APPENDIX A

Approved Project Application Documentation

Appendix C – Hart Street, Liverpool Hospital Redevelopment – Stage 2: Infrastructure and Ancillary Hospital Works Project Application and Environmental Assessment (MP 08_0062)

Approved on 15 April, 2009

NSW HEALTH

Liverpool Hospital Redevelopment - Stage 2

Infrastructure and Ancillary Hospital Works

Project Application and Environmental Assessment

Appendix C

Hart Street

- Siteworks plan
- Landscaping plan

Prepared by: LFA (Pacific) Pty Ltd
and
Capital Insight Pty Ltd

In conjunction with: Taylor Thomson Whitting

For: Department of Planning

On behalf of : NSW Health

October 2008

LEGEND

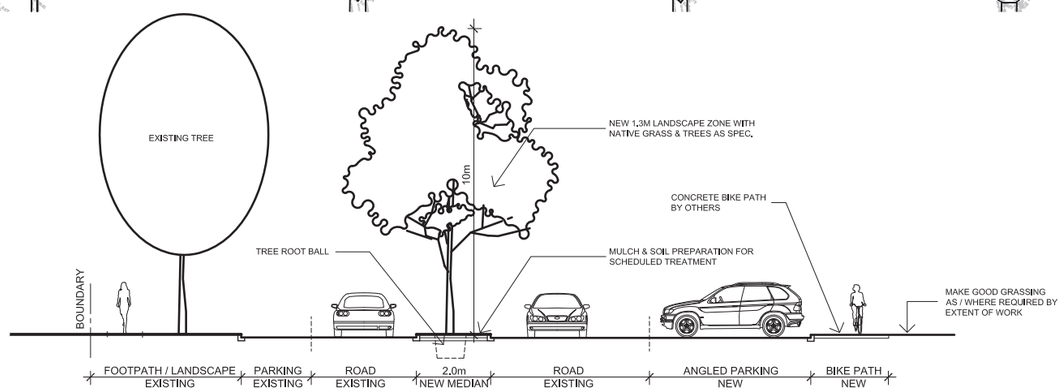
- NEW TREE PLANTING — Eucalyptus sideroxylon
- NEW TREE PLANTING — Eucalyptus maculata
- EXISTING TREES
- TREES REMOVED
- MAKE GOOD — Spray grass
- NATIVE GRASS IN MULCH (incl. soil prep.) — Poa labillardieri, Themeda australis ("mingo")
- NEW TURF — Turf incl. new soil prep.

3 x EUCALYPTUS MACULATA

16 x EUCALYPTUS SIDEROXYLON @ 15M c/c TO SUIT STREET LIGHTS

EXISTING LINE OF GUTTER SHOWN DOTTED

EXTENT OF EXISTING BIKE PATH SHOWN DOTTED



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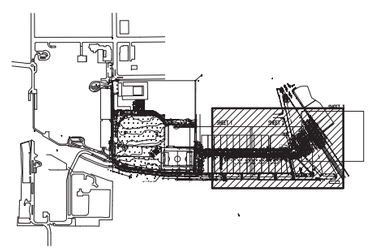

P1 PRELIMINARY 19.09.08

issue description date

status: PROJECT APPLICATION

project:

LIVERPOOL HOSPITAL

LANDSCAPE

Architects
Urban Planners
Interior Designers
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consultants:
structural
drainage
irrigation
lighting
signs and numbering

NORTH

drawing title

LANDSCAPE PLAN

project no.	208-8080	file no.	
drawn	GD	audited	
checked	RP	job capt	
date	09-08	proj dir	RP
plotted	19.09.08	proj mngr	RP
drawing no.			revision
L01			P1

scales
1:500 @ A1

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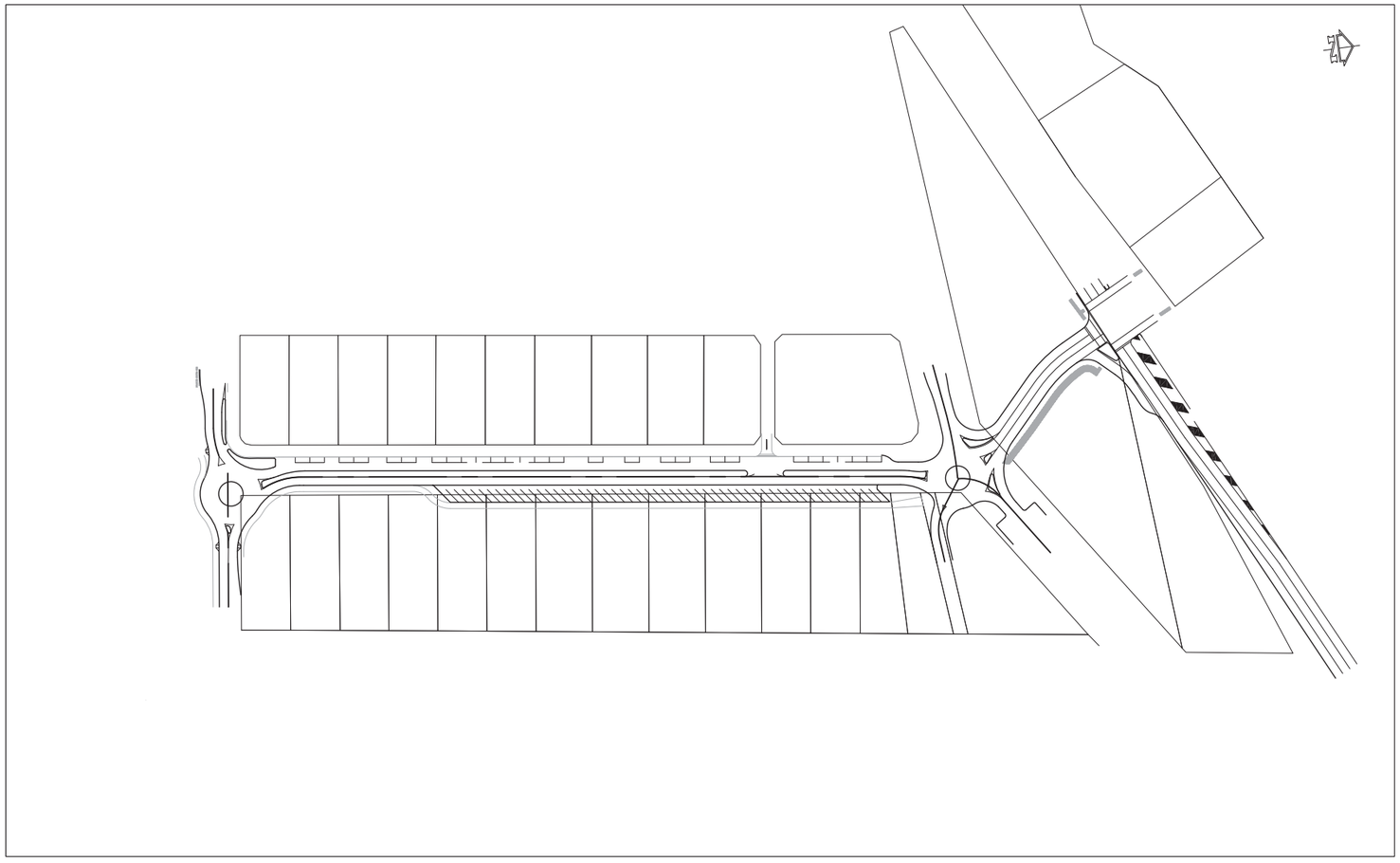
CIVIL WORKS

FOR

LIVERPOOL HOSPITAL

PROPOSED ROAD & CARPARK UPGRADE



CIVIL DRAWING LIST

Drawing No	Drawing Title
C000	TITLE SHEET, DRAWING LIST & LOCALITY PLAN
C001	NOTES AND LEGEND SHEET
C002	SITEWORKS PLAN SHEET 1
C003	SITEWORKS PLAN SHEET 2
C004	SITEWORKS PLAN SHEET 3
C005	SITEWORKS DETAIL PLAN
C006	ROAD LONGITUDINAL PLAN
C007	ROAD CROSS SECTION PLAN SHEET 1
C008	ROAD CROSS SECTION PLAN SHEET 2
C009	NOT USED
C010	INTERSECTION DETAILS PLAN SHEET 1
C011	INTERSECTION DETAILS PLAN SHEET 2
C012	INTERSECTION DETAILS PLAN SHEET 3
C013	SEDIMENTATION & EROSION CONTROL PLAN SHEET 1
C014	SEDIMENTATION & EROSION CONTROL PLAN SHEET 2

Rev	Description	Eng	Draft	Date
P1	PRELIMINARY	PL	CR	19.09.08

Project

LIVERPOOL HOSPITAL -
HART STREET UPGRADE

Sheet Subject

TITLE SHEET, DRAWING
LIST & LOCALITY PLAN

Architect

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Scale : B1	Drawn	Authorised
1:1000	C.R	P.L

Job No	Drawing No	Revision
071850	C00	P1

Plot File Created: Sep 19, 2008 - 4:03pm

PRELIMINARY

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GENERAL NOTES

1. Contractor must verify all dimensions and existing levels on site prior to commencement of works. Any discrepancies to be reported to the Engineer .
2. Strip all topsoil from the construction area. All stripped topsoil shall be disposed of off-site unless directed otherwise.
3. Make smooth connection with all existing works.
4. Compact subgrade under buildings and pavements to minimum 98% standard maximum dry density in accordance with AS 1289 5.1.1. Compaction under buildings to extend 2m minimum beyond building footprint.
5. All work on public property, property which is to become public property, or any work which is to come under the control of the Statutory Authority is to be carried out in accordance with the requirements of the relevant Authority. The Contractor shall obtain these requirements from the Authority. Where the requirements of the Authority are different to the drawings and specifications, the requirements of the Authority shall be applicable.
6. For all temporary batters refer to geotechnical recommendations.

REFERENCE DRAWINGS

1. These drawings have been based from, and to be read in conjunction with the following Consultants drawings. Any conflict to the drawings must be notified immediately to the Engineer.

Consultant	Dwg Title	Dwg No	Rev	Date
01	DRAWING TITLE	NUMBER	??	??.??.??

PIT SCHEDULE

Note: Grate size does not necessarily reflect pit size, refer pit type details, shown on detail sheets - C05

Type	Description	Cover (Clear Opening)	Number
A	Kerb inlet pit 2.4m lintel	'Sag pit' 450 x 900 Class D galvanised mild steel grate hinged to frame	2,3,4,7
		'On grade pit' 450 x 900 Class D galvanised mild steel grate hinged to frame	1
B	Kerb inlet pit 2.4m lintel	'Special sag pit' 450 x 900 Class D galvanised mild steel grate hinged to frame	5,6
C	Headwall	Concrete headwall to suit 300x750 RCBC	8
D		Existing pit to remain	9

STORMWATER DRAINAGE NOTES

1 Stormwater Design Criteria :
- (A) Average recurrence interval –
  1:100 years for roof drainage to first external pit
  1:20 years for paved and landscaped areas
- (B) Rainfall intensities –
  Time of concentration: 6 minutes
  1:100 years = 215.49 mm/hr
  1:20 years = 167.79 mm/hr
- (C) Runoff coefficients –
  Roof areas: C∞ = 1.00
  Roads and paved areas: C∞ = 0.95
  Landscaped areas: C∞ = 0.75

2. Pipes 300 dia and larger to be reinforced concrete Class "2" approved spigot and socket with rubber ring joints U.N.O.
3. Pipes up to 300 dia shall be sewer grade uPVC with solvent welded joints.
4. Equivalent strength VCP or FCP pipes may be used subject to approval.
5. Precast pits may be used external to the building subject to approval by
6. Enlargers, connections and junctions to be manufactured fittings where pipes are less than 300 dia.
7. Where subsoil drains pass under floor slabs and vehicular pavements, unslotted uPVC sewer grade pipe is to be used.
8. Grates and covers shall conform with AS 3996-2006, and AS 1428.1 for access requirements.
9. Pipes are to be installed in accordance with AS 3725. All bedding to be type H2 U.N.O.
10. Care is to be taken with levels of stormwater lines. Grades shown are not to be reduced without approval.
11. All stormwater pipes to be 150 dia at 1.0% min fall U.N.O.
12. Subsoil drains to be slotted flexible uPVC U.N.O.
13. Adopt invert levels for pipe installation (grades shown are only nominal).

SITEWORKS NOTES

1. All basecourse material to comply with RTA specification No 3051 and compacted to minimum 98% modified standard dry density in accordance with AS 1289 5.2.1.
2. All trench backfill material shall be compacted to the same density as the adjacent material.
3. All service trenches under vehicular pavements shall be backfilled with an approved select material and compacted to a minimum 98% standard maximum dry density in accordance with AS 1289 5.1.1

KERBING NOTES

Includes all kerbs, gutters, dish drains, crossings and edges.

1. All kerbs, gutters, dish drains and crossings to be constructed on minimum 75mm granular basecourse compacted to minimum 98% modified maximum dry density in accordance with AS 1289 5.2.1.
2. Expansion joints (EJ) to be formed from 10mm compressible cork filler board for the full depth of the section and cut to profile. Expansion joints to be located at drainage pits, on tangent points of curves and elsewhere at 12m centres except for integral kerbs where the expansion joints are to match the joint locations in slabs.
3. Weakened plane joints to be min 3mm wide and located at 3m centres except for integral kerbs where weakened plane joints are to match the joint locations in slabs.
4. Broomed finished to all ramped and vehicular crossings, all other kerbing or dish drains to be steel float finished.
5. In the replacement of kerbs –
   Existing road pavement is to be sawcut 900mm from lip of gutter. Upon completion of new kerbs, new basecourse and surface is to be laid 900mm wide to match existing materials and thicknesses.
   Existing allotment drainage pipes are to be built into the new kerb with a 100mm dia hole.
   Existing kerbs are to be completely removed where new kerbs are shown.

SURVEY AND SERVICES INFORMATION

SURVEY
Origin of levels : PM 15953 RL 8.844
Datum of levels : A.H.D. AUSTRALIAN HEIGHT DATUM
Coordinate system : MGA
Survey prepared by : JMD
Setout Points : CONTACT THE SURVEYOR

Taylor Thomson Whitting does not guarantee that the survey information shown on these drawings is accurate and will accept no liability for any inaccuracies in the survey information provided to us from any cause whatsoever.

UNDERGROUND SERVICES – WARNING

The locations of underground services shown on Taylor Thomson Whittings drawings 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.

Taylor Thomson Whitting does not guarantee that the services information shown on these drawings 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.

The Contractor must confirm the exact location and extent of services prior to construction and notify any conflict with the drawings immediately to the Engineer/Superintendent.

The contractor is to get approval from relevant the state survey department, to remove any survey mark. This includes but is not limited to; State Survey Marks (SSM), Permanent Marks (PM), cadastral reference marks or any other survey mark which is to be removed or adjusted in any way.
Taylor Thomson Whitting plans do not indicate the presence of any survey mark. The contractor is to undertake their own search.

BOUNDARY AND EASEMENT NOTE

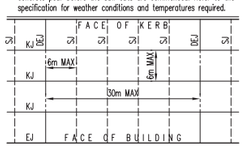
The property boundary and easement locations shown on Taylor Thomson Whitting drawing's have been based from information received from : No boundary information received.
Refer architect for boundary information and locations

Taylor Thomson Whitting makes no guarantees that the boundary or easement information shown is correct.
Taylor Thomson Whitting will accept no liabilities for boundary inaccuracies. The contractor/builder is advised to check/confirm all boundaries in relation to all proposed work prior to the commencement of construction. Boundary inaccuracies found are to be reported to the superintendent prior to construction starting.

JOINTING NOTES

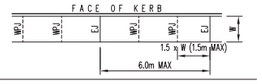
Vehicular Pavement Jointing

1. All vehicular pavements to be jointed as shown on drawings.
2. Keyed construction joints should generally be located at a maximum of 6m centres.
3. Sawn joints should generally be located at a maximum of 6m centres or 1.5 x the spacing of keyed joints, where key joint spacing is less than 4m, with dowelled expansion joints at maximum of 30m centres.
4. Provide 10mm wide full depth expansion joints between buildings and all concrete or unit pavers.
5. Vehicular pavement jointing as follows.
6. The timing of the saw cut is to be confirmed by the contractor on site. Site conditions will determine how many hours after the concrete pour before the saw cuts are commenced. Refer to the specification for weather conditions and temperatures required.



Pedestrian Footpath Jointing

1. Expansion joints are to be located where possible at tangent points of curves and elsewhere at max 6.0m centres.
2. Weakened plane joints are to be located at a max 1.5 x width of the pavement.
3. Where possible joints should be located to match kerbing and / or adjacent pavement joints.
4. All pedestrian footpath jointings as follows (uno).



EROSION AND SEDIMENT CONTROL NOTES

1. All work shall be generally carried out in accordance with
   (A) Local authority requirements,
   (B) EPA – Pollution control manual for urban stormwater,
   (C) Department of conservation and land management manual– "Urban Erosion & Sediment Control".
2. Erosion and sediment control drawings and notes are provided for the whole of the works. Should the Contractor stage these works then the design may require to be modified. Variation to these details may require to be approved by the relevant authorities. The erosion and sediment control plan shall be implemented and adopted to meet the varying situations as work on site progresses.
3. Maintain all erosion and sediment control devices to the satisfaction of the superintendent and the local authority.
4. When stormwater pits are constructed prevent site runoff entering the pits unless silt fences are erected around pits.
5. Minimise the area of site being disturbed at any one time.
6. Protect all stockpiles of materials from scour and erosion. Do not stockpile loose material in roadways, near drainage pits or in watercourses.
7. All soil and water control measures are to be put back in place at the end of each working day, and modified to best suit site conditions.
8. Control water from upstream of the site such that it does not enter the disturbed site.
9. All construction vehicles shall enter and exit the site via the temporary construction entry/exit.
10. All vehicles leaving the site shall be cleaned and inspected before leaving.
11. Maintain all stormwater pipes and pits clear of debris and sediment. Inspect stormwater system and clean out after each storm event.
12. Clean out all erosion and sediment control devices after each storm event.

Sequence Of Works

1. Prior to commencement of excavation the following soil management devices must be installed.
1.1. Construct silt fences below the site and across all potential runoff sites.
1.2. Construct temporary construction entry/exit and divert runoff to suitable control systems.
1.3. Construct measures to divert upstream flows into existing stormwater system.
1.4. Construct sedimentation traps/basin including outlet control and overflow.
1.5. Construct turf lined swales.
1.6. Provide sandbag sediment traps upstream of existing pits.
2. Construct geotextile filter pit surround around all proposed pits as they are constructed.
3. On completion of pavement provide sand bag kerb inlet sediment traps around pits.
4. Provide and maintain a strip of turf on both sides of all roads after the construction of kerbs.

CONCRETE FINISHING NOTES

1. All exposed concrete pavements are to be broomed finished.
2. All edges of the concrete pavement including keyed and dowelled joints are to be finished with an edging tool.
3. Concrete pavements with grades greater than 10 % shall be heavily broomed finished.
4. Carborundum to be added to all stair treads and ramped crossings U.N.O.

CONCRETE NOTES

EXPOSURE CLASSIFICATION

CONCRETE

1. Place concrete of the following characteristic compressive strength f'c as defined in AS 1379.

Location	AS 1379 f'c MPa at 28 days	Specified Slump	Nominal Agg. Size
Pits, kerbs, footpaths	S(25)	80	20
Footings	S(32)	80	20
Vehicular pavements	SF(32) at 90 days	80	20

2. Use Type 'SL' cement, unless otherwise specified.
3. All concrete shall be subject to project assessment and testing to AS 1379.
4. Consolidate by mechanical vibration. Cure all concrete surfaces as directed in the Specification.
5. For all falls in slab, drip grooves, reglets, chamfers etc. refer to Architects drawings and specifications.
6. Unless shown on the drawings, the location of all construction joints shall be submitted to Engineer for review.
7. No holes or chases shall be made in the slab without the approval of the Engineer.
8. Conduits and pipes are to be fixed to the underside of the top reinforcement layer.
9. Slurry used to lubricate concrete pump lines is not to be used in any structural members.
10. (170) Indicates Slab or Band thickness variation.

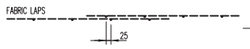
REINFORCEMENT NOTES

1. Fix reinforcement as shown on drawings. The type and grade is indicated by a symbol as shown below. On the drawings this is followed by a numeral which indicates the size in millimetres of the reinforcement.

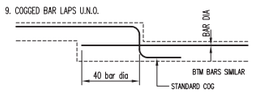
N. Hot rolled ribbed bar grade D500N
R. Plain round bar grade R250N
SL. Square mesh grade 500L
RL. Rectangular mesh grade 500L

2. Provide bar supports or spacers to give the following concrete cover to all reinforcement unless otherwise noted on drawings.
Footings – bottom, top, sides.
Slabs – top, bottom, when exposed to weather.
Beams – bottom, sides, top to ties.
Columns – to ties and spirals.
– when exposed to weather or ground.
Walls – generally.
– when cast in forms but later exposed to weather or ground.
– when cast directly in contact with ground.
3. Cover to reinforcement ends to be 45 mm u.n.o.
4. Provide N12–450 support bars to top reinforcement as required , Lap 450, U.N.O.
5. Maintain cover to all pipes,conduits,reglets,drip grooves etc
6. Laps in reinforcement shall be made only where shown on the drawings unless otherwise approved. Lap lengths shall be 40 bar dia, unless noted otherwise.
7. All cogs to be standard cogs unless noted otherwise.
8. Fabric end and side laps are to be placed strictly in accordance with the manufacturers requirements to achieve a full tensile lap. Fabric shall be laid so that there is a maximum of 3 layers at any location.

FABRIC LAPS



9. COGGED BAR LAPS U.N.O.



FORMWORK

1. The design, certification, construction and performance of the formwork, falsework and backpropping shall be the responsibility of the contractor. Proposed method of installation and removal of formwork is to be submitted to the superintendent for comment prior to work being carried out.

REINFORCEMENT LEGEND

1. Denotes the extent of area covered by bars.
2. Denotes a change in bar shape and/or length.
3. 83 Indicates to repeat bars tagged thus (83) etc.
   LAY BARS IN DIRECTION INDICATED BY ARROW.
4. Bars shown staggered on plan are to be placed alternately.
5. ALT. denotes bars of different length and/or shape to be laid alternately.
6. N16 @ 10–250 T+3 Indicates 10 bars at 250 centres + 3 bars placed one per space centrally over column.

LIST OF ABBREVIATIONS :
U.N.O. – unless noted otherwise
L.V. – Bar Lengths Vary
E.W. – Each Way
E.F. – Each Face
N.S.O.P. – Not Shown On Plan
N.S.O.E. – Not Shown On Elevation
N.F. – Near Face
F.F. – Far Face

SITEWORKS LEGEND

- F22.20 Finished surface level
- F22.00 Finished contour
- K&G Kerb and gutter
- KO Kerb only
- FK Flush kerb
- DD Dish drain
- MK Mountable kerb
- MIK Mountable integral kerb
- MIK+TE Mountable integral kerb with thickened edge
- IK+TE Integral kerb with thickened edge
- TE Thickened edge
- IK Integral kerb
- IK+ED Integral kerb with edge downturn
- K&T Kerb and toe
- IL10.00 / 600 ϕ 'Z' / 1.25% / Q=345 L/s / IL9.65 Stormwater pit, flow direction and line with Invert level upstream, Pipe size and class, Pipe grade, Flow (Litres per second), Invert level downstream
- GD Grated drain
- Subsoil drainage line (100 dia)
- FP Flushing point
- DP Down pipe
- RP Rodding point
- Concrete encased stormwater line
- Stormwater line with pipe taper and flow direction
- Taper kerb to zero height over 500 mm
- Wheelstop
- RW# Blockwork retaining wall
- RW# Brickwork retaining wall
- DEJ Dowelled expansion joint
- SJ Sawn joint
- KJ Keyed construction joint
- WPJ Weakened plane joint
- EJ Expansion joint
- TKJ Tied keyed joint
- Grass catch drain
- Overland flow path
- Guard Rail

SURVEY LEGEND

- 18.48 Surface level
- 19 Contour
- Kerb line
- Batter
- Retaining wall
- SW Stormwater drainage line
- T Telecommunications line
- G Gas line
- W Water main
- S Sewer line
- EASEMENT FOR ... (... m WIDE) Easement
- Fence
- Tree to be removed/be retained
- Boundary
- SGN Sign
- H Hydrant
- MH Manhole
- G Gas
- SV Stop Valve
- W Water
- TEL Telstra
- TRAP Trap
- Gully
- Grate
- S Sewer Manhole
- E Energy Australia (Electricity)
- ELP Electric Light Pole
- TL Traffic Light
- TLL Traffic Light Lid
- TLB Traffic Light Box
- TB Telephone Box
- PKM Parking Meter
- PM 1234 Permanent Mark
- BM 51.10 Bench Mark
- BH 0 Borehole
- TP No Test Pit
- FC Fuel Cock
- FL Flood Light
- LH Lamp Hole
- BUB Bubbler
- LB Letter Box
- FP Flag Pole
- FP BOX Flag Pole Box
- BOL Bollard
- SEAT Seat
- BIN Bin
- KO Kerb Outlet
- Monorail Pylon

PAVEMENT LEGEND

- 40mm Thickness asphaltic concrete (AC10) on 120mm Compacted thickness fine crushed rock (DGB20) on 220mm Compacted thickness fine crushed rock (DGS40)
- 80mm Thickness concrete (f'c=32MPa) with SL92 fabric (40 top cover) on 100mm Compacted thickness fine crushed rock (DGB 20)

NOTE
Asphaltic concrete shall conform to AS2150 and the specification
Assumed CBR = 3%

PRELIMINARY

Rev	Description	Eng	Draft	Date
P1	ISSUE FOR COMMENT	PL	CR	19.09.08

Project
LIVERPOOL HOSPITAL - HART STREET UPGRADE

Sheet Subject
NOTES AND LEGENDS SHEET

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Scale : B1	Drawn	Authorised
NO SCALE	CR	PL

Job No	Drawing No	Revision
071850	C01	P2

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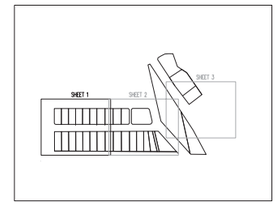
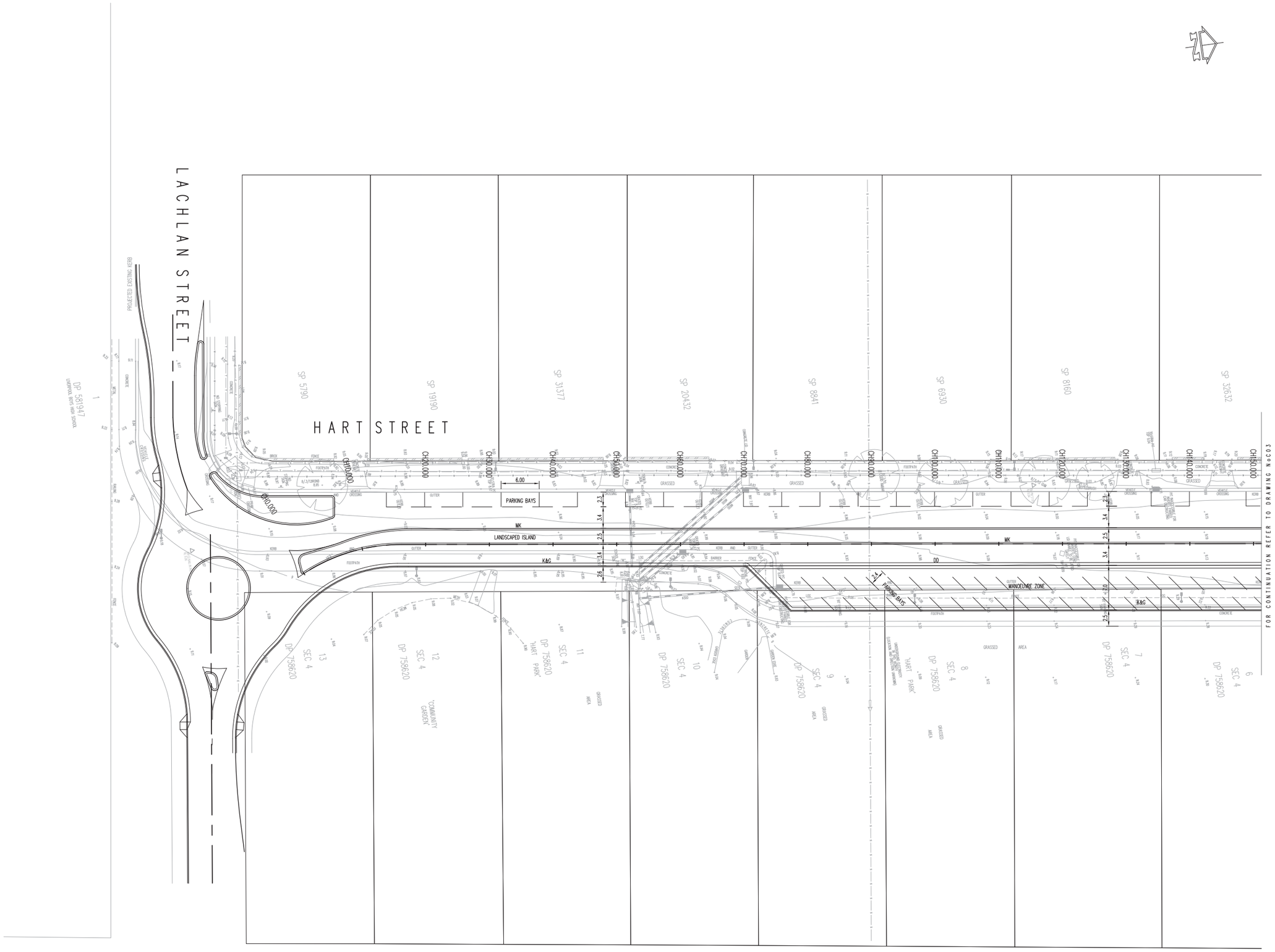


KEY PLAN

FOR NOTES AND LEGENDS REFER TO DRAWING No C01.

CONTRACTOR IS TO LOCATE ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF WORK



SCALE 1:250 0 2.5 5 7.5 10 12.5 m
AT ORIGINAL SIZE

PRELIMINARY

Rev	Description	Eng	Draft	Date
P2	ISSUE FOR COMMENT	PL	CR	19.09.08
P1	ISSUE FOR COMMENT	PL	CR	08.08.08

Project

LIVERPOOL HOSPITAL - HART STREET UPGRADE

Sheet Subject

SITEWORKS PLAN SHEET 1

Architect

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Scale : B1	Drawn	Authorised
1:250	C.R	P.L

Job No	Drawing No	Revision
071850	C02	P2

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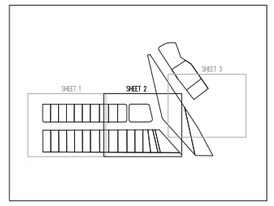
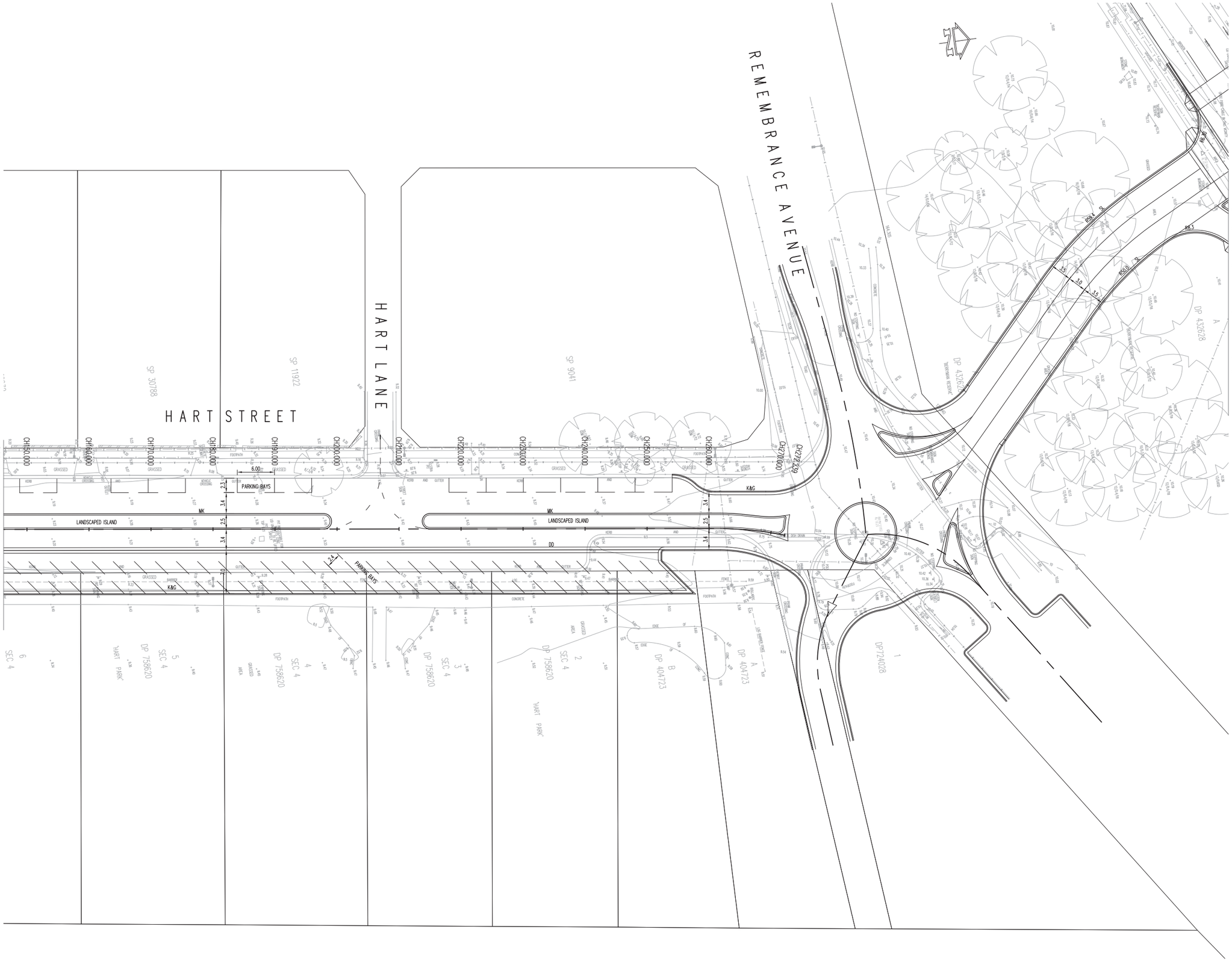


KEY PLAN

FOR NOTES AND LEGENDS REFER TO DRAWING No C01.

CONTRACTOR IS TO LOCATE ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF WORK



SCALE 1:250 AT ORIGINAL SIZE 0 2.5 5 7.5 10 12.5 m

PRELIMINARY

Rev	Description	Eng	Draft	Date
P2	ISSUE FOR COMMENT	PL	CR	19.09.08
P1	ISSUE FOR COMMENT	PL	CR	08.08.08

Project

LIVERPOOL HOSPITAL - HART STREET UPGRADE

Sheet Subject

SITEWORKS PLAN SHEET 2

Architect

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Scale : B1	Drawn	Authorised
1:250	CR	PL

Job No	Drawing No	Revision
071850	C03	P2

Plot File Created: Sep 19, 2008 - 4:05pm

FileName: C03.dwg - USER: cameron - Plot File Created: Sep 19, 2008 - 4:05pm

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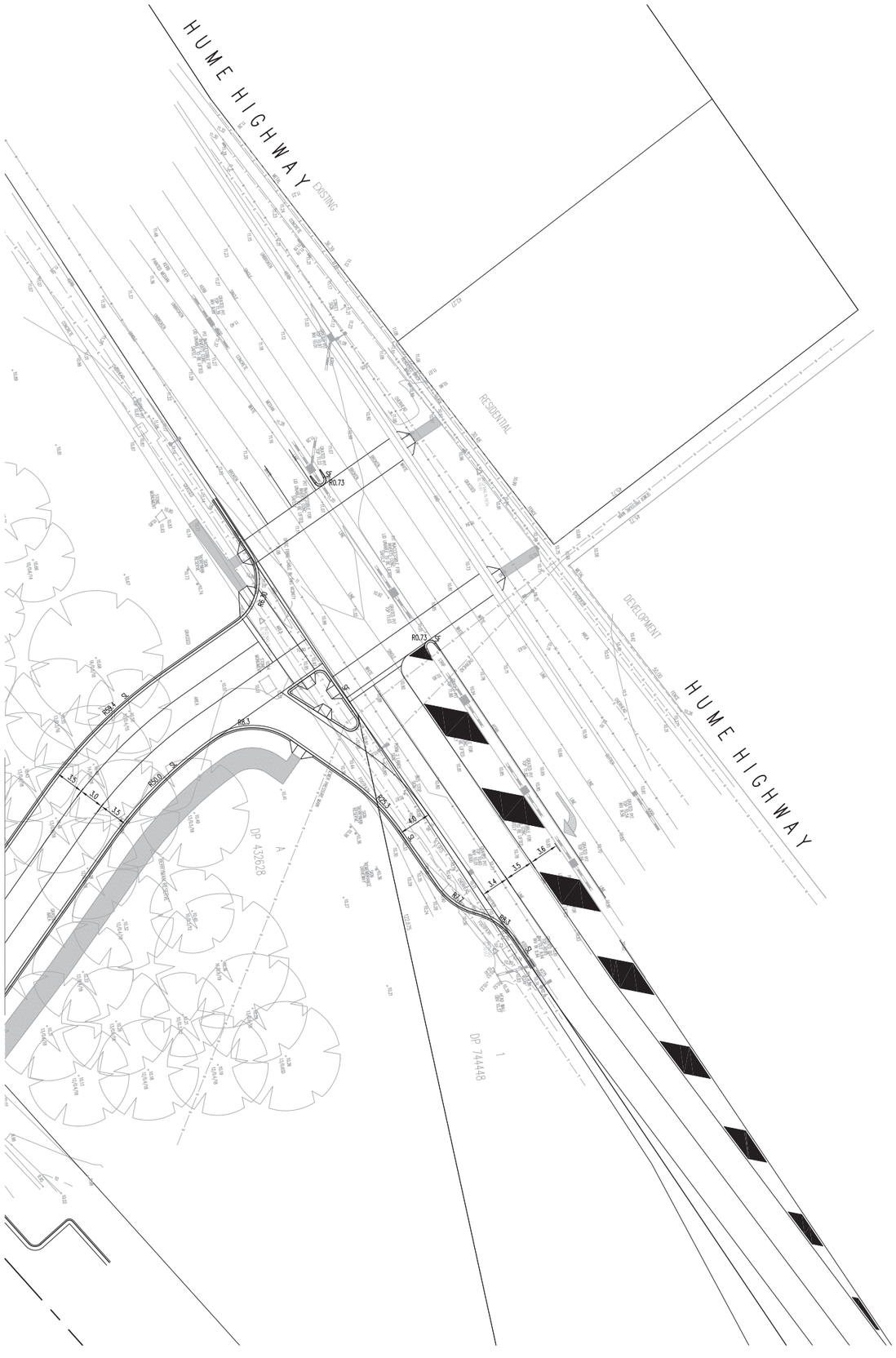

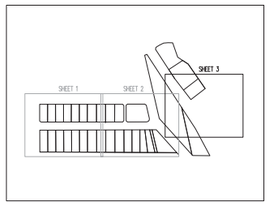

KEY PLAN

FOR NOTES AND LEGENDS REFER TO DRAWING No C01.

CONTRACTOR IS TO LOCATE ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF WORK

SCALE 1:250 0 2.5 5 7.5 10 12.5 m
AT ORIGINAL SIZE

PRELIMINARY

Rev	Description	Eng	Draft	Date
P2	ISSUE FOR COMMENT	PL	CR	19.09.08
P1	ISSUE FOR COMMENT	PL	CR	08.08.08

Project

LIVERPOOL HOSPITAL - HART STREET UPGRADE

Sheet Subject

SITEWORKS PLAN SHEET 3

Architect

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Scale : B1	Drawn	Authorised
1:250	C.R	P.L

Job No	Drawing No	Revision
071850	C04	P2

Plot File Created: Sep 19, 2008 - 4:06pm

File Name: C04.dwg - USER: cameronr - Plot File Created: Sep 19, 2008 - 4:06pm

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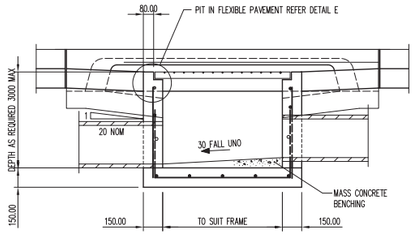
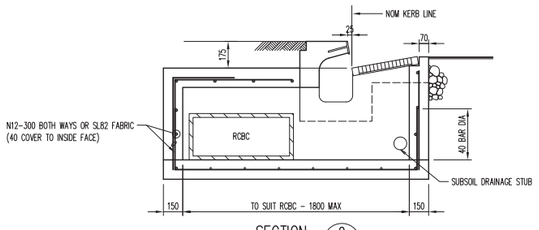
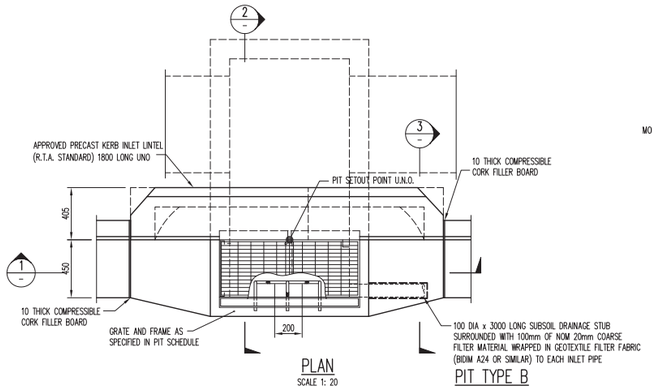


SECTION 1
SCALE 1:20



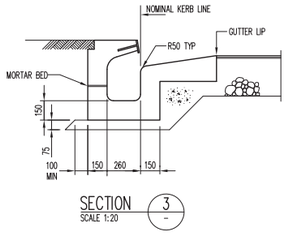
SECTION 2
SCALE 1:20

NOTE: IF REINFORCING FABRIC IS TO BE USED REFER TO WALL AND CORNER DETAILS

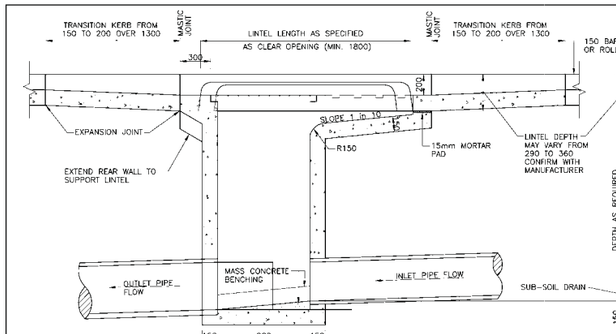


PLAN
SCALE 1: 20

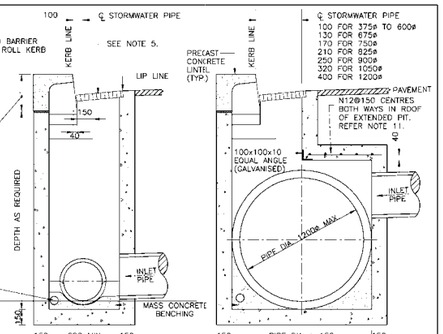
PIT TYPE B



SECTION 3
SCALE 1:20



SECTION A

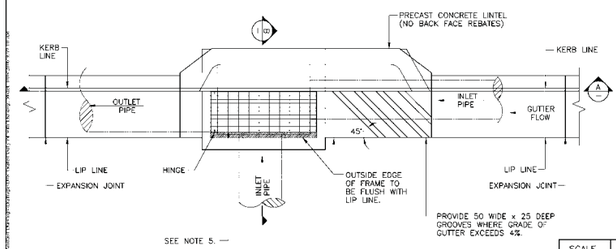


SECTION B

SECTION B
(ENLARGED CHAMBER)

NOTES

1. CONCRETE TO HAVE A MIN. COMPRESSIVE STRENGTH (F'c) OF 20 MPa AT 28 DAYS.
2. TOP OF BENCHING TO BE 1/2 OF OUTLET PIPE DIAMETER.
3. PROVIDE 3m LENGTH OF 100mmø SLOTSOIL DRAINAGE PIPE WRAPPED IN FABRIC SOCK ADJACENT TO INLET PIPE INVERTS AND DRAINING TO THE PIT.
4. LOCATE LINTELS CENTRALLY IN SAG PITS.
5. PROVIDE WELDLOK HOT DIPPED GALVANISED GULLY GRATE GG78–30 (OR APPROVED EQUIVALENT) SET PARALLEL TO ADJACENT GUTTER AND 10 LOWER FOR RESIDENTIAL ROADS. FOR INDUSTRIAL ROADS USE WELDLOK HEAVY DUTY HOT DIPPED GALVANISED GULLY GRATE GG78–42A (OR APPROVED EQUIVALENT) INSTALLED AS ABOVE. NOTE: IN THIS INSTANCE THE OUTSIDE EDGE OF THE FRAME NEED NOT BE FLUSH WITH THE LIP LINE.
6. ALL GRATES TO BE PROVIDED WITH A LOCKING CLIP.
7. ALL GRATES TO BE HOT DIP GALVANISED.
8. ALL PITS GREATER THAN 1.2m DEPTH (FROM GRATE TO INVERT) ARE TO PROVIDE STEP IRONS.
9. FOR PIT DEPTHS BETWEEN 1.8m AND 3.0m DEPTH, PROVIDE N12 @ 250C/C EACHWAY AT 40 COVER TO INSIDE FACE WALLS AND BASE. PROVIDE 400 LAP AT CORNERS. FOR PIT DEPTHS GREATER THAN 3.0m, SEPARATE DESIGN IS REQUIRED.
10. DURING INSTALLATION OF THE GRATE AND FRAME, THE CONTRACTOR IS TO ENSURE A MINIMUM CLEARANCE OF 40mm BETWEEN THE LINTEL AND OPENED GRATE.
11. WHERE EXTENDED CHAMBER WIDTH EXCEEDS 1.2m, ROOF REINFORCEMENT TO BE DESIGNED BY A PROFESSIONAL STRUCTURAL ENGINEER.
12. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SHOWN.

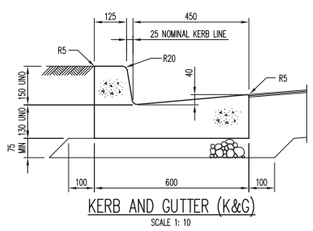


PLAN

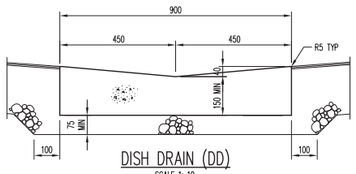
SCALE	AS SHOWN	ISSUE NO.	B	LIVERPOOL CITY COUNCIL	Std Dwg No.
DRAWN	R.N	DATUM	ASSUMED	GRATED GULLY PIT WITH EXTENDED KERB INLET	D8
CHECKED	P.M.	DATE	MAY 2006		

ORIGINAL – A3 SHEET

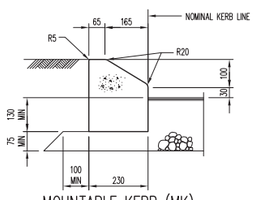
PIT TYPE A



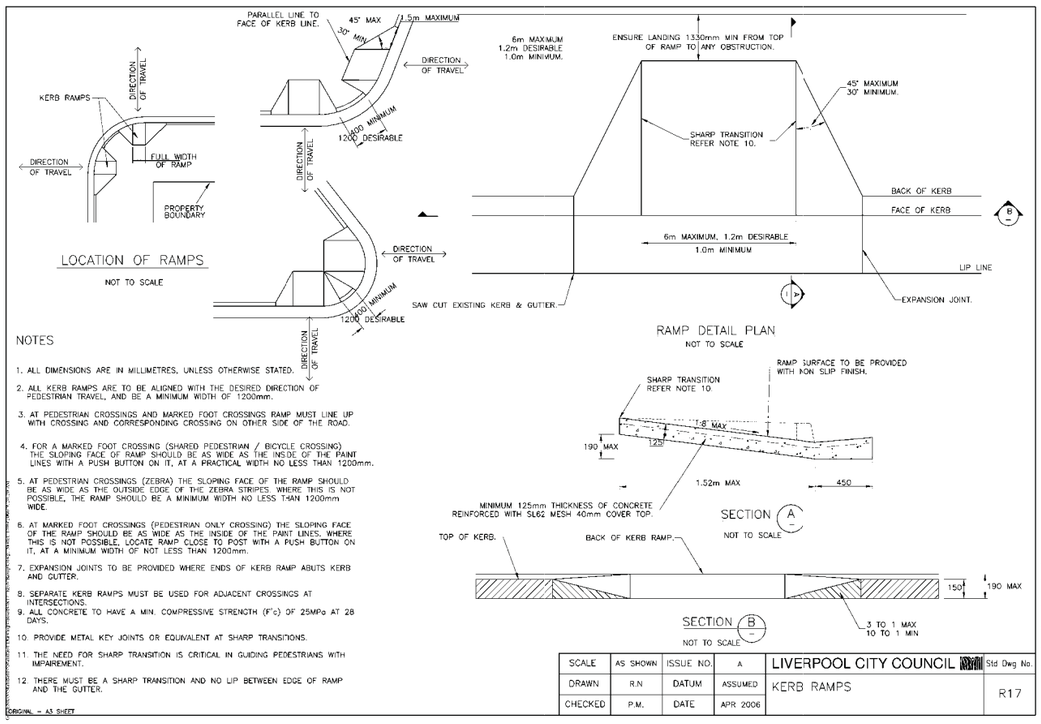
KERB AND GUTTER (K&G)
SCALE 1: 10



DISH DRAIN (DD)
SCALE 1: 10



MOUNTABLE KERB (MK)
SCALE 1: 10



LOCATION OF RAMPS
NOT TO SCALE

RAMP DETAIL PLAN
NOT TO SCALE

NOTES

1. ALL DIMENSIONS ARE IN MILLIMETRES, UNLESS OTHERWISE STATED.
2. ALL KERB RAMPS ARE TO BE ALIGNED WITH THE DESIRED DIRECTION OF PEDESTRIAN TRAVEL, AND BE A MINIMUM WIDTH OF 1200mm.
3. AT PEDESTRIAN CROSSINGS AND MARKED FOOT CROSSINGS RAMP MUST LINE UP WITH CROSSING AND CORRESPONDING CROSSING ON OTHER SIDE OF THE ROAD.
4. FOR A MARKED FOOT CROSSING (SHARED PEDESTRIAN / BICYCLE CROSSING) THE SLOPING FACE OF RAMP SHOULD BE AS WIDE AS THE INSIDE OF THE PAINT LINES WITH A PUSH BUTTON ON IT, AT A PRACTICAL WIDTH NO LESS THAN 1200mm.
5. AT PEDESTRIAN CROSSINGS (ZEBRA) THE SLOPING FACE OF THE RAMP SHOULD BE AS WIDE AS THE OUTSIDE EDGE OF THE ZEBRA STRIPES. WHERE THIS IS NOT POSSIBLE, THE RAMP SHOULD BE A MINIMUM WIDTH NO LESS THAN 1200mm WIDE.
6. AT MARKED FOOT CROSSINGS (PEDESTRIAN ONLY CROSSING) THE SLOPING FACE OF THE RAMP SHOULD BE AS WIDE AS THE INSIDE OF THE PAINT LINES. WHERE THIS IS NOT POSSIBLE, LOCATE RAMP CLOSE TO POST WITH A PUSH BUTTON ON IT, AT A MINIMUM WIDTH OF NOT LESS THAN 1200mm.
7. EXPANSION JOINTS TO BE PROVIDED WHERE ENDS OF KERB RAMP ABUTS KERB AND GUTTER.
8. SEPARATE KERB RAMPS MUST BE USED FOR ADJACENT CROSSINGS AT INTERSECTIONS.
9. ALL CONCRETE TO HAVE A MIN. COMPRESSIVE STRENGTH (F'c) OF 25MPa AT 28 DAYS.
10. PROVIDE METAL KEY JOINTS OR EQUIVALENT AT SHARP TRANSITIONS.
11. THE NEED FOR SHARP TRANSITION IS CRITICAL IN GUIDING PEDESTRIANS WITH IMPAIREMENT.
12. THERE MUST BE A SHARP TRANSITION AND NO LIP BETWEEN EDGE OF RAMP AND THE GUTTER.

SECTION A
NOT TO SCALE

SECTION B
NOT TO SCALE

SCALE	AS SHOWN	ISSUE NO.	A	LIVERPOOL CITY COUNCIL	Std Dwg No.
DRAWN	R.N	DATUM	ASSUMED	KERB RAMPS	R17
CHECKED	P.M.	DATE	APR 2006		

ORIGINAL – A3 SHEET

FOR NOTES AND LEGENDS REFER TO DRAWING No C01.

CONTRACTOR IS TO LOCATE ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF WORK

Rev	Description	Eng	Draft	Date
P1	ISSUE FOR COMMENT	PL	CR	19.09.08

Project
LIVERPOOL HOSPITAL - HART STREET UPGRADE

Sheet Subject
DETAILS SHEET

Architect
ARCHITECTS NAME
ARCHITECTS ADDRESS

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Scale : B1	Drawn	Authorised
AS SHOWN	JB	PL

Job No	Drawing No	Revision
071850	C05	P2

Plot File Created: Sep 19, 2008 - 4:07pm

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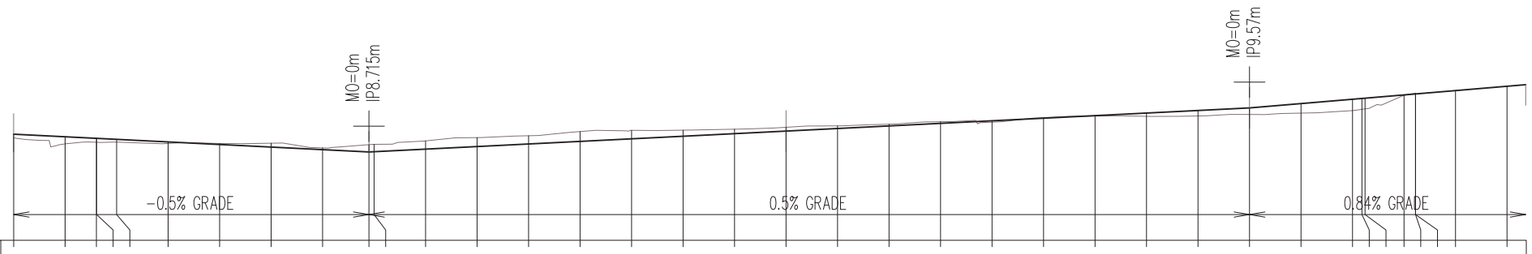

DATUM RL 7.00

PROPOSED CENTRE LINE LEVEL	9.06	9.01	8.98	8.98	8.96	8.91	8.86	8.81	8.76	8.71	8.72	8.77	8.82
EXISTING SURFACE LEVEL	8.99	8.87	8.90	8.90	8.91	8.88	8.88	8.88	8.79	8.86	8.86	8.93	8.99
CHAINAGE	0.00	10.00	16.08	16.11	20.00	30.00	40.00	50.00	60.00	69.00	70.00	80.00	90.00

PROPOSED CENTRE LINE LEVEL	8.87	8.92	8.97	9.02	9.07	9.12	9.17	9.22	9.27	9.32	9.37	9.42
EXISTING SURFACE LEVEL	9.03	9.11	9.13	9.14	9.16	9.19	9.22	9.25	9.30	9.29	9.38	9.41
CHAINAGE	100.00	110.00	120.00	130.00	140.00	150.00	160.00	170.00	180.00	190.00	200.00	210.00

PROPOSED CENTRE LINE LEVEL	9.47	9.52	9.57	9.65	9.74	9.75	9.76	9.82	9.84	9.84	9.91	9.99
EXISTING SURFACE LEVEL	9.41	9.41	9.44	9.47	9.52	9.54	9.55	9.81	9.85	9.85		
CHAINAGE	220.00	230.00	240.00	250.00	260.00	261.83	262.44	270.00	272.24	272.24	280.00	290.00

HART STREET LONGITUDINAL SECTION

SCALE 1:1000 HORIZONTAL
1:100 VERTICAL

FOR NOTES AND LEGENDS REFER TO DRAWING No C01.

CONTRACTOR IS TO LOCATE ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF WORK

FileName: C06.dwg - USER: cameronr - Plot File Created: Sep 19, 2008 - 4:07pm

VERTICAL 1:100 AT ORIGINAL SIZE 0 1 2 3 4 5 m
HORIZONTAL 1:1000 AT ORIGINAL SIZE 0 10 20 30 40 50 m

PRELIMINARY

Rev	Description	Eng	Draft	Date
P1	PRELIMINARY	PL	CR	19.09.08

Project
LIVERPOOL HOSPITAL -
HART STREET UPGRADE

Sheet Subject
ROAD LONGITUDINAL
PLAN

Architect

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Scale : B1	Drawn	Authorised
AS SHOWN	C.R	P.L

Job No	Drawing No	Revision
071850	C06	P1

Plot File Created: Sep 19, 2008 - 4:07pm

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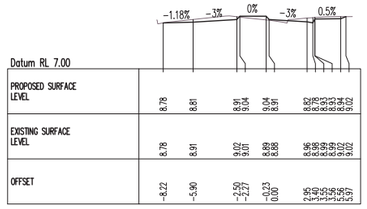

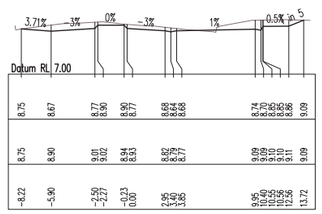

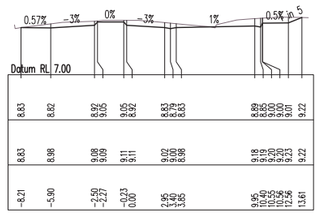

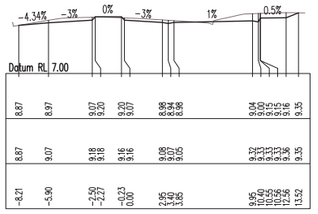

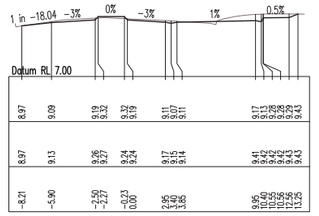

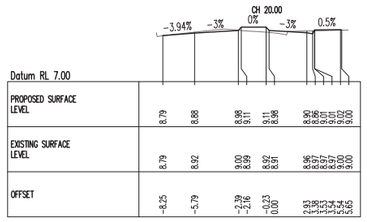

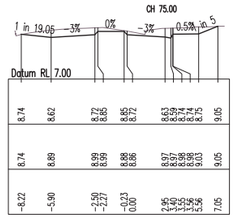

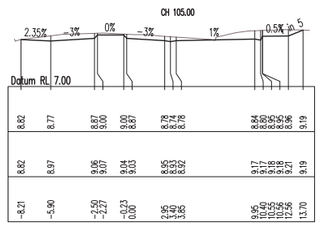

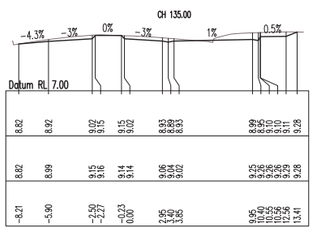

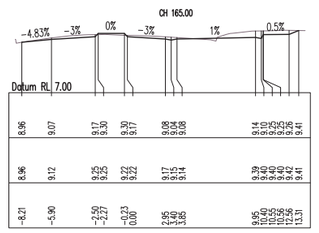

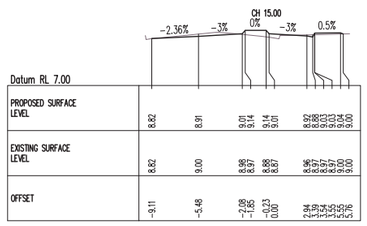

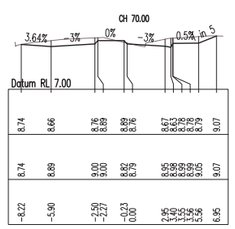

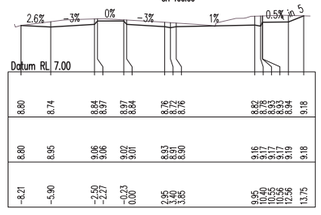

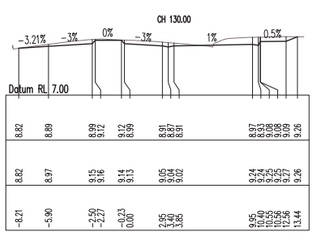

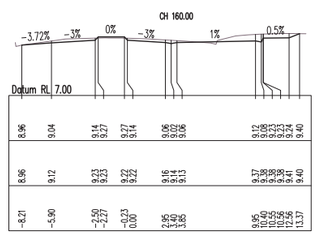

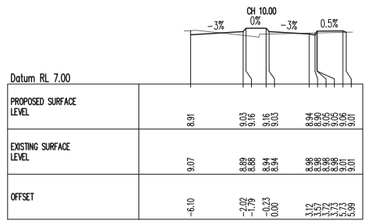

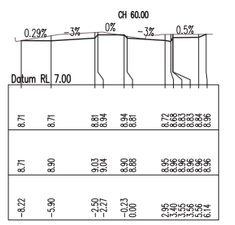

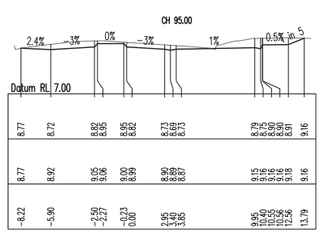

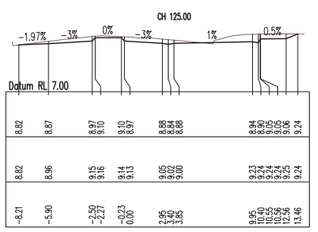

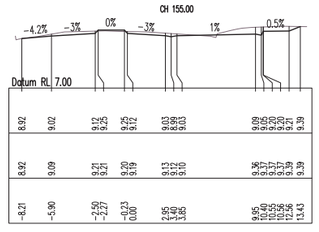

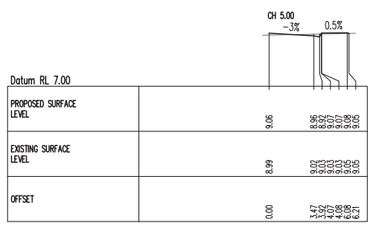

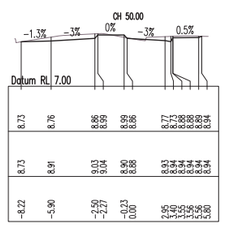

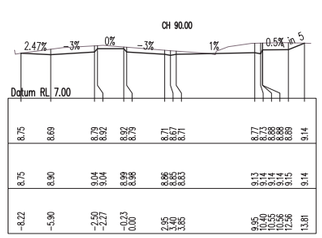

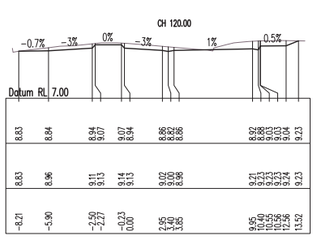

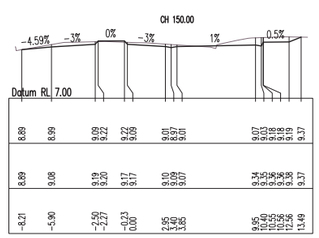

CH 0.00

CH 40.00

CH 85.00

CH 115.00

CH 145.00

FOR NOTES AND LEGENDS REFER TO DRAWING No C01.

CONTRACTOR IS TO LOCATE ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF WORK

Rev	Description	Eng	Draft	Date
P1	PRELIMINARY	PL	CR	19.09.08

Project

LIVERPOOL HOSPITAL - HART STREET UPGRADE

Sheet Subject

ROAD CROSS SECTION PLAN SHEET 1

Architect

VERTICAL 1:200
AT ORIGINAL SIZE
HORIZONTAL 1:1000
AT ORIGINAL SIZE

0 2 4 6 8 10 m
0 10 20 30 40 50 m

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Job No	Drawing No	Revision
071850	C07	P1

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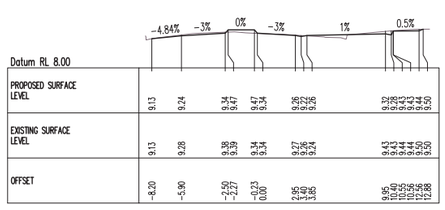

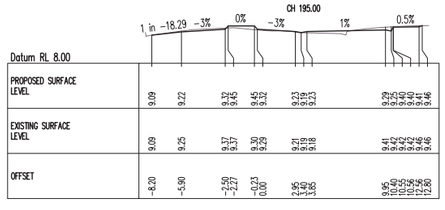

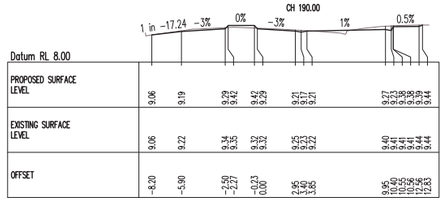

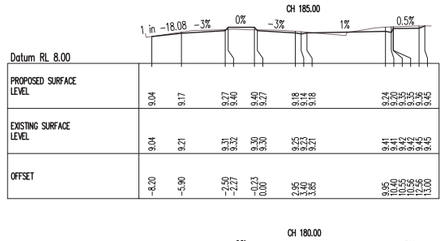

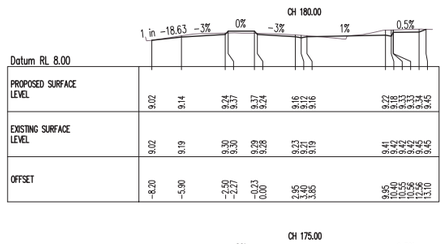

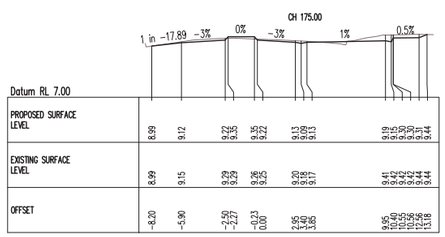

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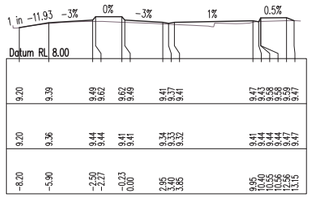

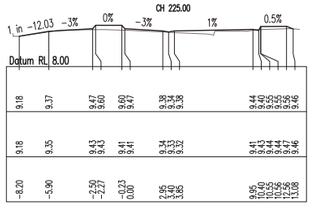

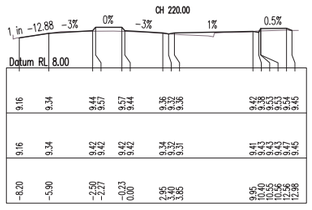

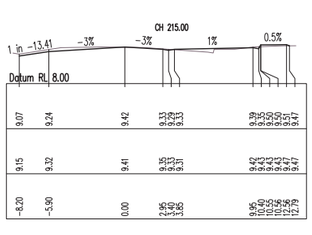

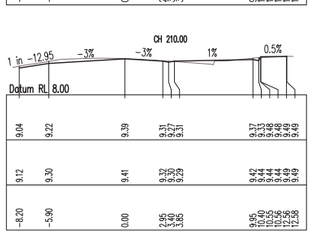

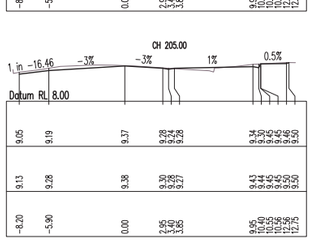

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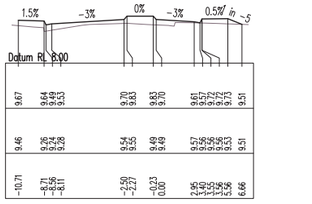

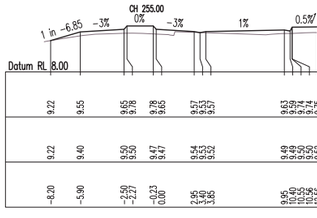

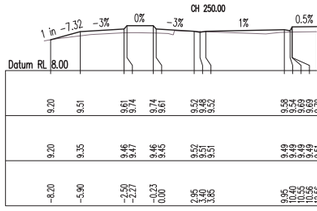

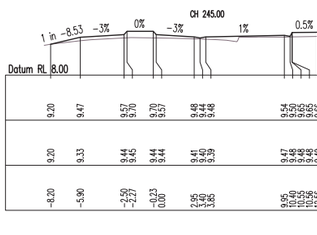

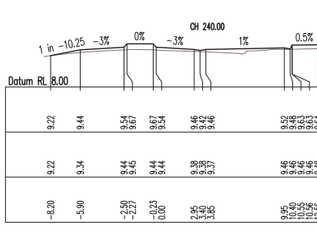

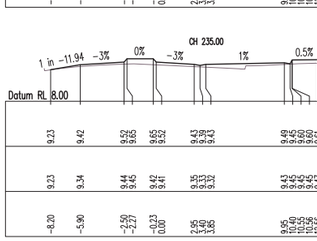

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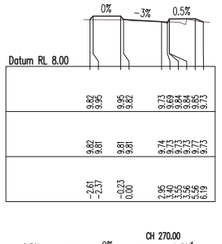

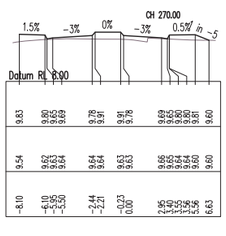

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FOR NOTES AND LEGENDS REFER TO DRAWING No C01.

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Rev	Description	Eng	Draft	Date
P1	PRELIMINARY	PL	CR	19.09.08

Project

LIVERPOOL HOSPITAL - HART STREET UPGRADE

Sheet Subject

ROAD CROSS SECTION PLAN SHEET 2

Architect

VERTICAL 1:200 AT ORIGINAL SIZE
HORIZONTAL 1:1000 AT ORIGINAL SIZE

0 2 4 6 8 10 m
0 10 20 30 40 50 m

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Scale : B1	Drawn	Authorised
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Job No	Drawing No	Revision
071850	C08	P1

Plot File Created: Sep 19, 2008 - 4:07pm

PRELIMINARY

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APPENDIX B

Amended Documentation

- **Appendix C – Amended Hart Street Documentation dated October 2010**, including:
  - Civil Works for Liverpool Hospital – Remembrance Avenue and Hart Street Upgrade, prepared by Taylor Thomson Whitting
  - Remembrance Avenue and Hart Street Upgrade Landscape Plan, prepared by LFA (Pacific) Pty. Ltd

NSW HEALTH

Liverpool Hospital Redevelopment - Stage 2

Infrastructure and
Ancillary Hospital Works

Section 75W Modification Request

Appendix C

Amended Hart Street Documentation

- Siteworks plan
- Landscaping plan

October 2010

Prepared by: LFA (Pacific) Pty Ltd
and
Capital Insight Pty Ltd

In conjunction with: Taylor Thomson Whitting

For: Department of Planning

On behalf of : NSW Health

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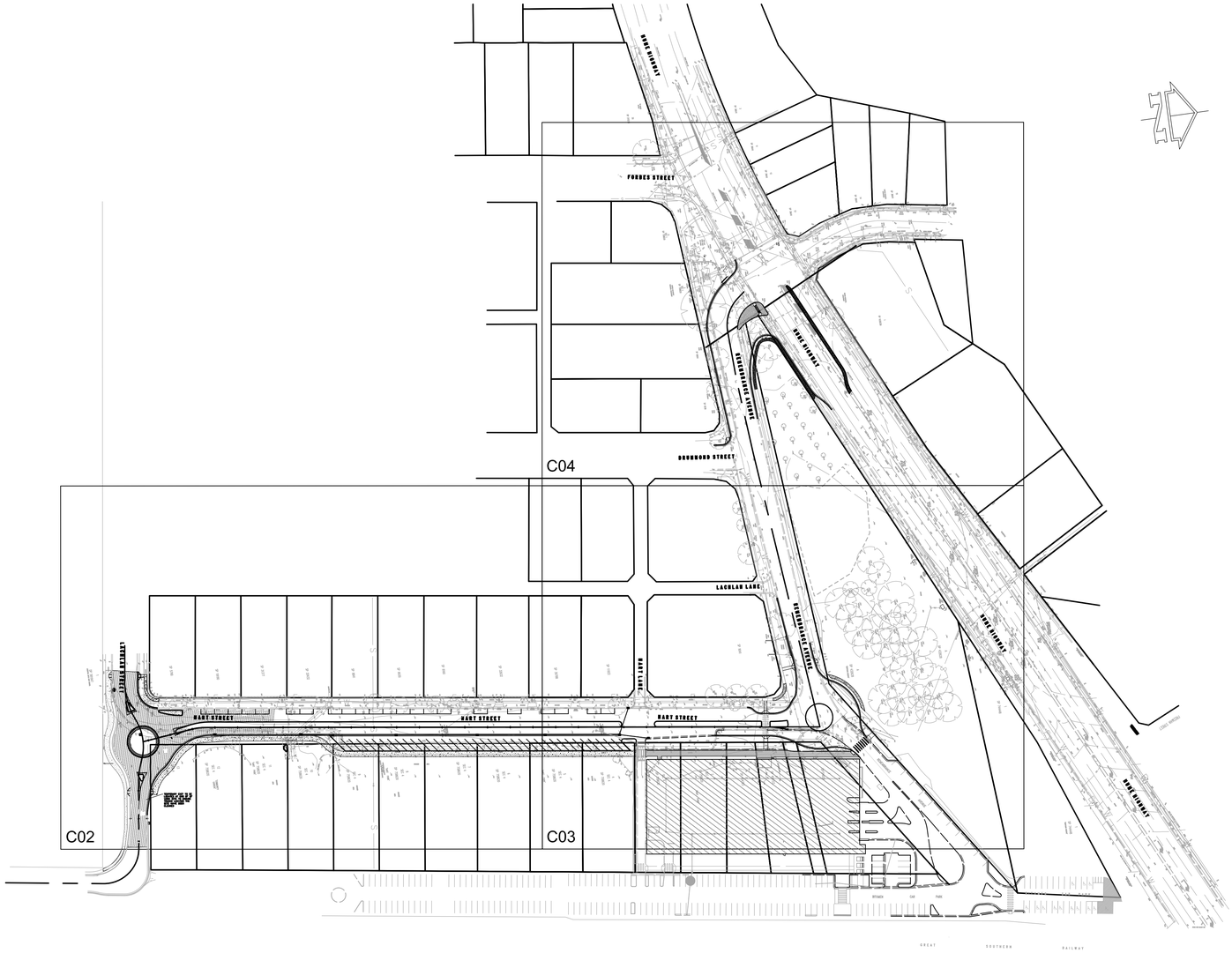
CIVIL WORKS FOR LIVERPOOL HOSPITAL
REMEMBRANCE AVE & HART STREET UPGRADE



CIVIL DRAWING LIST

Drawing No	Drawing Title
C00	COVER SHEET
C01	NOTES AND LEGEND SHEET
C02	SITEWORKS PLAN SHEET 1
C03	SITEWORKS PLAN SHEET 2
C04	SITEWORKS PLAN SHEET 3
C05	DETAILS SHEET 1
C06	SITEWORKS SECTIONS SHEET
C07	LONGITUDINAL SECTIONS SHEET
C08	HART ST CROSS SECTIONS SHEET 1
C09	HART ST CROSS SECTIONS SHEET 2
C10	REMEMBRANCE AVE CROSS SECTIONS SHEET 1

Rev	Description	Eng	Draft	Date
P4	PRELIMINARY	PL	EN	29.09.10
P3	PRELIMINARY	PL	EN	10.09.10
P2	ISSUE FOR PROJECT SUBMISSION	PL	CR	23.10.08
P1	PRELIMINARY	PL	CR	19.09.08

Project

LIVERPOOL HOSPITAL - REMEMBRANCE AVE & HART STREET UPGRADE

Sheet Subject

COVER SHEET

Architect

LFA (PACIFIC) Pty Ltd
SUITE 4, 2 NEW MCLEAN STREET
EDGECLIFF, NSW 2027

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Taylor Thomson Whitting (NSW) Pty Ltd A.C.N. 113 578 377

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1:1000	C.R	

Job No	Drawing No	Revision
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GENERAL NOTES

1. Contractor must verify all dimensions and existing levels on site prior to commencement of works. Any discrepancies to be reported to the SUPERINTENDENT.
2. Strip all topsoil from the construction area. All stripped topsoil shall be disposed of off-site unless directed otherwise.
3. Make smooth connection with all existing works.
4. Compact subgrade under buildings and pavements to minimum 98% standard maximum dry density in accordance with AS 1289 5.1.1. Compaction under buildings to extend 2m minimum beyond building footprint.
5. All work on public property, property which is to become public property, or any work which is to come under the control of the Statutory Authority is to be carried out in accordance with the requirements of the relevant Authority. The Contractor shall obtain these requirements from the Authority. Where the requirements of the Authority are different to the drawings and specifications, the requirements of the Authority shall be applicable.
6. For all temporary batters refer to geotechnical recommendations.

REFERENCE DRAWINGS

1. These drawings have been based from, and to be read in conjunction with the following Consultants drawings. Any conflict to the drawings must be notified immediately to the Engineer.

Consultant	Dwg Title	Dwg No	Rev	Date

PIT SCHEDULE

Note: Grate size does not necessarily reflect pit size, refer pit type details, shown on detail sheets – C07

Type	Description	Cover (Clear Opening)	Number
A	Kerb inlet pit 2.4m lintel	'Sag pit' 450 x 900 Class D galvanised mild steel grate hinged to frame	1,2,3,4,5,6, 7,29,30
		'On grade pit' 450 x 900 Class D galvanised mild steel grate hinged to frame	10,11,12, 13,15,17,23, 25,26,27,28
B	Junction pit	600 x 900 Class D cast iron cover with concrete infill	14
C	Headwall	Concrete headwall to suit 300x750 RCBC	8,16
D		Existing pit to remain	9,24
E	'V' drain	450 x 900 Class D galvanised mild steel grate hinged to frame	18,19,20,21, 22

EROSION AND SEDIMENT CONTROL NOTES

1. All work shall be generally carried out in accordance with
   (A) Local authority requirements,
   (B) EPA – Pollution control manual for urban stormwater,
   (C) Department of conservation and land management manual– "Urban Erosion & Sediment Control".
2. Erosion and sediment control **drawings and notes** are provided for the whole of the works. Should the Contractor stage these works then the design may require to be modified. Variation to these details may require to be approved by the relevant authorities. The erosion and sediment control **plan** shall be implemented and adopted to meet the varying situations as work on site progresses.
3. Maintain all erosion and sediment control devices to the satisfaction of the superintendent and the local authority.
4. When stormwater pits are constructed prevent site runoff entering the pits unless silt fences are erected around pits.
5. Minimise the area of site being disturbed at any one time.
6. Protect all stockpiles of materials from scour and erosion. Do not stockpile loose material in roadways, near drainage pits or in watercourses.
7. All soil and water control measures are to be put back in place at the end of each working day, and modified to best suit site conditions.
8. Control water from upstream of the site such that it does not enter the disturbed site.
9. All construction vehicles shall enter and exit the site via the temporary construction entry/exit.
10. All vehicles leaving the site shall be cleaned and inspected before leaving.
11. Maintain all stormwater pipes and pits clear of debris and sediment. Inspect stormwater system and clean out after each storm event.
12. Clean out all erosion and sediment control devices after each storm event.

Sequence Of Works

1. Prior to commencement of excavation the following soil management devices must be installed.
1.1. Construct silt fences below the site and across all potential runoff sites.
1.2. Construct temporary construction entry/exit and divert runoff to suitable control systems.
1.3. Construct measures to divert upstream flows into existing stormwater system.
1.4. Construct sedimentation traps/basin including outlet control and overflow.
1.5. Construct turf lined swales.
1.6. Provide sandbag sediment traps upstream of existing pits.
2. Construct geotextile filter pit surround around all proposed pits as they are constructed.
3. On completion of pavement provide sand bag kerb inlet sediment traps around pits.
4. Provide and maintain a strip of turf on both sides of all roads after the construction of kerbs.

PAVEMENT LEGEND

40mm Thickness asphaltic concrete (AC10) on
120mm Compacted thickness fine crushed rock (DGB20) on
220mm Compacted thickness fine crushed rock (DGS40)

80mm Thickness concrete (f'c=32MPa) with SL92 fabric (40 top cover) on
100mm Compacted thickness fine crushed rock (DGB 20)

NOTE
Asphaltic concrete shall conform to AS2150 and the specification
Assumed CBR = 3%

SURVEY AND SERVICES INFORMATION

SURVEY
Origin of levels : PM 15953 RL 8.844
Datum of levels : A.H.D. AUSTRALIAN HEIGHT DATUM
Coordinate system : MGA
Survey prepared by : JMD
Setout Points : CONTACT THE SURVEYOR

Taylor Thomson Whitting does not guarantee that the survey information shown on these drawings is accurate and will accept no liability for any inaccuracies in the survey information provided to us from any cause whatsoever.

UNDERGROUND SERVICES – WARNING
The locations of underground services shown on Taylor Thomson Whittings drawings 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.

Taylor Thomson Whitting does not guarantee that the services information shown on these drawings 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.

The Contractor must confirm the exact location and extent of services prior to construction and notify any conflict with the drawings immediately to the Engineer/Superintendent.

The contractor is to get approval from relevant the state survey department, to remove any survey mark. This includes but is not limited to; State Survey Marks (SSM), Permanent Marks (PM), cadastral reference marks or any other survey mark which is to be removed or adjusted in any way.
Taylor Thomson Whitting plans do not indicate the presence of any survey mark. The contractor is to undertake their own search.

BOUNDARY AND EASEMENT NOTE

The property boundary and easement locations shown on Taylor Thomson Whitting drawing's have been based from information received from : **No boundary information received. Refer architect for boundary information and locations**

Taylor Thomson Whitting makes no guarantees that the boundary or easement information shown is correct.
Taylor Thomson Whitting will accept no liabilities for boundary inaccuracies. The contractor/builder is advised to check/confirm all boundaries in relation to all proposed work prior to the commencement of construction. Boundary inaccuracies found are to be reported to the superintendent prior to construction starting.

STORMWATER DRAINAGE NOTES

1 Stormwater Design Criteria :
   (A) Average recurrence interval –
      1:100 years for roof drainage to first external pit
      1:20 years for paved and landscaped areas
   (B) Rainfall intensities –
      Time of concentration: 6 minutes
      1:100 years = 215.49 mm/hr
      1:20 years = 167.79 mm/hr
   (C) Runoff coefficients –
      Roof areas: C_{100} = 1.00
      Roads and paved areas: C_{20} = 0.95
      Landscaped areas: C_{20} = 0.75

2. Pipes 300 dia and larger to be reinforced concrete Class "2" approved spigot and socket with rubber ring joints U.N.O.
3. Pipes up to 300 dia shall be sewer grade uPVC with solvent welded joints.
4. Equivalent strength VCP or FCP pipes may be used subject to approval.
5. Precast pits may be used external to the building subject to approval by
6. Enlargers, connections and junctions to be manufactured fittings where pipes are less than 300 dia.
7. Where subsoil drains pass under floor slabs and vehicular pavements, unslotted uPVC sewer grade pipe is to be used.
8. Grates and covers shall conform with AS 3996–2006, and AS 1428.1 for access requirements.
9. Pipes are to be installed in accordance with AS 3725. All bedding to be type H2 U.N.O.
10. Care is to be taken with levels of stormwater lines. Grades shown are not to be reduced without approval.
11. All stormwater pipes to be 150 dia at 1.0% min fall U.N.O.
12. Subsoil drains to be slotted flexible uPVC U.N.O.
13. Adopt invert levels for pipe installation (grades shown are only nominal).

SIGNS AND LINE MARKING NOTES

1. Pavement marking and sign posting on public roads shall be in accordance with the requirements of the relevant Road Authority. The contractor shall obtain these requirements from the Road Authority.
1. Pavement marking and sign posting to be in accordance with R.T.A. 'Interim Guide to Signs and Markings'.
2. Contractor is to provide guide posts, spaced in accordance with AS1742.2. They are to be located near all head walls and pipe outlets.
3. Raised pavement markers to be in accordance with AS1742.2
4. Where existing pavement marking conflicts with proposed, it is to be removed.
5. Lane widths do not include width of gutter.
6. Line marking plan does not define boundaries.
7. Erect temporary sign 'changed traffic conditions ahead' 120m ahead of new work in both directions.
8. Establish the location of existing utility services and locate new signs clear of these installations.
9. The sloped face of the SF median kerbs which adjoin through lanes, are to be painted white in lieu of an E.3 edge line. The reflective pavement markers normally associated with an E.3 edge line are to be located on the pavement adjacent to the SF kerb.
10. Bicycle pavement markings and sign posting to be in accordance with Austroads Standards.
11. The design of major directional sign posting to be prepared and assessed by the R.T.A.

CONCRETE FINISHING NOTES

1. All exposed concrete pavements are to be broomed finished.
2. All edges of the concrete pavement including keyed and dowelled joints are to be finished with an edging tool.
3. Concrete pavements with grades greater than 10 % shall be heavily broomed finished.
4. Carborundum to be added to all stair treads and ramped crossings U.N.O.

SITEWORKS LEGEND

- F22.20 — Finished surface level
- F22.00 — Finished contour
- K&G — Kerb and gutter
- KO — Kerb only
- MK — Mountable kerb
- DD — Dish drain
- IL10.00 / 600 ø 'Z' / 1.25% / Q=345 L/s / IL9.65 — Stormwater pit, flow direction and line with; Invert level upstream; Pipe size and class; Pipe grade; Flow (Litres per second); Invert level downstream
- Subsoil drainage line (100 dia)
- FP — Flushing point
- DP — Down pipe
- RP — Rodding point
- Concrete encased stormwater line
- Stormwater line with pipe taper and flow direction
- Taper kerb to zero height over 500 mm
- Wheelstop
- RW — Blockwork retaining wall
- RW — Brickwork retaining wall
- DEJ — Dowelled expansion joint
- SJ — Sawn joint
- KJ — Keyed construction joint
- WPJ — Weakened plane joint
- EJ — Expansion joint
- TKJ — Tied keyed joint
- Grass catch drain
- Overland flow path
- Guard Rail

SURVEY LEGEND

- +18.48 — Surface level
- 19 — Contour
- Kerb line
- Batter
- Retaining wall
- SW — Stormwater drainage line
- T — Telecommunications line
- G — Gas line
- W — Water main
- S — Sewer line
- EASEMENT FOR ____(...m WIDE) — Easement
- Fence
- Tree to be removed/be retained
- Boundary
- SGN — Sign
- H — Hydrant
- MH — Manhole
- G — Gas
- SV — Stop Valve
- W — Water
- TEL — Telstra
- TRAP — Trap
- Gully
- Grate
- S — Sewer Manhole
- E — Energy Australia (Electricity)
- ELP — Electric Light Pole
- TL — Traffic Light
- TLL — Traffic Light Lid
- TLB — Traffic Light Box
- TB — Telephone Box
- PKM — Parking Meter
- PM 1234 — Permanent Mark
- BM 51.10 — Bench Mark

SITEWORKS NOTES

1. All basecourse material to comply with RTA specification No 3051 and compacted to minimum 98% modified standard dry density in accordance with AS 1289 5.2.1.
2. All trench backfill material shall be compacted to the same density as the adjacent material.
3. All service trenches under vehicular pavements shall be backfilled with an approved select material and compacted to a minimum 98% standard maximum dry density in accordance with AS 1289 5.1.1

KERBING NOTES

Includes all kerbs, gutters, dish drains, crossings and edges.

1. All kerbs, gutters, dish drains and crossings to be constructed on minimum 75mm granular basecourse compacted to minimum 98% modified maximum dry density in accordance with AS 1289 5.2.1.
2. Expansion joints (EJ) to be formed from 10mm compressible cork filler board for the full depth of the section and cut to profile. Expansion joints to be located at drainage pits, on tangent points of curves and elsewhere at 12m centres except for integral kerbs where the expansion joints are to match the joint locations in slabs.
3. Weakened plane joints to be min 3mm wide and located at 3m centres except for integral kerbs where weakened plane joints are to match the joint locations in slabs.
4. Broomed finished to all ramped and vehicular crossings, all other kerbing or dish drains to be steel float finished.
5. In the replacement of kerbs –
   Existing road pavement is to be sawcut 900mm from lip of gutter. Upon completion of new kerbs, new basecourse and surface is to be laid 900mm wide to match existing materials and thicknesses.
   Existing allotment drainage pipes are to be built into the new kerb with a 100mm dia hole.
   Existing kerbs are to be completely removed where new kerbs are shown.

REINFORCEMENT NOTES

1. Fix reinforcement as shown on drawings. The type and grade is indicated by a symbol as shown below. On the drawings this is followed by a numeral which indicates the size in millimetres of the reinforcement.

   N. Hot rolled ribbed bar — grade D500N
   R. Plain round bar — grade R250N
   SL. Square mesh — grade 500L
   RL. Rectangular mesh — grade 500L

2. Provide bar supports or spacers to give the following concrete cover to all reinforcement unless otherwise noted on drawings.

   Footings – –– top, –– bottom, –– sides.
   Slabs – –– top, –– bottom, ––
   – –– when exposed to weather or ground.
   Beams – –– bottom, –– sides, –– top to ties
   Columns – –– to ties and spirals.
   – –– when exposed to weather or ground.
   Walls – –– generally.
   – –– when cast in forms but later exposed to weather or ground.
   – –– when cast directly in contact with ground.
3. Cover to reinforcement ends to be 50 mm u.n.o.
4. Provide N12–450 support bars to top reinforcement as required , Lap 450. U.N.O.
5. Maintain cover to all pipes, conduits, reglets, drip grooves etc
6. Laps in reinforcement shall be made only where shown on the drawings unless otherwise approved. Lap lengths shall be 40 bar dia. unless noted otherwise.
7. All cogs to be standard cogs unless noted otherwise.
8. Fabric end and side laps are to be placed strictly in accordance with the manufacturers requirements to achieve a full tensile lap. Fabric shall be laid so that there is a maximum of 3 layers at any location.

FABRIC LAPS — 25

CONCRETE NOTES

EXPOSURE CLASSIFICATION : External :
Internal :

CONCRETE

Place concrete of the following characteristic compressive strength f'c as defined in AS 1379.

Location	AS 1379 f'c MPa at 28 days	Specified Slump	Nominal Agg. Size
X	S––	80	20
Warehouse pavements	SF––at 90 days	80	20

1. Use Type 'GP' cement, unless otherwise specified.
2. All concrete shall be subject to project assessment and testing to AS 1379.
3. Consolidate by mechanical vibration. Cure all concrete surfaces as directed in the Specification.
4. For all falls in slab, drip grooves, reglets, chamfers etc. refer to Architects drawings and specifications.
5. Unless shown on the drawings, the location of all construction joints shall be submitted to Engineer for review.
6. No holes or chases shall be made in the slab without the approval of the Engineer.
7. Conduits and pipes are to be fixed to the underside of the top reinforcement layer.
8. Slurry used to lubricate concrete pump lines is not to be used in any structural members.
9. All slabs cast on ground require sand blinding with a Concrete Underlay
10. ⟨170⟩ Indicates Slab or Band thickness variation.

FORMWORK

1. The design, certification, construction and performance of the formwork, falsework and backpropping shall be the responsibility of the contractor. Proposed method of installation and removal of formwork is to be submitted to the superintendent for comment prior to work being carried out.

KERBING NOTES

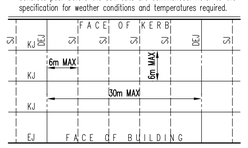
Includes all kerbs, gutters, dish drains, crossings and edges.

1. All kerbs, gutters, dish drains and crossings to be constructed on minimum 75mm granular basecourse compacted to minimum 98% modified maximum dry density in accordance with AS 1289 5.2.1.
2. Expansion joints (EJ) to be formed from 10mm compressible cork filler board for the full depth of the section and cut to profile. Expansion joints to be located at drainage pits, on tangent points of curves and elsewhere at 12m centres except for integral kerbs where the expansion joints are to match the joint locations in slabs.
3. Weakened plane joints to be min 3mm wide and located at 3m centres except for integral kerbs where weakened plane joints are to match the joint locations in slabs.
4. Broomed finished to all ramped and vehicular crossings, all other kerbing or dish drains to be steel float finished.
5. In the replacement of kerbs –
   Existing road pavement is to be sawcut 900mm from lip of gutter. Upon completion of new kerbs, new basecourse and surface is to be laid 900mm wide to match existing materials and thicknesses.
   Existing allotment drainage pipes are to be built into the new kerb with a 100mm dia hole.
   Existing kerbs are to be completely removed where new kerbs are shown.

JOINTING NOTES

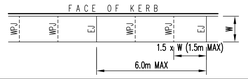
Vehicular Pavement Jointing

1. All vehicular pavements to be jointed as shown on drawings.
2. Keyed construction joints should generally be located at a maximum of 6m centres.
3. Sawn joints should generally be located at a maximum of 6m centres or 1.5 x the spacing of keyed joints, where key joint spacing is less than 4m, with dowelled expansion joints at maximum of 30m centres.
4. Provide 10mm wide full depth expansion joints between buildings and all concrete or unit pavers.
5. Vehicular pavement jointing as follows.
6. The timing of the saw cut is to be confirmed by the contractor on site. Site conditions will determine how many hours after the concrete pour before the saw cuts are commenced. Refer to the specification for weather conditions and temperatures required.



Pedestrian Footpath Jointing

1. Expansion joints are to be located where possible at tangent points of curves and elsewhere at max 6.0m centres.
2. Weakened plane joints are to be located at a max 1.5 x width of the pavement.
3. Where possible joints should be located to match kerbing and / or adjacent pavement joints.
4. All pedestrian footpath jointings as follows (uno).



LINEMARKING LEGEND

- E1 — Edge line type E1
- E5 — Edge line type E5
- BB — Barrier line
- TB — Holding line
- TF — Stop line
- C1 — Continuity line
- T1 — Turn line
- S1 — Separation line type S1
- S2 — Separation line type S2
- L1 — Lane line type L1
- B1 — Bike lane line
- PCW — Signalised pedestrian crossing

NOTE
Line marking to be in accordance with AS1742.2 and the relevant local or state authority guidelines

Rev	Description	Eng	Draft	Date
P3	PRELIMINARY	PL	EN	15.10.10
P2	ISSUE FOR PROJECT SUBMISSION	PL	CR	23.10.08
P1	ISSUE FOR COMMENT	PL	CR	19.09.08

Project
LIVERPOOL HOSPITAL - REMEMBRANCE AVE & HART STREET UPGRADE

Sheet Subject
NOTES AND LEGENDS SHEET

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Scale : B1 — Drawn — Authorised
NO SCALE — TB

Job No 071850 — Drawing No C01 — Revision P3

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PRELIMINARY

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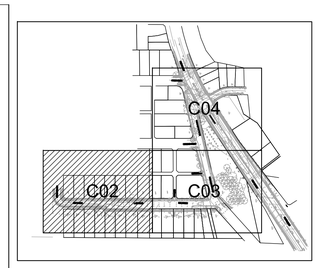

KEY PLAN

FOR NOTES AND LEGENDS REFER TO DRAWING No C01.

CONTRACTOR IS TO LOCATE ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF WORK

FOR CONTINUATION REFER TO DRAWING No C03

LACHLAN STREET

HART STREET

LOCATE ADVANCED WARNING SIGN 50m FROM INTERSECTION

MAKE SMOOTH CONNECTION WITH EXISTING WORKS

INSTALL SUBSOIL AT PAVEMENT INTERFACE TYPICAL

PROVIDE FOOTPATH TO LIVERPOOL CITY COUNCIL'S DETAIL TYPICAL

PROVIDE PRAM RAMP TO LIVERPOOL CITY COUNCIL'S DETAIL TYPICAL

INSTALL RRPM'S AT 12.0m CTS TYPICAL OR AS SHOWN

LINE 3

LINE 4

LINE 5

SCALE 1:250 0 2.5 5 7.5 10 12.5 m
AT ORIGINAL SIZE

Rev	Description	Eng	Draft	Date
P5	PRELIMINARY	PL	EN	29.09.10
P4	PRELIMINARY	PL	EN	10.09.10
P3	ISSUE FOR PROJECT SUBMISSION	PL	CR	23.10.08
P2	ISSUE FOR COMMENT	PL	CR	19.09.08
P1	ISSUE FOR COMMENT	PL	CR	08.08.08

Project

LIVERPOOL HOSPITAL - REMEMBRANCE AVE & HART STREET UPGRADE

Sheet Subject

SITEWORKS PLAN SHEET 1

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Scale : B1	Drawn	Authorised
1:250	TB	

Job No	Drawing No	Revision
071850	C02	P5

Plot File Created: Oct 15, 2010 - 9:08am

PRELIMINARY

FileName: C02.dwg – USER: matthewk – Plot File Created: Oct 15, 2010 - 9:08am

FOR CONTINUATION REFER TO DRAWING NoC04

FOR CONTINUATION REFER TO DRAWING NoC02

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KEY PLAN

FOR NOTES AND LEGENDS REFER TO DRAWING No C01.

CONTRACTOR IS TO LOCATE ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF WORK

SCALE 1:250 0 2.5 5 7.5 10 12.5
AT ORIGINAL SIZE m

Rev	Description	Eng	Draft	Date
P5	PRELIMNARY	PL	EN	29.09.10
P4	PRELIMNARY	PL	EN	10.09.10
P3	ISSUE FOR PROJECT SUBMISSION	PL	CR	23.10.08
P2	ISSUE FOR COMMENT	PL	CR	19.09.08
P1	ISSUE FOR COMMENT	PL	CR	08.08.08

Project

LIVERPOOL HOSPITAL - REMEMBRANCE AVE & HART STREET UPGRADE

Sheet Subject

SITEWORKS PLAN
SHEET 2

Architect

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Scale : B1	Drawn	Authorised
1:250	TB	

Job No	Drawing No	Revision
071850	C03	P5

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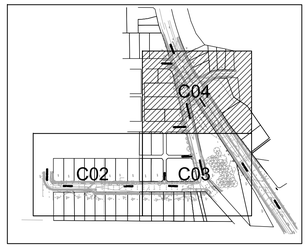

KEY PLAN

FOR NOTES AND LEGENDS REFER TO DRAWING No C01.

CONTRACTOR IS TO LOCATE ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF WORK

FORBES STREET

HUME HIGHWAY

REMEMBRANCE AVENUE

DRUMMOND STREET

CONSTRUCT CONCRETE BARRIER KERB AND GUTTER AND MATCH TO EXISTING

MODIFY WALL TO SUIT NEW LEVELS

REMOVE EXISTING PATH

MODIFY DRIVEWAY

INSTALL PEDESTRIAN CROSSING

REMOVE EXISTING MEDIAN AND REINSTATE PAVEMENT

MODIFY TELSTRA PIT

NEW FOOTPATH

CONSTRUCT NEW CONCRETE ISLAND AND MATCH INTO EXISTING

CONSTRUCT CONCRETE BARRIER KERB AND GUTTER AND MATCH TO EXISTING

MODIFY DRIVEWAY

CONSTRUCT CONCRETE BARRIER KERB AND GUTTER AND MATCH TO EXISTING

MODIFY PRAM RAMP

FOR CONTINUATION REFER TO DRAWING NoC03

SCALE 1:250 0 2.5 5 7.5 10 12.5 m
AT ORIGINAL SIZE

Rev	Description	Eng	Draft	Date
P5	PRELIMINARY	PL	EN	29.09.10
P4	PRELIMINARY	PL	EN	10.09.10
P3	ISSUE FOR PROJECT SUBMISSION	PL	CR	23.10.08
P2	ISSUE FOR COMMENT	PL	CR	19.09.08
P1	ISSUE FOR COMMENT	PL	CR	08.08.08

Project

LIVERPOOL HOSPITAL - REMEMBRANCE AVE & HART STREET UPGRADE

Sheet Subject

SITEWORKS PLAN SHEET 3

Architect

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Scale : B1	Drawn	Authorised
1:250	TB	

Job No	Drawing No	Revision
071850	C04	P5

Plot File Created: Oct 15, 2010 - 8:45am

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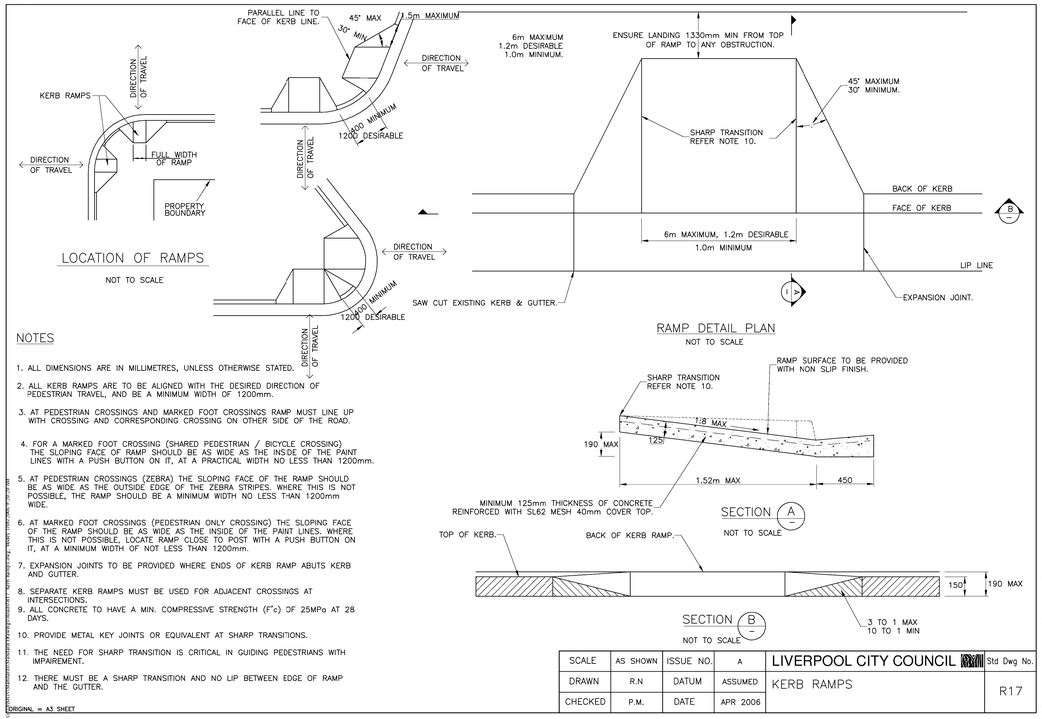

NOTES

1. ALL DIMENSIONS ARE IN MILLIMETRES, UNLESS OTHERWISE STATED.
2. ALL KERB RAMPS ARE TO BE ALIGNED WITH THE DESIRED DIRECTION OF PEDESTRIAN TRAVEL, AND BE A MINIMUM WIDTH OF 1200mm.
3. AT PEDESTRIAN CROSSINGS AND MARKED FOOT CROSSINGS RAMP MUST LINE UP WITH CROSSING AND CORRESPONDING CROSSING ON OTHER SIDE OF THE ROAD.
4. FOR A MARKED FOOT CROSSING (SHARED PEDESTRIAN / BICYCLE CROSSING) THE SLOPING FACE OF RAMP SHOULD BE AS WIDE AS THE INSIDE OF THE PAINT LINES WITH A PUSH BUTTON ON IT, AT A PRACTICAL WIDTH NO LESS THAN 1200mm.
5. AT PEDESTRIAN CROSSINGS (ZEBRA) THE SLOPING FACE OF THE RAMP SHOULD BE AS WIDE AS THE OUTSIDE EDGE OF THE ZEBRA STRIPES. WHERE THIS IS NOT POSSIBLE, THE RAMP SHOULD BE A MINIMUM WIDTH NO LESS THAN 1200mm WIDE.
6. AT MARKED FOOT CROSSINGS (PEDESTRIAN ONLY CROSSING) THE SLOPING FACE OF THE RAMP SHOULD BE AS WIDE AS THE INSIDE OF THE PAINT LINES. WHERE THIS IS NOT POSSIBLE, LOCATE RAMP CLOSE TO POST WITH A PUSH BUTTON ON IT, AT A MINIMUM WIDTH OF NOT LESS THAN 1200mm.
7. EXPANSION JOINTS TO BE PROVIDED WHERE ENDS OF KERB RAMP ABUTS KERB AND GUTTER.
8. SEPARATE KERB RAMPS MUST BE USED FOR ADJACENT CROSSINGS AT INTERSECTIONS.
9. ALL CONCRETE TO HAVE A MIN. COMPRESSIVE STRENGTH (F'c) OF 25MPa AT 28 DAYS.
10. PROVIDE METAL KEY JOINTS OR EQUIVALENT AT SHARP TRANSITIONS.
11. THE NEED FOR SHARP TRANSITION IS CRITICAL IN GUIDING PEDESTRIANS WITH IMPAIREMENT.
12. THERE MUST BE A SHARP TRANSITION AND NO LIP BETWEEN EDGE OF RAMP AND THE GUTTER.

ORIGINAL = A3 SHEET

SCALE	AS SHOWN	ISSUE NO.	A	LIVERPOOL CITY COUNCIL	Std Dwg No.
DRAWN	R.N	DATUM	ASSUMED	KERB RAMPS	R17
CHECKED	P.M.	DATE	APR 2006		

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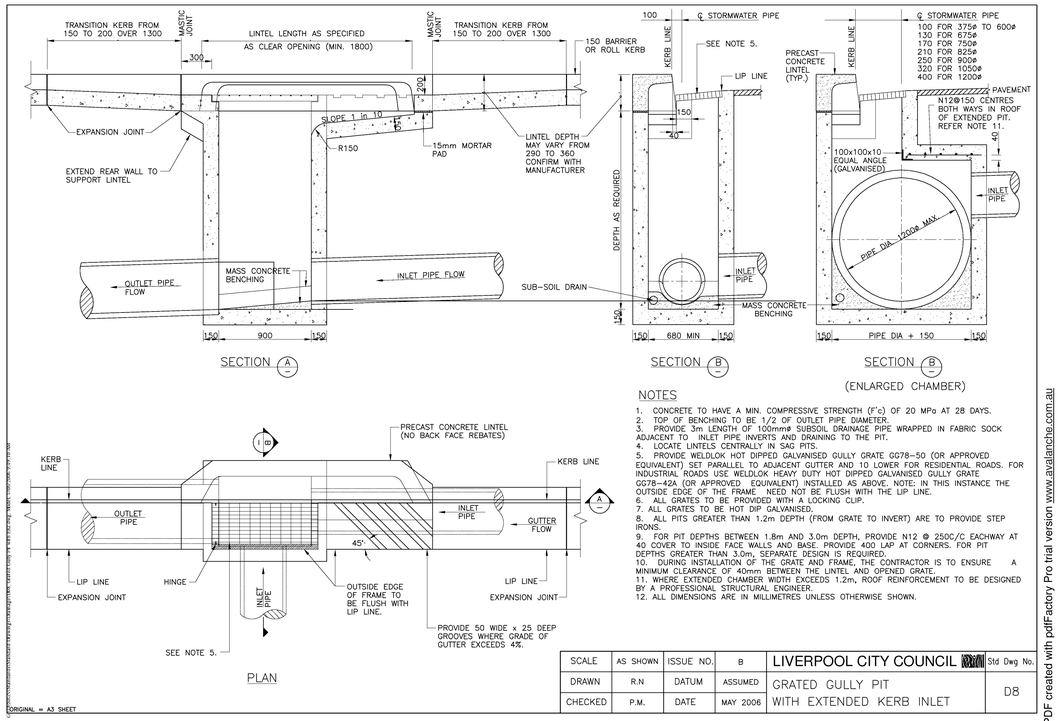

NOTES

1. CONCRETE TO HAVE A MIN. COMPRESSIVE STRENGTH (F'c) OF 20 MPa AT 28 DAYS.
2. TOP OF BENCHING TO BE 1/2 OF OUTLET PIPE DIAMETER.
3. PROVIDE 3m LENGTH OF 100mmø SUBSOIL DRAINAGE PIPE WRAPPED IN FABRIC SOCK ADJACENT TO INLET PIPE INVERTS AND DRAINING TO THE PIT.
4. LOCATE LINTELS CENTRALLY IN SAG PITS.
5. PROVIDE WELDLOK HOT DIPPED GALVANISED GULLY GRATE GG78-50 (OR APPROVED EQUIVALENT) SET PARALLEL TO ADJACENT GUTTER AND 10 LOWER FOR RESIDENTIAL ROADS. FOR INDUSTRIAL ROADS USE WELDLOK HEAVY DUTY HOT DIPPED GALVANISED GULLY GRATE GG78-42A (OR APPROVED EQUIVALENT) INSTALLED AS ABOVE. NOTE: IN THIS INSTANCE THE OUTSIDE EDGE OF THE FRAME NEED NOT BE FLUSH WITH THE LIP LINE.
6. ALL GRATES TO BE PROVIDED WITH A LOCKING CLIP.
7. ALL GRATES TO BE HOT DIP GALVANISED.
8. ALL PITS GREATER THAN 1.2m DEPTH (FROM GRATE TO INVERT) ARE TO PROVIDE STEP IRONS.
9. FOR PIT DEPTHS BETWEEN 1.8m AND 3.0m DEPTH, PROVIDE N12 @ 250C/C EACHWAY AT 40 COVER TO INSIDE FACE WALLS AND BASE. PROVIDE 400 LAP AT CORNERS. FOR PIT DEPTHS GREATER THAN 3.0m, SEPARATE DESIGN IS REQUIRED.
10. DURING INSTALLATION OF THE GRATE AND FRAME, THE CONTRACTOR IS TO ENSURE A MINIMUM CLEARANCE OF 40mm BETWEEN THE LINTEL AND OPENED GRATE.
11. WHERE EXTENDED CHAMBER WIDTH EXCEEDS 1.2m, ROOF REINFORCEMENT TO BE DESIGNED BY A PROFESSIONAL STRUCTURAL ENGINEER.
12. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE SHOWN.

ORIGINAL = A3 SHEET

SCALE	AS SHOWN	ISSUE NO.	B	LIVERPOOL CITY COUNCIL	Std Dwg No.
DRAWN	R.N	DATUM	ASSUMED	GRATED GULLY PIT WITH EXTENDED KERB INLET	D8
CHECKED	P.M.	DATE	MAY 2006		

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PIT TYPE A

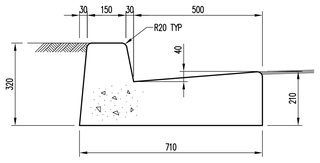
FOR NOTES AND LEGENDS REFER TO DRAWING No C01.

CONTRACTOR IS TO LOCATE ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF WORK

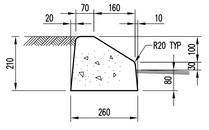
SECTION 1
SCALE 1:20

NOTE:IF REINFORCING FABRIC IS TO BE USED REFER TO WALL AND CORNER DETAILS

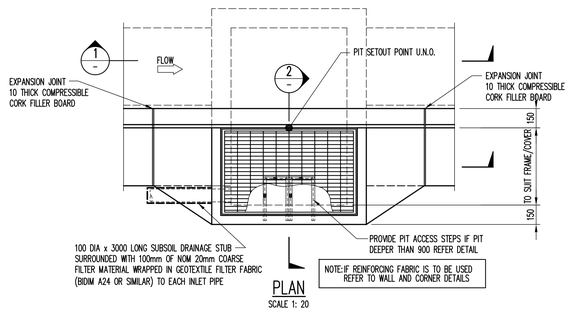
SECTION 2
SCALE 1:20



RTA KERB TYPE - SA
SCALE 1: 10



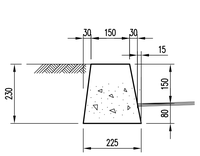
RTA KERB TYPE - SF
SCALE 1: 10



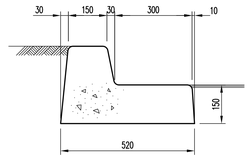
NOTE:IF REINFORCING FABRIC IS TO BE USED REFER TO WALL AND CORNER DETAILS

PLAN
SCALE 1: 20

PIT TYPE B



RTA KERB TYPE - SM
SCALE 1: 10



RTA KERB TYPE - SL
SCALE 1: 10

KERB AND GUTTER (K&G)
SCALE 1: 10

DISH DRAIN (DD)
SCALE 1: 10

MOUNTABLE KERB (MK)
SCALE 1: 10

KERB ONLY (KO)
SCALE 1: 10

FileName: C05.dwg - USER: matthewk - Plot File Created: Oct 15, 2010 - 9:00am

PRELIMINARY

Rev	Description	Eng	Draft	Date
P2	PRELIMINARY	PL	EN	15.10.10
P1	ISSUE FOR COMMENT	PL	CR	19.09.08

Project

LIVERPOOL HOSPITAL - REMEMBRANCE AVE & HART STREET UPGRADE

Sheet Subject

DETAILS SHEET 1

Architect
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Scale : B1	Drawn	Authorised
AS SHOWN	TB	

Job No	Drawing No	Revision
071850	C05	P2

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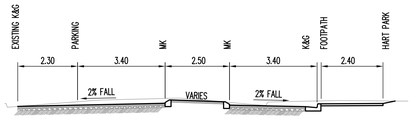
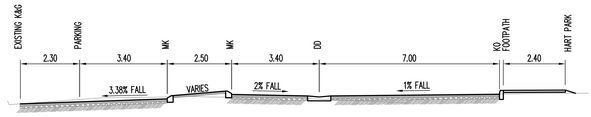
CONTRACTOR IS TO LOCATE ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF WORK



SECTION 3 — C03
SCALE 1:100



SECTION 4 — C04
SCALE 1:100

SCALE 1:100 AT ORIGINAL SIZE 0 1 2 3 4 5 m

Rev	Description	Eng	Draft	Date
P2	PRELIMINARY	PL	EN	15.10.10
P1	ISSUE FOR PROJECT SUBMISSION	PL	CR	23.10.08

Project

LIVERPOOL HOSPITAL - REMEMBRANCE AVE & HART STREET UPGRADE

Sheet Subject

SITEWORK SECTIONS SHEET

Architect

LFA (PACIFIC) Pty Ltd
SUITE 4, 2 NEW MCLEAN STREET
EDGECLIFF, NSW 2027

TaylorThomsonWhitting
Consulting Engineers
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Taylor Thomson Whitting (NSW) Pty Ltd A.C.N. 113 578 377

Scale : B1	Drawn	Authorised
AS SHOWN	TB	

Job No	Drawing No	Revision
071850	C06	P2

Plot File Created: Oct 15, 2010 - 8:58am

PRELIMINARY

File Name: C06.dwg - USER: mathewk - Plot File Created: Oct 15, 2010 - 8:58am

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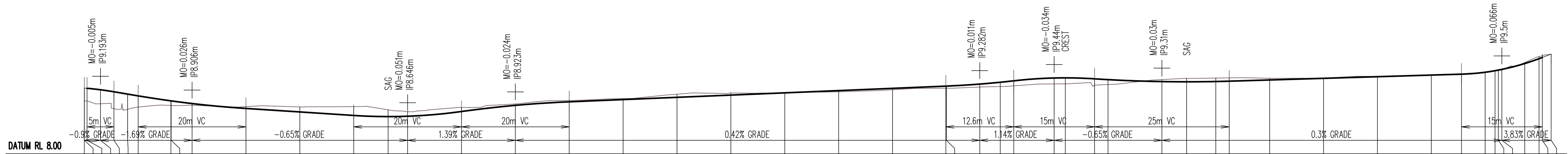

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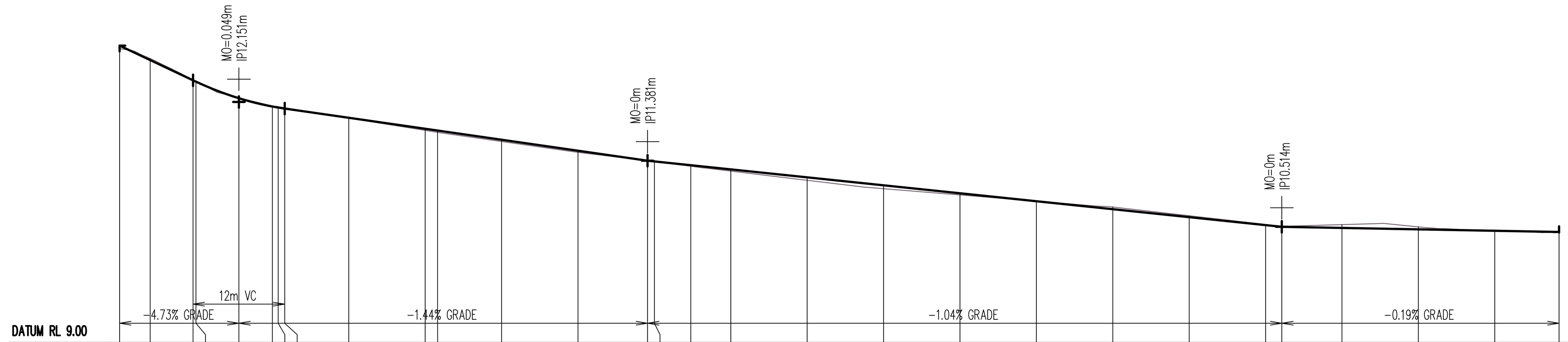
0.50	9.22	8.98
3.00	9.19	8.93
5.50	9.15	8.83
8.04	9.11	8.83
10.00	9.07	8.87
16.08	8.98	8.90
16.11	8.98	8.90
20.00	8.93	8.90
30.00	8.84	8.88
40.00	8.78	8.87
50.00	8.71	8.88
56.39	8.69	8.82
60.00	8.70	8.78
70.00	8.78	8.86
80.00	8.90	8.92
90.00	8.96	8.99
100.00	9.01	9.02
110.00	9.05	9.11
120.00	9.09	9.13
130.00	9.13	9.13
140.00	9.17	9.15
150.00	9.21	9.19
159.90	9.26	9.22
160.00	9.26	9.22
166.20	9.29	9.24
170.00	9.33	9.25
172.50	9.35	9.26
180.00	9.41	9.30
182.07	9.41	9.30
187.50	9.39	9.27
190.00	9.38	9.29
200.00	9.34	9.38
204.59	9.34	9.40
210.00	9.34	9.40
212.50	9.35	9.41
220.00	9.37	9.40
230.00	9.40	9.41
240.00	9.43	9.44
250.00	9.46	9.46
255.60	9.48	9.48
260.00	9.51	9.51
261.83	9.54	9.54
262.44	9.55	9.55
263.10	9.57	9.55
267.34	9.67	9.69
270.00	9.76	9.80
270.60	9.79	9.82
272.24	9.85	9.85

HART STREET LONGITUDINAL SECTION
SCALE 1:500 HORIZONTAL
1:50 VERTICAL



CHAINAGE	PROPOSED CENTRE LINE LEVEL	EXISTING SURFACE LEVEL
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10.00	12.42	12.42
15.61	12.20	12.21
20.00	12.09	12.10
20.76	12.08	12.09
21.61	12.06	12.08
30.00	11.94	11.94
40.00	11.80	11.78
41.62	11.78	11.75
50.00	11.66	11.63
60.00	11.51	11.49
69.11	11.38	11.38
70.00	11.37	11.37
74.77	11.32	11.31
80.00	11.27	11.24
90.00	11.16	11.12
100.00	11.06	11.01
110.00	10.95	10.93
120.00	10.85	10.85
130.00	10.75	10.77
140.00	10.64	10.66
150.00	10.54	10.54
152.12	10.51	10.52
160.00	10.50	10.54
170.00	10.48	10.51
180.00	10.46	10.45
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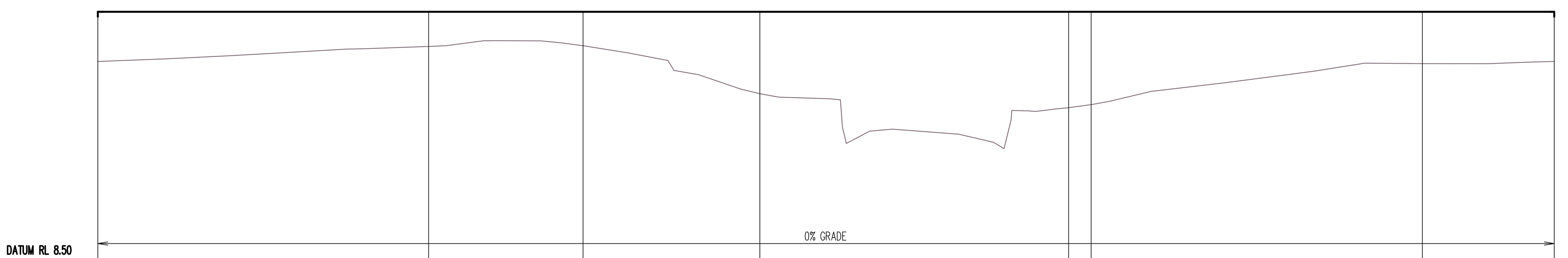
REMEMBERANCE AVENUE LONGITUDINAL SECTION
SCALE 1:500 HORIZONTAL
1:50 VERTICAL



CHAINAGE	PROPOSED KERB LIP LEVEL	EXISTING SURFACE LEVEL
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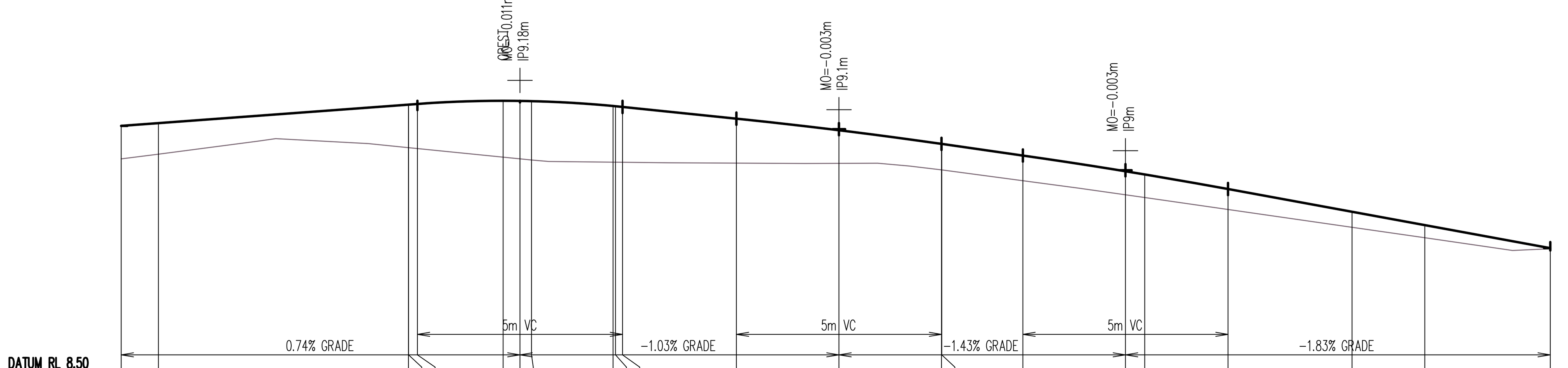
10.00	9.25	9.15
14.66	9.25	9.15
20.00	9.25	9.00
29.32	9.25	8.96
30.00	9.25	8.97
40.00	9.25	9.09
43.98	9.25	9.10

KERB RETURN (KD2)
SCALE 1:100 HORIZONTAL
1:10 VERTICAL



CHAINAGE	PROPOSED KERB LIP LEVEL	EXISTING SURFACE LEVEL
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0.91	9.11	9.04
7.00	9.16	9.05
7.00	9.16	9.05
7.22	9.16	9.05
9.31	9.17	9.03
9.72	9.17	9.03
10.00	9.17	9.02
11.99	9.16	9.02
12.05	9.16	9.02
12.22	9.15	9.02
14.99	9.13	9.02
17.49	9.10	9.02
19.99	9.06	9.00
20.00	9.06	9.00
21.98	9.04	8.97
24.48	9.00	8.94
24.95	8.99	8.93
26.98	8.95	8.90
30.00	8.90	8.86
31.77	8.87	8.84
34.83	8.81	8.81

KERB RETURN (KD3)
SCALE 1:100 HORIZONTAL
1:10 VERTICAL

FOR NOTES AND LEGENDS REFER TO DRAWING No C01.

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VERTICAL 1:50 AT ORIGINAL SIZE — 0 0.5 1 1.5 2 2.5 m
HORIZONTAL 1:500 AT ORIGINAL SIZE — 0 5 10 15 20 25 m

Rev	Description	Eng	Draft	Date
P2	PRELIMINARY	PL	EN	15.10.10
P1	PRELIMINARY	PL	CR	19.09.08

Project
LIVERPOOL HOSPITAL - REMEMBRANCE AVE & HART STREET UPGRADE

Sheet Subject
LONGITUDINAL SECTIONS SHEET

Architect
LFA (PACIFIC) Pty Ltd
SUITE 4, 2 NEW MCLEAN STREET
EDGECLIFF, NSW 2027

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Taylor Thomson Whitting (NSW) Pty Ltd A.C.N. 113 578 377

Scale : B1 AS SHOWN | Drawn TB | Authorised

Job No 071850 | Drawing No C07 | Revision P2

PRELIMINARY

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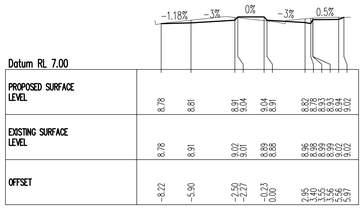

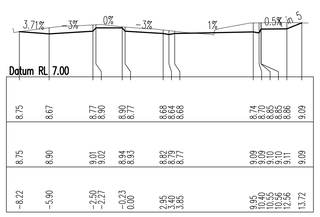

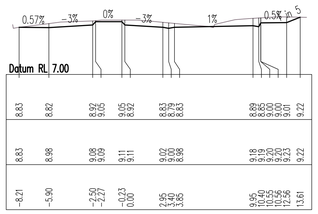

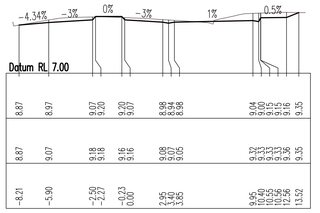

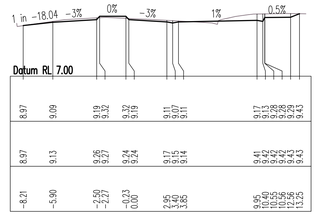

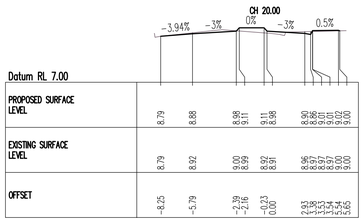

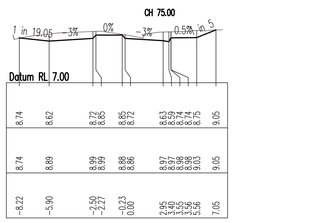

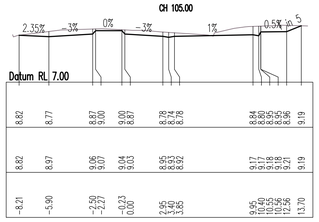

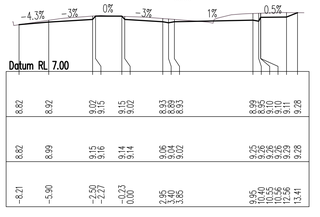

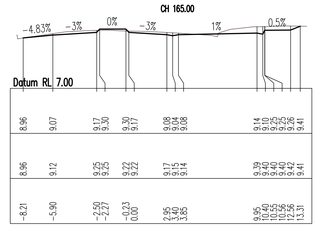

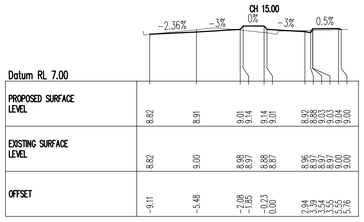

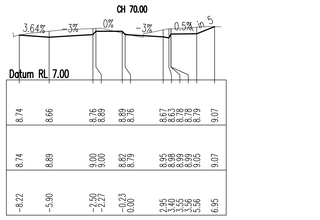

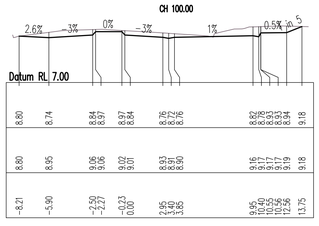

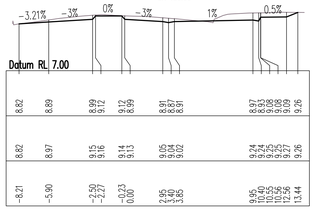

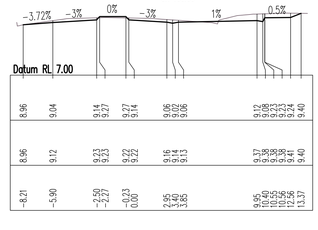

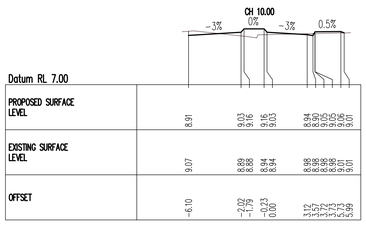

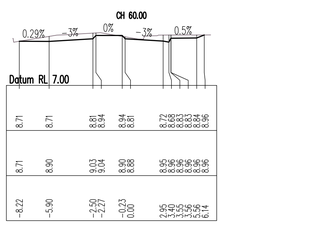

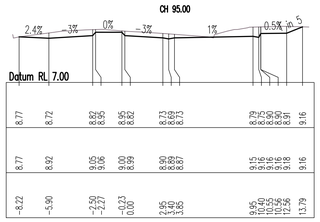

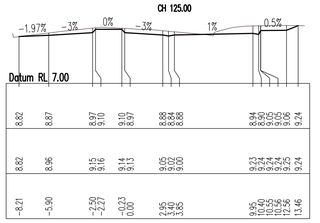

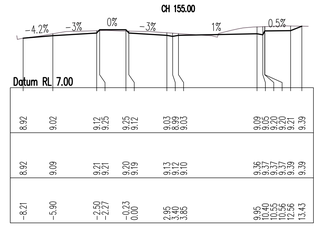

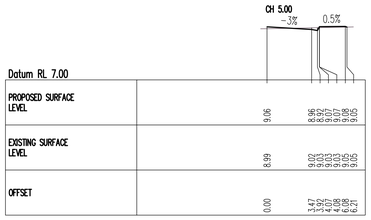

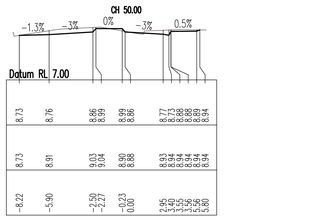

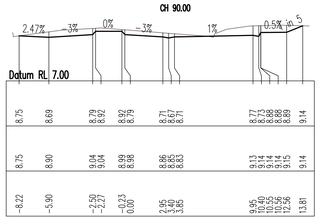

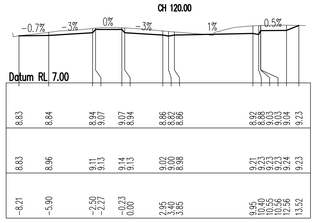

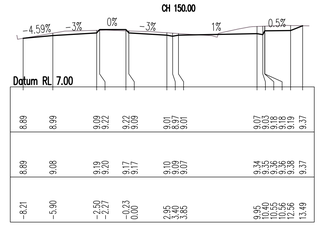

CH 0.00

CH 40.00

CH 85.00

CH 115.00

CH 145.00

FOR NOTES AND LEGENDS REFER TO DRAWING No C01.

CONTRACTOR IS TO LOCATE ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF WORK

VERTICAL 1:200 AT ORIGINAL SIZE
0 2 4 6 8 10 m
HORIZONTAL 1:1000 AT ORIGINAL SIZE
0 10 20 30 40 50 m

Rev	Description	Eng	Draft	Date
P2	PRELIMINARY	PL	EN	15.10.10
P1	PRELIMINARY	PL	CR	19.09.08

Project

LIVERPOOL HOSPITAL - REMEMBRANCE AVE & HART STREET UPGRADE

Sheet Subject

HART ST CROSS SECTIONS SHEET 1

Architect

LFA (PACIFIC) Pty Ltd
SUITE 4, 2 NEW MCLEAN STREET
EDGECLIFF, NSW 2027

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Consulting Engineers
48 Chandos Street StLeonards NSW 2065
T: +61 2 9439 7288 F: +61 2 9439 3146 ttwsyd@ttw.com.au
Taylor Thomson Whitting (NSW) Pty Ltd A.C.N. 113 578 377

Scale : B1	Drawn	Authorised
AS SHOWN	TB	

Job No	Drawing No	Revision
071850	C08	P2

Plot File Created: Oct 15, 2010 - 8:57am

PRELIMINARY

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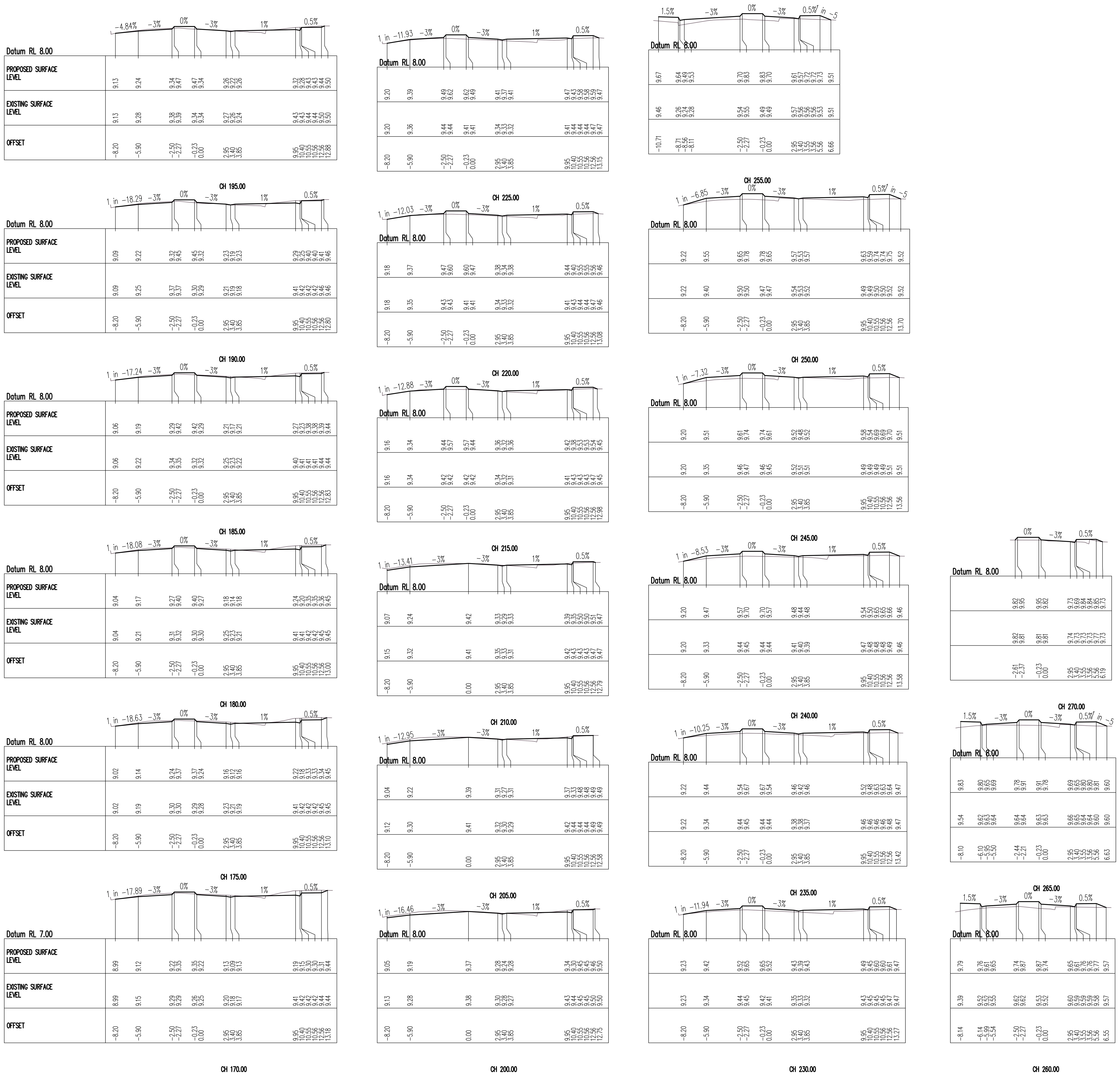
CONTRACTOR IS TO LOCATE ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF WORK



VERTICAL 1:200 AT ORIGINAL SIZE 0 2 4 6 8 10 m

HORIZONTAL 1:1000 AT ORIGINAL SIZE 0 10 20 30 40 50 m

Rev	Description	Eng	Draft	Date
P2	PRELIMINARY	PL	EN	15.10.10
P1	PRELIMINARY	PL	CR	19.09.08

Project

LIVERPOOL HOSPITAL - REMEMBRANCE AVE & HART STREET UPGRADE

Sheet Subject

HART ST CROSS SECTIONS SHEET 2

Architect

LFA (PACIFIC) Pty Ltd
SUITE 4, 2 NEW MCLEAN STREET
EDGECLIFF, NSW 2027

TaylorThomsonWhitting
Consulting Engineers
48 Chandos Street St.Leonards NSW 2065
T: +61 2 9439 7288 F: +61 2 9439 3146 ttwsyd@ttw.com.au
Taylor Thomson Whitting (NSW) Pty Ltd A.C.N. 113 578 377

Scale : B1 AS SHOWN | Drawn TB | Authorised

Job No 071850 | Drawing No C09 | Revision P2

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PRELIMINARY

Filename: C09.dwg - USER: mdhewk - Plot File Created: Oct 15, 2010 - 8:58am

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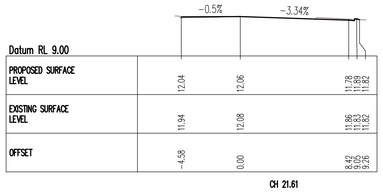
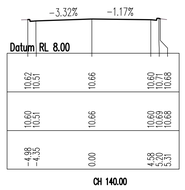
CONTRACTOR IS TO LOCATE ALL EXISTING SERVICES PRIOR TO THE COMMENCEMENT OF WORK



CH 21.61



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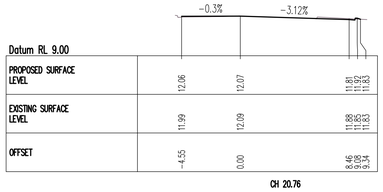

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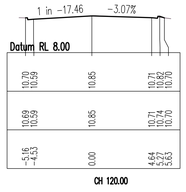
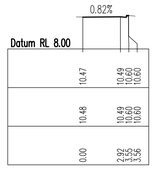
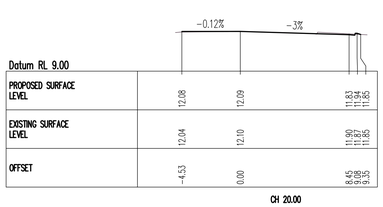


CH 120.00



CH 174.42



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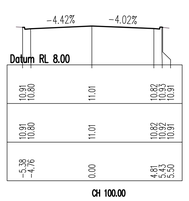
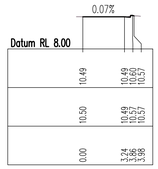
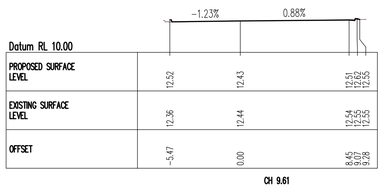


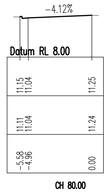
CH 100.00



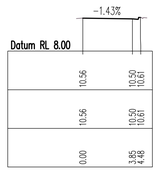
CH 172.01



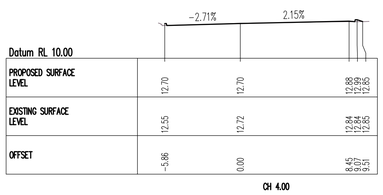
CH 9.61



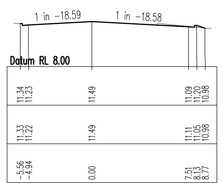
CH 80.00



CH 165.36



CH 4.00



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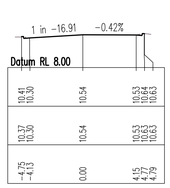

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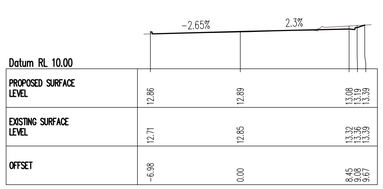

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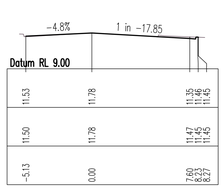
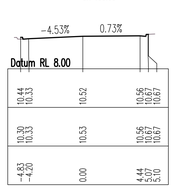


CH 40.00



CH 151.88

PRELIMINARY

SCALE 1:200 0 2 4 6 8 10 m
AT ORIGINAL SIZE

Rev	Description	Eng	Draft	Date
P3	PRELIMINARY	PL	EN	15.10.10
P2	PRELIMINARY	PL	EN	23.09.10
P1	ISSUE FOR COMMENT	PL	TB	11.08.10

Project

LIVERPOOL HOSPITAL - REMEMBRANCE AVE & HART STREET UPGRADE

Sheet Subject

REMEMBRANCE AVENUE CROSS SECTIONS SHEET 1

Architect
LFA (PACIFIC) Pty Ltd
SUITE 4, 2 NEW MCLEAN STREET
EDGECLIFF, NSW 2027

TaylorThomsonWhitting
Consulting Engineers
48 Chandos Street St.Leonards NSW 2065
T: +61 2 9439 7288 F: +61 2 9439 3146 thwyd@ttw.com.au
Taylor Thomson Whitting (NSW) Pty Ltd A.C.N. 113 578 377

Scale : B1	Drawn	Authorised
1: 200	TB	

Job No	Drawing No	Revision
071850	C10	P3

Plot File Created: Oct 15, 2010 - 9:01am

FileName: C10.dwg - USER: mathewk - Plot File Created: Oct 15, 2010 - 9:01am

REMEMBRANCE AVENUE

LACHLAN LANE

HART STREET

HART LANE

LANDSCAPED ISLAND

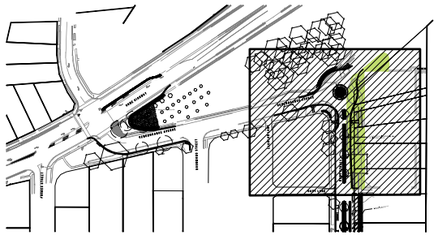
3 x EUCALYPTUS MACULATA

4 x EUCALYPTUS SIDEROXYLON @ 15M c/c
TO SUIT STREET LIGHTS

15m

184.305

KEY



LEGEND

- NEW TREE PLANTING — Eucalyptus sideroxylon
- NEW TREE PLANTING — Eucalyptus maculata
- EXISTING TREES
- TREES REMOVED
- MAKE GOOD — Spray grass
- NATIVE GRASS IN MULCH (incl. soil prep.) — Poa labillardieri; Themeda australis ("mingo")
- NEW TURF — Turf incl. new soil prep.
- NEW FOOTPATH / MEDIAN — Concrete
- WARWICK FARM STATION COMMUTER CAR PARK APPROVED LANDSCAPE WORKS

issue	description	date
P1	PRELIMINARY	30.09.10

status:
s75W MODIFICATION REQUEST

project:

LIVERPOOL HOSPITAL REDEVEVLEPMENT

HART STREET MODIFICATION

Architects
Urban Planners
Interior Designers
Landscape Architects

LFA (Pacific) Pty Limited
ABN 92 830 134 905

PO Box 259, Edgecliff NSW 2027
Suite 4 / 2 New McLean Street, Edgecliff, NSW
P 02 9327 6822 F 02 9327 5554 E lfa@lfa.com.au

consultants:
structural
drainage
irrigation
lighting
signs and numbering

NORTH

drawing title

LANDSCAPE PLAN

project no.	208–8080	file no.	
drawn	CM	audited	
checked	RP	job capt	
date	09–08	proj dir	RP
plotted	30.09.10	proj mngr	RP

drawing no. **L01** revision **P1**

scales
1:200 @ A1

HUME HIGHWAY

REMEMBRANCE AVENUE

DRUMMOND STREET

4 x EUCALYPTUS MACULATA

TRAFFIC LIGHT

TRAFFIC LIGHT

PIT — 13.23

CONTROL BOX

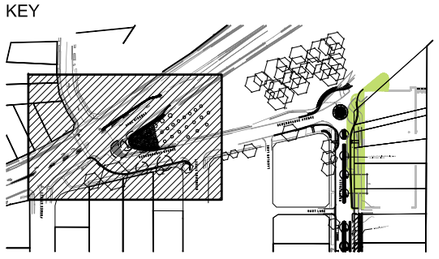
TRAFFIC LIGHT

TRAFFIC SIGNAL BOX

SINGLE

BRICK ELECTRIC BOX

KEY



LEGEND

NEW TREE PLANTING
Eucalyptus sideroxylon

NEW TREE PLANTING
Eucalyptus maculata

EXISTING TREES

TREES REMOVED

MAKE GOOD
Spray grass

NATIVE GRASS IN MULCH
(incl. soil prep.)
Poa labillardieri
Themeda australis ("mingo")

NEW TURF
Turf incl. new soil prep.

NEW FOOTPATH / MEDIAN
Concrete

issue	description	date
P1	PRELIMINARY	30.09.10

status:
s75W MODIFICATION REQUEST

project:

LIVERPOOL HOSPITAL REDEVEVLEPMENT

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consultants:
structural
drainage
irrigation
lighting
signs and numbering

NORTH

drawing title

LANDSCAPE PLAN

project no.	208–8080	file no.	
drawn	CM	audited	
checked	RP	job capt	
date	09–08	proj dir	RP
plotted	30.09.10	proj mngr	RP
drawing no.			revision
L02			**P1**

scales
1: 200 @ A1