

DRAWING SHEET INDEX

- E001 - SHEET INDEX AND LOCALITY PLAN
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- E003 - LUMINAIRE AND COLUMN DETAILS AND QUANTITIES
- E004 - CALCULATIONS RESULTS
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LOCALITY PLAN (SCALE 1:400 @A3)



PROJECT 3 PIGEON MOUNTAIN ROAD			
DRAWING SHEET INDEX AND LOCALITY PLAN			
SCALE @A3 1:600 @A3	DESIGNED BY MLB	CHECKED BY GU	APPROVED BY JA
PROJECT NUMBER 25-0263	DRAWING NUMBER E001	REVISION B	

THE VALUES SHOWN IN THIS REPORT ARE THE RESULT OF PRECISION CALCULATIONS. IN PRACTICE THE VALUES MAY VARY DUE TO TOLERANCE ON LUMINAIRES, LUMINAIRE POSITIONING, SURFACE FINISHES AND ELECTRICAL SUPPLY. THE INFORMATION CONTAINED IN THIS DOCUMENT IS PROPRIETARY TO NORWICH GROUP LTD.

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A	FOR RC APPLICATION	01-12-2025
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GENERAL NOTES



1. ALL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE VECTOR, AUCKLAND UNITARY PLAN (OPERATIVE IN PART) SECTION E24, AS/NZS 1158 (LIGHTING FOR ROADS AND PUBLIC SPACES), AND THE ELECTRICAL (SAFETY) REGULATIONS 2010,AS/NZS 3000, AND AS/NZS 3008.
2. CONNECTION TO THE VECTOR NETWORK IS REQUIRED - PRIVATE LIGHTING WILL REQUIRE APPROPRIATE METERING EQUIPMENT. ELECTRICAL DESIGN TO BE COMPLETED BY OTHERS, INCLUDING FUSING AND EARTHING.
3. EARTHING OF THE NEW COLUMNS AND LUMINAIRES SHALL CONFORM TO THE REQUIREMENTS OF THE NZ ELECTRICAL (SAFETY) REGULATIONS AND AS/NZS 3000.
4. THE DESIGN UTILISES VARIOUS COLUMN SETBACKS AS NOTED ON THE CONSTRUCTION DETAIL DRAWING SET. WHERE INSTALLATION AT A LOCATION REQUIRES VARIATION FROM THIS, THE DESIGN ALLOWS FOR A TOLERANCE OF +/- 0.5 m PERPENDICULAR TO THE KERB. FOR VARIATIONS GREATER THAN THIS, THE COMPLIANCE OF DESIGN SHALL BE VERIFIED BY THE DESIGNER/ENGINEER.
5. COLUMN LOCATION TOLERANCE PARALLEL WITH THE ROADWAY IS 1.0 m IN EITHER DIRECTION. EXCEEDING THIS TOLERANCE WILL REQUIRE APPROVAL BY THE DESIGNER/ENGINEER PRIOR TO EXCAVATION AND INSTALLATION.
6. LUMINAIRE MOUNTING HEIGHT SHALL BE TAKEN AS THE HEIGHT OF THE LUMINAIRE ABOVE THE ROAD SURFACE. INSTALLED LUMINAIRE HEIGHT SHALL BE WITHIN +/- 0.2 m OF THE DESIGN MOUNTING HEIGHT. IF DURING INSTALLATION SITE CONDITIONS CAUSE THE LUMINAIRE TO BE OUTSIDE THIS TOLERANCE, APPROVAL BY THE DESIGNER/ENGINEER WILL BE REQUIRED PRIOR TO FINAL EXCAVATION AND INSTALLATION.
7. LUMINAIRES SHALL BE INSTALLED WITH A TILT ANGLE OF 0 (ZERO) DEGREES, I.E. LED CIRCUIT BOARD MUST BE AT HORIZONTAL. REFER TO 'SPECIFIC NOTES' AND TO DRAWINGS FOR DETAILS OF ANY EXCEPTIONS TO THIS.
8. LIGHTING CALCULATIONS HAVE BEEN COMPLETED IN ACCORDANCE WITH THE REQUIREMENTS OF THE CURRENT AS/NZS 1158 STANDARDS (LIGHTING FOR ROADS AND PUBLIC SPACES) AND THE AUCKLAND COUNCIL UNITARY PLAN (OPERATIVE IN PART) E24 (LIGHTING) REQUIREMENTS.
9. PHOTOMETRIC DATA USED FOR THIS DESIGN HAS BEEN SOURCED FROM THE RELEVANT SUPPLIER AND IS ASSUMED TO BE CORRECT.

SAFETY IN DESIGN

NORWICH GROUP HAS FOLLOWED ALL PRACTICAL MEASURES TO ENSURE 'SAFETY IN DESIGN' IN ACCORDANCE WITH THE NZ HEALTH AND SAFETY AT WORK ACT 2015

LEGEND - ISOLUX PLOTS

MAINTAINED ISOLUX PLOTS		
ISOLUX COLOUR	VALUE	
	0.70 lux	PR2 Minimum
	0.50 lux	PP3 Minimum

INITIAL ISOLUX PLOTS	
ISOLUX COLOUR	VALUE
	2 lux
	10 lux

PROJECT 3 PIGEON MOUNTAIN ROAD			
DRAWING NOTES, LEGENDS AND DETAILS			
SCALE @A3 N.T.S.	DESIGNED BY MLB	CHECKED BY GU	APPROVED BY JA
PROJECT NUMBER 25-0263	DRAWING NUMBER E002	REVISION B	

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DETAIL - NEW LUMINAIRES

QTY	CODE	DESCRIPTION
23	Lx	NEW NORWICH LUMA 701 (3000K, ROAD OPTICS, RAL TBC)
17	L2	NEW NORWICH BOLLARD (3000K, PATHWAY OPTIC, RAL TBC)

MF
0.80
0.80

LUMINOUS INTENSITY	
Gamma80-90	Gamma90
147 cd	0.0 cd
43 cd	0.0 cd

INVENTORY

QTY	DESCRIPTION	LOCATION
23	NEW LUMINAIRE (Lx) TO BE ESTABLISHED	18-40
17	NEW LUMINAIRE (L2) TO BE ESTABLISHED	1-17

DETAIL OF ACTIONS BY LOCATIONS

LOCATION	ASSET	DESCRIPTION OF WORKS
1-17	BOLLARD	ESTABLISH NEW LUMINAIRE (L2)
18-40	LUMINAIRE COLUMN	ESTABLISH NEW LUMINAIRE (L1) ESTABLISH NEW 4m POST-TOP COLUMN

PROJECT 3 PIGEON MOUNTAIN ROAD			
DRAWING COLUMN AND LUMINAIRE DETAILS			
SCALE @A3 N.T.S.	DESIGNED BY MLB	CHECKED BY GU	APPROVED BY JA
PROJECT NUMBER 25-0263	DRAWING NUMBER E003	REVISION B	

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CALCULATION RESULTS - ILLUMINANCE - ROAD (MAINTAINED)

Calculation Summary						COMPLIANCE REQUIREMENTS		
Project: CALCULATIONS								
Label	Units	Min	Avg	Max	Max/Avg	Min	Average	Max/Avg
Footpath 1 - Eh (PP3)	Lux	1.9	34.38	108.7	3.16	>= 0.50 lux	>= 3 lux	<= 5
Footpath 1 - Ev1 (PP3)	Lux	0.3	2.35	9.8	4.17	>= 0.10 lux	n/a	n/a
Footpath 1 - Ev2 (PP3)	Lux	0.6	2.67	9.9	3.71	>= 0.10 lux	n/a	n/a
Footpath 2 - Eh (PP3)	Lux	2.4	19.33	33.9	1.75	>= 0.50 lux	>= 3 lux	<= 5
Footpath 2 - Ev1 (PP3)	Lux	1.5	3.30	4.6	1.39	>= 0.10 lux	n/a	n/a
Footpath 2 - Ev2 (PP3)	Lux	0.6	2.43	4.2	1.73	>= 0.10 lux	n/a	n/a
Footpath 3 - Eh (PP3)	Lux	2.5	22.87	50.1	2.19	>= 0.50 lux	>= 3 lux	<= 5
Footpath 3 - Ev1 (PP3)	Lux	2.0	9.45	38.8	4.11	>= 0.10 lux	n/a	n/a
Footpath 3 - Ev2 (PP3)	Lux	1.9	12.58	51.0	4.05	>= 0.10 lux	n/a	n/a
JOAL 1 (PR2)	Lux	2.5	14.68	27.1	1.85	>= 0.70 lux	>= 3.5 lux	<= 8
JOAL 2 (PR2)	Lux	0.5	9.92	26.8	2.70	>= 0.70 lux	>= 3.5 lux	<= 8
JOAL 3 (PR2)	Lux	0.8	8.34	20.7	2.48	>= 0.70 lux	>= 3.5 lux	<= 8
JOAL 4 (PR2)	Lux	0.9	9.74	17.7	1.82	>= 0.70 lux	>= 3.5 lux	<= 8

CALCULATION RESULTS - ILLUMINANCE & INTENSITY - E24 (INITIAL)

Calculation Summary			COMPLIANCE REQUIREMENTS	
Project: E24 - Spill Lighting				
Label	Units	Max	Maximum	Category
Lot 1-7_Cd_Seg1	N.A.	15	<= 1000 Cd	E24
Lot 1-7_Cd_Seg10	N.A.	30	<= 1000 Cd	E24
Lot 1-7_Cd_Seg11	N.A.	29	<= 1000 Cd	E24
Lot 1-7_Cd_Seg12	N.A.	17	<= 1000 Cd	E24
Lot 1-7_Cd_Seg2	N.A.	0	<= 1000 Cd	E24
Lot 1-7_Cd_Seg3	N.A.	32	<= 1000 Cd	E24
Lot 1-7_Cd_Seg4	N.A.	40	<= 1000 Cd	E24
Lot 1-7_Cd_Seg5	N.A.	57	<= 1000 Cd	E24
Lot 1-7_Cd_Seg6	N.A.	25	<= 1000 Cd	E24
Lot 1-7_Cd_Seg7	N.A.	27	<= 1000 Cd	E24
Lot 1-7_Cd_Seg8	N.A.	19	<= 1000 Cd	E24
Lot 1-7_Cd_Seg9	N.A.	34	<= 1000 Cd	E24
Lot 1-7_III_Seg1	Lux	0.1	<= 2 lux	E24
Lot 1-7_III_Seg10	Lux	0.1	<= 2 lux	E24
Lot 1-7_III_Seg11	Lux	0.2	<= 2 lux	E24
Lot 1-7_III_Seg12	Lux	0.0	<= 2 lux	E24
Lot 1-7_III_Seg2	Lux	0.0	<= 2 lux	E24
Lot 1-7_III_Seg3	Lux	0.7	<= 2 lux	E24
Lot 1-7_III_Seg4	Lux	0.3	<= 2 lux	E24
Lot 1-7_III_Seg5	Lux	1.0	<= 2 lux	E24
Lot 1-7_III_Seg6	Lux	0.2	<= 2 lux	E24
Lot 1-7_III_Seg7	Lux	0.2	<= 2 lux	E24
Lot 1-7_III_Seg8	Lux	0.1	<= 2 lux	E24
Lot 1-7_III_Seg9	Lux	0.3	<= 2 lux	E24
Lot 12-18_Cd_Seg1	N.A.	25	<= 1000 Cd	E24
Lot 12-18_Cd_Seg2	N.A.	21	<= 1000 Cd	E24
Lot 12-18_Cd_Seg3	N.A.	12	<= 1000 Cd	E24
Lot 12-18_Cd_Seg4	N.A.	17	<= 1000 Cd	E24
Lot 12-18_Cd_Seg5	N.A.	5	<= 1000 Cd	E24
Lot 12-18_III_Seg1	Lux	0.4	<= 2 lux	E24
Lot 12-18_III_Seg2	Lux	0.7	<= 2 lux	E24
Lot 12-18_III_Seg3	Lux	0.3	<= 2 lux	E24
Lot 12-18_III_Seg4	Lux	0.5	<= 2 lux	E24
Lot 12-18_III_Seg5	Lux	0.0	<= 2 lux	E24
Lot 19-24_Cd_Seg1	N.A.	24	<= 1000 Cd	E24
Lot 19-24_Cd_Seg2	N.A.	24	<= 1000 Cd	E24
Lot 19-24_III_Seg1	Lux	0.9	<= 2 lux	E24
Lot 19-24_III_Seg2	Lux	1.2	<= 2 lux	E24
Lot 25-33_Cd_Seg1	N.A.	24	<= 1000 Cd	E24
Lot 25-33_Cd_Seg2	N.A.	93	<= 1000 Cd	E24
Lot 25-33_Cd_Seg3	N.A.	26	<= 1000 Cd	E24
Lot 25-33_III_Seg1	Lux	0.2	<= 2 lux	E24
Lot 25-33_III_Seg2	Lux	0.9	<= 2 lux	E24
Lot 25-33_III_Seg3	Lux	0.2	<= 2 lux	E24
Lot 34-41_Cd_Seg1	N.A.	21	<= 1000 Cd	E24

PROJECT: 3 PIGEON MOUNTAIN ROAD			
DRAWING: CALCULATION RESULTS			
SCALE @A3	DESIGNED BY	CHECKED BY	APPROVED BY
N.T.S.	MLB	GU	JA
PROJECT NUMBER	DRAWING NUMBER	REVISION	
25-0263	E004	B	

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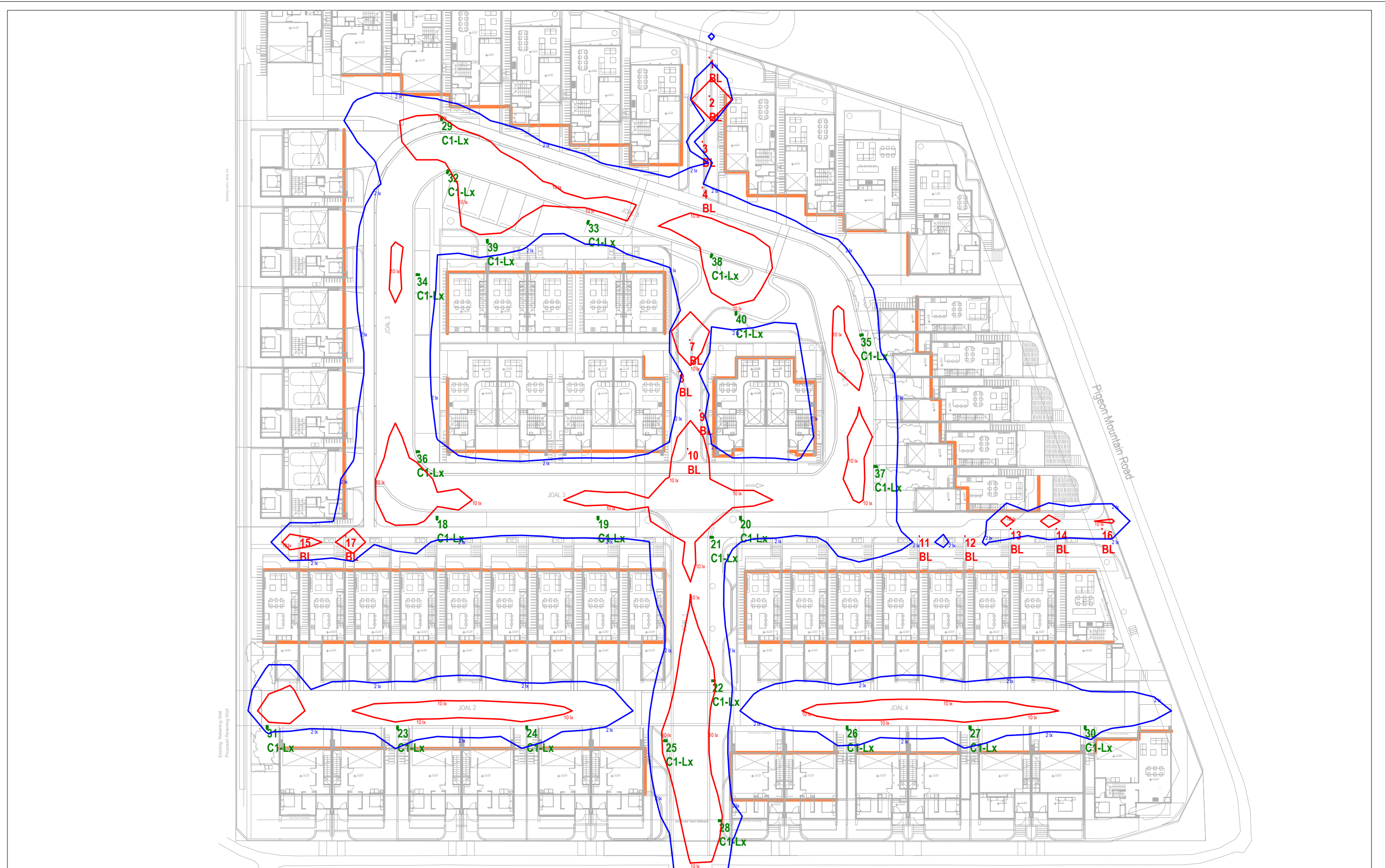
PROJECT 3 PIGEON MOUNTAIN ROAD			
DRAWING MAINTAINED ISOLINES - OVERALL			
SCALE @A3 1:400 @A3	DESIGNED BY MLB	CHECKED BY GU	APPROVED BY JA
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PROJECT 3 PIGEON MOUNTAIN ROAD			
DRAWING INITIAL ISOLINES - OVERALL			
SCALE @A3 1:400 @A3	DESIGNED BY MLB	CHECKED BY GU	APPROVED BY JA
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