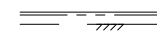
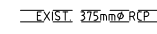
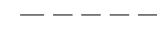






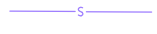


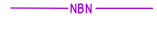
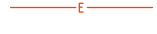







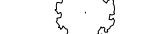






# BELLAMY STREET & STEVENS STREET, PENNANT HILLS

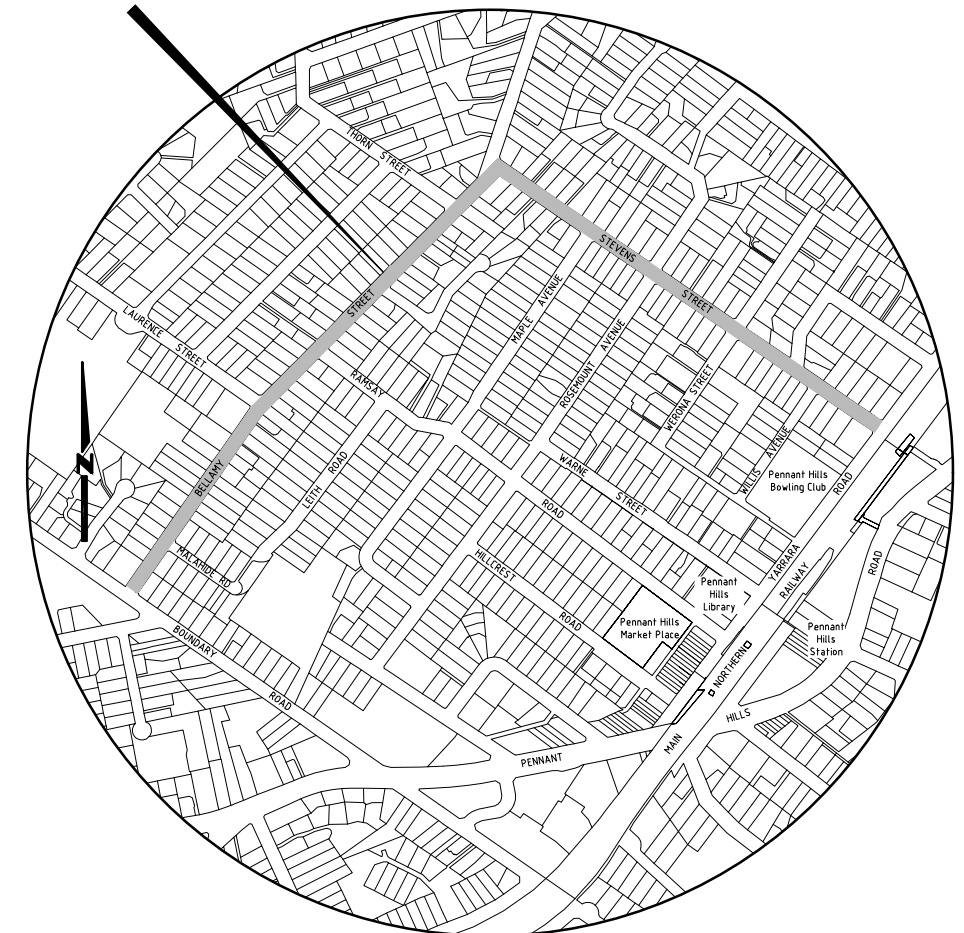
## PROPOSED TRAFFIC IMPROVEMENTS

### LEGEND

-  EXISTING KERB & GUTTER.
-  EXISTING STORMWATER PIPE.
-  EXISTING CONCRETE PATH EDGE.
-  **SSM12345**  
RL 123.456 STATE SURVEY MARK.
-  DH&W SURVEY REFERENCE MARK - DRILL HOLE & WING.
-  ELP EXISTING POWER POLE.
-  EXISTING TELSTRA PIT.
-  SMH EXISTING SEWER MAINTENANCE HOLE.
-  HYD EXISTING HYDRANT
-  S EXISTING SEWER MAIN.
-  W EXISTING WATER MAIN.
-  T EXISTING U/G TELSTRA CABLES.
-  NBN EXISTING U/G NBN CABLES.
-  E EXISTING U/G ELECTRICAL CABLES.
-  G EXISTING GAS MAIN.
-  EXISTING OVERHEAD ELECTRICAL CABLES.
-  PROPOSED BLISTER ISLAND.
-  PROPOSED BLISTER ISLAND WITH RAIN GARDEN.
-  PROPOSED SUBSOIL PIPE.
-  PROPOSED DRAINAGE PIPE.
-  EXISTING TREE.
-  EXISTING LINE MARKING.
-  PROPOSED LINE MARKING.
-  EXISTING SIGN.
-  PROPOSED SIGN.
-  TPZ TREE PROTECTION ZONE.
-  SRZ STRUCTURAL ROOT ZONE.

DRAWING SCHEDULE		
SHEET No.	TITLE	ISSUE
1	DRAWING SCHEDULE, LOCALITY PLAN & LEGEND.	1
2	PROJECT NOTES.	1
3	TYPICAL CONCRETE DETAILS & NOTES.	1
4	OVERALL LAYOUT PLAN.	1
5	GENERAL WORKS & SERVICES PLAN - SHEET 1 OF 5.	1
6	GENERAL WORKS & SERVICES PLAN - SHEET 2 OF 5.	1
7	GENERAL WORKS & SERVICES PLAN - SHEET 3 OF 5.	1
8	GENERAL WORKS & SERVICES PLAN - SHEET 4 OF 5.	1
9	GENERAL WORKS & SERVICES PLAN - SHEET 5 OF 5.	1
10	ENLARGED DETAILED PLAN.	1
11	RAISED BLISTER ISLAND TYPICAL DETAILS & SECTION.	1
12	RAIN GARDEN ISLAND TYPICAL DETAILS & SECTIONS.	1
13	RAISED PEDESTRIAN CROSSING PLAN & SECTIONS.	1
14	RAISED PEDESTRIAN CROSSING & REFUGEE ISLANDS SETOUT PLAN.	1
15	RAISED PEDESTRIAN CROSSING SIGNS & LINE MARKING PLAN.	1
16	STORMWATER CATCHMENT PLAN.	1

SITE OF WORKS



**LOCALITY PLAN**  
NOT TO SCALE

TRAFFIC & ROAD SAFETY BRANCH		
Senior Traffic Engineer		
Name: R. ZARZYCKI		Telephone: 9847 6684
Accepted as complying with the general intent of the design brief		
Signed: _____		Date: _____
Project Number		
100925		
Sheet	of	Issue
1	16	1
HSC Drawing Number		
511.9		

**Hornsby Shire Council**  
Design & Construction  
Branch

TELEPHONE: (02) 9847 6666  
EMAIL: hsc@hornsby.nsw.gov.au  
Authorised for release - Manager Design & Construction  
Name: R. RAJCA Signed: \_\_\_\_\_ Date: \_\_\_\_\_

Designer K.ROM	Design Checked-Design Team Leader		
Drawn K.ROM	Signed: _____		
Surveyor J. HART	NA	NA	GDA94
	Field Book	Level Book	Datum
Project Identifier\ACAD File Name			
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TRIM Document Number	1		

Issue	Description	Name	Initial	Date
1	ISSUED FOR CONSTRUCTION	M. DRAKE		

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Bar Scales  
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**BELLAMY ST & STEVENS ST, PENNANT HILLS**  
PROPOSED TRAFFIC IMPROVEMENTS

DRAWING SCHEDULE, LOCALITY PLAN & LEGEND

**GENERAL NOTES:**

- ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH THE REQUIREMENTS & SPECIFICATIONS OF HORNSBY SHIRE COUNCIL.
- LEVELS SHALL BE OBTAINED FROM ESTABLISHED BENCH MARKS & NOT FROM SURVEY PEGS.
- PROVIDE TRAFFIC MANAGEMENT, LINEMARKING & SIGNAGE IN ACCORDANCE WITH "THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES" / AS1742 REQUIREMENTS.
- SERVICES SHOWN ON THESE PLANS HAVE BEEN LOCATED FROM INFORMATION SUPPLIED FROM THE RELEVANT AUTHORITIES VIA A "DIAL BEFORE YOU DIG" ENQUIRY. THE LOCATION OF SERVICES SHOWN ON THESE DRAWINGS HAVE BEEN PLOTTED AS ACCURATELY AS POSSIBLE FROM DIAGRAMS PROVIDED BY SERVICE AUTHORITIES & FIELD INVESTIGATIONS & ARE TO BE VERIFIED PRIOR TO CONSTRUCTION.
- EROSION & SEDIMENT CONTROL MEASURES ARE TO BE INSTALLED IN ACCORDANCE WITH THE LANDCOM PUBLICATION:- "MANAGING URBAN STORMWATER, SOILS & CONSTRUCTION" Vol. 1, 4th EDITION.
- ALL DISTURBED AREAS OF THE SITE ARE TO BE REINSTATED WITH EXISTING OR MATCHING MATERIALS UNLESS NOTED OTHERWISE AT THE COMPLETION OF THE WORKS.
- ARRANGE SET-OUT BY HORNSBY SHIRE COUNCIL DESIGN & CONSTRUCTION BRANCH SURVEYOR. NOTIFY ENGINEERING SURVEYOR A MINIMUM OF 24 HOURS IN ADVANCE.
- WHERE PAVEMENT RESURFACING IS UNDERTAKEN ENSURE ALL BLUE HYDRANT MARKER RRPMS ARE REINSTATED AT THE COMPLETION OF WORKS.

**ACCESS & SAFETY NOTES:**

- THE CONSTRUCTOR SHALL COMPLY WITH ALL STATUTORY & INDUSTRIAL REQUIREMENTS FOR PROVISION OF A SAFE WORKING ENVIRONMENT INCLUDING TRAFFIC CONTROL.
- THE CONSTRUCTOR SHALL PROVIDE TRAFFIC MANAGEMENT PLANS FOR THE PROPOSED WORKS COMPLETED BY A SUITABLY QUALIFIED PERSON & APPROVED BY COUNCIL/REGULATORY AUTHORITY. WORK IS NOT TO COMMENCE ON SITE PRIOR TO APPROVAL OF TRAFFIC MANAGEMENT SCHEME.
- THE CONSTRUCTOR SHALL ENSURE THAT AT ALL TIMES ACCESS TO BUILDINGS/RESIDENCES ADJACENT TO THE WORKS IS NOT DISRUPTED, INCLUDING THE FIRE STATION.
- WHERE NECESSARY THE CONSTRUCTOR SHALL PROVIDE SAFE PASSAGE OF VEHICLES AND/OR PEDESTRIANS THROUGH OR BY THE SITE.
- THE CONSTRUCTOR SHALL ENSURE PUBLIC ACCESS EXTERNAL TO THE SITE IS IN ACCORDANCE WITH COUNCIL REQUIREMENTS.

**SIGNS & LINE MARKING NOTES:**

- SIGNS & LINE MARKING TO BE INSTALLED IN ACCORDANCE WITH MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES/ AS1742 REQUIREMENTS.
- WHERE POSSIBLE EXISTING SIGNAGE IS TO BE CLEANED & REUSED TO SUIT NEW WORK.
- KERB ON MEDIAN ISLAND SHALL BE PAINTED WITH REFLECTIVE WHITE PAINT.
- ALL NEW SIGNS TO BE SIZE A.
- TEMPORARY 'CHANGED TRAFFIC CONDITIONS AHEAD' (T1-23) SIGNS TO BE INSTALLED ON ALL APPROACHES APPROXIMATELY 100m FROM LIMIT OF WORKS (TYPICAL) AT THE COMMENCEMENT OF WORKS & UNTIL 6 MONTHS AFTER COMPLETION.
- GRIND OFF REDUNDANT LINE MARKING & REMOVE REDUNDANT RRPMS.
- APPROVED BY LOCAL TRAFFIC COMMITTEE \_\_\_\_\_ - REFERENCE: \_\_\_\_\_.

**SEDIMENT & EROSION CONTROL NOTES:**

- NO WORK SHALL BE UNDERTAKEN UNTIL ALL SEDIMENT & EROSION CONTROL MEASURES ARE IN PLACE & HAVE BEEN APPROVED BY THE CONSTRUCTION ENGINEER.
- ALL SEDIMENT CONTROL STRUCTURES TO BE INSPECTED BY THE SITE SUPERVISOR ON A DAILY BASIS & SIGNED OFF ON THE BACK OF THE DAY SHEET. A CHECKLIST SHALL BE HANDED OVER TO THE PROJECT MANAGER AT THE END OF EACH DAY. STRUCTURES WILL ALSO BE INSPECTED AFTER EACH RAINFALL EVENT FOR STRUCTURAL DAMAGE & ALL TRAPPED SEDIMENT TO BE REMOVED TO A NOMINATED SOIL STOCKPILE SITE. THE CONSTRUCTION ENGINEER MUST INFORM ALL CONTRACTORS & SUB-CONTRACTORS OF THEIR OBLIGATIONS UNDER THE EROSION CONTROL PLAN.
- SELECTIVE CLEARING OF VEGETATION TO BE RESTRICTED TO NOMINATED AREAS WITH CLEARED VEGETATION WINDROWED ON THE CONTOUR.
- TREES NEAR THE CONSTRUCTION ZONE NOT OTHERWISE PROTECTED BY FENCING SHALL BE PROTECTED IN ACCORDANCE WITH AS4970 SECTION 4.5. ALTERNATIVE PROTECTION MEASURES SATISFYING THE PROJECTS ARBORIST'S REQUIREMENTS IS ACCEPTABLE. TRUNK PROTECTION SHOULD BE MAINTAINED INTACT UNTIL THE COMPLETION OF ALL WORK ON THE SITE. ALL TREES REQUIRING REMOVAL ARE SHOWN ON THIS PLAN & SHALL BE MARKED ACCORDINGLY PRIOR TO REMOVAL.
- TOPSOIL FROM AREAS THAT WILL BE DISTURBED TO BE STRIPPED & STOCKPILED AT THE NOMINATED SITE.
- A MINIMUM STOCK OF THE FOLLOWING SHALL BE KEPT ON SITE AT ALL TIMES:  
(A) 50m ROLL OF SEDIMENT FENCE & PEGS.  
(B) 50m ROLL OF BIDIM GEOTEXTILE.
- ANY DISTURBED AREA OF LAND SHALL BE COMPACTED AT THE END OF EACH WORKING DAY & BEFORE ANY STORM EVENT.
- CONSTRUCTION AREA IS TO BE LIMITED AS SHOWN TO MINIMISE DISTURBANCE.
- SEDIMENT FENCING SHALL BE PLACED AROUND ANY STOCKPILE AREA.
- ALL EROSION & SEDIMENT CONTROL MEASURES ARE TO BE INSTALLED IN ACCORDANCE WITH THE LANDCOM PUBLICATION:- "MANAGING URBAN STORMWATER, SOILS & CONSTRUCTION" Vol. 1, 4th EDITION.
- ALL DISTURBED AREAS SHALL BE TURFED WITHIN 14 DAYS OF FINAL TRIMMING.

**SUBSOIL DRAINAGE NOTES:**

- SUBSOIL DRAINAGE TO BE INSTALLED AS DIRECTED BY SUPERVISING CONSTRUCTION ENGINEER.
- SUBSOIL FLUSHING POINTS TO BE INSTALLED AT ALL U/S ENDS OF LINES & AT 60m MAXIMUM CENTRES. CONNECT SUBSOIL PIPES TO STORMWATER PITS.

**ABORIGINAL ARTEFACT NOTES:**

- AN AHIMS WEB SEARCH HAS BEEN UNDERTAKEN FOR THIS PROJECT (REF: 720402). ALTHOUGH NO ARTIFACTS HAVE BEEN IDENTIFIED IN THIS SEARCH SHOULD ANY POTENTIAL ARTIFACTS BE UNCOVERED THEY ARE NOT TO BE REMOVED FROM THE SITE & SHALL BE IMMEDIATELY REPORTED TO COUNCIL'S PROJECT MANAGER.

**TREE PROTECTION MEASURES:**

- ALL WORKS WITHIN THE TREE PROTECTION ZONE OF ANY TREE/S TO BE RETAINED SHOULD NOT REDUCE THE USEFUL LIFE EXPECTANCY OF THE TREE/S & BE CARRIED OUT UNDER THE SUPERVISION OF AN 'AQF LEVEL 5 ARBORIST'.


TREE PROTECTION ZONES (TPZ)

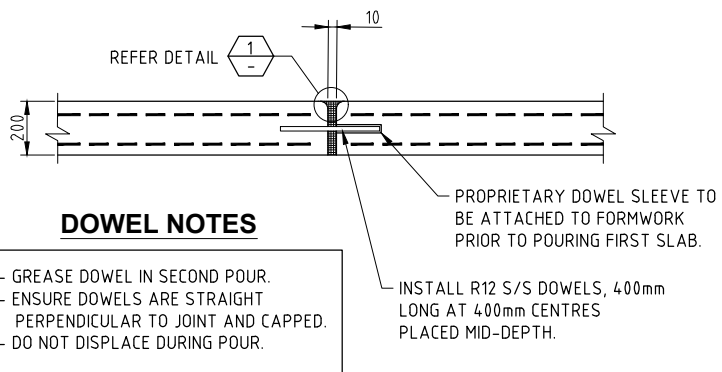
TREE SIZE	TPZ
TREES WITH A DIAMETER AT BREAST HEIGHT GREATER THAN 800mm	9m
TREES WITH A DIAMETER AT BREAST HEIGHT BETWEEN 400mm & 800mm	7m
TREES WITH A DIAMETER AT BREAST HEIGHT LESS THAN 400mm	4m

SOIL LEVELS WITHIN THE TREE PROTECTION ZONE OF TREES TO BE RETAINED SHOULD REMAIN AT EXISTING GRADE & UNDISTURBED. EXCAVATION WITHIN THE TREE ROOT ZONE OF TREES TO BE RETAINED SHOULD BE CARRIED OUT BY HAND EXCAVATION ONLY. HAND EXCAVATION SHOULD BE CARRIED OUT UNDER THE SUPERVISION OF A QUALIFIED ARBORIST IN SUCH A MANNER THAT IS NON-INJURIOUS TO ANY ROOTS REVEALED. NO TREE ROOT GREATER THAN 30mm DIAMETER LOCATED WITHIN THE TPZ OF ANY TREE TO BE RETAINED SHOULD BE SEVERED OR INJURED IN THE PROCESS OF ANY WORKS.

TREE ROOTS LESS THAN 30mm IN DIAMETER REQUIRED TO BE SEVERED SHALL BE CUT CLEANLY BY HAND BY A QUALIFIED & EXPERIENCED ARBORIST OR HORTICULTURIST WITH MINIMUM QUALIFICATIONS OF HORTICULTURAL CERTIFICATE OR TREE SURGERY CERTIFICATE (AQF 3).

- ALL PRUNING SHALL BE UNDERTAKEN AS SPECIFIED IN AS 4373-2009 'PRUNING OF AMENITY TREES'.
- THE FILLING OR STOCKPILING OF BUILDING MATERIALS, PARKING OF VEHICLES OR PLANT, THE USE OF MACHINERY OTHER THAN HAND HELD, DISPOSAL OF CEMENT SLURRY, WASTE WATER OR OTHER CONTAINMENTS MUST REMAIN OUTSIDE THE TREE ROOT ZONE OF ANY TREE TO BE RETAINED.
- ANY MECHANICAL DAMAGE TO TREES OR CHEMICAL SPILLS WITHIN THE TPZ MUST BE REPORTED TO THE PROJECT SUPERVISOR/MANAGER.
- BARRIER MESH FENCING SHALL BE ERECTED AROUND RETAINED TREES TO ENSURE THEY ARE PROTECTED FROM MACHINERY MISTAKENLY TRAVERSING BETWEEN TREES, THIS CAN BE IDENTIFIED/ DIRECTED BY PROJECT ARBORIST.

<b>Hornsby Shire Council Design &amp; Construction Branch</b> <small>TELEPHONE: (02) 9647 6666 EMAIL: hsc@hornsby.nsw.gov.au</small>	Designer K.ROM Signed: _____	Design Checked-Design Team Leader Signed: _____			Bar Scales  NOT TO SCALE	 HORNBSBY SHIRE COUNCIL <small>PO BOX 37, HORNSBY NSW 1630</small>	Project Number <b>100925</b>		
	Drawn K.ROM Signed: _____	Drawing Checked Signed: _____					Sheet <b>2</b>	of <b>16</b>	Issue <b>1</b>
	Surveyor J. HART	NA Field Book	NA Level Book	NA Datum			HSC Drawing Number <b>511.9</b>		
	Project Identifier\\CAD File Name H:\\Bellamy Stevens_TR_100925\\Design\\ACAD\\BellamyStevens.dwg			TRIM Document Number 1			ISSUED FOR CONSTRUCTION Description: _____ Name: M. DRAKE Initial: _____ Date: _____		PROJECT NOTES
Authorised for release - Manager Design & Construction Name: R. RAJCA Signed: _____ Date: _____		Design not to be amended without authorisation by Manager Design & Construction			DO NOT SCALE, USE FIGURED DIMENSIONS ONLY				



**DOWEL NOTES**

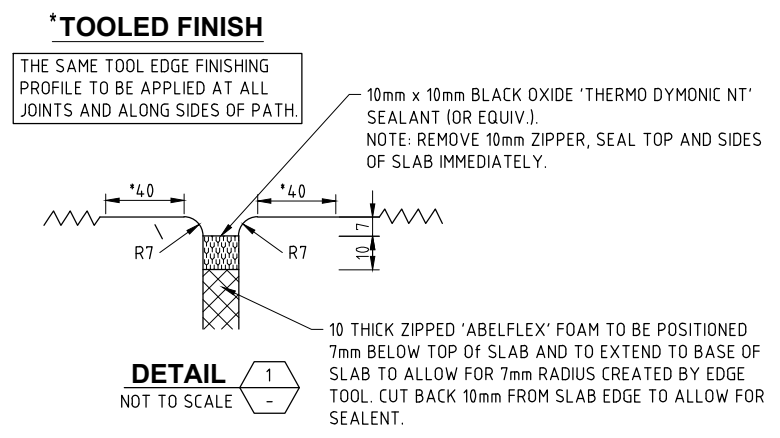
- GREASE DOWEL IN SECOND POUR.
- ENSURE DOWELS ARE STRAIGHT PERPENDICULAR TO JOINT AND CAPPED.
- DO NOT DISPLACE DURING POUR.

PROPRIETARY DOWEL SLEEVE TO BE ATTACHED TO FORMWORK PRIOR TO POURING FIRST SLAB.

INSTALL R12 S/S DOWELS, 400mm LONG AT 400mm CENTRES PLACED MID-DEPTH.

**DOWELLED EXPANSION JOINT (DEJ)**

NOT TO SCALE



**\*TOOLED FINISH**

THE SAME TOOL EDGE FINISHING PROFILE TO BE APPLIED AT ALL JOINTS AND ALONG SIDES OF PATH.

10mm x 10mm BLACK OXIDE 'THERMO DYMONIC NT' SEALANT (OR EQUIV.).  
NOTE: REMOVE 10mm ZIPPER, SEAL TOP AND SIDES OF SLAB IMMEDIATELY.

**DETAIL**

NOT TO SCALE

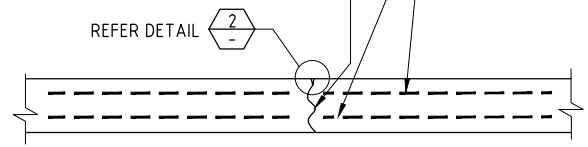
**CONCRETE NOTES**

(USING STEEL REINFORCED CONCRETE U.N.O.)

- MATERIALS AND CONSTRUCTION: TO AS 3600, AS 3610. STEEL REINFORCEMENT MATERIALS: TO AS 4671.
- CONCRETE QUALITY: TO AS 1379  
READY MIX CONCRETE: TO AS 1379  
a) DO NOT USE ADMIXTURES WITHOUT WRITTEN APPROVAL FROM SUPERVISING ENGINEER.  
b) CEMENT: TYPE 'GP' OR 'GB' TO AS 3972.  
c) MAXIMUM SIZE OF COARSE AGGREGATE: 20mm.  
d) CONCRETE SLUMP: 80mm U.N.O.
- VERIFY STRENGTH BY PRODUCTION CONTROL TESTING TO AS 1379.
- NO UNSPECIFIED HOLES, DUCTING OR CHASES ARE PERMITTED WITHOUT WRITTEN APPROVAL FROM SUPERINTENDENT (SUPERVISING OFFICER). NO PIPES OR CONDUITS ARE PERMITTED WITHIN CONCRETE COVER.
- STRUCTURAL DIMENSIONS DO NOT INCLUDE TOPPING OR FINISHES.
- FORM CONSTRUCTION JOINTS ONLY AT LOCATIONS SHOWN ON DRAWINGS. DO NOT VARY WITHOUT WRITTEN APPROVAL FROM SUPERVISING ENGINEER.
- PREPARE COLD JOINTS BY LIGHT SCABBING, REMOVAL OF DEBRIS & WASHING WITH CLEAN WATER.
- FOUNDATION MATERIALS MUST BE CAPABLE OF WITHSTANDING A SAFE BEARING PRESSURE OF 100kPa. VERIFY & RECORD THE BEARING CAPACITY BEFORE ANY CONCRETE IS PLACED.
- DO NOT PLACE CONCRETE UNTIL REINFORCEMENT (IF USED) & FORMWORK ARE INSPECTED BY SUPERVISING ENGINEER.
- THOROUGHLY CLEAN OUT ALL FORMWORK PRIOR TO POURING.
- DO NOT PLACE CONCRETE UNDER THE FOLLOWING CONDITIONS:  
a) WHEN THE SURROUNDING OUTDOOR TEMPERATURE EXCEEDS 30°C.  
b) WHEN THE SURROUNDING WIND SPEED EXCEEDS 12 KNOTS.
- IMPLEMENT THE FOLLOWING PROCEDURES TO MITIGATE PREMATURE DRYING & CRACKING OF THE CONCRETE:  
a) IN HOT CONDITIONS, PROGRAM CONCRETE PLACEMENT FOR THE COOLER PART OF THE DAY (ie. EARLY MORNING).  
b) SPRAY EVAPORATIVE RETARDERS WITH FUGATIVE DYES (eg. ALIPHATIC ALCOHOL) OVER THE SURFACE IMMEDIATELY AFTER SCREEDING & WHILST BLEED WATER IS STILL PRESENT. REAPPLY IF THE SURFACE IS DISTURBED.  
c) COMMENCE CURING IMMEDIATELY AFTER FINISHING. CURE FOR 7 DAYS.
- VIBRATE CONCRETE DURING PLACEMENT TO GIVE MAXIMUM COMPACTION WITHOUT SEGREGATION.
- SURFACE FINISH - REFER TO DRAWINGS FOR DETAILS.
- COMMENCE CURING OF ALL CONCRETE SURFACES IMMEDIATELY ON FINISHING & CONTINUE FOR 7 DAYS MIN.
- EXPANSION JOINTS & ISOLATION JOINTS ARE TO BE SEALED TO MANUFACTURER'S SPECIFICATIONS WITH A GUN GRADE POLYURETHANE LOW MODULUS SELF PRIMING SEALANT EQUAL TO 'TREMCO DYMONIC NT' (+100%, -50% MOVEMENT CAPACITY). SEALANT COLOUR GREY OR EQUIVALENT.

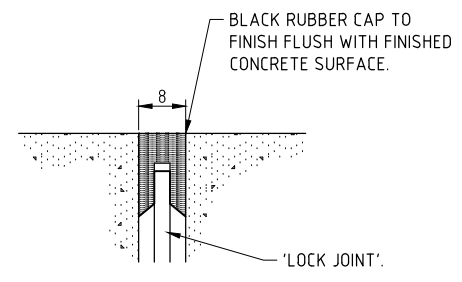
ELEMENT	CHARACTERISTIC CONCRETE STRENGTH(f'c) AT 28 DAYS	COVER	SPECIAL REQUIREMENTS	COLOUR
PLATFORM	S 32 (U.N.O.)	AS DETAILED	BROOM FINISH	BLACK OXIDE
PLATFORM RAMPS	S 32 (U.N.O.)	AS DETAILED	BROOM FINISH	PLAIN CONCRETE
BLISTERS INFILL	S 25 (U.N.O.)	AS DETAILED	BROOM FINISH	TERRACOTTA OXIDE
KERB	S 25 (U.N.O.)	REQ NOT REQUIRED	SMOOTH TROWEL	PLAIN CONCRETE

'LOCK JOINT' CONTRACTION JOINT (OR APPROVED EQUIVALENT) SIZED TO SUIT WITH (BLACK) RUBBER CAP. MANUFACTURER: 'LOCK JOINT AUSTRALIA' PH. 1800 022 250. NOTE: LOCK JOINT HOLDING BARS AND CLAMPS TO BE USED TO SUPPORT CONTRACTION JOINT DURING CONSTRUCTION.



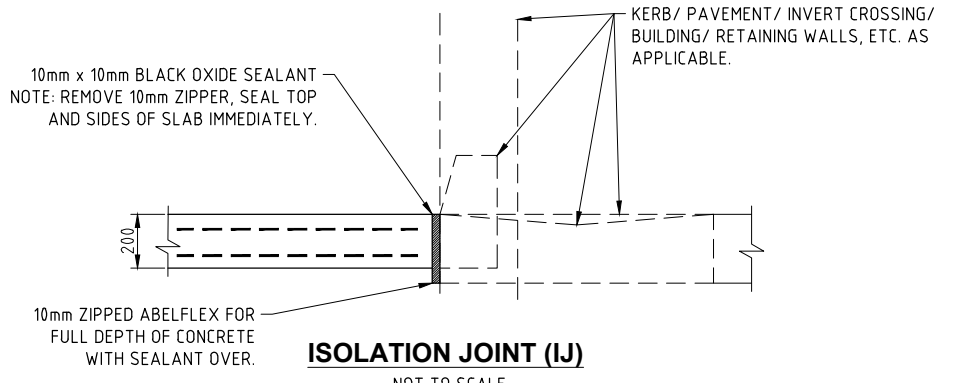
**CONTRACTION JOINT (CJ)**

NOT TO SCALE



**DETAIL**

NOT TO SCALE



**ISOLATION JOINT (IJ)**

NOT TO SCALE

**Hornsby Shire Council**  
Design & Construction  
Branch

TELEPHONE: (02) 9647 6666  
EMAIL: hsc@hornsby.nsw.gov.au

Authorised for release - Manager Design & Construction  
Name: R. RAJCA Signed: Date:

Designer K.ROM	Design Checked-Design Team Leader						
Drawn K.ROM	Drawing Checked						
Surveyor J. HART	NA Field Book	NA Level Book	NA Datum				
Project Identifier\ACAD File Name H:\Bellamy Stevens_TR_100925\Design\ACAD\BellamyStevens.dwg	TRM Document Number	1	ISSUED FOR CONSTRUCTION	M. DRAKE			
	Issue		Description	Name	Initial	Date	
Design not to be amended without authorisation by Manager Design & Construction							DO NOT SCALE, USE FIGURED DIMENSIONS ONLY

Bar Scales

NOT TO SCALE



**BELLAMY ST & STEVENS ST, PENNANT HILLS**  
PROPOSED TRAFFIC IMPROVEMENTS

TYPICAL CONCRETE DETAILS & NOTES

Project Number	100925	
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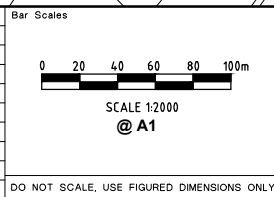
**Hornsby Shire Council  
Design & Construction  
Branch**

TELEPHONE: (02) 9647 6666  
EMAIL: hsc@hornsby.nsw.gov.au  
Authorised for release - Manager Design & Construction  
Name: R. RAJCA Signed: Date:

Designer K.ROM Signed:	Design Checked-Design Team Leader Signed:		
Drawn K.ROM Signed:	Drawing Checked Signed:		
Surveyor J. HART	NA Field Book	NA Level Book	GDA94 Datum
Project Identifier\\CAD File Name H:\Bellamy Stevens_TR_100925\Design\CAD\BellamyStevens.dwg			
TRM Document Number			

Issue	Description	Name	Initial	Date
1	ISSUED FOR CONSTRUCTION	M.DRAKE		

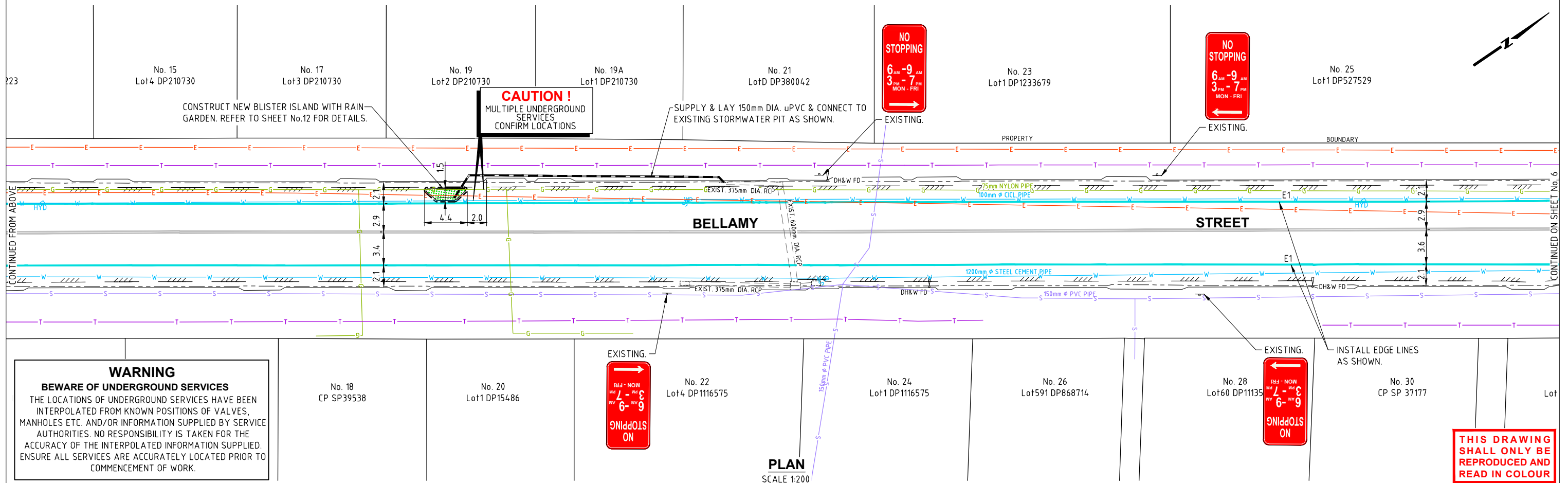
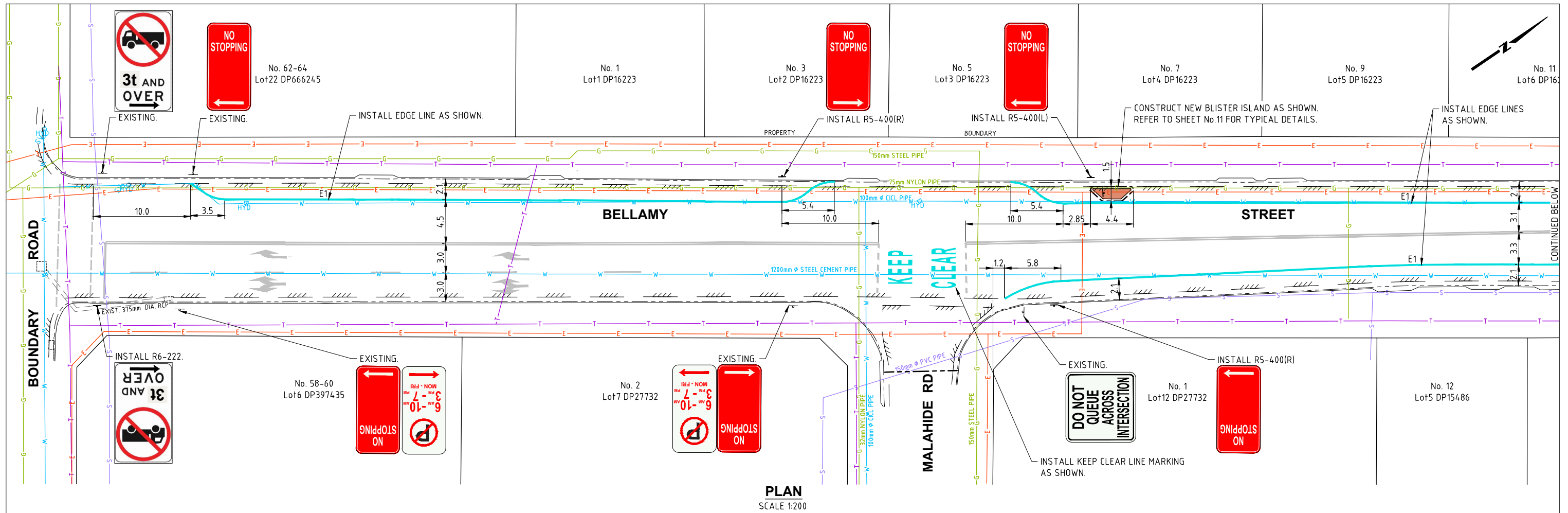
Design not to be amended without authorisation by Manager Design & Construction



**BELLAMY ST & STEVENS ST, PENNANT HILLS  
PROPOSED TRAFFIC IMPROVEMENTS**

OVERALL LAYOUT PLAN

Project Number	100925	
Sheet of	4	16
Issue	1	
HSC Drawing Number	511.9	



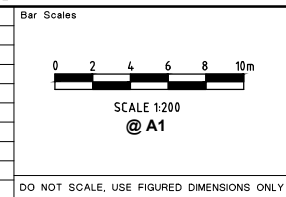
**WARNING**  
**BEWARE OF UNDERGROUND SERVICES**  
THE LOCATIONS OF UNDERGROUND SERVICES HAVE BEEN INTERPOLATED FROM KNOWN POSITIONS OF VALVES, MANHOLES ETC. AND/OR INFORMATION SUPPLIED BY SERVICE AUTHORITIES. NO RESPONSIBILITY IS TAKEN FOR THE ACCURACY OF THE INTERPOLATED INFORMATION SUPPLIED. ENSURE ALL SERVICES ARE ACCURATELY LOCATED PRIOR TO COMMENCEMENT OF WORK.

**THIS DRAWING SHALL ONLY BE REPRODUCED AND READ IN COLOUR**

**Hornsby Shire Council**  
**Design & Construction**  
**Branch**  
TELEPHONE: (02) 9647 6666  
EMAIL: hsc@hornsby.nsw.gov.au

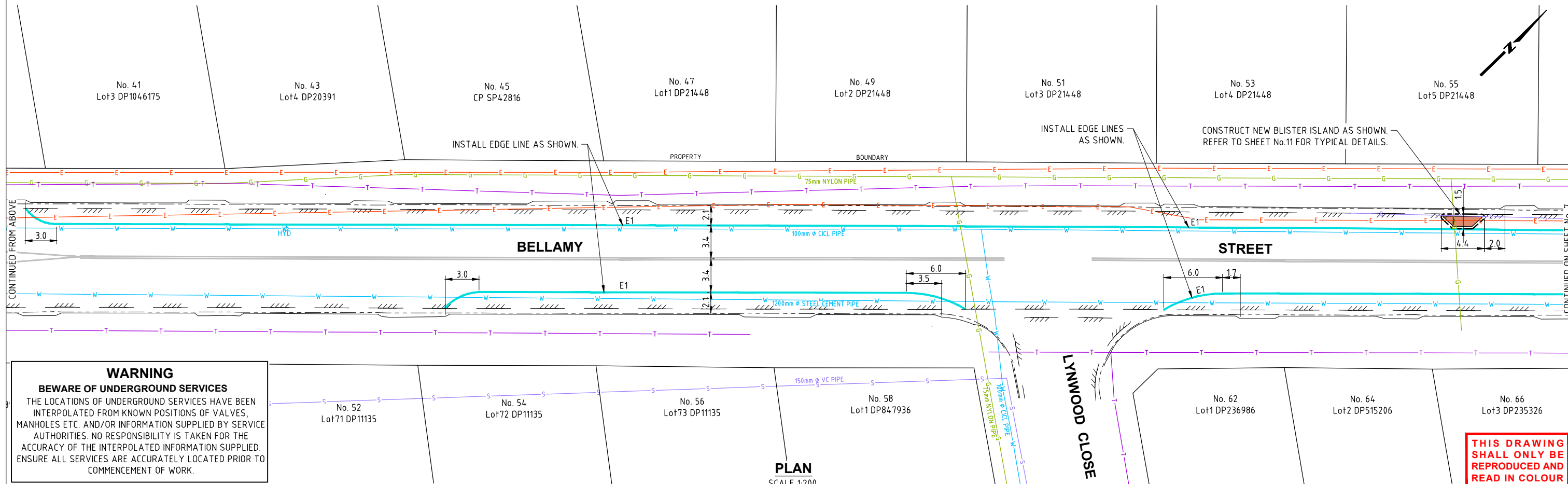
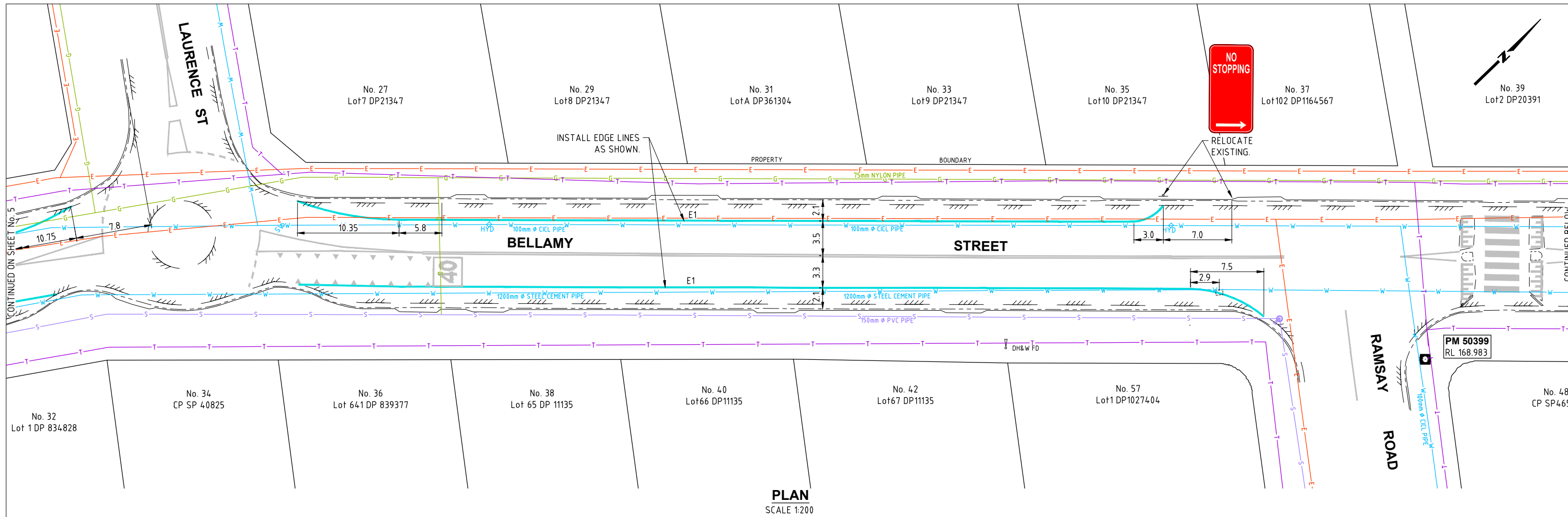
Designer K.ROM	Design Checked-Design Team Leader		
Drawn K.ROM	Signed:		
Surveyor J. HART	NA	NA	GDA94
Project Identifier-\\CAD File Name	Field Book	Level Book	Datum
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TRM Document Number	Issue		

1	ISSUED FOR CONSTRUCTION	M.DRAKE		
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**BELLAMY ST & STEVENS ST, PENNANT HILLS**  
**PROPOSED TRAFFIC IMPROVEMENTS**  
**GENERAL WORKS & SERVICES PLAN**  
**SHEET 1 OF 5**

Project Number	100925		
Sheet	of	Issue	
5	16	1	
HSC Drawing Number	511.9		



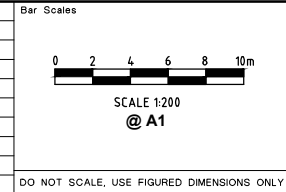
**WARNING**  
**BEWARE OF UNDERGROUND SERVICES**  
THE LOCATIONS OF UNDERGROUND SERVICES HAVE BEEN INTERPOLATED FROM KNOWN POSITIONS OF VALVES, MANHOLES ETC. AND/OR INFORMATION SUPPLIED BY SERVICE AUTHORITIES. NO RESPONSIBILITY IS TAKEN FOR THE ACCURACY OF THE INTERPOLATED INFORMATION SUPPLIED. ENSURE ALL SERVICES ARE ACCURATELY LOCATED PRIOR TO COMMENCEMENT OF WORK.

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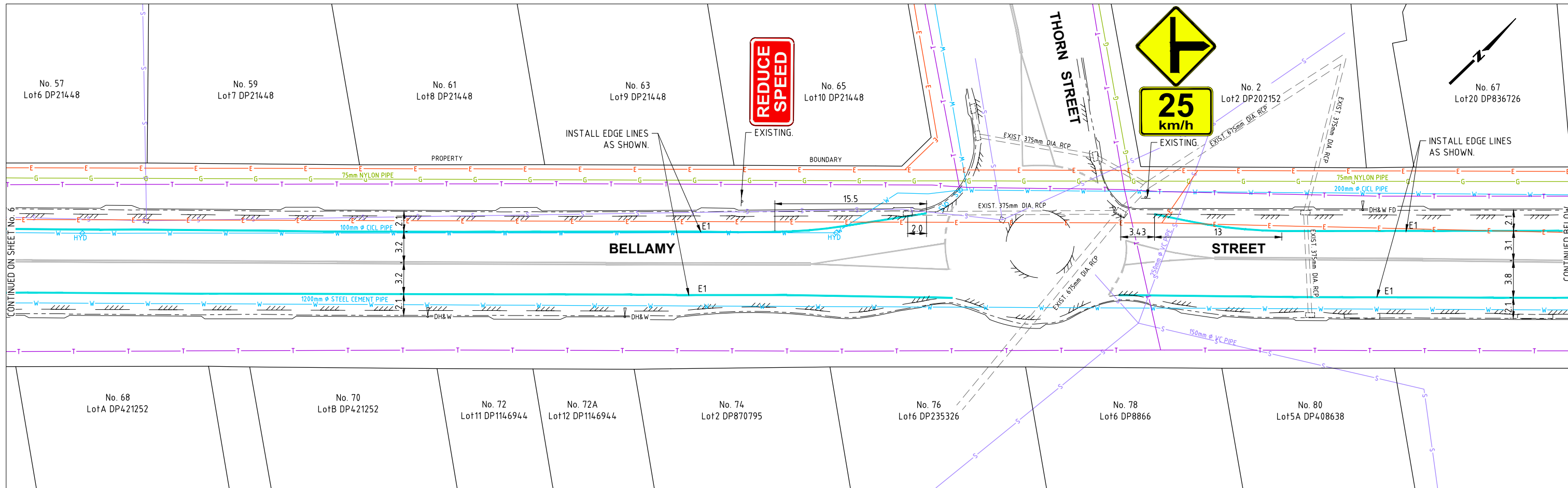
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Drawn K.ROM	Signed:		
Surveyor J. HART	NA Field Book	NA Level Book	GDA94 Datum
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TRM Document Number			

1	ISSUED FOR CONSTRUCTION	M.DRAKE		
Issue	Description	Name	Initial	Date
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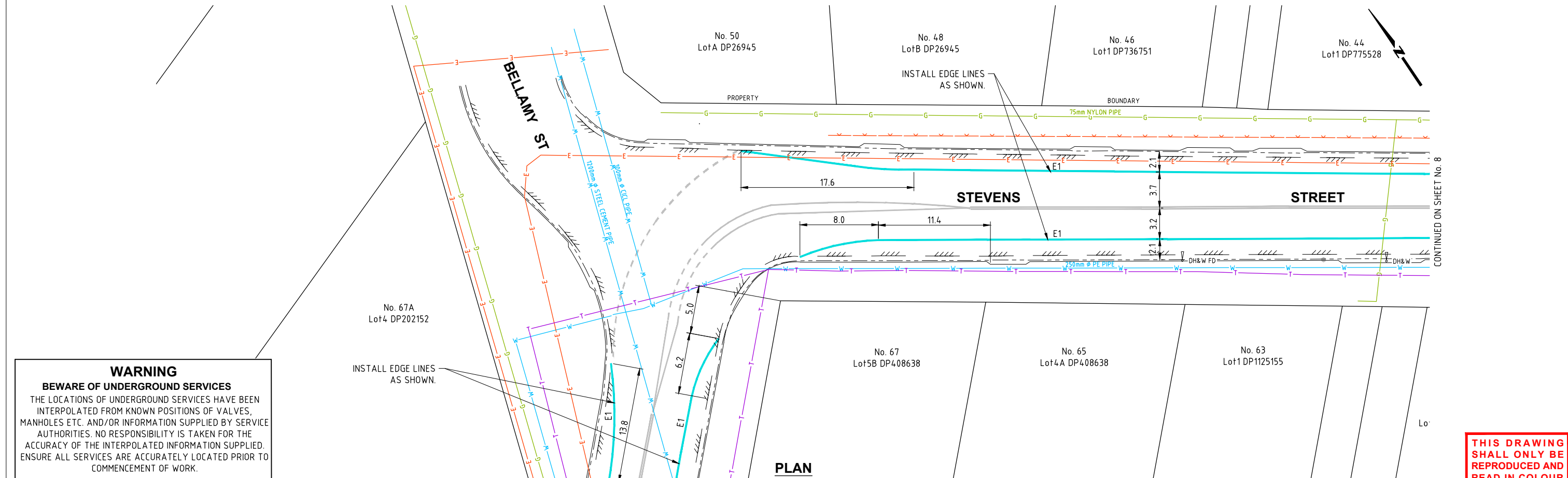


**BELLAMY ST & STEVENS ST, PENNANT HILLS**  
**PROPOSED TRAFFIC IMPROVEMENTS**  
**GENERAL WORKS & SERVICES PLAN**  
**SHEET 2 OF 5**

Project Number <b>100925</b>	Sheet of <b>6 16</b>	Issue <b>1</b>
HSC Drawing Number <b>511.9</b>		



**PLAN**  
SCALE 1:200



**PLAN**  
SCALE 1:200

**WARNING**  
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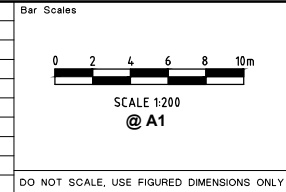
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Surveyor J. HART	NA Field Book	NA Level Book	GDA94 Datum
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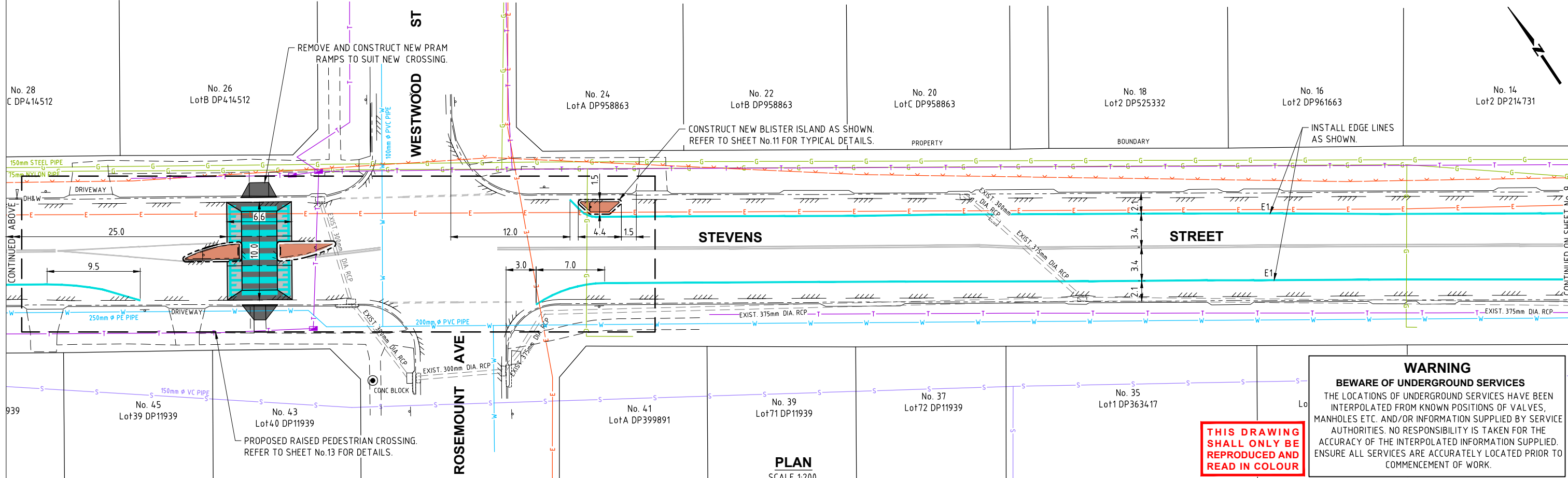
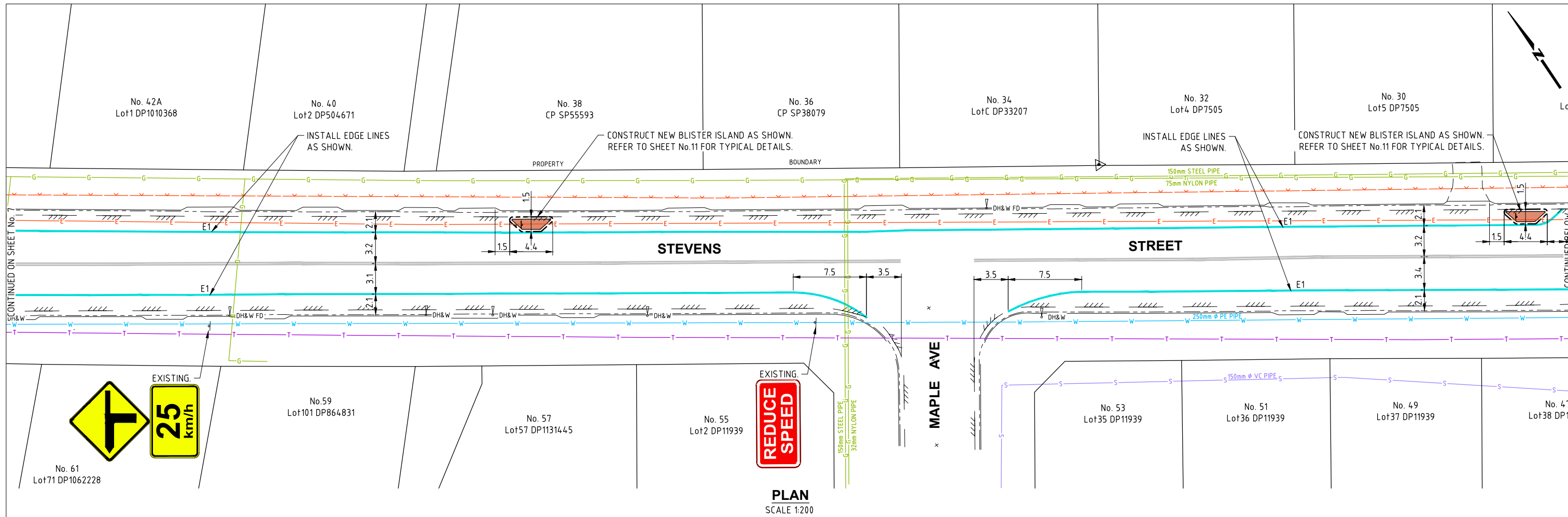
Issue	Description	Name	Initial	Date
1	ISSUED FOR CONSTRUCTION	M.DRAKE		

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**BELLAMY ST & STEVENS ST, PENNANT HILLS**  
**PROPOSED TRAFFIC IMPROVEMENTS**  
**GENERAL WORKS & SERVICES PLAN**  
**SHEET 3 OF 5**

Project Number <b>100925</b>	Sheet of <b>7 16</b>	Issue <b>1</b>
HSC Drawing Number <b>511.9</b>		



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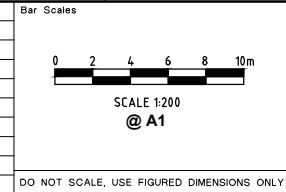
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Designer: K.ROM  
 Design Checked: Design Team Leader  
 Drawn: K.ROM  
 Surveyor: J. HART  
 Project Identifier: \CAD File Name  
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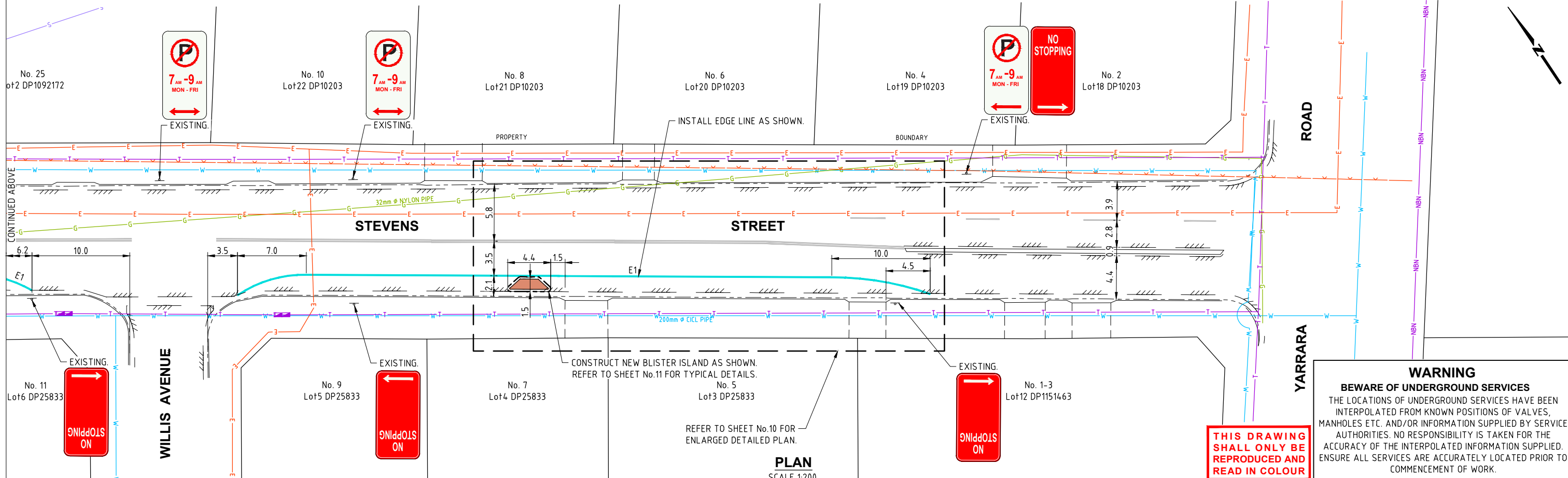
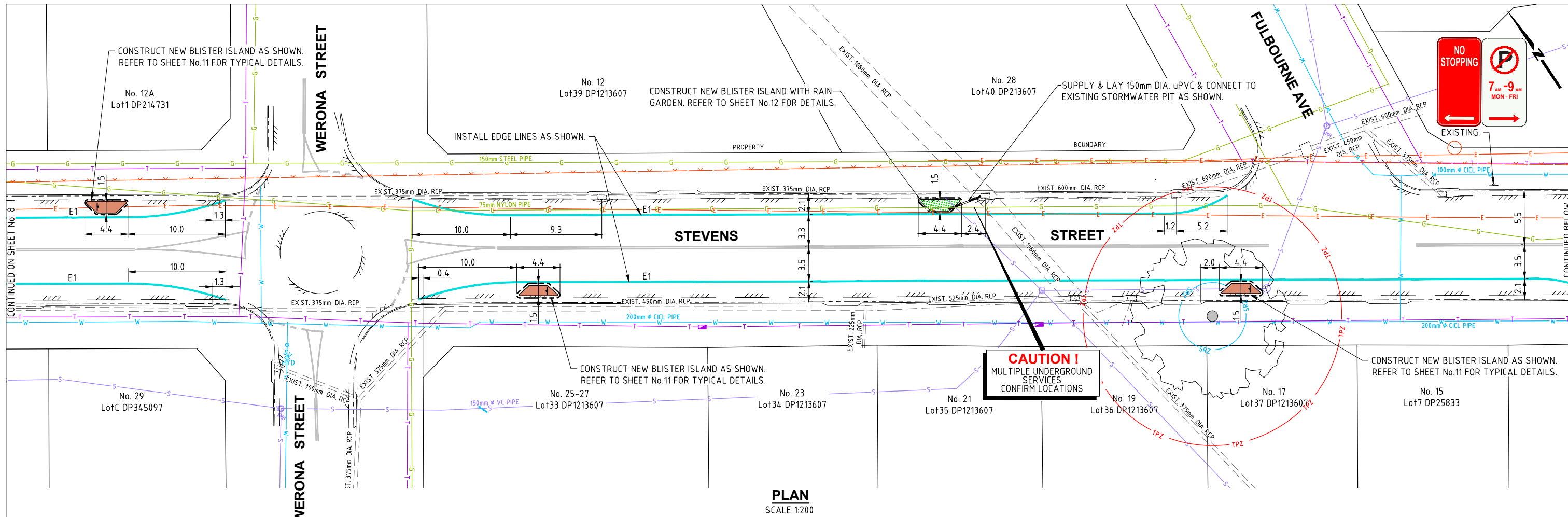
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**BELLAMY ST & STEVENS ST, PENNANT HILLS**  
**PROPOSED TRAFFIC IMPROVEMENTS**  
 GENERAL WORKS & SERVICES PLAN  
 SHEET 4 OF 5

Project Number	100925		
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HSC Drawing Number	511.9		





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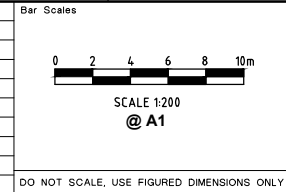
Authorised for release - Manager Design & Construction  
Name: R. RAJCA Signed: Date:

Designer: K.ROM  
Signed: Drawing Checked: K.ROM  
Surveyor: J. HART  
Project Identifier: \\CAD File Name  
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NA	NA	GDA94
Field Book	Level Book	Datum

Issue	Description	Name	Initial	Date
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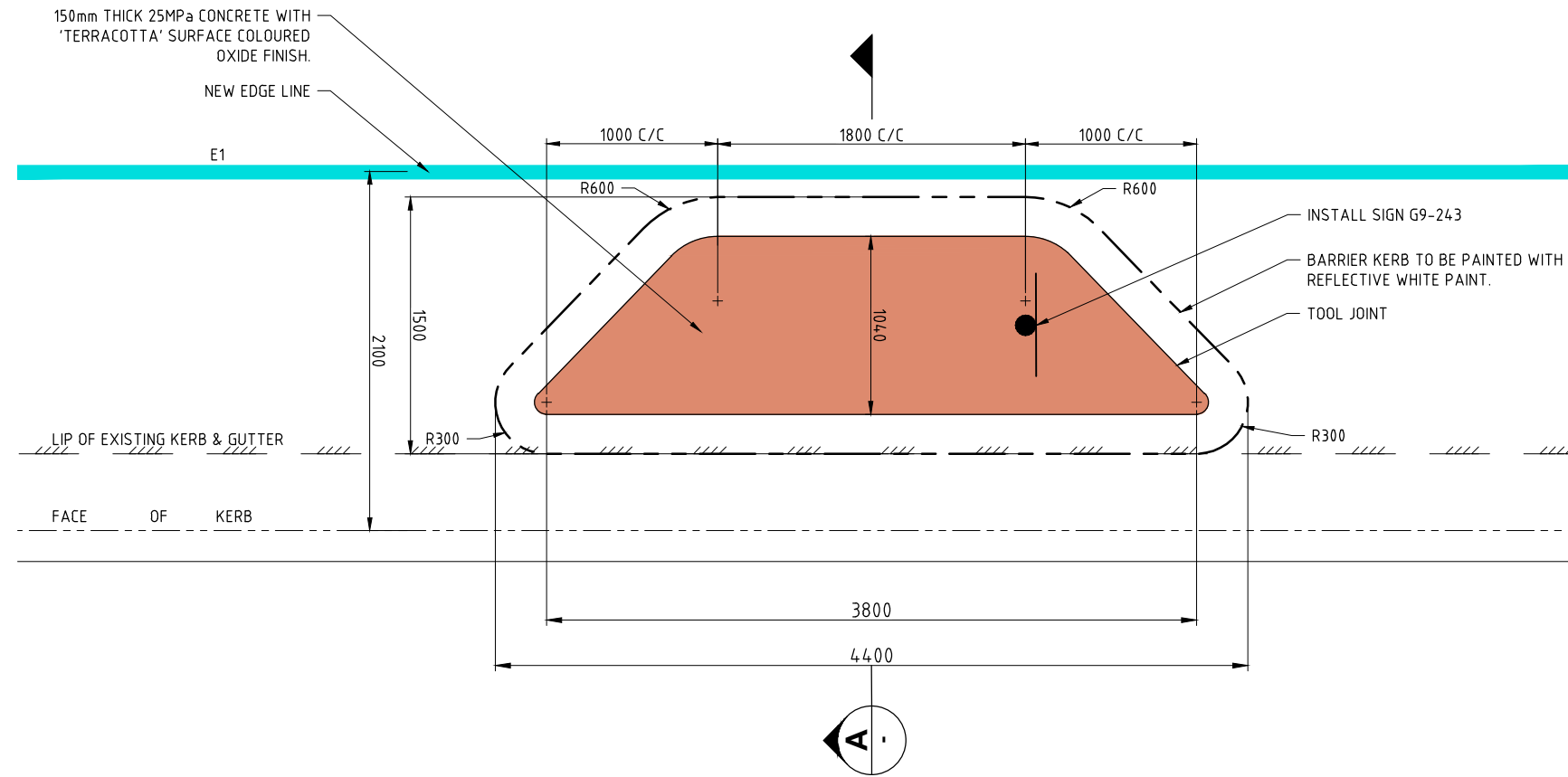


**BELLAMY ST & STEVENS ST, PENNANT HILLS**  
PROPOSED TRAFFIC IMPROVEMENTS

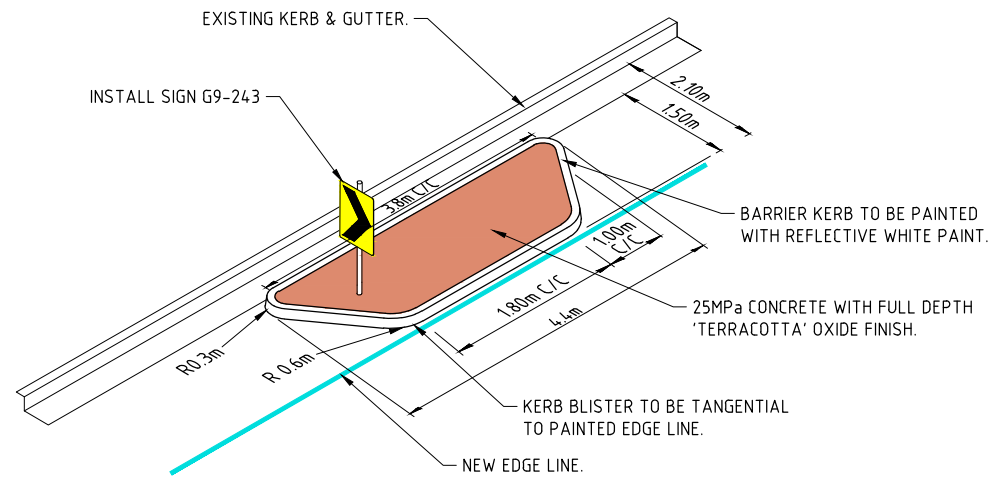
GENERAL WORKS & SERVICES PLAN  
SHEET 5 OF 5

Project Number	100925	
Sheet of	9	16
Issue	1	
HSC Drawing Number	511.9	

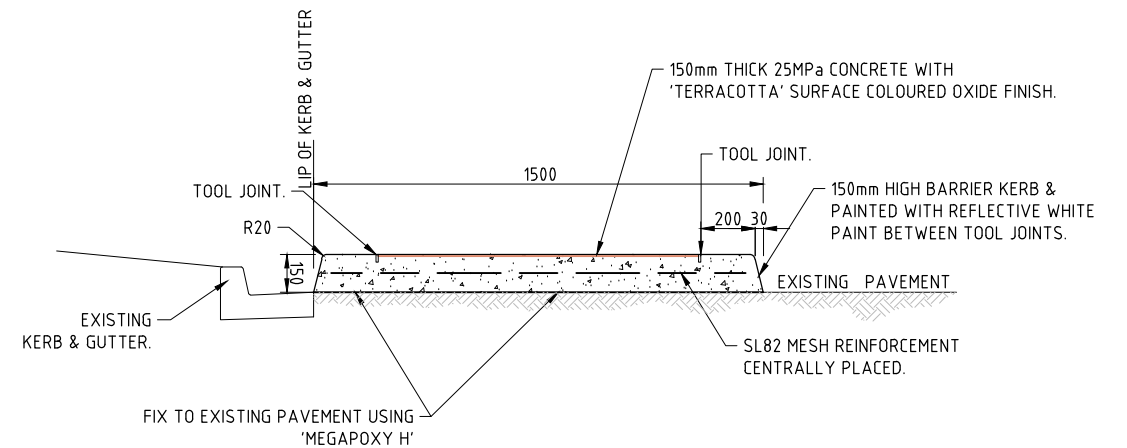




**DETAILED PLAN OF RAISED BLISTER ISLAND**  
(ADJACENT TO EXISTING KERB & GUTTER)  
SCALE 1:20



**ISOMETRIC VIEW OF RAISED BLISTER ISLAND**  
NOT TO SCALE



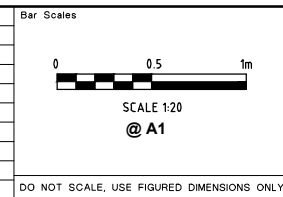
**SECTION A**  
NOT TO SCALE

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Designer K.ROM	Design Checked-Design Team Leader		
Drawn K.ROM	Signed:		
Surveyor J. HART	NA Field Book	NA Level Book	NA Datum
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Authorised for release - Manager Design & Construction Name: R. RAJCA	TRIM Document Number		

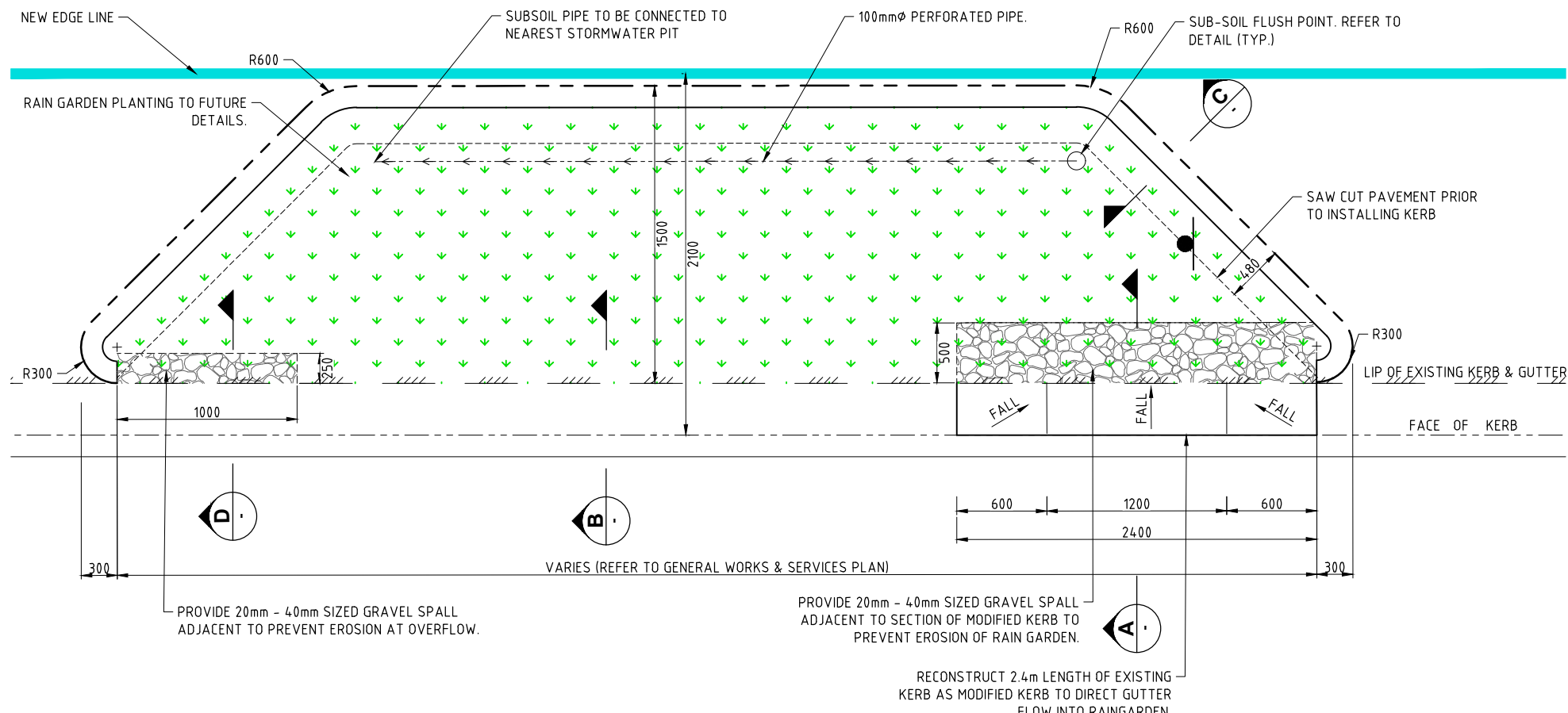
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	Description	Name	Initial	Date
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**BELLAMY ST & STEVENS ST, PENNANT HILLS**  
**PROPOSED TRAFFIC IMPROVEMENTS**  
**BOUNDARY ROAD TO YARRARA ROAD**

**RAISED BLISTER ISLAND TYPICAL DETAILS & SECTION**

Project Number <b>100925</b>	Sheet of		Issue
	<b>11</b>	<b>16</b>	<b>1</b>
HSC Drawing Number			<b>511.9</b>



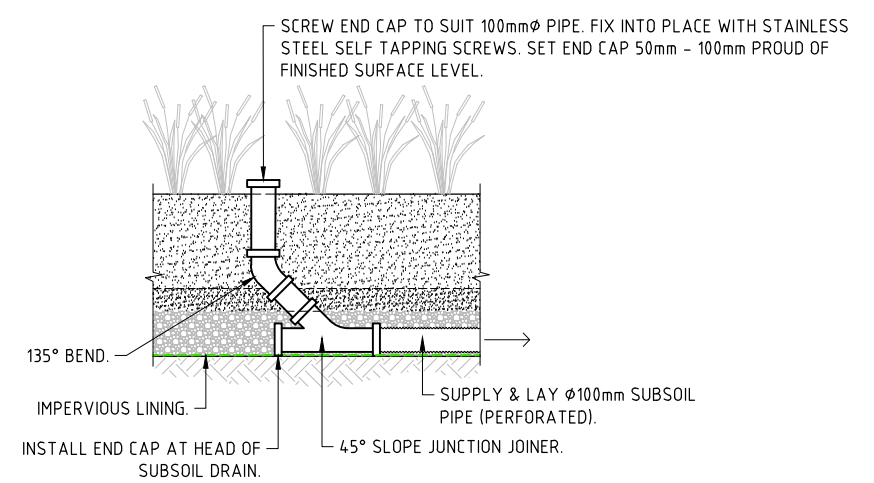
**DETAILED PLAN OF RAIN GARDEN**  
(ADJACENT TO EXISTING KERB & GUTTER)  
NTS

**RAIN GARDEN MEDIA SPECIFICATION**

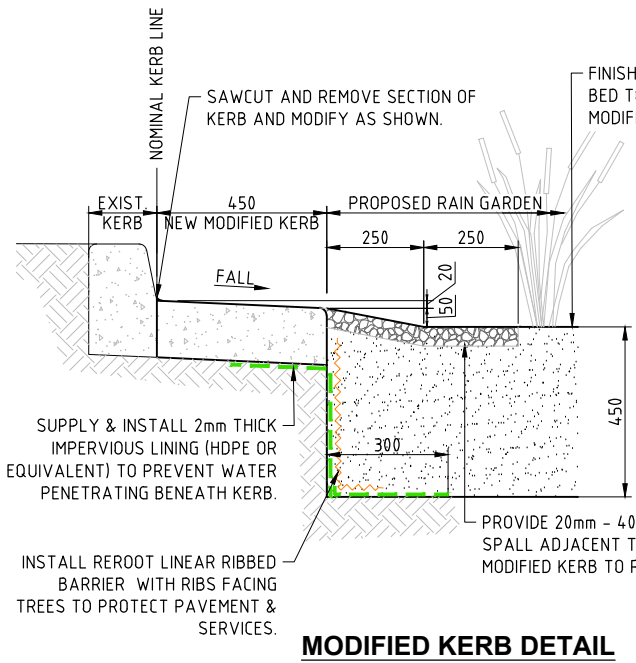
- RAINWATER MEDIA SHOULD BE IN ACCORDANCE WITH "ADOPTION GUIDELINES FOR STORMWATER BIOFILTRATION SYSTEM - APPENDIX C" BY CRCWSC. REFER TO FOLLOWING WEBSITE FOR DETAILS: <https://watersensitivecities.org.au/content/stormwater-biofilter-design/>
- CONTRACTOR SHALL BE RESPONSIBLE FOR FILTER MEDIA, TRANSITION LAYER & DRAINAGE LAYER COMPLY WITH THE GUIDELINES.
- PROOF OF COMPLIANCE TO BE PROVIDED TO THE SUPERINTENDENT.
- HOLD POINT:** AFTER DRAINAGE INSTALLED & BEFORE MEDIA, INCLUDING DRAINAGE LAYER INSTALLED.
- RAINGARDEN FILTER MEDIA SPECIFICATION
  - COMPLY WITH THE GUIDELINE REFERRED IN NOTE No.1 ABOVE.
  - CLAY & SILT CONTENT TO BE LESS THAN 3%.
  - SATURATED HYDRAULIC CONDUCTIVITY 100-300mm/hr.
  - FREE OF STONES, STUMPS, ROOTS, OR OTHER WOODY MATERIAL OVER 25mm DIAMETER.
  - FREE OF BRUSH OR SEED FROM WEEDS.
- PLANTS SHOULD BE DENSE HEAVY FOLIAGE TOLERANT OF FREELY DRAINING.
- PLANT DENSITY 8-10 PLANTS/m<sup>2</sup>. SELECT FROM COUNCIL'S NURSERY AT PENNANT HILLS.

**RAIN GARDEN CONSTRUCTION NOTES:**

- MEDIA MATERIAL TO MEET SPECIFICATIONS SHOWN HERE. CONTRACTOR IS TO UNDERTAKE ALL TESTING NECESSARY TO CERTIFY THIS PRIOR TO MEDIA BEING PLACED.
- MEDIA TO BE LOOSELY COMPACTED (TAMPED LIGHTLY WITH BACKHOE BUCKET).

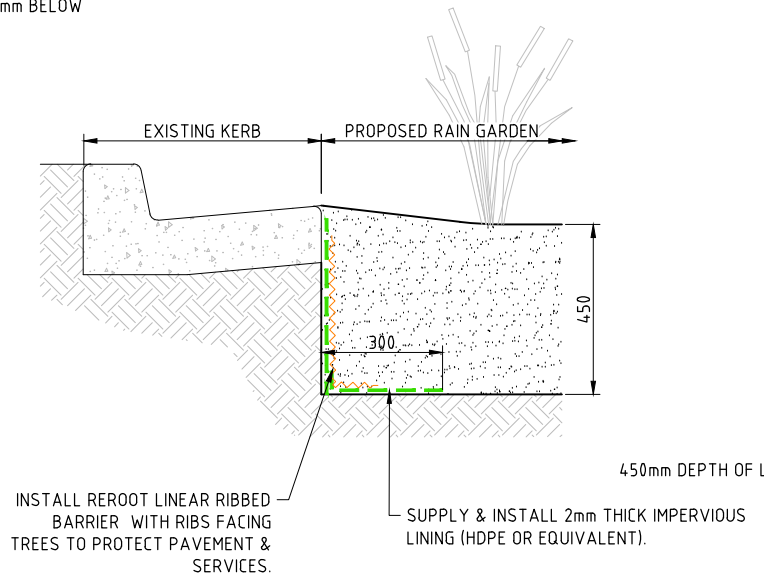


**SUBSOIL FLUSHING POINT DETAIL**  
NOT TO SCALE

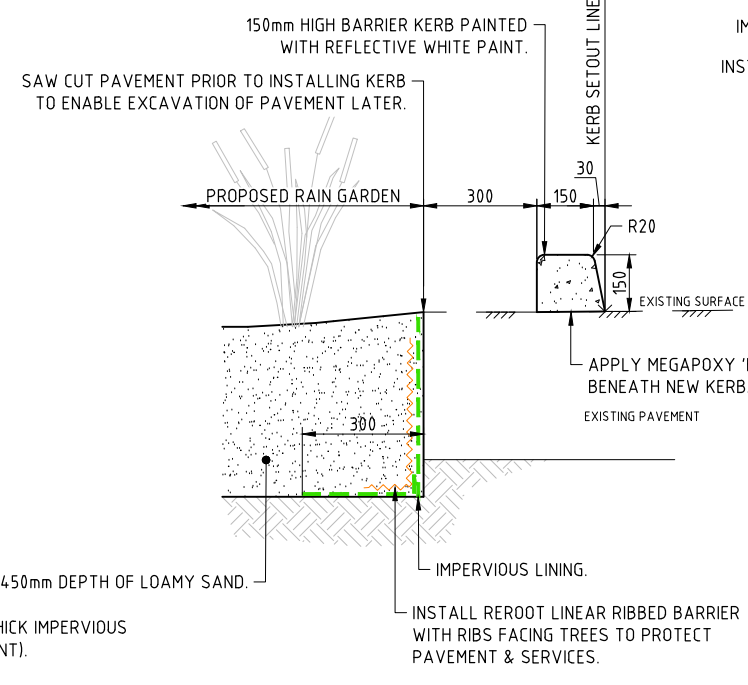


**MODIFIED KERB DETAIL**

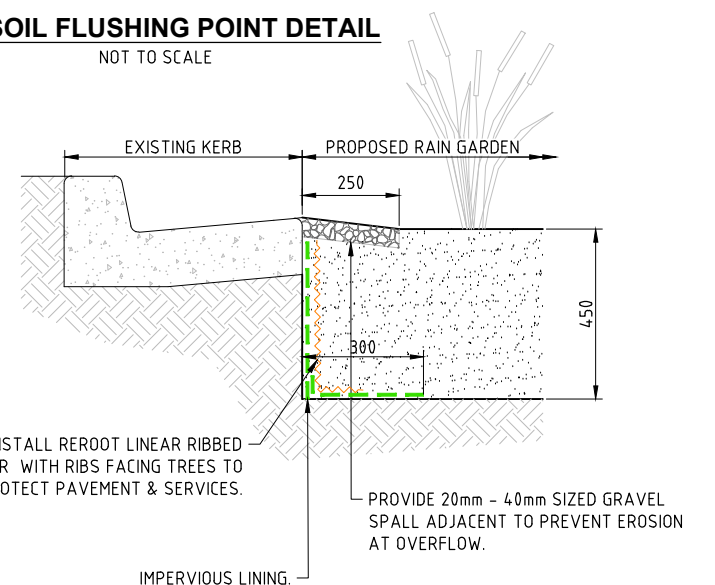
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SCALE 1:10



**SECTION B**  
SCALE 1:10



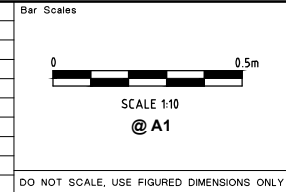
**SECTION C**  
SCALE 1:10



**SECTION D**  
SCALE 1:10

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TELEPHONE: (02) 9847 6666  
EMAIL: [hsc@hornsby.nsw.gov.au](mailto:hsc@hornsby.nsw.gov.au)

Designer K.ROM	Design Checked-Design Team Leader							
Drawn K.ROM	Drawing Checked							
Surveyor J. HART	NA	NA	GDA94					
Field Book	Level Book	Datum						
Project Identifier\ACAD File Name H:\Bellamy Stevens_TR_100925\Design\ACAD\BellamyStevens.dwg	1	ISSUED FOR CONSTRUCTION	M. DRAKE					
TRIM Document Number	Issue	Description	Name	Initial	Date			
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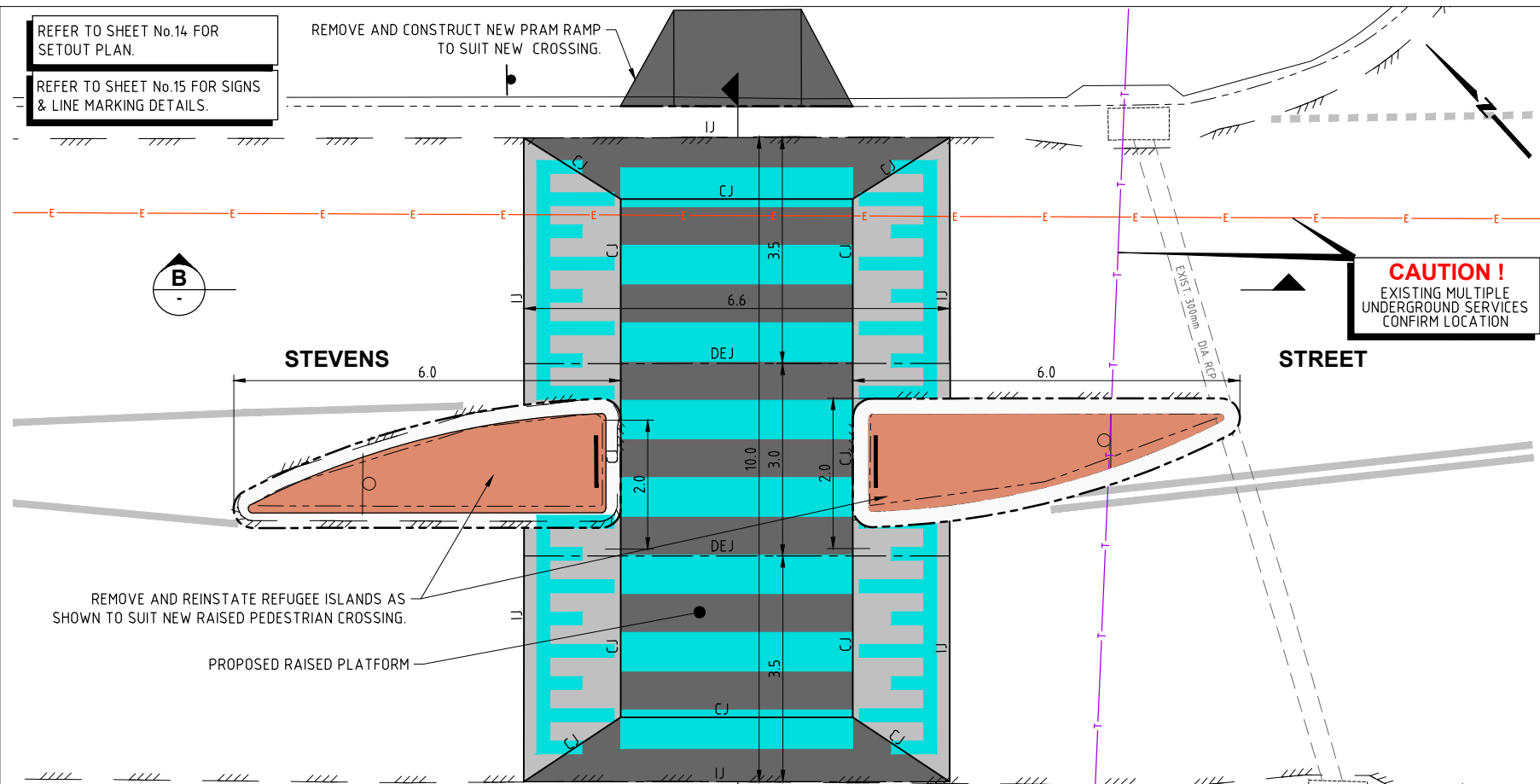


**BELLAMY ST & STEVENS ST, PENNANT HILLS**  
**PROPOSED TRAFFIC IMPROVEMENTS**  
**BOUNDARY ROAD TO YARRARA ROAD**  
**RAIN GARDEN ISLAND**  
**TYPICAL DETAILS & SECTIONS**

Project Number <b>100925</b>	Sheet of <b>12</b> of <b>16</b>	Issue <b>1</b>
HSC Drawing Number <b>511.9</b>		

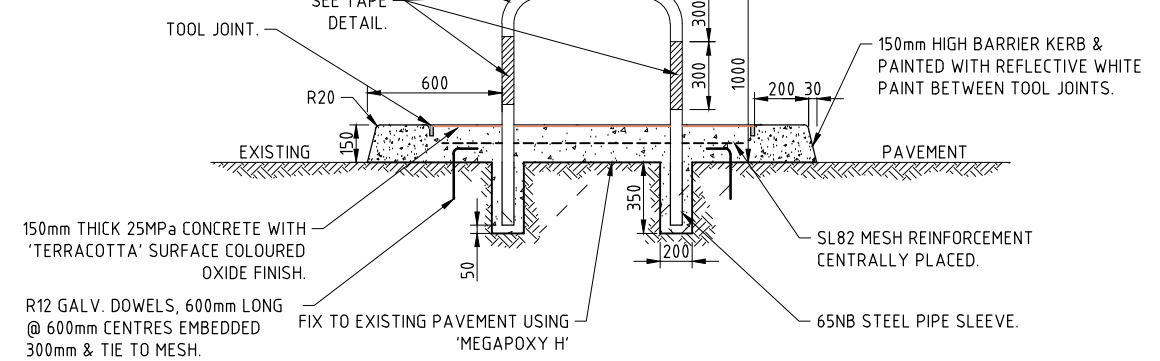
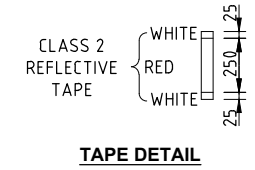
REFER TO SHEET No.14 FOR SETOUT PLAN.  
REFER TO SHEET No.15 FOR SIGNS & LINE MARKING DETAILS.

REMOVE AND CONSTRUCT NEW PRAM RAMP TO SUIT NEW CROSSING.



REMOVE AND REINSTATE REFUGEE ISLANDS AS SHOWN TO SUIT NEW RAISED PEDESTRIAN CROSSING.  
PROPOSED RAISED PLATFORM

**CAUTION!**  
EXISTING MULTIPLE UNDERGROUND SERVICES CONFIRM LOCATION

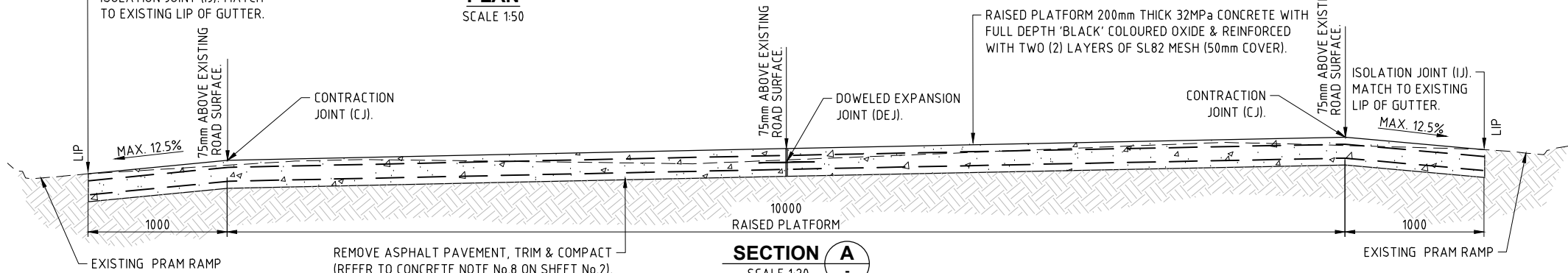


**TYPICAL SECTION RAISED REFUGEE ISLAND WITH HOLDING RAIL**  
NOT TO SCALE

REMOVE AND CONSTRUCT NEW PRAM RAMP TO SUIT NEW CROSSING.

ISOLATION JOINT (IJ). MATCH TO EXISTING LIP OF GUTTER.

**PLAN**  
SCALE 1:50

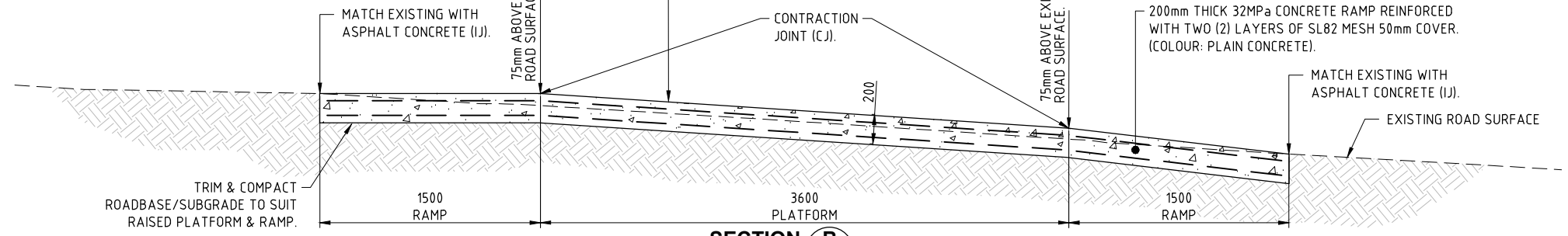


**SECTION A**  
SCALE 1:20

MATCH EXISTING WITH ASPHALT CONCRETE (IJ).

RAISED PLATFORM 200mm THICK 32MPa CONCRETE WITH FULL DEPTH 'BLACK' COLOURED OXIDE & REINFORCED WITH TWO (2) LAYERS OF SL82 MESH (50mm COVER).

200mm THICK 32MPa CONCRETE RAMP REINFORCED WITH TWO (2) LAYERS OF SL82 MESH 50mm COVER. (COLOUR: PLAIN CONCRETE).

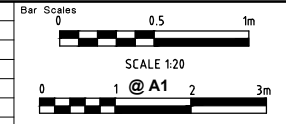


**SECTION B**  
SCALE 1:20

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Designer: K.ROM  
Drawn: K.ROM  
Surveyor: J. HART  
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Design Checked-Design Team Leader	Signed:				
Drawn	Signed:				
Field Book	Level Book	GDA94	Datum		
1	ISSUED FOR CONSTRUCTION	M. DRAKE	Name	Initial	Date
Issue	Description	Name	Initial	Date	



**BELLAMY ST & STEVENS ST, PENNANT HILLS**  
PROPOSED TRAFFIC IMPROVEMENTS  
BOUNDARY ROAD TO YARRARA ROAD

RAISED PEDESTRIAN CROSSING PLAN & SECTIONS

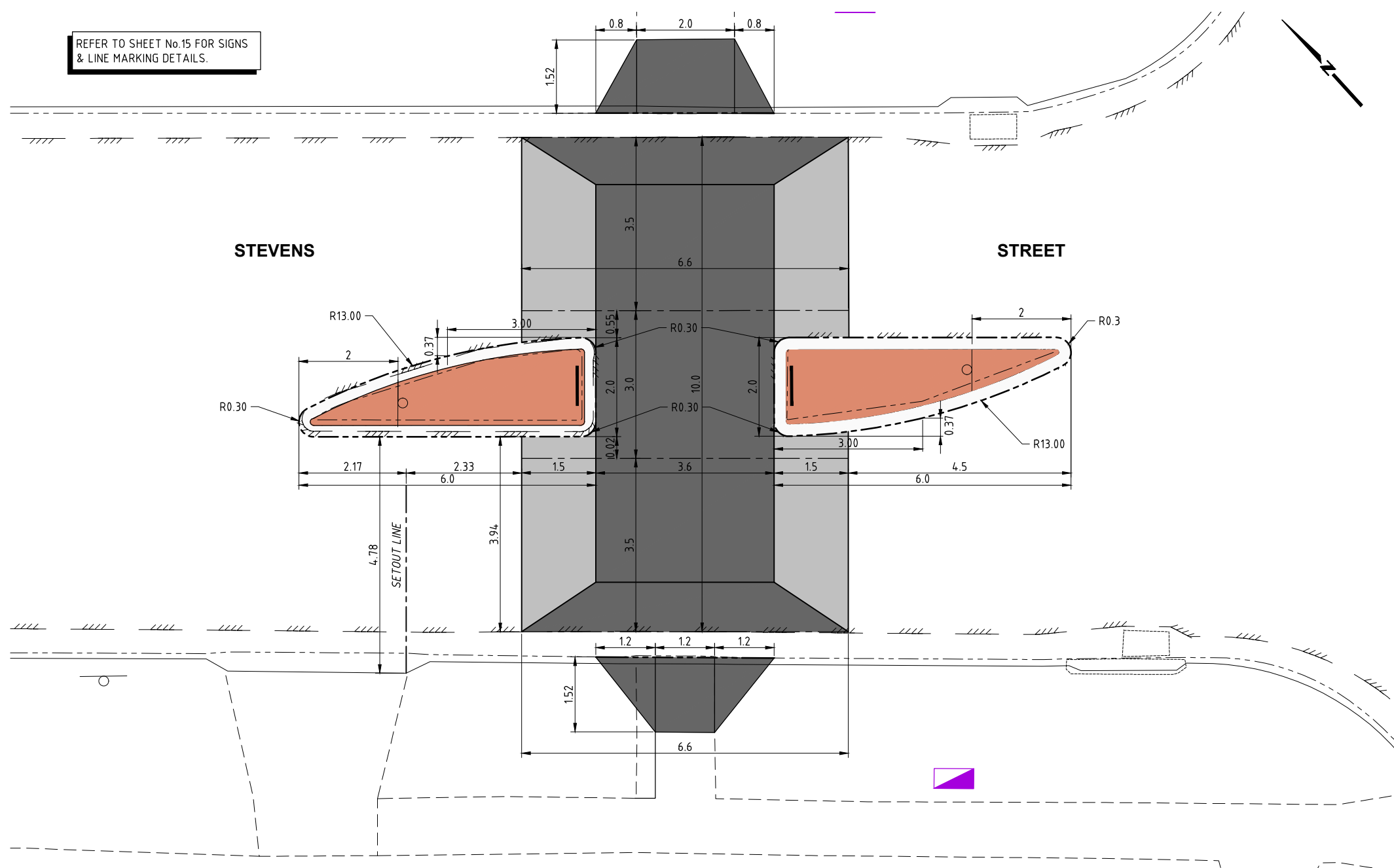
Project Number	100925		
Sheet of	13	16	Issue 1
HSC Drawing Number	511.9		

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REFER TO SHEET No.15 FOR SIGNS & LINE MARKING DETAILS.



**SETOUT PLAN**  
SCALE 1:50

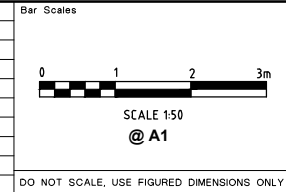
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Drawn K.ROM	Signed:		
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TRIM Document Number	1	ISSUED FOR CONSTRUCTION	M. DRAKE
	Issue	Description	Name Initial Date

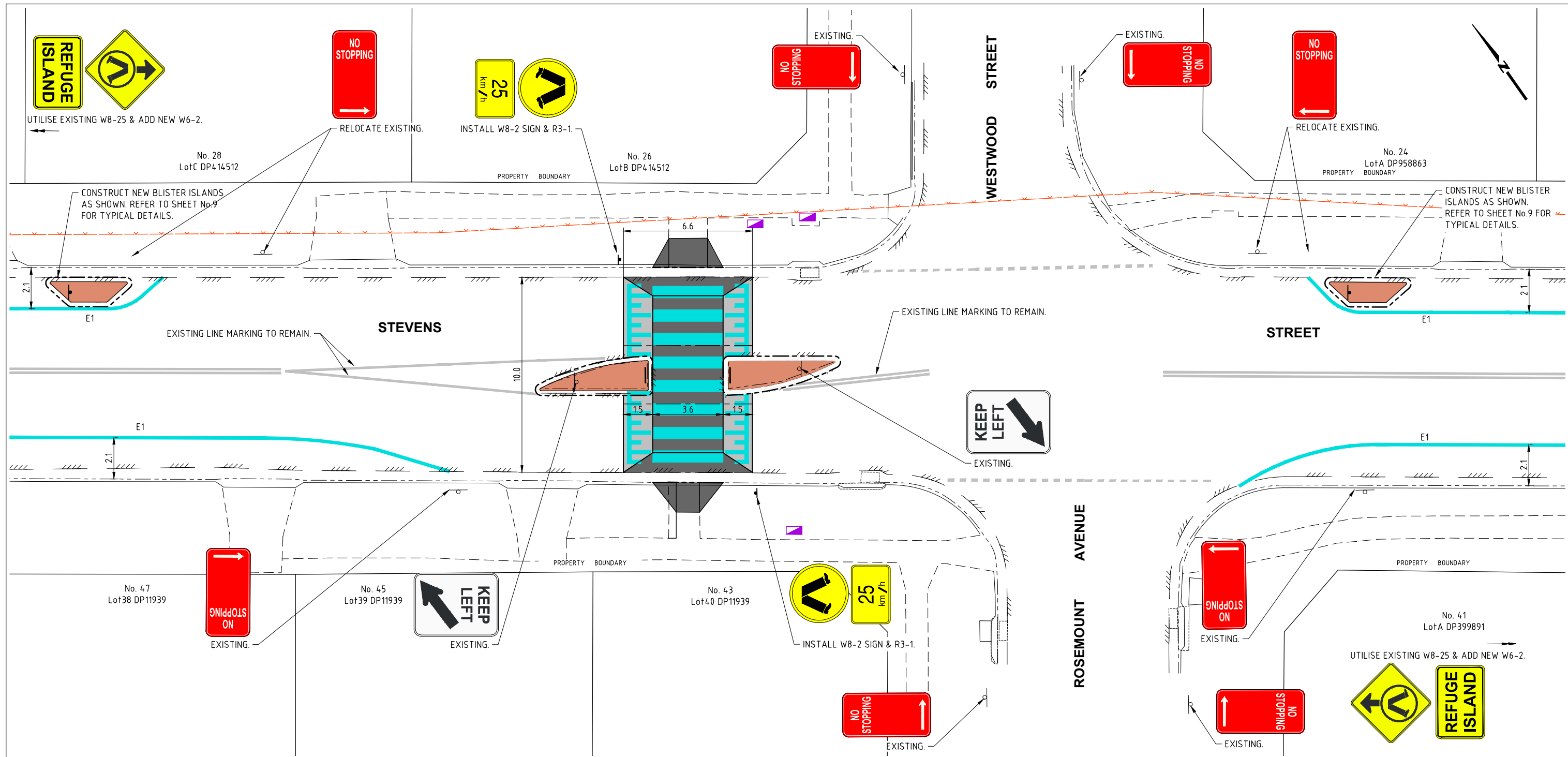
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**BELLAMY ST & STEVENS ST, PENNANT HILLS**  
**PROPOSED TRAFFIC IMPROVEMENTS**  
**BOUNDARY ROAD TO YARRARA ROAD**

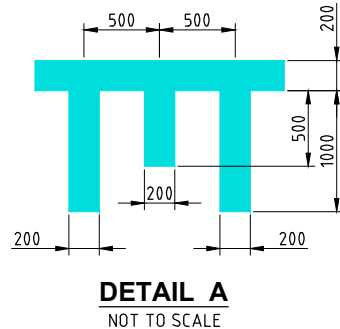
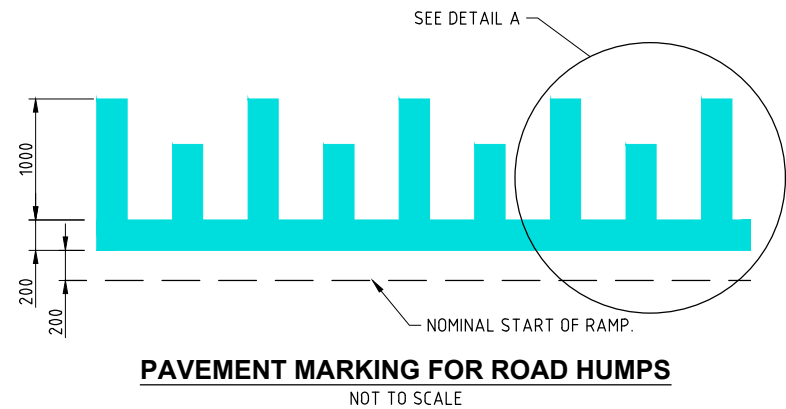
**RAISED PEDESTRIAN CROSSING & REFUGEE ISLANDS**  
**SETOUT PLAN**

Project Number	100925	
Sheet of	14	16
Issue	1	
HSC Drawing Number	511.9	



**LINE MARKING LEGEND**

- PROPOSED LINE MARKING.
- EXISTING LINE MARKING.
- EXISTING SIGN.
- NEW SIGN.



**NOTE:**

SIGNS SHOWN ON THIS DRAWING HAVE BEEN APPROVED BY LOCAL TRAFFIC COMMITTEE \_\_\_\_\_ - REFERENCE: \_\_\_\_\_.

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Branch**

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Surveyor J. HART	NA Field Book	NA Level Book	GDA94 Datum
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Issue	Description	Name	Initial Date
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Bar Scales	0 1 2 3 4 5m
SCALE 1:100	@ A1
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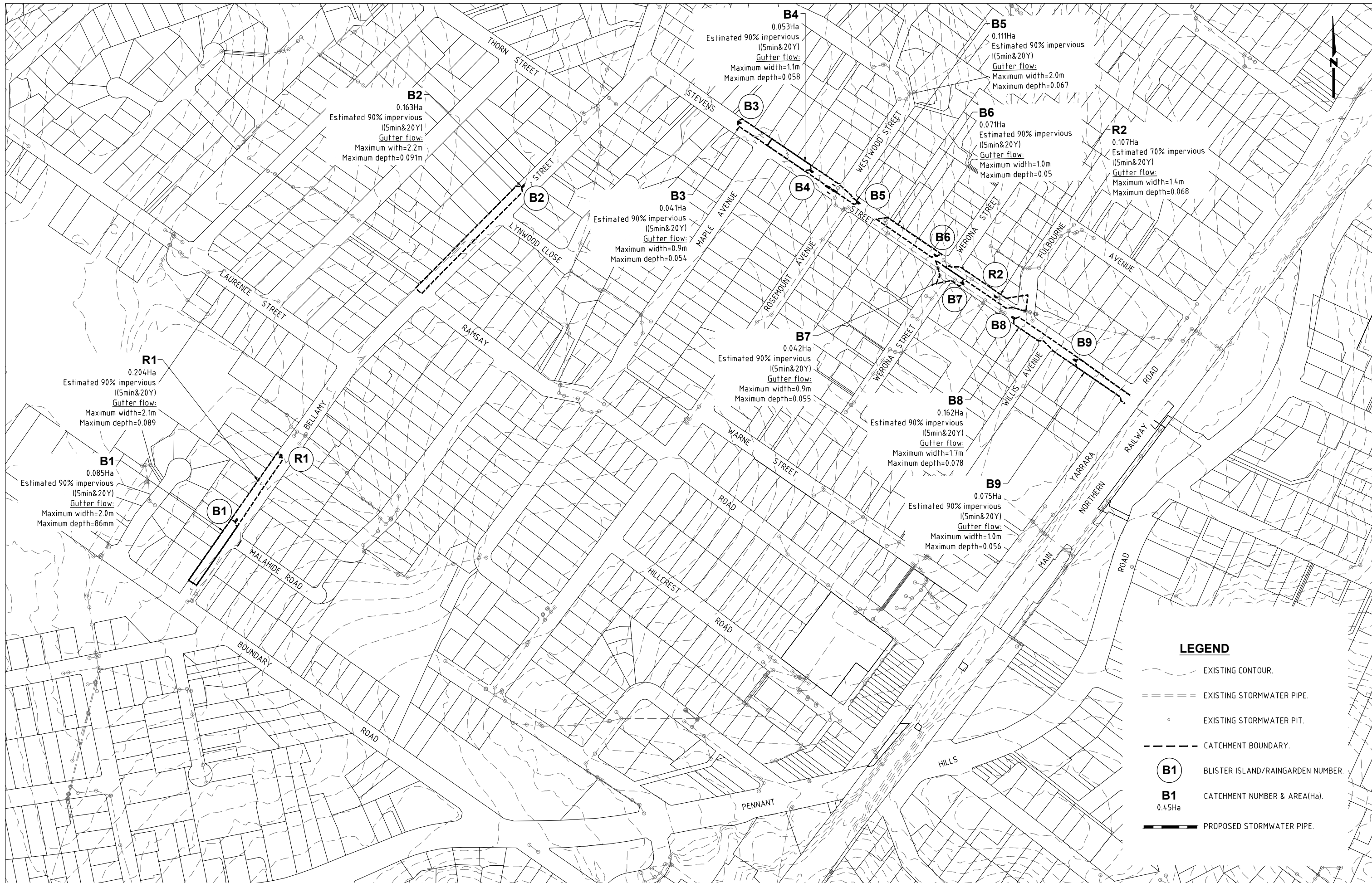
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**BELLAMY ST & STEVENS ST, PENNANT HILLS  
PROPOSED TRAFFIC IMPROVEMENTS  
BOUNDARY ROAD TO YARRARA ROAD**

**RAISED PEDESTRIAN CROSSING  
SIGNS & LINE MARKING PLAN**

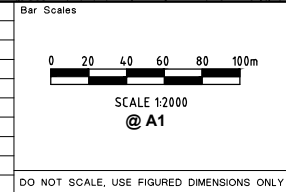
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HSC Drawing Number	511.9	



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 TRIM Document Number: [ ]

Issue	Description	Name	Initial	Date



**BELLAMY ST & STEVENS ST, PENNANT HILLS**  
**PROPOSED TRAFFIC IMPROVEMENTS**  
**BOUNDARY ROAD TO YARRARA ROAD**  
 STORMWATER CATCHMENT PLAN

Project Number	100925		
Sheet of	16	16	Issue 1
HSC Drawing Number	511.9		

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