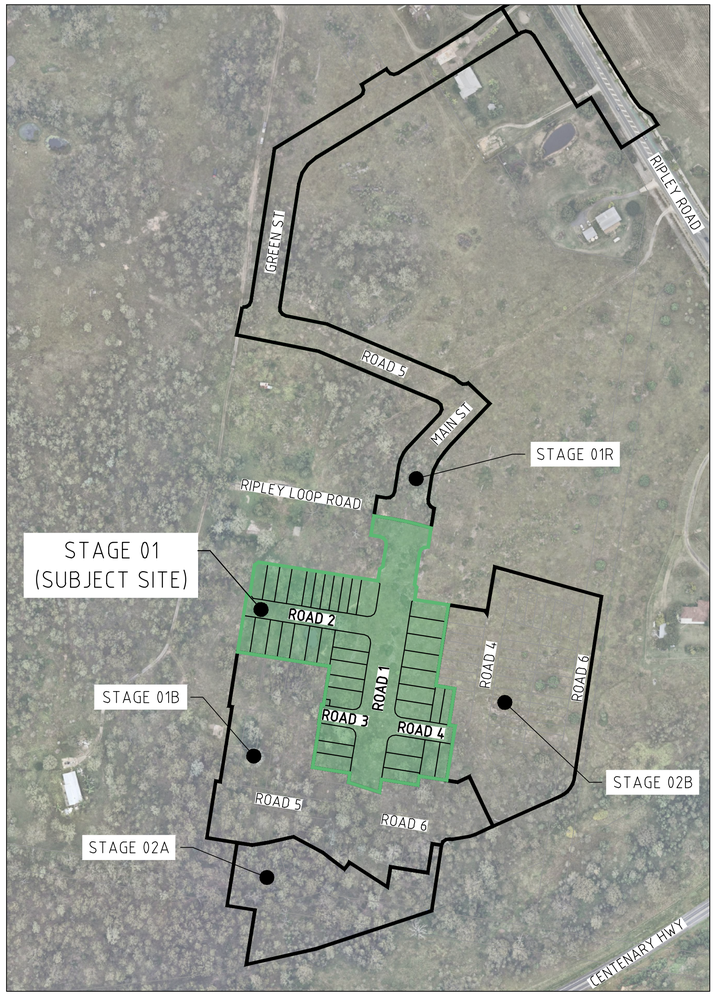
AMORY AT RIPLEY
STAGE 01
RIPLEY ESTATE DEVELOPMENT PTY LTD



LOCALITY PLAN

NTS

DRAWING SCHEDULE

DRAWING	DESCRIPTION
GENERAL	
320678-01-C0100	DRAWING SCHEDULE & LOCALITY PLAN
320678-01-C0101	GENERAL NOTES & LEGEND
320678-01-C0102	OVERALL KEY PLAN
320678-01-C0103	CONTROL LINE LAYOUT PLAN & TYPICAL SECTIONS
EARTHWORKS	
320678-01-C0200	EARTHWORKS LAYOUT PLAN - SHEET 1 OF 2
320678-01-C0201	EARTHWORKS LAYOUT PLAN - SHEET 2 OF 2
320678-01-C0202	EARTHWORKS SITE SECTIONS
ROADWORKS	
320678-01-C0300	ROADWORKS STANDARD NOTES & DETAILS
320678-01-C0301	ROADWORKS LAYOUT PLAN - SHEET 1 OF 2
320678-01-C0302	ROADWORKS LAYOUT PLAN - SHEET 2 OF 2
320678-01-C0303	ROAD 1 LONGITUDINAL SECTIONS - SHEET 1 OF 2
320678-01-C0304	ROAD 1 LONGITUDINAL SECTIONS - SHEET 2 OF 2
320678-01-C0305	ROAD 1 CROSS SECTIONS - SHEET 1 OF 2
320678-01-C0306	ROAD 2 LONGITUDINAL SECTIONS
320678-01-C0307	ROAD 2 CROSS SECTIONS
320678-01-C0308	ROAD 3 & ROAD 4 LONGITUDINAL SECTIONS
320678-01-C0309	ROAD 3 & ROAD 4 CROSS SECTIONS
320678-01-C0310	RIPLEY LOOP/ROAD 1 INTERSECTION DETAIL
320678-01-C0311	ROAD1/ROAD 2 INTERSECTION DETAIL
320678-01-C0312	ROAD 3/ROAD 4 INTERSECTION DETAILS - SHEET 1 OF 2
320678-01-C0313	ROAD 3/ROAD 4 INTERSECTION DETAILS - SHEET 2 OF 2
320678-01-C0314	TRAFFIC ISLAND SETOUT DETAILS
SIGNAGE & LINEMARKING	
320678-01-C0400	SIGNAGE & LINEMARKING DETAILED LAYOUT PLAN
STORMWATER DRAINAGE	
320678-01-C0500	STORMWATER DRAINAGE STANDARD NOTES & DETAILS
320678-01-C0501	STORMWATER DRAINAGE CATCHMENT PLAN
320678-01-C0502	STORMWATER DRAINAGE LONGITUDINAL SECTIONS - SHEET 1 OF 3
320678-01-C0503	STORMWATER DRAINAGE LONGITUDINAL SECTIONS - SHEET 2 OF 3
320678-01-C0504	STORMWATER DRAINAGE LONGITUDINAL SECTIONS - SHEET 3 OF 3
320678-01-C0505	BASIN 1 CATCHMENT - OVERALL CATCHMENT PLAN
320678-01-C0506	STORMWATER DRAINAGE CALCULATIONS TABLE - SHEET 1 OF 4
320678-01-C0507	STORMWATER DRAINAGE CALCULATIONS TABLE - SHEET 2 OF 4
320678-01-C0508	STORMWATER DRAINAGE CALCULATIONS TABLE - SHEET 3 OF 4
320678-01-C0509	STORMWATER DRAINAGE CALCULATIONS TABLE - SHEET 4 OF 4
320678-01-C0510	STORMWATER STRUCTURE DETAILS
SAFETY IN DESIGN REPORT	
320678-01-C0900	SAFETY IN DESIGN REPORT

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Zero Damage - Zero Harm

WARNING
BEWARE OF UNDERGROUND/OVERHEAD SERVICES
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A	ISSUE FOR APPROVAL	K.H.	01-12-23

NOT TO SCALE

dtcs ISO 9001 certified ISO 45001 certified ISO 14001 certified

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spiire.com.au ABN 55 050 029 635

AMORY AT RIPLEY

Designed T.MULLEN
Checked K. HOWELLS
Authorised M. READMAN RPEQ 28295
Date DECEMBER 23

AMORY AT RIPLEY
STAGE 01
COVER SHEET, LOCALITY PLAN AND DRAWING SCHEDULE

IPSWICH CITY COUNCIL
RIPLEY ESTATE DEVELOPMENT PTY LTD

CONSTRUCTION
Drg No 320678-01-C0100
Rev 2

file name 320678-01AC0100.dwg layout name C0100 plotted by Charlene Chessells
FILE DETAILS

NOTES:

GENERAL

1. ALL LEVELS ARE TO AUSTRALIAN HEIGHT DATUM
2. ALL EXISTING SURFACE LEVELS SHOWN ON THE ENGINEERING DRAWINGS HAVE BEEN INTERPOLATED FROM A DIGITAL TERRAIN MODEL. THESE LEVELS HAVE BEEN USED AS THE BASIS FOR ALL ENGINEERING DESIGN AND DETERMINATION OF QUANTITIES AND ARE ACCURATE TO WITHIN ±0.05m.
3. ALL WORKS TO BE CARRIED OUT IN ACCORDANCE WITH AS2124-1992 GENERAL CONDITIONS OF CONTRACT, SPECIFICATIONS, APPROVED AUTHORITY SPECIFICATIONS AND STANDARD DRAWINGS, AUSTRALIAN STANDARDS AND TO THE SATISFACTION OF THE SUPERINTENDENT AND THE COUNCIL ENGINEER OR THEIR REPRESENTATIVE.
4. ROAD CHAINAGES REFER TO ROAD CENTRELINES. CHAINAGES FOR INTERSECTIONS AND CUL-DE-SACS REFER TO THE LIP OF KERB.
5. CONTRACTOR TO VERIFY LOCATION OF ALL EXISTING SURFACES AND CONNECTION POINTS INCLUDING CONNECTION LEVELS AND ADVISE THE SUPERINTENDENT OF ANY DISCREPANCIES PRIOR TO COMMENCEMENT ON SITE.
6. ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE IMPLEMENTED IN ACCORDANCE WITH THE EROSION AND SEDIMENT CONTROL PLANS, BEST PRACTICE AND IN ACCORDANCE WITH INTERNATIONAL EROSION CONTROL ASSOCIATION PRACTICES AND GUIDELINES.
7. PROJECT SURVEYOR SHALL PEG COMMON BOUNDARY WITH ADJOINING PROPERTIES.
8. CONTRACTOR SHALL ASSESS LOCATION AND LEVEL OF ANY EXISTING FENCING AND RETAINING WALLS RELATIVE TO PROPOSED RETAINING WALL CONSTRUCTION.
9. CONTRACTOR MUST PROVIDE TEMPORARY PROPPING AS NECESSARY TO ENSURE THAT PROPOSED CONSTRUCTION WORKS DO NOT CAUSE ANY DAMAGE OR DRAINAGE ISSUES TO EXISTING NEIGHBORING PROPERTIES.
10. CONTRATOR TO PROVIDE DILAPIDATION REPORT OF ALL ASSETS IN THE VICINITY OF WORKS

EARTHWORKS

1. ALL LEVELS ARE TO AUSTRALIAN HEIGHT DATUM
2. ALL EXISTING SURFACE LEVELS SHOWN ON THE ENGINEERING DRAWINGS HAVE BEEN INTERPOLATED FROM A DIGITAL TERRAIN MODEL. THESE LEVELS HAVE BEEN USED AS THE BASIS FOR ALL ENGINEERING DESIGN AND DETERMINATION OF QUANTITIES.
3. THE CONTRACTOR SHALL ADVISE THE COUNCIL INSPECTOR OF THE PROPOSED SOURCE OF IMPORTED FILL TO BE BROUGHT ONTO THE DEVELOPMENT SITE AND PROVIDE CERTIFICATION (IF REQUESTED BY COUNCIL) FROM THE SUPPLIER / GEOTECHNICAL CONSULTANT.
4. THE CONTRACTOR SHALL ALSO ADVISE THE COUNCIL INSPECTOR OF THE PROPOSED HAUL ROUTE TO BE TAKEN BY ANY TRUCKS DELIVERING FILL TO THE PROPOSED DEVELOPMENT SITE.
5. IT IS THE PRINCIPAL CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT NO FILL MATERIAL IS DEPOSITED ONTO THE ROADS USED BY DELIVERY TRUCKS. ANY MATERIAL DEPOSITED ONTO ROADWAYS SHALL BE CLEANED AS NECESSARY TO AVOID CAUSING NUISANCE TO VEHICLE TRAFFIC.
6. ALL WORK SHALL BE IN ACCORDANCE WITH IPSWICH CITY COUNCIL DESIGN STANDARDS.
7. ALL EARTHWORKS & WORKS ASSOCIATED WITH PROPOSED DEVELOPMENT SHALL BE UNDERTAKEN IN STRICT ACCORDANCE WITH THE PROJECT SPECIFIC GEOTECHNICAL REPORT AND AS3978.
8. WORKS MUST BE UNDERTAKEN IN ACCORDANCE WITH BUTLER PARTNERS REPORTS 010-218K - '633 RIPLEY ROAD' & '695 AND 787-815 RIPLEY ROAD' 31/01/2021
9. WHERE NEW WORK ABUTS EXISTING WORK THE CONTRACTOR SHALL ENSURE THAT A SMOOTH EVEN PROFILE, FREE FROM ABRUPT CHANGES IS OBTAINED.
10. THE PLACEMENT OF ALL FILL TO BE INSPECTED, TESTED AND CERTIFIED BY A GEOTECHNICAL ENGINEER TO A LEVEL 1 REQUIREMENT DURING THE EARTHWORKS OPERATIONS TO ENDURE THAT ALL FILL IS PLACED IN A "CONTROLLED MANNER", IN ACCORDANCE WITH AS3798 "GUIDELINES ON EARTHWORKS FOR COMMERCIAL AND RESIDENTIAL DEVELOPMENTS".
11. THE CONTRACTOR IS RESPONSIBLE FOR ENGAGING A NATA ACCREDITED GEOTECHNICAL CONSULTANT TO SUPERVISE ALL EARTHWORKS PROCEDURES AND PROVIDE LEVEL 1 TESTING AND CERTIFICATION IN ACCORDANCE WITH THE REQUIREMENTS OF AS3798.
12. STRIPPED TOPSOIL SHALL BE STOCKPILED WITHIN THE DEVELOPMENT SITE IN A POSITION APPROVED BY THE SUPERINTENDENT.
13. ANY IMPORTED FILL SHALL BE APPROVED AND FREE OF ORGANIC MATTER WITH CERTIFICATES PROVIDED
14. FILL SHALL BE PLACED IN MAXIMUM150mm LAYERS

LOCATION	MINIMUM DRY DENSITY RATIO (%)
BUILDING PADS	REFER SITE SPECIFIC GEOTECHNICAL REPORT RECOMMENDATIONS
ROADWAYS a) >0.5m BELOW PAVEMENT SUBGRADE b) <0.5m BELOW PAVEMENT SUBGRADE	 95 (Std.) 100 (Std.)
NOTE: THE RECOMMENDED COMPACTIONS ARE PERCENTAGES OF THE MAXIMUM DRY DENSITY DETERMINED BY AUSTRALIAN STANDARD 1289	

ROAD CONSTRUCTION

1. CONCTRETE WORKS TO BE CONSTRUCTED IN ACCORDANCE WITH AS3600 AND RELEVANT AUTHORITY STANDARDS.
2. ONCE EXCAVATION TO SUBGRADE LEVEL HAS OCCURRED, CONTRACTOR TO PROVIDE CBR TEST RESULTS TO SUPERINTENDENT FOR FINAL PAVEMENT DESIGN CONFIRMATION.
3. PRIOR TO PLACING EACH LAYER OF PAVEMENT, COMPACTION TEST RESULTS ARE TO BE PROVIDED TO SUPERINTENDENT FOR ACCEPTANCE.
4. CONSTRUCTION OF KERB TO BE IN ACCORDANCE WITH RELEVANT COUNCIL STANDARDS.
5. ALL SERVICE CONDUIT TRENCHES UNDER ROAD PAVEMENTS TO BE BACKFILLED IN ACCORDANCE WITH RELEVANT MUNICIPALITY OR ROAD AUTHORITY SPECIFICATION. TESTING TO OCCUR AT MINIMUM 40m INTERVALS- 1 TEST FOR EVERY 2 LAYERS.

LOCATION	DENSITY RATIO (%)	TYPE
PAVEMENT	95	MODIFIED MAXIMUM DRY DENSITY
ROADWAYS a) >0.5m BELOW PAVEMENT SUBGRADE b) <0.5m BELOW PAVEMENT SUBGRADE	 95 100	STANDARD MAXIMUM DRY DENSITY

GENERAL STORMWATER DRAINAGE

1. AG/SUBSOIL DRAIN TO BE LAID BEHIND KERB WHERE REQUIRED IN ACCORDANCE WITH THE COUNCIL STANDARD DRAWINGS AND CONNECTED TO UNDERGROUND DRAINAGE WITH CLEANOUTS AS REQUIRED.
2. ALL STORMWATER DRAINS ARE TO BE CLASS '2' R.C. PIPES UNLESS OTHERWISE SHOWN.
3. ALL PIPES ≤600 DIAMETER TO BE RUBBER RING JOINTED (R.R.J.) UNLESS STATED OTHERWISE. ALL OTHER PIPES TO BE FLUSH JOINTED (F.J) UNLESS STATED OTHERWISE.
4. ALL DRAINAGE AND DRAINAGE STRUCTURES TO BE IN ACCORDANCE WITH COUNCIL STANDARDS WITH THE INSTALLATION OF HEAVY DUTY LIDS.
5. CONCTRETE WORKS TO BE CONSTRUCTED IN ACCORDANCE WITH AS3600 AND RELEVANT AUTHORITY STANDARDS.

PAVEMENT

1. PAVEMENT DEPTHS MAY BE MODIFIED AS DIRECTED BY THE SUPERINTENDENT. PAVEMENT TO BE BOXED OUT TO MINIMUM DEPTH DENOTED, INSPECTED AND IF SUBGRADE IS IN QUESTION, FURTHER TESTING CARRIED OUT TO DETERMINE FINAL PAVEMENT DEPTH.
2. WHERE PAVEMENT IS CONSTRUCTED ON FILLING, FILL MATERIAL IS TO BE APPROVED BY THE SUPERINTENDENT AND COUNCIL. FILLING TO BE CONSTRUCTED IN LAYERS 150mm THICK WITH COMPACTION ACHIEVING 95% AUSTRALIAN STANDARD DENSITY.
3. WHEN PAVEMENT EXCAVATION IS IN ROCK ALL LOOSE MATERIAL (INCLUDING ROCKS AND CLAY) MUST BE REMOVED. THE SUB-GRADE MUST THEN BE REGULATED WITH COUNCIL APPROVED MATERIAL.

SIGNAGE AND LINEMARKING

1. LINEMARKING AND SIGNAGE TO BE INSTALLED IN ACCORDANCE WITH AS 1742 SERIES UNLESS NOTED OTHERWISE. STREET SIGNS ARE TO BE INSTALLED IN ACCORDANCE WITH COUNCIL/AUTHROITY STANDARDS.
2. ALL TEMPORARY WARNING SIGNS USED DURING CONSTRUCTION SHALL BE SUPPLIED AND MAINTAINED IN ACCORDANCE WITH AS 1742
3. TACTILE GROUND SURFACE INDICATORS ARE TO BE INSTALLED IN ACCORDANCE WITH THE DISABILITY DISCRIMINATION ACT AND RELEVANT COUNCIL STANDARD DRAWINGS.

CONCRETE

1. CONCTRETE WORKS TO BE CONSTRUCTED IN ACCORDANCE WITH AS3600 AND RELEVANT AUTHORITY STANDARDS.

RETAINING WALLS

1. RETAINING WALLS SHOWN ON THESE CIVIL DRAWINGS INDICATE ONLY THE RETAINING WALL TYPE, LOCATION, HEIGHT AND RELATIVITY TO BOUNDARIES OR OTHER KNOWN ELEMENTS. ALL RETAINING WALL STRUCTURAL AND OTHER SPECIFICATION SHALL BE DETAILED BY OTHERS. THE APPOINTED CONTRACTOR SHALL REVIEW ALL DEVELOPMENT APPROVAL CONDITIONS, PLANS AND SPECIFICATIONS TO ENSURE THAT ALL RETAINING WALL LOADS, ANCILLARY DRAINAGE (SUBSOIL & SURFACE DRAINAGE) AND CONSTRAINTS ARE ACCOMMODATED (INCLUDING ANY FUTURE FENCES WHICH MAY BE ATTACHED), AND SHALL SUPPLY THE SUPERVISING ENGINEER ALL POST-CONSTRUCTION CERTIFICATIONS NECESSARY FOR RELEVANT LOCAL AUTHORITY ACCEPTANCE. FOR WORKS WITHIN QUEENSLAND THIS SHALL INCLUDE (BUT NOT LIMITED TO) QUEENSLAND GOVERNMENT - "FORM 15" AND "FORM 12" CERTIFIED BY AN R.P.E.Q. ENGINEER.

LEGEND

DESCRIPTION	EXISTING	PROPOSED
WATER MAIN	DW	DW
ELECTRICITY	E	
TELECOMMUNICATIONS & SERVICE PIT	T	
GAS MAIN	G	
SEWER & MAINTENANCE STRUCTURE	S	S
SWALE		
STORMWATER DRAIN & PIT	SWD	
STORMWATER PITS		
AG DRAIN AND FLUSHER	AG	AG
STORM WATER DRAINAGE PIT NUMBER		1/1
BARRIER KERB - TYPE B1		B1
BARRIER KERB - TYPE B2		B2
INVERT - TYPE CHANNEL		C1
EDGE RESTRAINT - TYPE ER2		ER2
MOUNTABLE KERB - TYPE 1		TYPE 1
SURFACE CONTOUR MAJOR	- 169.00 -	169.00
SURFACE CONTOUR MINOR	- 168.90 -	168.90
SIGN AND POST		
LIGHT & POLE (BY OTHERS)		
STREET SIGN		
ROAD CENTERLINE		
ROAD CHAINAGES	CH200.000	CH200.000
BATTER		
CUT EXTENTS		
FILL EXTENTS		
ROCK PITCHING		
FENCES		
GUARD RAIL		
TREE		
ROAD PAVEMENT - TYPE A		
ROAD PAVEMENT - TYPE B		
FOOTPATH		
RETAINING WALL		
RETAINING WALL HEIGHT		(2.0)

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AMORY AT RIPLEY

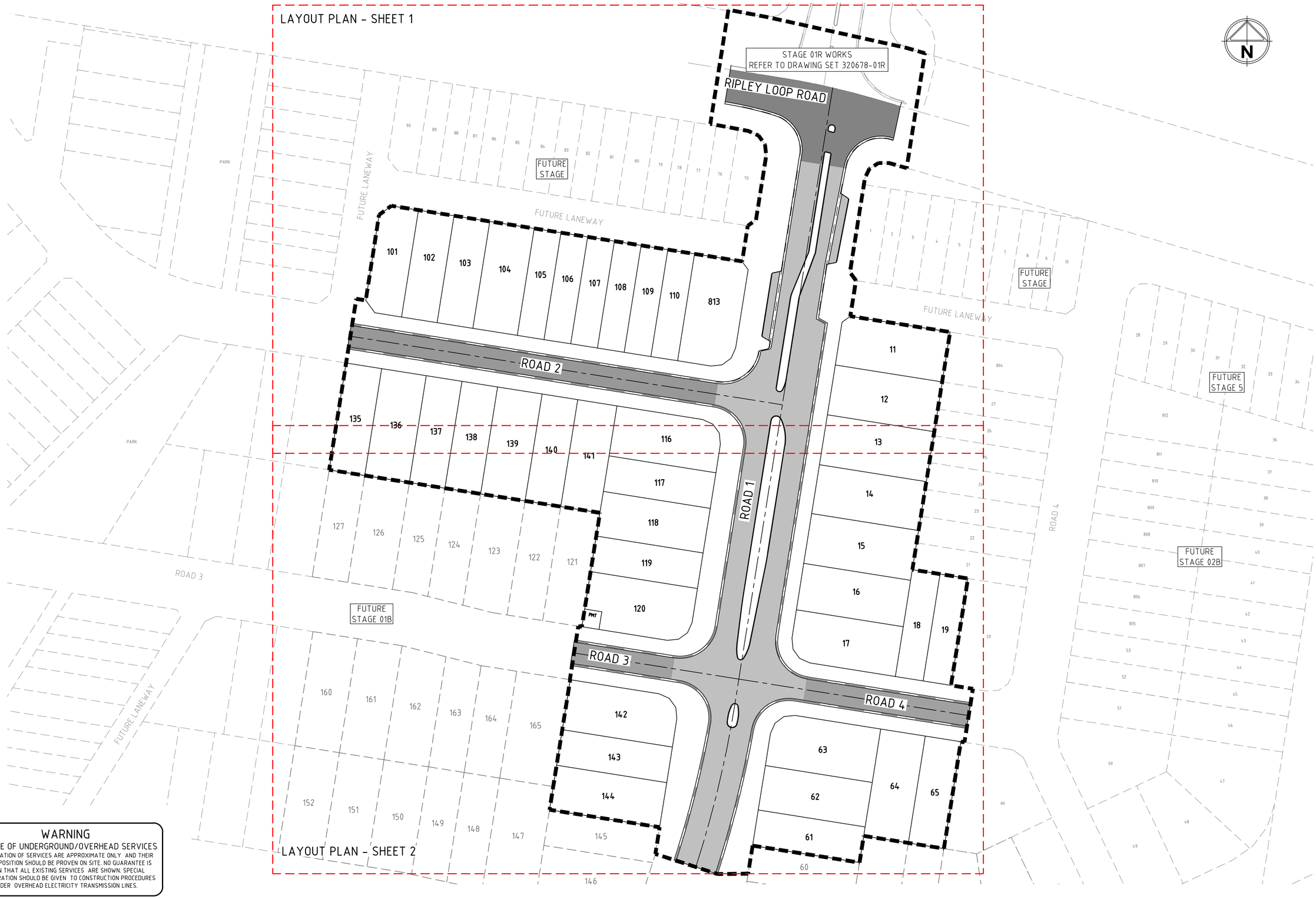
Designed T.MULLEN | Checked K. HOWELLS
Authorised M. READMAN RPEQ 28295 | Date DECEMBER 23

AMORY AT RIPLEY STAGE 01
GENERAL NOTES & LEGEND

IPSWICH CITY COUNCIL
RIPLEY ESTATE DEVELOPMENT PTY LTD

CONSTRUCTION Drg No **320678-01-C0101** Rev **2**

LAYOUT PLAN - SHEET 1



LAYOUT PLAN - SHEET 2

WARNING

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H 1500 SCALE @ A1 0 5 10 15 20 25

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AMORY AT RIPLEY

Designed T.MULLEN | Checked K. HOWELLS

Authorised M. READMAN RPEQ 28295 | Date DECEMBER 23

AMORY AT RIPLEY STAGE 01

OVERALL KEY PLAN

IPSWICH CITY COUNCIL
RIPLEY ESTATE DEVELOPMENT PTY LTD

CONSTRUCTION Drg No 320678-01-C0102 Rev 2

file name: 320678-01AC0102.dwg layout name: C0102 plotted by: Charlene Chessells
FILE DETAILS

CONTROL LINE LAYOUT PLAN

SCALE 1:500

WARNING

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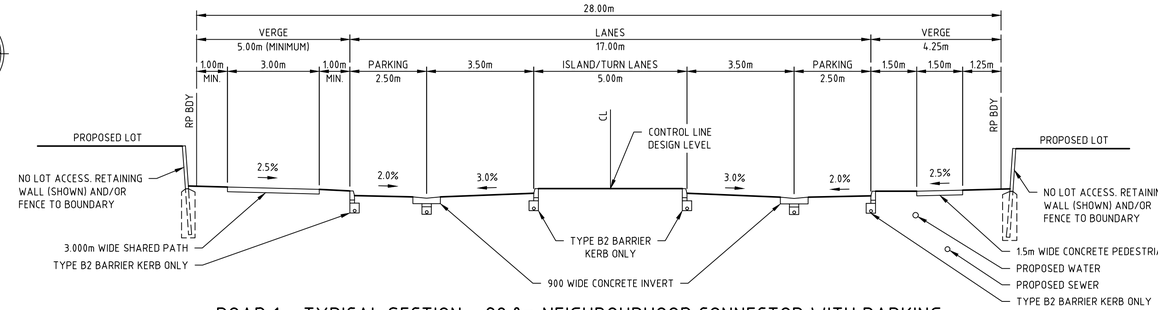
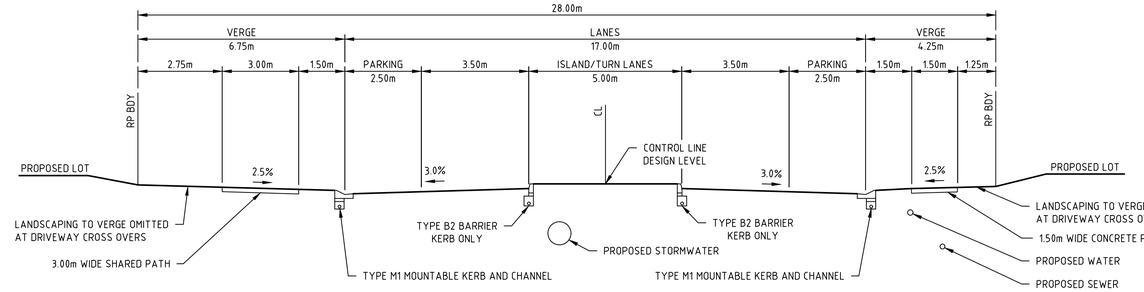


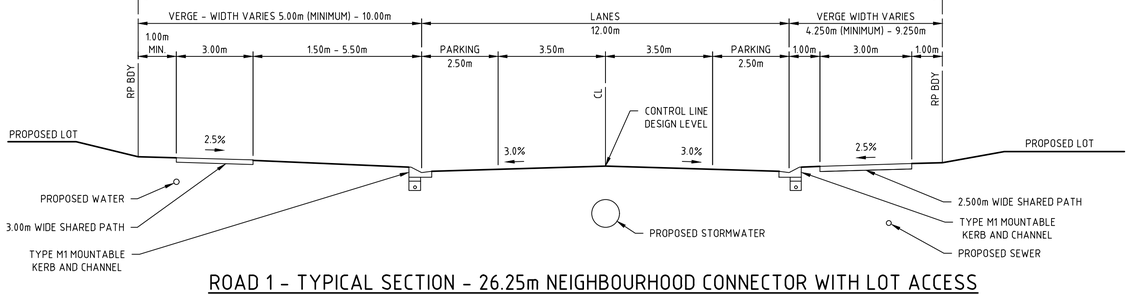
ROAD 1 - TYPICAL SECTION - 28.0m NEIGHBOURHOOD CONNECTOR WITH PARKING BAYS FROM RIPLEY LOOP TO ROAD 2 INTERSECTION

SCALE 1:100



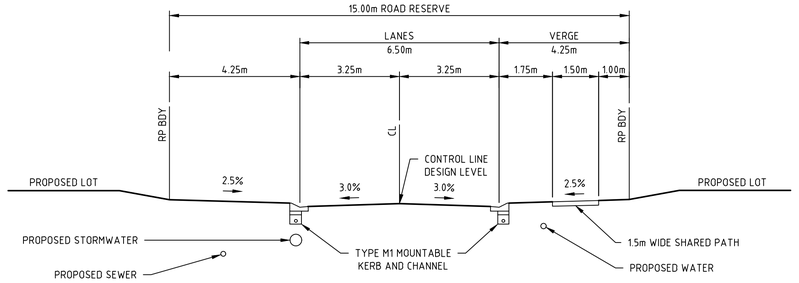
ROAD 1 - TYPICAL SECTION - 28.0m NEIGHBOURHOOD CONNECTOR WITH LOT ACCESS FROM ROAD 2 TO ROAD 3/ROAD 4 INTERSECTION

SCALE 1:100



ROAD 1 - TYPICAL SECTION - 26.25m NEIGHBOURHOOD CONNECTOR WITH LOT ACCESS FROM ROAD 3/ROAD 4 TO END OF WORKS

SCALE 1:100



TYPICAL SECTION - 15.00m NEIGHBOURHOOD ACCESS ROAD

ROAD 2 - CH.000 TO CH 121.500

ROAD 3 - CH.000 TO CH 46.750

ROAD 4 - CH.000 TO CH 64.500

SCALE 1:100

NOTE:

- SERVICE LOCATIONS ARE INDICATIVE ONLY
- FOR TYPICAL SERVICE CORRIDORS REFER TO ICC-STD-DWG-SR22 &SR23.

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LAYOUT PLAN
H 1:500
SCALE @ A1
0 5 10 15 20 25

TYPICAL SECTIONS
H 1:100
SCALE @ A1
0 1 2 3 4 5

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AMORY AT RIPLEY

Designed	Checked
T.MULLEN	K. HOWELLS
Authorised	Date
M. READMAN RPEQ 28295	DECEMBER 23

AMORY AT RIPLEY STAGE 01

CONTROL LINE LAYOUT PLAN AND TYPICAL ROAD SECTIONS

IPSWICH CITY COUNCIL

RIPLEY ESTATE DEVELOPMENT PTY LTD

CONSTRUCTION Drg No **320678-01-C0103** Rev **2**

file name 320678-01AC0103.dwg layout name C0103 plotted by Charlene Chessells
FILE DETAILS

RETAINING WALLS TYPICAL NOTE:

RETAINING WALLS SHOWN ON THESE CIVIL DRAWINGS INDICATE ONLY THE RETAINING WALL TYPE, LOCATION, HEIGHT AND RELATIVITY TO BOUNDARIES OR OTHER KNOWN ELEMENTS. ALL RETAINING WALL STRUCTURAL AND OTHER SPECIFICATION SHALL BE DETAILED BY OTHERS. THE APPOINTED CONTRACTOR SHALL REVIEW ALL DEVELOPMENT APPROVAL CONDITIONS, PLANS AND SPECIFICATIONS TO ENSURE THAT ALL RETAINING WALL LOADS, ANCILLARY DRAINAGE (SUBSOIL & SURFACE DRAINAGE) AND CONSTRAINTS ARE ACCOMMODATED (INCLUDING ANY FUTURE FENCES WHICH MAY BE ATTACHED), AND SHALL SUPPLY THE SUPERVISING ENGINEER ALL POST-CONSTRUCTION CERTIFICATIONS NECESSARY FOR RELEVANT LOCAL AUTHORITY ACCEPTANCE. FOR WORKS WITHIN QUEENSLAND THIS SHALL INCLUDE (BUT NOT LIMITED TO) QUEENSLAND GOVERNMENT - DEPARTMENT OF LOCAL GOVERNMENT AND CERTIFIED BY AN R.P.E.Q. ENGINEER.

BULK EARTHWORKS 'EARLY WORKS' DESIGN. REFER TO DRAWING SET 320678-BEW FOR DETAILS

RIPLEY LOOP ROAD

FUTURE STAGE

FUTURE LANEWAY

ROAD 1

ROAD 2

CH0.000 CH20.000 CH40.000 CH60.000 CH80.000 CH100.000 CH120.000 CH121.500 END CH160.000 CH200.000 CH214.416

CH16.134 CH51.969

101 102 103 104 105 106 107 108 109 110 813 135 136 137 138 139 140 141 116 11 12 13

WARNING

BEWARE OF UNDERGROUND/OVERHEAD SERVICES

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FOR CONTINUATION REFER TO DRG 320678-01-C0201

EARTHWORKS LAYOUT PLAN - SHEET 1 OF 2

SCALE 1:250

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H 1:250 SCALE @ A1 0 2.5 5 7.5 10 12.5

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AMORY AT RIPLEY

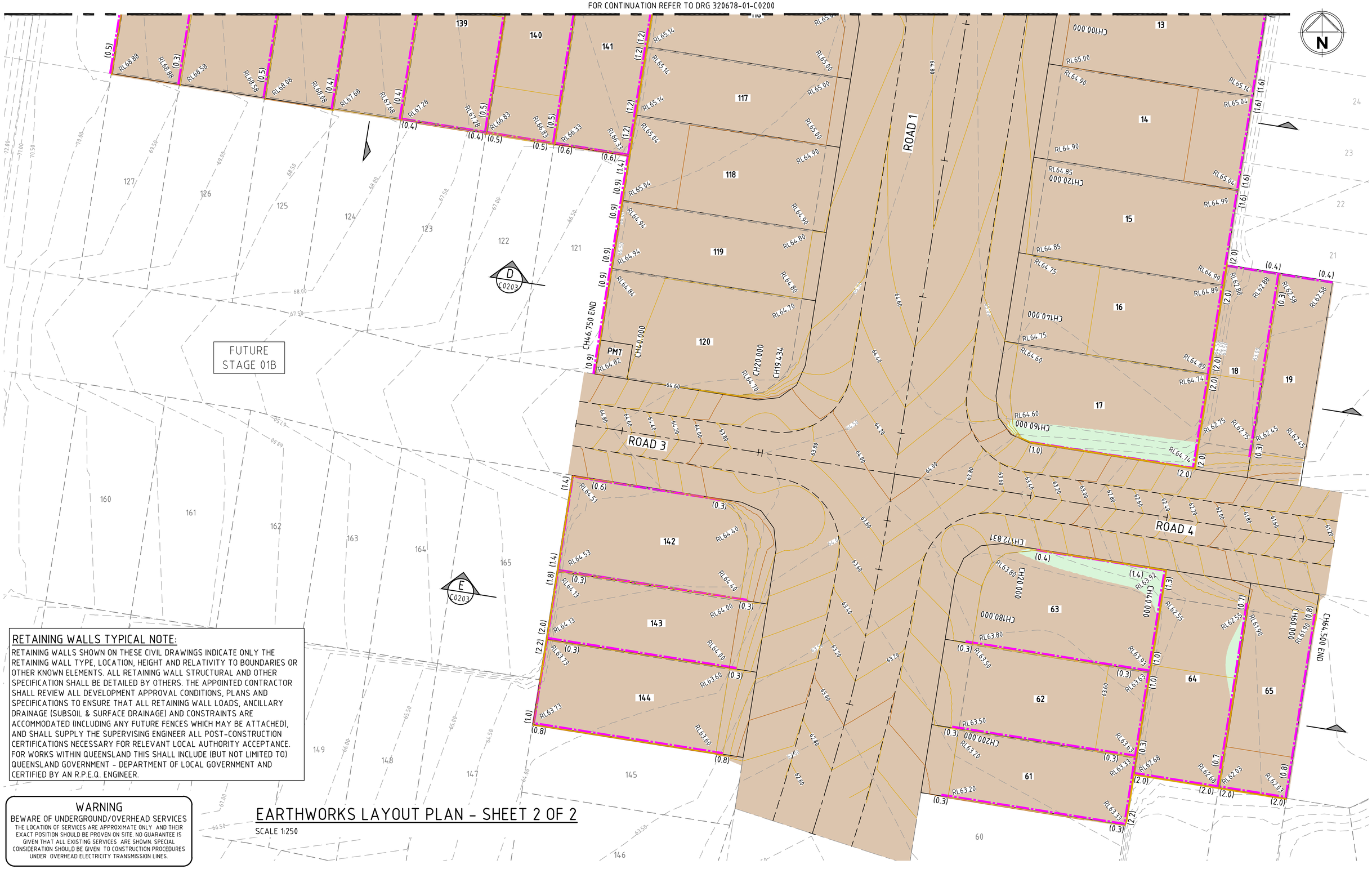
Designed T.MULLEN | Checked K. HOWELLS
Authorised M. READMAN RPEQ 28295 | Date DECEMBER 23

AMORY AT RIPLEY
STAGE 01
EARTHWORKS LAYOUT PLAN
SHEET 1 OF 2
IPSWICH CITY COUNCIL
RIPLEY ESTATE DEVELOPMENT PTY LTD

CONSTRUCTION Drg No **320678-01-C0200** Rev **2**

file name 320678-01AC0200.dwg layout name C0200 plotted by Charlene Chessells
FILE SET ALL

FOR CONTINUATION REFER TO DRG 320678-01-C0200



RETAINING WALLS TYPICAL NOTE:

RETAINING WALLS SHOWN ON THESE CIVIL DRAWINGS INDICATE ONLY THE RETAINING WALL TYPE, LOCATION, HEIGHT AND RELATIVITY TO BOUNDARIES OR OTHER KNOWN ELEMENTS. ALL RETAINING WALL STRUCTURAL AND OTHER SPECIFICATION SHALL BE DETAILED BY OTHERS. THE APPOINTED CONTRACTOR SHALL REVIEW ALL DEVELOPMENT APPROVAL CONDITIONS, PLANS AND SPECIFICATIONS TO ENSURE THAT ALL RETAINING WALL LOADS, ANCILLARY DRAINAGE (SUBSOIL & SURFACE DRAINAGE) AND CONSTRAINTS ARE ACCOMMODATED (INCLUDING ANY FUTURE FENCES WHICH MAY BE ATTACHED), AND SHALL SUPPLY THE SUPERVISING ENGINEER ALL POST-CONSTRUCTION CERTIFICATIONS NECESSARY FOR RELEVANT LOCAL AUTHORITY ACCEPTANCE. FOR WORKS WITHIN QUEENSLAND THIS SHALL INCLUDE (BUT NOT LIMITED TO) QUEENSLAND GOVERNMENT - DEPARTMENT OF LOCAL GOVERNMENT AND CERTIFIED BY AN R.P.E.Q. ENGINEER.

WARNING

BEWARE OF UNDERGROUND/OVERHEAD SERVICES

THE LOCATION OF SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN. SPECIAL CONSIDERATION SHOULD BE GIVEN TO CONSTRUCTION PROCEDURES UNDER OVERHEAD ELECTRICITY TRANSMISSION LINES.

EARTHWORKS LAYOUT PLAN - SHEET 2 OF 2

SCALE 1:250

Rev	Amendments	Approved	Date
2	ISSUE FOR CONSTRUCTION	K.H.	18-02-25
1	ISSUE FOR CONSTRUCTION	K.H.	06-01-25
0	ISSUE FOR CONSTRUCTION	K.H.	20-11-24
C	ISSUE FOR APPROVAL	K.H.	05-09-24
B	ISSUE FOR TENDER	K.H.	21-02-24
A	ISSUE FOR APPROVAL	K.H.	01-12-23

H 1:250 SCALE @ A1 — 0 2.5 5 7.5 10 12.5

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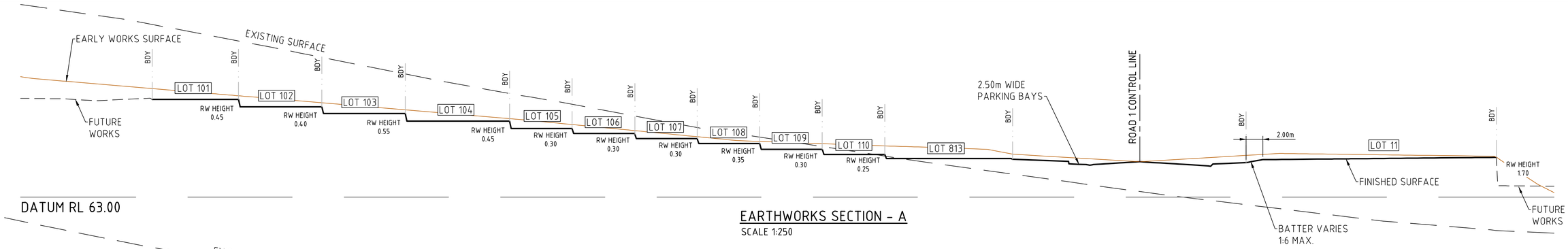
AMORY AT RIPLEY

Designed	Checked
T.MULLEN	K. HOWELLS
Authorised	Date
M. READMAN RPEQ 28295	DECEMBER 23

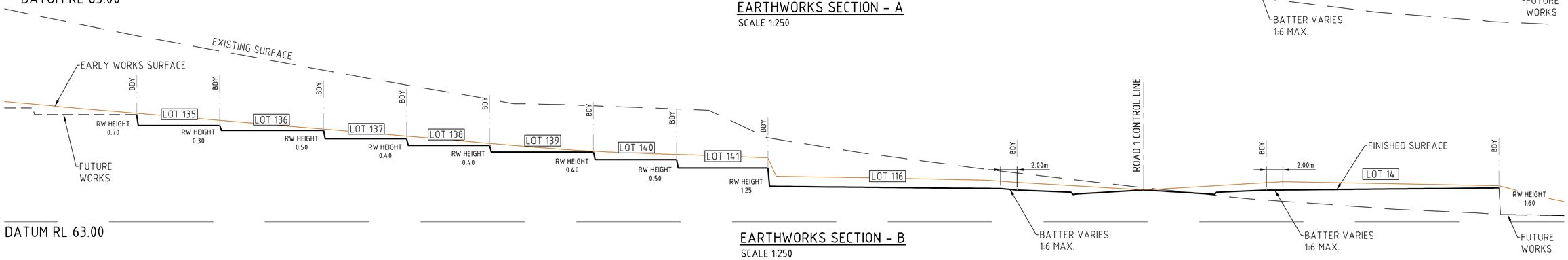
AMORY AT RIPLEY STAGE 01
EARTHWORKS LAYOUT PLAN
SHEET 2 OF 2
IPSWICH CITY COUNCIL
RIPLEY ESTATE DEVELOPMENT PTY LTD

CONSTRUCTION Drg No **320678-01-C0201** Rev **2**

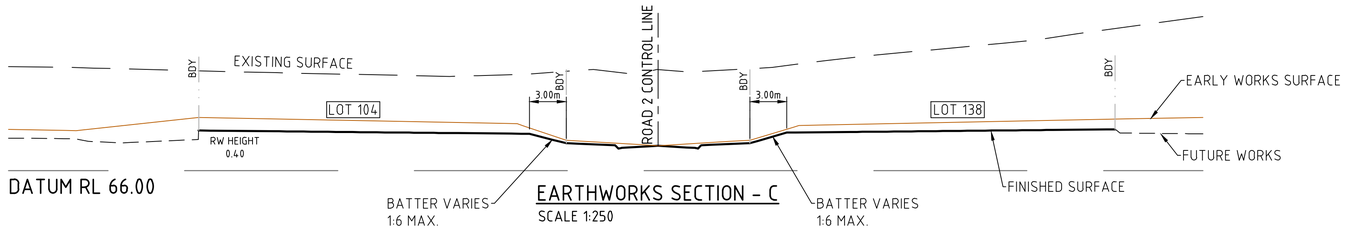
file name: 320678-01AC0201.dwg Layout name C0201 plotted by Charlene Chessells
FILE DETAILS



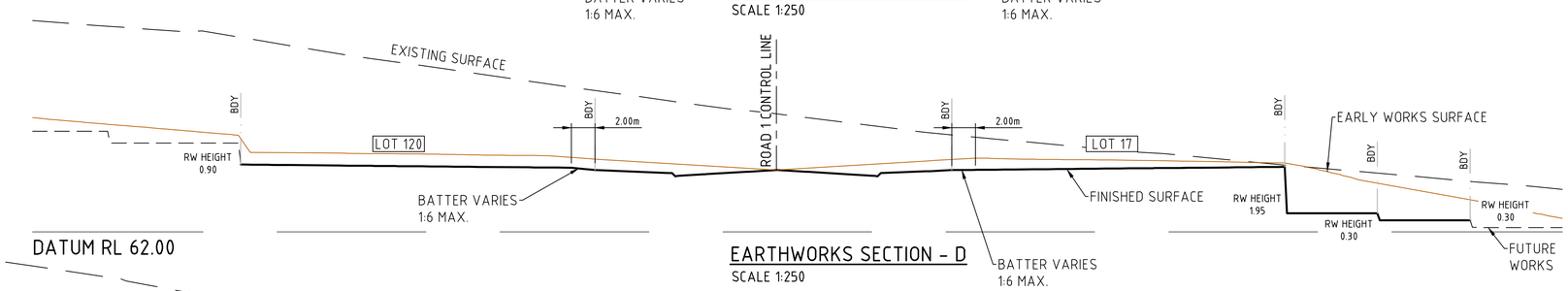
EARTHWORKS SECTION - A
SCALE 1:250



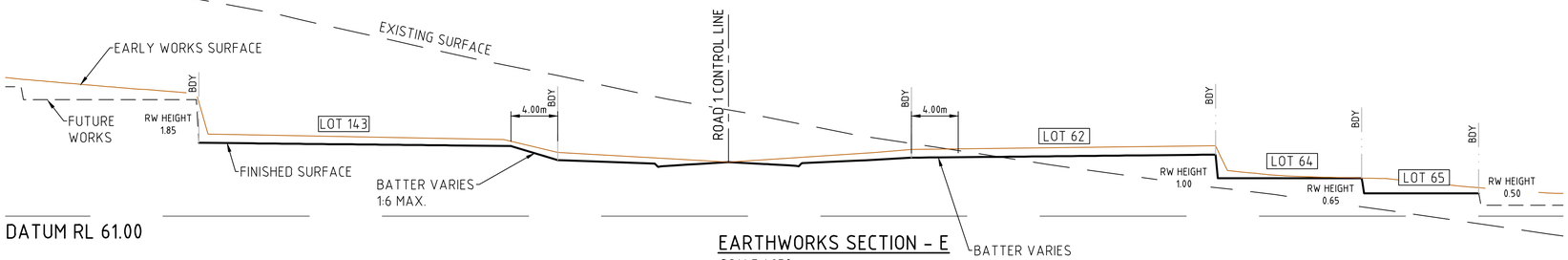
EARTHWORKS SECTION - B
SCALE 1:250



EARTHWORKS SECTION - C
SCALE 1:250



EARTHWORKS SECTION - D
SCALE 1:250



EARTHWORKS SECTION - E
SCALE 1:250

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2	ISSUE FOR CONSTRUCTION	K.H.	18-02-25
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A	ISSUE FOR APPROVAL	K.H.	01-12-23

H 1:250 SCALE @ A1 0 2.5 5 7.5 10 12.5

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AMORY AT RIPLEY

Designed T.MULLEN
Checked K. HOWELLS
Authorised M. READMAN RPEQ 28295
Date DECEMBER 23

AMORY AT RIPLEY STAGE 01
EARTHWORKS SITE SECTIONS

IPSWICH CITY COUNCIL
RIPLEY ESTATE DEVELOPMENT PTY LTD

CONSTRUCTION Drg No **320678-01-C0202** Rev **2**

file name 320678-01AC0202.dwg layout name C0202 plotted by Charlene Chessells
FILE DETAILS

DESIGN PAVEMENT PROFILE- TYPE A

PAVEMENT LAYER	DESCRIPTION	DEPTH (mm) TYPE A*
WEARING SURFACE	ASPHALT CONCRETE AC14M	50
PRIMER SEAL	AMC0 OR AMC00 PRIME	YES
BASE COURSE	TYPE 2.1 (MIN CBR 80)	125
	UPPER PAVEMENT TOTAL	175
UPPER SUBBASE	TYPE 2.3 (MIN CBR 45)	100
LOWER SUBBASE	TYPE 2.5 (MIN CBR 15)	295
	TOTAL PAVEMENT DEPTH	570

DESIGN PAVEMENT PROFILE- TYPE B

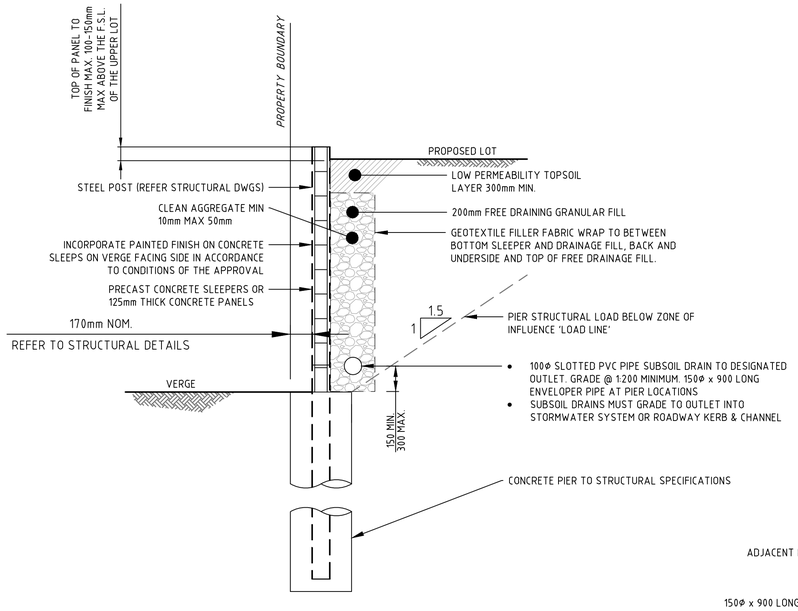
PAVEMENT LAYER	DESCRIPTION	DEPTH (mm) TYPE B*
WEARING SURFACE	ASPHALT CONCRETE AC14M	35
PRIMER SEAL	AMC0 OR AMC00 PRIME	YES
BASE COURSE	TYPE 2.1 (MIN CBR 80)	125
	UPPER PAVEMENT TOTAL	160
UPPER SUBBASE	TYPE 2.3 (MIN CBR 45)	100
LOWER SUBBASE	TYPE 2.5 (MIN CBR 15)	155
	TOTAL PAVEMENT DEPTH	415

DESIGN PAVEMENT PROFILE- TYPE C

PAVEMENT LAYER	DESCRIPTION	DEPTH (mm) TYPE C*
WEARING SURFACE	ASPHALT CONCRETE AC14M	35
PRIMER SEAL	AMC0 OR AMC00 PRIME	YES
BASE COURSE	TYPE 2.1 (MIN CBR 80)	125
	UPPER PAVEMENT TOTAL	160
UPPER SUBBASE	TYPE 2.3 (MIN CBR 45)	100
LOWER SUBBASE	TYPE 2.5 (MIN CBR 15)	195
	TOTAL PAVEMENT DEPTH	455

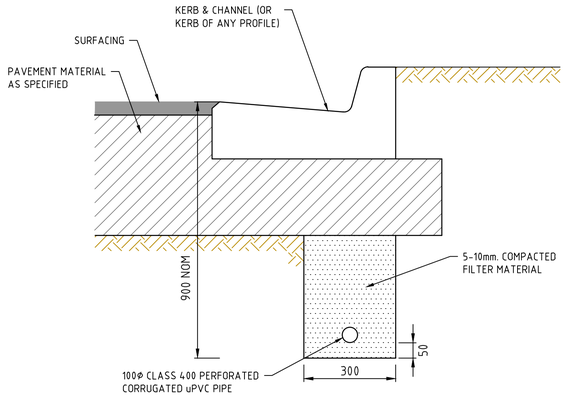
ROAD NAME	TYPE
RIPLEY LOOP ROAD	TYPE A
ROAD 1	TYPE C
ROAD 2	TYPE B
ROAD 3	TYPE B
ROAD 4	TYPE B

NOTE:
THE PAVEMENT DEPTHS ARE INDICATIVE ONLY. PAVEMENT DESIGN IS SUBJECT TO CONFIRMATION WITH GEOTECHNICAL TESTING AND RPEQ CERTIFIED PAVEMENT DESIGN REPORT.



RETAINING WALL FRONTING ROAD RESERVE
Scale 1 : 25

RETAINING WALL FRONTING ROAD RESERVE NOTE:-
CONTRACTOR TO CONFIRM STRUCTURAL DETAILS TO ENSURE ALL RETAINING WALL FOOTINGS ARE WITHIN PRIVATE PROPERTY.

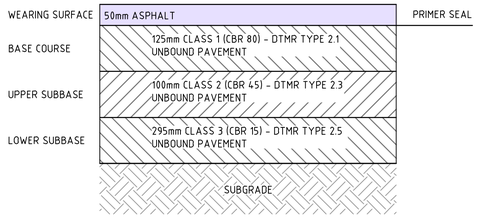


SUBSURFACE PAVEMENT DRAIN
REFER TO ICC STANDARD DWG NO. SR.20
NOT TO SCALE

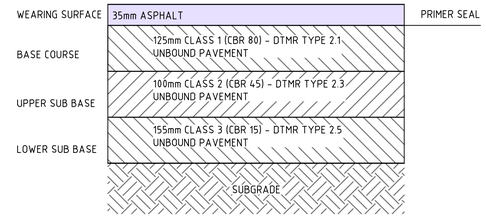
MEDIAN INFILL
100mm N32 CONCRETE WITH 50mm SAND- REFER IPWEA RS-065

FOOTPATHS
100mm N25 CONCRETE- SL72 50 TOP COVER- REFER ICC SR.19

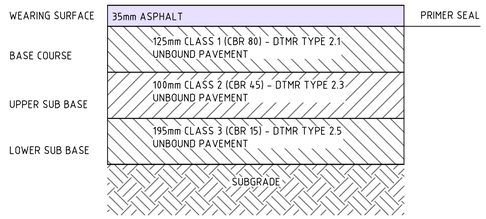
DRIVEWAYS (FUTURE LANEWAY ACCESS)
175mm N32 CONCRETE WITH SL72 MESH AND 50mm TOP COVER. REFER ICC SR13



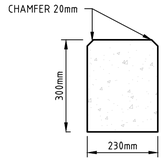
PAVEMENT TYPE A
RIPLEY LOOP



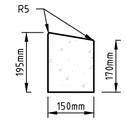
PAVEMENT TYPE B
ROAD 2, 3, 4



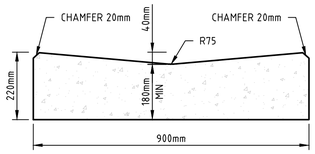
PAVEMENT TYPE C
ROAD 1



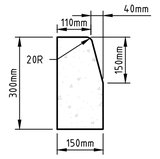
TYPE ER2
EDGE RESTRAINT
N.T.S



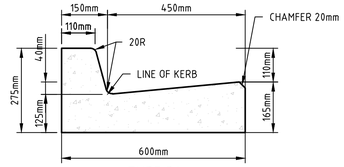
TYPE 1
MOUNTABLE KERB. MODIFIED VERSION OF TMR SD. 1033 KERB TYPE 1. REFER TO DETAIL A IN FIGURE B1.04 OF THE TMR SELECTION AND DESIGN OF CYCLE TRACKS
N.T.S



TYPE CHANNEL
INVERT
N.T.S

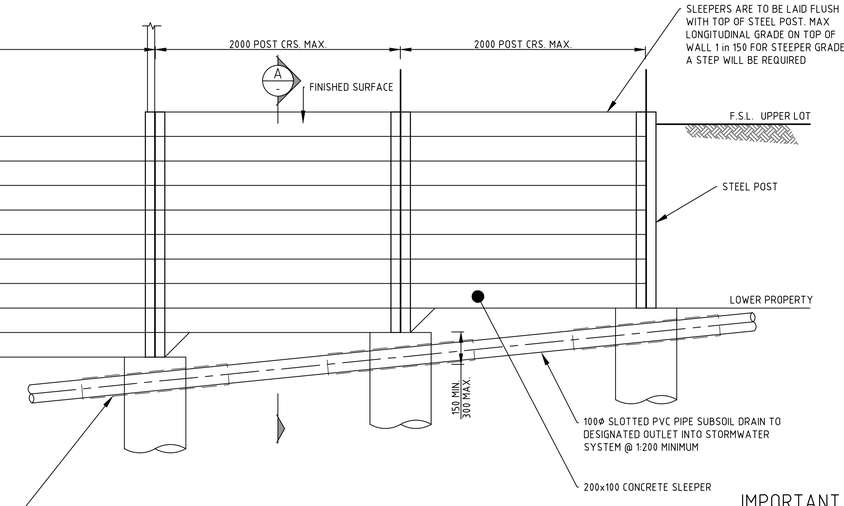


TYPE B2
BARRIER KERB
N.T.S

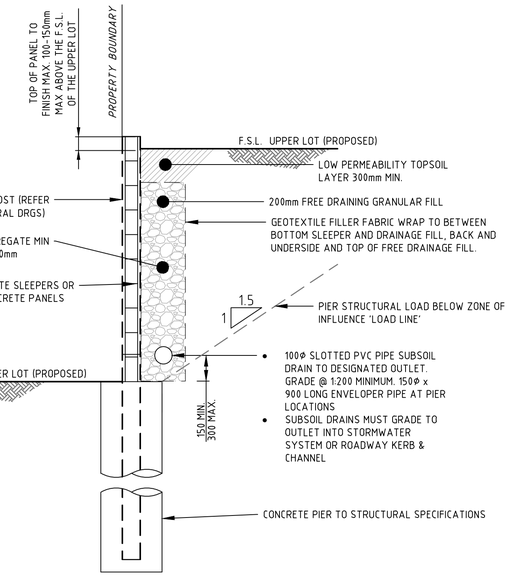


TYPE B1
BARRIER KERB
N.T.S

STANDARD KERB PROFILES
NOTE: ALL KERB & CHANNEL AS PER IPWEA STD DRAWING RS.080 UNLESS STATED OTHERWISE



TYPICAL RETAINING WALL PART ELEVATION
Scale 1 : 25



SECTION - A
Scale 1 : 25

IMPORTANT NOTES:-
RETAINING WALLS/PROPERTY BOUNDARY

1. RETAINING WALL STRUCTURE (INCLUDING FOOTING) MUST NOT ENCROACH BEYOND PROPERTY BOUNDARY ONTO EXTERNAL PROPERTY OWNED BY OTHERS, OR COUNCIL PROPERTY.
2. FOOTING OF RETAINING WALL IS ONLY PROPOSED TO ENCROACH OVER BOUNDARY ONTO OTHER LOTS WITHIN PROPOSED DEVELOPMENT - WHICH ARE PROPOSED TO HAVE COVENANT (OR EASEMENT) WHICH PERMITS SUCH ENCROACHMENT
3. THE CONTRACTOR SHALL ENSURE THAT PROPERTY BOUNDARIES ARE PEGGED ON-SITE AND RETAINING WALL LOCATIONS VERIFIED WITH THE SUPERINTENDENT PRIOR TO CONSTRUCTION.
4. THE BOUNDARY / RETAINING WALL CONFIGURATIONS DETAILS SHOWN ARE TYPICAL DETAILS ONLY. THE CONTRACTOR MUST ASCERTAIN WHICH CONFIGURATION APPLIES AT ALL LOCATIONS.
5. SHOULD ANY DOUBT EXIST TO THE REQUIRED LOCATION OF RETAINING WALL - THE CONTRACTOR SHALL SEEK DIRECTION FROM THE SUPERINTENDENT.

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AMORY AT RIPLEY

Designed T.MULLEN
Checked K. HOWELLS
Authorised M. READMAN RPEQ 28295
Date DECEMBER 23

AMORY AT RIPLEY STAGE 01
ROADWORKS STANDARD NOTES AND DETAILS

IPSWICH CITY COUNCIL
RIPLEY ESTATE DEVELOPMENT PTY LTD

CONSTRUCTION Drg No 320678-01-C0300 Rev 2

file name 320678-01AC0300.dwg layout name C0300 plotted by Charlene Chessells
FILE DETAILS

STAGE 03 WORKS
REFER TO DRAWING SET 320678-003

REFER ROADWORKS INTERSECTION
DETAIL DRAWING 320678-01AC310

STAGE 01R WORKS
REFER TO DRAWING SET 320678-01R

RIPLEY LOOP ROAD

STAGE 03 WORKS
REFER TO DRAWING SET
320678-003

FUTURE
STAGE

FUTURE LANEWAY

CONSTRUCT 3.0m WIDE CONCRETE
FOOTPATH IN ACCORDANCE WITH
ICC-STD-DWG SR.19

CONSTRUCT 5.5m WIDE (AT JOIN OF DRIVEWAY)
CONCRETE CROSS OVER IN ACCORDANCE WITH
ICC-STD-DWG SR.12

FOR WATER DRAWINGS
REFER TO DRAWING SET
320678-01-C0700 SERIES

CONSTRUCT 1.5m WIDE CONCRETE
FOOTPATH IN ACCORDANCE WITH
ICC-STD-DWG SR.19

CONSTRUCT 3.0m WIDE KERB RAMP IN
ACCORDANCE WITH ICC-STD-DWG
SR.18

BATTER FINISHED SURFACE TO
BULK EARTHWORKS DESIGN. 1:3
MAX TEMPORARY BATTER

SWD TO BE CAPPED FOR
FUTURE CONNECTION

ROAD 1

ROAD 2

CONSTRUCT 5.5m WIDE (AT JOIN OF DRIVEWAY)
CONCRETE CROSS OVER IN ACCORDANCE WITH
ICC-STD-DWG SR.12

CONSTRUCT 1.5m WIDE CONCRETE
FOOTPATH IN ACCORDANCE WITH
ICC-STD-DWG SR.19

REFER ROADWORKS
INTERSECTION DETAIL
DRAWING 320678-01-C0311

FOR SEWER DRAWINGS REFER
TO DRAWING SET
320678-01-C0600 SERIES

CONSTRUCT 3.0m WIDE KERB RAMP
IN ACCORDANCE WITH
ICC-STD-DWG SR.18

FOR CONTINUATION REFER TO DRG 320678-01-C0302

WARNING
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ROADWORKS & DRAINAGE LAYOUT PLAN - SHEET 1 OF 2

SCALE 1:250

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H 1:250
SCALE @ A1
0 2.5 5 7.5 10 12.5

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AMORY AT RIPLEY

Designed T.MULLEN
Checked K. HOWELLS
Authorised M. READMAN RPEQ 28295
Date DECEMBER 23

AMORY AT RIPLEY
STAGE 01
ROADWORKS & DRAINAGE LAYOUT PLAN
SHEET 1 OF 2
IPSWICH CITY COUNCIL
RIPLEY ESTATE DEVELOPMENT PTY LTD

CONSTRUCTION Drg No **320678-01-C0301** Rev **2**

file name 320678-01AC0301.dwg layout name C0301 plotted by Charlene Chessells
FILE DETAILS

FOR CONTINUATION REFER TO DRG 320678-01-C0301

FUTURE STAGE 01B

ROAD 3

ROAD 4

ROAD 1

CONSTRUCT 3.0m WIDE CONCRETE KERB RAMP IN ACCORDANCE WITH ICC-STD-DWG SR.18

BATTER FINISHED SURFACE TO BULK EARTHWORKS DESIGN. 1:3 MAX TEMPORARY BATTER

SWD TO BE CAPPED FOR FUTURE CONNECTION

CONSTRUCT 1.5m WIDE CONCRETE FOOTPATH IN ACCORDANCE WITH ICC-STD-DWG SR.19

CONSTRUCT 3.0m WIDE KERB RAMP IN ACCORDANCE WITH ICC-STD-DWG SR.18

FOR WATER DRAWINGS REFER TO DRAWING SET 320678-01-C0700 SERIES

REFER ROADWORKS INTERSECTION DETAIL DRAWING 320678-01AC312

CONSTRUCT 1.5m WIDE KERB RAMP IN ACCORDANCE WITH ICC-STD-DWG SR.18

CONSTRUCT 1.5m WIDE CONCRETE FOOTPATH IN ACCORDANCE WITH ICC-STD-DWG SR.19

CONSTRUCT 1.5m WIDE KERB RAMP IN ACCORDANCE WITH ICC-STD-DWG SR.18

CONSTRUCT 1.5m WIDE CONCRETE FOOTPATH IN ACCORDANCE WITH ICC-STD-DWG SR.19

CONSTRUCT 3.0m WIDE KERB RAMP IN ACCORDANCE WITH ICC-STD-DWG SR.18

CONSTRUCT 3.0m WIDE CONCRETE FOOTPATH IN ACCORDANCE WITH ICC-STD-DWG SR.19

SWD TO BE CAPPED FOR FUTURE CONNECTION

BATTER FINISHED SURFACE TO BULK EARTHWORKS DESIGN. 1:3 MAX TEMPORARY BATTER

FOR SEWER DRAWINGS REFER TO DRAWING SET 320678-01-C0600 SERIES

CH46.750 END

CH40.000

CH20.000

CH19.434

CH120.000

CH140.000

CH160.000

CH172.831

CH180.000

CH200.000

CH219.503 END

CH40.000

CH60.000

CH64.500 END

ROADWORKS & DRAINAGE LAYOUT PLAN - SHEET 2 OF 2

SCALE 1:250

WARNING

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H 1:250 SCALE @ A1 — 0 2.5 5 7.5 10 12.5

dlcs ISO 9001 certified ISO 45001 certified ISO 14001 certified

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spiire.com.au ABN 55 050 029 635

AMORY AT RIPLEY

Designed T.MULLEN | Checked K. HOWELLS

Authorised M. READMAN RPEQ 28295 | Date DECEMBER 23

AMORY AT RIPLEY STAGE 01

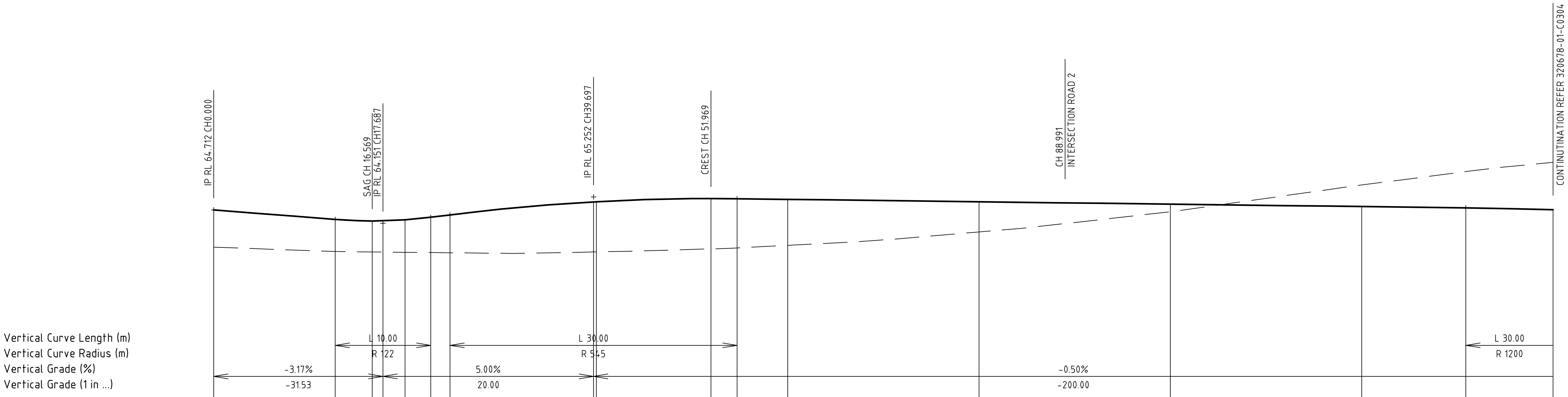
ROADWORKS & DRAINAGE LAYOUT PLAN SHEET 2 OF 2

IPSWICH CITY COUNCIL

RIPLEY ESTATE DEVELOPMENT PTY LTD

CONSTRUCTION Drg No **320678-01-C0302** Rev **2**

file name 320678-01AC0302.dwg layout name C0302 plotted by Charlene Chessells
FILE DETAILS



DATUM RL55.000

CHAINAGE	DESIGN LEVELS LEFT LIP OF KERB	DESIGN LEVELS RIGHT LIP OF KERB	CUT / FILL DEPTH	DESIGN LEVELS ON ROAD CL	EXISTING SURFACE ON ROAD CL
0.000			1.558	64.712	63.154
12.687			1.338	64.310	62.971
16.569			1.295	64.248	62.953
17.687			1.305	64.253	62.948
20.000	64.130		1.358	64.296	62.939
22.687	64.235	64.207	1.474	64.401	62.927
24.697	64.335	64.310	1.583	64.502	62.919
39.697	64.879	64.869	2.094	65.045	62.951
40.000	64.886	64.876	2.099	65.052	62.953
51.969	65.017	65.017	2.102	65.183	63.082
54.697	65.010	65.010	2.058	65.177	63.118
60.000	64.984	64.984	1.920	65.150	63.230
80.000		64.803	1.263	65.050	63.787
100.000		64.703	0.315	64.950	64.635
120.000	64.603	64.603	-0.900	64.850	65.750
130.881	64.549	64.549	-1.516	64.796	66.311
140.000	64.469	64.469	-1.985	64.715	66.700

REFER TO DRAWING 320678-01C0310 FOR INTERSECTION LEVELS

REFER TO DRAWING 320678-01C0311 FOR INTERSECTION LEVELS

LONGITUDINAL SECTION - ROAD 1

SCALE HORIZONTAL 1 : 250
VERTICAL 1 : 100

file name 320678-01AC0303.dwg layout name C0303 plotted by Charlene Chessells
FILEDETAILS

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B	ISSUE FOR TENDER	K.H.	21-02-24
A	ISSUE FOR APPROVAL	K.H.	01-12-23

H 1 : 250 0 2.5 5 7.5 10 12.5
SCALE @ A1
V 1 : 100 0 1 2 3 4 5

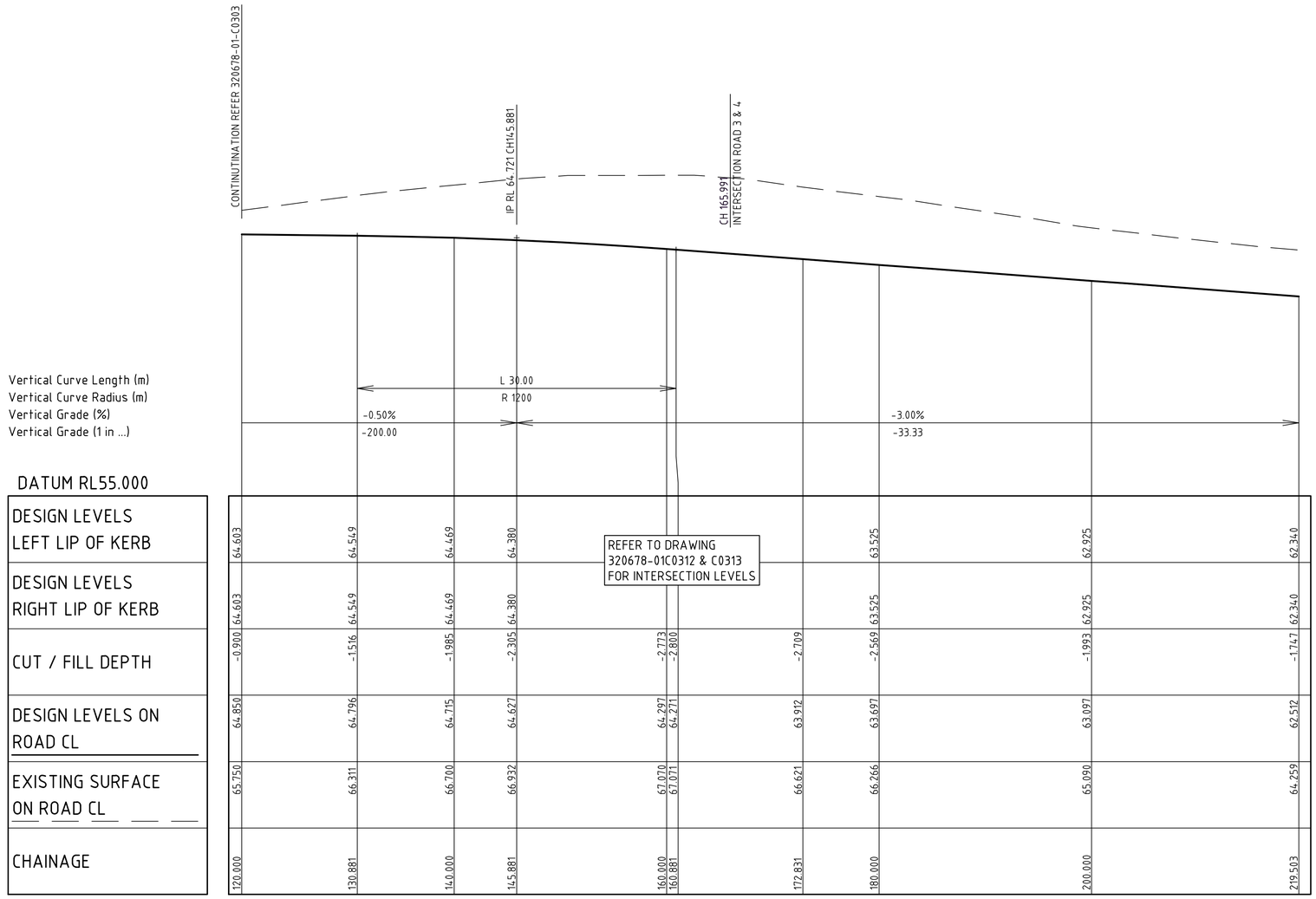
spiire
Waterfront Place, level 9/1 Eagle St, Brisbane City Queensland 4000 Australia T 61 7 3522 3000
spiire.com.au ABN 55 050 029 635

AMORY AT RIPLEY

Designed: T.MULLEN	Checked: K. HOWELLS
Authorised: M. READMAN RPEQ 28295	Date: DECEMBER 23

AMORY AT RIPLEY
STAGE 01
ROAD 1 LONGITUDINAL SECTION
SHEET 1 OF 2
IPSWICH CITY COUNCIL
RIPLEY ESTATE DEVELOPMENT PTY LTD

CONSTRUCTION Drg No **320678-01-C0303** Rev **2**



LONGITUDINAL SECTION - ROAD 1

SCALE HORIZONTAL 1 : 250
VERTICAL 1 : 100

CONTROL LINE - ROAD 1 - HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	9979.420	37281.728	64.712	189°00'50.01"			
	10.000	9977.853	37271.852	64.395	189°00'50.01"			
	20.000	9976.287	37261.975	64.296	189°00'50.01"			
	30.000	9974.720	37252.099	64.741	189°00'50.01"			
	40.000	9973.153	37242.222	65.052	189°00'50.01"			
	50.000	9971.586	37232.346	65.180	189°00'50.01"			
	60.000	9970.020	37222.469	65.150	189°00'50.01"			
	70.000	9968.453	37212.593	65.100	189°00'50.01"			
	80.000	9966.886	37202.716	65.050	189°00'50.01"			
	90.000	9965.319	37192.840	65.000	189°00'50.01"			
	100.000	9963.753	37182.963	64.950	189°00'50.01"			
	110.000	9962.186	37173.087	64.900	189°00'50.01"			
	120.000	9960.619	37163.210	64.850	189°00'50.01"			
	130.000	9959.052	37153.334	64.800	189°00'50.01"			
	140.000	9957.486	37143.457	64.715	189°00'50.01"			
	150.000	9955.919	37133.581	64.548	189°00'50.01"			
	160.000	9954.352	37123.704	64.297	189°00'50.01"			
	170.000	9952.786	37113.828	63.997	189°00'50.01"			
TC	172.831	9952.342	37111.031	63.912	189°00'50.01"			
	180.000	9951.134	37103.965	63.697	190°22'58.82"			
	190.000	9949.168	37094.161	63.397	192°17'34.31"			
IP 2	196.167	9948.678	37087.937	63.212		R = 300.000	46.672	8°54'49.22"
	200.000	9946.877	37084.428	63.097	194°12'09.80"			
	210.000	9944.262	37074.776	62.797	196°06'45.30"			
CT	219.503	9941.481	37065.689	62.512	197°55'39.23"			
	220.000	9941.328	37065.217	62.497	197°55'39.23"			

Rev	Amendments	Approved	Date
2	ISSUE FOR CONSTRUCTION	K.H.	18-02-25
1	ISSUE FOR CONSTRUCTION	K.H.	06-01-25
0	ISSUE FOR CONSTRUCTION	K.H.	20-11-24
C	ISSUE FOR APPROVAL	K.H.	05-09-24
B	ISSUE FOR TENDER	K.H.	21-02-24
A	ISSUE FOR APPROVAL	K.H.	01-12-23

H 1 : 250
SCALE @ A1
V 1 : 100
0 2.5 5 7.5 10 12.5
0 1 2 3 4 5

spiire
Waterfront Place, level 9/1 Eagle St, Brisbane City
Queensland 4000 Australia T 61 7 3522 3000
spiire.com.au ABN 55 050 029 635

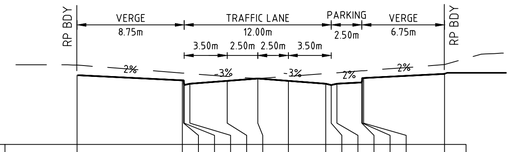
AMORY AT RIPLEY

Designed T.MULLEN
Checked K. HOWELLS
Authorised M. READMAN RPEQ 28295
Date DECEMBER 23

AMORY AT RIPLEY
STAGE 01
ROAD 1 LONGITUDINAL SECTION
SHEET 2 OF 2
IPSWICH CITY COUNCIL
RIPLEY ESTATE DEVELOPMENT PTY LTD

CONSTRUCTION Drg No **320678-01-C0304** Rev **2**

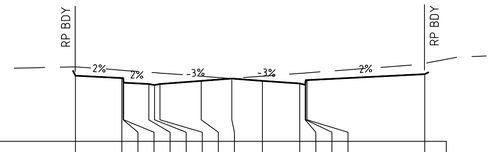
file name 320678-01AC0304.dwg layout name C0304 plotted by Charlene Chessells
FILE DETAILS



CENTRELINE DATA
E = 9970.02
N = 37222.469
Z = 65.15
Datum 63.00

DESIGN SURFACE	65.268	65.096	65.096	64.946	64.984	65.075	65.150	65.075	64.984	64.947	64.984	65.025	65.175	65.306
EXISTING SURFACE	65.591	65.334	65.331	65.330	65.316	65.225	65.150	65.225	65.317	65.330	65.344	65.405	65.406	65.409	65.175	65.607
DESIGN OFFSET	-14.750	-6.150	-6.040	-6.000	-5.550	-2.500	0.000	2.500	5.550	6.000	6.450	8.500	8.540	8.650	15.250

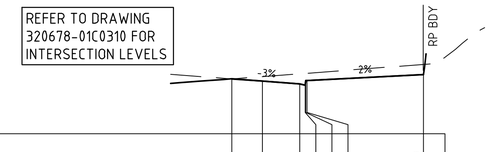
CH 60.000



CENTRELINE DATA
E = 9973.153
N = 37242.222
Z = 65.052
Datum 63.00

DESIGN SURFACE	65.143	65.067	65.067	64.917	64.876	64.839	64.876	64.977	65.052	64.977	64.886	64.848	64.998	64.998	65.190
EXISTING SURFACE	65.435	65.321	65.318	65.317	65.255	65.241	65.228	65.127	65.052	65.127	65.219	65.232	65.233	65.237	65.548
DESIGN OFFSET	-12.750	-8.967	-8.857	-8.817	-6.758	-6.308	-5.858	-2.500	0.000	2.500	5.550	6.000	6.040	6.150	15.759

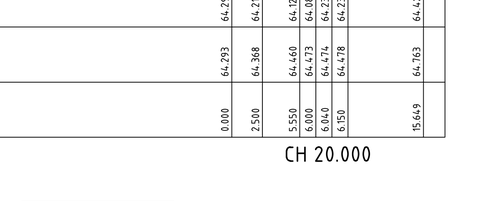
CH 40.000



CENTRELINE DATA
E = 9976.287
N = 37261.975
Z = 64.293
Datum 62.50

DESIGN SURFACE	64.293	64.218	64.127	64.089	64.239	64.239	64.429	64.429	64.429	64.429	64.429	64.429	64.429	64.429	64.429
EXISTING SURFACE	64.293	64.368	64.460	64.473	64.474	64.478	64.763	64.763	64.763	64.763	64.763	64.763	64.763	64.763	64.763
DESIGN OFFSET	0.000	2.500	5.550	6.000	6.040	6.150	15.649	15.649	15.649	15.649	15.649	15.649	15.649	15.649	15.649

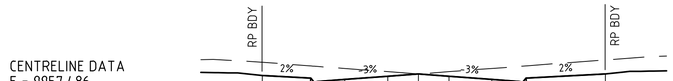
CH 20.000



CENTRELINE DATA
E = 9976.3
N = 37262.063
Z = 64.29
Datum 62.50

DESIGN SURFACE	64.290	64.215	64.124	64.086	64.236	64.236	64.427	64.427	64.427	64.427	64.427	64.427	64.427	64.427	64.427
EXISTING SURFACE	64.291	64.366	64.457	64.471	64.472	64.475	64.761	64.761	64.761	64.761	64.761	64.761	64.761	64.761	64.761
DESIGN OFFSET	0.000	2.500	5.550	6.000	6.040	6.150	15.673	15.673	15.673	15.673	15.673	15.673	15.673	15.673	15.673

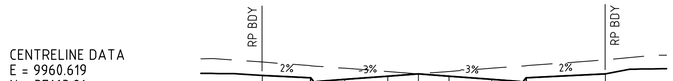
CH 19.912



CENTRELINE DATA
E = 9957.486
N = 37143.457
Z = 64.715
Datum 62.50

DESIGN SURFACE	64.662	64.584	64.584	64.444	64.469	64.535	64.640	64.715	64.640	64.535	64.469	64.444	64.584	64.712	64.712
EXISTING SURFACE	65.098	64.980	64.979	64.970	64.962	64.895	64.790	64.715	64.790	64.895	64.962	64.970	64.979	64.980	65.173
DESIGN OFFSET	-12.750	-8.825	-8.775	-8.500	-8.225	-6.000	-2.500	0.000	2.500	6.000	8.225	8.500	8.775	8.825	15.250

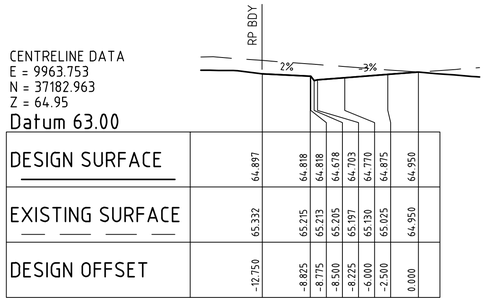
CH 140.000



CENTRELINE DATA
E = 9960.619
N = 37163.21
Z = 64.85
Datum 63.00

DESIGN SURFACE	64.797	64.718	64.718	64.578	64.603	64.670	64.775	64.850	64.775	64.670	64.603	64.578	64.718	64.718	64.847
EXISTING SURFACE	65.232	65.115	65.113	65.105	65.097	65.030	64.925	64.850	64.925	65.030	65.097	65.105	65.113	65.115	65.308
DESIGN OFFSET	-12.750	-8.825	-8.775	-8.500	-8.225	-6.000	-2.500	0.000	2.500	6.000	8.225	8.500	8.775	8.825	15.250

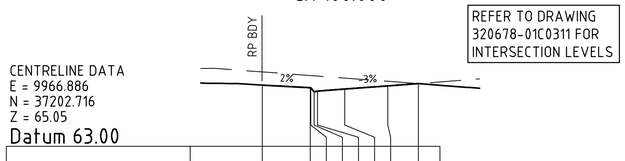
CH 120.000



CENTRELINE DATA
E = 9963.753
N = 37182.963
Z = 64.95
Datum 63.00

DESIGN SURFACE	64.897	64.818	64.818	64.678	64.703	64.770	64.875	64.950	64.875	64.770	64.703	64.678	64.818	64.818	64.950
EXISTING SURFACE	65.332	65.215	65.213	65.205	65.197	65.130	65.025	64.950	65.025	65.130	65.197	65.205	65.213	65.215	65.406
DESIGN OFFSET	-12.750	-8.825	-8.775	-8.500	-8.225	-6.000	-2.500	0.000	2.500	6.000	8.225	8.500	8.775	8.825	15.250

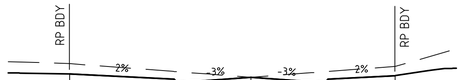
CH 100.000



CENTRELINE DATA
E = 9966.886
N = 37202.716
Z = 65.05
Datum 63.00

DESIGN SURFACE	64.997	64.918	64.918	64.778	64.803	64.870	64.975	65.050	64.975	64.870	64.803	64.778	64.918	64.918	65.050
EXISTING SURFACE	65.432	65.315	65.313	65.305	65.297	65.230	65.125	65.050	65.125	65.230	65.297	65.305	65.313	65.315	65.506
DESIGN OFFSET	-12.750	-8.825	-8.775	-8.500	-8.225	-6.000	-2.500	0.000	2.500	6.000	8.225	8.500	8.775	8.825	15.250

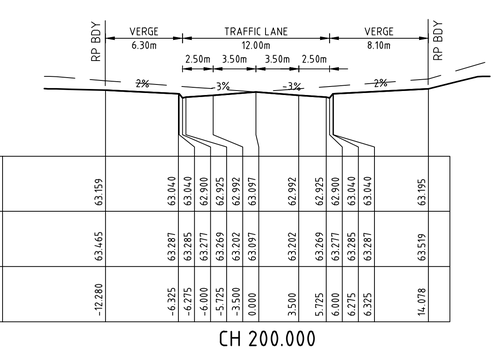
CH 80.000



CENTRELINE DATA
E = 9941.481
N = 37065.689
Z = 62.512
Datum 60.50

DESIGN SURFACE	62.625	62.455	62.455	62.315	62.340	62.407	62.512	62.407	62.340	62.315	62.455	62.455	62.564	62.564	62.564
EXISTING SURFACE	62.956	62.702	62.700	62.692	62.684	62.617	62.512	62.617	62.684	62.692	62.700	62.702	62.865	62.865	62.865
DESIGN OFFSET	-14.802	-6.325	-6.275	-6.000	-5.725	-3.500	0.000	3.500	5.725	6.000	6.275	6.325	11.769	11.769	11.769

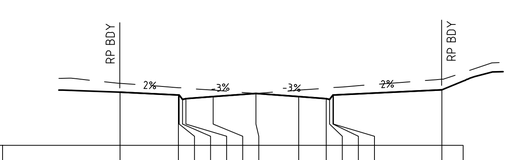
CH 219.503



CENTRELINE DATA
E = 9946.877
N = 37084.428
Z = 63.097
Datum 61.00

DESIGN SURFACE	63.159	63.040	63.040	62.900	62.925	62.992	63.097	62.992	62.925	62.900	63.040	63.040	63.195	63.195	63.195
EXISTING SURFACE	63.465	63.287	63.285	63.277	63.269	63.202	63.097	63.202	63.269	63.277	63.285	63.287	63.519	63.519	63.519
DESIGN OFFSET	-12.280	-6.325	-6.275	-6.000	-5.725	-3.500	0.000	3.500	5.725	6.000	6.275	6.325	14.078	14.078	14.078

CH 200.000



CENTRELINE DATA
E = 9951.134
N = 37103.965
Z = 63.697
Datum 62.00

DESIGN SURFACE	63.736	63.640	63.640	63.500	63.525	63.592	63.697	63.592	63.525	63.500	63.640	63.640	63.817	63.817	63.817
EXISTING SURFACE	64.028	63.885	63.884	63.876	63.868	63.801	63.697	63.802	63.868	63.876	63.885	63.886	64.158	64.158	64.158
DESIGN OFFSET	-11.089	-6.325	-6.275	-6.000	-5.725	-3.500	0.000	3.500	5.725	6.000	6.275	6.325	15.169	15.169	15.169

CH 180.000

CROSS SECTIONS - ROAD 1 - CH0.000 TO CH219.503

SCALE HORIZONTAL 1 : 250
VERTICAL 1 : 100

Rev	Amendments	Approved	Date
2	ISSUE FOR CONSTRUCTION	K.H.	18-02-25
1	ISSUE FOR CONSTRUCTION	K.H.	06-01-25
0	ISSUE FOR CONSTRUCTION	K.H.	20-11-24
C	ISSUE FOR APPROVAL	K.H.	05-09-24
B	ISSUE FOR TENDER	K.H.	21-02-24
A	ISSUE FOR APPROVAL	K.H.	01-12-23

H 1 : 250
SCALE @ A1
V 1 : 100
0 2.5 5 7.5 10 12.5
0 1 2 3 4 5

spiire
Waterfront Place, level 9/1 Eagle St, Brisbane City
Queensland 4000 Australia T 61 7 3522 3000
spiire.com.au ABN 55 050 029 635

AMORY AT RIPLEY

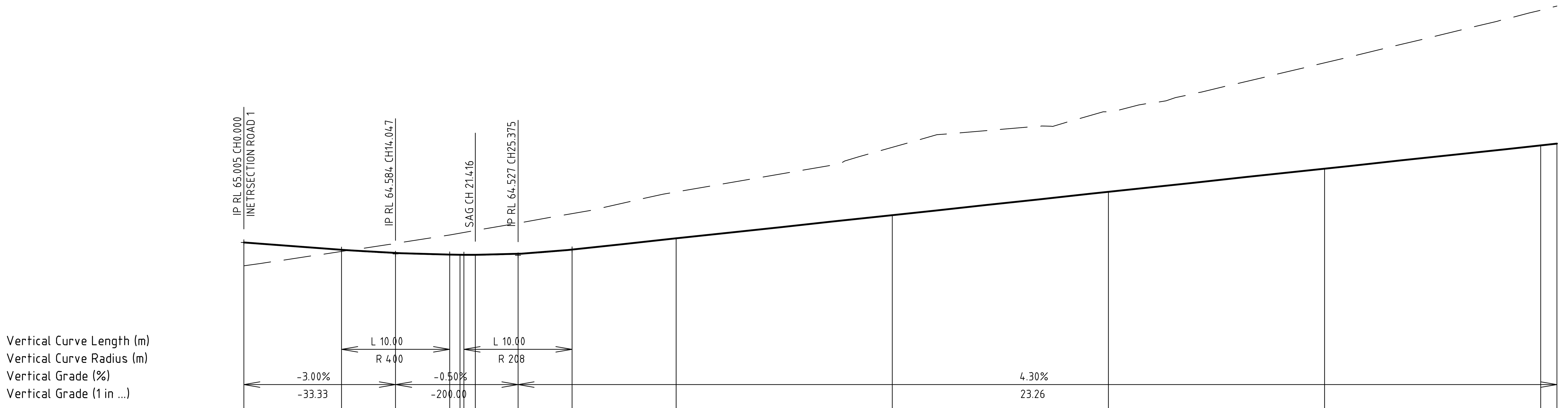
Designed T.MULLEN
Checked K. HOWELLS
Authorised M. READMAN RPEQ 28295
Date DECEMBER 23

AMORY AT RIPLEY
STAGE 01
ROAD 1 CROSS SECTIONS

IPSWICH CITY COUNCIL
RIPLEY ESTATE DEVELOPMENT PTY LTD

CONSTRUCTION Drg No **320678-01-C0305** Rev **2**

file name 320678-01AC0305.dwg layout name C0305 plotted by Charlene Chessells
FILE DETAILS



DATUM RL57.000

REFER TO DRAWING 320678-01C0311 FOR INTERSECTION LEVELS

CHAINAGE	DESIGN LEVELS LEFT LIP OF KERB	DESIGN LEVELS RIGHT LIP OF KERB	CUT / FILL DEPTH	DESIGN LEVELS ON ROAD CL	EXISTING SURFACE ON ROAD CL
0.000			0.865	65.005	64.140
9.047			0.062	64.734	64.672
14.047			-0.355	64.615	64.970
19.047	64.469	64.469	-0.726	64.559	65.285
20.000	64.465	64.465	-0.796	64.554	65.350
20.375	64.463	64.463	-0.823	64.552	65.375
21.416	64.460	64.460	-0.897	64.550	65.447
25.375	64.498	64.498	-1.136	64.587	65.723
30.375	64.653	64.653	-1.330	64.742	66.072
40.000	65.067	65.067	-1.721	65.156	66.877
60.000	65.927	65.927	-2.512	66.016	68.528
80.000	66.787	66.787	-2.968	66.876	69.844
100.000	67.647	67.647	-3.914	67.736	71.650
120.000	68.507	68.507	-5.005	68.596	73.601
121.500			-5.093	68.660	73.753

LONGITUDINAL SECTION - ROAD 2

SCALE HORIZONTAL 1 : 250
VERTICAL 1 : 100

CONTROL LINE - ROAD 2 - HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING
IP 1	0.000	9965.481	37193.836	65.005	279°00'49.57"
	10.000	9955.605	37195.403	64.706	279°00'49.57"
	20.000	9945.728	37196.969	64.554	279°00'49.57"
	30.000	9935.852	37198.536	64.726	279°00'49.57"
	40.000	9925.975	37200.103	65.156	279°00'49.57"
	50.000	9916.099	37201.669	65.586	279°00'49.57"
	60.000	9906.222	37203.236	66.016	279°00'49.57"
	70.000	9896.346	37204.803	66.446	279°00'49.57"
	80.000	9886.469	37206.370	66.876	279°00'49.57"
	90.000	9876.593	37207.936	67.306	279°00'49.57"
	100.000	9866.716	37209.503	67.736	279°00'49.57"
	110.000	9856.840	37211.070	68.166	279°00'49.57"
	120.000	9846.963	37212.637	68.596	279°00'49.57"

Rev	Amendments	Approved	Date
2	ISSUE FOR CONSTRUCTION	K.H.	18-02-25
1	ISSUE FOR CONSTRUCTION	K.H.	06-01-25
0	ISSUE FOR CONSTRUCTION	K.H.	20-11-24
C	ISSUE FOR APPROVAL	K.H.	05-09-24
B	ISSUE FOR TENDER	K.H.	21-02-24
A	ISSUE FOR APPROVAL	K.H.	01-12-23

H 1:250 SCALE @ A1 V 1:100

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Waterfront Place, level 9/1 Eagle St, Brisbane City Queensland 4000 Australia T 61 7 3522 3000
spiire.com.au ABN 55 050 029 635

AMORY AT RIPLEY

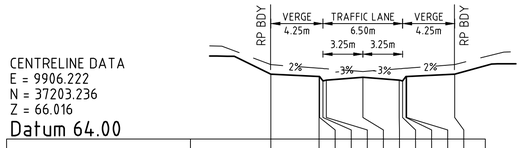
Designed: T.MULLEN
Checked: K. HOWELLS
Authorised: M. READMAN RPEQ 28295
Date: DECEMBER 23

AMORY AT RIPLEY
STAGE 01
ROAD 2 LONGITUDINAL SECTION

IPSWICH CITY COUNCIL
RIPLEY ESTATE DEVELOPMENT PTY LTD

CONSTRUCTION Drg No 320678-01-C0306 Rev 2

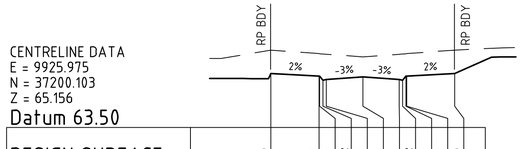
file name 320678-01AC0306.dwg layout name C0306 plotted by Charlene Chessells
FILEDETAILS



CENTRELINE DATA
E = 9906.222
N = 37203.236
Z = 66.016
Datum 64.00

DESIGN SURFACE	66.120		66.042	66.042	65.902	65.927	66.016	65.927	65.902	66.042	66.042	66.120
EXISTING SURFACE	66.430		66.312	66.311	66.302	66.294	66.205	66.294	66.302	66.311	66.312	66.430
DESIGN OFFSET	-7.500		-3.575	-3.525	-3.250	-2.975	0.000	2.975	3.250	3.525	3.575	7.500

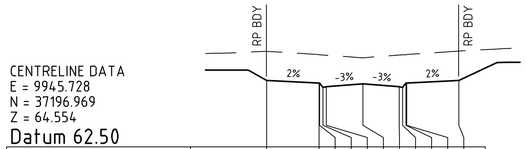
CH 60.000



CENTRELINE DATA
E = 9925.975
N = 37200.103
Z = 65.156
Datum 63.50

DESIGN SURFACE	65.260		65.182	65.182	65.042	65.067	65.156	65.067	65.042	65.182	65.182	65.260
EXISTING SURFACE	66.030		65.912	65.911	65.902	65.894	65.805	65.894	65.902	65.911	65.912	66.030
DESIGN OFFSET	-7.500		-3.575	-3.525	-3.250	-2.975	0.000	2.975	3.250	3.525	3.575	7.500

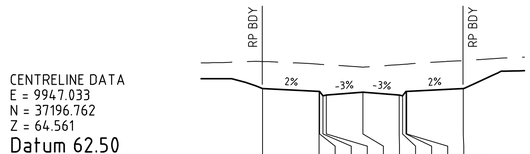
CH 40.000



CENTRELINE DATA
E = 9945.728
N = 37196.969
Z = 64.554
Datum 62.50

DESIGN SURFACE	64.665		64.580	64.580	64.440	64.465	64.554	64.465	64.440	64.580	64.580	64.665
EXISTING SURFACE	65.612		65.507	65.505	65.498	65.490	65.405	65.491	65.499	65.507	65.509	65.625
DESIGN OFFSET	-7.836		-3.575	-3.525	-3.250	-2.975	0.000	2.975	3.250	3.525	3.575	7.836

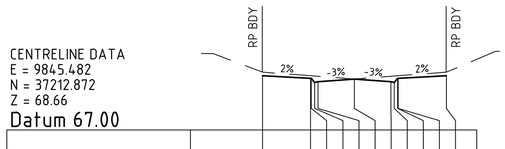
CH 20.000



CENTRELINE DATA
E = 9947.033
N = 37196.762
Z = 64.561
Datum 62.50

DESIGN SURFACE	64.679		64.587	64.587	64.447	64.472	64.561	64.472	64.447	64.587	64.587	64.679
EXISTING SURFACE	65.565		65.473	65.472	65.465	65.457	65.379	65.463	65.471	65.478	65.479	65.593
DESIGN OFFSET	-8.190		-3.575	-3.525	-3.250	-2.975	0.000	2.975	3.250	3.525	3.575	8.190

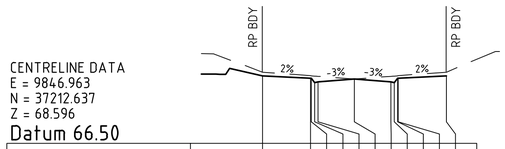
CH 18.679



CENTRELINE DATA
E = 9845.482
N = 37212.872
Z = 68.66
Datum 67.00

DESIGN SURFACE	68.765		68.686	68.686	68.546	68.571	68.660	68.571	68.546	68.686	68.686	68.765
EXISTING SURFACE	68.885		68.768	68.766	68.758	68.750	68.660	68.750	68.758	68.766	68.768	68.886
DESIGN OFFSET	-7.500		-3.575	-3.525	-3.250	-2.975	0.000	2.975	3.250	3.525	3.575	7.500

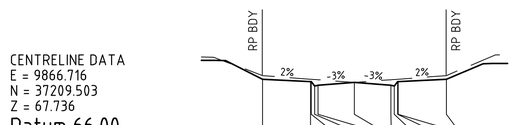
CH 121.500



CENTRELINE DATA
E = 9846.963
N = 37212.637
Z = 68.596
Datum 66.50

DESIGN SURFACE	68.700		68.622	68.622	68.482	68.507	68.596	68.507	68.482	68.622	68.622	68.700
EXISTING SURFACE	68.821		68.703	68.702	68.694	68.685	68.596	68.685	68.693	68.702	68.703	68.821
DESIGN OFFSET	-7.500		-3.575	-3.525	-3.250	-2.975	0.000	2.975	3.250	3.525	3.575	7.500

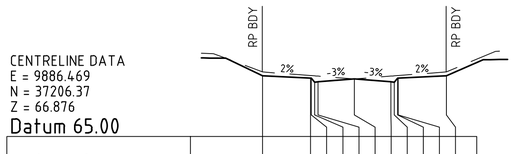
CH 120.000



CENTRELINE DATA
E = 9866.716
N = 37209.503
Z = 67.736
Datum 66.00

DESIGN SURFACE	67.840		67.762	67.762	67.622	67.647	67.736	67.647	67.622	67.762	67.762	67.840
EXISTING SURFACE	67.961		67.843	67.842	67.833	67.825	67.736	67.825	67.834	67.842	67.843	67.961
DESIGN OFFSET	-7.500		-3.575	-3.525	-3.250	-2.975	0.000	2.975	3.250	3.525	3.575	7.500

CH 100.000



CENTRELINE DATA
E = 9886.469
N = 37206.37
Z = 66.876
Datum 65.00

DESIGN SURFACE	66.980		66.902	66.902	66.762	66.787	66.876	66.787	66.762	66.902	66.902	66.980
EXISTING SURFACE	67.101		66.983	66.982	66.974	66.965	66.876	66.965	66.974	66.982	66.983	67.101
DESIGN OFFSET	-7.500		-3.575	-3.525	-3.250	-2.975	0.000	2.975	3.250	3.525	3.575	7.500

CH 80.000

CROSS SECTIONS - ROAD 2 - CH0.000 TO CH121.500

SCALE HORIZONTAL 1 : 250
VERTICAL 1 : 100

Rev	Amendments	Approved	Date
2	ISSUE FOR CONSTRUCTION	K.H.	18-02-25
1	ISSUE FOR CONSTRUCTION	K.H.	06-01-25
0	ISSUE FOR CONSTRUCTION	K.H.	20-11-24
C	ISSUE FOR APPROVAL	K.H.	05-09-24
B	ISSUE FOR TENDER	K.H.	21-02-24
A	ISSUE FOR APPROVAL	K.H.	01-12-23

H 1:1000
SCALE @ A1
0 10 20 30 40 50

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Queensland 4000 Australia T 61 7 3522 3000
spiire.com.au ABN 55 050 029 635

AMORY AT RIPLEY

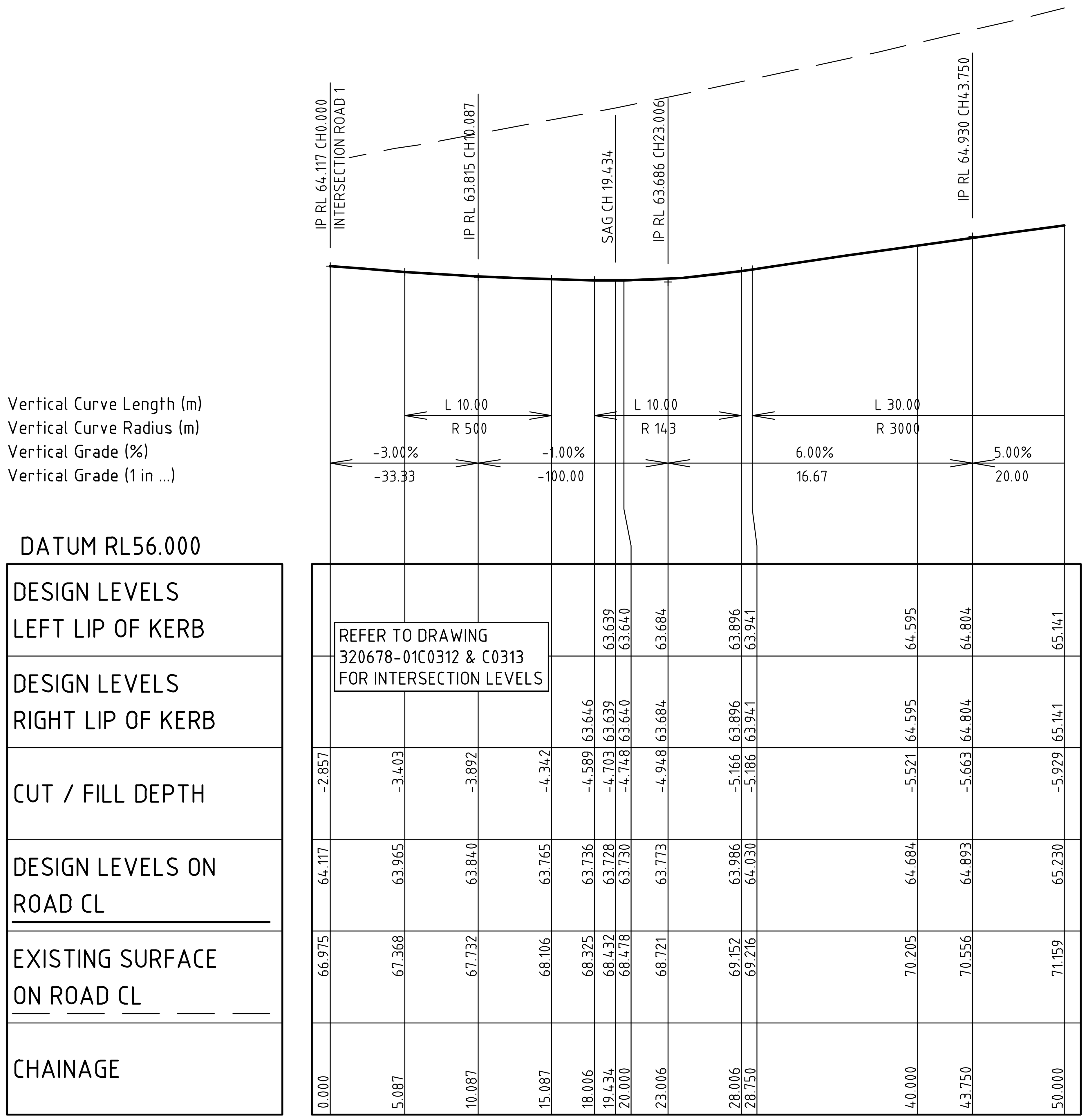
Designed T.MULLEN
Checked K. HOWELLS
Authorised M. READMAN RPEQ 28295
Date DECEMBER 23

AMORY AT RIPLEY
STAGE 01
ROAD 2 CROSS SECTIONS

IPSWICH CITY COUNCIL
RIPLEY ESTATE DEVELOPMENT PTY LTD

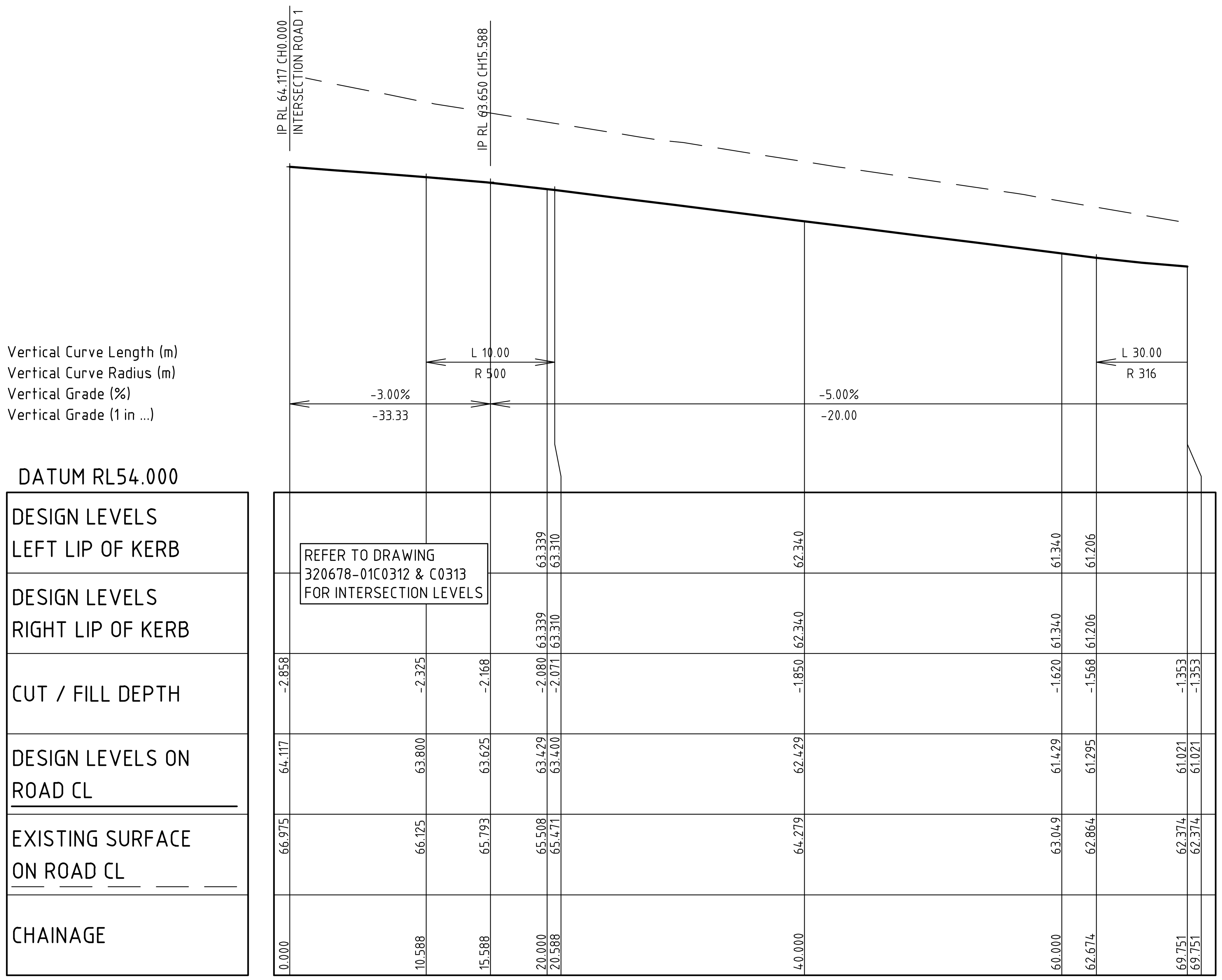
CONSTRUCTION Drg No **320678-01-C0307** Rev **2**

file name 320678-01AC0307.dwg layout name C0307 plotted by Charlene Chessells
FILE DETAILS



LONGITUDINAL SECTION - ROAD 3

SCALE HORIZONTAL 1 : 250
VERTICAL 1 : 100



LONGITUDINAL SECTION - ROAD 4

SCALE HORIZONTAL 1 : 250
VERTICAL 1 : 100

CONTROL LINE - ROAD 3 - HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING
IP 1	0.000	9953.419	37117.787	64.117	279°00'49.79"
	10.000	9943.542	37119.353	63.842	279°00'49.79"
	20.000	9933.666	37120.920	63.730	279°00'49.79"
	30.000	9923.789	37122.487	64.105	279°00'49.79"
	40.000	9913.913	37124.054	64.684	279°00'49.79"
	50.000	9904.036	37125.620	65.230	279°00'49.79"

CONTROL LINE - ROAD 4 - HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING
IP 1	0.000	9953.413	37117.787	64.117	99°00'49.87"
	10.000	9963.289	37116.221	63.817	99°00'49.87"
	20.000	9973.166	37114.654	63.429	99°00'49.87"
	30.000	9983.042	37113.087	62.929	99°00'49.87"
	40.000	9992.919	37111.521	62.429	99°00'49.87"
	50.000	10002.795	37109.954	61.929	99°00'49.87"
	60.000	10012.672	37108.387	61.429	99°00'49.87"
TC	69.751	10022.302	37106.859	61.021	99°00'49.87"

Rev	Amendments	Approved	Date
2	ISSUE FOR CONSTRUCTION	K.H.	18-02-25
1	ISSUE FOR CONSTRUCTION	K.H.	06-01-25
0	ISSUE FOR CONSTRUCTION	K.H.	20-11-24
C	ISSUE FOR APPROVAL	K.H.	05-09-24
B	ISSUE FOR TENDER	K.H.	21-02-24
A	ISSUE FOR APPROVAL	K.H.	01-12-23

H 1:250 SCALE @ A1 V 1:100
0 2.5 5 7.5 10 12.5
0 1 2 3 4 5

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AMORY AT RIPLEY

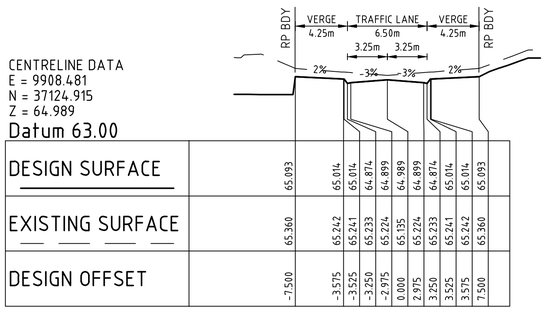
Designed T.MULLEN
Checked K. HOWELLS
Authorised M. READMAN RPEQ 28295
Date DECEMBER 23

AMORY AT RIPLEY
STAGE 01
ROAD 3 AND ROAD 4 LONGITUDINAL SECTION

IPSWICH CITY COUNCIL
RIPLEY ESTATE DEVELOPMENT PTY LTD

CONSTRUCTION Drg No **320678-01-C0308** Rev **2**

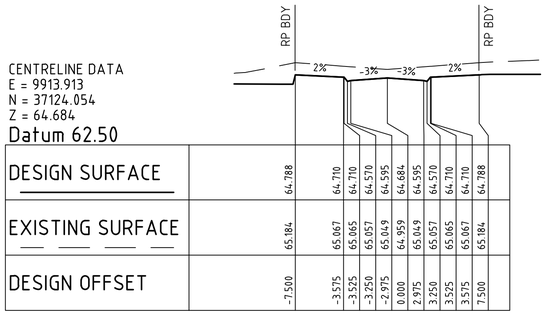
file name 320678-01AC0308.dwg layout name C0308 plotted by Charlene Chessells
FILEDETAILS



CENTRELINE DATA
E = 9908.481
N = 37124.915
Z = 64.989
Datum 63.00

DESIGN SURFACE	65.093	65.014	65.014	64.874	64.899	64.989	64.899	64.874	65.014	65.014	65.093
EXISTING SURFACE	65.360	65.242	65.241	65.233	65.224	65.135	65.224	65.233	65.241	65.242	65.360
DESIGN OFFSET	-7.500	-3.575	-3.525	-3.250	-2.975	0.000	2.975	3.250	3.525	3.575	7.500

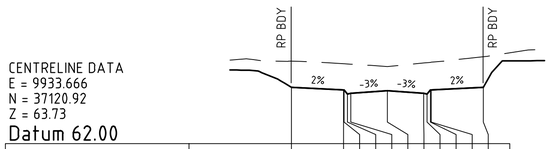
CH 45.500



CENTRELINE DATA
E = 9913.913
N = 37124.054
Z = 64.684
Datum 62.50

DESIGN SURFACE	64.788	64.710	64.710	64.570	64.595	64.684	64.595	64.570	64.710	64.710	64.788
EXISTING SURFACE	65.184	65.067	65.065	65.057	65.049	64.959	65.049	65.057	65.065	65.067	65.184
DESIGN OFFSET	-7.500	-3.575	-3.525	-3.250	-2.975	0.000	2.975	3.250	3.525	3.575	7.500

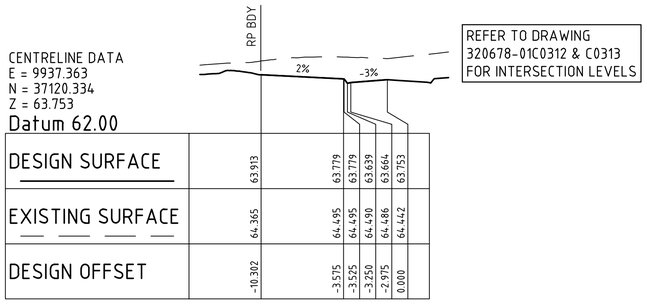
CH 40.000



CENTRELINE DATA
E = 9933.666
N = 37120.92
Z = 63.73
Datum 62.00

DESIGN SURFACE	63.841	63.755	63.755	63.615	63.640	63.730	63.640	63.615	63.755	63.755	63.841
EXISTING SURFACE	64.692	64.610	64.608	64.601	64.594	64.517	64.633	64.643	64.654	64.656	64.838
DESIGN OFFSET	-7.836	-3.575	-3.525	-3.250	-2.975	0.000	2.975	3.250	3.525	3.575	7.836

CH 20.000



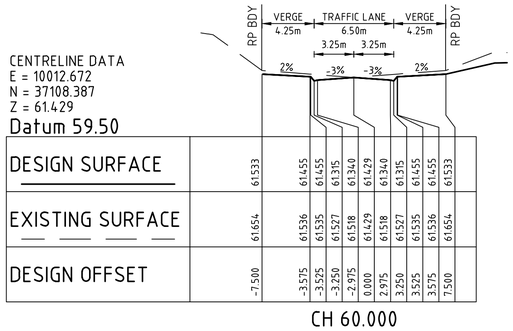
CENTRELINE DATA
E = 9937.363
N = 37120.334
Z = 63.753
Datum 62.00

DESIGN SURFACE	63.913	63.779	63.779	63.639	63.664	63.753	
EXISTING SURFACE	64.365	64.495	64.495	64.490	64.486	64.442	
DESIGN OFFSET	-10.302	-3.575	-3.525	-3.250	-2.975	0.000	

CH 16.256

CROSS SECTIONS - ROAD 3 - CH0.000 TO CH45.500

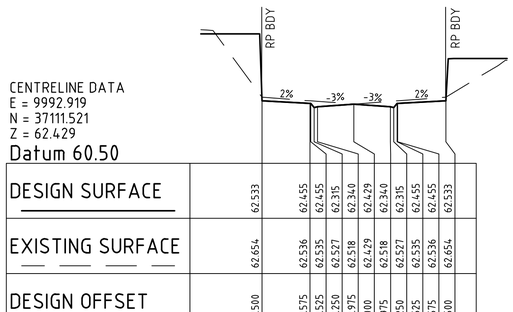
SCALE HORIZONTAL 1 : 250
VERTICAL 1 : 100



CENTRELINE DATA
E = 10012.672
N = 37108.387
Z = 61.429
Datum 59.50

DESIGN SURFACE	61.533	61.455	61.455	61.315	61.340	61.429	61.340	61.315	61.455	61.455	61.533
EXISTING SURFACE	61.654	61.536	61.535	61.527	61.518	61.429	61.518	61.527	61.535	61.536	61.654
DESIGN OFFSET	-7.500	-3.575	-3.525	-3.250	-2.975	0.000	2.975	3.250	3.525	3.575	7.500

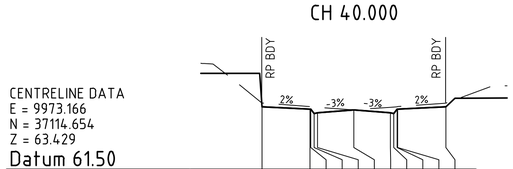
CH 60.000



CENTRELINE DATA
E = 9992.919
N = 37111.521
Z = 62.429
Datum 60.50

DESIGN SURFACE	62.533	62.455	62.455	62.315	62.340	62.429	62.340	62.315	62.455	62.455	62.533
EXISTING SURFACE	62.654	62.536	62.535	62.527	62.518	62.429	62.518	62.527	62.535	62.536	62.654
DESIGN OFFSET	-7.500	-3.575	-3.525	-3.250	-2.975	0.000	2.975	3.250	3.525	3.575	7.500

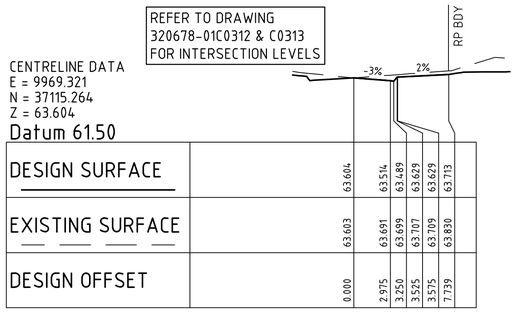
CH 40.000



CENTRELINE DATA
E = 9973.166
N = 37114.654
Z = 63.429
Datum 61.50

DESIGN SURFACE	63.533	63.454	63.454	63.314	63.339	63.429	63.339	63.314	63.454	63.454	63.533
EXISTING SURFACE	63.654	63.536	63.535	63.526	63.518	63.429	63.518	63.526	63.534	63.536	63.654
DESIGN OFFSET	-7.500	-3.575	-3.525	-3.250	-2.975	0.000	2.975	3.250	3.525	3.575	7.500

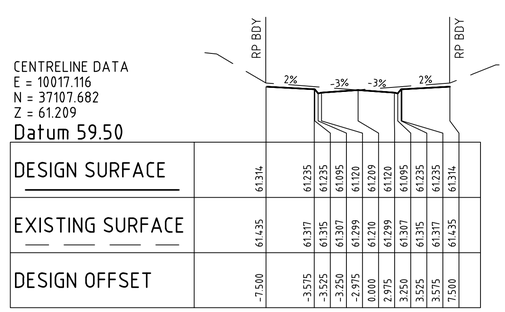
CH 20.000



CENTRELINE DATA
E = 9969.321
N = 37115.264
Z = 63.604
Datum 61.50

DESIGN SURFACE	63.604	63.514	63.489	63.629	63.629	63.713	
EXISTING SURFACE	63.603	63.691	63.699	63.707	63.709	63.838	
DESIGN OFFSET	0.000	2.975	3.250	3.525	3.575	7.739	

CH 16.107



CENTRELINE DATA
E = 10017.116
N = 37107.682
Z = 61.209
Datum 59.50

DESIGN SURFACE	61.314	61.235	61.235	61.095	61.120	61.209	61.120	61.095	61.235	61.235	61.314	
EXISTING SURFACE	61.435	61.317	61.315	61.307	61.299	61.210	61.299	61.307	61.315	61.317	61.435	
DESIGN OFFSET	-7.500	-3.575	-3.525	-3.250	-2.975	0.000	2.975	3.250	3.525	3.575	7.500	

CH 64.500

CROSS SECTIONS - ROAD 4 - CH0.000 TO CH64.500

SCALE HORIZONTAL 1 : 250
VERTICAL 1 : 100

Rev	Amendments	Approved	Date
2	ISSUE FOR CONSTRUCTION	K.H.	18-02-25
1	ISSUE FOR CONSTRUCTION	K.H.	06-01-25
0	ISSUE FOR CONSTRUCTION	K.H.	20-11-24
C	ISSUE FOR APPROVAL	K.H.	05-09-24
B	ISSUE FOR TENDER	K.H.	21-02-24
A	ISSUE FOR APPROVAL	K.H.	01-12-23

H 1:1000
SCALE @ A1
0 10 20 30 40 50

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Waterfront Place, level 9/1 Eagle St, Brisbane City
Queensland 4000 Australia T 61 7 3522 3000
spiire.com.au ABN 55 050 029 635

AMORY AT RIPLEY

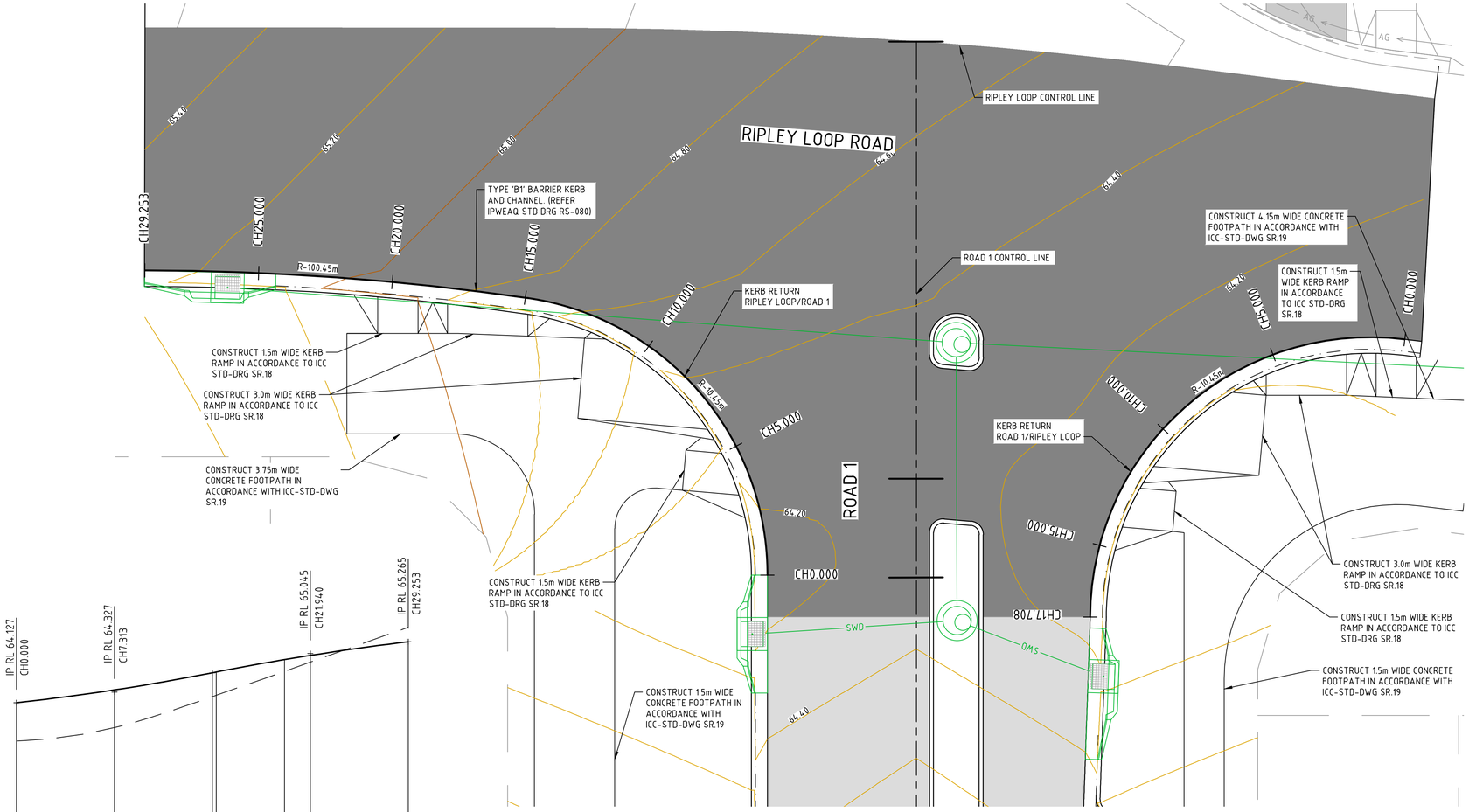
Designed T.MULLEN
Checked K. HOWELLS
Authorised M. READMAN RPEQ 28295
Date DECEMBER 23

AMORY AT RIPLEY
STAGE 01
ROAD 3 AND ROAD 4 CROSS SECTIONS

IPSWICH CITY COUNCIL
RIPLEY ESTATE DEVELOPMENT PTY LTD

CONSTRUCTION
Drg No 320678-01-C0309
Rev 2

file name: 320678-01AC0309.dwg layout name: C0309 plotted by: Charlene Chessells
FILE DETAILS



INTERSECTION DETAIL PLAN - RIPLEY LOOP/ROAD 1

SCALE 1:100

KERB RETURN RD1/RIPLEY LOOP - HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	9970.819	37262.932	64.127	9°00'50.01"			
	5.000	9970.414	37267.868	64.282	341°35'58.72"			
IP 2	7.457	9972.237	37271.869	64.372		R = -10.450	14.915	81°46'31.49"
	10.000	9967.782	37272.063	64.475	314°11'07.42"			
CC	14.915	9963.595	37274.550	64.700	287°14'18.52"			
	15.000	9963.513	37274.575	64.704	287°11'23.50"			
	20.000	9958.702	37275.933	64.931	284°20'16.46"			
IP 3	22.084	9956.736	37276.678	65.016		R = -100.450	14.339	8°10'43.01"
	25.000	9953.829	37277.051	65.125	281°29'09.42"			
IP 4	29.253	9949.644	37277.809	65.265	279°03'35.51"			

KERB RETURN RIPLEY LOOP/RD1 - HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	9995.695	37267.898	64.042	286°06'24.93"			
	5.000	9990.747	37268.106	64.075	258°41'33.63"			
IP 2	8.854	9984.328	37271.180	64.100		R = -10.450	17.708	97°05'34.92"
	10.000	9986.259	37266.011	64.108	231°16'42.34"			
	15.000	9983.239	37262.086	64.141	203°51'51.04"			
IP 3	17.708	9982.475	37259.496	64.158	189°00'50.01"			

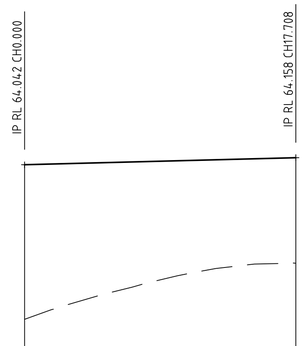
Vertical Curve Length (m) — L 14.63 — L 14.63
Vertical Curve Radius (m) — R 672 — R 766
Vertical Grade (%) — 2.73% — 4.91% — 3.00%
Vertical Grade (1 in ...) — 36.61 — 20.37 — 33.33

DATUM RL59.000

CUT / FILL DEPTH	0.715	0.704	0.445 / 0.434	0.219	0.125	-0.271	
DESIGN LEVELS ON ROAD CL	64.127	64.367	64.686 / 64.700	64.931	65.010	65.265	
EXISTING SURFACE ON ROAD CL	63.412	63.663	64.241 / 64.266	64.712	64.885	65.535	
CHAINAGE	0.000	7.313	14.627 / 14.915	20.000	21.940	29.253	

LONGITUDINAL SECTION - RD1/RIPLEY LOOP

SCALE HORIZONTAL 1 : 200
VERTICAL 1 : 50



Vertical Curve Length (m)
Vertical Curve Radius (m)
Vertical Grade (%) — 0.66%
Vertical Grade (1 in ...) — 152.4

DATUM RL58.000

CUT / FILL DEPTH	2.519	1.721
DESIGN LEVELS ON ROAD CL	64.042	64.158
EXISTING SURFACE ON ROAD CL	61.523	62.437
CHAINAGE	0.000	17.708

LONGITUDINAL SECTION - RIPLEY LOOP/RD1

SCALE HORIZONTAL 1 : 200
VERTICAL 1 : 50

Rev	Amendments	Approved	Date
2	ISSUE FOR CONSTRUCTION	K.H.	18-02-25
1	ISSUE FOR CONSTRUCTION	K.H.	06-01-25
0	ISSUE FOR CONSTRUCTION	K.H.	20-11-24
C	ISSUE FOR APPROVAL	K.H.	05-09-24
B	ISSUE FOR TENDER	K.H.	21-02-24
A	ISSUE FOR APPROVAL	K.H.	01-12-23

DETAIL PLAN
H 1:100 SCALE @ A1 — 0 1 2 3 4 5
LONGITUDINAL SECTION
H 1:200 SCALE @ A1 — 0 2 4 6 8 10
V 1:50 — 0 0.5 1 1.5 2 2.5

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AMORY AT RIPLEY

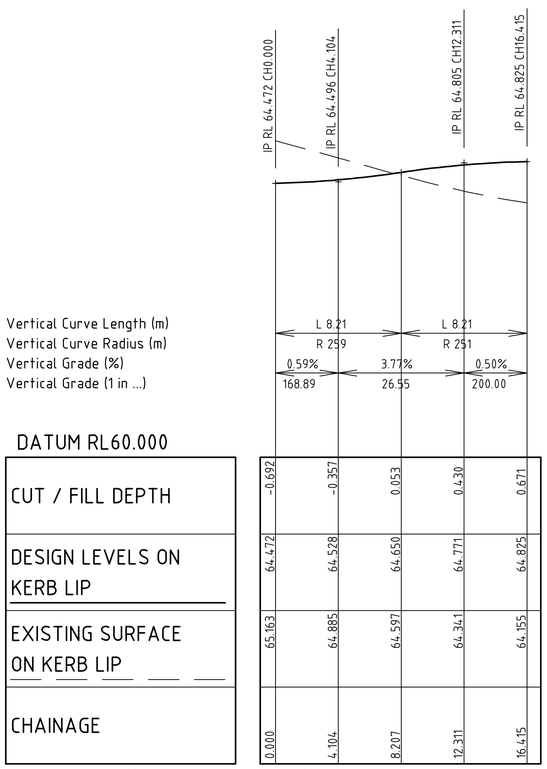
Designed T.MULLEN | Checked K. HOWELLS
Authorised M. READMAN RPEQ 28295 | Date DECEMBER 23

AMORY AT RIPLEY
STAGE 01
RIPLEY LOOP/ROAD 1 INTERSECTION DETAIL

IPSWICH CITY COUNCIL
RIPLEY ESTATE DEVELOPMENT PTY LTD

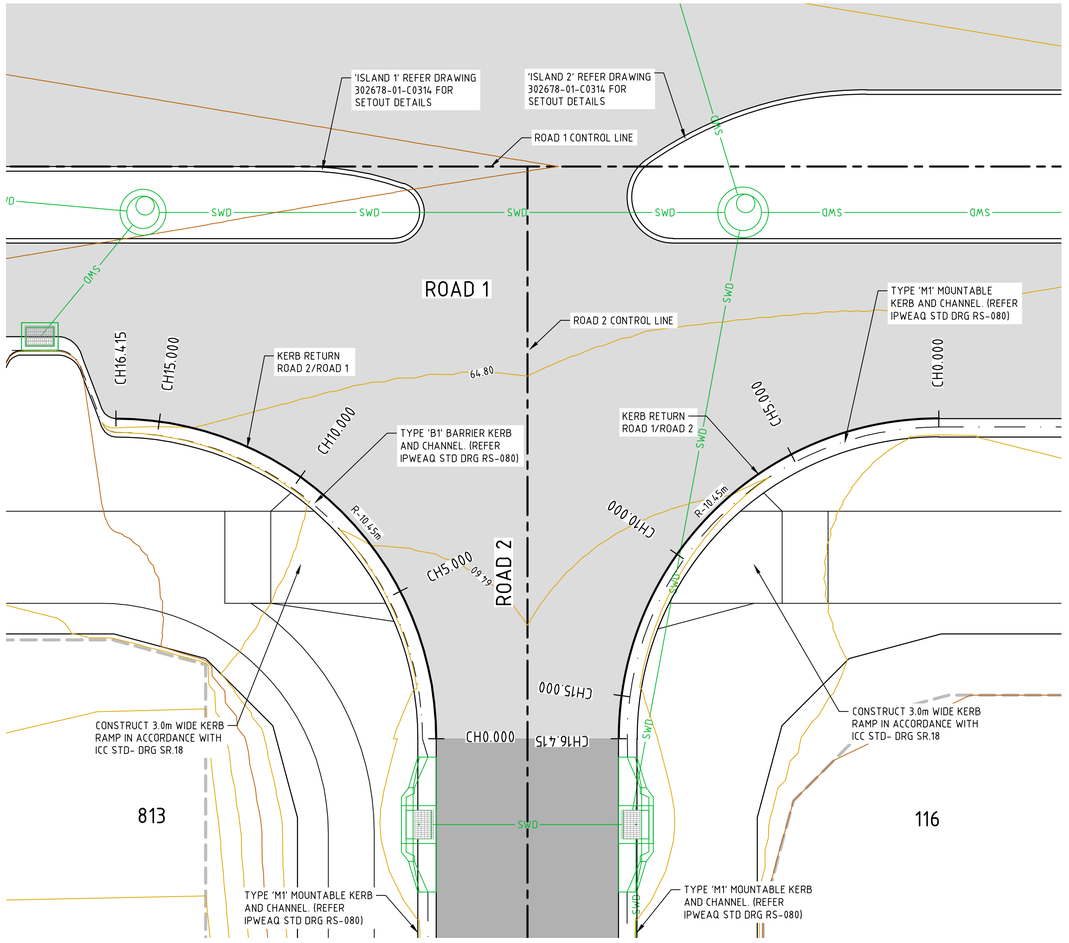
CONSTRUCTION Drg No **320678-01-C0310** Rev **2**

file name 320678-01AC0310.dwg layout name C0310 plotted by Charlene Chessells
FILE DETAILS



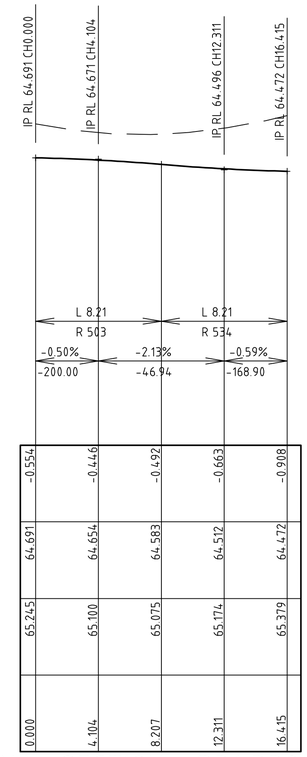
LONGITUDINAL SECTION - RD2 RD1

SCALE HORIZONTAL 1 : 200
VERTICAL 1 : 50



INTERSECTION DETAIL PLAN - ROAD 1/ROAD 2

SCALE 1:100



LONGITUDINAL SECTION - RD1 RD2

SCALE HORIZONTAL 1 : 200
VERTICAL 1 : 50

KERB RETURN - RD2 RD1 HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	9947.499	37199.701	64.472	99°00'49.57"			
	5.000	9952.435	37200.106	64.549	71°35'58.27"			
IP 2	8.207	9957.820	37198.063	64.650		R = -10.450	16.415	89°59'59.55"
	10.000	9956.630	37202.738	64.711	44°11'06.98"			
	15.000	9959.142	37207.006	64.814	16°46'15.68"			
IP 3	16.415	9959.457	37208.384	64.825	9°00'50.01"			

KERB RETURN - RD1 RD2 HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	9955.251	37181.866	64.691	9°00'50.01"			
	5.000	9954.846	37186.802	64.641	341°35'58.72"			
IP 2	8.207	9956.888	37192.187	64.583		R = -10.450	16.415	90°00'00.45"
	10.000	9952.213	37190.997	64.548	314°11'07.42"			
	15.000	9947.945	37193.509	64.482	286°46'16.13"			
IP 3	16.415	9946.567	37193.824	64.472	279°00'49.57"			

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B	ISSUE FOR TENDER	K.H.	21-02-24
A	ISSUE FOR APPROVAL	K.H.	01-12-23

DETAIL PLAN
H 1:100 SCALE @ A1 (0 1 2 3 4 5)
LONGITUDINAL SECTION
H 1:200 SCALE @ A1 (0 2 4 6 8 10)
V 1:50 (0 0.5 1 1.5 2 2.5)

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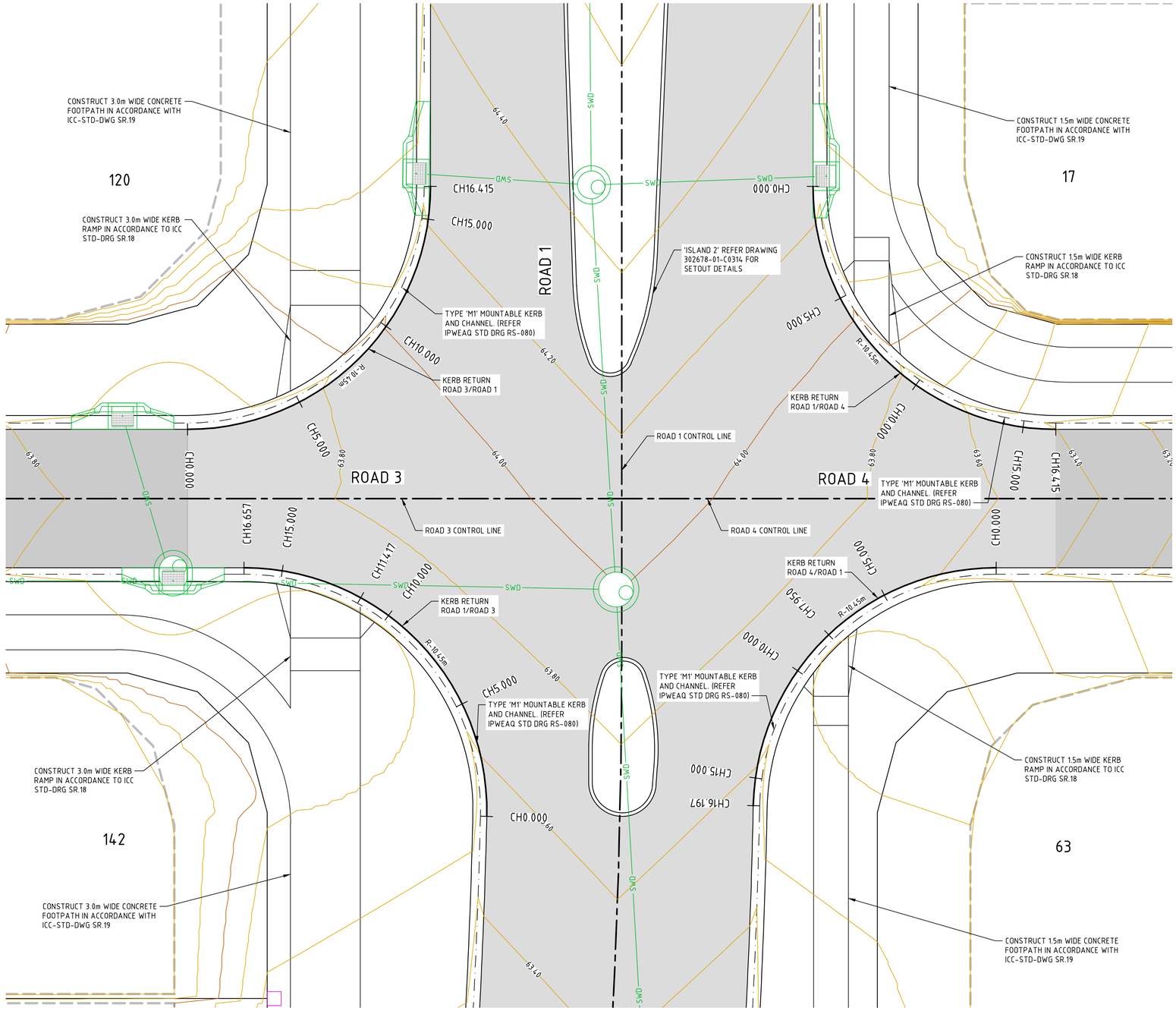
AMORY AT RIPLEY

Designed	Checked
T.MULLEN	K. HOWELLS
Authorised	Date
M. READMAN RPEQ 28295	DECEMBER 23

AMORY AT RIPLEY
STAGE 01
ROAD 1/ROAD 2 INTERSECTION DETAIL

IPSWICH CITY COUNCIL
RIPLEY ESTATE DEVELOPMENT PTY LTD

CONSTRUCTION Drg No **320678-01-C0311** Rev **2**



INTERSECTION DETAIL PLAN - ROAD 1/ROAD 3/ROAD4

SCALE 1:100

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A	ISSUE FOR APPROVAL	K.H.	01-12-23

H 1:100
SCALE @ A1
0 1 2 3 4 5

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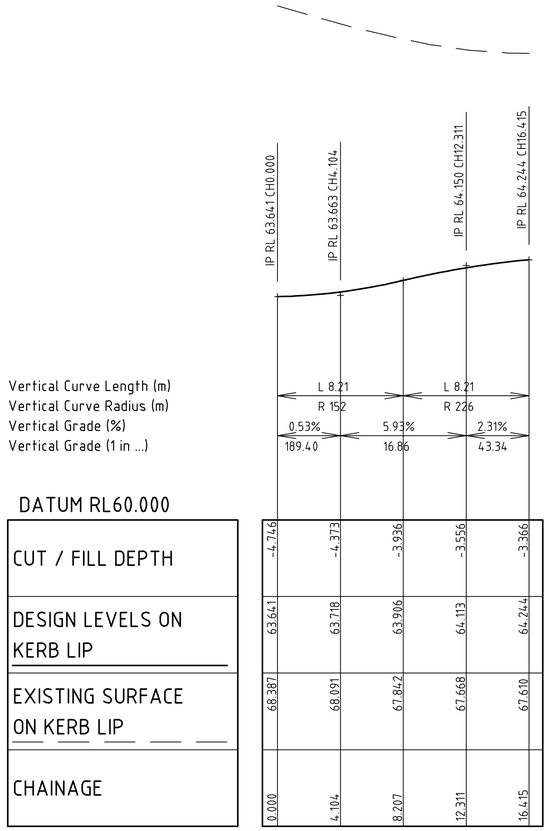
AMORY AT RIPLEY

Designed T.MULLEN
Checked K. HOWELLS
Authorised M. READMAN RPEQ 28295
Date DECEMBER 23

AMORY AT RIPLEY
STAGE 01
ROAD 1/ROAD 3 AND 4 INTERSECTION DETAIL
SHEET 1 OF 2
IPSWICH CITY COUNCIL
RIPLEY ESTATE DEVELOPMENT PTY LTD

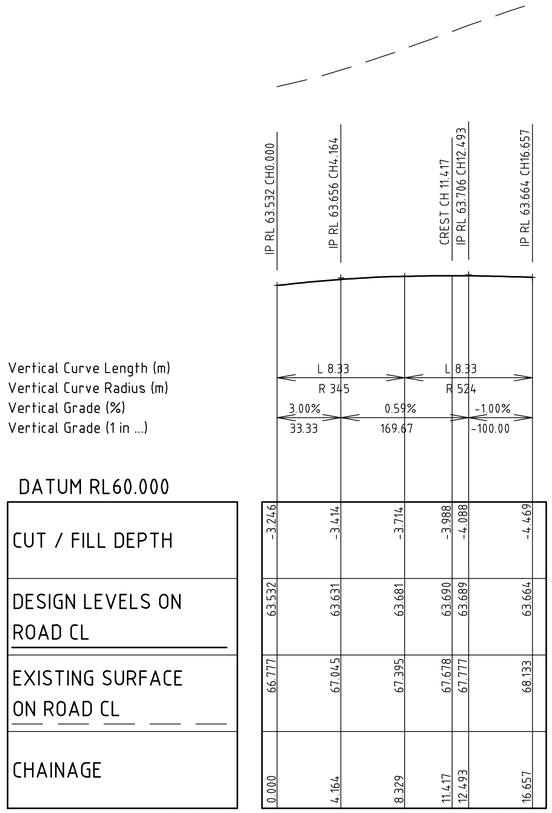
CONSTRUCTION Drg No **320678-01-C0312** Rev **2**

file name 320678-01AC0312.dwg layout name C0312 plotted by Charlene Chesselis
FILE DETAILS



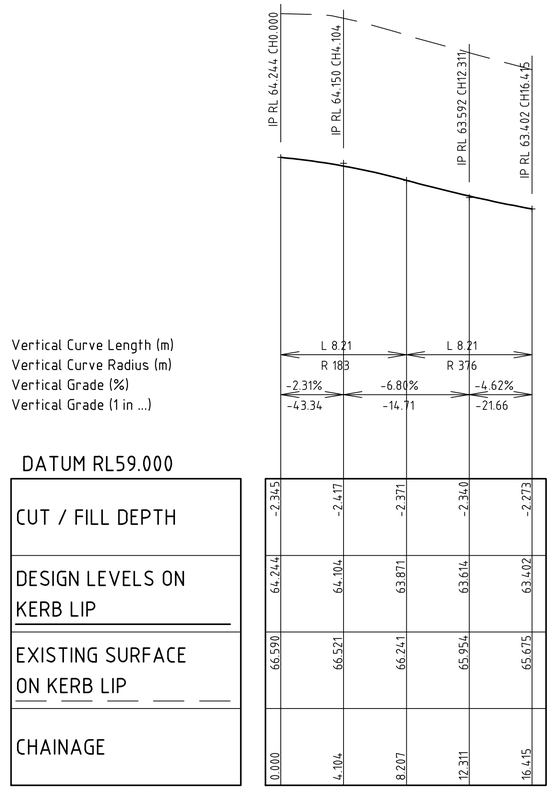
LONGITUDINAL SECTION - RD3 RD1

SCALE HORIZONTAL 1 : 200
VERTICAL 1 : 50



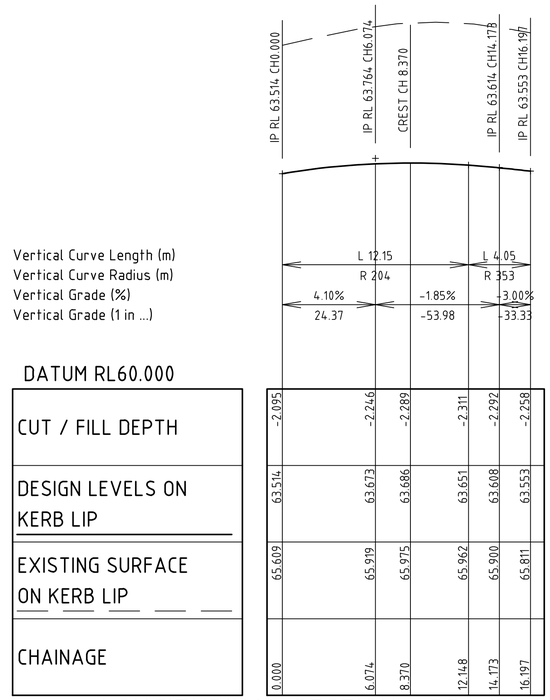
LONGITUDINAL SECTION - RD1 RD3

SCALE HORIZONTAL 1 : 200
VERTICAL 1 : 50



LONGITUDINAL SECTION - RD1 RD4

SCALE HORIZONTAL 1 : 200
VERTICAL 1 : 50



LONGITUDINAL SECTION - RD4/RD1

SCALE HORIZONTAL 1 : 200
VERTICAL 1 : 50

KERB RETURN - RD3 RD1 HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	9935.435	37123.652	63.641	99°00'49.79"			
	5.000	9940.371	37124.057	63.750	71°35'58.50"			
IP 2	8.207	9945.756	37122.014	63.906		R = -10.450	16.415	89°59'59.78"
	10.000	9944.566	37126.689	64.006	44°11'07.20"			
	15.000	9947.078	37130.957	64.207	16°46'15.91"			
IP 3	16.415	9947.394	37132.335	64.244	9°00'50.01"			

KERB RETURN - RD1 RD3 HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	9945.540	37105.198	63.532	10°20'35.69"			
	5.000	9945.249	37110.142	63.645	342°55'44.40"			
IP 2	8.329	9947.460	37115.720	63.681		R = -10.450	16.657	91°19'45.90"
	10.000	9942.715	37114.397	63.688	315°30'53.10"			
	15.000	9938.506	37117.007	63.678	288°06'01.81"			
IP 3	16.657	9936.897	37117.395	63.664	279°00'49.79"			

KERB RETURN - RD1 RD4 HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	9963.640	37129.758	64.244	189°00'50.01"			
	5.000	9964.046	37124.822	64.061	161°35'58.72"			
IP 2	8.207	9962.003	37119.437	63.871		R = -10.450	16.415	90°00'00.14"
	10.000	9966.678	37120.627	63.753	134°11'07.42"			
	15.000	9970.946	37118.115	63.470	106°46'16.13"			
IP 3	16.415	9972.324	37117.800	63.402	99°00'49.87"			

KERB RETURN - RD4 RD1 HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	9968.855	37112.326	63.514	279°00'49.87"			
	5.000	9963.919	37111.920	63.658	251°35'58.58"			
IP 2	8.099	9958.747	37113.929	63.686		R = -10.450	16.197	88°48'23.92"
	10.000	9959.724	37109.288	63.680	224°11'07.28"			
	15.000	9957.212	37105.020	63.587	196°46'15.99"			
IP 3	16.197	9956.933	37103.857	63.553	190°12'25.96"			

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A	ISSUE FOR APPROVAL	K.H.	01-12-23

LONGITUDINAL SECTION
H 1 : 200 SCALE @ A1 V 1 : 50
0 2 4 6 8 10
0 0.5 1 1.5 2 2.5

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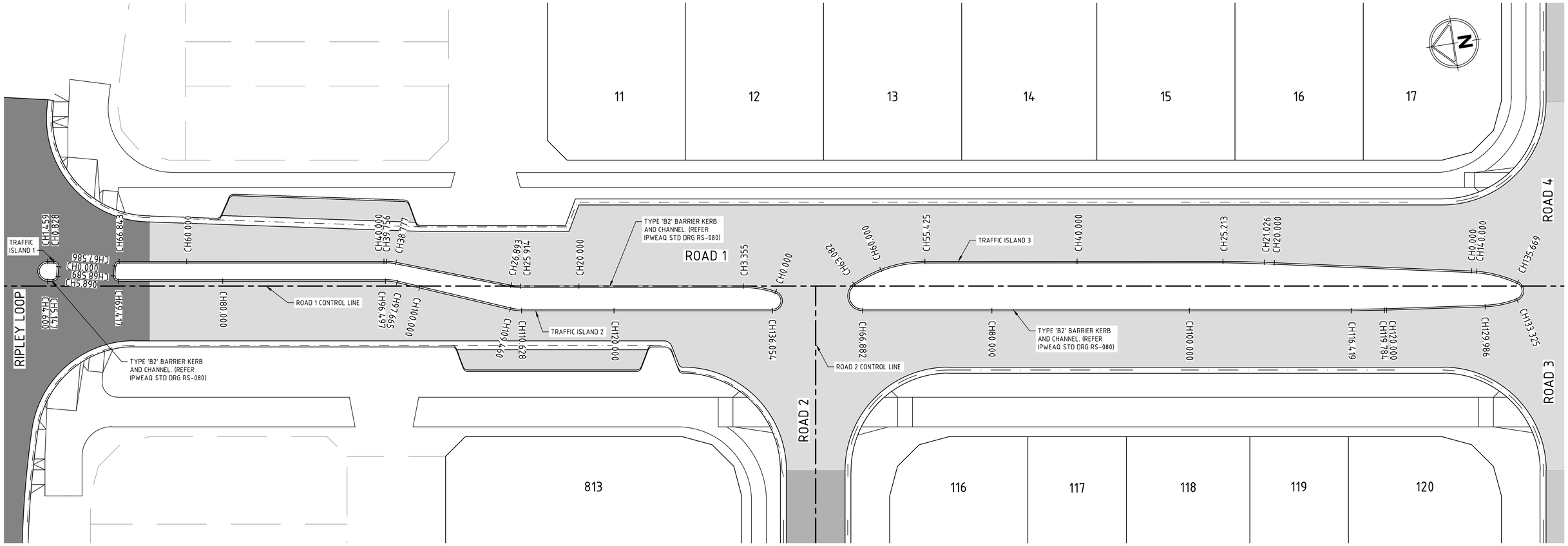
AMORY AT RIPLEY

Designed T.MULLEN
Checked K. HOWELLS
Authorised M. READMAN RPEQ 28295
Date DECEMBER 23

AMORY AT RIPLEY
STAGE 01
ROAD 1/ROAD 3 AND 4 INTERSECTION DETAIL
SHEET 2 OF 2
IPSWICH CITY COUNCIL
RIPLEY ESTATE DEVELOPMENT PTY LTD

CONSTRUCTION Drg No **320678-01-C0313** Rev **2**



TRAFFIC ISLAND 1, 2 & 3 DETAIL PLAN

SCALE 1:200

ISLAND 1 SETOUT - HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	9979.430	37269.295	64.252	103°50'25.63"			
IP 2	0.414	9979.958	37269.165	64.248		R = -0.500	0.828	94°49'35.56"
CT	0.828	9980.043	37269.702	64.251	9°00'50.07"			
TC	1.459	9980.142	37270.325	64.267	9°00'50.07"			
IP 3	2.244	9980.299	37271.313	64.296		R = -1.000	1.571	90°00'00.00"
CT	3.029	9979.311	37271.470	64.323	279°00'50.07"			
IP 4	3.815	9978.324	37271.626	64.333		R = -1.000	1.571	90°00'00.00"
CT	4.600	9978.167	37270.639	64.324	189°00'50.07"			
TC	5.147	9978.081	37270.099	64.308	189°00'50.07"			
IP 5	5.518	9978.009	37269.645	64.295		R = -0.500	0.743	85°10'24.44"
CT	5.890	9978.455	37269.535	64.282	103°50'25.63"			
IP 6	6.894	9979.430	37269.295	64.252	103°50'25.63"			

ISLAND 2 SETOUT - HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	9965.562	37197.920	65.008	28°14'26.56"			
IP 2	1.677	9966.364	37199.412	65.027		R = -9.995	3.355	19°13'58.75"
IP 3	3.355	9966.629	37201.084	65.042				
TC	25.914	9970.162	37223.365	65.155	9°00'36.21"			
IP 4	26.403	9970.239	37223.850	65.156		R = 5.000	0.979	11°12'50.84"
CT	26.893	9970.408	37224.311	65.157	20°13'27.05"			
TC	38.777	9974.517	37235.462	65.083	20°13'27.05"			
IP 5	39.266	9974.686	37235.923	65.077		R = -5.000	0.979	11°12'46.51"
CT	39.756	9974.763	37236.408	65.070	9°00'40.53"			
IP 6	66.843	9979.006	37263.160	64.183				
IP 7	67.214	9979.078	37263.614	64.185		R = -0.500	0.743	85°10'14.04"
CT	67.586	9978.632	37263.724	64.189	283°50'25.63"			
TC	68.589	9977.657	37263.964	64.217	283°50'25.63"			
IP 8	69.003	9977.129	37264.094	64.230		R = -0.500	0.828	94°49'45.96"
CT	69.417	9977.044	37263.557	64.241	189°00'39.67"			
TC	96.497	9972.802	37236.811	65.129	189°00'39.67"			
IP 9	97.081	9972.711	37236.232	65.137		R = 5.000	1.168	13°23'04.93"
CT	97.665	9972.487	37235.690	65.146	202°23'44.60"			
TC	109.460	9967.993	37224.784	65.089	202°23'44.60"			
IP 10	110.044	9967.770	37224.242	65.083		R = -5.000	1.168	13°22'54.53"
CT	110.628	9967.678	37223.662	65.079	189°00'50.07"			
TC	136.054	9963.694	37198.550	64.947	189°00'50.07"			
IP 11	136.755	9963.562	37197.716	64.951		R = -1.000	1.403	80°22'24.07"
CC	137.456	9964.362	37197.446	64.969	108°38'26.01"			
IP 12	138.158	9965.162	37197.176	64.990		R = -1.000	1.403	80°22'24.07"
IP 13	138.859	9965.562	37197.920	65.008	28°16'01.94"			

ISLAND 3 SETOUT - HORIZONTAL POINTS

PT	CHAINAGE	EASTING	NORTHING	HEIGHT	BEARING	RAD/SPIRAL	A.LENGTH	DEFL.ANGLE
IP 1	0.000	9956.579	37127.939	64.374	11°24'32.43"			
TC	21.026	9960.739	37148.549	64.700	11°24'32.43"			
IP 2	23.120	9961.153	37150.602	64.712		R = -100.000	4.188	2°23'57.66"
CT	25.213	9961.481	37152.670	64.724	9°00'34.76"			
IP 3	55.425	9966.212	37182.509	64.875				
IP 4	59.253	9966.831	37186.413	64.912		R = -12.500	7.657	35°05'48.49"
CC	63.082	9965.093	37189.963	64.979	333°55'01.58"			
IP 5	64.032	9964.609	37190.953	64.970		R = -1.500	1.900	72°34'58.89"
CC	64.982	9963.520	37190.787	64.938	261°20'02.70"			
IP 6	65.932	9962.431	37190.621	64.910		R = -1.500	1.900	72°34'58.89"
IP 7	66.882	9962.263	37189.532	64.896				
TC	116.419	9954.506	3714.0.607	64.595	189°00'36.21"			
IP 8	118.102	9954.242	37138.944	64.567		R = -100.000	3.366	1°55'42.10"
CT	119.784	9954.035	37137.274	64.540	187°04'54.11"			
TC	129.986	9952.777	37127.150	64.321	187°04'54.11"			
IP 9	131.656	9952.569	37125.478	64.282		R = -10.000	3.339	19°08'01.43"
CC	133.325	9952.921	37123.830	64.248	167°56'52.68"			
IP 10	133.911	9953.060	37123.181	64.249		R = -1.000	1.172	67°08'48.68"
CC	134.497	9953.712	37123.056	64.260	100°48'04.00"			
IP 11	135.083	9954.364	37122.932	64.277		R = -1.000	1.172	67°08'48.68"
CC	135.669	9954.731	37123.484	64.278	33°39'15.32"			
IP 12	138.096	9956.093	37125.530	64.321		R = -12.500	4.853	22°14'42.89"
IP 13	140.522	9956.579	37127.939	64.374	11°24'32.43"			

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H 1:200 SCALE @ A1 0 2 4 6 8 10

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Waterfront Place, level 9/1 Eagle St, Brisbane City
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AMORY AT RIPLEY

Designed T.MULLEN | Checked K. HOWELLS
Authorised M. READMAN RPEQ 28295 | Date DECEMBER 23

AMORY AT RIPLEY
STAGE 01
TRAFFIC ISLAND SETOUT DETAILS

IPSWICH CITY COUNCIL
RIPLEY ESTATE DEVELOPMENT PTY LTD

CONSTRUCTION Drg No **320678-01-C0314** Rev **2**

file name 320678-01AC0314.dwg layout name C0314 plotted by Charlene Chessells
FILE DETAILS

NOTES

1. T.G.S.I's TO BE PROVIDED FOR ALL KERB RAMPS AT SIGNALISED INTERSECTION, REFER TO ICC STD DWG SR.18 FOR DETAILS.
2. ALL PAVEMENT MARKINGS AND SIGNAGE TO BE IN ACCORDANCE WITH TMR AND AS1742 MANUAL FOR UNIFORM TRAFFIC CONTROL DEVICES.
3. FOR SIGNAGE AND ASSEMBLY DETAILS REFER TMR MANUAL OF UNIFORM CONTROL DEVICES.
4. EXISTING PAVEMENT MARKING ARE TO BE REMOVED BY GRINDING.
5. LINEMARKING SHALL BE DULUX ROADMASTER WATER BASED PAVEMENT MARKING OR APPROVED EQUIVALENT.

LINEMARKING LEGEND:

SYMBOL:	DESCRIPTION:	REMARK:
	DIAGONAL AND CHEVRON MARKINGS	AS1742.2 CLAUSE 5.6
	SINGLE CONTINUOUS LANE LINE	CONTINUOUS LINE, 100mm WIDE. AS1742.2 CLAUSE 5.3
CL1	CONTINUITY LINE	1m LINE, 3m GAP, 150mm WIDE. AS1742.2 CLAUSE 5.3
SL	STOP LINE	CONTINUOUS LINE, 450mm WIDE. AS1742.2 CLAUSE 5.5 & AS1742.14 CLAUSE 6.2.1
TL	TURN LINE	600mm LINE, 600mm GAP, 100mm WIDE. AS1742.2 CLAUSE 5.3 & AS1742.14 CLAUSE 6.2.4
PL	PEDESTRIAN GUIDE LINE	1m LINE 300mm GAP, 150mm WIDE. AS1742.2 CLAUSE 5.5 & AS1742.14 CLAUSE 6.2.3
GW	GIVE WAY LINE	600mm LINE, 600mm GAP, 450mm WIDE. AS1742.2 CLAUSE 5.5
	INTERSECTION ARROW	AS1742.2 CLAUSE 5.7 & AS1742.14 CLAUSE 6.2.2
	LINEMARKING TO BE REMOVED	
	BICYCLE LANE GREEN PAINTED SURFACE	SECTION 6.6-1, PART 10, TRUM MANUAL VOL. 1. APPROVED COLOUR EMERALD GREEN G13
	BICYCLE SYMBOL (ROAD)	AS1742.2 CLAUSE 5.8 FIGURE 5.41
	BICYCLE SYMBOLS (PATH)	AS1742.2 CLAUSE 5.8 FIGURE 5.44
DLP	SINGLE BROKEN DIVIDING LINE - PATH	1m LINE, 3m GAP, 100mm WIDE. AS1742.2 CLAUSE 5.3

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0	ISSUE FOR CONSTRUCTION	K.H.	20-11-24
C	ISSUE FOR APPROVAL	K.H.	05-09-24
B	ISSUE FOR TENDER	K.H.	21-02-24
A	ISSUE FOR APPROVAL	K.H.	01-12-23

H 1500 SCALE @ A1 — 0 5 10 15 20 25

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Queensland 4000 Australia T 61 7 3522 3000
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AMORY AT RIPLEY

Designed T.MULLEN | Checked K. HOWELLS
Authorised M. READMAN RPEQ 28295 | Date DECEMBER 23

AMORY AT RIPLEY STAGE 01

SIGNAGE & LINEMARKING LAYOUT PLAN

IPSWICH CITY COUNCIL
RIPLEY ESTATE DEVELOPMENT PTY LTD

CONSTRUCTION Drg No 320678-01-C0400 Rev 2

file name 320678-01AC0400.dwg layout name C0400 plotted by Chantene Chessells
FILE DETAILS

STORMWATER DRAINAGE NOTES:

1. ALL DRAINAGE MATERIALS, EXCAVATION AND CONSTRUCTION SHALL COMPLY WITH THE APPLICABLE LOCAL AUTHORITY SPECIFICATIONS AND DETAILS AND THE FOLLOWING PUBLICATIONS (AS APPLIES TO THE TYPE OF PIPELINE):-
   - CONCRETE PIPE ASSOCIATION OF AUSTRALIA TECHNICAL ADVISORY PUBLICATIONS
   - AS 3725 "DESIGN FOR THE INSTALLATION OF BURIED CONCRETE PIPES"
   - AS 4058 "PRE-CAST CONCRETE PIPES (PRESSURE AND NON-PRESSURE)
   - AS 4139 "FIBRE REINFORCED CONCRETE PIPES AND FITTINGS"
   - AS 2566 "BURIED FLEXIBLE PIPELINES"
   - AS 3500 "NATIONAL PLUMBING CODE"
   - AS 1254 "PVC PIPES AND FITTINGS FOR STORM & SURFACE WATER APPLICATIONS"
   - AS 1273 "UNPLASTICIZED PVC (uPVC) DOWNPIPE AND FITTINGS FOR RAINWATER
2. WHERE THE DEPTH OF FILL OVER THE PIPE IS BETWEEN Min. 600mm AND Max. 1.5m HIGH:-
   - ALL uPVC PIPES SHALL BE CLASS "SN8" FOR 150Ø - 225Ø AND "SN6" FOR 100Ø
   - ALL CONCRETE PIPES SHALL BE MINIMUM CLASS "2".

   SHOULD THE DEPTH OF COVER OVER THE PIPE BE OUTSIDE THE ABOVE MAXIMUM AND MINIMUM LIMITS, OR ANY LOADING OTHER THAN NORMAL EARTH LOADS BE APPLICABLE (INCLUDING CONSTRUCTION TRAFFIC LOADS) THE DESIGN ENGINEER MUST BE CONTACTED FOR SPECIFIC DESIGN OF PIPE CLASS.
3. UNLESS DETAILED OTHERWISE PIPE CLASSES SPECIFIED ON PROJECT DRAWINGS ARE BASED ON SINGLE PIPE BARREL ONLY - WHERE MULTIPLE PIPE BARRELS ARE PROPOSED THE PIPE CLASS MUST BE REFERRED TO THE DESIGN ENGINEER FOR CONFIRMATION.
4. UNLESS SPECIFIED OTHERWISE DESIGN LOADING ON ALL PIPELINES REQUIRE "TRENCH" TYPE BEDDING AND BACKFILL INSTALLATION IN ACCORDANCE WITH AS 3725. "EMBANKMENT" TYPE INSTALLATION WILL NOT BE ACCEPTED WITHOUT WRITTEN APPROVAL. STABILITY OF TRENCH BASE AND SIDES MUST BE ADEQUATE TO PROVIDE REQUIRED SUPPORT TO THE BEDDING, HAUNCH AND SIDES OF THE TRENCH - IF ANY DOUBT EXISTS THE CONTRACTOR MUST OBTAIN GEOTECHNICAL CONSULTANT CONFIRMATION.
5. THE WIDTH OF TRENCH OUTSIDE THE PIPE SHALL BE IN ACCORDANCE WITH AS 3725 (NOMINAL 300mm Max.). ANY FURTHER WIDENING OF THE TRENCH WILL INCREASE LOAD ONTO PIPE, AND WILL REQUIRE REVIEW OF PIPE CLASS AND INSTALLATION SPECIFICATIONS. ANY ADDITIONAL ASSOCIATED PIPE OR SUPPORT COSTS WILL BE AT CONTRACTOR'S EXPENSE.
6. UNLESS SPECIFIED OTHERWISE PIPE BEDDING AND SUPPORT SHALL BE INSTALLED IN ACCORDANCE WITH AS 3725 AND SHALL BE GENERALLY AS FOLLOWS:-
   - "HS2" UNDER ROADWAYS
   - "H2" UNDER NON-TRAFFIC / NON-LOADED AREAS

   ANY CIRCUMSTANCES OUTSIDE THESE MUST BE REFERRED TO THE DESIGN ENGINEER FOR PIPE SUPPORT SPECIFICATIONS.
7. THE CONTRACTOR SHALL ENSURE THAT ALL CONSTRUCTION TRAFFIC LOADING ONTO PIPELINES IS LIMITED TO MAXIMUM VEHICLE LOADINGS AND ACHIEVES BACKFILL COVER IN ACCORDANCE WITH AS 3725 (OR ALTERNATIVELY PROVIDE ADEQUATE TEMPORARY AND PERMANENT BRIDGING). REFER C.P.A.A. PIPE CLASS SELECTION CRITERIA / SOFTWARE FOR ACCEPTABLE LOADING APPLICATIONS.
8. ANY DRAINLINE BEING INSTALLED WITH ANY PORTION OF THE DRAINLINE BELOW THE MAXIMUM TIDAL LEVEL SHALL HAVE SALTWATER EXPOSURE COVER CLASS PIPES OR CULVERTS INSTALLED. FOR ANY DEVELOPMENT WITHIN 1 KILOMETRE OF THE COASTLINE, OR WITH PIPEWORK THE HIGHEST ASTRONAMICAL TIDE (H.A.T.) THE CONTRACTOR MUST VERIFY THIS REQUIREMENT WITH THE SUPERVISING ENGINEER.
9. WHERE DRAINLINES ARE TO BE INSTALLED IN "AGGRESSIVE" PERMEABLE SOILS AS DEFINED IN AS 3600, OR ACID SULPHATE SOILS (pH <4.0) THEY MUST BE REFERRED TO THE SUPERVISING ENGINEER FOR REVIEW OF PIPE / EXPOSURE COVER CLASS. THE CONTRACTOR SHALL VERIFY SOIL CONDITION (BY TESTING) AND UNDERTAKE SOIL REMEDIATION TREATMENT (WHERE REQUIRED) PRIOR TO DRAINLINE CONSTRUCTION.
10. MINIMUM AND MAXIMUM PIPE GRADES SHALL BE IN ACCORDANCE WITH Q.U.D.M. SPECIFICATIONS. (N.B. 150Ø=1% Min. AND 375Ø=0.4% Min.)
11. ANY PIPE DOWNSTREAM OF INLETS CAPTURING GROUND RUNOFF SHALL BE Min. 150Ø.
12. WHERE PIPES AND STRUCTURES ARE TO BE LAID WITHIN THE ZONE OF INFLUENCE OF STRUCTURAL ELEMENTS (e.g. BUILDING FOOTINGS, RETAINING WALLS . . . etc.) THE BUILDER SHALL PROVIDE ADEQUATE BRIDGING / PROTECTION TO ENSURE NO UNDUE LOADING ONTO STORMWATER PIPES AND STRUCTURES. WHERE ANY DOUBT MAY EXIST REFERENCE SHALL BE MADE TO THE DESIGNER OF THE STRUCTURE AND THE STORMWATER DESIGN ENGINEER.
13. CONTRACTOR MUST VERIFY THAT ALL PIPE LEVELS AND GRADES CAN BE ACHIEVED PRIOR TO CONSTRUCTING DRAINLINES. ANY CONFLICT SHALL BE REFERRED TO THE SUPERINTENDENT FOR RE-DESIGN PRIOR TO ANY PIPELINE CONSTRUCTION.
14. BENCHING OF PIT STRUCTURES SHALL HAVE A SMOOTH FINISHED SURFACE, AND PIPES SHALL NOT PROJECT INSIDE THE SHAFT OF THE PIT.
15. WHERE RECTANGULAR PITS OR STRUCTURES ARE CONSTRUCTED, PIPES MUST NOT CONNECT INTO THE STRUCTURE AT CORNERS.
16. ALL CONSTRUCTION AND EXCAVATIONS SHALL BE CARRIED OUT IN ACCORDANCE WITH THE REQUIREMENTS OF THE CURRENT WORKPLACE HEALTH AND SAFETY ACT INCLUDING AMENDMENTS SUBSEQUENT TO THE ORIGINAL PUBLICATION.
17. BASE AND SHAFT OF ALL STORMWATER STRUCTURES SHALL BE "CAST IN-SITU" CONCRETE UNLESS OTHERWISE APPROVED IN WRITING BY THE SUPERVISING ENGINEER.
18. ALL GRATED INLETS SHALL BE MINIMUM "CLASS D" TRAFFICABLE, AND SHALL BE BOLTED DOWN UNLESS OTHERWISE APPROVED BY THE SUPERVISING ENGINEER.
19. WHERE A BRANCH CONNECTION IS INDICATED DIRECTLY ONTO THE RECEIVING PIPELINE (I.E. WITHOUT JUNCTION PIT) - A PROPRIETORY OBLIQUE BRANCH FITTING SHALL BE INSTALLED ONTO RECEIVING PIPELINE SIZE UP TO 300MM, OR APPROVED SADDLE BRANCH INSTALLED IN STRICT ACCORDANCE WITH MANUFACTURER SPECIFICATIONS FOR PIPES FOR RECEIVING PIPELINE SIZE 375MM OR GREATER. THE MAXIMUM SIZE OF THE CONNECTING BRANCH LINE (WITHOUT JUNCTION PIT) SHALL BE 150MM U.N.O.
20. ALL PIPED OUTLETS AND INLETS MUST BE PROVIDED WITH CEMENT GROUTED STONE PITCHING SCOUR PROTECTION IN ACCORDANCE WITH IPWEA STANDARD DRAWING NUMBER D-0081. ALL VOIDS BETWEEN STONES MUST BE CEMENT GROUTED - NO SHALL NOT BE LOOSE STACKED. ALL STONE PITCHING SHALL BE PLACED OVER GEOFABRIC - BIDIM A24 OR EQUIVALENT.

STORMWATER DESIGN CRITERIA:

1. STORMWATER HAS BEEN DESIGNED IN ACCORDANCE WITH QUEENSLAND URBAN DRAINAGE MANUAL (Q.U.D.M.) AND IPSWICH COUNCIL PLANNING SCHEME, POLICIES & DEVELOPMENT STANDARDS.
2. STORMWATER DESIGN EVENTS ADOPTED ARE AS FOLLOWS:-
   "MINOR STORM" PIPED SYSTEM - 10 YEAR A.R.I.
   "MAJOR STORM" OVERLAND FLOW - 100 YEAR A.R.I.
3. CATCHMENT LABELS CORRELATE TO INLET STRUCTURE LABELS U.N.O.

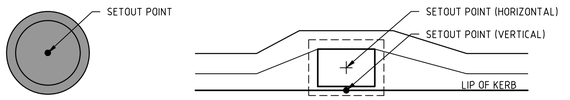
NOTES:

1. ALL STORMWATER PIPELINES SHALL BE INSTALLED WITH TYPE "HS2" EMBEDMENT IN ACCORDANCE WITH AS 3725.
2. ALL STORMWATER STRUCTURE COVERS SHALL BE CLASS 'D' TRAFFICABLE U.N.O.
3. PIPE CLASS NOMINATED ON LONGITUDINAL SECTIONS ARE AS FOLLOWS;

- U = uPVC CLASS "SN8"
- 2 = RCP CLASS '2'
- 3 = RCP CLASS '3'
- 4 = RCP CLASS '4'

ROOFWATER CONNCTION NOTE:

1. LOTS SHALL BE PROVIDED WITH KERB ADAPTER INSTALLED INTO KERB & CHANNEL IN ACCORDANCE WITH IPWEA STANDARD DRAWING RS-081.

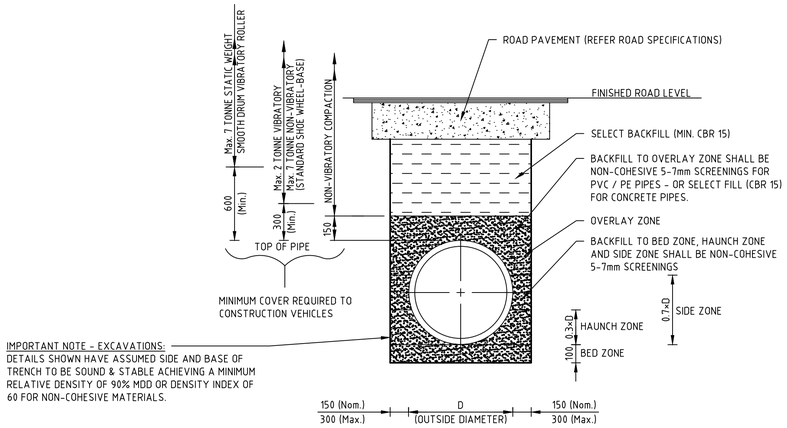


MANHOLE & ROOFWATER CHAMBER SETOUT LOCATION

GULLY PIT SETOUT LOCATION

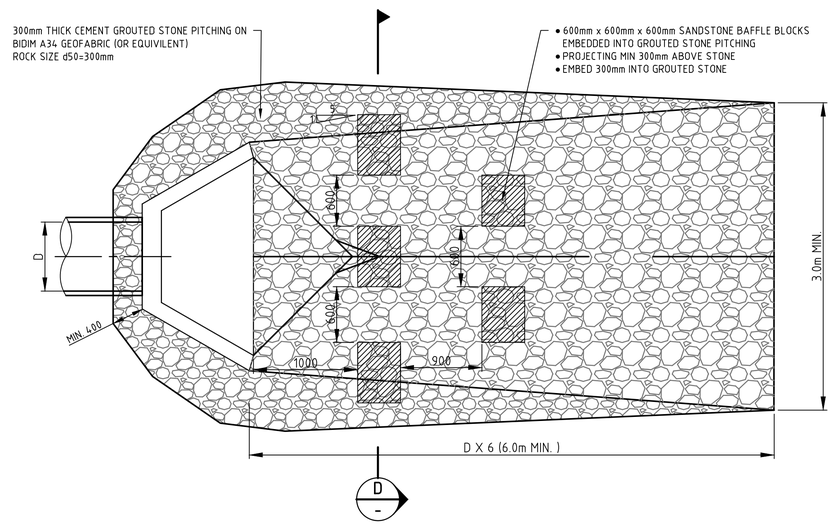
SETOUT POINTS LOCATION DETAIL

N.T.S



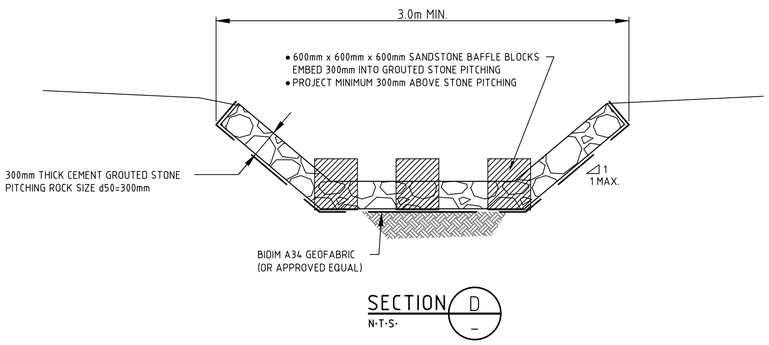
TYPICAL STORMWATER TRENCH DETAIL TYPE "HS2" SUPPORT - SINGLE BARREL)

N.T.S



STORMWATER OUTLET SCOUR PROTECTION DETAIL - TYPICAL

N.T.S



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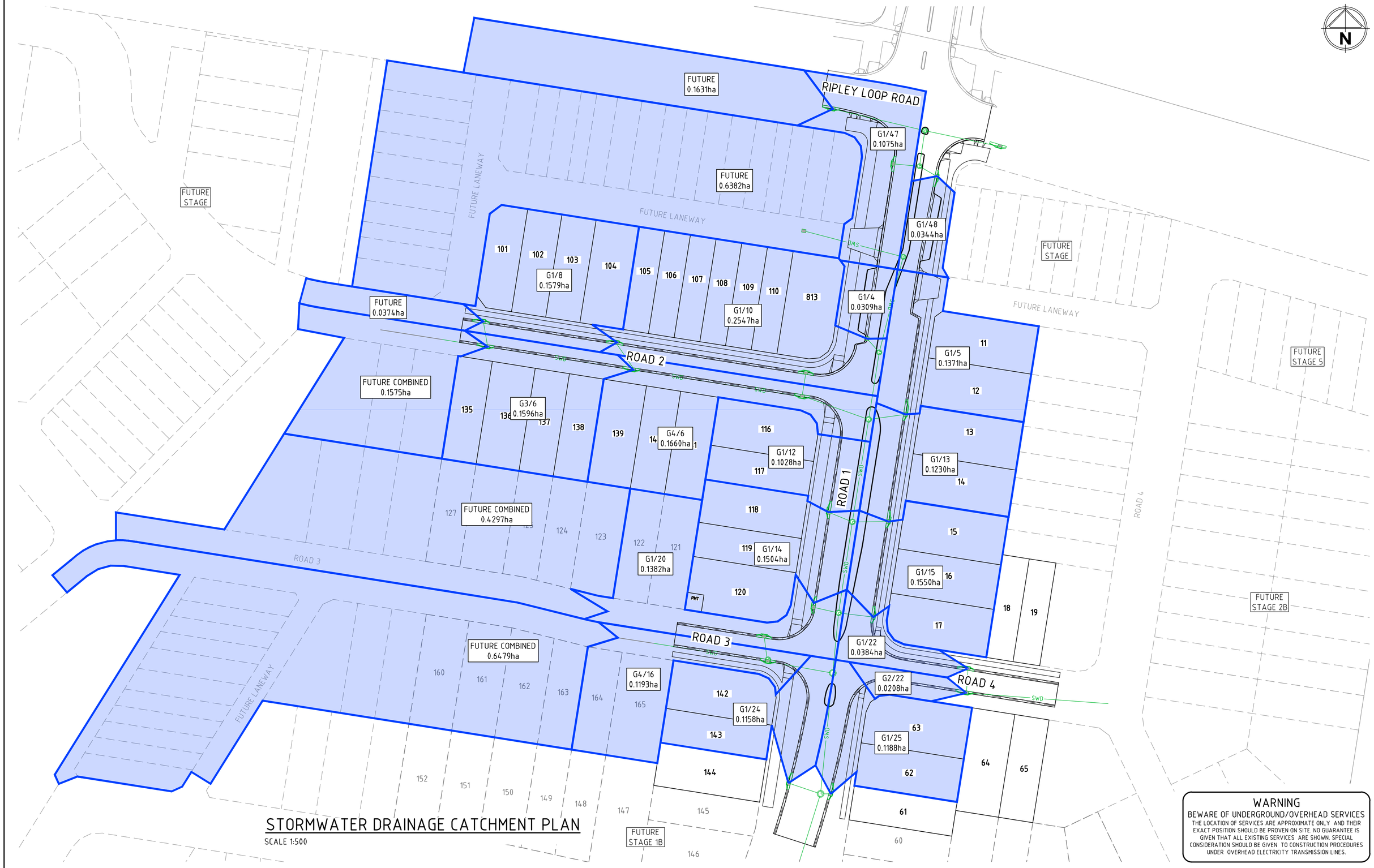
AMORY AT RIPLEY

Designed	Checked
T.MULLEN	K. HOWELLS
Authorised	**Date**
M. READMAN RPEQ 28295	DECEMBER 23

AMORY AT RIPLEY
STAGE 01
STORMWATER DRAINAGE STANDARD NOTES & DETAILS

IPSWICH CITY COUNCIL
RIPLEY ESTATE DEVELOPMENT PTY LTD

CONSTRUCTION Drg No **320678-01-C0500** Rev **2**



STORMWATER DRAINAGE CATCHMENT PLAN

SCALE 1:500

WARNING

BEWARE OF UNDERGROUND/OVERHEAD SERVICES

THE LOCATION OF SERVICES ARE APPROXIMATE ONLY AND THEIR EXACT POSITION SHOULD BE PROVEN ON SITE. NO GUARANTEE IS GIVEN THAT ALL EXISTING SERVICES ARE SHOWN. SPECIAL CONSIDERATION SHOULD BE GIVEN TO CONSTRUCTION PROCEDURES UNDER OVERHEAD ELECTRICITY TRANSMISSION LINES.

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H 1:500 SCALE @ A1 0 5 10 15 20 25

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AMORY AT RIPLEY

Designed	Checked
T.MULLEN	K. HOWELLS
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M. READMAN RPEQ 28295	DECEMBER 23

AMORY AT RIPLEY
STAGE 01
STORMWATER DRAINAGE CATCHMENT PLAN

IPSWICH CITY COUNCIL
RIPLEY ESTATE DEVELOPMENT PTY LTD

CONSTRUCTION Drg No **320678-01-C0501** Rev **2**

file name 320678-01AC0501.dwg layout name C0501 plotted by Charlene Chessells
FILEDETAILS

STORMWATER DRAINAGE LONGITUDINAL SECTIONS SHEET 1 OF 3

SCALE HORIZONTAL 1:1000
VERTICAL 1:100

NOTES:

- ALL STORMWATER PIPELINES SHALL BE INSTALLED WITH TYPE "HS2" EMBEDMENT IN ACCORDANCE WITH AS 3725.
- ALL STORMWATER STRUCTURE COVERS SHALL BE CLASS 'D' TRAFFICABLE U.N.O.
- PIPE CLASS NOMINATED ON LONGITUDINAL SECTIONS ARE AS FOLLOWS;

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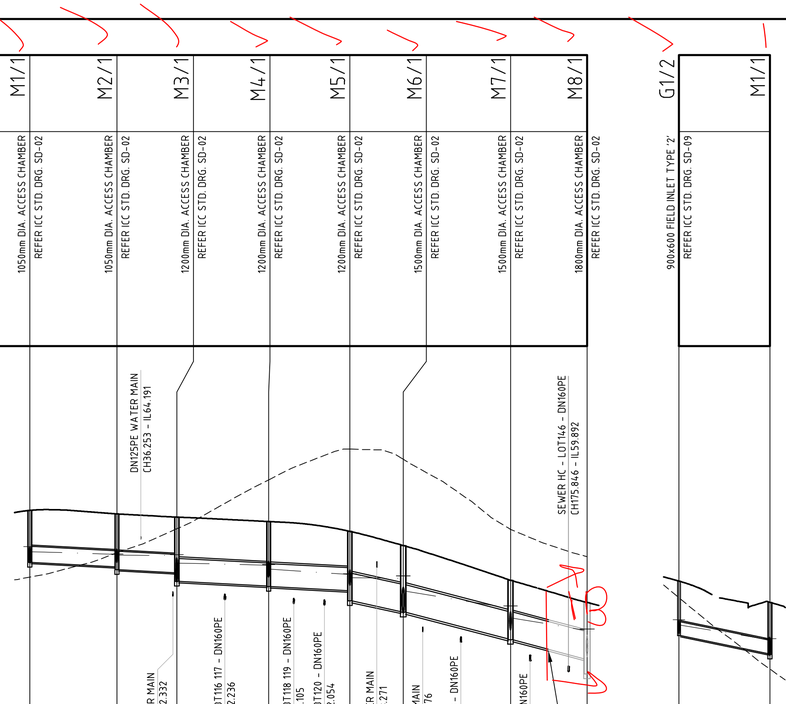

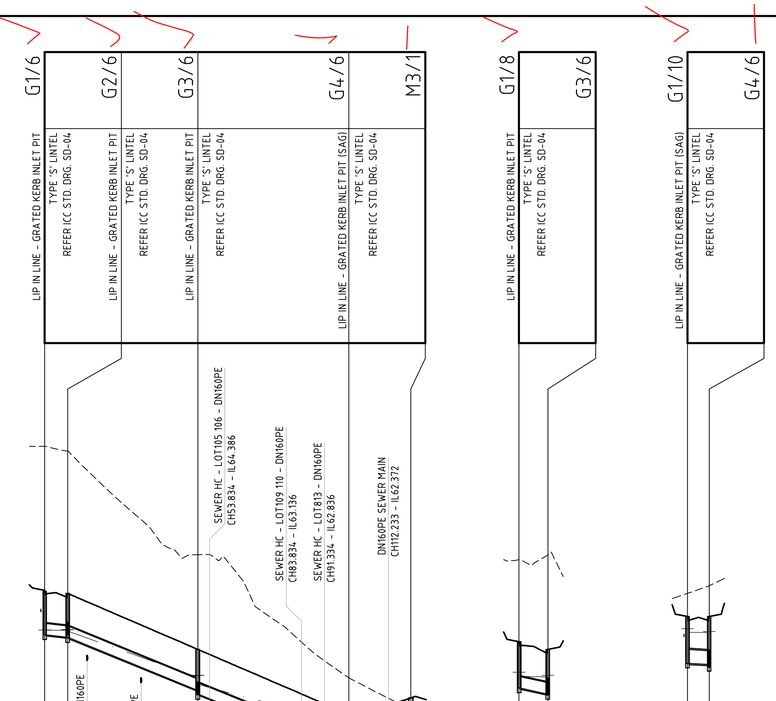

STRUCTURE NAME	M1/1	M2/1	M3/1	M4/1	M5/1	M6/1	M7/1	M8/1	G1/2	M1/1	G1/4	M2/1	G1/5	M3/1	G1/6	G2/6	G3/6	G4/6	M3/1	G1/8	G3/6	G1/10	G4/6
STRUCTURE DESCRIPTION	1050mm DIA. ACCESS CHAMBER REFER ICC STD. DRG. SD-02	1050mm DIA. ACCESS CHAMBER REFER ICC STD. DRG. SD-02	1200mm DIA. ACCESS CHAMBER REFER ICC STD. DRG. SD-02	1200mm DIA. ACCESS CHAMBER REFER ICC STD. DRG. SD-02	1200mm DIA. ACCESS CHAMBER REFER ICC STD. DRG. SD-02	1500mm DIA. ACCESS CHAMBER REFER ICC STD. DRG. SD-02	1500mm DIA. ACCESS CHAMBER REFER ICC STD. DRG. SD-02	1800mm DIA. ACCESS CHAMBER REFER ICC STD. DRG. SD-02	900x600 FIELD INLET TYPE '2' REFER ICC STD. DRG. SD-09		900x600 FIELD INLET TYPE '2' REFER ICC STD. DRG. SD-09		LIP IN LINE - GRATED KERB INLET PIT TYPE 'S' LINTEL REFER ICC STD. DRG. SD-04		LIP IN LINE - GRATED KERB INLET PIT TYPE 'S' LINTEL REFER ICC STD. DRG. SD-04	LIP IN LINE - GRATED KERB INLET PIT TYPE 'S' LINTEL REFER ICC STD. DRG. SD-04	LIP IN LINE - GRATED KERB INLET PIT TYPE 'S' LINTEL REFER ICC STD. DRG. SD-04	LIP IN LINE - GRATED KERB INLET PIT (SAG) TYPE 'S' LINTEL REFER ICC STD. DRG. SD-04		LIP IN LINE - GRATED KERB INLET PIT TYPE 'S' LINTEL REFER ICC STD. DRG. SD-04		LIP IN LINE - GRATED KERB INLET PIT (SAG) TYPE 'S' LINTEL REFER ICC STD. DRG. SD-04	
PIPE SIZE (mm)		525		600		750		750		900		900		900		450		375		375		375		375		375		375		450	
PIPE CLASS		RCP (CLASS 2)		RCP (CLASS 2)		RCP (CLASS 2)		RCP (CLASS 2)		RCP (CLASS 2)		RCP (CLASS 2)		RCP (CLASS 2)		RCP (CLASS 2)		RCP (CLASS 2)		RCP (CLASS 2)		RCP (CLASS 2)		RCP (CLASS 2)		RCP (CLASS 2)		RCP (CLASS 2)		RCP (CLASS 2)	
PIPE GRADE (%)		0.50%		0.50%		0.50%		0.50%		2.00%		2.50%		2.50%		2.00%		1.00%		2.00%		1.00%		4.00%		4.00%		0.50%		2.00%		0.50%	
PIPE SLOPE (1 in X)		200.00		200.00		200.00		200.00		50.00		40.00		40.00		50.00		100.00		50.00		100.00		25.00		25.00		200.00		50.00		200.00	
FULL PIPE VELOCITY (m/s)		1.09		0.87		1.48		1.66		1.33		2.11		2.22		1.50		0.11		0.51		0.14		0.71		1.74		1.70		0.53		0.69	
PART FULL VELOCITY (m/s)		1.55		1.58		1.99		2.02		3.61		4.43		4.48		2.64		0.92		1.81		0.98		2.56		3.25		1.70		1.84		1.30	
DATUM RL		48.0														51.0		51.0		50.0		54.0								54.0		51.0	
H.G.L IN PIPE & W.S.E IN STRUCTURE	63.955	63.791	63.707 63.711	63.680	63.662 63.697	63.419	63.350 63.373	63.224	63.051 63.069	62.940	62.927 63.001	62.501	61.952 62.019	61.623	61.228 61.265	61.043	64.567	64.396	63.919 63.955	63.791	63.713	63.706	63.707 63.711	63.680	63.790	63.663	63.662 63.697	63.419	67.140	67.130	67.132 67.147	67.086	65.610 65.659	65.349	64.057 64.091	63.810	63.663 63.698	63.419	65.759	65.620	65.610 65.659	65.349	64.182	64.063	64.053 64.086	63.805
PIPE FLOW (Cumecs)		0.237		0.246		0.656		0.735		0.844		1.340		1.412		0.239		0.013		0.056		0.015		0.079		0.192		0.367		0.058		0.110	
PIPE CAPACITY AT GRADE (Cumecs)		0.304		0.434		0.788		0.788		2.561		2.864		2.864		0.403		0.175		0.248		0.175		0.351		0.351		0.304		0.248		0.202	
DEPTH TO INVERT		1.700	1.726	1.821	1.816	2.098	2.103	2.123	1.934	2.269	2.157	2.177	1.917	1.937	2.336	1.779	1.680	1.393	1.551	1.821	1.454	1.735	2.098	1.429	1.432	1.452	1.324	1.474	1.516	1.632	2.078	2.098	1.518	1.454	1.474	1.525	1.561	1.635	1.700
INVERT LEVEL OF DRAINAGE		63.438	63.296	63.201	63.103	62.822	62.672	62.652	62.519	62.184	61.836	61.816	60.940	60.920	60.295	59.800	64.052	63.458	63.438	63.525	63.471	63.201	63.400	63.185	62.822	66.975	66.900	66.880	65.180	65.030	63.059	62.943	62.842	62.822	65.238	65.050	65.030	63.050	63.015	62.940	64.575
DESIGN SURFACE LEVEL	65.139		65.023		64.919		64.775		64.453		63.993		62.858		62.136	65.831	65.139	64.918	65.023	64.919	64.854	64.919	64.575	68.404	68.332	66.504	64.575	64.575	66.757	66.504	64.575	64.575	64.575	64.575	64.575	64.575	64.575	64.575	64.575	64.575	64.575	64.575	64.575	64.575
SETOUT COORDINATES	E 9972.900 N 37234.009	E 9965.961 N 37206.461	E 9962.894 N 37187.126	E 9958.202 N 37157.547	E 9954.229 N 37131.310	E 9952.556 N 37113.963	E 9949.037 N 37079.131	E 9941.562 N 37055.274	E 9944.193 N 37241.510	E 9972.900 N 37234.009	E 9962.494 N 37210.421	E 9965.961 N 37206.461	E 9973.546 N 37188.576	E 9962.894 N 37187.126							E 9851.789 N 37215.377	E 9853.062 N 37208.083	E 9895.051 N 37201.422	E 9962.894 N 37187.126	E 9890.360 N 37209.340	E 9895.051 N 37201.422	E 9944.823 N 37200.700	E 9943.713 N 37193.702								
CHAINAGE	0.000	28.408	28.408	19.577	47.985	29.949	77.934	26.535	104.469	17.428	121.898	35.009	156.907	25.000	181.907		0.000	29.673	29.673	5.368	5.368	10.768	10.768	7.455	7.455	42.514	49.969	49.270	99.239	20.285	119.524		0.000	9.412	9.412	7.085	7.085							
LINE									1			2		4					5					6									8				10			

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SCALE @ A1
V 1:100
0 10 20 30 40 50
0 1 2 3 4 5

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AMORY AT RIPLEY

Designed T.MULLEN
Checked K. HOWELLS
Authorised M. READMAN RPEQ 28295
Date DECEMBER 23

AMORY AT RIPLEY
STAGE 01
STORMWATER DRAINAGE LONGITUDINAL SECTIONS
SHEET 1 OF 3
IPSWICH CITY COUNCIL
RIPLEY ESTATE DEVELOPMENT PTY LTD

CONSTRUCTION
Drg No 320678-01-C0502
Rev 2

file name 320678-01AC0502.dwg layout name C0502 plotted by Charlene Chessells
FILE DETAILS

STORMWATER DRAINAGE LONGITUDINAL SECTIONS SHEET 2 OF 3

SCALE HORIZONTAL 1:1000
VERTICAL 1:100

NOTES:
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- PIPE CLASS NOMINATED ON LONGITUDINAL SECTIONS ARE AS FOLLOWS;
  - U = uPVC CLASS "SN8"
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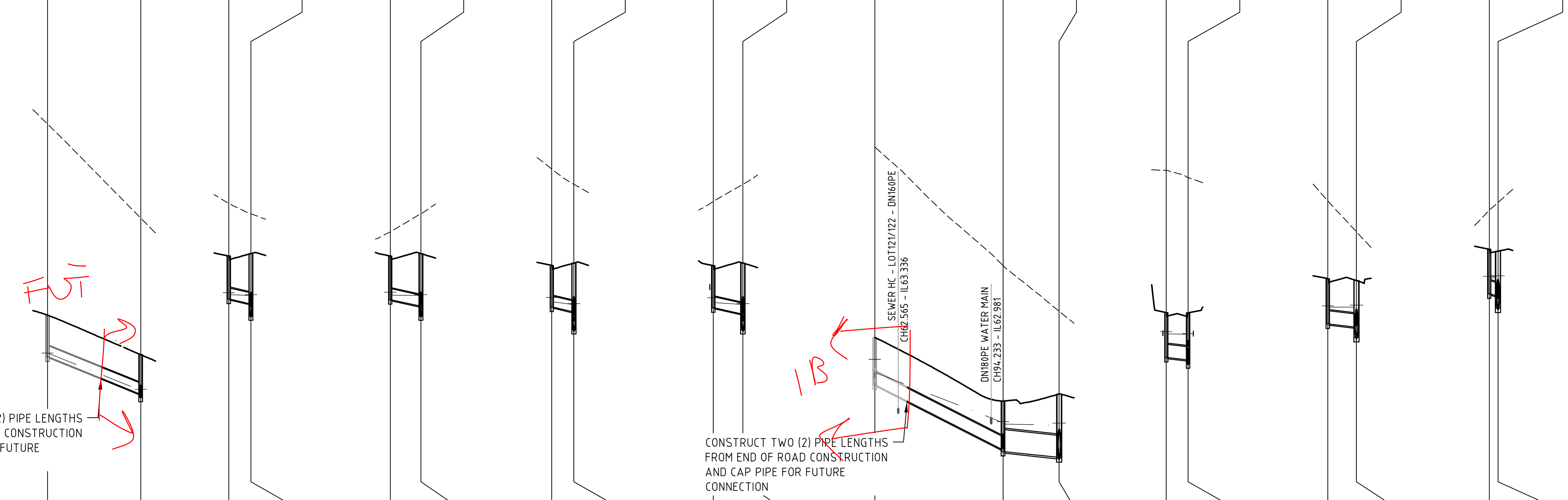
  - 4 = RCP CLASS '4'

STRUCTURE NAME	STRUCTURE DESCRIPTION
G1/F1	LIP IN LINE - GRATED KERB INLET PIT TYPE 'S' LINTEL REFER ICC STD. DRG. SD-04
G2/6	
G1/12	LIP IN LINE - GRATED KERB INLET PIT TYPE 'S' LINTEL REFER ICC STD. DRG. SD-04
M4/1	
G1/13	LIP IN LINE - GRATED KERB INLET PIT TYPE 'S' LINTEL REFER ICC STD. DRG. SD-04
M4/1	
G1/14	LIP IN LINE - GRATED KERB INLET PIT TYPE 'S' LINTEL REFER ICC STD. DRG. SD-04
M5/1	
G1/15	LIP IN LINE - GRATED KERB INLET PIT TYPE 'S' LINTEL REFER ICC STD. DRG. SD-04
M5/1	
G3/16	LIP IN LINE - GRATED KERB INLET PIT TYPE 'S' LINTEL REFER ICC STD. DRG. SD-04
G4/16	LIP IN LINE - GRATED KERB INLET PIT (SAG) TYPE 'S' LINTEL 1200 DIA. ACCESS CHAMBER EXT.300 REFER ICC STD. DRG. SD-04 REFER ICC STD. DRG. SD-02
M6/1	
G1/20	LIP IN LINE - GRATED KERB INLET PIT (SAG) TYPE 'S' LINTEL REFER ICC STD. DRG. SD-04
G4/16	
G1/24	LIP IN LINE - GRATED KERB INLET PIT TYPE 'S' LINTEL REFER ICC STD. DRG. SD-04
M7/1	
G1/25	LIP IN LINE - GRATED KERB INLET PIT TYPE 'S' LINTEL REFER ICC STD. DRG. SD-04
M7/1	



LINE	FUTURE 1	12	13	14	15	16 (G3/16–G4/16)	16 (G4/16–M6/1)	20	24	25
PIPE SIZE (mm)	375	375	375	375	375	450	750	450	450	450
PIPE CLASS	RCP (CLASS 2)	RCP (CLASS 2)	RCP (CLASS 2)	RCP (CLASS 2)	RCP (CLASS 2)	RCP (CLASS 2)	RCP (CLASS 2)	RCP (CLASS 2)	RCP (CLASS 2)	RCP (CLASS 2)
PIPE GRADE (%)	3.94%	2.00%	2.00%	2.04%	2.00%	5.00%	1.00%	1.00%	1.00%	2.00%
PIPE SLOPE (1 in X)	25.35	50.00	50.00	49.09	50.00	20.00	100.00	100.00	100.00	50.01
FULL PIPE VELOCITY (m/s)	0.25	0.38	0.45	0.56	0.57	2.49	1.17	0.45	0.30	0.30
PART FULL VELOCITY (m/s)	1.88	1.67	1.76	1.86	1.88	4.22	2.47	1.49	1.33	1.71
DATUM RL	58.0	51.0	51.0	51.0	51.0	55.0		52.0	50.0	49.0
H.G.L IN PIPE & W.S.E IN STRUCTURE	68.390 / 68.368 / 67.132 / 67.147 / 67.086	63.444 / 63.373 / 63.350 / 63.373 / 63.224	63.464 / 63.362 / 63.350 / 63.373 / 63.224	63.283 / 63.130 / 63.048 / 63.069 / 62.940	63.270 / 63.108 / 63.048 / 63.069 / 62.940	65.175 / 64.710 / 63.034 / 63.046	62.968 / 62.927 / 63.001 / 62.501	63.111 / 63.037 / 63.033 / 63.045 / 62.966	61.999 / 61.955 / 61.952 / 62.019 / 61.623	61.999 / 61.953 / 61.952 / 62.019 / 61.623
PIPE FLOW (Cumecs)	0.027	0.042	0.050	0.061	0.063	0.396	0.517	0.071	0.047	0.048
PIPE CAPACITY AT GRADE (Cumecs)	0.348	0.248	0.248	0.248	0.248	0.638	1.114	0.285	0.285	0.403
DEPTH TO INVERT	1.426 / 1.332 / 1.452	1.472 / 1.700 / 2.123	1.497 / 1.784 / 2.123	1.423 / 1.657 / 2.269	1.445 / 1.730 / 2.269	1.332 / 1.630 / 1.647	1.727 / 2.157 / 2.177	1.539 / 1.598 / 1.733	1.547 / 1.580 / 1.937	1.526 / 1.517 / 1.937
INVERT LEVEL OF DRAINAGE	68.250 / 67.000 / 66.880	63.225 / 63.075 / 62.652	63.200 / 62.991 / 62.652	62.950 / 62.796 / 62.184	62.925 / 62.723 / 62.184	64.590 / 64.291 / 62.107	62.027 / 61.836 / 61.816	62.230 / 62.156 / 62.021	61.375 / 61.277 / 60.920	61.400 / 61.341 / 60.920
DESIGN SURFACE LEVEL	69.676 / 68.332	64.697 / 64.775	64.697 / 64.775	64.373 / 64.453	64.370 / 64.453	65.922 / 63.754	63.993	63.769 / 63.754	62.922 / 62.858	62.926 / 62.858
SETOUT COORDINATES	E 9821.761 N 37213.048 / E 9853.062 N 37208.083	E 9951.273 N 37160.413 / E 9958.202 N 37157.547	E 9968.641 N 37157.659 / E 9958.202 N 37157.547	E 9946.867 N 37132.978 / E 9954.229 N 37131.310	E 9964.270 N 37130.106 / E 9954.229 N 37131.310	E 9890.582 N 37124.168 / E 9933.722	N 37117.323 / E 9952.556 N 37113.963	E 9932.763 N 37124.650 / E 9933.722 N 37117.323	E 9939.780 N 37082.238 / E 9949.037 N 37079.131	E 9951.994 N 37079.135 / E 9949.037 N 37079.131
CHAINAGE	0.000 / 31.693 / 31.693	0.000 / 7.510 / 7.510	0.000 / 10.446 / 10.446	0.000 / 7.550 / 7.550	0.000 / 10.113 / 10.113	54.560 / 43.679 / 98.239	19.132 / 117.371	0.000 / 7.428 / 7.428	0.000 / 9.765 / 9.765	0.000 / 2.974 / 2.974

Rev	Amendments	Approved	Date
2	ISSUE FOR CONSTRUCTION	K.H.	18-02-25
1	ISSUE FOR CONSTRUCTION	K.H.	06-01-25
0	ISSUE FOR CONSTRUCTION	K.H.	20-11-24
C	ISSUE FOR APPROVAL	K.H.	05-09-24
B	ISSUE FOR TENDER	K.H.	21-02-24
A	ISSUE FOR APPROVAL	K.H.	01-12-23

H 1:1000 SCALE @ A1 V 1:100

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AMORY AT RIPLEY

Designed T.MULLEN | Checked K. HOWELLS
Authorised M. READMAN RPEQ 28295 | Date DECEMBER 23

AMORY AT RIPLEY
STAGE 01
STORMWATER DRAINAGE LONGITUDINAL SECTIONS SHEET 2 OF 3
IPSWICH CITY COUNCIL
RIPLEY ESTATE DEVELOPMENT PTY LTD

CONSTRUCTION Drg No 320678-01-C0503 Rev 2

file name 320678-01AC0503.dwg layout name C0503 plotted by Charlene Chessells FILEDETAILS

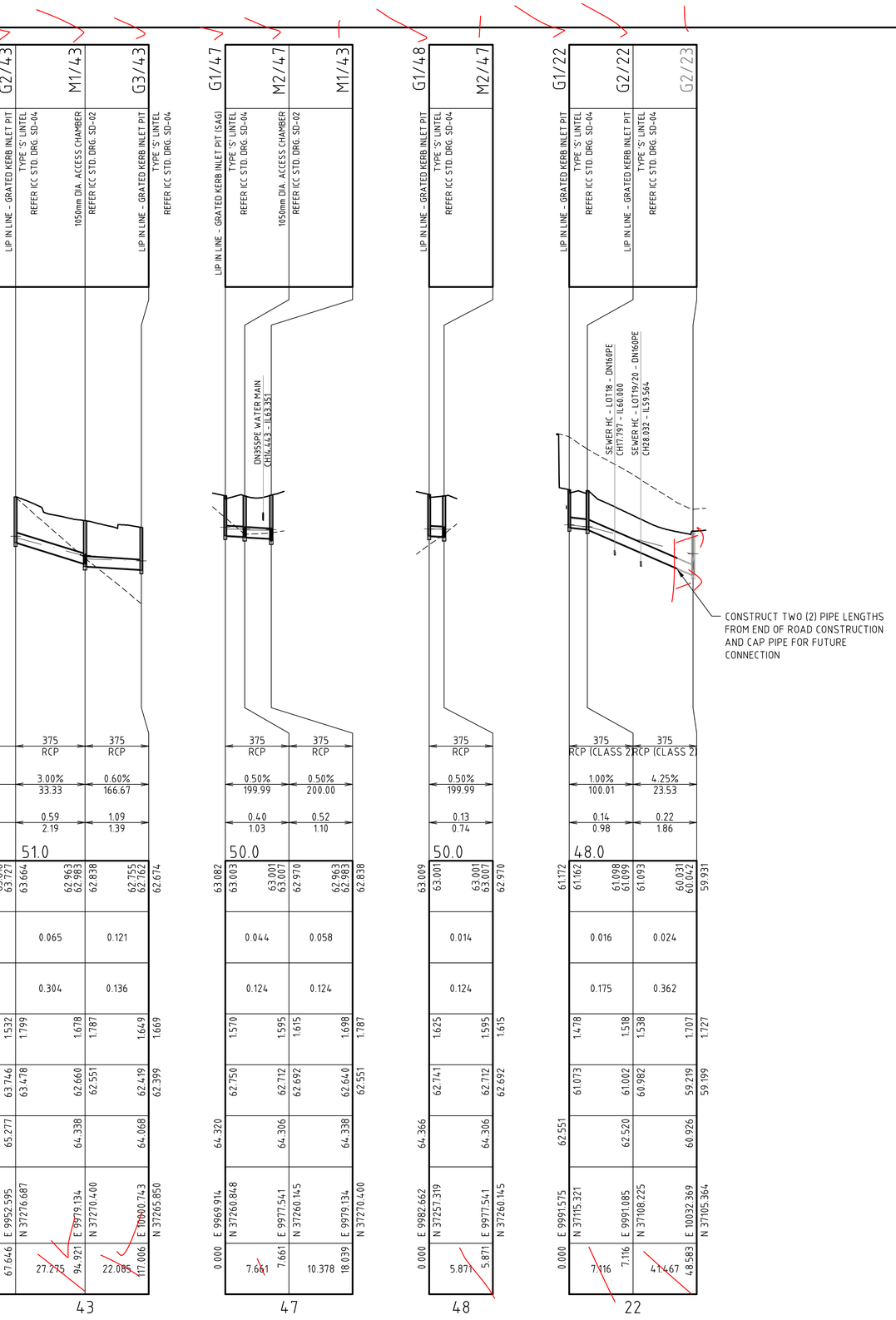
STORMWATER DRAINAGE LONGITUDINAL SECTIONS SHEET 3 OF 3

SCALE HORIZONTAL 1:1000
VERTICAL 1:100

NOTES:

- ALL STORMWATER PIPELINES SHALL BE INSTALLED WITH TYPE "HS2" EMBEDMENT IN ACCORDANCE WITH AS 3725.
- ALL STORMWATER STRUCTURE COVERS SHALL BE CLASS 'D' TRAFFICABLE U.N.O.
- PIPE CLASS NOMINATED ON LONGITUDINAL SECTIONS ARE AS FOLLOWS;

- U = uPVC CLASS "SN8"
- 2 = RCP CLASS '2'
- 3 = RCP CLASS '3'
- 4 = RCP CLASS '4'



STRUCTURE NAME	G2/43	M1/43	G3/43	G1/47	M2/47	M1/43	G1/48	M2/47	G1/22	G2/22	G2/23
STRUCTURE DESCRIPTION	LIP IN LINE – GRATED KERB INLET PIT TYPE 'S' LINTEL REFER ICC STD. DRG. SD–04	1050mm DIA. ACCESS CHAMBER REFER ICC STD. DRG. SD–02	LIP IN LINE – GRATED KERB INLET PIT TYPE 'S' LINTEL REFER ICC STD. DRG. SD–04	LIP IN LINE – GRATED KERB INLET PIT (SAG) TYPE 'S' LINTEL REFER ICC STD. DRG. SD–04	1050mm DIA. ACCESS CHAMBER REFER ICC STD. DRG. SD–02		LIP IN LINE – GRATED KERB INLET PIT TYPE 'S' LINTEL REFER ICC STD. DRG. SD–04		LIP IN LINE – GRATED KERB INLET PIT TYPE 'S' LINTEL REFER ICC STD. DRG. SD–04	LIP IN LINE – GRATED KERB INLET PIT TYPE 'S' LINTEL REFER ICC STD. DRG. SD–04	
PIPE SIZE (mm)	375	375		375	375		375		375	375	
PIPE CLASS	RCP	RCP		RCP	RCP		RCP		RCP (CLASS 2)	RCP (CLASS 2)	
PIPE GRADE (%)	3.00%	0.60%		0.50%	0.50%		0.50%		1.00%	4.25%	
PIPE SLOPE (1 in X)	33.33	166.67		199.99	200.00		199.99		100.01	23.53	
FULL PIPE VELOCITY (m/s)	0.59	1.09		0.40	0.52		0.13		0.14	0.22	
PART FULL VELOCITY (m/s)	2.19	1.39		1.03	1.10		0.74		0.98	1.86	
DATUM RL	51.0			50.0			50.0		48.0		
H.G.L IN PIPE & W.S.E IN STRUCTURE	63.816 / 63.727	63.664 / 62.963 / 62.933	62.838 / 62.755 / 62.762	62.674	63.082 / 63.003	63.001 / 63.007 / 62.970	62.963 / 62.933 / 62.838	63.009 / 63.001	63.007 / 62.970	61.172 / 61.162	61.098 / 61.099 / 61.093	60.031 / 60.042	59.931
PIPE FLOW (Cumecs)		0.065	0.121		0.044	0.058		0.014		0.016	0.024		
PIPE CAPACITY AT GRADE (Cumecs)		0.304	0.136		0.124	0.124		0.124		0.175	0.362		
DEPTH TO INVERT	1.532	1.799 / 1.678	1.787 / 1.649	1.669	1.570	1.595 / 1.615	1.698 / 1.787	1.625	1.595 / 1.615	1.478	1.518 / 1.538	1.707	1.727
INVERT LEVEL OF DRAINAGE	63.746	63.478 / 62.660	62.551 / 62.419	62.399	62.750	62.712 / 62.692	62.640 / 62.551	62.741	62.712 / 62.692	61.073	61.002 / 60.982	59.219	59.199
DESIGN SURFACE LEVEL	65.277	64.338	64.068		64.320	64.306	64.338	64.366	64.306	62.551	62.520	60.926	
SETOUT COORDINATES	E 9952.595 / N 37276.687	E 9979.134 / N 37270.400	E 10000.743 / N 37265.850		E 9969.914 / N 37260.848	E 9977.541 / N 37260.145	E 9979.134 / N 37270.400	E 9982.662 / N 37257.319	E 9977.541 / N 37260.145	E 9991.575 / N 37115.321	E 9991.085 / N 37108.225	E 10032.369 / N 37105.364	
CHAINAGE	67.646	27.275 / 94.921	22.085 / 117.006		0.000	7.661 / 7.661	10.378 / 18.039	0.000	5.871 / 5.871	0.000	7.116 / 7.116	41.467 / 48.583	
LINE	43			47			48		22				

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A	ISSUE FOR APPROVAL	K.H.	01-12-23

H 1:1000 SCALE @ A1 V 1:100
0 10 20 30 40 50
0 1 2 3 4 5

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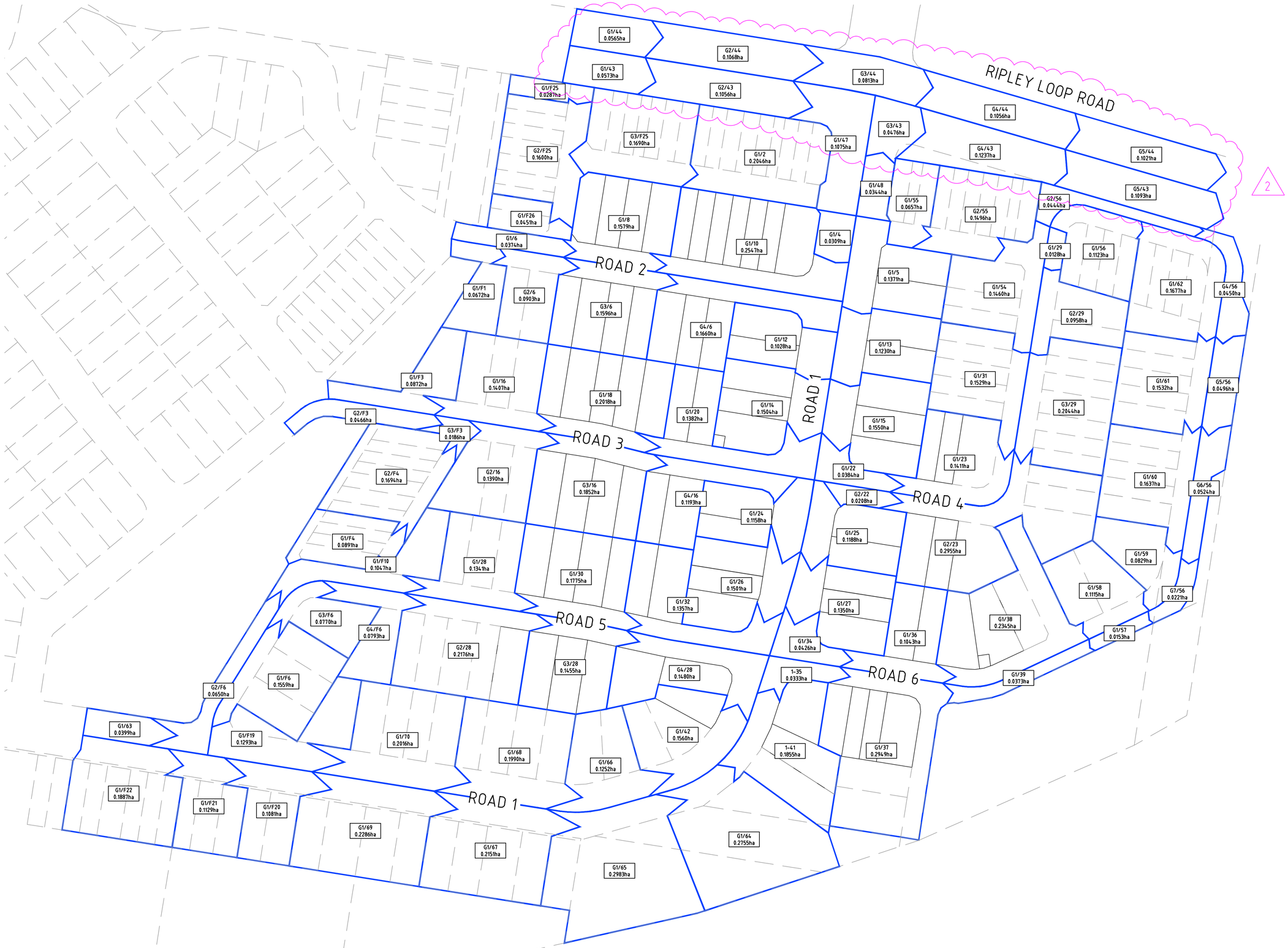
AMORY AT RIPLEY

Designed T.MULLEN | Checked K. HOWELLS
Authorised M. READMAN RPEQ 28295 | Date DECEMBER 23

AMORY AT RIPLEY
STAGE 01
STORMWATER DRAINAGE LONGITUDINAL SECTIONS SHEET 3 OF 3
IPSWICH CITY COUNCIL
RIPLEY ESTATE DEVELOPMENT PTY LTD

CONSTRUCTION Drg No **320678-01-C0504** Rev **2**

file name 320678-01AC0504.dwg layout name C0504 plotted by Charlene Chesselis
FILE DETAILS



Rev	Amendments	Approved	Date
2	ISSUE FOR CONSTRUCTION	K.H.	18-02-25
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B	ISSUE FOR TENDER	K.H.	21-02-24
A	ISSUE FOR APPROVAL	K.H.	01-12-23

H 1:1000
SCALE @ A1
0 10 20 30 40 50

dlcs ISO 9001 certified ISO 45001 certified ISO 14001 certified

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AMORY AT RIPLEY

Designed T.MULLEN
Checked K. HOWELLS
Authorised M. READMAN RPEQ 28295
Date DECEMBER 23

AMORY AT RIPLEY STAGE 01

BASIN 1 CATCHMENT - OVERALL CATCHMENT PLAN

IPSWICH CITY COUNCIL
RIPLEY ESTATE DEVELOPMENT PTY LTD

CONSTRUCTION

Drg No 320678-01-C0505
Rev 2

file name 320678-01AC0505.dwg layout name C0505 plotted by Charlene Chessells
FILEDETAILS

	LOCATION		SUB-CATCHMENT RUNOFF							INLET DESIGN							DRAIN DESIGN																					PART FULL		DESIGN LEVELS						
			Tc	I	C10	C	A	CxA	Q					Qg	Qb	dV	tc	I	+CA	Qt	Qs	Qa	Qp	L	S		V	Qcap			V2/2g	Ku	hu	Kw	hw	Sf	hf		Vp							
DESIGN ARI	STRUCTURE No	SUB-CATCHMENTS CONTRIBUTING	SUB-CATCHMENT TIME OF CONC.	RAINFALL INTENSITY	10yr RUNOFF CO-EFFICIENT	COEFFICIENT OF RUNOFF	SUB-CATCHMENT AREA	EQUIVALENT AREA	SUB-CATCHMENT DISCHARGE	FLOW IN K&C (INC. BYPASS)	ROAD GRADE AT INLET	MINOR FLOW WIDTH	INLET TYPE	FLOW INTO INLET	BYPASS FLOW	FLOW DEPTH x VELOCITY	CRITICAL TIME OF CONC.	RAINFALL INTENSITY	TOTAL (C x A)	MAJOR TOTAL FLOW	MAJOR ROAD FLOW CAPACITY	ADDITIONAL PIPE FLOW	PIPE FLOW	REACH LENGTH	PIPE GRADE	PIPE / BOX DIMENSIONS (CLASS)	FLOW VELOCITY FULL (PIPE GRADE VELOCITY)	PIPE FLOW CAPACITY AT GRADE	STRUCTURE CHART No.	STRUCTURE RATIOS FOR 'K' VALUE CALCULATIONS	VELOCITY HEAD	U/S HEAD LOSS COEFFICIENT	U/S HEAD LOSS	W.S.E COEFFICIENT	CHANGE IN W.S.E	PIPE FRICTION SLOPE	PIPE FRICTION HEADLOSS (L x Sf)	DEPTH	VELOCITY	OBVERT LEVELS	DRAIN SECTION H.G.L	UPSTREAM H.G.L	W.S.E	SURFACE OR K&C INVERT LEVEL	FREEBOARD	STRUCTURE No. / LINK STRUCTURE
			min	mm/h			ha	ha	l/s	l/s	%	m		l/s	l/s	m^2/s	min	mm/h	ha	l/s	l/s	l/s	l/s	m	%	mm	m/s	l/s			m		m		m	%	m	m	m/s	m	m	m	m	m	m	
10 100	M2/1	G1/4; G1/F26; G1/F25; G2/F25; G3/F25; G1/2									0.50		ACCESS CHAMBER				6.52	176.0 266.2	0.504 0.616				246.5 450.8	19.58	0.50	600(RCP)	0.87 1.59 (1.54)	434.4	T1/T3	S/Do = 1.05 Ku = 0.70, Kw = 0.82	0.039 0.130	0.70 0.53	0.027 0.069	0.82 0.59	0.032 0.077	0.09 0.54	0.029 0.105	0.324 0.515	1.58 1.74	63.801	63.6809	63.711 64.757	63.711 64.757	65.023	1.311 0.266	M2/1
10 100	M3/1	G1/10; G1/8; G1/F1; G1/6; G2/6; G3/6; G4/6; G1/5; G1/4; G1/F26; G1/F25; G2/F25; G3/F25; G1/2									0.50		ACCESS CHAMBER				6.68	174.9 264.5	1.350 1.649				655.8 1,186.0	29.95	0.50	750(RCP)	1.48 2.68 (1.78)	787.5	T6/T9	S/Do = 1.37 Ku = 2.17, Kw = 2.48	0.112 0.009	2.17 1.79	0.244 0.016	2.48 1.94	0.279 0.017	0.23 0.03	0.099 0.008	0.523 0.750	1.99 2.68	63.572	63.4205	63.697 64.576	63.697 64.576	64.919	1.222 0.343	M3/1
10 100	M4/1	G1/13; G1/12; G1/10; G1/8; G1/F1; G1/6; G2/6; G3/6; G4/6; G1/5; G1/4; G1/F26; G1/F25; G2/F25; G3/F25; G1/2									0.50		ACCESS CHAMBER				6.93	173.3 261.9	1.528 1.867				735.5 1,311.2	26.54	0.50	750(RCP)	1.66 2.97 (1.78)	787.5	T1/T3	S/Do = 1.20 Ku = 0.89, Kw = 1.05	0.141 0.332	0.89 0.65	0.125 0.214	1.05 0.72	0.149 0.240	0.65 1.02	0.138 0.272	0.575 0.750	2.02 2.97	63.402	63.2257	63.373 64.576	63.373 64.576	64.775	1.402 0.199	M4/1
10 100	M5/1	G1/15; G1/14; G1/13; G1/12; G1/10; G1/8; G1/F1; G1/6; G2/6; G3/6; G4/6; G1/5; G1/4; G1/F26; G1/F25; G2/F25; G3/F25; G1/2									2.20		ACCESS CHAMBER				7.15	171.8 259.6	1.769 2.161				844.4 1,461.7	17.43	2.00	900(RCP)	1.33 2.30 (4.03)	2,561.2	T1/T3	S/Do = 1.14 Ku = 1.20, Kw = 1.43	0.090 0.269	1.20 0.93	0.107 0.252	1.43 1.05	0.129 0.283	0.08 0.65	0.036 0.114	0.356 0.487	3.61 4.16	63.084	62.9413	63.069 64.096	63.069 64.096	64.453	1.384 0.357	M5/1
10 100	M6/1	G1/20; G1/18; G1/F4; G2/F4; G1/F3; G2/F3; G3/F3; G1/16; G2/16; G3/16; G4/16; G1/15; G1/14; G1/13; G1/12; G1/10; G1/8; G1/F1; G1/6; G2/6; G3/6; G4/6; G1/5; G1/4; G1/F26; G1/F25; G2/F25; G3/F25; G1/2									1.00		ACCESS CHAMBER				7.30	170.8 258.1	2.824 3.450				1,340.2 2,417.8	35.01	2.50	900(RCP)	2.11 3.80 (4.50)	2,863.6	T3/T6	S/Do = 1.56 Ku = 1.88, Kw = 2.21	0.226 0.357	1.88 1.67	0.425 0.598	2.21 1.83	0.500 0.655	1.57 0.86	0.661 0.303	0.433 0.634	4.43 5.05	62.716	62.5031	63.001 63.756	63.001 63.756	63.993	0.992 0.237	M6/1
10 100	M7/1	G1/25; G1/24; G1/20; G1/18; G1/F4; G2/F4; G1/F3; G2/F3; G3/F3; G1/16; G2/16; G3/16; G4/16; G1/15; G1/14; G1/13; G1/12; G1/10; G1/8; G1/F1; G1/6; G2/6; G3/6; G4/6; G1/5; G1/4; G1/F26; G1/F25; G2/F25; G3/F25; G1/2									2.95		ACCESS CHAMBER				7.59	168.9 255.1	3.010 3.676				1,412.1 2,495.1	25.00	2.50	900(RCP)	2.22 3.92 (4.50)	2,863.5	T1/T3	S/Do = 1.44 Ku = 1.31, Kw = 1.57	0.251 0.432	1.31 1.06	0.329 0.457	1.57 1.19	0.396 0.516	1.58 1.05	0.502 0.261	0.446 0.650	4.48 5.07	61.82	61.6252	62.019 62.858	62.019 62.858	62.858	0.839 0.000	M7/1
10 100	M8/1	G1/27; G1/26; G1/25; G1/24; G1/20; G1/18; G1/F4; G2/F4; G1/F3; G2/F3; G3/F3; G1/16; G2/16; G3/16; G4/16; G1/15; G1/14; G1/13; G1/12; G1/10; G1/8; G1/F1; G1/6; G2/6; G3/6; G4/6; G1/5; G1/4; G1/F26; G1/F25; G2/F25; G3/F25; G1/2									2.73		ACCESS CHAMBER				7.80	167.5 252.9	3.235 3.951				1,505.4 2,624.1	14.56	2.00	1050(RCP)	1.74 3.03 (4.46)	3,863.4	T1/T3	S/Do = 1.39 Ku = 1.20, Kw = 1.43	0.154 0.448	1.20 0.97	0.184 0.434	1.43 1.09	0.221 0.489	0.30 0.88	0.044 0.128	0.455 0.635	4.18 4.79	60.85	61.0447	61.265 62.136	61.265 62.136	62.136	0.871 0.000	M8/1
10 100	M9/1	G1/41; G1/42; G1/64; G1/66; G1/65; G1/68; G1/67; G1/70; G1/69; G1/F20; G1/F19; G1/F21; G1/F22; G1/63; G1/32; G1/30; G1/F10; G1/F6; G2/F6; G3/F6; G4/F6; G1/28; G2/28; G3/28; G4/28; G1/27; G1/26; G1/25; G1/24; G1/20; G1/18; G1/F4; G2/F4; G1/F3; G2/F3; G3/F3; G1/16; G2/16; G3/16; G4/16; G1/15; G1/14; G1/13; G1/12; G1/10; G1/8; G1/F1; G1/6; G2/6; G3/6; G4/6; G1/5; G1/4; G1/F26; G1/F25; G2/F25; G3/F25; G1/2									3.32		ACCESS CHAMBER				7.92	166.7 251.6	6.319 7.719				2,917.6 5,027.6	30.96	1.50	1050(RCP)	3.37 5.81 (3.86)	3,345.9	T9/T10	S/Do = 2.27 Ku = 1.97, Kw = 2.30	0.579 0.696	1.97 1.93	1.139 1.343	2.30 2.14	1.331 1.490	2.10 1.37	0.328 0.424	0.759 1.050	4.35 5.81	59.967	59.8644	61.191 61.665	61.191 61.665	61.905	0.714 0.240	M9/1
10 100	M10/1	G1/35; G1/34; G1/41; G1/42; G1/64; G1/66; G1/65; G1/68; G1/67; G1/70; G1/69; G1/F20; G1/F19; G1/F21; G1/F22; G1/63; G1/32; G1/30; G1/F10; G1/F6; G2/F6; G3/F6; G4/F6; G1/28; G2/28; G3/28; G4/28; G1/27; G1/26; G1/25; G1/24; G1/20; G1/18; G1/F4; G2/F4; G1/F3; G2/F3; G3/F3; G1/16; G2/16; G3/16; G4/16; G1/15; G1/14; G1/13; G1/12; G1/10; G1/8; G1/F1; G1/6; G2/6; G3/6; G4/6; G1/5; G1/4; G1/F26; G1/F25; G2/F25; G3/F25; G1/2									4.50		ACCESS CHAMBER				8.18	165.0 249.0	6.379 7.792				2,924.3 5,165.1	45.50	3.00	1200(RCP)	2.59 4.57 (5.97)	6,755.7	T1/T3	S/Do = 1.06 Ku = 0.21, Kw = 0.22	0.341 1.064	0.21 0.35	0.070 0.372	0.22 0.40	0.076 0.420	2.00 1.75	1.050 0.798	0.552 0.786	5.76 6.58	59.035	58.7786	58.852 59.798	58.852 59.798	60.678	1.826 0.880	M10/1
10 100	M11/1	G1/37; G1/36; G1/35; G1/34; G1/41; G1/42; G1/64; G1/66; G1/65; G1/68; G1/67; G1/70; G1/69; G1/F20; G1/F19; G1/F21; G1/F22; G1/63; G1/32; G1/30; G1/F10; G1/F6; G2/F6; G3/F6; G4/F6; G1/28; G2/28; G3/28; G4/28; G1/27; G1/26; G1/25; G1/24; G1/20; G1/18; G1/F4; G2/F4; G1/F3; G2/F3; G3/F3; G1/16; G2/16; G3/16; G4/16; G1/15; G1/14; G1/13; G1/12; G1/10; G1/8; G1/F1; G1/6; G2/6; G3/6; G4/6; G1/5; G1/4; G1/F26; G1/F25; G2/F25; G3/F25; G1/2									4.50		ACCESS CHAMBER				8.56	162.5 245.0	6.694 8.177				2,999.6 5,283.4	13.39	2.00	1500(RCP)	1.70 2.99 (5.66)	10,001.0	T1/T3	S/Do = 1.52 Ku = 0.96, Kw = 1.13	0.147 0.456	0.96 0.86	0.141 0.390	1.13 0.96	0.167 0.437	0.18 0.56	0.024 0.075	0.563 0.775	4.95 5.74	57.111	57.7277	57.892 58.627	57.892 58.627	58.630	0.738 0.004	M11/1
10 100	M12/1	G1/37; G1/36; G1/35; G1/34; G1/41; G1/42; G1/64; G1/66; G1/65; G1/68; G1/67; G1/70; G1/69; G1/F20; G1/F19; G1/F21; G1/F22; G1/63; G1/32; G1/30; G1/F10; G1/F6; G2/F6; G3/F6; G4/F6; G1/28; G2/28; G3/28; G4/28; G1/27; G1/26; G1/25; G1/24; G1/20; G1/18; G1/F4; G2/F4; G1/F3; G2/F3; G3/F3; G1/16; G2/16; G3/16; G4/16; G1/15; G1/14; G1/13; G1/12; G1/10; G1/8; G1/F1; G1/6; G2/6; G3/6; G4/6; G1/5; G1/4; G1/F26; G1/F25; G2/F25; G3/F25; G1/2									2.22		ACCESS CHAMBER				8.67	161.8 243.9	6.694 8.177				2,985.9 5,257.0	12.25	0.50	1500(RCP)	1.69 2.97 (2.83)	5,000.5	T1/T3	S/Do = 1.62 Ku = 1.59, Kw = 1.90	0.146 0.125	1.59 1.50	0.232 0.187	1.90 1.74	0.277 0.217	0.18 0.15	0.022 0.019	0.835 1.315	2.95 3.20	56.823	57.4717	57.746 58.144	57.746 58.144	58.144	0.397 0.000	M12/1
10 100	M13/1	G1/39; G1/38; G1/58; G1/57; G1/59; G1/60; G1/61; G1/62; G1/53; G1/52; G1/51; G1/50; G1/49; G1/48; G1/47; G1/46; G1/45; G1/44; G1/43; G8/43; G1/56; G2/56; G4/56; G5/56; G6/56; G7/56; G1/31; G1/54; G1/55; G2/55; G1/29; G2/29; G3/29; G1/22; G2/22; G1/23; G2/23; G1/37; G1/36; G1/35; G1/34; G1/41; G1/42; G1/64; G1/66; G1/65; G1/68; G1/67; G1/70; G1/69; G1/F20; G1/F19; G1/F21; G1/F22; G1/63; G1/32; G1/30; G1/F10; G1/F6; G2/F6; G3/F6; G4/F6; G1/28; G2/28; G3/28; G4/28; G1/27; G1/26; G1/25; G1/24; G1/20; G1/18; G1/F4; G2/F4; G1/F3; G2/F3; G3/F3; G1/16; G2/16; G3/16; G4/16; G1/15; G1/14; G1/13; G1/12; G1/10; G1/8; G1/F1; G1/6; G2/6; G3/6; G4/6; G1/5; G1/4; G1/F26; G1/F25; G2/F25; G3/F25; G1/2									1.00		ACCESS CHAMBER				9.20	158.3 238.3	9.587 11.710				4,214.4 7,751.2	8.40	0.50	1500(RCP)	2.38 4.39 (2.83)	5,000.5	T9/T10	S/Do = 1.57 Ku = 2.13, Kw = 2.65	0.290 0.373	2.13 2.06	0.618 0.770	2.65 2.52	0.768 0.942	0.36 0.46	0.030 0.038	1.056 1.500	3.17 4.39	56.742	56.8324	57.598 58.081	57.598 58.081	58.081	0.483 0.000	M13/1
10 100	OUT14/1	G1/39; G1/38; G1/58; G1/57; G1/59; G1/60; G1/61; G1/62; G1/53; G1/52; G1/51; G1/50; G1/49; G1/48; G1/47; G1/46; G1/45; G1/44; G1/43; G8/43; G1/56; G2/56; G4/56; G5/56; G6/56; G7/56; G1/31; G1/54; G1/55; G2/55; G1/29; G2/29; G3/29; G1/22; G2/22; G1/23; G2/23; G1/37; G1/36; G1/35; G1/34; G1/41; G1/42; G1/64; G1/66; G1/65; G1/68; G1/67; G1/70; G1/69; G1/F20; G1/F19; G1/F21; G1/F22; G1/63; G1/32; G1/30; G1/F10; G1/F6; G2/F6; G3/F6; G4/F6; G1/28; G2/28; G3/28; G4/28; G1/27; G1/26; G1/25; G1/24; G1/20; G1/18; G1/F4; G2/F4; G1/F3; G2/F3; G3/F3; G1/16; G2/16; G3/16; G4/16; G1/15; G1/14; G1/13; G1/12; G1/10; G1/8; G1/F1; G1/6; G2/6; G3/6; G4/6; G1/5; G1/4; G1/F26; G1/F25; G2/F25; G3/F25; G1/2									1.00		ACCESS CHAMBER																	Ku = 0.00												56.800 57.100	56.800 57.100	57.150		OUT14/1
10 100	G1/2	G1/F26; G1/F25; G2/F25; G3/F25	5.0			0.79 0.97	0.205	0.162 0.197	83.5 154.7	83.5 154.7	2.75		HEADWALL	83.5 154.7	0.0 0.0		6.03	179.2 271.2	0.480 0.586	0.0 0.0	4.5 2.3		238.8 441.6	29.67	2.00	450(RCP)	1.50 2.78 (2.54)	403.4	T1/T3	S/Do = 1.38 Ku = 1.37, Kw = 1.49	0.115 0.277	1.37 0.83	0.158 0.228	1.49 0.84	0.171 0.234	1.61 1.69	0.533 0.500	0.249 0.450	2.64 2.78	64.502	64.3975	64.567 65.831	64.567 65.831	65.831	1.264 0.000	G1/2
10 100	M1/1	G1/F26; G1/F25; G2/F25; G3/F25; G1/2		186.0 282.0							0.48		FIELD INLET V-GRATE																T10	S/Do = 1.31 Ku = 2.10, Kw = 2.69		2.10 1.70	0.128 0.190	2.69 2.07	0.164 0.232							63.955 65.139	63.955 65.139	65.139	1.184 0.000	M1/1
10 100	G1/4		5.0		0.79	0.79 0.97	0.031	0.024 0.030	12.6 23.4	12.6 23.4	0.50	1.4	ACCESS CHAMBER	12.6 18.7	0.0 4.7	0.024 0.033	5.00	186.0 282.0	0.024 0.030	0.0 4.7	483.6 483.6		12.6 18.7	5.37	1.00	375(RCP)	0.11 0.17 (1.59)	175.4	G2	S/Do = 1.02 Ku = 9.70	0.001 0.001	9.70 3.50	0.006 0.005		0.006 0.005	-0.01 0.01	0.001 0.001	0.068 0.083	0.92 1.03	63.9	63.7061	63.713 64.755	63.713 64.755	64.918	1.205 0.164	G1/4
10 100	M2/1	G1/4; G1/F26; G1/F25; G2/F25; G3/F25; G1/2		186.0 282.0							0.50		ON-GRADE LIP IN LINE GULLY 2.4m LINTEL; MOUNTABLE K&C																T1/T3	S/Do = 1.05 Ku = 0.70, Kw = 0.82		0.70 0.53	0.027 0.069	0.82 0.59	0.032 0.077							63.711 64.757	63.711 64.757	65.023	1.311 0.266	M2/1
10 100	G1/5		5.0		0.79	0.79 0.97	0.137	0.108 0.132	56.0 103.6	56.0 103.6	0.50	2.7	ACCESS CHAMBER	56.0 78.2	0.0 25.5	0.049 0.070	5.00	186.0 282.0	0.108 0.132	0.0 25.5	1,662.1 1,662.1		56.0 78.2	10.77	2.00	375(RCP)	0.51 0.71 (2.25)	248.1	G2	S/Do = 1.34 Ku = 9.70	0.013 0.026	9.70 3.35	0.127 0.086		0.127 0.086	0.00 0.20	0.011 0.021	0.121 0.145	1.81 1.99	63.775	63.6635	63.790 64.682	63.790 64.682	64.854	1.064 0.172	G1/5
10 100	M3/1	G1/10; G1/8; G1/F1; G1/6; G2/6; G3/6; G4/6; G1/5; G1/4; G1/F26; G1/F25; G2/F25; G3/F25; G1/2		186.0 282.0							0.50		ON-GRADE LIP IN LINE GULLY 3.6m LINTEL; MOUNTABLE K&C																T6/T9	S/Do = 1.37 Ku = 2.17, Kw = 2.48		2.17 1.79	0.244 0.016	2.48 1.94	0.279 0.017							63.697 64.576	63.697 64.576	64.919	1.222 0.343	M3/1
10 100	G1/6		5.0		0.79	0.79 0.97	0.037	0.030 0.036	15.3 28.3	15.3 28.3	4.30	1.0	ACCESS CHAMBER	15.3 22.6	0.0 5.7	0.040 0.055	5.00	186.0 282.0	0.030 0.036	0.0 5.7	322.0 322.0		15.3 22.6	7.46	1.00	375(RCP)	0.14 0.21 (1.59)	175.4	G2	S/Do = 1.03 Ku = 9.70	0.001 0.002	9.70 9.70	0.009 0.021		0.009 0.021	-0.02 0.00	0.002 0.001	0.075 0.091	0.98 1.09	67.35	67.1301	67.140 67.250	67.140 67.250	68.404	1.264 1.154	G1/6
10 100	G2/6	G1/F1; G1/6	5.0	186.0 282.0		0.79 0.97	0.090	0.071 0.087	36.8 68.2	36.8 79.2	4.30	1.5	ON-GRADE LIP IN LINE GULLY 2.4m LINTEL; MOUNTABLE K&C	36.8 53.9	0.0 25.3	0.063 0.096	5.26	184.3 279.3	0.154 0.188	0.0 25.3	315.9 315.9		78.8 114.9	42.51	4.00	375(RCP)	0.71 1.04 (3.18)	350.8	T3/T6	S/Do = 1.16 Ku = 1.79, Kw = 2.37	0.026 0.055	1.79 1.79	0.047 0.099	2.37 2.37	0.062 0.131	3.47 2.41	1.533 1.079	0.121 0.148	2.56 2.84	67.255	67.0867	67.147 67.261	67.147 67.261	68.332	1.185 1.071	G2/6
10 100	G3/6	G1/8; G1/F1; G1/6; G2/6	5.0	186.0 282.0	0.79	0.79 0.97	0.160	0.126 0.154	65.1 120.7	65.1 146.0	4.30	1.9	ON-GRADE LIP IN LINE GULLY 2.4m LINTEL; MOUNTABLE K&C	58.9 83.2	6.2 62.8	0.086 0.135	5.62	181.9 275.6	0.405 0.495	6.2 62.8	323.6 323.6		192.4 265.5	49.87	4.00	375(RCP)	1.74 2.40 (3.18)	350.8	T1/T3	S/Do = 1.83 Ku = 1.68, Kw = 2.00	0.155 0.295	1.68 1.31	0.260 0.387	2.00 1.45	0.310 0.428	2.60 2.29	1.330 1.143	0.198 0.244	3.25 3.49	65.405	65.3507	65.659 66.147	65.659 66.147	66.504	0.845 0.357	G3/6
10 100	G4/6	G1/10; G1/8; G1/F1; G1/6; G2/6; G3/6	5.0	186.0 282.0	0.79	0.79 0.97	0.166	0.131 0.160	67.7 125.5	74.0 188.3	0.50		ON-GRADE LIP IN LINE GULLY 2.4m LINTEL; MOUNTABLE K&C	74.0 188.3	0.0 0.0		6.03	179.2 271.2	0.737 0.901	0.0 0.0	362.0 181.0		366.9 683.2	19.69	0.50	525(RCP)	1.69 3.16 (1.41)	304.2	T3/T6	S/Do = 2.18 Ku = 1.69, Kw = 1.91	0.147 0.001	1.69 1.57	0.247 0.001	1.91 1.67	0.281 0.001	0.73 0.00	0.143 0.001	0.525 0.525	1.69 3.16	63.465	63.8067	64.086 64.576	64.086 64.576	64.576	0.490 0.000	G4/6
10 100	M3/1	G1/10; G1/8; G1/F1; G1/6; G2/6; G3/6; G4/6; G1/5; G1/4; G1/F26; G1/F25; G2/F25; G3/F25; G1/2		186.0 282.0	0.79						0.50		SAG LIP IN LINE GULLY - 3.6m LINTEL; MOUNTABLE K&C																T6/T9	S/Do = 1.37 Ku = 2.17, Kw = 2.48		2.17 1.79	0.244 0.016	2.48 1.94	0.279 0.017							63.697 64.576	63.697 64.576	64.919	1.222 0.343	M3/1
10 100	G1/8		5.0		0.79	0.79 0.97	0.158	0.125 0.152	64.5 119.4	64.5 125.0	4.30	1.9	ACCESS CHAMBER	58.5 74.8	6.0 50.2	0.086 0.124	5.00	186.0 282.0	0.125 0.152	6.0 50.2	322.0 322.0		58.5 74.8	9.41	2.00	375(RCP)	0.53 0.68 (2.25)	248.1	G2	S/Do = 1.39 Ku = 9.70	0.014 0.023	9.70 4.58	0.139 0.107		0.139 0.107	0.11 0.18	0.010 0.017	0.124 0.141	1.84 1.97	65.613	65.6205	65.759 66.231	65.759 66.231	66.757	0.998 0.526	G1/8
10 100	G3/6	G1/8; G1/F1; G1/6; G2/6	5.0	186.0 282.0		0.79 0.97	0.160	0.126 0.154	65.1 120.7	65.1 146.0	4.30	1.9	ON-GRADE LIP IN LINE GULLY 2.4m LINTEL; MOUNTABLE K&C	58.9 83.2	6.2 62.8	0.086 0.135				6.2 62.8	323.6 323.6								T1/T3	S/Do = 1.83 Ku = 1.68, Kw = 2.00		1.68 1.31	0.260 0.387	2.00 1.45	0.310 0.428							65.659 66.147	65.659 66.147	66.504	0.845 0.357	G3/6
10 100	G1/10		5.0	186.0 282.0	0.79	0.79 0.97	0.255	0.201 0.246	104.0 192.5	110.0 247.4	0.50		ON-GRADE LIP IN LINE GULLY 2.4m LINTEL; MOUNTABLE K&C	110.0 247.4	0.0 0.0		5.00	186.0 282.0	0.201 0.246	0.0 0.0	385.6 192.8		110.0 247.4	7.09	0.50	450(RCP)	0.69 1.56 (1.27)	201.7	G2	S/Do = 2.52 Ku = 4.87	0.024 0.000	4.87 3.38	0.119 0.000		0.119 0.000	0.15 0.00	0.011 0.000	0.237 0.450	1.30 1.56	63.5	64.0637	64.182 64.576	64.182 64.576	64.576	0.394 0.000	G1/10
10 100	G4/6	G1/10; G1/8; G1/F1; G1/6; G2/6; G3/6	5.0	186.0 282.0	0.79	0.79 0.97	0.166	0.131 0.160	67.7 125.5	74.0 188.3	0.50		SAG LIP IN LINE GULLY - 3.6m LINTEL; MOUNTABLE K&C	74.0 188.3	0.0 0.0					0.0 0.0	362.0 181.0								T3/T6	S/Do = 2.18 Ku = 1.69, Kw = 1.91		1.69 1.57	0.247 0.001	1.91 1.67	0.281 0.001							64.086 64.576	64.086 64.576	64.576	0.490 0.000	G4/6
10 100	G1/12		5.0	186.0 282.0	0.79	0.79 0.97	0.103	0.081 0.099	42.0 77.7	42.0 77.7	0.50	2.4	SAG LIP IN LINE GULLY - 3.6m LINTEL; MOUNTABLE K&C	42.0 62.2	0.0 15.5	0.042 0.059	5.00	186.0 282.0	0.081 0.099	0.0 15.5	1,637.5 1,637.5		42.0 62.2	7.51	2.00	375(RCP)	0.38 0.56 (2.25)	248.1	G2	S/Do = 1.19 Ku = 9.70	0.007 0.016	9.70 3.05	0.071 0.049		0.071 0.049	0.30 0.13	0.066 0.009	0.104 0.128	1.67 1.87	63.6	63.3734	63.444 64.609	63.444 64.609	64.697	1.253 0.088	G1/12
10 100	M4/1	G1/13; G1/12; G1/10; G1/8; G1/F1; G1/6; G2/6; G3/6; G4/6; G1/5; G1/4; G1/F26; G1/F25; G2/F25; G3/F25; G1/2		186.0 282.0	0.79						0.50		ON-GRADE LIP IN LINE GULLY 3.6m LINTEL; MOUNTABLE K&C																T1/T3	S/Do = 1.20 Ku = 0.89, Kw = 1.05		0.89 0.65	0.125 0.214	1.05 0.72	0.149 0.240							63.373 64.576	63.373 64.576	64.775	1.402 0.199	M4/1
10 100	G1/13		5.0		0.79	0.79 0.97	0.123	0.097 0.119	50.2 93.0	50.2 118.4	0.50	2.6	ACCESS CHAMBER	50.2 87.1	0.0 31.4	0.046 0.076	5.00	186.0 282.0	0.097 0.119	0.0 31.4	1,666.1 1,666.1		50.2 87.1	10.45	2.00	375(RCP)	0.45 0.79 (2.25)	248.1	G2	S/Do = 1.27 Ku = 9.70	0.011 0.032	9.70 2.82	0.102 0.089		0.102 0.089	0.12 0.25	0.063 0.026	0.114 0.153	1.76 2.05	63.575	63.3625	63.464 64.666	63.464 64.666	64.697	1.233 0.031	G1/13
10 100	M4/1	G1/13; G1/12; G1/10; G1/8; G1/F1; G1/6; G2/6; G3/6; G4/6; G1/5; G1/4; G1/F26; G1/F25; G2/F25; G3/F25; G1/2		186.0 282.0							0.50		ON-GRADE LIP IN LINE GULLY 3.6m LINTEL; MOUNTABLE K&C																T1/T3	S/Do = 1.20 Ku = 0.89, Kw = 1.05		0.89 0.65	0.125 0.214	1.05 0.72	0.149 0.240							63.373 64.576	63.373 64.576	64.775	1.402 0.199	M4/1
10 100	G1/14		5.0		0.79	0.79 0.97	0.150	0.119 0.145	61.4 113.7	61.4 129.3	2.07	2.1	ACCESS CHAMBER	61.4 87.8	0.0 41.5	0.072 0.109	5.00	186.0 282.0	0.119 0.145	0.0 41.5	3,406.9 3,406.9		61.4 87.8	7.69	2.00	375(RCP)	0.56 0.79 (2.25)	248.1	G2	S/Do = 1.41 Ku = 9.70	0.016 0.032	9.70 3.45	0.153 0.111		0.153 0.111	1.07 0.25	0.121 0.019	0.127 0.154	1.86 2.05	63.325	63.1306	63.283 64.195	63.283 64.195	64.400	1.116 0.204	G1/14
10 100	M5/1	G1/15; G1/14; G1/13; G1/12; G1/10; G1/8; G1/F1; G1/6; G2/6; G3/6; G4/6; G1/5; G1/4; G1/F26; G1/F25; G2/F25; G3/F25; G1/2		186.0 282.0							2.20		ON-GRADE LIP IN LINE GULLY 3.6m LINTEL; MOUNTABLE K&C																T1/T3	S/Do = 1.14 Ku = 1.20, Kw = 1.43		1.20 0.93	0.107 0.252	1.43 1.05	0.129 0.283							63.069 64.096	63.069 64.096	64.453	1.384 0.357	M5/1
10 100	G1/15		5.0		0.79	0.79 0.97	0.155	0.122 0.150	63.3 117.2	63.3 148.5	2.20	2.1	ACCESS CHAMBER	63.3 92.9	0.0 55.6	0.073 0.118	5.00	186.0 282.0	0.122 0.150	0.0 55.6	3,454.0 3,454.0		63.3 92.9	10.11	2.00	375(RCP)	0.57 0.84 (2.25)	248.1	G2	S/Do = 1.43 Ku = 9.70	0.017 0.036	9.70 3.33	0.162 0.120		0.162 0.120	0.60 0.28	0.112 0.028	0.129 0.159	1.88 2.08	63.3	63.1086	63.270 64.213	63.270 64.213	64.370	1.099 0.156	G1/15
10 100	M5/1	G1/15; G1/14; G1/13; G1/12; G1/10; G1/8; G1/F1; G1/6; G2/6; G3/6; G4/6; G1/5; G1/4; G1/F26; G1/F25; G2/F25; G3/F25; G1/2		186.0 282.0							2.20		ON-GRADE LIP IN LINE GULLY 2.4m LINTEL; MOUNTABLE K&C																T1/T3	S/Do = 1.14 Ku = 1.20, Kw = 1.43		1.20 0.93	0.107 0.252	1.43 1.05	0.129 0.283							63.069 64.096	63.069 64.096	64.453	1.384 0.357	M5/1
10 100	G1/16		5.0		0.79	0.79 0.97	0.141	0.111 0.136	57.4 106.4	57.4 124.8	5.00	1.7	ACCESS CHAMBER	54.0 74.7	3.4 50.1	0.084 0.128	5.00	186.0 282.0	0.111 0.136	3.4 50.1	351.6 351.6		54.0 74.7	7.51	1.00	375(RCP)	0.49 0.68 (1.59)	175.4	G2	S/Do = 2.05 Ku = 6.81	0.012 0.023	6.81 3.13	0.083 0.073		0.083 0.073	0.09 0.18	0.007 0.014	0.143 0.171	1.40 1.52	67.295	67.6045	67.687 68.277	67.687 68.277	68.371	0.684 0.094	G1/16
10 100	G2/16	G1/F4; G2/F4; G1/F3; G2/F3; G3/F3; G1/16	5.0	186.0 282.0		0.79 0.97	0.139	0.110 0.134	56.7 105.1	56.7 109.3	5.00		ON-GRADE LIP IN LINE GULLY 2.4m LINTEL; MOUNTABLE K&C	53.6 5.6	3.2 103.7		5.71	181.3 274.6	0.546 0.666	3.2 103.7			268.2 354.6	47.05	4.75	375(RCP)	2.43 3.21 (3.46)	382.3	T1/T3	S/Do = 2.28 Ku = 1.39, Kw = 1.60	0.301 0.526	1.39 0.79	0.418 0.416	1.60 0.94	0.481 0.494	4.44 4.09	2.104 1.923	0.232 0.286	3.75 3.93	67.2	67.1814	67.660 68.269	67.660 68.269	68.276	0.616 0.008	G2/16
10 100	G3/16	G1/18; G1/F4; G2/F4; G1/F3; G2/F3; G3/F3; G1/16; G2/16	5.0	186.0 282.0	0.79	0.79 0.97	0.185	0.146 0.179	75.6 140.0	78.8 243.7	5.00	2.1	ON-GRADE LIP IN LINE GULLY 2.4m LINTEL; MOUNTABLE K&C	67.1 93.4	11.7 150.3	0.094 0.177	6.10	178.7 270.5	0.851 1.040	11.7 150.3	294.7 294.7		396.3 531.3	44.28	5.00	450(RCP)	2.49 3.34 (4.01)	637.8	T1/T3	S/Do = 2.03 Ku = 1.31, Kw = 1.47	0.317 0.569	1.31 0.99	0.415 0.564	1.47 1.11	0.465 0.632	3.71 3.47	1.661 1.536	0.257 0.314	4.22 4.49	64.705	64.6765	65.138 65.920	65.138 65.920	65.922	0.783 0.002	G3/16
10 100	G4/16	G1/20; G1/18; G1/F4; G2/F4; G1/F3; G2/F3; G3/F3; G1/16; G2/16; G3/16	5.0	186.0 282.0	0.79	0.79 0.97	0.119	0.094 0.115	48.7 90.2	60.4 240.5	1.00		ON-GRADE LIP IN LINE GULLY 2.4m LINTEL; MOUNTABLE K&C	60.4 240.5	0.0 0.0		6.47	176.3 266.7	1.055 1.288	0.0 0.0	362.0 181.0		516.5 995.9	18.53	1.00	750(RCP)	1.17 2.25 (2.52)	1,113.8	T1/T3	S/Do = 1.37 Ku = 0.95, Kw = 1.13	0.070 0.025	0.95 1.53	0.066 0.038	1.13 1.71	0.078 0.042	0.22 0.08	0.040 0.014	0.359 0.553	2.47 2.85	62.771	62.9672	63.045 63.756	63.045 63.756	63.756	0.711 0.000	G4/16
10 100	M6/1	G1/20; G1/18; G1/F4; G2/F4; G1/F3; G2/F3; G3/F3; G1/16; G2/16; G3/16; G4/16; G1/15; G1/14; G1/13; G1/12; G1/10; G1/8; G1/F1; G1/6; G2/6; G3/6; G4/6; G1/5; G1/4; G1/F26; G1/F25; G2/F25; G3/F25; G1/2		186.0 282.0	0.79						1.00		SAG LIP IN LINE GULLY - 3.6m LINTEL; MOUNTABLE K&C																T3/T6	S/Do = 1.56 Ku = 1.88, Kw = 2.21		1.88 1.67	0.425 0.598	2.21 1.83	0.500 0.655							63.001 63.756	63.001 63.756	63.993	0.992 0.237	M6/1
10 100	G1/18		5.0		0.79	0.79 0.97	0.202	0.159 0.195	82.4 152.6	85.8 202.6	5.00	2.0	ACCESS CHAMBER	71.2 102.8	14.6 99.8	0.104 0.168	5.00	186.0 282.0	0.159 0.195	14.6 99.8	346.6 346.6		71.2 102.8	8.27	2.00	375(RCP)	0.64 0.93 (2.25)	248.1	G2	S/Do = 1.75 Ku = 8.37	0.021 0.044	8.37 3.04	0.177 0.134		0.177 0.134	0.16 0.34	0.014 0.028	0.138 0.168	1.94 2.14	65	65.1026	65.280 66.014	65.280 66.014	66.107	0.827 0.093	G1/18
10 100	G3/16	G1/18; G1/F4; G2/F4; G1/F3; G2/F3; G3/F3; G1/16; G2/16	5.0	186.0 282.0		0.79 0.97	0.185	0.146 0.179	75.6 140.0	78.8 243.7	5.00	2.1	ON-GRADE LIP IN LINE GULLY 2.4m LINTEL; MOUNTABLE K&C	67.1 93.4	11.7 150.3	0.094 0.177				11.7 150.3	294.7 294.7								T1/T3	S/Do = 2.03 Ku = 1.31, Kw = 1.47		1.31 0.99	0.415 0.564	1.47 1.11	0.465 0.632							65.138 65.920	65.138 65.920	65.922	0.783 0.002	G3/16
10 100	G1/20		5.0	186.0 282.0	0.79	0.79 0.97	0.138	0.109 0.133	56.4 104.5	71.1 245.8	1.71		ON-GRADE LIP IN LINE GULLY 2.4m LINTEL; MOUNTABLE K&C	71.1 245.8	0.0 0.0		5.00	186.0 282.0	0.109 0.133	0.0 0.0	318.0 159.0		71.1 245.8	7.43	1.00	450(RCP)	0.45 1.55 (1.79)	285.2	G2	S/Do = 1.96 Ku = 7.23	0.010 0.003	7.23 3.36	0.074 0.009		0.074 0.009	0.06 0.02	0.005 0.001	0.153 0.322	1.49 2.02	62.68	63.0374	63.111 63.762	63.111 63.762	63.762	0.651 0.000	G1/20
10 100	G4/16	G1/20; G1/18; G1/F4; G2/F4; G1/F3; G2/F3; G3/F3; G1/16; G2/16; G3/16	5.0	186.0 282.0	0.79	0.79 0.97	0.119	0.094 0.115	48.7 90.2	60.4 240.5	1.00		SAG LIP IN LINE GULLY - 3.6m LINTEL; MOUNTABLE K&C	60.4 240.5	0.0 0.0					0.0 0.0	362.0 181.0								T1/T3	S/Do = 1.37 Ku = 0.95, Kw = 1.13		0.95 1.53	0.066 0.038	1.13 1.71	0.078 0.042							63.045 63.756	63.045 63.756	63.756	0.711 0.000	G4/16

Rev	Amendments	Approved	Date
2	ISSUE FOR CONSTRUCTION	K.H.	18-02-25
1	ISSUE FOR CONSTRUCTION	K.H.	06-01-25
0	ISSUE FOR CONSTRUCTION	K.H.	20-11-24
C	ISSUE FOR APPROVAL	K.H.	05-09-24
B	ISSUE FOR TENDER	K.H.	21-02-24
A	ISSUE FOR APPROVAL	K.H.	01-12-23

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AMORY AT RIPLEY

Designed: T.MULLEN
Checked: K. HOWELLS
Authorised: M. READMAN RPEQ 28295
Date: DECEMBER 23

AMORY AT RIPLEY
STAGE 01
STORMWATER DRAINAGE CALCULATION TABLE
SHEET 1 OF 4

IPSWICH CITY COUNCIL
RIPLEY ESTATE DEVELOPMENT PTY LTD

CONSTRUCTION Drg No 320678-01-C0506 Rev 2

file name 320678-01AC0506.dwg layout name C0506 plotted by Charlene Chessells
FILEDETAILS

DESIGN ARI	LOCATION		SUB-CATCHMENT RUNOFF							INLET DESIGN							DRAIN DESIGN																					PART FULL		DESIGN LEVELS						
	STRUCTURE No	SUB-CATCHMENTS CONTRIBUTING	Tc SUB-CATCHMENT TIME OF CONC. (min)	I RAINFALL INTENSITY (mm/h)	C10 10yr RUNOFF CO-EFFICIENT	C COEFFICIENT OF RUNOFF	A SUB-CATCHMENT AREA (ha)	CxA EQUIVALENT AREA (ha)	Q SUB-CATCHMENT DISCHARGE (l/s)	FLOW IN K&C (INC. BYPASS) (l/s)	ROAD GRADE AT INLET (%)	MINOR FLOW WIDTH (m)	INLET TYPE	Qg FLOW INTO INLET (l/s)	Qb BYPASS FLOW (l/s)	dV FLOW DEPTH x VELOCITY (m²/s)	tc CRITICAL TIME OF CONC. (min)	I RAINFALL INTENSITY (mm/h)	+CA TOTAL (C x A) (ha)	Qt MAJOR TOTAL FLOW (l/s)	Qs MAJOR ROAD FLOW CAPACITY (l/s)	Qa ADDITIONAL PIPE FLOW (l/s)	Qp PIPE FLOW (l/s)	L REACH LENGTH (m)	S PIPE GRADE (%)	PIPE / BOX DIMENSIONS (CLASS) (mm)	V FLOW VELOCITY FULL (PIPE GRADE VELOCITY) (m/s)	Qcap PIPE FLOW CAPACITY AT GRADE (l/s)	STRUCTURE CHART No.	STRUCTURE RATIOS FOR 'K' VALUE CALCULATIONS	V2/2g VELOCITY HEAD (m)	Ku U/S HEAD LOSS COEFFICIENT	hu U/S HEAD LOSS (m)	Kw W.S.E COEFFICIENT	hw CHANGE IN W.S.E (m)	Sf PIPE FRICTION SLOPE (%)	hf PIPE FRICTION HEADLOSS (L x Sf) (m)	DEPTH (m)	Vp VELOCITY (m/s)	OBVERT LEVELS (m)	DRAIN SECTION H.G.L (m)	UPSTREAM H.G.L (m)	W.S.E (m)	SURFACE OR K&C INVERT LEVEL (m)	FREEBOARD (m)	STRUCTURE No. / LINK STRUCTURE
10 100	G1/22		5.0	186.0 282.0	0.79	0.79 0.97	0.038	0.030 0.037	15.7 29.1	15.7 84.7	5.00	1.0	SAG LIP IN LINE GULLY - 3.6m LINTEL; MOUNTABLE K&C	15.7 56.4	0.0 28.3	0.042 0.103	5.00	186.0 282.0	0.030 0.037	0.0 28.3	348.9 348.9		15.7 56.4	7.12	1.00	375(RCP)	0.14 0.51 (1.59)	175.4	G2	S/Do = 1.03 Ku = 9.70	0.001 0.013	9.70 9.70	0.010 0.129		0.010 0.129	0.90 0.40	0.070 0.057	0.076 0.146	0.98 1.41	61.448	61.1621	61.172 61.374	61.172 61.374	62.551	1.379 1.177	G1/22
10 100	G2/22	G1/22	5.0	186.0 282.0	0.79	0.79 0.97	0.021	0.016 0.020	8.5 15.7	8.5 15.7	5.00	0.7	ON-GRADE LIP IN LINE GULLY 2.4m LINTEL; MOUNTABLE K&C	8.5 12.6	0.0 3.1	0.031 0.042	5.06	185.6 281.4	0.047 0.057	0.0 3.1	346.4 346.4		24.1 68.9	41.47	4.25	375(RCP)	0.22 0.62 (3.27)	361.6	T10	S/Do = 1.02 Ku = 2.26, Kw = 2.67	0.002 0.020	2.26 2.20	0.005 0.044	2.67 2.67	0.006 0.053	2.56 0.63	1.099 0.318	0.066 0.111	1.86 2.52	61.357	61.0932	61.099 61.226	61.099 61.226	62.520	1.421 1.294	G2/22
10 100	G2/23	G1/22; G2/22; G1/23	5.0	186.0 282.0	0.79	0.79 0.97	0.295	0.233 0.285	120.6 223.4	130.1 382.4	0.25		ON-GRADE LIP IN LINE GULLY 2.4m LINTEL; MOUNTABLE K&C	130.1 382.4	0.0 0.0					0.0 0.0	385.6 192.8								G2/T1/T3	S/Do = 1.40 Ku = 3.48, Kw = 3.87		3.48 1.84	0.100 0.279	3.87 1.95	0.111 0.295							60.042 60.926	60.042 60.926	60.926	0.884 0.000	G2/23
10 100	G1/23		5.0	186.0 282.0	0.79	0.79 0.97	0.141	0.111 0.136	57.6 106.6	60.7 219.2	0.22		SAG LIP IN LINE GULLY - 3.6m LINTEL; MOUNTABLE K&C	60.7 219.2	0.0 0.0		5.00	186.0 282.0	0.111 0.136	0.0 0.0	385.6 192.8		60.7 219.2	7.12	0.50	450(RCP)	0.38 1.38 (1.27)	201.7	G2	S/Do = 1.59 Ku = 9.19	0.007 0.004	9.19 3.34	0.068 0.014		0.068 0.014	0.05 0.03	0.003 0.002	0.169 0.450	1.11 1.38	59.835	60.0344	60.103 60.926	60.103 60.926	60.926	0.824 0.000	G1/23
10 100	G2/23	G1/22; G2/22; G1/23	5.0	186.0 282.0	0.79	0.79 0.97	0.295	0.233 0.285	120.6 223.4	130.1 382.4	0.25		SAG LIP IN LINE GULLY - 3.6m LINTEL; MOUNTABLE K&C	130.1 382.4	0.0 0.0		5.40	183.3 277.8	0.392 0.478	0.0 0.0	385.6 192.8		212.0 664.9	5.25	0.50	600(RCP)	0.75 2.35 (1.54)	434.4	G2/T1/T3	S/Do = 1.40 Ku = 3.48, Kw = 3.87	0.029 0.151	3.48 1.84	0.100 0.279	3.87 1.95	0.111 0.295	0.12 0.63	0.006 0.033	0.296 0.600	1.53 2.35	59.799	59.9317	60.042 60.926	60.042 60.926	60.926	0.884 0.000	G2/23
10 100	M3/23	G1/31; G1/54; G1/55; G2/55; G1/29; G2/29; G3/29; G1/22; G2/22; G1/23; G2/23		186.0 282.0	0.79						0.22		SAG LIP IN LINE GULLY - 3.6m LINTEL; MOUNTABLE K&C				6.35	177.1 268.0	1.045 1.277				514.2 1,006.0	23.68	6.25	600(RCP)	1.82 3.56 (5.43)	1,535.6	T3/T6	S/Do = 1.60 Ku = 1.79, Kw = 2.12	0.169 0.646	1.79 1.19	0.302 0.767	2.12 1.36	0.357 0.880	6.22 2.68	1.480 0.635	0.239 0.354	4.89 5.79	59.753	59.6248	59.980 60.712	59.980 60.712	61.031	1.051 0.319	M3/23
10 100	M4/23	G1/31; G1/54; G1/55; G2/55; G1/29; G2/29; G3/29; G1/22; G2/22; G1/23; G2/23			0.79						1.00		ACCESS CHAMBER				6.54	175.8 265.9	1.045 1.277				510.4 998.7	38.73	2.50	600(RCP)	1.81 3.53 (3.44)	971.2	T1	S/Do = 1.22 Ku = 0.20	0.166 0.497	0.20 0.20	0.033 0.100		0.033 0.100	0.69 2.07	0.267 0.800	0.309 0.509	3.48 3.91	58.018	58.1188	58.150 59.197	58.150 59.197	59.197	1.047 0.000	M4/23
10 100	M5/23	G1/58; G1/57; G1/59; G1/60; G1/61; G1/62; G1/53; G1/52; G1/51; G1/50; G1/49; G1/48; G1/47; G1/46; G1/45; G1/44; G1/43; G8/43; G1/56; G2/56; G4/56; G5/56; G6/56; G7/56; G1/31; G1/54; G1/55; G2/55; G1/29; G2/29; G3/29; G1/22; G2/22; G1/23; G2/23									1.00		ACCESS CHAMBER				9.00	159.6 240.4	2.677 3.271				1,187.2 1,771.9	24.90	1.25	900(RCP)	1.87 2.79 (3.18)	2,024.8	T3/T6	S/Do = 2.27 Ku = 1.66, Kw = 1.81	0.178 0.170	1.66 1.68	0.295 0.286	1.81 1.78	0.321 0.303	0.43 0.41	0.107 0.103	0.495 0.652	3.31 3.59	56.734	57.5569	57.876 58.314	57.876 58.314	58.314	0.438 0.000	M5/23
10 100	M13/1	G1/39; G1/38; G1/58; G1/57; G1/59; G1/60; G1/61; G1/62; G1/53; G1/52; G1/51; G1/50; G1/49; G1/48; G1/47; G1/46; G1/45; G1/44; G1/43; G8/43; G1/56; G2/56; G4/56; G5/56; G6/56; G7/56; G1/31; G1/54; G1/55; G2/55; G1/29; G2/29; G3/29; G1/22; G2/22; G1/23; G2/23; G1/37; G1/36; G1/35; G1/34; G1/41; G1/42; G1/64; G1/66; G1/65; G1/68; G1/67; G1/70; G1/69; G1/F20; G1/F19; G1/F21; G1/F22; G1/63; G1/32; G1/30; G1/F10; G1/F6; G2/F6; G3/F6; G4/F6; G1/28; G2/28; G3/28; G4/28; G1/27; G1/26; G1/25; G1/24; G1/20; G1/18; G1/F4; G2/F4; G1/F3; G2/F3; G3/F3; G1/16; G2/16; G3/16; G4/16; G1/15; G1/14; G1/13; G1/12; G1/10; G1/8; G1/F1; G1/6; G2/6; G3/6; G4/6; G1/5; G1/4; G1/F26; G1/F25; G2/F25; G3/F25; G1/2									1.00		ACCESS CHAMBER																T9/T10	S/Do = 1.57 Ku = 2.13, Kw = 2.65		2.13 2.06	0.618 0.770	2.65 2.52	0.768 0.942							57.598 58.081	57.598 58.081	58.081	0.483 0.000	M13/1
10 100	G1/24		5.0			0.79 0.97	0.116	0.091 0.112	47.3 87.5	47.3 87.5	3.06	1.7	ACCESS CHAMBER	47.3 57.7	0.0 29.8	0.070 0.099	5.00	186.0 282.0	0.091 0.112	0.0 29.8	1,671.2 1,671.2		47.3 57.7	9.77	1.00	450(RCP)	0.30 0.36 (1.79)	285.2	G2	S/Do = 1.39 Ku = 9.70	0.005 0.007	9.70 3.56	0.044 0.024		0.044 0.024	0.03 0.04	0.003 0.004	0.124 0.137	1.33 1.40	61.825	61.9553	61.999 62.826	61.999 62.826	62.922	0.923 0.096	G1/24
10 100	M7/1	G1/25; G1/24; G1/20; G1/18; G1/F4; G2/F4; G1/F3; G2/F3; G3/F3; G1/16; G2/16; G3/16; G4/16; G1/15; G1/14; G1/13; G1/12; G1/10; G1/8; G1/F1; G1/6; G2/6; G3/6; G4/6; G1/5; G1/4; G1/F26; G1/F25; G2/F25; G3/F25; G1/2									2.95		ON-GRADE LIP IN LINE GULLY 2.4m LINTEL; MOUNTABLE K&C																T1/T3	S/Do = 1.44 Ku = 1.31, Kw = 1.57		1.31 1.06	0.329 0.457	1.57 1.19	0.396 0.516							62.019 62.858	62.019 62.858	62.858	0.839 0.000	M7/1
10 100	G1/25		5.0	186.0 282.0	0.79	0.79 0.97	0.119	0.094 0.115	48.5 89.8	48.5 89.8	2.94	1.7	ACCESS CHAMBER	48.5 65.5	0.0 24.3	0.069 0.097	5.00	186.0 282.0	0.094 0.115	0.0 24.3	1,437.2 1,437.2		48.5 65.5	2.97	2.00	450(RCP)	0.30 0.41 (2.54)	403.4	G2	S/Do = 1.33 Ku = 9.70	0.005 0.009	9.70 3.61	0.046 0.031		0.046 0.031	0.03 0.05	0.001 0.002	0.105 0.123	1.71 1.87	61.85	61.9533	61.999 62.831	61.999 62.831	62.926	0.927 0.095	G1/25
10 100	M7/1	G1/25; G1/24; G1/20; G1/18; G1/F4; G2/F4; G1/F3; G2/F3; G3/F3; G1/16; G2/16; G3/16; G4/16; G1/15; G1/14; G1/13; G1/12; G1/10; G1/8; G1/F1; G1/6; G2/6; G3/6; G4/6; G1/5; G1/4; G1/F26; G1/F25; G2/F25; G3/F25; G1/2									2.95		ON-GRADE LIP IN LINE GULLY 2.4m LINTEL; MOUNTABLE K&C																T1/T3	S/Do = 1.44 Ku = 1.31, Kw = 1.57		1.31 1.06	0.329 0.457	1.57 1.19	0.396 0.516							62.019 62.858	62.019 62.858	62.858	0.839 0.000	M7/1
10 100	G1/26		5.0	186.0 282.0	0.79	0.79 0.97	0.150	0.119 0.145	61.3 113.4	61.3 143.3	2.18	2.4	ACCESS CHAMBER	61.3 90.5	0.0 52.7	0.063 0.101	5.00	186.0 282.0	0.119 0.145	0.0 52.7	803.1 803.1		61.3 90.5	9.78	2.00	450(RCP)	0.39 0.57 (2.54)	403.4	G2	S/Do = 1.56 Ku = 9.36	0.008 0.017	9.36 3.33	0.071 0.055		0.071 0.055	0.05 0.10	0.005 0.010	0.119 0.145	1.83 2.05	61.05	61.2324	61.303 62.145	61.303 62.145	62.155	0.851 0.009	G1/26
10 100	M8/1	G1/27; G1/26; G1/25; G1/24; G1/20; G1/18; G1/F4; G2/F4; G1/F3; G2/F3; G3/F3; G1/16; G2/16; G3/16; G4/16; G1/15; G1/14; G1/13; G1/12; G1/10; G1/8; G1/F1; G1/6; G2/6; G3/6; G4/6; G1/5; G1/4; G1/F26; G1/F25; G2/F25; G3/F25; G1/2									2.73		ON-GRADE LIP IN LINE GULLY 2.4m LINTEL; MOUNTABLE K&C																T1/T3	S/Do = 1.39 Ku = 1.20, Kw = 1.43		1.20 0.97	0.184 0.434	1.43 1.09	0.221 0.489							61.265 62.136	61.265 62.136	62.136	0.871 0.000	M8/1
10 100	G1/27		5.0	186.0 282.0	0.79	0.79 0.97	0.135	0.107 0.130	55.1 102.0	55.1 126.3	2.73		ACCESS CHAMBER	55.1 82.9	0.0 43.4		5.00	186.0 282.0	0.107 0.130	0.0 43.4			55.1 82.9	3.61	2.00	450(RCP)	0.35 0.52 (2.54)	403.4	G2	S/Do = 1.42 Ku = 9.70	0.006 0.014	9.70 3.48	0.059 0.048		0.059 0.048	0.04 0.08	0.001 0.003	0.112 0.138	1.77 1.99	61.1	61.2293	61.289 62.132	61.289 62.132	62.221	0.932 0.089	G1/27
10 100	M8/1	G1/27; G1/26; G1/25; G1/24; G1/20; G1/18; G1/F4; G2/F4; G1/F3; G2/F3; G3/F3; G1/16; G2/16; G3/16; G4/16; G1/15; G1/14; G1/13; G1/12; G1/10; G1/8; G1/F1; G1/6; G2/6; G3/6; G4/6; G1/5; G1/4; G1/F26; G1/F25; G2/F25; G3/F25; G1/2									2.73		ON-GRADE LIP IN LINE GULLY 2.4m LINTEL; MOUNTABLE K&C																T1/T3	S/Do = 1.39 Ku = 1.20, Kw = 1.43		1.20 0.97	0.184 0.434	1.43 1.09	0.221 0.489							61.265 62.136	61.265 62.136	62.136	0.871 0.000	M8/1
10 100	G1/28		5.0	186.0 282.0	0.79	0.79 0.97	0.134	0.106 0.129	54.7 101.3	55.6 137.1	7.38	1.6	ACCESS CHAMBER	50.4 75.5	5.2 61.6	0.089 0.146	5.00	186.0 282.0	0.106 0.129	5.2 61.6	415.9 415.9		50.4 75.5	10.53	3.50	375(RCP)	0.46 0.68 (2.97)	328.2	G2	S/Do = 1.28 Ku = 9.70	0.011 0.024	9.70 8.78	0.103 0.210		0.103 0.210	0.32 0.19	0.085 0.020	0.099 0.122	2.15 2.41	66.125	65.9125	66.016 66.376	66.016 66.376	67.246	1.230 0.869	G1/28
10 100	G2/28	G1/F10; G1/F6; G2/F6; G3/F6; G4/F6; G1/28	5.0	186.0 282.0		0.79 0.97	0.218	0.172 0.210	88.8 164.5	88.8 204.3	7.38	1.9	ON-GRADE LIP IN LINE GULLY 2.4m LINTEL; MOUNTABLE K&C	70.2 97.0	18.7 107.3	0.113 0.180	6.08	178.9 270.8	0.658 0.804	18.7 107.3	392.9 392.9		303.4 442.2	37.88	7.25	450(RCP)	1.91 2.78 (4.83)	768.0	T1/T3	S/Do = 1.67 Ku = 1.42, Kw = 1.62	0.186 0.394	1.42 1.23	0.264 0.487	1.62 1.36	0.301 0.538	6.26 4.96	2.412 1.893	0.197 0.245	4.54 5.00	65.682	65.6169	65.916 66.198	65.916 66.198	66.699	0.784 0.501	G2/28
10 100	G3/28	G1/30; G1/F10; G1/F6; G2/F6; G3/F6; G4/F6; G1/28; G2/28	5.0	186.0 282.0	0.79	0.79 0.97	0.145	0.115 0.140	59.4 110.0	78.0 217.3	7.38	1.9	ON-GRADE LIP IN LINE GULLY 2.4m LINTEL; MOUNTABLE K&C	70.4 72.3	7.7 145.0	0.102 0.179	6.39	176.8 267.5	0.914 1.116	7.7 145.0	347.1 347.1		433.5 591.4	33.28	7.00	450(RCP)	2.73 3.72 (4.74)	754.6	T1/T3	S/Do = 2.27 Ku = 1.32, Kw = 1.51	0.379 0.706	1.32 0.99	0.501 0.698	1.51 1.13	0.573 0.800	5.16 4.30	1.734 1.431	0.245 0.300	4.91 5.25	62.764	62.7437	63.314 63.884	63.314 63.884	63.887	0.573 0.003	G3/28
10 100	G4/28	G1/32; G1/30; G1/F10; G1/F6; G2/F6; G3/F6; G4/F6; G1/28; G2/28; G3/28	5.0	186.0 282.0	0.79	0.79 0.97	0.148	0.117 0.143	60.4 111.9	71.8 419.4	2.25		ON-GRADE LIP IN LINE GULLY 3.6m LINTEL; MOUNTABLE K&C	71.8 419.4	0.0 0.0		6.67	175.0 264.6	1.138 1.390	0.0 0.0	362.0 181.0		556.8 1,242.9	28.14	2.00	1050(RCP)	0.64 1.44 (4.46)	3,863.5	T1/T3	S/Do = 1.45 Ku = 0.52, Kw = 0.77	0.021 0.062	0.52 1.63	0.011 0.100	0.77 1.83	0.016 0.113	0.04 0.12	0.012 0.034	0.269 0.410	3.17 3.97	60.55	61.0116	61.027 61.665	61.027 61.665	61.665	0.638 0.000	G4/28
10 100	M9/1	G1/41; G1/42; G1/64; G1/66; G1/65; G1/68; G1/67; G1/70; G1/69; G1/F20; G1/F19; G1/F21; G1/F22; G1/63; G1/32; G1/30; G1/F10; G1/F6; G2/F6; G3/F6; G4/F6; G1/28; G2/28; G3/28; G4/28; G1/27; G1/26; G1/25; G1/24; G1/20; G1/18; G1/F4; G2/F4; G1/F3; G2/F3; G3/F3; G1/16; G2/16; G3/16; G4/16; G1/15; G1/14; G1/13; G1/12; G1/10; G1/8; G1/F1; G1/6; G2/6; G3/6; G4/6; G1/5; G1/4; G1/F26; G1/F25; G2/F25; G3/F25; G1/2			0.79						3.32		SAG LIP IN LINE GULLY - 3.6m LINTEL; MOUNTABLE K&C																T9/T10	S/Do = 2.27 Ku = 1.97, Kw = 2.30		1.97 1.93	1.139 1.343	2.30 2.14	1.331 1.490							61.191 61.665	61.191 61.665	61.905	0.714 0.240	M9/1
10 100	G1/29	G1/55; G2/55	5.0	186.0 282.0	0.79	0.79 0.97	0.013	0.010 0.012	5.2 9.7	5.2 9.7	2.67	0.7	ACCESS CHAMBER	5.2 -4.3	0.0 13.9	0.021 0.028	5.45	183.0 277.3	0.180 0.220	0.0 13.9	251.6 251.6		91.6 155.7	36.59	0.75	375(RCP)	0.83 1.41 (1.38)	151.9	T9/T10	S/Do = 1.26 Ku = 2.43, Kw = 2.76	0.035 0.101	2.43 1.70	0.085 0.172	2.76 2.02	0.097 0.205	0.21 0.79	0.098 0.288	0.210 0.317	1.44 1.56	61.905	61.8048	61.901 63.121	61.901 63.121	63.141	1.240 0.020	G1/29
10 100	G2/29	G1/54; G1/55; G2/55; G1/29	5.0	186.0 282.0		0.79 0.97	0.096	0.076 0.092	39.1 72.4	39.1 86.3	0.50	2.3	ON-GRADE LIP IN LINE GULLY 2.4m LINTEL; MOUNTABLE K&C	39.1 45.9	0.0 40.4	0.040 0.063	5.75	181.0 274.2	0.371 0.453	0.0 40.4	110.4 110.4		186.7 250.2	46.72	2.00	375(RCP)	1.69 2.27 (2.25)	248.1	T3/T6	S/Do = 1.83 Ku = 1.81, Kw = 2.13	0.146 0.262	1.81 1.16	0.263 0.303	2.13 1.33	0.310 0.349	1.88 2.03	0.914 0.951	0.243 0.311	2.47 2.56	61.525	61.4667	61.775 62.673	61.775 62.673	62.689	0.914 0.016	G2/29
10 100	G3/29	G1/31; G1/54; G1/55; G2/55; G1/29; G2/29	5.0	186.0 282.0	0.79	0.79 0.97	0.204	0.161 0.197	83.4 154.5	83.4 194.9	4.50	2.0	ON-GRADE LIP IN LINE GULLY 2.4m LINTEL; MOUNTABLE K&C	74.0 39.0	9.5 155.9	0.101 0.163	6.14	178.5 270.1	0.654 0.798	9.5 155.9	344.2 344.2		311.4 358.8	24.48	1.50	450(RCP)	1.96 2.26 (2.20)	349.3	T10	S/Do = 2.21 Ku = 1.89, Kw = 2.27	0.196 0.260	1.89 1.49	0.369 0.388	2.27 1.85	0.443 0.481	1.19 1.58	0.292 0.387	0.331 0.381	2.48 2.50	60.117	60.219	60.660 61.467	60.660 61.467	61.467	0.807 0.001	G3/29
10 100	M3/23	G1/31; G1/54; G1/55; G2/55; G1/29; G2/29; G3/29; G1/22; G2/22; G1/23; G2/23			0.79						0.22		ON-GRADE LIP IN LINE GULLY 3.6m LINTEL; MOUNTABLE K&C																T3/T6	S/Do = 1.60 Ku = 1.79, Kw = 2.12		1.79 1.19	0.302 0.767	2.12 1.36	0.357 0.880							59.980 60.712	59.980 60.712	61.031	1.051 0.319	M3/23
10 100	G1/30		5.0	186.0 282.0	0.79	0.79 0.97	0.177	0.140 0.171	72.4 134.2	77.7 195.7	7.38	1.8	ACCESS CHAMBER	70.1 96.8	7.6 99.0	0.106 0.177	5.00	186.0 282.0	0.140 0.171	7.6 99.0	404.0 404.0		70.1 96.8	7.10	1.00	375(RCP)	0.63 0.88 (1.59)	175.4	G2	S/Do = 2.43 Ku = 5.20	0.021 0.039	5.20 2.83	0.107 0.111		0.107 0.111	0.16 0.30	0.011 0.022	0.165 0.199	1.50 1.63	62.825	63.2546	63.361 63.913	63.361 63.913	63.924	0.563 0.010	G1/30
10 100	G3/28	G1/30; G1/F10; G1/F6; G2/F6; G3/F6; G4/F6; G1/28; G2/28	5.0	186.0 282.0		0.79 0.97	0.145	0.115 0.140	59.4 110.0	78.0 217.3	7.38	1.9	ON-GRADE LIP IN LINE GULLY 3.6m LINTEL; MOUNTABLE K&C	70.4 72.3	7.7 145.0	0.102 0.179				7.7 145.0	347.1 347.1								T1/T3	S/Do = 2.27 Ku = 1.32, Kw = 1.51		1.32 0.99	0.501 0.698	1.51 1.13	0.573 0.800							63.314 63.884	63.314 63.884	63.887	0.573 0.003	G3/28
10 100	G1/31		5.0	186.0 282.0	0.79	0.79 0.97	0.153	0.121 0.148	62.4 115.6	62.4 170.4	4.50	1.8	ON-GRADE LIP IN LINE GULLY 3.6m LINTEL; MOUNTABLE K&C	59.3 86.1	3.1 84.3	0.084 0.147	5.00	186.0 282.0	0.121 0.148	3.1 84.3	314.4 314.4		59.3 86.1	7.11	0.50	375(RCP)	0.54 0.78 (1.12)	124.0	G2	S/Do = 1.82 Ku = 7.99	0.015 0.031	7.99 2.86	0.118 0.089		0.118 0.089	0.11 0.24	0.008 0.017	0.183 0.230	1.11 1.21	60.405	60.5945	60.711 61.480	60.711 61.480	61.494	0.783 0.014	G1/31
10 100	G3/29	G1/31; G1/54; G1/55; G2/55; G1/29; G2/29	5.0	186.0 282.0	0.79	0.79 0.97	0.204	0.161 0.197	83.4 154.5	83.4 194.9	4.50	2.0	ON-GRADE LIP IN LINE GULLY 3.6m LINTEL; MOUNTABLE K&C	74.0 39.0	9.5 155.9	0.101 0.163				9.5 155.9	344.2 344.2								T10	S/Do = 2.21 Ku = 1.89, Kw = 2.27		1.89 1.49	0.369 0.388	2.27 1.85	0.443 0.481							60.660 61.467	60.660 61.467	61.467	0.807 0.001	G3/29
10 100	G1/32		5.0	186.0 282.0	0.79	0.79 0.97	0.136	0.107 0.131	55.4 102.6	63.0 254.3	2.25		ON-GRADE LIP IN LINE GULLY 3.6m LINTEL; MOUNTABLE K&C	63.0 254.3	0.0 0.0		5.00	186.0 282.0	0.107 0.131	0.0 0.0	318.0 159.0		63.0 254.3	7.08	0.50	450(RCP)	0.40 1.60 (1.27)	201.7	G2	S/Do = 2.17 Ku = 6.29	0.008 0.003	6.29 3.28	0.050 0.011		0.050 0.011	0.05 0.02	0.003 0.001	0.173 0.450	1.12 1.60	60.55	61.0254	61.076 61.665	61.076 61.665	61.665	0.589 0.000	G1/32
10 100	G4/28	G1/32; G1/30; G1/F10; G1/F6; G2/F6; G3/F6; G4/F6; G1/28; G2/28; G3/28	5.0	186.0 282.0	0.79	0.79 0.97	0.148	0.117 0.143	60.4 111.9	71.8 419.4	2.25		SAG LIP IN LINE GULLY - 3.6m LINTEL; MOUNTABLE K&C	71.8 419.4	0.0 0.0					0.0 0.0	362.0 181.0								T1/T3	S/Do = 1.45 Ku = 0.52, Kw = 0.77		0.52 1.63	0.011 0.100	0.77 1.83	0.016 0.113							61.027 61.665	61.027 61.665	61.665	0.638 0.000	G4/28
10 100	G1/34		5.0	186.0 282.0	0.79	0.79 0.97	0.043	0.034 0.041	17.4 32.2	17.4 75.7	4.50	1.1	SAG LIP IN LINE GULLY - 3.6m LINTEL; MOUNTABLE K&C	17.4 52.2	0.0 23.4	0.043 0.094	5.00	186.0 282.0	0.034 0.041	0.0 23.4	322.5 322.5		17.4 52.2	4.95	2.00	375(RCP)	0.16 0.47 (2.25)	248.1	G2	S/Do = 1.03 Ku = 9.70	0.001 0.011	9.70 7.94	0.012 0.091		0.012 0.091	2.53 0.09	0.073 0.004	0.067 0.117	1.29 1.78	59.535	59.2542	59.266 59.845	59.266 59.845	60.794	1.528 0.949	G1/34
10 100	M10/1	G1/35; G1/34; G1/41; G1/42; G1/64; G1/66; G1/65; G1/68; G1/67; G1/70; G1/69; G1/F20; G1/F19; G1/F21; G1/F22; G1/63; G1/32; G1/30; G1/F10; G1/F6; G2/F6; G3/F6; G4/F6; G1/28; G2/28; G3/28; G4/28; G1/27; G1/26; G1/25; G1/24; G1/20; G1/18; G1/F4; G2/F4; G1/F3; G2/F3; G3/F3; G1/16; G2/16; G3/16; G4/16; G1/15; G1/14; G1/13; G1/12; G1/10; G1/8; G1/F1; G1/6; G2/6; G3/6; G4/6; G1/5; G1/4; G1/F26; G1/F25; G2/F25; G3/F25; G1/2			0.79						4.50		ON-GRADE LIP IN LINE GULLY 2.4m LINTEL; MOUNTABLE K&C																T1/T3	S/Do = 1.06 Ku = 0.21, Kw = 0.22		0.21 0.35	0.070 0.372	0.22 0.40	0.076 0.420							58.852 59.798	58.852 59.798	60.678	1.826 0.880	M10/1
10 100	G1/35		5.0	186.0 282.0	0.79	0.79 0.97	0.033	0.026 0.032	13.6 25.2	22.7 294.0	4.50	1.2	ACCESS CHAMBER	22.7 149.5	0.0 144.5	0.049 0.201	5.00	186.0 282.0	0.026 0.032	0.0 144.5	316.5 316.5		22.7 149.5	2.63	2.00	375(RCP)	0.21 1.35 (2.25)	248.1	G2	S/Do = 1.06 Ku = 9.70	0.002 0.093	9.70 4.37	0.021 0.409		0.021 0.409	3.17 0.73	0.022 0.019	0.077 0.210	1.40 2.35	59.525	59.2572	59.278 60.178	59.278 60.178	60.794	1.516 0.616	G1/35
10 100	M10/1	G1/35; G1/34; G1/41; G1/42; G1/64; G1/66; G1/65; G1/68; G1/67; G1/70; G1/69; G1/F20; G1/F19; G1/F21; G1/F22; G1/63; G1/32; G1/30; G1/F10; G1/F6; G2/F6; G3/F6; G4/F6; G1/28; G2/28; G3/28; G4/28; G1/27; G1/26; G1/25; G1/24; G1/20; G1/18; G1/F4; G2/F4; G1/F3; G2/F3; G3/F3; G1/16; G2/16; G3/16; G4/16; G1/15; G1/14; G1/13; G1/12; G1/10; G1/8; G1/F1; G1/6; G2/6; G3/6; G4/6; G1/5; G1/4; G1/F26; G1/F25; G2/F25; G3/F25; G1/2									4.50		ON-GRADE LIP IN LINE GULLY 3.6m LINTEL; MOUNTABLE K&C																T1/T3	S/Do = 1.06 Ku = 0.21, Kw = 0.22		0.21 0.35	0.070 0.372	0.22 0.40	0.076 0.420							58.852 59.798	58.852 59.798	60.678	1.826 0.880	M10/1
10 100	G1/36		5.0	186.0 282.0	0.79	0.79 0.97	0.104	0.082 0.101	42.6 78.9	42.6 102.3	4.50	1.6	ACCESS CHAMBER	42.6 69.1	0.0 33.2	0.069 0.112	5.00	186.0 282.0	0.082 0.101	0.0 33.2	331.0 331.0		42.6 69.1	5.30	2.00	525(RCP)	0.20 0.32 (2.81)	608.5	G2	S/Do = 2.15 Ku = 6.36	0.002 0.005	6.36 3.24	0.013 0.017		0.013 0.017	0.01 0.03	0.001 0.001	0.094 0.120	1.62 1.87	57.275	57.8672	57.880 58.598	57.880 58.598	58.791	0.911 0.194	G1/36
10 100	M11/1	G1/37; G1/36; G1/35; G1/34; G1/41; G1/42; G1/64; G1/66; G1/65; G1/68; G1/67; G1/70; G1/69; G1/F20; G1/F19; G1/F21; G1/F22; G1/63; G1/32; G1/30; G1/F10; G1/F6; G2/F6; G3/F6; G4/F6; G1/28; G2/28; G3/28; G4/28; G1/27; G1/26; G1/25; G1/24; G1/20; G1/18; G1/F4; G2/F4; G1/F3; G2/F3; G3/F3; G1/16; G2/16; G3/16; G4/16; G1/15; G1/14; G1/13; G1/12; G1/10; G1/8; G1/F1; G1/6; G2/6; G3/6; G4/6; G1/5; G1/4; G1/F26; G1/F25; G2/F25; G3/F25; G1/2									4.50		ON-GRADE LIP IN LINE GULLY 3.6m LINTEL; MOUNTABLE K&C																T1/T3	S/Do = 1.52 Ku = 0.96, Kw = 1.13		0.96 0.86	0.141 0.390	1.13 0.96	0.167 0.437							57.892 58.627	57.892 58.627	58.630	0.738 0.004	M11/1
10 100	G1/37		5.0	186.0 282.0	0.79	0.79 0.97	0.295	0.233 0.285	120.4 222.9	120.4 367.5	4.50	2.4	ACCESS CHAMBER	97.6 174.1	22.7 193.4	0.123 0.242	5.00	186.0 282.0	0.233 0.285	22.7 193.4	331.0 331.0		97.6 174.1	3.29	2.00	525(RCP)	0.45 0.80 (2.81)	608.5	G2	S/Do = 1.64 Ku = 8.94	0.010 0.033	8.94 3.73	0.093 0.123		0.093 0.123	0.05 0.16	0.002 0.005	0.142 0.192	2.06 2.42	57.625	57.8685	57.961 58.708	57.961 58.708	58.791	0.830 0.083	G1/37
10 100	M11/1	G1/37; G1/36; G1/35; G1/34; G1/41; G1/42; G1/64; G1/66; G1/65; G1/68; G1/67; G1/70; G1/69; G1/F20; G1/F19; G1/F21; G1/F22; G1/63; G1/32; G1/30; G1/F10; G1/F6; G2/F6; G3/F6; G4/F6; G1/28; G2/28; G3/28; G4/28; G1/27; G1/26; G1/25; G1/24; G1/20; G1/18; G1/F4; G2/F4; G1/F3; G2/F3; G3/F3; G1/16; G2/16; G3/16; G4/16; G1/15; G1/14; G1/13; G1/12; G1/10; G1/8; G1/F1; G1/6; G2/6; G3/6; G4/6; G1/5; G1/4; G1/F26; G1/F25; G2/F25; G3/F25; G1/2									4.50		ON-GRADE LIP IN LINE GULLY 3.6m LINTEL; MOUNTABLE K&C																T1/T3	S/Do = 1.52 Ku = 0.96, Kw = 1.13		0.96 0.86	0.141 0.390	1.13 0.96	0.167 0.437							57.892 58.627	57.892 58.627	58.630	0.738 0.004	M11/1
10 100	G1/38		5.0	186.0 282.0	0.79	0.79 0.97	0.235	0.185 0.226	95.7 177.3	95.7 463.4	0.69		ACCESS CHAMBER	95.7 463.4	0.0 0.0		5.00	186.0 282.0	0.185 0.226	0.0 0.0	415.0 207.5		95.7 463.4	5.73	2.00	600(RCP)	0.34 1.64 (3.07)	868.7	G2	S/Do = 2.30 Ku = 5.72	0.006 0.060	5.72 3.40	0.033 0.202		0.033 0.202	0.02 0.25	0.001 0.014	0.135 0.312	2.02 3.12	56.7	57.4493	57.483 58.125	57.483 58.125	58.125	0.642 0.000	G1/38
10 100	M13/1	G1/39; G1/38; G1/58; G1/57; G1/59; G1/60; G1/61; G1/62; G1/53; G1/52; G1/51; G1/50; G1/49; G1/48; G1/47; G1/46; G1/45; G1/44; G1/43; G8/43; G1/56; G2/56; G4/56; G5/56; G6/56; G7/56; G1/31; G1/54; G1/55; G2/55; G1/29; G2/29; G3/29; G1/22; G2/22; G1/23; G2/23; G1/37; G1/36; G1/35; G1/34; G1/41; G1/42; G1/64; G1/66; G1/65; G1/68; G1/67; G1/70; G1/69; G1/F20; G1/F19; G1/F21; G1/F22; G1/63; G1/32; G1/30; G1/F10; G1/F6; G2/F6; G3/F6; G4/F6; G1/28; G2/28; G3/28; G4/28; G1/27; G1/26; G1/25; G1/24; G1/20; G1/18; G1/F4; G2/F4; G1/F3; G2/F3; G3/F3; G1/16; G2/16; G3/16; G4/16; G1/15; G1/14; G1/13; G1/12; G1/10; G1/8; G1/F1; G1/6; G2/6; G3/6; G4/6; G1/5; G1/4; G1/F26; G1/F25; G2/F25; G3/F25; G1/2									1.00		SAG LIP IN LINE GULLY 4.8m LINTEL; MOUNTABLE K&C																T9/T10	S/Do = 1.57 Ku = 2.13, Kw = 2.65		2.13 2.06	0.618 0.770	2.65 2.52	0.768 0.942							57.598 58.081	57.598 58.081	58.081	0.483 0.000	M13/1
10 100	G1/39		5.0	186.0 282.0	0.79	0.79 0.97	0.037	0.030 0.036	15.2 28.2	38.0 436.8	0.69		ACCESS CHAMBER	38.0 436.8	0.0 0.0		5.00	186.0 282.0	0.030 0.036	0.0 0.0	415.0 207.5		38.0 436.8	3.42	2.00	600(RCP)	0.13 1.54 (3.07)	869.3	G2	S/Do = 2.09 Ku = 6.62	0.001 0.059	6.62 3.57	0.006 0.210		0.006 0.210	0.00 0.24	0.000 0.008	0.086 0.301	1.54 3.08	56.8	57.4481	57.454 58.127	57.454 58.127	58.127	0.673 0.000	G1/39
10 100	M13/1	G1/39; G1/38; G1/58; G1/57; G1/59; G1/60; G1/61; G1/62; G1/53; G1/52; G1/51; G1/50; G1/49; G1/48; G1/47; G1/46; G1/45; G1/44; G1/43; G8/43; G1/56; G2/56; G4/56; G5/56; G6/56; G7/56; G1/31; G1/54; G1/55; G2/55; G1/29; G2/29; G3/29; G1/22; G2/22; G1/23; G2/23; G1/37; G1/36; G1/35; G1/34; G1/41; G1/42; G1/64; G1/66; G1/65; G1/68; G1/67; G1/70; G1/69; G1/F20; G1/F19; G1/F21; G1/F22; G1/63; G1/32; G1/30; G1/F10; G1/F6; G2/F6; G3/F6; G4/F6; G1/28; G2/28; G3/28; G4/28; G1/27; G1/26; G1/25; G1/24; G1/20; G1/18; G1/F4; G2/F4; G1/F3; G2/F3; G3/F3; G1/16; G2/16; G3/16; G4/16; G1/15; G1/14; G1/13; G1/12; G1/10; G1/8; G1/F1; G1/6; G2/6; G3/6; G4/6; G1/5; G1/4; G1/F26; G1/F25; G2/F25; G3/F25; G1/2									1.00		SAG LIP IN LINE GULLY 4.8m LINTEL; MOUNTABLE K&C																T9/T10	S/Do = 1.57 Ku = 2.13, Kw = 2.65		2.13 2.06	0.618 0.770	2.65 2.52	0.768 0.942							57.598 58.081	57.598 58.081	58.081	0.483 0.000	M13/1
10 100	M1/40	G1/64; G1/66; G1/65; G1/68; G1/67; G1/70; G1/69; G1/F20; G1/F19; G1/F21; G1/F22; G1/63			0.79						1.83		ACCESS CHAMBER				7.10	172.1 260.1	1.677 2.048				761.6 998.2	26.81	2.00	750(RCP)	1.72 2.26 (3.57)	1,575.1	T3/T6	S/Do = 1.45 Ku = 1.89, Kw = 2.24	0.152 0.212	1.89 1.56	0.286 0.330	2.24 1.73	0.339 0.366	1.02 0.65	0.375 0.175	0.368 0.434	3.53 3.77	61.85	61.6427	61.980 62.812	61.980 62.812	62.812	0.831 0.000	M1/40
10 100	M2/40	G1/42; G1/64; G1/66; G1/65; G1/68; G1/67; G1/70; G1/69; G1/F20; G1/F19; G1/F21; G1/F22; G1/63									2.00		ACCESS CHAMBER				7.32	170.7 257.8	1.800 2.198				825.0 1,068.1	10.11	2.00	750(RCP)	1.87 2.42 (3.57)	1,575.1	T1/T3	S/Do = 1.38 Ku = 1.35, Kw = 1.62	0.178 0.284	1.35 1.07	0.240 0.304	1.62 1.21	0.289 0.343	-0.24 0.87	0.052 0.088	0.386 0.453	3.61 3.83	61.294	61.1309	61.417 62.310	61.417 62.310	62.310	0.893 0.000	M2/40
10 100	M3/40	G1/41; G1/42; G1/64; G1/66; G1/65; G1/68; G1/67; G1/70; G1/69; G1/F20; G1/F19; G1/F21; G1/F22; G1/63									2.00		ACCESS CHAMBER				7.41	170.1 256.9	1.946 2.378				906.9 1,259.6	11.74	2.00	900(RCP)	1.43 1.98 (4.03)	2,561.3	T1/T3	S/Do = 1.19 Ku = 1.35, Kw = 1.61	0.104 0.200	1.35 1.52	0.140 0.304	1.61 1.74	0.167 0.348	0.12 0.48	0.027 0.057	0.370 0.446	3.68 4.01	61.112	61.0144	61.180 61.923	61.180 61.923	62.110	0.930 0.187	M3/40

file name 320678-01AC0507.dwg layout name C0507 plotted by Charlene Chessells
FILEDETAILS

Rev	Amendments	Approved	Date
2	ISSUE FOR CONSTRUCTION	K.H.	18-02-25
1	ISSUE FOR CONSTRUCTION	K.H.	06-01-25
0	ISSUE FOR CONSTRUCTION	K.H.	20-11-24
C	ISSUE FOR APPROVAL	K.H.	05-09-24
B	ISSUE FOR TENDER	K.H.	21-02-24
A	ISSUE FOR APPROVAL	K.H.	01-12-23

H 1:1000 SCALE @ A1 — 0 10 20 30 40 50

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AMORY AT RIPLEY

Designed	Checked
T.MULLEN	K. HOWELLS
Authorised	**Date**
M. READMAN RPEQ 28295	DECEMBER 23

AMORY AT RIPLEY
STAGE 01
STORMWATER DRAINAGE CALCULATION TABLE
SHEET 2 OF 4

IPSWICH CITY COUNCIL
RIPLEY ESTATE DEVELOPMENT PTY LTD

CONSTRUCTION — Drg No 320678-01-C0507 — Rev 2

DESIGN ARI	STRUCTURE No	SUB-CATCHMENTS CONTRIBUTING	Tc SUB-CATCHMENT TIME OF CONC. (min)	I RAINFALL INTENSITY (mm/h)	C10 10yr RUNOFF CO-EFFICIENT	C COEFFICIENT OF RUNOFF	A SUB-CATCHMENT AREA (ha)	CxA EQUIVALENT AREA (ha)	Q SUB-CATCHMENT DISCHARGE (l/s)	FLOW IN K&C (INC. BYPASS) (l/s)	ROAD GRADE AT INLET (%)	MINOR FLOW WIDTH (m)	INLET TYPE	Qg FLOW INTO INLET (l/s)	Qb BYPASS FLOW (l/s)	dV FLOW DEPTH x VELOCITY (m²/s)
10 100	M9/1	G1/41; G1/42; G1/64; G1/66; G1/65; G1/68; G1/67; G1/70; G1/69; G1/F20; G1/F19; G1/F21; G1/F22; G1/63; G1/32; G1/30; G1/F10; G1/F6; G2/F6; G3/F6; G4/F6; G1/28; G2/28; G3/28; G4/28; G1/27; G1/26; G1/25; G1/24; G1/20; G1/18; G1/F4; G2/F4; G1/F3; G2/F3; G3/F3; G1/16; G2/16; G3/16; G4/16; G1/15; G1/14; G1/13; G1/12; G1/10; G1/8; G1/F1; G1/6; G2/6; G3/6; G4/6; G1/5; G1/4; G1/F26; G1/F25; G2/F25; G3/F25; G1/2									3.32		ACCESS CHAMBER			
10 100	G1/41		5.0	186.0 282.0		0.79 0.97	0.186	0.147 0.179	75.7 140.2	100.1 478.1	2.00	2.6	ACCESS CHAMBER	91.1 209.3	9.0 268.8	0.092 0.220
10 100	M3/40	G1/41; G1/42; G1/64; G1/66; G1/65; G1/68; G1/67; G1/70; G1/69; G1/F20; G1/F19; G1/F21; G1/F22; G1/63									2.00		ON-GRADE LIP IN LINE GULLY 3.6m LINTEL; MOUNTABLE K&C			
10 100	G1/42		5.0	186.0 282.0	0.79	0.79 0.97	0.156	0.123 0.151	63.7 117.9	79.3 255.7	2.00	2.4	ACCESS CHAMBER	75.6 93.2	3.7 162.5	0.079 0.154
10 100	M2/40	G1/42; G1/64; G1/66; G1/65; G1/68; G1/67; G1/70; G1/69; G1/F20; G1/F19; G1/F21; G1/F22; G1/63									2.00		ON-GRADE LIP IN LINE GULLY 2.4m LINTEL; MOUNTABLE K&C			
10 100	G1/43		5.0	186.0 282.0	0.79	0.79 0.97	0.057	0.045 0.055	23.4 43.3	23.4 43.3	3.00	1.2	ACCESS CHAMBER	23.4 34.7	0.0 8.7	0.051 0.070
10 100	M2/43	G1/44; G1/43									2.92		ON-GRADE LIP IN LINE GULLY 2.4m LINTEL; MOUNTABLE K&C			
10 100	M3/43	G1/46; G1/45; G1/44; G1/43			0.79						2.82		ACCESS CHAMBER			
10 100	M4/43	G1/48; G1/47; G1/46; G1/45; G1/44; G1/43									1.96		ACCESS CHAMBER			
10 100	M5/43	G1/50; G1/49; G1/48; G1/47; G1/46; G1/45; G1/44; G1/43									1.00		ACCESS CHAMBER			
10 100	M6/43	G1/52; G1/51; G1/50; G1/49; G1/48; G1/47; G1/46; G1/45; G1/44; G1/43									1.67		ACCESS CHAMBER			
10 100	M7/43	G1/53; G1/52; G1/51; G1/50; G1/49; G1/48; G1/47; G1/46; G1/45; G1/44; G1/43									2.00		ACCESS CHAMBER			
10 100	G8/43	G1/53; G1/52; G1/51; G1/50; G1/49; G1/48; G1/47; G1/46; G1/45; G1/44; G1/43	5.0	186.0 282.0		0.79 0.97	0.082	0.065 0.079	33.4 61.9	33.4 117.7	2.00	1.5	ACCESS CHAMBER	33.4 117.7	0.0 0.0	0.057 0.111
10 100	M3/56	G1/53; G1/52; G1/51; G1/50; G1/49; G1/48; G1/47; G1/46; G1/45; G1/44; G1/43; G8/43; G1/56; G2/56									1.13		ON-GRADE LIP IN LINE GULLY 2.4m LINTEL; MOUNTABLE K&C			
10 100	G1/44		5.0	186.0 282.0	0.79	0.79 0.97	0.056	0.044 0.054	23.0 42.6	23.0 42.6	2.62	1.2	ACCESS CHAMBER	23.0 34.1	0.0 8.5	0.051 0.069
10 100	M2/43	G1/44; G1/43									2.92		ON-GRADE LIP IN LINE GULLY 2.4m LINTEL; MOUNTABLE K&C			
10 100	G1/45		5.0	186.0 282.0	0.79	0.79 0.97	0.106	0.083 0.102	43.1 79.8	43.1 88.5	3.00	1.4	ACCESS CHAMBER	43.1 58.2	0.0 30.3	0.078 0.113
10 100	M3/43	G1/46; G1/45; G1/44; G1/43									2.82		ON-GRADE LIP IN LINE GULLY 2.4m LINTEL; MOUNTABLE K&C			
10 100	G1/46		5.0	186.0 282.0	0.79	0.79 0.97	0.106	0.084 0.102	43.3 80.2	43.3 88.7	3.00	1.6	ACCESS CHAMBER	43.3 88.7	0.0 0.0	0.071 0.103
10 100	M3/43	G1/46; G1/45; G1/44; G1/43									2.82		ON-GRADE LIP IN LINE GULLY 2.4m LINTEL; MOUNTABLE K&C			
10 100	G1/47		5.0	186.0 282.0	0.79	0.79 0.97	0.107	0.085 0.104	43.9 81.2	43.9 111.5	5.00		ACCESS CHAMBER	43.9 111.5	0.0 0.0	
10 100	M2/47	G1/48; G1/47									5.10		SAG LIP IN LINE GULLY - 2.4m LINTEL; MOUNTABLE K&C			
10 100	M4/43	G1/48; G1/47; G1/46; G1/45; G1/44; G1/43			0.79						1.96		ACCESS CHAMBER			
10 100	G1/48		5.0	186.0 282.0		0.79 0.97	0.034	0.027 0.033	14.1 26.0	14.1 26.0	5.10		ACCESS CHAMBER	14.1 26.0	0.0 0.0	
10 100	M2/47	G1/48; G1/47									5.10		ON-GRADE LIP IN LINE GULLY 2.4m LINTEL; MOUNTABLE K&C			
10 100	G1/49		5.0	186.0 282.0	0.79	0.79 0.97	0.115	0.091 0.111	47.0 87.1	47.0 87.1	1.00	2.1	ACCESS CHAMBER	47.0 42.0	0.0 45.1	0.058 0.081
10 100	M5/43	G1/50; G1/49; G1/48; G1/47; G1/46; G1/45; G1/44; G1/43									1.00		ON-GRADE LIP IN LINE GULLY 2.4m LINTEL; MOUNTABLE K&C			
10 100	G1/50		5.0	186.0 282.0	0.79	0.79 0.97	0.137	0.108 0.132	55.9 103.6	55.9 103.6	1.00	2.2	ACCESS CHAMBER	55.9 59.5	0.0 44.1	0.064 0.089
10 100	M5/43	G1/50; G1/49; G1/48; G1/47; G1/46; G1/45; G1/44; G1/43									1.00		ON-GRADE LIP IN LINE GULLY 2.4m LINTEL; MOUNTABLE K&C			
10 100	G1/51		5.0	186.0 282.0	0.79	0.79 0.97	0.084	0.066 0.081	34.3 63.6	34.3 108.7	1.59	1.6	ACCESS CHAMBER	34.3 52.9	0.0 55.8	0.055 0.102
10 100	M6/43	G1/52; G1/51; G1/50; G1/49; G1/48; G1/47; G1/46; G1/45; G1/44; G1/43									1.67		ON-GRADE LIP IN LINE GULLY 2.4m LINTEL; MOUNTABLE K&C			
10 100	G1/52		5.0	186.0 282.0	0.79	0.79 0.97	0.079	0.063 0.076	32.3 59.8	32.3 103.9	1.59	1.6	ACCESS CHAMBER	32.3 66.8	0.0 37.1	0.053 0.099
10 100	M6/43	G1/52; G1/51; G1/50; G1/49; G1/48; G1/47; G1/46; G1/45; G1/44; G1/43									1.67		ON-GRADE LIP IN LINE GULLY 2.4m LINTEL; MOUNTABLE K&C			
10 100	G1/53		5.0	186.0 282.0	0.79	0.79 0.97	0.082	0.065 0.079	33.4 61.8	33.4 98.9	2.00	1.5	ACCESS CHAMBER	33.4 98.9	0.0 0.0	0.057 0.102
10 100	M7/43	G1/53; G1/52; G1/51; G1/50; G1/49; G1/48; G1/47; G1/46; G1/45; G1/44; G1/43									2.00		ON-GRADE LIP IN LINE GULLY 2.4m LINTEL; MOUNTABLE K&C			
10 100	G1/54		5.0	186.0 282.0	0.79	0.79 0.97	0.146	0.115 0.141	59.6 110.4	59.6 110.4	0.50		ACCESS CHAMBER	59.6 55.6	0.0 54.7	
10 100	G2/29	G1/54; G1/55; G2/55; G1/29	5.0	186.0 282.0		0.79 0.97	0.096	0.076 0.092	39.1 72.4	39.1 86.3	0.50	2.3	ON-GRADE LIP IN LINE GULLY 2.4m LINTEL; MOUNTABLE K&C	39.1 45.9	0.0 40.4	0.040 0.063
10 100	G1/55		5.0	186.0 282.0	0.79	0.79 0.97	0.066	0.052 0.063	26.8 49.7	26.8 49.7	1.00		ON-GRADE LIP IN LINE GULLY 2.4m LINTEL; MOUNTABLE K&C	26.8 49.7	0.0 0.0	
10 100	G2/55	G1/55	5.0	186.0 282.0	0.79	0.79 0.97	0.150	0.118 0.144	61.1 113.1	61.1 113.1	2.50		FIELD INLET V-GRATE	61.1 113.1	0.0 0.0	
10 100	G1/29	G1/55; G2/55	5.0	186.0 282.0	0.79	0.79 0.97	0.013	0.010 0.012	5.2 9.7	5.2 9.7	2.67	0.7	FIELD INLET V-GRATE	5.2 -4.3	0.0 13.9	0.021 0.028
10 100	G1/56		5.0	186.0 282.0	0.79	0.79 0.97	0.112	0.089 0.108	45.8 84.9	45.8 84.9	1.95	1.9	ON-GRADE LIP IN LINE GULLY 2.4m LINTEL; MOUNTABLE K&C	45.8 63.1	0.0 21.7	0.060 0.084
10 100	G2/56	G1/56	5.0	186.0 282.0	0.79	0.79 0.97	0.044	0.035 0.043	18.1 33.5	18.1 33.5	1.75	1.2	ON-GRADE LIP IN LINE GULLY 2.4m LINTEL; MOUNTABLE K&C	18.1 26.8	0.0 6.7	0.037 0.052
10 100	M3/56	G1/53; G1/52; G1/51; G1/50; G1/49; G1/48; G1/47; G1/46; G1/45; G1/44; G1/43; G8/43; G1/56; G2/56			0.79						1.13		ON-GRADE LIP IN LINE GULLY 2.4m LINTEL; MOUNTABLE K&C			
10 100	G4/56	G1/62; G1/53; G1/52; G1/51; G1/50; G1/49; G1/48; G1/47; G1/46; G1/45; G1/44; G1/43; G8/43; G1/56; G2/56	5.0	186.0 282.0	0.79	0.79 0.97	0.045	0.036 0.043	18.4 34.0	18.4 40.7	2.13	1.3	ACCESS CHAMBER	18.4 32.6	0.0 8.1	0.037 0.057
10 100	G5/56	G1/61; G1/62; G1/53; G1/52; G1/51; G1/50; G1/49; G1/48; G1/47; G1/46; G1/45; G1/44; G1/43; G8/43; G1/56; G2/56; G4/56	5.0	186.0 282.0		0.79 0.97	0.050	0.039 0.048	20.2 37.5	20.2 45.6	3.00	1.2	ON-GRADE LIP IN LINE GULLY 2.4m LINTEL; MOUNTABLE K&C	20.2 28.5	0.0 17.1	0.042 0.066
10 100	G6/56	G1/60; G1/61; G1/62; G1/53; G1/52; G1/51; G1/50; G1/49; G1/48; G1/47; G1/46; G1/45; G1/44; G1/43; G8/43; G1/56; G2/56; G4/56; G5/56	5.0	186.0 282.0	0.79	0.79 0.97	0.052	0.041 0.051	21.4 39.6	21.4 56.7	1.49	1.5	ON-GRADE LIP IN LINE GULLY 2.4m LINTEL; MOUNTABLE K&C	21.4 -232.8	0.0 289.4	0.037 0.062
10 100	G7/56	G1/59; G1/60; G1/61; G1/62; G1/53; G1/52; G1/51; G1/50; G1/49; G1/48; G1/47; G1/46; G1/45; G1/44; G1/43; G8/43; G1/56; G2/56; G4/56; G5/56; G6/56	5.0	186.0 282.0	0.79	0.79 0.97	0.022	0.017 0.021	9.0 16.7	9.0 306.1	1.00	1.1	ON-GRADE LIP IN LINE GULLY 2.4m LINTEL; MOUNTABLE K&C	9.0 18.0	0.0 288.1	0.021 0.202
10 100	M8/56	G1/58; G1/57; G1/59; G1/60; G1/61; G1/62; G1/53; G1/52; G1/51; G1/50; G1/49; G1/48; G1/47; G1/46; G1/45; G1/44; G1/43; G8/43; G1/56; G2/56; G4/56; G5/56; G6/56; G7/56			0.79						1.00		ON-GRADE LIP IN LINE GULLY 2.4m LINTEL; MOUNTABLE K&C			
10 100	M5/23	G1/58; G1/57; G1/59; G1/60; G1/61; G1/62; G1/53; G1/52; G1/51; G1/50; G1/49; G1/48; G1/47; G1/46; G1/45; G1/44; G1/43; G8/43; G1/56; G2/56; G4/56; G5/56; G6/56; G7/56; G1/31; G1/54; G1/55; G2/55; G1/29; G2/29; G3/29; G1/22; G2/22; G1/23; G2/23			0.79						1.00		ACCESS CHAMBER			

STRUCTURE No	tc CRITICAL TIME OF CONC. (min)	I RAINFALL INTENSITY (mm/h)	ΣCA TOTAL (C x A) (ha)	Qt MAJOR TOTAL FLOW (l/s)	Qs MAJOR ROAD FLOW CAPACITY (l/s)	Qa ADDITIONAL PIPE FLOW (l/s)	Qp PIPE FLOW (l/s)	L REACH LENGTH (m)	S PIPE GRADE (%)	PIPE / BOX DIMENSIONS (CLASS) (mm)	V FLOW VELOCITY FULL (PIPE GRADE VELOCITY) (m/s)	Qcap PIPE FLOW CAPACITY AT GRADE (l/s)	STRUCTURE CHART No.	STRUCTURE RATIOS FOR 'K' VALUE CALCULATIONS
M9/1													T9/T10	S/Do = 2.27 Ku = 1.97, Kw = 2.30
G1/41	5.00	186.0 282.0	0.147 0.179	9.0 268.8	1,066.1 1,066.1		91.1 209.3	2.78	1.00	450(RCP)	0.57 1.32 (1.79)	285.2	G2	S/Do = 1.58 Ku = 9.27
M3/40													T1/T3	S/Do = 1.19 Ku = 1.35, Kw = 1.61
G1/42	5.00	186.0 282.0	0.123 0.151	3.7 162.5	982.6 982.6		75.6 93.2	10.26	1.50	375(RCP)	0.68 0.84 (1.95)	214.8	G2	S/Do = 1.71 Ku = 8.55
M2/40													T1/T3	S/Do = 1.38 Ku = 1.35, Kw = 1.62
G1/43	5.00	186.0 282.0	0.045 0.055	0.0 8.7	5,154.8 5,154.8		23.4 34.7	9.12	0.50	375(RCP)	0.21 0.31 (1.12)	124.0	G2	S/Do = 1.06 Ku = 9.70
M2/43	5.10	185.4 281.0	0.090 0.110				46.2 68.4	67.30	3.00	375(RCP)	0.42 0.62 (2.75)	303.8	T9	S/Do = 1.07 Ku = 2.50, Kw = 2.78
M3/43	5.66	181.7 275.2	0.257 0.314				129.7 209.6	32.44	2.50	375(RCP)	1.17 1.90 (2.51)	277.3	T6/T9	S/Do = 1.46 Ku = 2.11, Kw = 2.43
M4/43	5.93	179.9 272.3	0.369 0.451				184.4 341.1	49.28	0.90	450(RCP)	1.16 2.14 (1.70)	270.6	T3/T6	S/Do = 2.23 Ku = 1.50, Kw = 1.69
M5/43	6.34	177.2 268.1	0.568 0.694				279.7 427.7	50.00	1.00	450(RCP)	1.76 2.69 (1.79)	285.2	T3/T6	S/Do = 2.61 Ku = 1.33, Kw = 1.51
M6/43	6.76	174.4 263.7	0.697 0.852				337.8 531.1	45.16	2.00	450(RCP)	2.12 3.34 (2.54)	403.4	T1/T3	S/Do = 2.23 Ku = 0.93, Kw = 1.04
M7/43	7.13	171.9 259.8	0.762 0.931				363.8 615.9	8.44	1.75	525(RCP)	1.68 2.84 (2.63)	569.2	T9/T10	S/Do = 2.21 Ku = 1.97, Kw = 2.34
G8/43	7.20	171.5 259.1	0.827 1.010	0.0 0.0	4,297.7 4,297.7		393.7 726.7	17.50	0.50	525(RCP)	1.82 3.36 (1.41)	304.2	T1/T3	S/Do = 1.85 Ku = 1.44, Kw = 1.67
M3/56													T3/T6	S/Do = 1.48 Ku = 1.88, Kw = 2.23
G1/44	5.00	186.0 282.0	0.044 0.054	0.0 8.5	5,048.4 5,048.4		23.0 34.1	11.63	0.50	375(RCP)	0.21 0.31 (1.12)	124.0	G2	S/Do = 1.06 Ku = 9.70
M2/43													T9	S/Do = 1.07 Ku = 2.50, Kw = 2.78
G1/45	5.00	186.0 282.0	0.083 0.102	0.0 30.3	5,587.7 5,587.7		43.1 58.2	8.96	0.50	375(RCP)	0.39 0.53 (1.12)	124.1	G2	S/Do = 1.20 Ku = 9.70
M3/43													T6/T9	S/Do = 1.46 Ku = 2.11, Kw = 2.43
G1/46	5.00	186.0 282.0	0.084 0.102	0.0 0.0	4,760.7 4,760.7		43.3 88.7	11.99	0.50	375(RCP)	0.39 0.80 (1.12)	124.0	G2	S/Do = 1.20 Ku = 9.70
M3/43													T6/T9	S/Do = 1.46 Ku = 2.11, Kw = 2.43
G1/47	5.00	186.0 282.0	0.085 0.104	0.0 0.0	362.2 181.1		43.9 111.5	7.66	0.50	375(RCP)	0.40 1.01 (1.12)	124.0	G2	S/Do = 2.33 Ku = 5.61
M2/47	5.06	185.6 281.3	0.112 0.137				57.8 137.3	20.86	0.50	375(RCP)	0.52 1.24 (1.12)	124.0	T9	S/Do = 2.36 Ku = 1.96, Kw = 2.24
M4/43													T3/T6	S/Do = 2.23 Ku = 1.50, Kw = 1.69
G1/48	5.00	186.0 282.0	0.027 0.033	0.0 0.0			14.1 26.0	5.87	0.50	375(RCP)	0.13 0.24 (1.12)	124.0	G2	S/Do = 2.24 Ku = 6.01
M2/47													T9	S/Do = 2.36 Ku = 1.96, Kw = 2.24
G1/49	5.00	186.0 282.0	0.091 0.111	0.0 45.1	2,780.0 2,780.0		47.0 42.0	8.79	0.50	375(RCP)	0.43 0.38 (1.12)	124.0	G2	S/Do = 2.83 Ku = 4.18
M5/43													T3/T6	S/Do = 2.61 Ku = 1.33, Kw = 1.51
G1/50	5.00	186.0 282.0	0.108 0.132	0.0 44.1	2,613.7 2,613.7		55.9 59.5	11.57	0.50	375(RCP)	0.51 0.54 (1.12)	124.0	G2	S/Do = 2.82 Ku = 4.19
M5/43													T3/T6	S/Do = 2.61 Ku = 1.33, Kw = 1.51
G1/51	5.00	186.0 282.0	0.066 0.081	0.0 55.8	4,595.8 4,595.8		34.3 52.9	9.00	0.50	375(RCP)	0.31 0.48 (1.12)	124.0	G2	S/Do = 2.46 Ku = 5.06
M6/43													T1/T3	S/Do = 2.23 Ku = 0.93, Kw = 1.04
G1/52	5.00	186.0 282.0	0.063 0.076	0.0 37.1	3,315.7 3,315.7		32.3 66.8	11.72	0.50	375(RCP)	0.29 0.60 (1.12)	124.0	G2	S/Do = 2.46 Ku = 5.05
M6/43													T1/T3	S/Do = 2.23 Ku = 0.93, Kw = 1.04
G1/53	5.00	186.0 282.0	0.065 0.079	0.0 0.0	3,931.5 3,931.5		33.4 98.9	11.35	0.50	375(RCP)	0.30 0.90 (1.12)	124.0	G2	S/Do = 2.80 Ku = 4.24
M7/43													T9/T10	S/Do = 2.21 Ku = 1.97, Kw = 2.34
G1/54	5.00	186.0 282.0	0.115 0.141	0.0 54.7			59.6 55.6	7.09	0.50	375(RCP)	0.54 0.50 (1.12)	124.0	G2	S/Do = 1.70 Ku = 8.60
G2/29				0.0 40.4	110.4 110.4								T3/T6	S/Do = 1.83 Ku = 1.81, Kw = 2.13
G1/55	5.00	186.0 282.0	0.052 0.063	0.0 0.0	4.5 2.3		26.8 49.7	31.50	2.50	375(RCP)	0.24 0.45 (2.51)	277.3	G1	S/Do = 1.06 Ku = 7.00
G2/55	5.26	184.3 279.3	0.170 0.208	0.0 0.0	4.5 2.3		87.1 161.2	22.28	2.50	375(RCP)	0.79 1.46 (2.51)	277.3	G2/T3/T6	S/Do = 1.44 Ku = 4.88, Kw = 5.24
G1/29				0.0 13.9	251.6 251.6								T9/T10	S/Do = 1.26 Ku = 2.43, Kw = 2.76
G1/56	5.00	186.0 282.0	0.089 0.108	0.0 21.7	220.0 220.0		45.8 63.1	25.80	1.50	375(RCP)	0.41 0.57 (1.95)	214.8	G2	S/Do = 1.23 Ku = 9.70
G2/56	5.22	184.6 279.8	0.124 0.151	0.0 6.7	251.3 251.3		63.4 89.0	18.16	1.50	375(RCP)	0.57 0.81 (1.95)	214.8	T3/T6	S/Do = 1.11 Ku = 1.89, Kw = 2.43
M3/56	7.35	170.5 257.6	0.950 1.161				450.1 802.1	37.34	1.00	600(RCP)	1.59 2.84 (2.17)	614.3	T3/T6	S/Do = 1.48 Ku = 1.88, Kw = 2.23
G4/56	7.66	168.4 254.3	1.118 1.366	0.0 8.1	229.8 229.8		523.3 868.5	39.37	2.75	600(RCP)	1.85 3.07 (3.60)	1,018.7	T1/T3	S/Do = 1.38 Ku = 1.10, Kw = 1.30
G5/56	7.99	166.3 250.9	1.279 1.562	0.0 17.1	270.3 270.3		587.4 905.5	55.22	2.75	600(RCP)	2.08 3.20 (3.60)	1,018.7	T1/T3	S/Do = 1.40 Ku = 0.93, Kw = 1.09
G6/56	8.45	163.2 246.1	1.449 1.770	0.0 289.4	185.9 185.9		656.6 690.4	29.26	1.00	750(RCP)	1.49 1.56 (2.52)	1,113.8	T3/T6	S/Do = 1.89 Ku = 1.79, Kw = 1.96
G7/56	8.69	161.6 243.6	1.532 1.872	0.0 288.1	155.5 155.5		687.9 730.1	29.42	1.00	750(RCP)	1.56 1.65 (2.52)	1,113.7	T3/T6	S/Do = 1.91 Ku = 1.81, Kw = 2.00
M8/56	8.94	160.0 241.1	1.632 1.994				725.6 866.9	7.08	1.00	900(RCP)	1.14 1.36 (2.85)	1,811.1	T1/T3	S/Do = 1.69 Ku = 0.80, Kw = 0.93
M5/23													T3/T6	S/Do = 2.27 Ku = 1.66, Kw = 1.81

STRUCTURE No	V2/2g VELOCITY HEAD (m)	Ku U/S HEAD LOSS COEFFICIENT	hu U/S HEAD LOSS (m)	Kw W.S.E COEFFICIENT	hw CHANGE IN W.S.E (m)	Sf PIPE FRICTION SLOPE (%)	hf PIPE FRICTION HEADLOSS (L x Sf) (m)	PART FULL DEPTH (m)	PART FULL Vp VELOCITY (m/s)	OBVERT LEVELS (m)	DRAIN SECTION H.G.L (m)	UPSTREAM H.G.L (m)	W.S.E (m)	SURFACE OR K&C INVERT LEVEL (m)	FREEBOARD (m)	STRUCTURE No. / LINK STRUCTURE
M9/1		1.97 1.93	1.139 1.343	2.30 2.14	1.331 1.490							61.191 61.665	61.191 61.665	61.905	0.714 0.240	M9/1
G1/41	0.017 0.088	9.27 3.25	0.155 0.287		0.155 0.287	0.10 0.54	0.003 0.015	0.175 0.286	1.59 1.96	61.05	61.1566	61.311 62.181	61.311 62.181	62.183	0.872 0.002	G1/41
M3/40		1.35 1.52	0.140 0.304	1.61 1.74	0.167 0.348							61.180 61.923	61.180 61.923	62.110	0.930 0.187	M3/40
G1/42	0.024 0.036	8.55 2.85	0.204 0.104		0.204 0.104	0.19 0.28	0.019 0.029	0.154 0.173	1.77 1.88	61.325	61.3887	61.592 62.403	61.592 62.403	62.405	0.813 0.001	G1/42
M2/40		1.35 1.07	0.240 0.304	1.62 1.21	0.289 0.343							61.417 62.310	61.417 62.310	62.310	0.893 0.000	M2/40
G1/43	0.002 0.005	9.70 9.70	0.022 0.049		0.022 0.049	0.03 0.03	0.022 0.012	0.110 0.136	0.86 0.96	66.208	65.9482	65.970 66.058	65.970 66.058	67.308	1.338 1.250	G1/43
M2/43	0.009 0.020	2.50 2.50	0.022 0.049	2.78 2.78	0.025 0.054	2.66 1.37	1.838 0.980	0.099 0.121	1.99 2.22	66.142	65.9224	65.947 66.012	65.947 66.012	67.316	1.368 1.303	M2/43
M3/43	0.070 0.184	2.11 1.55	0.148 0.285	2.43 1.63	0.171 0.300	1.21 1.43	0.444 0.463	0.180 0.244	2.47 2.76	64.095	63.9872	64.156 65.048	64.156 65.048	65.307	1.151 0.259	M3/43
M4/43	0.069 0.138	1.50 1.18	0.103 0.164	1.69 1.34	0.116 0.185	0.42 0.84	0.206 0.415	0.273 0.450	1.83 2.14	63.052	63.4922	63.607 64.306	63.607 64.306	64.430	0.823 0.124	M4/43
M5/43	0.158 0.156	1.33 0.82	0.210 0.128	1.51 0.99	0.239 0.154	0.96 0.95	0.481 0.476	0.361 0.450	2.04 2.69	62.588	63.0778	63.314 63.732	63.314 63.732	63.813	0.498 0.081	M5/43
M6/43	0.230 0.268	0.93 0.78	0.213 0.208	1.04 0.93	0.240 0.249	1.40 1.63	0.633 0.737	0.315 0.450	2.84 3.34	62.068	62.3841	62.622 63.143	62.622 63.143	63.194	0.573 0.051	M6/43
M7/43	0.144 0.002	1.97 1.89	0.284 0.003	2.34 2.16	0.338 0.004	0.72 0.01	0.060 0.001	0.305 0.525	2.79 2.84	61.165	61.4657	61.802 62.158	61.802 62.158	62.316	0.514 0.158	M7/43
G8/43	0.169 0.017	1.44 1.12	0.242 0.019	1.67 1.28	0.282 0.021	0.84 0.08	0.147 0.014	0.525 0.525	1.82 3.36	60.997	61.1628	61.443 62.156	61.443 62.156	62.156	0.713 0.000	G8/43
M3/56		1.88 1.28	0.243 0.266	2.23 1.45	0.288 0.301							61.060 62.156	61.060 62.156	62.240	1.180 0.084	M3/56
G1/44	0.002 0.005	9.70 9.70	0.021 0.047		0.021 0.047	0.09 0.03	0.034 0.017	0.109 0.134	0.86 0.96	66.22	65.9552	65.976 66.057	65.976 66.057	67.303	1.327 1.246	G1/44
M2/43		2.50 2.50	0.022 0.049	2.78 2.78	0.025 0.054							65.947 66.012	65.947 66.012	67.316	1.368 1.303	M2/43
G1/45	0.008 0.014	9.70 3.32	0.075 0.047		0.075 0.047	0.04 0.11	0.004 0.010	0.152 0.181	1.02 1.11	64.175	64.1384	64.213 65.090	64.213 65.090	65.277	1.065 0.187	G1/45
M3/43		2.11 1.55	0.148 0.285	2.43 1.63	0.171 0.300							64.156 65.048	64.156 65.048	65.307	1.151 0.259	M3/43
G1/46	0.008 0.033	9.70 3.11	0.076 0.102		0.076 0.102	0.05 0.26	0.006 0.031	0.153 0.235	1.02 1.22	64.175	64.1404	64.216 65.166	64.216 65.166	65.262	1.046 0.096	G1/46
M3/43		2.11 1.55	0.148 0.285	2.43 1.63	0.171 0.300							64.156 65.048	64.156 65.048	65.307	1.151 0.259	M3/43
G1/47	0.008 0.005	5.61 2.72	0.045 0.012		0.045 0.012	0.06 0.04	0.005 0.003	0.154 0.278	1.03 1.27	63.195	63.6494	63.694 64.320	63.694 64.320	64.320	0.626 0.000	G1/47
M2/47	0.014 0.006	1.96 1.74	0.027 0.010	2.24 2.03	0.031 0.012	0.11 0.04	0.023 0.009	0.180 0.375	1.10 1.24	63.137	63.6175	63.648 64.306	63.648 64.306	64.306	0.658 0.000	M2/47
M4/43		1.50 1.18	0.103 0.164	1.69 1.34	0.116 0.185							63.607 64.306	63.607 64.306	64.430	0.823 0.124	M4/43
G1/48	0.001 0.003	6.01 2.72	0.005 0.008		0.005 0.008	0.01 0.02	0.000 0.001	0.085 0.117	0.74 0.89	63.186	63.6441	63.649 64.313	63.649 64.313	64.366	0.717 0.053	G1/48
M2/47		1.96 1.74	0.027 0.010	2.24 2.03	0.031 0.012							63.648 64.306	63.648 64.306	64.306	0.658 0.000	M2/47
G1/49	0.009 0.007	4.18 2.83	0.039 0.021		0.039 0.021	0.07 0.06	0.006 0.005	0.160 0.150	1.05 1.01	62.645	63.2924	63.330 63.732	63.330 63.732	63.732	0.402 0.000	G1/49
M5/43		1.33 0.82	0.210 0.128	1.51 0.99	0.239 0.154							63.314 63.732	63.314 63.732	63.813	0.498 0.081	M5/43
G1/50	0.013 0.015	4.19 2.81	0.055 0.041		0.055 0.041	0.10 0.11	0.012 0.013	0.177 0.183	1.09 1.11	62.667	63.2975	63.352 63.760	63.352 63.760	63.761	0.409 0.000	G1/50
M5/43		1.33 0.82	0.210 0.128	1.51 0.99	0.239 0.154							63.314 63.732	63.314 63.732	63.813	0.498 0.081	M5/43
G1/51	0.005 0.012	5.06 2.88	0.025 0.033		0.025 0.033	0.04 0.09	0.003 0.008	0.135 0.171	0.96 1.08	62.075	62.5983	62.623 63.143	62.623 63.143	63.143	0.520 0.000	G1/51
M6/43		0.93 0.78	0.213 0.208	1.04 0.93	0.240 0.249							62.622 63.143	62.622 63.143	63.194	0.573 0.051	M6/43
G1/52	0.004 0.019	5.05 2.79	0.022 0.052		0.022 0.052	0.03 0.14	0.004 0.017	0.131 0.196	0.94 1.14	62.072	62.5993	62.621 63.171	62.621 63.171	63.171	0.550 0.000	G1/52
M6/43		0.93 0.78	0.213 0.208	1.04 0.93	0.240 0.249							62.622 63.143	62.622 63.143	63.194	0.573 0.051	M6/43
G1/53	0.005 0.000	4.24 2.91	0.020 0.000		0.020 0.000	0.04 0.00	0.004 0.000	0.133 0.253	0.95 1.25	61.098	61.7523	61.772 62.158	61.772 62.158	62.158	0.386 0.000	G1/53
M7/43		1.97 1.89	0.284 0.003	2.34 2.16	0.338 0.004							61.802 62.158	61.802 62.158	62.316	0.514 0.158	M7/43
G1/54	0.015 0.013	8.60 2.87	0.128 0.037		0.128 0.037	0.12 0.10	0.008 0.007	0.183 0.176	1.11 1.09	61.6	61.7365	61.864 62.672	61.864 62.672	62.689	0.825 0.017	G1/54
G2/29		1.81 1.16	0.263 0.303	2.13 1.33	0.310 0.349							61.775 62.673	61.775 62.673	62.689	0.914 0.016	G2/29
G1/55	0.003 0.010	7.00 7.00	0.021 0.072		0.021 0.072	2.62 0.08	0.739 0.025	0.079 0.107	1.59 1.90	63.575	63.3172	63.338 63.640	63.338 63.640	64.631	1.293 0.990	G1/55
G2/55	0.032 0.109	4.88 1.97	0.155 0.214	5.24 2.05	0.166 0.222	1.95 0.84	0.488 0.188	0.144 0.205	2.22 2.60	62.482	62.3238	62.490 63.552	62.490 63.552	63.843	1.353 0.291	G2/55
G1/29		2.43 1.70	0.085 0.172	2.76 2.02	0.097 0.205							61.901 63.121	61.901 63.121	63.141	1.240 0.020	G1/29
G1/56	0.009 0.017	9.70 4.95	0.085 0.082		0.085 0.082	1.34 0.13	0.373 0.033	0.118 0.139	1.55 1.69	61.775	61.5554	61.640 62.333	61.640 62.333	62.969	1.329 0.635	G1/56
G2/56	0.017 0.033	1.89 1.52	0.032 0.050	2.43 1.63	0.041 0.054	0.89 0.26	0.209 0.047	0.140 0.168	1.69 1.85	61.368	61.1766	61.217 62.221	61.217 62.221	62.485	1.268 0.264	G2/56
M3/56	0.129 0.207	1.88 1.28	0.243 0.266	2.23 1.45	0.288 0.301	0.48 0.86	0.258 0.322	0.382 0.600	2.37 2.84	60.932	60.7736	61.060 62.156	61.060 62.156	62.240	1.180 0.084	M3/56
G4/56	0.175 0.481	1.10 0.58	0.192 0.279	1.30 0.64	0.228 0.308	2.22 2.00	0.942 0.787	0.305 0.426	3.63 4.04	60.529	60.4039	60.630 61.562	60.630 61.562	61.587	0.958 0.025	G4/56
G5/56	0.220 0.523	0.93 0.46	0.205 0.239	1.09 0.49	0.240 0.258	1.40 2.17	0.830 1.200	0.327 0.441	3.73 4.07	59.426	59.3271	59.564 60.486	59.564 60.486	60.491	0.927 0.005	G5/56
G6/56	0.113 0.125	1.79 1.46	0.202 0.182	1.96 1.58	0.221 0.197	0.35 0.38	0.102 0.112	0.414 0.427	2.62 2.65	57.908	58.3535	58.573 59.028	58.573 59.028	59.029	0.455 0.000	G6/56
G7/56	0.124 0.139	1.81 1.55	0.224 0.217	2.00 1.71	0.248 0.238	0.38 0.43	0.112 0.126	0.426 0.443	2.65 2.69	57.595	58.0276	58.274 58.740	58.274 58.740	58.741	0.467 0.000	G7/56
M8/56	0.066 0.064	0.80 1.05	0.053 0.068	0.93 1.19	0.061 0.077	0.16 0.16	0.011 0.011	0.396 0.439	2.69 2.82	57.301	57.8621	57.922 58.385	57.922 58.385	58.385	0.463 0.000	M8/56
M5/23		1.66 1.68	0.295 0.286	1.81 1.78	0.321 0.303							57.876 58.314	57.876 58.314	58.314	0.438 0.000	M5/23

Rev	Amendments	Approved	Date
2	ISSUE FOR CONSTRUCTION	K.H.	18-02-25
1	ISSUE FOR CONSTRUCTION	K.H.	06-01-25
0	ISSUE FOR CONSTRUCTION	K.H.	20-11-24
C	ISSUE FOR APPROVAL	K.H.	05-09-24
B	ISSUE FOR TENDER	K.H.	21-02-24
A	ISSUE FOR APPROVAL	K.H.	01-12-23

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Waterfront Place, level 9/1 Eagle St, Brisbane City
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AMORY AT RIPLEY

Designed: T.MULLEN
Checked: K. HOWELLS
Authorised: M. READMAN RPEQ 28295
Date: DECEMBER 23

AMORY AT RIPLEY
STAGE 01
STORMWATER DRAINAGE CALCULATION TABLE
SHEET 3 OF 4
IPSWICH CITY COUNCIL
RIPLEY ESTATE DEVELOPMENT PTY LTD

CONSTRUCTION

Drg No: 320678-01-C0508
Rev: 2

file name 320678-01AC0508.dwg layout name C0508 plotted by Charlene Chessells
FILEDETAILS

DESIGN ARI	STRUCTURE No	SUB-CATCHMENTS CONTRIBUTING	Tc SUB-CATCHMENT TIME OF CONC. (min)	I RAINFALL INTENSITY (mm/h)	C10 10yr RUNOFF CO-EFFICIENT	C COEFFICIENT OF RUNOFF	A SUB-CATCHMENT AREA (ha)	CxA EQUIVALENT AREA (ha)	Q SUB-CATCHMENT DISCHARGE (l/s)	FLOW IN K&C (INC. BYPASS) (l/s)	ROAD GRADE AT INLET (%)	MINOR FLOW WIDTH (m)	INLET TYPE	Qg FLOW INTO INLET (l/s)	Qb BYPASS FLOW (l/s)	dV FLOW DEPTH x VELOCITY (m²/s)
LOCATION			SUB-CATCHMENT RUNOFF							INLET DESIGN						
10 100	G1/57		5.0	186.0 282.0		0.79 0.97	0.015	0.012 0.015	6.3 11.6	6.3 299.7	1.00	0.9	ACCESS CHAMBER	6.3 84.4	0.0 215.2	0.018 0.197
10 100	M8/56	G1/58; G1/57; G1/59; G1/60; G1/61; G1/62; G1/53; G1/52; G1/51; G1/50; G1/49; G1/48; G1/47; G1/46; G1/45; G1/44; G1/43; G8/43; G1/56; G2/56; G4/56; G5/56; G6/56; G7/56									1.00		ON-GRADE LIP IN LINE GULLY 3.6m LINTEL; MOUNTABLE K&C			
10 100	G1/58		5.0	186.0 282.0	0.79	0.79 0.97	0.112	0.088 0.108	45.5 84.3	45.5 332.6	1.00	2.2	ACCESS CHAMBER	45.5 79.6	0.0 253.0	0.051 0.219
10 100	M8/56	G1/58; G1/57; G1/59; G1/60; G1/61; G1/62; G1/53; G1/52; G1/51; G1/50; G1/49; G1/48; G1/47; G1/46; G1/45; G1/44; G1/43; G8/43; G1/56; G2/56; G4/56; G5/56; G6/56; G7/56									1.00		ON-GRADE LIP IN LINE GULLY 3.6m LINTEL; MOUNTABLE K&C			
10 100	G1/59		5.0	186.0 282.0	0.79	0.79 0.97	0.083	0.065 0.080	33.8 62.7	34.4 293.2	1.00	1.9	ACCESS CHAMBER	34.4 44.9	0.0 248.3	0.044 0.193
10 100	G7/56	G1/59; G1/60; G1/61; G1/62; G1/53; G1/52; G1/51; G1/50; G1/49; G1/48; G1/47; G1/46; G1/45; G1/44; G1/43; G8/43; G1/56; G2/56; G4/56; G5/56; G6/56	5.0	186.0 282.0		0.79 0.97	0.022	0.017 0.021	9.0 16.7	9.0 306.1	1.00	1.1	ON-GRADE LIP IN LINE GULLY 2.4m LINTEL; MOUNTABLE K&C	9.0 18.0	0.0 288.1	0.021 0.202
10 100	G1/60		5.0	186.0 282.0	0.79	0.79 0.97	0.164	0.129 0.158	66.8 123.7	69.9 289.8	1.69	2.3	ON-GRADE LIP IN LINE GULLY 2.4m LINTEL; MOUNTABLE K&C	69.4 59.3	0.5 230.5	0.072 0.191
10 100	G6/56	G1/60; G1/61; G1/62; G1/53; G1/52; G1/51; G1/50; G1/49; G1/48; G1/47; G1/46; G1/45; G1/44; G1/43; G8/43; G1/56; G2/56; G4/56; G5/56	5.0	186.0 282.0	0.79	0.79 0.97	0.052	0.041 0.051	21.4 39.6	21.4 56.7	1.49	1.5	ON-GRADE LIP IN LINE GULLY 3.6m LINTEL; MOUNTABLE K&C	21.4 -232.8	0.0 289.4	0.037 0.062
10 100	G1/61		5.0	186.0 282.0	0.79	0.79 0.97	0.153	0.121 0.148	62.5 115.8	62.5 204.3	3.00	2.0	ON-GRADE LIP IN LINE GULLY 2.4m LINTEL; MOUNTABLE K&C	59.4 38.2	3.1 166.0	0.078 0.151
10 100	G5/56	G1/61; G1/62; G1/53; G1/52; G1/51; G1/50; G1/49; G1/48; G1/47; G1/46; G1/45; G1/44; G1/43; G8/43; G1/56; G2/56; G4/56	5.0	186.0 282.0	0.79	0.79 0.97	0.050	0.039 0.048	20.2 37.5	20.2 45.6	3.00	1.2	ON-GRADE LIP IN LINE GULLY 3.6m LINTEL; MOUNTABLE K&C	20.2 28.5	0.0 17.1	0.042 0.066
10 100	G1/62		5.0	186.0 282.0	0.79	0.79 0.97	0.168	0.132 0.162	68.4 126.8	68.4 148.5	2.13	2.2	ON-GRADE LIP IN LINE GULLY 2.4m LINTEL; MOUNTABLE K&C	68.4 60.0	0.0 88.5	0.076 0.118
10 100	G4/56	G1/62; G1/53; G1/52; G1/51; G1/50; G1/49; G1/48; G1/47; G1/46; G1/45; G1/44; G1/43; G8/43; G1/56; G2/56	5.0	186.0 282.0	0.79	0.79 0.97	0.045	0.036 0.043	18.4 34.0	18.4 40.7	2.13	1.3	ON-GRADE LIP IN LINE GULLY 2.4m LINTEL; MOUNTABLE K&C	18.4 32.6	0.0 8.1	0.037 0.057
10 100	G1/63		5.0	186.0 282.0	0.79	0.79 0.97	0.040	0.032 0.038	16.3 30.1	16.3 30.1	5.50	1.0	ON-GRADE LIP IN LINE GULLY 2.4m LINTEL; MOUNTABLE K&C	16.3 24.1	0.0 6.0	0.043 0.059
10 100	M2/63	G1/F22; G1/63			0.79						5.50		ON-GRADE LIP IN LINE GULLY 2.4m LINTEL; MOUNTABLE K&C			
10 100	M3/63	G1/F21; G1/F22; G1/63			0.79						5.50		ACCESS CHAMBER			
10 100	M4/63	G1/F20; G1/F19; G1/F21; G1/F22; G1/63									5.66		ACCESS CHAMBER			
10 100	M5/63	G1/70; G1/69; G1/F20; G1/F19; G1/F21; G1/F22; G1/63									8.00		ACCESS CHAMBER			
10 100	M6/63	G1/68; G1/67; G1/70; G1/69; G1/F20; G1/F19; G1/F21; G1/F22; G1/63									7.21		ACCESS CHAMBER			
10 100	M7/63	G1/66; G1/65; G1/68; G1/67; G1/70; G1/69; G1/F20; G1/F19; G1/F21; G1/F22; G1/63									4.77		ACCESS CHAMBER			
10 100	M1/40	G1/64; G1/66; G1/65; G1/68; G1/67; G1/70; G1/69; G1/F20; G1/F19; G1/F21; G1/F22; G1/63									1.83		ACCESS CHAMBER			
10 100	G1/64		5.0	186.0 282.0		0.79 0.97	0.276	0.218 0.266	112.5 208.3	142.8 464.0	1.74	3.1	ACCESS CHAMBER	118.4 126.1	24.4 337.9	0.107 0.206
10 100	M1/40	G1/64; G1/66; G1/65; G1/68; G1/67; G1/70; G1/69; G1/F20; G1/F19; G1/F21; G1/F22; G1/63									1.83		ON-GRADE LIP IN LINE GULLY 3.6m LINTEL; MOUNTABLE K&C			
10 100	G1/65		5.0	186.0 282.0	0.79	0.79 0.97	0.298	0.236 0.288	121.8 225.5	140.3 379.1	4.94	2.8	ACCESS CHAMBER	110.0 123.4	30.3 255.7	0.122 0.214
10 100	M7/63	G1/66; G1/65; G1/68; G1/67; G1/70; G1/69; G1/F20; G1/F19; G1/F21; G1/F22; G1/63									4.77		ON-GRADE LIP IN LINE GULLY 3.6m LINTEL; MOUNTABLE K&C			
10 100	G1/66		5.0	186.0 282.0	0.79	0.79 0.97	0.125	0.099 0.121	51.1 94.7	76.1 238.1	6.71	1.7	ACCESS CHAMBER	60.5 100.3	15.6 137.8	0.111 0.209
10 100	M7/63	G1/66; G1/65; G1/68; G1/67; G1/70; G1/69; G1/F20; G1/F19; G1/F21; G1/F22; G1/63									4.77		ON-GRADE LIP IN LINE GULLY 2.4m LINTEL; MOUNTABLE K&C			
10 100	G1/67		5.0	186.0 282.0	0.79	0.79 0.97	0.215	0.170 0.208	87.8 162.6	108.5 292.2	7.17	3.0	ACCESS CHAMBER	89.9 138.6	18.6 153.6	0.093 0.159
10 100	M6/63	G1/68; G1/67; G1/70; G1/69; G1/F20; G1/F19; G1/F21; G1/F22; G1/63									7.21		ON-GRADE LIP IN LINE GULLY 3.6m LINTEL; MOUNTABLE K&C			
10 100	G1/68		5.0	186.0 282.0	0.79	0.79 0.97	0.199	0.157 0.192	81.2 150.4	97.7 245.6	9.11	1.8	ACCESS CHAMBER	72.7 102.1	25.0 143.5	0.132 0.222
10 100	M6/63	G1/68; G1/67; G1/70; G1/69; G1/F20; G1/F19; G1/F21; G1/F22; G1/63									7.21		ON-GRADE LIP IN LINE GULLY 2.4m LINTEL; MOUNTABLE K&C			
10 100	G1/69		5.0	186.0 282.0	0.79	0.79 0.97	0.229	0.181 0.221	93.3 172.8	93.3 234.8	8.00	1.9	ACCESS CHAMBER	72.6 105.2	20.7 129.6	0.121 0.203
10 100	M5/63	G1/70; G1/69; G1/F20; G1/F19; G1/F21; G1/F22; G1/63									8.00		ON-GRADE LIP IN LINE GULLY 2.4m LINTEL; MOUNTABLE K&C			
10 100	G1/70		5.0	186.0 282.0	0.79	0.79 0.97	0.202	0.159 0.195	82.3 152.4	84.0 187.7	8.00	1.8	ACCESS CHAMBER	67.6 92.5	16.4 95.2	0.114 0.178
10 100	M5/63	G1/70; G1/69; G1/F20; G1/F19; G1/F21; G1/F22; G1/63									8.00		ON-GRADE LIP IN LINE GULLY 2.4m LINTEL; MOUNTABLE K&C			
10 100	G1/F1		5.0	186.0 282.0	0.79	0.79 0.97	0.067	0.053 0.065	27.4 50.8	27.4 50.8	3.40	1.4	ACCESS CHAMBER	27.4 39.8	0.0 11.0	0.052 0.072
10 100	G2/6	G1/F1; G1/6	5.0	186.0 282.0		0.79 0.97	0.090	0.071 0.087	36.8 68.2	36.8 79.2	4.30	1.5	ON-GRADE LIP IN LINE GULLY 2.4m LINTEL; MOUNTABLE K&C	36.8 53.9	0.0 25.3	0.063 0.096
10 100	G1/F10		5.0	186.0 282.0	0.79	0.79 0.97	0.105	0.083 0.101	42.7 79.1	42.7 94.2	7.38	1.4	ON-GRADE LIP IN LINE GULLY 2.4m LINTEL; MOUNTABLE K&C	41.8 58.5	0.9 35.8	0.077 0.119
10 100	G4/F6	G1/F10; G1/F6; G2/F6; G3/F6	5.0	186.0 282.0	0.79	0.79 0.97	0.079	0.063 0.076	32.4 59.9	32.4 101.4	7.38		ON-GRADE LIP IN LINE GULLY 2.4m LINTEL; MOUNTABLE K&C	32.4 61.5	0.0 39.8	
10 100	G1/F19		5.0	186.0 282.0	0.79	0.79 0.97	0.129	0.102 0.125	52.8 97.8	52.8 97.8	5.52	1.6	ON-GRADE LIP IN LINE GULLY 2.4m LINTEL; MOUNTABLE K&C	51.0 62.5	1.7 35.3	0.082 0.114
10 100	M4/63	G1/F20; G1/F19; G1/F21; G1/F22; G1/63			0.79						5.66		ON-GRADE LIP IN LINE GULLY 2.4m LINTEL; MOUNTABLE K&C			
10 100	G1/F20		5.0	186.0 282.0	0.79	0.79 0.97	0.108	0.085 0.104	44.1 81.7	47.4 144.6	5.50	1.6	ACCESS CHAMBER	47.4 82.6	0.0 61.9	0.077 0.142
10 100	M4/63	G1/F20; G1/F19; G1/F21; G1/F22; G1/63									5.66		ON-GRADE LIP IN LINE GULLY 2.4m LINTEL; MOUNTABLE K&C			
10 100	G1/F21		5.0	186.0 282.0	0.79	0.79 0.97	0.113	0.089 0.109	46.1 85.3	57.0 146.1	5.50	1.7	ACCESS CHAMBER	53.7 83.2	3.3 62.9	0.084 0.142
10 100	M3/63	G1/F21; G1/F22; G1/63									5.50		ON-GRADE LIP IN LINE GULLY 2.4m LINTEL; MOUNTABLE K&C			
10 100	G1/F22		5.0	186.0 282.0	0.79	0.79 0.97	0.189	0.149 0.182	77.0 142.6	77.0 142.6	5.50	1.9	ACCESS CHAMBER	66.1 81.9	11.0 60.8	0.100 0.140
10 100	M2/63	G1/F22; G1/63									5.50		ON-GRADE LIP IN LINE GULLY 2.4m LINTEL; MOUNTABLE K&C			
10 100	G1/F25		5.0	186.0 282.0	0.79	0.79 0.97	0.029	0.023 0.028	11.7 21.7	11.7 21.7	1.00		ACCESS CHAMBER	11.7 21.7	0.0 0.0	
10 100	G2/F25	G1/F26; G1/F25	5.0	186.0 282.0		0.79 0.97	0.160	0.126 0.154	65.3 120.9	65.3 120.9	2.75		FIELD INLET V-GRATE	65.3 120.9	0.0 0.0	
10 100	G3/F25	G1/F26; G1/F25; G2/F25	5.0	186.0 282.0	0.79	0.79 0.97	0.169	0.134 0.163	69.0 127.8	69.0 127.8	2.75		FIELD INLET V-GRATE	69.0 127.8	0.0 0.0	

STRUCTURE No	tc CRITICAL TIME OF CONC. (min)	I RAINFALL INTENSITY (mm/h)	+CA TOTAL (C x A) (ha)	Qt MAJOR TOTAL FLOW (l/s)	Qs MAJOR ROAD FLOW CAPACITY (l/s)	Qa ADDITIONAL PIPE FLOW (l/s)	Qp PIPE FLOW (l/s)	L REACH LENGTH (m)	S PIPE GRADE (%)	PIPE / BOX DIMENSIONS (CLASS) (mm)	V FLOW VELOCITY FULL (PIPE GRADE VELOCITY) (m/s)	Qcap PIPE FLOW CAPACITY AT GRADE (l/s)	STRUCTURE CHART No.	STRUCTURE RATIOS FOR 'K' VALUE CALCULATIONS	V2/2g VELOCITY HEAD (m)	Ku U/S HEAD LOSS COEFFICIENT	hu U/S HEAD LOSS (m)	Kw W.S.E COEFFICIENT	hw CHANGE IN W.S.E (m)	Sf PIPE FRICTION SLOPE (%)	hf PIPE FRICTION HEADLOSS (L x Sf) (m)	DEPTH (m)	Vp VELOCITY (m/s)	OBVERT LEVELS (m)	DRAIN SECTION H.G.L (m)	UPSTREAM H.G.L (m)	W.S.E (m)	SURFACE OR K&C INVERT LEVEL (m)	FREEBOARD (m)	STRUCTURE No. / LINK STRUCTURE
	DRAIN DESIGN																					PART FULL		DESIGN LEVELS						
G1/57	5.00	186.0 282.0	0.012 0.015	0.0 215.2	155.1 155.1		6.3 84.4	2.76	1.00	375(RCP)	0.06 0.76 (1.59)	175.4	G2	S/Do = 2.71 Ku = 4.45	0.000 0.030	4.45 2.64	0.001 0.079		0.001 0.079	0.00 0.23	0.000 0.006	0.048 0.183	0.75 1.57	57.275	57.9141	57.915 58.461	57.915 58.461	58.461	0.546 0.000	G1/57
M8/56													T1/T3	S/Do = 1.69 Ku = 0.80, Kw = 0.93		0.80 1.05	0.053 0.068	0.93 1.19	0.061 0.077							57.922 58.385	57.922 58.385	58.385	0.463 0.000	M8/56
G1/58	5.00	186.0 282.0	0.088 0.108	0.0 253.0	155.5 155.5		45.5 79.6	4.98	0.50	375(RCP)	0.41 0.72 (1.12)	124.0	G2	S/Do = 2.56 Ku = 4.78	0.009 0.026	4.78 2.83	0.041 0.075		0.041 0.075	0.07 0.21	0.003 0.010	0.157 0.218	1.04 1.19	57.375	57.9174	57.959 58.461	57.959 58.461	58.461	0.502 0.000	G1/58
M8/56													T1/T3	S/Do = 1.69 Ku = 0.80, Kw = 0.93		0.80 1.05	0.053 0.068	0.93 1.19	0.061 0.077							57.922 58.385	57.922 58.385	58.385	0.463 0.000	M8/56
G1/59	5.00	186.0 282.0	0.065 0.080	0.0 248.3	155.5 155.5		34.4 44.9	7.14	1.00	375(RCP)	0.31 0.41 (1.59)	175.4	G2	S/Do = 2.81 Ku = 4.22	0.005 0.008	4.22 2.68	0.021 0.022		0.021 0.022	0.04 0.07	0.003 0.005	0.113 0.129	1.23 1.33	57.595	58.2533	58.274 58.746	58.274 58.746	58.746	0.473 0.000	G1/59
G7/56				0.0 288.1	155.5 155.5								T3/T6	S/Do = 1.91 Ku = 1.81, Kw = 2.00		1.81 1.55	0.224 0.217	2.00 1.71	0.248 0.238							58.274 58.740	58.274 58.740	58.741	0.467 0.000	G7/56
G1/60	5.00	186.0 282.0	0.129 0.158	0.5 230.5	198.5 198.5		69.4 59.3	7.86	1.00	375(RCP)	0.63 0.54 (1.59)	175.4	G2	S/Do = 2.80 Ku = 4.23	0.020 0.015	4.23 2.78	0.085 0.041		0.085 0.041	0.16 0.11	0.012 0.009	0.164 0.150	1.49 1.43	57.975	58.5666	58.651 59.078	58.651 59.078	59.078	0.427 0.000	G1/60
G6/56				0.0 289.4	185.9 185.9								T3/T6	S/Do = 1.89 Ku = 1.79, Kw = 1.96		1.79 1.46	0.202 0.182	1.96 1.58	0.221 0.197							58.573 59.028	58.573 59.028	59.029	0.455 0.000	G6/56
G1/61	5.00	186.0 282.0	0.121 0.148	3.1 166.0	270.3 270.3		59.4 38.2	7.08	1.00	375(RCP)	0.54 0.35 (1.59)	175.4	G2	S/Do = 1.87 Ku = 7.70	0.015 0.006	7.70 2.67	0.114 0.016		0.114 0.016	0.11 0.05	0.008 0.003	0.150 0.119	1.43 1.27	59.325	59.5375	59.651 60.487	59.651 60.487	60.491	0.840 0.004	G1/61
G5/56				0.0 17.1	270.3 270.3								T1/T3	S/Do = 1.40 Ku = 0.93, Kw = 1.09		0.93 0.46	0.205 0.239	1.09 0.49	0.240 0.258							59.564 60.486	59.564 60.486	60.491	0.927 0.005	G5/56
G1/62	5.00	186.0 282.0	0.132 0.162	0.0 88.5	229.8 229.8		68.4 60.0	7.08	1.00	375(RCP)	0.62 0.54 (1.59)	175.4	G2	S/Do = 1.88 Ku = 7.66	0.020 0.015	7.66 2.68	0.150 0.040		0.150 0.040	0.15 0.12	0.011 0.008	0.163 0.151	1.49 1.44	60.425	60.6056	60.755 61.582	60.755 61.582	61.587	0.833 0.005	G1/62
G4/56				0.0 8.1	229.8 229.8								T1/T3	S/Do = 1.38 Ku = 1.10, Kw = 1.30		1.10 0.58	0.192 0.279	1.30 0.64	0.228 0.308							60.630 61.562	60.630 61.562	61.587	0.958 0.025	G4/56
G1/63	5.00	186.0 282.0	0.032 0.038	0.0 6.0	1,564.9 1,564.9		16.3 24.1	11.42	2.00	375(RCP)	0.15 0.22 (2.25)	248.1	G2	S/Do = 1.03 Ku = 9.70	0.001 0.002	9.70 9.70	0.011 0.024		0.011 0.024	0.53 0.06	0.091 0.044	0.065 0.079	1.27 1.42	77.706	77.4221	77.432 77.466	77.432 77.466	78.812	1.379 1.346	G1/63
M2/63	5.10	185.4 281.0	0.181 0.221				82.0 105.4	27.69	5.00	375(RCP)	0.74 0.95 (3.55)	392.2	T9/T10	S/Do = 1.21 Ku = 2.44, Kw = 2.76	0.028 0.046	2.44 2.45	0.069 0.114	2.76 2.77	0.078 0.128	4.84 4.37	1.372 1.266	0.116 0.133	2.81 3.01	77.458	77.2927	77.370 77.450	77.370 77.450	78.503	1.133 1.053	M2/63
M3/63	5.33	183.8 278.6	0.270 0.329				134.5 186.1	40.46	5.50	375(RCP)	1.22 1.69 (3.72)	411.4	T3	S/Do = 1.41 Ku = 1.69, Kw = 2.04	0.076 0.145	1.69 1.68	0.127 0.243	2.04 1.97	0.154 0.285	4.79 4.34	1.991 1.792	0.148 0.177	3.33 3.63	75.928	75.8252	75.978 76.153	75.978 76.153	76.980	1.002 0.827	M3/63
M4/63	5.66	181.6 275.1	0.457 0.559				229.0 323.6	54.73	7.00	375(RCP)	2.07 2.93 (4.20)	464.1	T3/T6	S/Do = 2.04 Ku = 1.57, Kw = 1.78	0.219 0.438	1.57 1.25	0.344 0.547	1.78 1.46	0.390 0.637	6.23 5.55	3.430 3.043	0.186 0.231	4.19 4.54	73.575	73.5421	73.931 74.202	73.931 74.202	74.752	0.822 0.550	M4/63
M5/63	6.12	178.6 270.4	0.797 0.974				358.3 500.5	50.23	7.50	375(RCP)	3.24 4.53 (4.35)	480.4	T1/T3	S/Do = 2.88 Ku = 1.10, Kw = 1.32	0.537 0.828	1.10 0.93	0.590 0.770	1.32 1.12	0.707 0.929	6.71 6.43	3.375 3.232	0.241 0.324	4.77 4.93	69.549	69.5452	70.249 70.687	70.249 70.687	70.687	0.439 0.000	M5/63
M6/63	6.54	175.9 266.0	1.124 1.373				505.6 711.7	44.31	7.50	525(RCP)	2.34 3.29 (5.44)	1,178.3	T3/T6	S/Do = 2.00 Ku = 1.72, Kw = 1.89	0.278 0.552	1.72 1.44	0.478 0.794	1.89 1.59	0.525 0.878	6.49 5.16	2.910 2.298	0.240 0.294	5.23 5.70	65.75	65.6953	66.219 66.610	66.219 66.610	66.739	0.520 0.129	M6/63
M7/63	6.91	173.4 262.2	1.459 1.782				656.8 898.3	23.34	2.50	600(RCP)	2.32 3.18 (3.44)	971.2	T3/T6	S/Do = 1.89 Ku = 1.72, Kw = 1.94	0.275 0.287	1.72 1.37	0.474 0.392	1.94 1.53	0.534 0.439	1.79 1.19	0.465 0.278	0.362 0.456	3.69 3.90	62.423	62.3463	62.879 63.492	62.879 63.492	63.493	0.614 0.000	M7/63
M1/40													T3/T6	S/Do = 1.45 Ku = 1.89, Kw = 2.24		1.89 1.56	0.286 0.330	2.24 1.73	0.339 0.366							61.980 62.812	61.980 62.812	62.812	0.831 0.000	M1/40
G1/64	5.00	186.0 282.0	0.218 0.266	24.4 337.9	882.3 882.3		118.4 126.1	2.38	2.00	450(RCP)	0.74 0.79 (2.54)	403.3	G2	S/Do = 1.88 Ku = 7.63	0.028 0.032	7.63 3.24	0.216 0.104		0.216 0.104	0.17 0.20	0.004 0.005	0.167 0.173	2.20 2.24	61.75	61.9317	62.147 62.884	62.147 62.884	62.884	0.737 0.000	G1/64
M1/40													T3/T6	S/Do = 1.45 Ku = 1.89, Kw = 2.24		1.89 1.56	0.286 0.330	2.24 1.73	0.339 0.366							61.980 62.812	61.980 62.812	62.812	0.831 0.000	M1/40
G1/65	5.00	186.0 282.0	0.236 0.288	30.3 255.7	1,134.0 1,134.0		110.0 123.4	2.48	1.95	450(RCP)	0.69 0.78 (2.50)	398.2	G2	S/Do = 2.17 Ku = 6.29	0.024 0.031	6.29 3.32	0.154 0.102		0.154 0.102	0.15 0.19	0.004 0.005	0.162 0.172	2.14 2.21	62.45	62.8227	62.976 63.552	62.976 63.552	63.552	0.577 0.000	G1/65
M7/63													T3/T6	S/Do = 1.89 Ku = 1.72, Kw = 1.94		1.72 1.37	0.474 0.392	1.94 1.53	0.534 0.439							62.879 63.492	62.879 63.492	63.493	0.614 0.000	M7/63
G1/66	5.00	186.0 282.0	0.099 0.121	15.6 137.8	2,619.3 2,619.3		60.5 100.3	10.51	2.00	375(RCP)	0.55 0.91 (2.25)	248.1	G2	S/Do = 2.19 Ku = 6.19	0.015 0.042	6.19 2.74	0.095 0.115		0.095 0.115	0.12 0.33	0.012 0.034	0.126 0.166	1.85 2.13	62.478	62.8315	62.926 63.595	62.926 63.595	63.663	0.737 0.068	G1/66
M7/63													T3/T6	S/Do = 1.89 Ku = 1.72, Kw = 1.94		1.72 1.37	0.474 0.392	1.94 1.53	0.534 0.439							62.879 63.492	62.879 63.492	63.493	0.614 0.000	M7/63
G1/67	5.00	186.0 282.0	0.170 0.208	18.6 153.6	623.4 623.4		89.9 138.6	3.89	2.00	375(RCP)	0.81 1.26 (2.25)	248.1	G2	S/Do = 2.33 Ku = 5.63	0.034 0.080	5.63 3.26	0.190 0.262		0.190 0.262	0.26 0.62	0.010 0.024	0.156 0.200	2.07 2.31	65.875	66.1828	66.372 66.813	66.372 66.813	66.992	0.619 0.179	G1/67
M6/63													T3/T6	S/Do = 2.00 Ku = 1.72, Kw = 1.89		1.72 1.44	0.478 0.794	1.89 1.59	0.525 0.878							66.219 66.610	66.219 66.610	66.739	0.520 0.129	M6/63
G1/68	5.00	186.0 282.0	0.157 0.192	25.0 143.5	2,667.4 2,667.4		72.7 102.1	10.27	2.00	375(RCP)	0.66 0.92 (2.25)	248.1	G2	S/Do = 2.31 Ku = 5.71	0.022 0.044	5.71 3.41	0.126 0.149		0.126 0.149	0.17 0.34	0.018 0.035	0.139 0.168	1.95 2.14	65.825	66.1897	66.315 66.710	66.315 66.710	66.872	0.556 0.162	G1/68
M6/63													T3/T6	S/Do = 2.00 Ku = 1.72, Kw = 1.89		1.72 1.44	0.478 0.794	1.89 1.59	0.525 0.878							66.219 66.610	66.219 66.610	66.739	0.520 0.129	M6/63
G1/69	5.00	186.0 282.0	0.181 0.221	20.7 129.6	2,180.5 2,180.5		72.6 105.2	5.50	5.00	375(RCP)	0.66 0.95 (3.55)	392.2	G2	S/Do = 1.79 Ku = 8.14	0.022 0.046	8.14 4.03	0.179 0.187		0.179 0.187	0.17 0.36	0.009 0.020	0.109 0.133	2.71 3.01	70.025	70.1417	70.321 70.735	70.321 70.735	71.041	0.720 0.306	G1/69
M5/63													T1/T3	S/Do = 2.88 Ku = 1.10, Kw = 1.32		1.10 0.93	0.590 0.770	1.32 1.12	0.707 0.929							70.249 70.687	70.249 70.687	70.687	0.439 0.000	M5/63
G1/70	5.00	186.0 282.0	0.159 0.195	16.4 95.2	2,142.2 2,142.2		67.6 92.5	10.31	2.00	375(RCP)	0.61 0.84 (2.25)	248.1	G2	S/Do = 2.29 Ku = 5.79	0.019 0.036	5.79 3.36	0.111 0.120		0.111 0.120	0.15 0.28	0.015 0.029	0.134 0.159	1.91 2.08	69.775	70.1476	70.258 70.678	70.258 70.678	70.832	0.574 0.154	G1/70
M5/63													T1/T3	S/Do = 2.88 Ku = 1.10, Kw = 1.32		1.10 0.93	0.590 0.770	1.32 1.12	0.707 0.929							70.249 70.687	70.249 70.687	70.687	0.439 0.000	M5/63
G1/F1	5.00	186.0 282.0	0.053 0.065	0.0 11.0	288.0 288.0		27.4 39.8	31.69	3.94	375(RCP)	0.25 0.36 (3.15)	348.4	G1	S/Do = 1.06 Ku = 7.00	0.003 0.007	7.00 7.00	0.022 0.046		0.022 0.046	3.90 3.67	1.247 1.202	0.071 0.086	1.88 2.10	68.625	68.3682	68.390 68.440	68.390 68.440	69.676	1.286 1.236	G1/F1
G2/6				0.0 25.3	315.9 315.9								T3/T6	S/Do = 1.16 Ku = 1.79, Kw = 2.37		1.79 1.79	0.047 0.099	2.37 2.37	0.062 0.131							67.147 67.261	67.147 67.261	68.332	1.185 1.071	G2/6
G1/F10	5.00	186.0 282.0	0.083 0.101	0.9 35.8	415.9 415.9		41.8 58.5	7.15	1.00	375(RCP)	0.38 0.53 (1.59)	175.4	G2	S/Do = 1.48 Ku = 9.70	0.007 0.014	9.70 6.05	0.071 0.086		0.071 0.086	0.06 0.11	0.004 0.008	0.125 0.149	1.30 1.43	69.725	69.8334	69.904 70.185	69.904 70.185	70.807	0.902 0.622	G1/F10
G4/F6				0.0 39.8									T1/T3	S/Do = 1.80 Ku = 1.64, Kw = 1.96		1.64 1.38	0.252 0.474	1.96 1.63	0.300 0.558							69.878 70.175	69.878 70.175	70.740	0.862 0.565	G4/F6
G1/F19	5.00	186.0 282.0	0.102 0.125	1.7 35.3	1,790.5 1,790.5		51.0 62.5	10.24	2.00	375(RCP)	0.46 0.57 (2.25)	248.1	G2	S/Do = 1.53 Ku = 9.56	0.011 0.016	9.56 6.40	0.104 0.104		0.104 0.104	0.08 0.13	0.009 0.013	0.115 0.128	1.77 1.87	73.8	73.8935	73.997 74.229	73.997 74.229	74.831	0.833 0.602	G1/F19
M4/63													T3/T6	S/Do = 2.04 Ku = 1.57, Kw = 1.78		1.57 1.25	0.344 0.547	1.78 1.46	0.390 0.637							73.931 74.202	73.931 74.202	74.752	0.822 0.550	M4/63
G1/F20	5.00	186.0 282.0	0.085 0.104	0.0 61.9	1,791.6 1,791.6		47.4 82.6	5.20	2.00	375(RCP)	0.43 0.75 (2.25)	248.0	G2	S/Do = 1.24 Ku = 9.70	0.009 0.029	9.70 6.81	0.091 0.194		0.091 0.194	0.04 0.22	0.003 0.012	0.111 0.149	1.73 2.02	73.925	73.8874	73.978 74.317	73.978 74.317	75.024	1.046 0.707	G1/F20
M4/63													T3/T6	S/Do = 2.04 Ku = 1.57, Kw = 1.78		1.57 1.25	0.344 0.547	1.78 1.46	0.390 0.637							73.931 74.202	73.931 74.202	74.752	0.822 0.550	M4/63
G1/F21	5.00	186.0 282.0	0.089 0.109	3.3 62.9	1,741.0 1,741.0		53.7 83.2	2.58	2.00	375(RCP)	0.49 0.75 (2.25)	248.1	G2	S/Do = 1.31 Ku = 9.70	0.012 0.029	9.70 7.56	0.117 0.219		0.117 0.219	-0.01 0.23	0.002 0.006	0.119 0.150	1.79 2.02	76	75.9515	76.068 76.336	76.068 76.336	77.079	1.011 0.743	G1/F21
M3/63													T3	S/Do = 1.41 Ku = 1.69, Kw = 2.04		1.69 1.68	0.127 0.243	2.04 1.97	0.154 0.285							75.978 76.153	75.978 76.153	76.980	1.002 0.827	M3/63
G1/F22	5.00	186.0 282.0	0.149 0.182	11.0 60.8	1,741.0 1,741.0		66.1 81.9	2.12	2.00	375(RCP)	0.60 0.74 (2.25)	248.1	G2	S/Do = 1.47 Ku = 9.70	0.018 0.028	9.70 8.83	0.177 0.248		0.177 0.248	-1.36 -0.27	0.011 0.005	0.132 0.148	1.90 2.01	77.52	77.3326	77.509 77.677	77.509 77.677	78.478	0.969 0.801	G1/F22
M2/63													T9/T10	S/Do = 1.21 Ku = 2.44, Kw = 2.76		2.44 2.45	0.069 0.114	2.76 2.77	0.078 0.128							77.370 77.450	77.370 77.450	78.503	1.133 1.053	M2/63
G1/F25	5.00	186.0 282.0	0.023 0.028	0.0 0.0	4.5 2.3		11.7 21.7	21.55	1.25	375(RCP)	0.11 0.20 (1.78)	196.1	G1	S/Do = 1.01 Ku = 7.00	0.001 0.002	7.00 7.00	0.004 0.014		0.004 0.014	0.41 0.02	0.115 0.003	0.062 0.084	0.97 1.17	67.825	67.5261	67.530 67.880	67.530 67.880	68.803	1.272 0.923	G1/F25
G2/F25	5.23	184.5 279.6	0.185 0.226	0.0 0.0	4.5 2.3		94.6 175.2	55.54	3.00	375(RCP)	0.86 1.59 (2.75)	303.8	G1/T10	S/Do = 1.43 Ku = 4.03, Kw = 4.26	0.037 0.128	4.03 2.74	0.151 0.352	4.26 3.02	0.160 0.388	2.56 1.00	1.479 0.554	0.144 0.204	2.43 2.85	67.436	67.2869	67.446 67.899	67.446 67.899	68.484	1.038 0.585	G2/F25
G3/F25	5.69	181.4 274.8	0.318 0.389	0.0 0.0	4.5 2.3		160.4 296.7	40.92	3.00	375(RCP)	1.45 2.69 (2.75)	303.8	T1	S/Do = 1.52 Ku = 1.82	0.108 0.263	1.82 1.12	0.196 0.295		0.196 0.295	2.73 2.04	1.159 0.836	0.194 0.300	2.79 3.13	65.75	65.6705	65.865 66.957	65.865 66.957	66.957	1.092 0.000	G3/F25

Rev	Amendments	Approved	Date
2	ISSUE FOR CONSTRUCTION	K.H.	18-02-25
1	ISSUE FOR CONSTRUCTION	K.H.	06-01-25
0	ISSUE FOR CONSTRUCTION	K.H.	20-11-24
C	ISSUE FOR APPROVAL	K.H.	05-09-24
B	ISSUE FOR TENDER	K.H.	21-02-24
A	ISSUE FOR APPROVAL	K.H.	01-12-23

file name 320678-01AC0509.dwg layout name C0509 plotted by Charlene Chessells
FILEDETAILS

H 1:1000
SCALE @ A1
0 10 20 30 40 50

dlcs ISO 9001 certified ISO 45001 certified ISO 14001 certified

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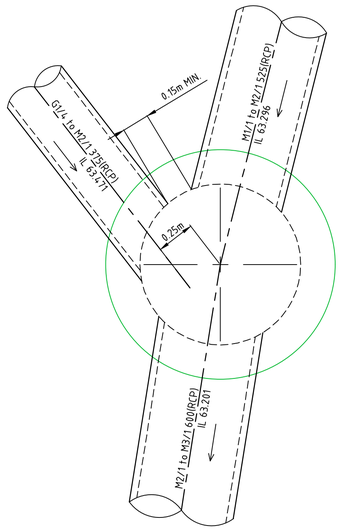
AMORY AT RIPLEY

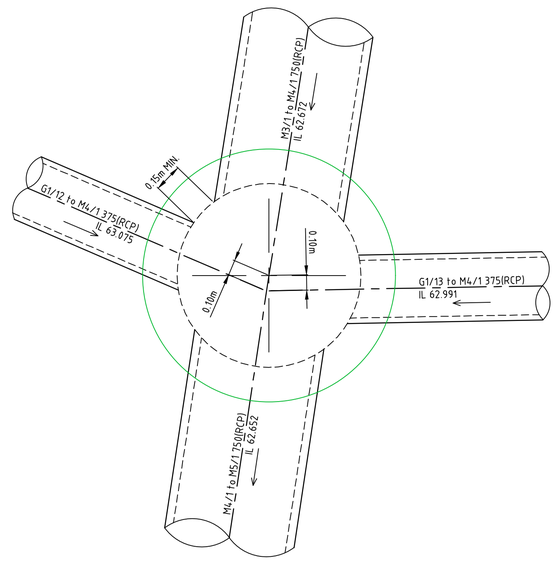
Designed: T.MULLEN
Checked: K. HOWELLS
Authorised: M. READMAN RPEQ 28295
Date: DECEMBER 23

AMORY AT RIPLEY
STAGE 01
STORMWATER DRAINAGE CALCULATION TABLE
SHEET 4 OF 4
IPSWICH CITY COUNCIL
RIPLEY ESTATE DEVELOPMENT PTY LTD

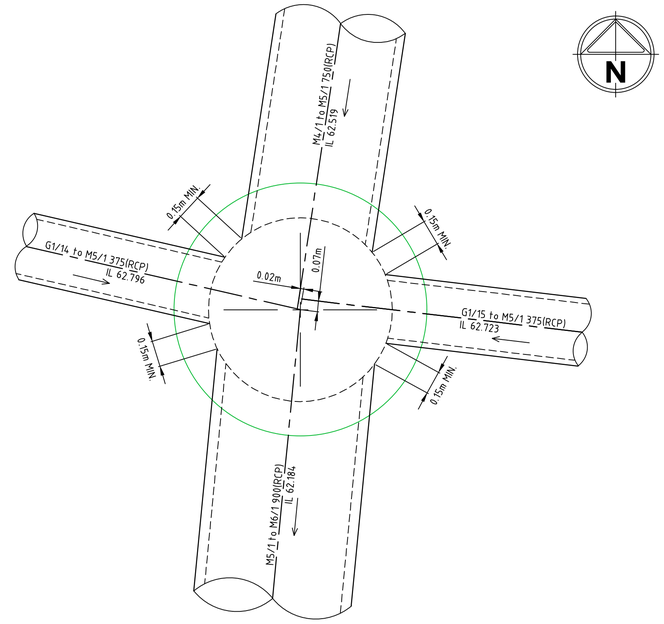
CONSTRUCTION
Drg No 320678-01-C0509
Rev 2



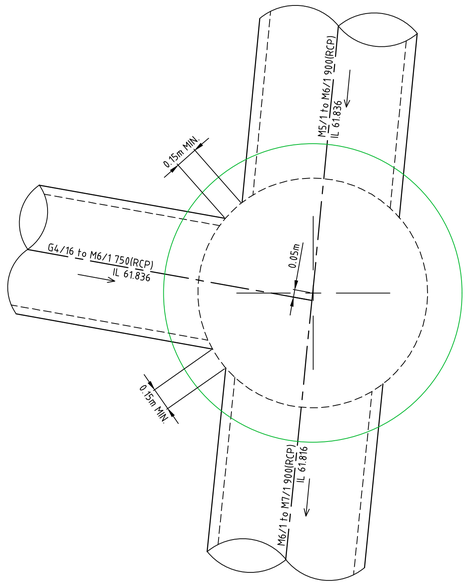
STORMWATER STRUCTURE M2/1 - 1050ø MANHOLE
SCALE : 1 : 20



STORMWATER STRUCTURE M4/1 - 1200ø MANHOLE
SCALE : 1 : 20



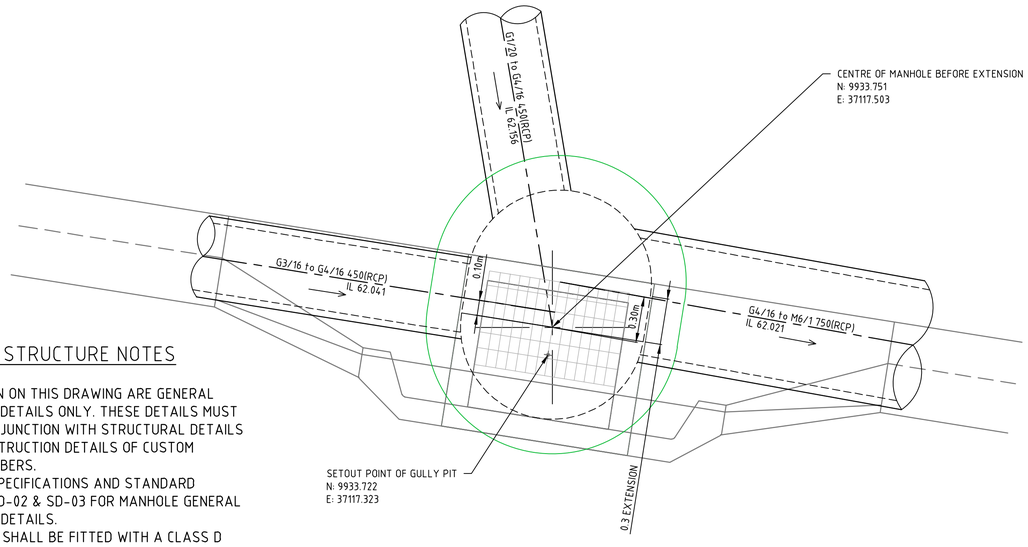
STORMWATER STRUCTURE M5/1 - 1200ø MANHOLE
SCALE : 1 : 20



STORMWATER STRUCTURE M6/1 - 1500ø MANHOLE
SCALE : 1 : 20

STORMWATER STRUCTURE NOTES

1. DETAILS SHOWN ON THIS DRAWING ARE GENERAL ARRANGEMENT DETAILS ONLY. THESE DETAILS MUST BE READ IN CONJUNCTION WITH STRUCTURAL DETAILS FOR FULL CONSTRUCTION DETAILS OF CUSTOM MANHOLE CHAMBERS.
2. REFER TO ICC SPECIFICATIONS AND STANDARD DRAWING NO. SD-02 & SD-03 FOR MANHOLE GENERAL CONSTRUCTION DETAILS.
3. ALL MANHOLES SHALL BE FITTED WITH A CLASS D HEAVY DUTY ROADWAY TRAFFICABLE ACCESS COVER AND FRAME IN ACCORDANCE WITH ICC STANDARD DRAWING SD-02.
4. STEP RUNGS TO ICC REQUIREMENTS. REFER TO ICC STANDARD DRAWINGS SD-02 & SD-10 AND IN ACCORDANCE WITH AS1657.



STORMWATER STRUCTURE G4/16 - 1200ø MANHOLE EXT 300mm
SCALE : 1 : 20

Rev	Amendments	Approved	Date
2	ISSUE FOR CONSTRUCTION	K.H.	14-02-25
1	ISSUE FOR CONSTRUCTION	K.H.	06-01-25
0	ISSUE FOR CONSTRUCTION	K.H.	12-11-24

H 1:20 SCALE @ A1
0 0.2 0.4 0.6 0.8 1.0

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AMORY AT RIPLEY

Designed	Checked
T.MULLEN	K. HOWELLS
Authorised	Date
M. READMAN RPEQ 28295	DECEMBER 23

AMORY AT RIPLEY
STAGE 01
STORMWATER STRUCTURE DETAILS

IPSWICH CITY COUNCIL
RIPLEY ESTATE DEVELOPMENT PTY LTD

CONSTRUCTION Drg No **320678-01-C0510** Rev **2**

file name: 320678-01AC0510.dwg layout name C0510 plotted by Charlene Chessells
FILEDETAILS

SAFETY IN DESIGN REPORT

DURING THE DESIGN SPIIRE AUSTRALIA PTY LTD HAS REGULARLY REVIEWED THE DESIGN IN PROGRESS TO ELIMINATE OR REDUCE SAFETY HAZARDS SO FAR AS IS REASONABLY PRACTICABLE FOR THE CONSTRUCTION, MAINTENANCE, OPERATION AND DEMOLITION OF THE PROPOSED CIVIL WORKS. IN ACCORDANCE WITH WORK HEALTH AND SAFETY ACT AND REGULATIONS, POTENTIAL RESIDUAL HAZARDS ASSOCIATED WITH THE CIVIL DESIGN AS DOCUMENTED WILL INCLUDE BUT MAY NOT BE LIMITED TO THE FOLLOWING:

RESIDUAL RISK	LIKELIHOOD (L)	IMPACT (I)	RISK RATING (L+I)
DEMOLITION	4	4	8
GROUND VIBRATIONS	4	2	6
SURROUNDING PROPERTY AND INFRASTRUCTURE INCLUDING TREES	4	4	8
EXCAVATIONS	4	4	8
TRIP/FALL HAZARDS	4	3	7
FIRE AND OTHER EMERGENCY HAZARDS, INCLUDING EMERGENCY ROUTES AND EXITS	3	4	7
UNDERGROUND AND ABOVE GROUND SERVICES AND OBSTRUCTIONS	4	4	8
LIFTING AND POSITIONING OF STRUCTURAL COMPONENTS	3	4	7
HAZARDOUS MATERIALS	3	4	7
NOISE EXPOSURE FROM CONSTRUCTION AND SURROUNDING ACTIVITIES	3	4	7
OVER LOADING DUE TO CONSTRUCTION LOADS	3	4	7
OPEN TRENCHING	4	4	8
UNDER-BORE & AND OTHER TRENCHLESS METHODOLOGY FOR PIPELINE CONSTRUCTION	3	4	7
WORKING AT HEIGHTS	3	5	8
GENERAL SITE WORKS AND USE OF CONSTRUCTION VEHICLES & EQUIPMENT	3	5	8
SITE ACCESS INCLUDING RESTRICTED WORK SPACES	4	4	8
INTERACTION OF VEHICLES AND PERSONNEL ON THE ROAD/TRANSPORT NETWORK	4	4	8

THE ABOVE LISTED HAZARDS ARE TO BE ADDRESSED BY IMPLEMENTING AND COMPLYING WITH THE FOLLOWING NOTES, AUSTRALIAN STANDARDS, REGULATORY REQUIREMENTS AND OTHER RELEVANT DOCUMENTATION RELATING TO THE PROPOSED WORKS:

1. IT IS THE CLIENT'S RESPONSIBILITY TO PROVIDE ALL "SAFETY IN DESIGN" REPORTS TO THE BUILDER, PROJECT MANAGER AND/ OR PRINCIPAL CONTRACTOR.
2. IT IS THE BUILDER, PROJECT MANAGER OR PRINCIPAL CONTRACTOR'S RESPONSIBILITY TO BUILD THE WORKS STRICTLY IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND NOT TO MAKE ANY VARIATIONS TO THE CONSTRUCTION WITHOUT THE SPECIFIC WRITTEN APPROVAL OF THE DESIGNERS.
3. IT IS THE CLIENT'S RESPONSIBILITY, THROUGH CONSULTATION AND ENGAGEMENT OF SUITABLY QUALIFIED PROFESSIONALS, TO MAKE THE DESIGNERS AWARE OF ANY INFORMATION RELATING TO HAZARDS AND RISKS WHERE CONSTRUCTION WORK IS TO BE CARRIED OUT, INCLUDING BUT NOT LIMITED TO: THE LOCATION OF UNDER GROUND AND ABOVE GROUND SERVICES, IDENTIFICATION OF CONTAMINATED SOILS AND OTHER MATERIALS OR THE PRESENCE OF DANGEROUS MATERIALS INCLUDING ASBESTOS.
4. THIS DESIGN HAS BEEN DOCUMENTED IN ACCORDANCE WITH RELEVANT AUSTRALIAN STANDARDS, LOCAL AUTHORITY REGULATIONS AND STANDARD BUILDING CODES OF PRACTICE UNLESS NOTED OTHERWISE. EACH LEVEL OF CONSTRUCTION IS TO BE COMPLETED AND INSPECTED TO ENSURE DESIGN COMPLIANCE BY THE CERTIFYING AUTHORITY PRIOR TO ADVANCING TO THE NEXT STAGE OF WORK. IT IS THE BUILDER, PROJECT MANAGER OR PRINCIPAL CONTRACTOR'S RESPONSIBILITY TO PROGRAM THE WORKS IN A SAFE MANNER AND TO HIGHLIGHT TO THE DESIGNERS ANY ASPECTS OF THE WORK THAT MAY REQUIRE FURTHER CLARIFICATION OR ADVICE WITH REGARD TO THE HEALTH AND SAFETY OF THE PROJECT.
5. ALL ASPECTS DETAILED OR NOTED IN THE DOCUMENTS ARE THOSE REQUIRED FOR THE COMPLETED WORKS ONLY. THE BUILDER, PROJECT MANAGER OR THE PRINCIPAL CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ANY NECESSARY TEMPORARY WORKS TO MAINTAIN THE STABILITY AND SAFETY OF THE WORKS THROUGHOUT THE CONSTRUCTION PERIOD. THE DESIGNER IS TO BE CONTACTED FOR FURTHER ADVICE IF REQUIRED.
6. WHERE THESE DESIGN DRAWINGS ONLY DOCUMENT PART OF THE WORKS, IT IS THE BUILDER, PROJECT MANAGER OR PRINCIPAL CONTRACTOR'S RESPONSIBILITY TO ENSURE ALL DESIGN DRAWINGS ARE CO-ORDINATED BETWEEN CONSULTANTS. FOR EXAMPLE, CO-ORDINATION TO ENSURE APPROPRIATE SLAB THICKENINGS AND DETAILING FOR LOAD-BEARING AND BRACING WALL ELEMENTS, ETC.
7. DURING CONSTRUCTION, THE BUILDER, PROJECT MANAGER OR PRINCIPAL CONTRACTOR SHALL PROTECT NEIGHBOURING PROPERTIES FROM NOISE IN ACCORDANCE WITH LOCAL AUTHORITY REQUIREMENTS, RADIATION, GROUND VIBRATIONS AND OTHER CONSTRUCTION HAZARDS. CONDITION (DILAPIDATION) REPORTS ON NEIGHBOURING PROPERTIES AND STRUCTURES ARE RECOMMENDED PRIOR TO CONSTRUCTION.
8. THE BUILDER, PROJECT MANAGER OR PRINCIPAL CONTRACTOR IS REQUIRED TO VERIFY AND IF NECESSARY CONDUCT FURTHER SEARCHES TO ACCURATELY LOCATE EASEMENTS, UNDER GROUND AND ABOVE GROUND SERVICES, PROPERTY BOUNDARIES, TREES, EXISTING STRUCTURES, AND OTHER OBSTRUCTIONS PRIOR TO CONSTRUCTION. THE DESIGNER IS TO BE IMMEDIATELY NOTIFIED OF ANY ELEMENTS NOT SHOWN ON THE APPROVED DRAWINGS AS THE DESIGN AND SAFETY DESIGN REPORT MAY REQUIRE AMENDING.
9. THE BUILDER, PROJECT MANAGER OR PRINCIPAL CONTRACTOR MUST OBTAIN DESIGN AND INSPECTION CERTIFICATES ON ALL ELEMENTS OF THE WORKS WHICH PRESENT ANY SAFETY RISKS.
10. THE CONSTRUCTION IS TO BE FULLY CARRIED OUT IN ACCORDANCE WITH ALL DESIGN DRAWINGS AND NOTES AS DOCUMENTED. IF CONSTRUCTION CEASES AT ANY STAGE, THE DESIGNERS ARE TO BE NOTIFIED TO PROVIDE ADVICE ON THE SAFETY OF COMPLETED CONSTRUCTION WORK AT THAT TIME.
11. IT IS THE BUILDER, PROJECT MANAGER OR PRINCIPAL CONTRACTOR'S RESPONSIBILITY TO INFORM THE DESIGNERS OF ANY CHANGE TO CONTRACTUAL ARRANGEMENTS BETWEEN THE CLIENT AND THEMSELVES WHICH MAY IMPACT ON THE DESIGN AND SAFETY OF THE DESIGN.
12. THE BUILDER, PROJECT MANAGER OR PRINCIPAL CONTRACTOR SHALL PROVIDE SUITABLE FENCING AROUND ALL EXCAVATIONS AND AT NO STAGE SHOULD AN EXCAVATION BE APPROACHED OR ENTERED INTO UNLESS AN APPROVED AND CERTIFIED SHORING SYSTEM HAS BEEN INSTALLED OR THE BANKS HAVE BEEN BATTERED AND/ OR BENCHED IN ACCORDANCE WITH THE PROJECTS GEOTECHNICAL ENGINEERING SPECIFICATION AND/ OR WRITTEN INSTRUCTIONS BY THE INSPECTING GEOTECHNICAL ENGINEER.
13. AT NO STAGE SHALL SITE PERSONNEL PASS UNDER MATERIALS BEING LIFTED AND MOVED AROUND ON SITE. IT IS THE BUILDER, PROJECT MANAGER OR PRINCIPAL CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT SITE MATERIALS ARE DELIVERED, TRANSPORTED, STORED AND POSITIONED IN A SAFE MANNER AND IN ACCORDANCE WITH THE PRODUCT SPECIFICATION, THE SITE SPECIFIC SAFETY PLAN AND GENERAL SAFETY INDUCTION REGULATIONS.
14. CONTRACTORS ARE REQUIRED TO OBTAIN AND COMPLY WITH MATERIAL PRODUCT SPECIFICATIONS AND RECOMMENDATIONS WHEN USING MATERIALS SPECIFIED IN THE DESIGN DOCUMENTS.
15. THE BUILDER, PROJECT MANAGER OR PRINCIPAL CONTRACTOR MUST ELIMINATE OR LIMIT (AS FAR AS REASONABLY PRACTICABLE) SLIP AND TRIP HAZARDS AND PROTRUDING, SHARP OR ABRASIVE ELEMENTS ON SITE. HAZARDOUS ELEMENTS MUST BE CAPPED, ADEQUATELY SCREENED OR CLEARLY MARKED TO ENSURE SITE SAFETY.
16. IT IS THE BUILDER, PROJECT MANAGER OR PRINCIPAL CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT SITE WORKERS ARE SUITABLY QUALIFIED, TRAINED AND INSURED FOR THE TASKS BEING UNDERTAKEN ON SITE.
17. IT IS THE BUILDER, PROJECT MANAGER OR PRINCIPAL CONTRACTOR'S RESPONSIBILITY TO ENSURE THAT ALL SITE PERSONNEL ARE PROVIDED WITH ADEQUATE SPACE, VENTILATION AND APPROPRIATE PERSONAL PROTECTIVE EQUIPMENT TO UNDERTAKE THE WORKS REQUIRED. ALL CONSTRUCTION EQUIPMENT IS TO BE USED IN ACCORDANCE WITH BEST INDUSTRY SAFETY PRACTICES AND REGULATIONS.
18. DEMOLITION WORKS ARE REQUIRED TO BE CARRIED OUT IN A SAFE, SYSTEMATIC AND ORDERLY MANNER IN ACCORDANCE WITH THE SITE SPECIFIC SAFETY PLAN AND ALL GENERAL SAFETY INDUCTION REGULATIONS. TEMPORARY PROPPING OF MEMBERS MAY BE REQUIRED IN ACCORDANCE WITH THE DIRECTION OF A SUITABLY QUALIFIED PROFESSIONAL IN ACCORDANCE WITH INDUSTRY SAFETY PRACTICES AND REGULATIONS.
19. AT ALL TIMES THE BUILDER, THE PROJECT MANAGER OR PRINCIPAL CONTRACTOR IS TO PROVIDE SAFE ACCESS ONTO AND AROUND THE SITE INCLUDING ADEQUATE STAIRS, SCAFFOLDING, SECURE LADDER ACCESS, SAFE WORKING PLATFORMS, ACCESS PATHS FREE FROM FALLING OBJECTS, ADEQUATE RAILINGS, FALL ARREST SYSTEMS, ETC.
20. ALL FORMWORK AND SCAFFOLDING SYSTEMS ARE TO BE DESIGNED AND CERTIFIED BY A LICENSED CONTRACTOR TO COMPLY WITH RELEVANT AUSTRALIAN STANDARDS AND KEPT AND MAINTAINED IN A GOOD WORKING ORDER. REGULAR CHECKS ON ERECTED MEMBERS AND FIXINGS MUST BE CARRIED OUT BY A QUALIFIED PROFESSIONAL TO ENSURE COMPLIANCE WITH THE DESIGN.
21. CLIMBING ON SCAFFOLDING OR FORMWORK AND WORKING AT HEIGHTS WITHOUT SUITABLY APPROVED RAILINGS, BARRIERS AND RESTRAINTS FIXED OFF TO CERTIFIED ANCHOR POINTS IS STRICTLY PROHIBITED.
22. ALL SITE MACHINERY AND ELECTRICAL EQUIPMENT IS TO BE KEPT IN GOOD WORKING ORDER WITH CURRENT SAFETY TAGGING AND SERVICING WHERE APPLICABLE.
23. THE BUILDER, PROJECT MANAGER OR PRINCIPAL CONTRACTOR IS TO ADEQUATELY TREAT AND DISPOSE OF DANGEROUS SITE MATERIALS INCLUDING CONTAMINATED SOILS AND ASBESTOS IN ACCORDANCE WITH AUTHORITY REGULATIONS, INDUSTRY STANDARDS AND PRACTICES.
24. THE BUILDER, PROJECT MANAGER OR PRINCIPAL CONTRACTOR IS TO ENSURE THAT THE SITE IS MAINTAINED IN A SAFE WORKING MANNER AND THAT ALL SITE PRACTICES ARE IN ACCORDANCE WITH CURRENT WORK PLACE HEALTH AND SAFETY LAWS AND REGULATIONS.

(L) LIKELIHOOD OF THE CONSEQUENCES OCCURING	
RATING	DESCRIPTION
ALMOST CERTAIN 5	HAS HAPPENED SEVERAL TIMES IN THE PAST YEAR AND IN EACH OF THE PREVIOUS 5 YEARS OR HAS A >90% CHANCE OF OCCURRING IN THE NEXT 24 MONTHS IF THE RISK IS NOT MITIGATED.
LIKELY 4	HAS HAPPENED AT LEAST ONCE IN THE PAST YEAR AND IN EACH OF THE PREVIOUS 5 YEARS OR HAS A 60-90% CHANCE OF OCCURRING IN THE NEXT 24 MONTHS IF THE RISK IS NOT MITIGATED.
POSSIBLE 3	HAS HAPPENED DURING THE PAST 5 YEARS BUT NOT EVERY YEAR OR HAS A 40-60% CHANCE OF OCCURRING IN THE NEXT 24 MONTHS IF THE RISK IS NOT MITIGATED.
UNLIKELY 2	MAY HAVE OCCURRED ONCE IN THE LAST 5 YEARS OR HAS A 10-30% CHANCE OF OCCURRING IN THE FUTURE IF THE RISK IS NOT MITIGATED.
RARE 1	HAS NOT OCCURRED IN THE PAST 5 YEARS OR MAY OCCUR IN EXCEPTIONAL CIRCUMSTANCES AND LESS THAN 10% CHANCE OF OCCURRING IN THE NEXT 24 MONTHS IF THE RISK IS NOT MITIGATED.

(I) IMPACT OR CONSEQUENCE RATING TABLE	
RATING	DESCRIPTION
SEVERE 5	ONE OR MORE FATALITIES OR LIFE THREATENING INJURIES OR ILLNESS, OR PUBLIC OR STAFF EXPOSED TO A SEVERE, ADVERSE LONG TERM HEALTH IMPACT OR LIFE THREATENING HAZARD.
MAJOR 4	ONE OR MORE MAJOR INJURIES OR ILLNESS REQUIRING MAJOR SURGERY OR RESULTING IN PERMANENT DISABLEMENT OR PUBLIC OR STAFF EXPOSED TO A HAZARD THAT RESULTS IN MAJOR SURGERY, PERMANENT DISABLEMENT OR ADVERSE PERMANENT HEALTH EFFECTS.
MODERATE 3	ONE OR MORE INJURIES OR ILLNESS REQUIRING TREATMENT BY A PHYSICIAN OR HOSPITALISATION OR PUBLIC OR STAFF EXPOSED TO A HAZARD THAT COULD CAUSE INJURIES OR MODERATE ADVERSE HEALTH EFFECTS.
MINOR 2	ONE OR MORE INJURIES OR ILLNESS REQUIRING TREATMENT BY A QUALIFIED FIRST AID PERSON OR EXPOSURE OF PUBLIC OR STAFF TO A HAZARD THAT COULD CAUSE MINOR INJURIES OR MINOR ADVERSE HEALTH EFFECTS.
NEGLIGIBLE 1	MINOR INJURY OR AILMENT THAT DOES NOT REQUIRE MEDICAL TREATMENT BY A PHYSICIAN OR A QUALIFIED FIRST AID PERSON.

LIKELIHOOD RATING	CONSEQUENCE RATING				
	SEVERE 5	MAJOR 4	MODERATE 3	MINOR 2	NEGLIGIBLE 1
ALMOST CERTAIN 5	VERY HIGH 10	VERY HIGH 9	HIGH 8	HIGH 7	MEDIUM 6
LIKELY 4	VERY HIGH 9	HIGH 8	HIGH 7	MEDIUM 6	MEDIUM 5
POSSIBLE 3	HIGH 8	HIGH 7	MEDIUM 6	MEDIUM 5	LOW 4
UNLIKELY 2	HIGH 7	MEDIUM 6	MEDIUM 5	LOW 4	LOW 3
RARE 1	MEDIUM 6	MEDIUM 5	LOW 4	LOW 3	VERY LOW 2

RISK LEVEL	REQUIRED ACTION
VERY HIGH	ACT IMMEDIATELY: THE PROPOSED TASK OR PROCESS ACTIVITY MUST NOT PROCEED. STEPS MUST BE TAKEN TO LOWER THE RISK LEVEL TO AS LOW AS REASONABLY PRACTICABLE USING THE HIERARCHY OF RISK CONTROLS.
HIGH	ACT TODAY: THE PROPOSED ACTIVITY CAN ONLY PROCEED, PROVIDED THAT: (i) THE RISK LEVEL HAS BEEN REDUCED TO AS LOW AS REASONABLY PRACTICABLE USING THE HIERARCHY OF RISK CONTROLS; (ii) THE RISK CONTROLS MUST INCLUDE THOSE IDENTIFIED IN LEGISLATION, STANDARDS, CODES OF PRACTICE ECT. (iii) THE RISK ASSESSMENT HAS BEEN REVIEWED AND APPROVED BY THE SUPERVISOR AND (iv) THE SUPERVISOR MUST REVIEW AND DOCUMENT THE EFFECTIVENESS OF THE IMPLEMENTED RISK CONTROLS.
MEDIUM	ACT THIS WEEK: THE PROPOSED TASK OR PROCESS CAN PROCEED, PROVIDED THAT: (i) THE RISK LEVEL HAS BEEN REDUCED TO AS LOW AS REASONABLY PRACTICABLE USING THE HIERARCHY OF RISK CONTROLS; (ii) THE RISK ASSESSMENT HAS BEEN REVIEWED AND APPROVED BY THE SUPERVISOR.
LOW	ACT THIS MONTH: MANAGED BY LOCAL DOCUMENTED ROUTINE PROCEDURES WHICH MUST INCLUDE APPLICATION OF THE HIERARCHY OF CONTROLS.
VERY LOW	KEEP A WATCHING BRIEF: ALTHOUGH THE RISK LEVEL IS LOW THE SITUATION SHOULD BE MONITORED PERIODICALLY TO DETERMINE IF THE SITUATION CHANGES.

HIERARCHY OF CONTROLS	
1	ELIMINATE THE HAZARD - REMOVE IT COMPLETELY FROM YOUR WORKPLACE.
2	SUBSTITUTE THE HAZARD - WITH A SAFER ALTERNATIVE.
3	ISOLATE THE HAZARD - AS MUCH AS POSSIBLE AWAY FROM WORKERS.
4	USE ENGINEERING CONTROLS - ADAPT TOOLS OR EQUIPMENT TO REDUCE THE RISK.
5	USE ADMINISTRATIVE CONTROLS - CHANGE WORK PRACTICES AND ORGANISATION.
6	USE PERSONAL PROTECTIVE EQUIPMENT (PPE) - THIS SHOULD BE THE LAST OPTION AFTER YOU HAVE CONSIDERED ALL OTHER OPTIONS FOR YOUR WORKPLACE.

Rev	Amendments	Approved	Date
2	ISSUE FOR CONSTRUCTION	K.H.	18-02-25
1	ISSUE FOR CONSTRUCTION	K.H.	06-01-25
0	ISSUE FOR CONSTRUCTION	K.H.	20-11-24
C	ISSUE FOR APPROVAL	K.H.	05-09-24
B	ISSUE FOR TENDER	K.H.	21-02-24
A	ISSUE FOR APPROVAL	K.H.	01-12-23

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AMORY AT RIPLEY

Designed	Checked
T.MULLEN	K. HOWELLS
Authorised	Date
M. READMAN RPEQ 28295	DECEMBER 23

AMORY AT RIPLEY STAGE 01
SAFETY IN DESIGN REPORT

IPSWICH CITY COUNCIL
RIPLEY ESTATE DEVELOPMENT PTY LTD

CONSTRUCTION Drg No **320678-01-C0900** Rev **2**

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