CATALINA ESTATE
Clarkson, WA

STAGE 12 & 13 STREETSCAPES

LANDSCAPE PLANS

CLIENT: TAMALA PARK REGIONAL COUNCIL

ISSUE FOR: *AS CONSTRUCTED*
DATE: JULY 2017

emerge ASSOCIATES
Integrated Science & Design

LANDSCAPE DRAWING LIST

SHEET:	REVISION:	TITLE:	SCALE:
CAT-22-00	0	COVER PAGE	NTS
CAT-22-01	0	LANDSCAPE PLAN	1:250
CAT-22-02	0	LANDSCAPE PLAN	1:250

IRRIGATION DRAWING LIST

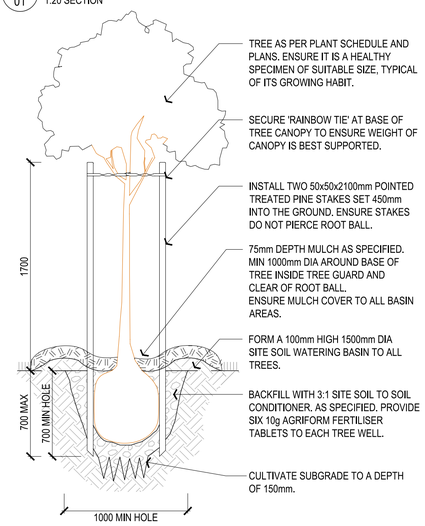
CE-1213-1-SS-01	0	IRRIGATION LAYOUT	1:250
CE-1213-1-SS-02	0	IRRIGATION LAYOUT	1:250
CE-1213-1-SS-03	0	IRRIGATION LAYOUT	NTS



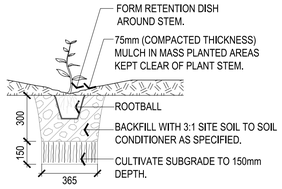


LIMESTONE BOULDERS SOURCED ONSITE. MIN HEIGHT SIZE 500mm - MAX SIZE 800mm. GENERALLY BOULDERS TO BE BURIED APPROX. 1/3 OF EXPOSED HEIGHT. CONTRACTOR TO LIASE WITH SUPERINTENDENT FOR BOULDER SOURCING.

1/01 FEATURE BOULDERS
1:20 SECTION



2/01 TYPICAL 100 & 200 LITRE TREE PLANTING
1:25 SECTION



3/01 130mm - 200mm POT PLANTING
1:20 SECTION

LEGEND

- EXTENT OF WORKS
- SHRUB PLANTING
- 600mm WIDE MULCH MAINTENANCE STRIP
- PROPOSED MATURE TREE *Araucaria heterophylla* - Norfolk Island Pine (1/01)
- PROPOSED 100LT TREE *Agonis flexuosa* - WA Peppermint (1/01)
- PROPOSED 200LT TREE *Melaleuca lanceolata* - Rottnest Island Teatree (1/01)
- PROPOSED 100LT TREE *Eucalyptus caesia* - Silver Princess (1/01)
- STREETLIGHTS BY CIVIL CONTRACTOR
- LIMESTONE BOULDERS AS SPECIFIED

STANDARD NOTES

1. **SET OUT & DIMENSIONS.** THE CONTRACTOR SHALL SET OUT ALL PATHS, WALLS, HARD SURFACES AND ELEMENTS EITHER ON OR OFFSITE PRIOR TO CONSTRUCTION AND SHALL OBTAIN THE SUPERINTENDENTS SET OUT APPROVAL PRIOR TO WORKS COMMENCING. WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALE. CHECK ALL DRAWING SCALES IN CONJUNCTION WITH DRAWING SIZE.
2. **SERVICES & SITE ASSETS.** THE CONTRACTOR SHALL INVESTIGATE THE NATURE AND LOCATION OF ALL EXISTING SERVICES AND RETAINED SITE ASSETS AFFECTED BY THEIR WORKS. FAILURE TO TAKE DUE CARE SHALL NOT LIMIT THE CONTRACTORS LIABILITIES.
3. **REFERENCE.** THE CONTRACTOR SHALL REFER TO ALL CONTRACT DOCUMENTS, THE SPECIFICATION AND DRAWINGS PRIOR TO AND DURING THE WORKS.
4. **DISCREPANCIES.** NOTIFY SUPERINTENDENT OF ANY SUSPECTED OR KNOWN DISCREPANCIES OR ERRORS PRIOR TO THE ORDERING OF AFFECTED MATERIALS AND OR CONSTRUCTION OF AFFECTED WORKS.
5. **RELEVANT STANDARDS.** THE CONTRACTOR SHALL UNDERTAKE ALL PRICING AND WORKS IN ACCORDANCE WITH CURRENT INDUSTRY BEST PRACTICE AND ALL RELEVANT AUSTRALIAN STANDARDS.
6. **SERVICE LOCATOR.** THE CONTRACTOR SHALL UNDERTAKE A DIAL BEFORE YOU DIG PROCESS PRIOR TO COMMENCING WORKS ON SITE. THE CONTRACTOR SHALL ENGAGE A SERVICE LOCATOR TO MAP THE SPECIFIC LOCATIONS AND DEPTH OF ALL SERVICES AND ADVISE ALL RELEVANT STAFF AND SUBCONTRACTORS IN WRITING PRIOR TO COMMENCING WORKS ON SITE.

REV	DATE	BY	ISSUE OR AMENDMENT
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emerge ASSOCIATES
Integrated Science & Design
PERTH (08) 9380 4988 • MARGARET RIVER (08) 9758 8159

PROJECT
CATALINA
Clarkson, WA
STAGE OR PHASE
STAGE 12 & 13 STREETSCAPES

DRAWING TITLE
LANDSCAPE CONSTRUCTION PLAN

CLIENT
TAMALA PARK REGIONAL COUNCIL

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DATE INITIALLY DRAWN	27.02.2015		
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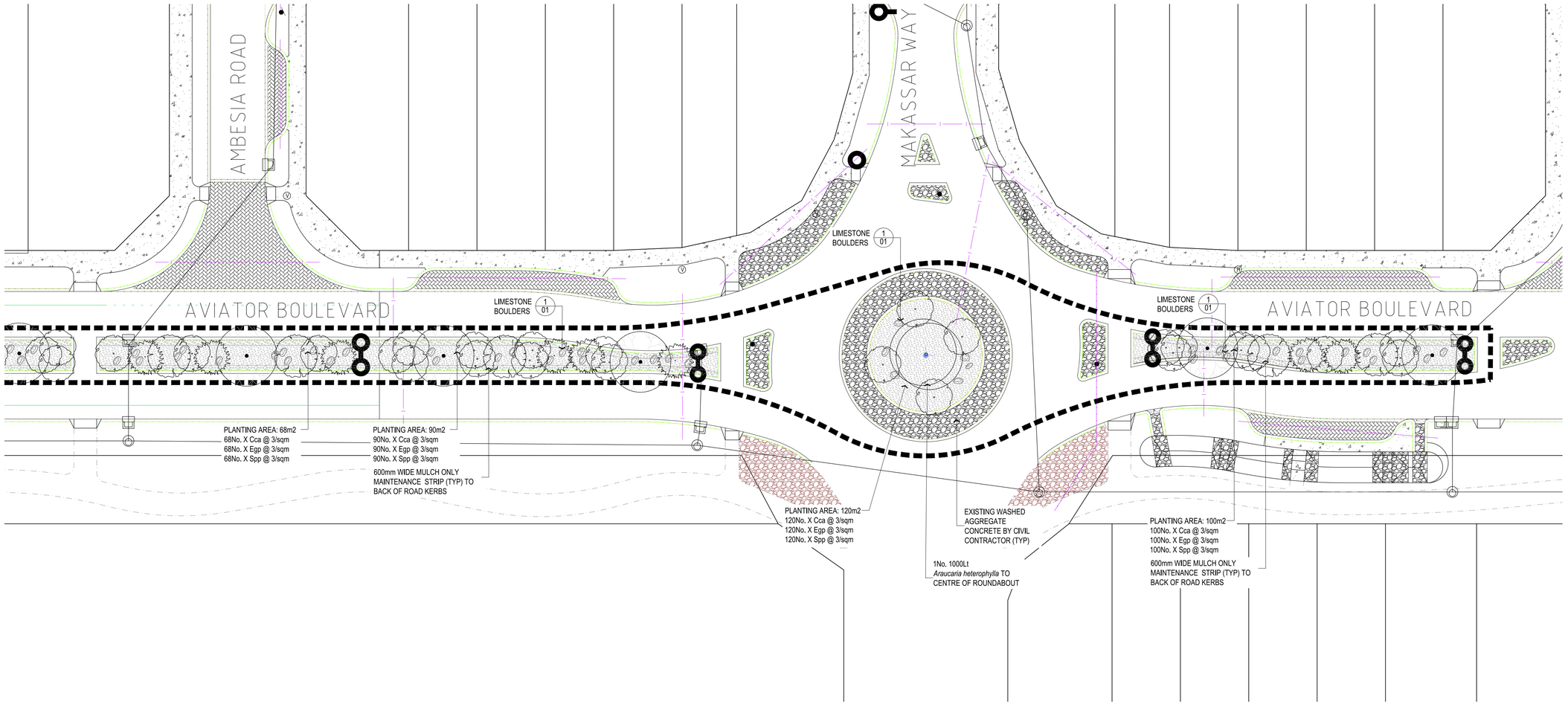
DRAWING NUMBER
CAT-22-01

REV
0

REF: U:\CURRENT PROJECTS\CATALINA, TAMALA PARK\CLL\DRAWINGS\JOB CODE\ LANDSCAPE\STAGE 12 13 STREETSCAPE\CAT-22-01.DWG LAST PLOTTED: 27/06/2017 2:39 PM BY: EMILY



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PLANT SCHEDULE
NOTE : FINAL SPECIES TO BE NOMINATED IN CONSULTATION WITH COUNCIL AND SUBJECT TO AVAILABILITY

CODE	BOTANIC NAME	COMMON NAME	SIZE	QTY
	TREES			
Afl	Agonis flexuosa	WA Peppermint	100Lt	12
Ahe	Araucaria heterophylla	Norfolk Island Pine	1000Lt	1
Ahe	Araucaria heterophylla	Norfolk Island Pine	MATURE	13
Mla	Melaleuca lanceolata	Rottnest Island Teatree	200Lt	16
Eca	Eucalyptus caesia	Silver Princess	100Lt	64
	SHRUBS			
Cca	Conostylis candicans	Grey Cottonhead	140mm	728
Egp	Eremophila glabra prostrate	Emu Bush	140mm	728
Spp	Scaevola Purple Passion	Fan Flower	140mm	728

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DRAWING NUMBER CAT-22-02

REV 0

REF: U:\CURRENT PROJECTS\CAT\LNA - TAMALA PARK\CCL\ DRAWINGS\JOB CODE\ AUTOCAD\JOB CODE\ LANDSCAPES\STAGE 12-13 STREETSCAPES\CAT-22-01-GREY ELEMENT

IRRIGATION

CLIENT & PROJECT:

TDL
CATALINA
CENTRAL GREENLINK STG 12-16

LOCATION: MINDARIE WA

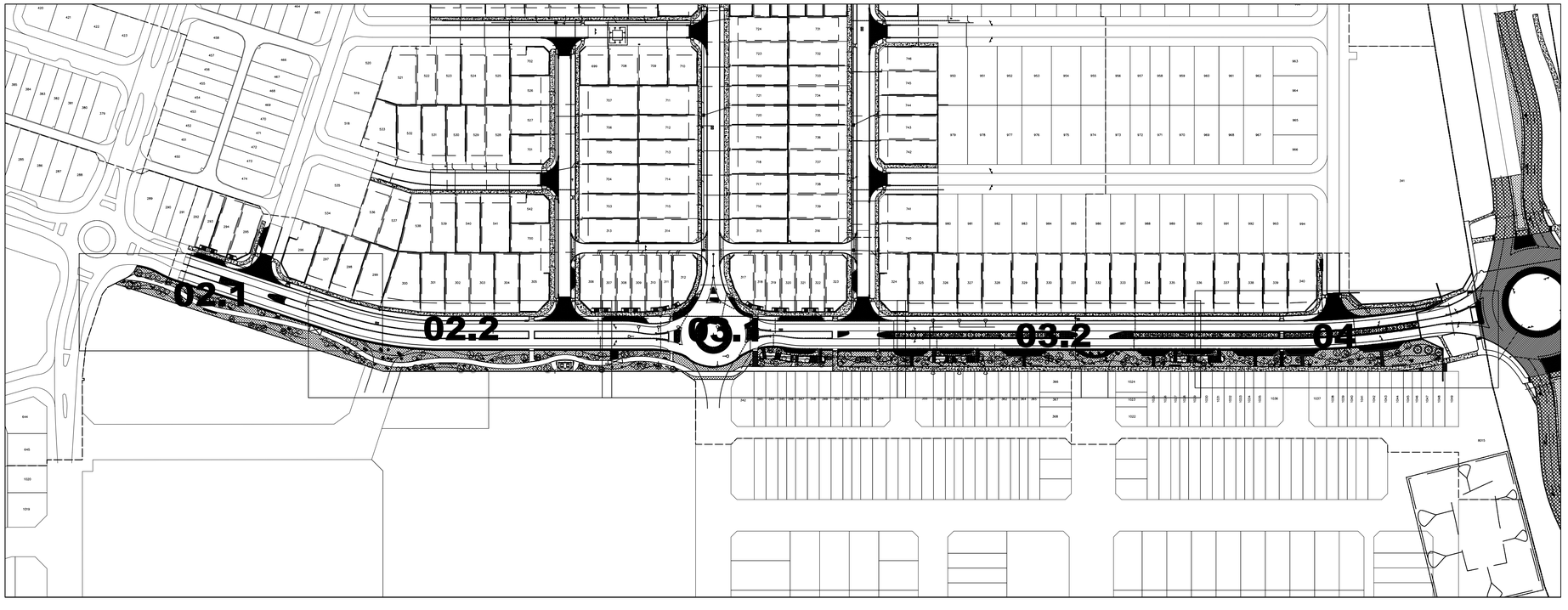
WORKS DESC: IRRIGATION

DRAWINGS IN SET: 6

DRAWING LIST:

Abrv:	Sheet:	Rev:	Description:
CCG	01	AC	LEGEND, SYSTEM DATA
CCG	02	AC	IRRIGATION PLAN
CCG	03	AC	IRRIGATION PLAN
CCG	04	AC	IRRIGATION PLAN
CCG	05	AC	IRRIGATION SLEEVE
CCG	06	AC	IRRIGATION DETAIL

KEY PLAN [NTS]



LEGEND & SYSTEM DATA

TURF & GARDEN SPRAYS

SPRAY SPRINKLER BODIES

BRAND / MODEL SPECIFICATION	
TORO	570Z

BRAND/MODEL SUBJECT TO VARIATION IN ACCORDANCE WITH SPECIFICATION. NOZZLE SETS TO BE OF SAME BRAND AS SPRINKLER BODY.

POP-UP HEIGHT			
PLANTING	TURF	GDN	TREES
PERIMETER	100mm	300mm	150mm
INTERNAL	100mm	300mm	150mm

SPRAY NOZZLE LEGEND

	Q	T	H	2T	3Q	F	OPERATING PRESSURE = 200KPA
TURF							15series NOZZLES
GDN							
TURF							12series NOZZLES
GDN							
TURF							10series NOZZLES
GDN							
TURF							END/SIDE STRIP - 15series
GDN							
TURF							SIDE STRIP - 4series, 9series
GDN							

SUPPLEMENTARY TREE WATERING

SUPPLEMENTARY WATERING FOR TREES		
	☒	BUBBLER NOZZLE - 2 L/m
	△	MULTIPLE BUBBLERS - 2 x 2 L/m
	□	MULTIPLE BUBBLERS - 2 x 4 L/m
	⩛	MULTIPLE BUBBLERS - 4 x 4 L/m

1. ALL BUBBLER NOZZLES TO BE TORO PCN.
2. ALL BUBBLERS FITTED TO 150mm POPUP SPRINKLER BODIES - TORO 570Z
3. REFER LANDSCAPE CONTRACTOR OR PLAN FOR VERIFICATION OF LOCATIONS.

OTHER SYMBOLS

- LINE SIZED EPOXY COATED CAST IRON ISOLATION VALVE
- SOLENOID VALVE ASSEMBLY BERMAD 200 SERIES GLASS REINFORCED NYLON CONSTRUCTION SIZED AS SHOWN
- FLUSH VALVE
- CABLE PIT - 'P2' PLASTIC OR EQUIV. CONTRACTOR TO SHOW INSTALLED LOCATIONS IN AS-CONSTRUCTED DRAWINGS/RECORDS.
- IRRIGATION PIPE CONNECTION POINT
- EXISTING VALVE
- IRRIGATION PIPE END CAP
- MEX — EXISTING MAINLINE WITH CONDUIT & CONTROL CABLE
- MDemo — EXISTING IRRIGATION MAINLINE & ASSOCIATED SOLENOID VALVE ASSEMBLIES TO BE DECOMMISSIONED
- NEW DN110 PE100 PN 12.5 POLY MAINLINE WITH WIRE CONDUIT
- NEW PVC CLASS 9 IRRIGATION LATERAL PIPE WORK SIZED AS SHOWN
- PVC CLASS 9 TREE BUBBLER LATERAL PIPE WORK.

PIPE WORK DOES NOT CONNECT TO ANY SPRAY OR ROTOR IRRIGATION - SIZED AS SHOWN

- LIGHTNING SURGE PROTECTION

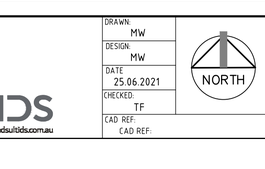
TO BE INSTALLED & TESTED IN STRICT ACCORDANCE WITH CONTROL SYSTEM MANUFACTURERS REQUIREMENTS
INFIELD LSP REQUIREMENTS :
HUNTER ACC-99D - DECODER GROUNDED EVERY 150m OR 8th DECODER AND END OF MAINLINES.
SURGE PROTECTION DEVICES ARE TO BE HOUSED IN ADEQUATELY SIZED, LOCKABLE PLASTIC VALVE BOX

PATTERN & DESIGNATION	
	GARDEN PLANTING

IRRIGATION SEQUENCING CONTROLLER

EXISTING HUNTER ACC-99D 2-WIRE DECODER CONTROLLER.

VALVE IDENTIFICATION



VALVE & STATION DATA TABLE

VALVE DATA TABLE				STATION DATA TABLE								
				STN	Irrig	PR	Valves for Station				Stn Flow
Valve#	LPM	Type	PR	No.	Type	mm/hr	A	B	C	D	L/m
1	379.75	GS	40	1	GS	40	1				379.75
2	375.4	GS	40	2	GS	40	2				375.4
3	376.5	GS	40	3	GS	40	3				376.5
4	375.02	GS	40	4	GS	40	4				375.02
5	362.68	GS	40	5	GS	40	5				362.68
6	137.41	GS	40	6	GS	40	7				355.68
7	355.68	GS	40	7	GS	40	8				385.43
8	385.43	GS	40	8	GS	40	9				334.21
9	334.21	GS	40	9	GS	40	10	6			351.21
10	213.8	GS	40	10	B	50	11				338.79
11	338.79	B	50	11	B	50	12	14			338.79
12	90.85	B	50	12	B	50	13				351.99
13	351.99	B	50	13	B	50	15				370.94
14	247.94	B	50	14	B	50	16	17	18	19	242.14
15	370.94	B	50	15	-						0
16	151.33	B	50	16	-						0
17	30.27	B	50	17	-						0
18	30.27	B	50	18	-						0
19	30.27	B	50	19	-						0

CONTRACTOR TO ADD VALVES TO EXISTING CONTROLLER DATA AS REQUIRED FOR FULL HYDRAULIC OPTIMISATION.
CONTRACTOR TO ADD VALVE TO REGULAR WATERING PROGRAM AND ALSO TO A SEPARATE PROGRAM FOR LANDSCAPE ESTABLISHMENT REQUIREMENTS.

VALVE/STATION DENOTATIONS			
#	VALVE No.	Type	IRRIGATION TYPE
LPM	FLOW - LITRES PER MINUTE	T	TURF AREA
PR	TYPICAL PRECIPITATION RATE	G	GARDEN AREA
DIA	VALVE SIZE	S	SPRAY SPRINKLER
ADDR	DECODER ADDRESS	R	ROTOR SPRINKLER
		P	PART CIRCLE ONLY
		F	FULL CIRCLE ONLY
		D	DRIP IRRIGATION
		B	TREE BUBBLERS

PERTH ONE CALL SYSTEM DIAL 1100 DIAL BEFORE YOU DIG

IRRIGATION AUSTRALIA

NOTES

1. CITY OF WANNEROO IRRIGATION SPECIFICATION APPLY TO THESE IRRIGATION WORKS.
2. WHERE PIPE WORK SHOWN RUNNING PARALLEL UNDER PAVED SURFACES, HAS BEEN DONE SO FOR CLARITY PURPOSES ONLY.
3. ALL PIPE WORK IS TO BE INSTALLED WITHIN SOFT LANDSCAPED AREAS ONLY WHERE POSSIBLE
4. PIPE HOPS OVER MAINLINES NOT SHOWN. ALL CONNECTIONS TO MAINLINES ONLY AT SOLENOID VALVE LOCATIONS.
5. CONTRACTOR SHALL UNDERTAKE THE RADIUS ADJUSTMENT OF ALL ROTOR SPRINKLERS AS REQUIRED.
6. FOR ALL SPRINKLER HEADS TO BACK OF ROAD KERBS, WATER SUPPLY LATERAL TO BE INSTALLED MINIMUM OF 500MM OFF BACK OF KERB.
7. ALL PIPE WORK UNDER CONCRETE PAVING TO BE INSTALLED IN SLEEVES.
8. ALL PIPE WORK UNDER REMOVABLE PAVING MAY BE PRE-LAID PRIOR TO PAVING WORKS.
9. ALL PIPE WORK UNDER RETAINED AREA TO BE PRE-LAID PRIOR TO RETAINING WALL CONSTRUCTION.
10. IRRIGATION MAINLINE ALIGNMENTS IN VERGES TO BE IN STANDARD ALIGNMENT ZONE FOR TREES i.e. 2.5M to 3M FROM PROPERTY BOUNDARY, UNLESS OTHERWISE NOTED.
11. CROSS-STACKING OF PIPE FITTINGS IS NOT ALLOWED.
12. LATERAL PIPE WORK ROUTED PARALLEL TO MAINLINES SHALL NOT BE INSTALLED DIRECTLY ABOVE MAINLINES. LATERALS MUST BE HORIZONTALLY OFFSET BY A MINIMUM OF 300mm FROM MAINLINES.
13. ALL PIPE WORK SHALL BE ROUTED AROUND ANY EXISTING TREES AND NO CLOSER THAN TREE CANOPY 'DRIP-LINE'. ALL TREE ROOTS SMALLER THAN 50mm DIA. WHICH ARE DAMAGED DURING EXCAVATION SHALL BE CLEANLY CUT WITH A SAW OR SECATEURS . ANY TREE ROOTS 50mm OR GREATER ENCOUNTERED ARE NOT TO DAMAGED AND PIPE TRENCH SHALL BE HAND-EXCAVATED, THRUST BORED (PLUNKED) OR AIR-DRILLED (EITHER PRESSURE AND/OR SUCTION).
14. A MINIMUM LENGTH OF 200mm OF PIPE SHALL BE PROVIDED BETWEEN FITTINGS IN LATERAL PIPE WORK.
15. PLEASE NOTE THAT THIS DRAWING IS TO BE READ IN CONJUNCTION WITH THE DETAIL DRAWING AND THE SPECIFICATIONS.

SCALE REFERENCE - REDUCTION
SHEET SCALE X 100 mm = PAPER SCALE

REV	DATE	MADE BY	AMENDMENT	CHKD
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
AC	07.10.2022	LDT	AS CONSTRUCTED BY LD TOTAL	LDT
0	07.12.2021	MW	ISSUED FOR CONSTRUCTION	TF
B	12.10.2021	MW	ISSUED FOR APPROVAL	TF
A	25.06.2021	MW	ISSUED FOR APPROVAL	TF

SHEET KEY

COMMENT/NOTE

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1/220 Carr Place Leederville WA 6007 | www.cadsultids.com.au

DRAWN: MW
DESIGN: MW
DATE: 25.06.2021
CHECKED: TF
CAD REF: CAD REF:

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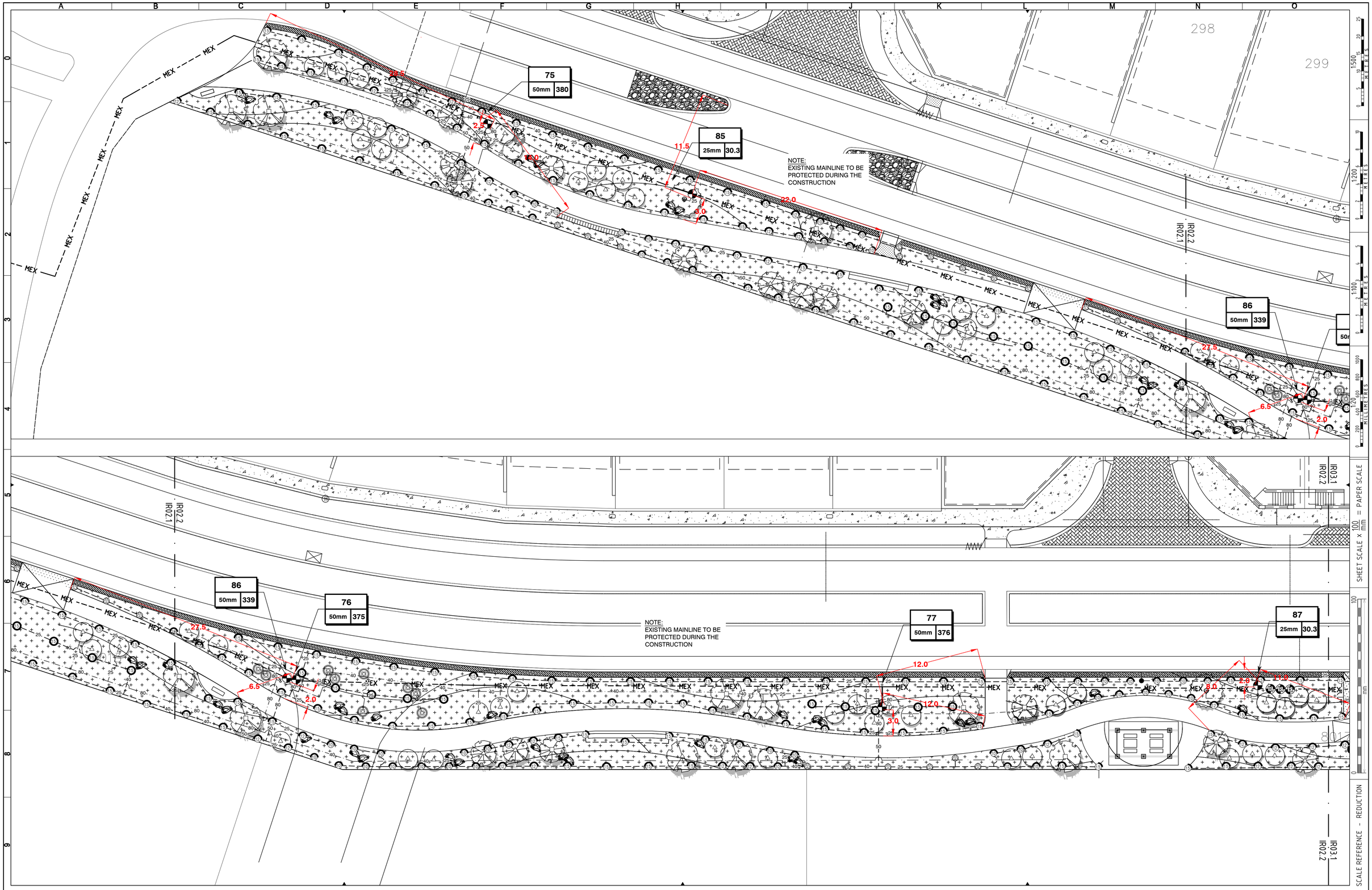
CLIENT: TDL

PROJECT: CATALINA
CENTRAL GREENLINK STG 12-16

TITLE: IRRIGATION LEGEND & SYSTEM DATA

SHEET SIZE	SHEET SCALE	# SHEETS IN SET	DRAWING LD. PROJECT	ORG NO.	REV
A1	NTS	6	CCG-01	AC	



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CENTRAL GREENLINK STG 12-16

TITLE: IRRIGATION PLAN

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A1	1:200	6	CCG	02	AC

NOTE:
EXISTING MAINLINE TO BE PROTECTED DURING THE CONSTRUCTION

LOCATED AND CONNECTED NEW MAINLINE IN TO EXISTING MAINLINE AND 2 WIRE PATH

78	
50mm	375

88	
40mm	90.8

79	
50mm	363

90	
40mm	30.3

80	
40mm	137

91	
50mm	352

81	
50mm	356

366

1024

IR03.1 IR02.2

IR03.2 IR03.1

IR04 IR03.2

SCALE REFERENCE - REDUCTION

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PROJECT: CATALINA CENTRAL GREENLINK STG 12-16

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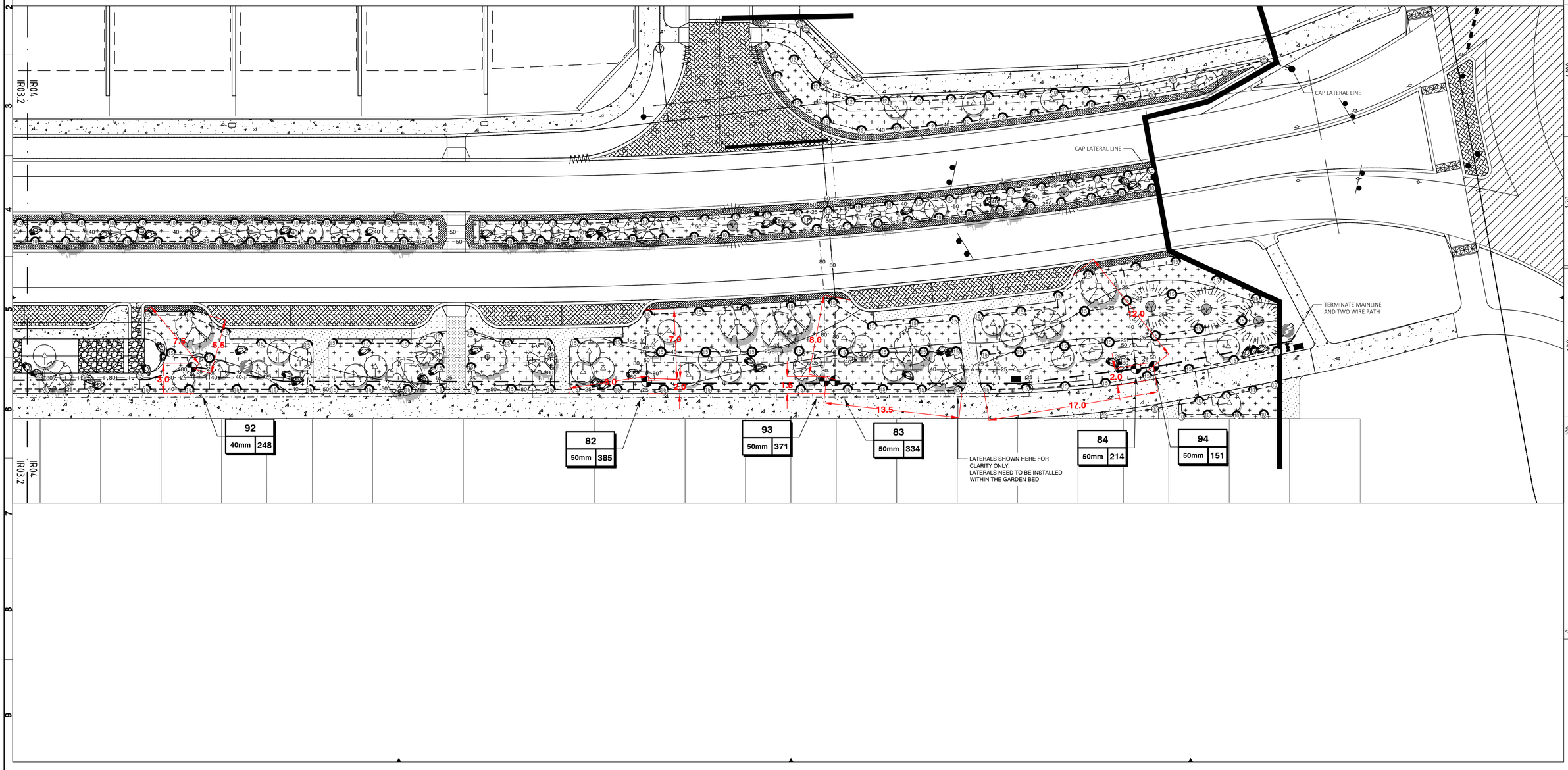
SHEET SIZE	SHEET SCALE	# SHEETS IN SET	DRAWING LD. PROJECT	DRG NO.	REV
A1	1:200	6	CCG	03	AC



REV	DATE	MADE BY	AMENDMENT	CHKD
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-	-	-	-	-
-	-	-	-	-
AC	07.10.2022	LDT	AS CONSTRUCTED BY LD TOTAL	LDT
0	07.12.2021	MW	ISSUED FOR CONSTRUCTION	TF
B	12.10.2021	MW	ISSUED FOR APPROVAL	TF
A	25.06.2021	MW	ISSUED FOR APPROVAL	TF

COMMENT/NOTE

SHEET KEY

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DESIGN: MW
DATE: 25.06.2021
CHECKED: TF
CAD REF:
CAD REF:

NORTH

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CLIENT: TDL

PROJECT: CATALINA
CENTRAL GREENLINK STG 12-16

TITLE: IRRIGATION PLAN

SHEET SIZE	SHEET SCALE	# SHEETS IN SET	DRAWING LD. PROJECT	DRG NO.	REV
A1	1:200	6	CCG	04	A

SCALE REFERENCE - REDUCTION
SHEET SCALE X 100 mm = PAPER SCALE

SLEEVES & PRE-LAYS (NTS)

PRE-LAY/SLEEVE DESIGNATION CODE

PVC IRRIGATION SLEEVE/PRELAY

PRE-LAY/SLEEVE NOTES

1. LATERALS UNDER PAVING LESS THAN 3M WIDE TO BE THRUST BORED ("PLUNGED")
2. SLEEVES FOR LATER INSTALLATION OF PIPING.
3. 'PRE-LAYS' FOR LATER DIRECT CONNECTION TO PRESSURE PIPING.
4. SLEEVES ARE PE100 PN10 DURIT PIPE
5. 'PE' DESIGNATES POLYETHYLENE PIPE TYPE PE100, CLASS PN12.5
6. PRE-LAYS INSTALLATED WITH NO JOINTS

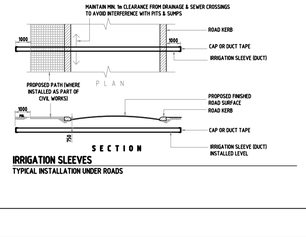
Pre-Lay Table	
CODE	QTY/SIZE
A	1xDN25PE
B	1xDN32PE
C	1xDN40PE
D	2xDN25PE
E	2xDN40PE
F	DN40PE + DN32PE
G	DN40PE + DN25PE

Sleeve Size/Qty Table	
CODE	QTY/SIZE
1	1 x DN50PE
2	2 x DN50PE
3	1 x DN75PE
4	2 x DN75PE
5	3 x DN50PE
6	1 x DN200PE + 1 xDN110PE
7	2 x DN200PE

Typical Install Depth	
DESC	DEPTH (mm)
ROAD - SEALED	750
ROAD - UNSEALED	600
PATH/PAVING	300-600

PRE-LAY & SLEEVES
SIZE TABLE

UNDER-ROAD SLEEVE NOTES:
1. INSTALL SLEEVE AT LOCATION SHOWN IN SLEEVE PLAN AND AS PER DETAIL.
2. RECORD DISTANCE OF EACH SLEEVE END FROM AT TWOCE LOT BOUNDARY PEGS OR ROAD CHAINAGES.
3. ADD SLEEVE LOCATION DATA ON A SEPARATE DRAWING TITLED "IRRIGATION SLEEVE LOCATION DRAWING".
4. AFTER ROAD/VERGE CONSTRUCTION CLEARLY MARK KERB AT BOTH SIDES OF ROAD WITH SLEEVE LOCATION.



IRRIGATION SLEEVES
TYPICAL INSTALLATION UNDER ROADS

REV	DATE	MADE BY	AMENDMENT	CHKD
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
AC	07.10.2022	LDT	AS CONSTRUCTED BY LD TOTAL	LDT
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CLIENT: TDL

PROJECT: CATALINA
CENTRAL GREENLINK STG 12-16

TITLE: IRRIGATION SLEEVES

SHEET SIZE	SHEET SCALE	# SHEETS IN SET	DRAWING LD. PROJECT	DRG NO.	REV
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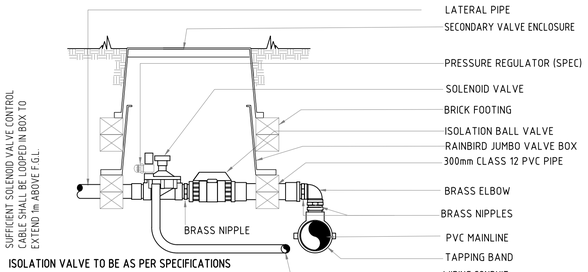
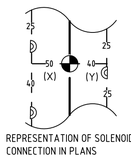
SHEET SCALE x 100 mm = PAPER SCALE
SCALE REFERENCE - REDUCTION

DETAILS [NTS]

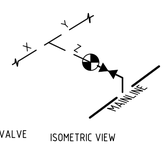


ISOLATION VALVE TO BE AS PER SPECIFICATIONS

SOLENOID VALVE CONNECTION DETAIL
CITY OF WANNEROO INSTALLATION — NTS



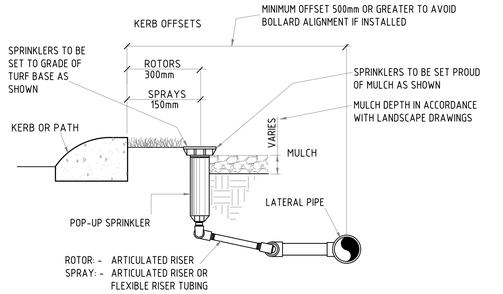
REPRESENTATION OF SOLENOID VALVE CONNECTION IN PLANS



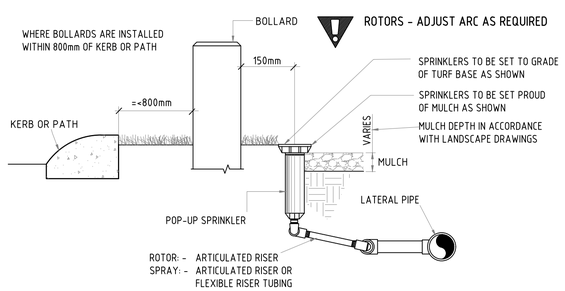
ISOMETRIC VIEW

VALVE PIPE CONNECTION		
Branch (X)	Branch (Y)	Connection (Z)
25	25	40
25	40	40
40	40	50
40	50	80
50	50	80
50	80	80

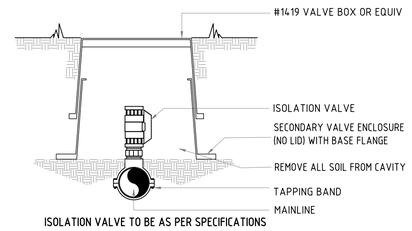
SOLENOID VALVE MAINLINE CONNECTION
PIPE CONNECTION SIZE TO VALVE — NTS



SPRINKLER CONNECTION DETAIL
TYPICAL INSTALLATION - NO BOLLARDS OR BOLLARDS BEYOND 800mm OF BOUNDARY — NTS

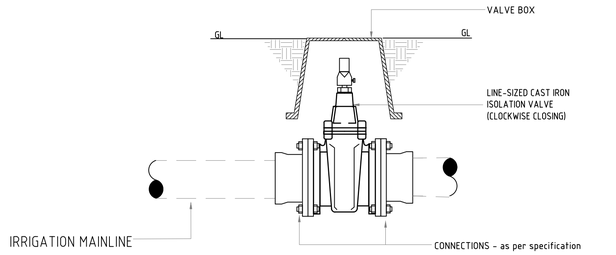


SPRINKLER CONNECTION DETAIL (ROTORS)
TYPICAL INSTALLATION - WITH BOLLARDS WITHIN 800mm OF BOUNDARY — NTS

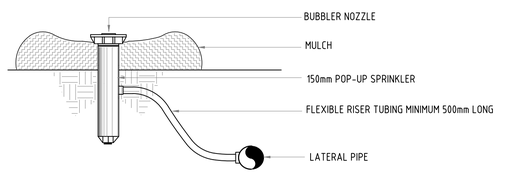


ISOLATION VALVE TO BE AS PER SPECIFICATIONS

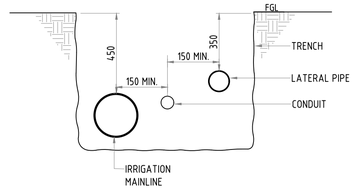
FLUSHING POINT
TYPICAL INSTALLATION — NTS



ISOLATION VALVE CONNECTION DETAIL
MAINLINES - IN PLANTED AREAS — NTS



SUPPLEMENTARY TREE WATERING
POP-UP / BUBBLER NOZZLE CONNECTION DETAIL - REFER SPECIFICATION — NTS



COMMON TRENCH DETAIL — SECTION
MAINLINE, CONDUIT & LATERAL — NTS

REV	DATE	MADE BY	AMENDMENT	CHKD
-	-	-	-	-
-	-	-	-	-
-	-	-	-	-
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COMMENT/NOTE

SHEET KEY

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CLIENT: TDL

PROJECT: CATALINA
CENTRAL GREENLINK STG 12-16

TITLE: IRRIGATION DETAILS

SHEET SIZE	SHEET SCALE	# SHEETS IN SET	DRAWING LD. PROJECT	ORG NO.	REV
A1	NTS	6	CCG-06-AC		

SCALE REFERENCE - REDUCTION
SHEET SCALE x 100 mm = PAPER SCALE

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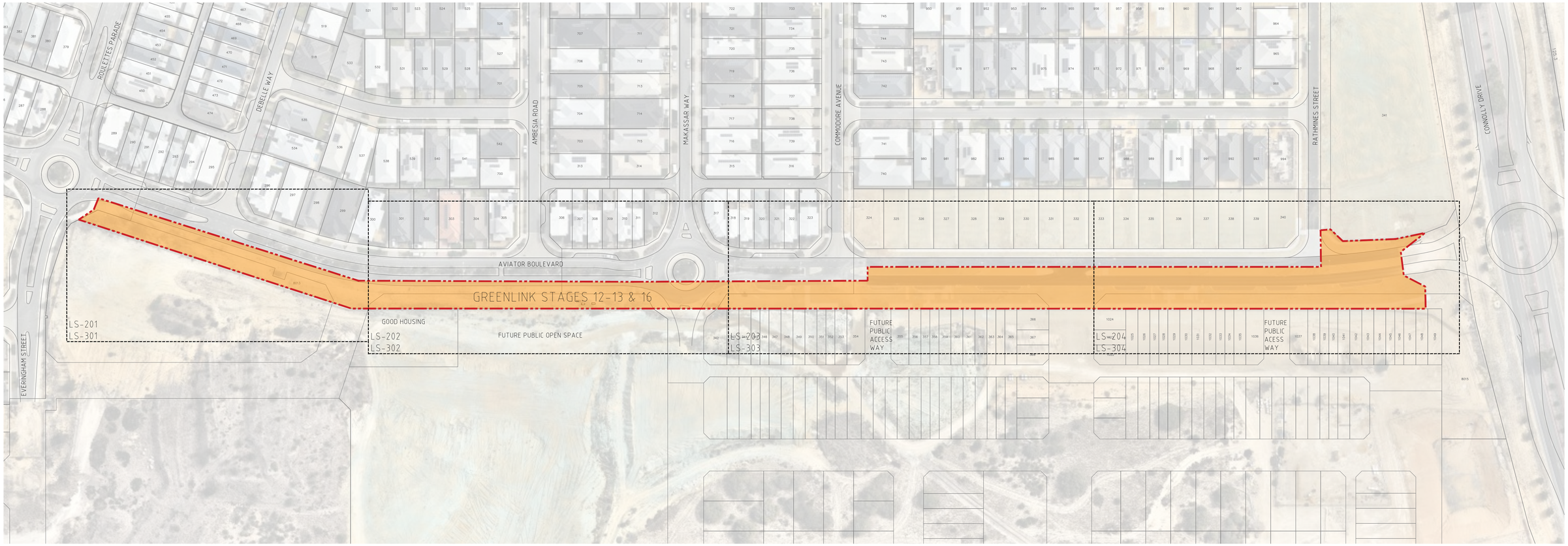
CATALINA CENTRAL GREENLINK STG 12-13 & 16



01/101 COVER PAGE
PLAN 1:1000 @ A1

DWG	DWG NAME	SCALE @ A1	REV
LS -101	COVER PAGE	1:1000	AC
LS -201	HARDSCAPE PLAN 1	1:250	AC
LS -202	HARDSCAPE PLAN 2	1:250	AC
LS -203	HARDSCAPE PLAN 3	1:250	AC
LS -204	HARDSCAPE PLAN 4	1:250	AC
LS -301	SOFTSCAPE PLAN 1	1:250	AC
LS -302	SOFTSCAPE PLAN 2	1:250	AC
LS -303	SOFTSCAPE PLAN 3	1:250	AC
LS -304	SOFTSCAPE PLAN 4	1:250	AC
LS -401	DETAILS 1	AS SHOWN	AC
LS -402	DETAILS 2	AS SHOWN	AC
LS -403	DETAILS 3	AS SHOWN	AC
LS -500	SCHEDULES	N/A	AC

CATALINA ESTATE
CATALINA CENTRAL

REVISION	DESCRIPTION	BY	DATE
AC	AS CONSTRUCTED	IZ	04.10.22

0 10 20 40 60 100m

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three pilina court osborne park
western australia 6017
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facsimile +61 8 9441 0201
enq@tdl.com.au

CLIENT	SATTERLEY PROPERTY GROUP & TPRC		
DESIGNED	AF	DRAWING TITLE	GREENLINK STAGES 12-16
DRAWN	AF		
APPROVED	GD	DRAWING No.	12606-CC-GL-101
SCALE	1:1000@A1		REVISION AC

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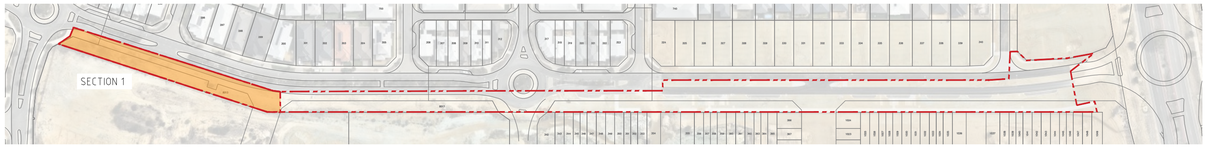
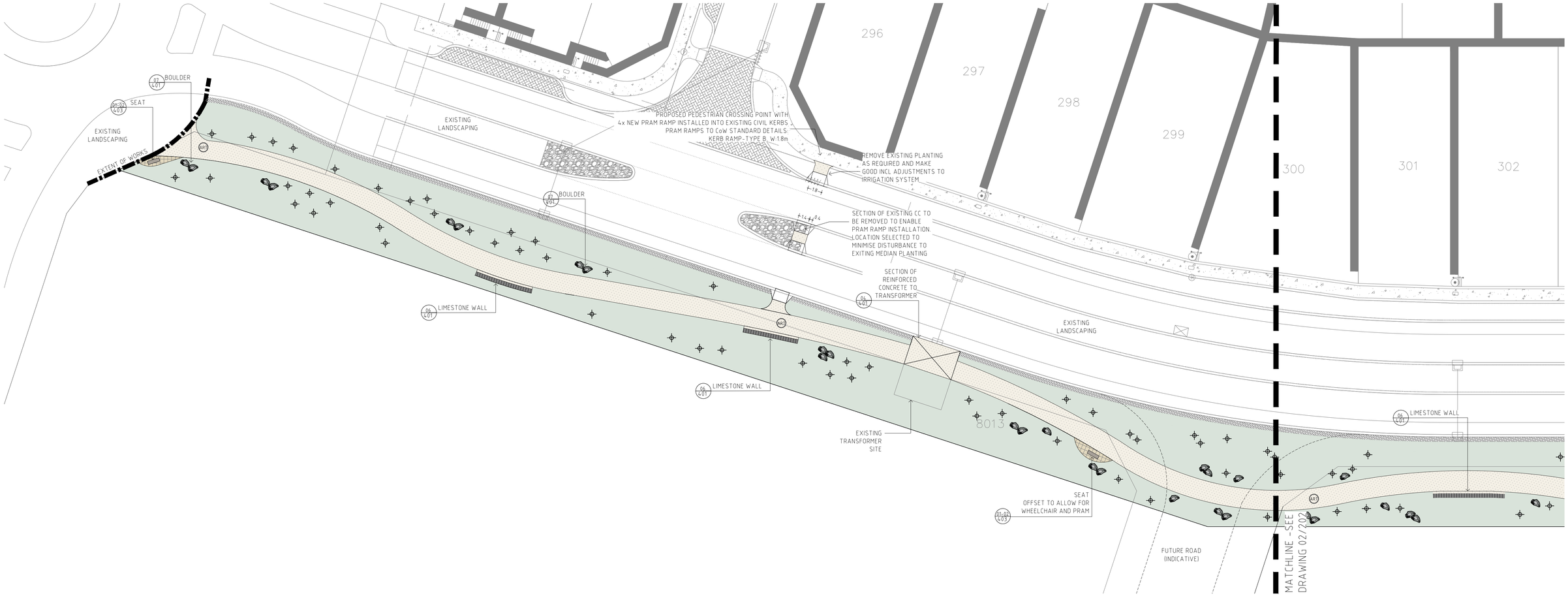


01 / 201 KEY PLAN
PLAN 1:2000 @ A1



02 / 201 HARDSCAPE PLAN
PLAN 1:250 @ A1

GENERAL NOTES:

- FOR GENERAL ARRANGEMENT PLEASE REFER TO TDL DRAWINGS AND SPECIFICATIONS.
- ANY DIFFERENCES NOTED BETWEEN THE LAYOUT PLANS, DETAIL DRAWINGS AND SPECIFICATION IS TO BE CLARIFIED BY THE CONTRACTOR PRIOR TO WORKS COMMENCING ON SITE.
- THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL SERVICES ON SITE. SERVICES DIAGRAMS ARE PROVIDED AS A GUIDE ONLY. THE CONTRACTOR WILL BE FULLY RESPONSIBLE TO SURVEY SERVICES ON SITE. ANY DAMAGE TO SERVICES IS TO BE RECTIFIED AT THE CONTRACTORS OWN EXPENSE. ANY DAMAGE NEEDS TO BE IMMEDIATELY NOTIFIED TO THE RELEVANT SERVICE PROVIDER.
- THE CONTRACTOR IS TO PROVIDE A FULL TRAFFIC MANAGEMENT PLAN (TMP) FOR APPROVAL BY CITY OF WANNEROO (CoW). THE TMP IS TO BE IMPLEMENTED AND MONITORED AT ALL TIMES DURING CONSTRUCTION WITH WEEKLY UPDATES OF TRAFFIC MANAGEMENT IS OCCURRING.
- THE CONTRACTOR IS TO PROVIDE A FULL OH&S PLAN FOR APPROVAL BY CoW. THE PLAN IS TO BE FULLY IMPLEMENTED AND MONITORED AT ALL TIMES DURING CONSTRUCTION WITH WEEKLY UPDATES PROVIDED BY THE CONTRACTOR OF INCIDENTS ETC.
- ALL SITE SET OUT AND PROPOSED FINISHED LEVELS ARE TO BE CONFIRMED ON SITE WITH THE SUPERINTENDENT PRIOR TO CONSTRUCTION.
- EXISTING GRADES ARE TO BE MAINTAINED.
- VERGES TO HAVE 2-3% CROSSFALL TOWARDS ROAD EDGE.
- ALL EXISTING SITE FEATURES, SUCH AS KERBLINES, PATHS, SIGN POSTS, LIGHT POLES ETC ARE TO BE RETAINED AND PROTECTED UNLESS OTHERWISE NOMINATED ON PLAN.
- WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER MEASUREMENTS.

EXCAVATION AND SITE PREPARATION:

- EXCAVATE AS REQUIRED ALONG KERBLINE TO ACHIEVE FINISHED LEVELS AFTER SOIL PREPARATION AND MULCH. EXCAVATED MATERIAL MAY BE RE-SPREAD ON SITE WITHIN LOT BOUNDARY. LOCATION TO BE CONFIRMED BY SUPERINTENDENT
- EXISTING GRADES WITHIN VERGES AND MEDIANS ARE TO BE MAINTAINED. PREPARE EVEN SURFACE SUITABLE FOR PLANTING AND HARDSCAPE INSTALLATION THAT TIES INTO EXSITNG LEVELS.
- FINISHED LEVELS OF NEW PATHS AND PAVING TO TIE IN WITH EXISTING PAVING AND KERBS.
- FOR COOK ISLAND TRANSPLANTS, CONTRACTOR TO PREPARE 3×3×2M DEEP PLANTING HOLE. FOR ERYTHRINA TRANSPLANTS, PREPARE 2×2×1M DEEP HOLES. TRANSPLANT SUPPLY BY CLIENT. TRANSPLANT INSTALLATION AND MANAGEMENT WORKS ARE TO BE COORDINATED WITH SPECIALIST GROWER BY CONTRACTOR.
- CONTRACTOR TO EXCAVATE ALONG EXISTING CIVIL KERBLINE AS REQUIRED BY SPECIALIST TRANSPLANT GROWER TO ENABLE SPRAY ON ROOT CONTROL BARRIER INSTALLATION TO ALL COOK ISLAND TRANSPLANTS LOCATED WITHIN 5M OF EXISTING KERBLINE AT A LENGTH OF 10M TO EACH SIDE OF TREE.
- FOR ALL HARD AND SOFTSCAPE DETAILS, REFER TO DETAILS 01-03
- FOR ALL MATERIALS AND FURNITURE SELECTIONS, REFER TO SCHEDULES (LS-500) AND SPECIFICATION

PLANTING NOTES:

- PROPOSED TREES MAY BE REALIGNED BASED ON SERVICES LOCATIONS WHERE APPROVED BY SUPERINTENDENT
- SHRUB AND GROUNDCOVER PLANTING OFFSET: MIN 600mm FROM ROAD EDGES, KERBLINES AND OTHER HARD EDGE
- FOR SHRUB PLANTING MIXES: PLANTS ARE TO BE PLANTED IN GROUPS OF 7-9-11 OF EACH SPECIES.
- FOR OVERALL PLANT SCHEDULES, REFER TO DRAWING LS-500
- FOR ALL HARD AND SOFTSCAPE DETAILS, REFER TO DETAILS 01-03.
- FOR ALL MATERIALS AND FURNITURE SELECTIONS, REFER TO SCHEDULES (LS-500) AND SPECIFICATION
- ALL 1000LT & 1500LT TREES ARE TO BE INSTALLED WITH UNDERGROUND GUYING.
- TREE POT SIZES ARE INDICATIVE AND SUBJECT TO STOCK AVAILABILITY AT TIME OF PROCUREMENT.
- SPECIES SELECTION SUBJECT TO AVAILABILITY AT TIME OF PROCUREMENT. ALTERNATIVE SPECIES AND STOCK SIZES NOMINATED WITHIN OVERALL PLANT SCHEDULE INTENDED TO BE USED WHERE PRIMARY SELECTION IS NOT AVAILABLE.
- TREES ARE TO SETBACK 1M FROM FOOTPATHS, 2.5M FROM STRUCTURES INCLUDING WALLS, BUILT ELEMENTS, SIDE ENTRY PITS, SIGNS AND STREETLIGHTS.
- TREES NOMINATED ON PLAN AND/OR LOCATED WITHIN 1.5M OF HARD EDGE/PAVING/KERBLINE ARE TO BE INSTALLED WITH 6M LONG 800MM DEEP ROOT CONTROL BARRIER POSITIONED AGAINST THE HARD EDGE WITH TOP OF RCB TO BE 50MM BELOW TOP OF MULCH
- FEATURE BOULDERS ARE TO SETBACK 0.6M FROM ALL FOOTPATHS AND 1.2M FROM THE BACK OF KERB.

PUBLIC ART NOTES:

- PUBLIC ART TO BE A CONTINUATION OF SANDBLASTED CONCRETE ARTWORK INSTALLED WITHIN CATALINA STAGE 2 CENTRAL GREENLINK.

LEGEND

SURFACE FINISHES

- EXISTING CONCRETE PAVEMENT
- PROPOSED CONCRETE PAVEMENT STANDARD GREY CONCRETE — 01-05 / 401
- PROPOSED CONCRETE PAVEMENT EXPOSED AGGREGATE 1 : HOLCIM 'MAGNOLIA' — 01-05 / 401
- PROPOSED CONCRETE PAVEMENT EXPOSED AGGREGATE 2 : HOLCIM 'KARRI' — 01-05 / 401
- MULCH MAINTENANCE STRIP 600mm
- EXISTING STONE PITCHING
- IRRIGATED PLANTING BED REFER TO SOFTSCAPE PLAN
- VEGETATED SWALE REFER TO SOFTSCAPE PLAN

FURNITURE & SITE FEATURES

- SEAT HEIGHT FREESTANDING WALL — 06 / 401
- FEATURE BOULDERS — 07 / 401
- SHADE STRUCTURE — 04 / 402
- PICNIC SETTING — 03-04 / 403
- BENCH SEAT — 01-02 / 403
- BOLLARD — 05 / 403
- LIGHT POLE BY OTHERS (LP)
- PROPOSED PUBLIC ART LOCATION BY OTHERS (ART)

TREES

- PROPOSED TREE MARKER REFER TO SOFTSCAPE PLAN

0 1 2 4 6 10 20 25m

CATALINA ESTATE
CATALINA CENTRAL

REVISION	DESCRIPTION	BY	DATE
AC	AS CONSTRUCTED	IZ	04.10.22

TIM DAVIES LANDSCAPING
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western australia 6017
telephone +61 8 9441 0200
facsimile +61 8 9441 0203
enq@tdl.com.au

CLIENT	SATTERLEY PROPERTY GROUP & TPRC		
DESIGNED	AF	DRAWING TITLE	HARDSCAPE PLAN 1
DRAWN	AF		
APPROVED	GD	DRAWING No.	12606-CC-GL-201
SCALE	1:250@A1		REVISION AC

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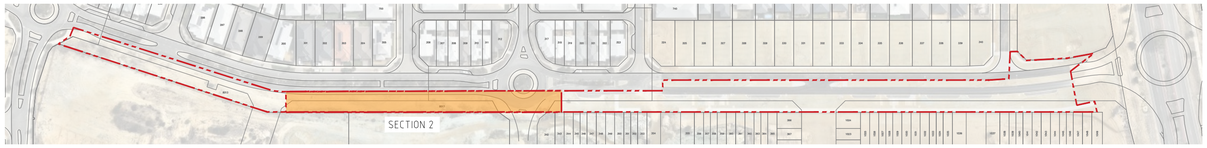
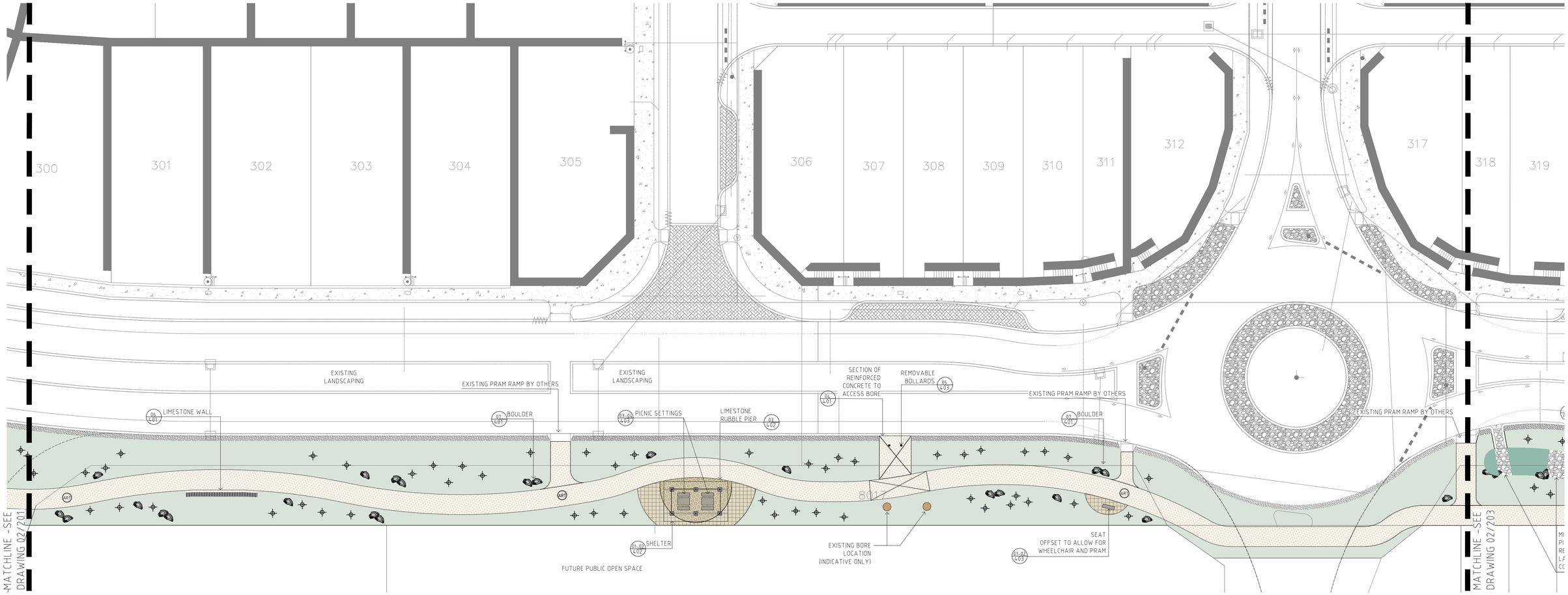


01 / 202 KEY PLAN
PLAN 1:2000 @ A1



02 / 202 HARDSCAPE PLAN
PLAN 1:250 @ A1

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- SHRUB AND GROUNDCOVER PLANTING OFFSET: MIN 600mm FROM ROAD EDGES, KERBLINES AND OTHER HARD EDGE
- FOR SHRUB PLANTING MIXES: PLANTS ARE TO BE PLANTED IN GROUPS OF 7-9-11 OF EACH SPECIES
- FOR OVERALL PLANT SCHEDULES, REFER TO DRAWING LS-500
- FOR ALL HARD AND SOFTSCAPE DETAILS, REFER TO DETAILS 01-03
- FOR ALL MATERIALS AND FURNITURE SELECTIONS, REFER TO SCHEDULES (LS-500) AND SPECIFICATION
- ALL 1000LT & 1500LT TREES ARE TO BE INSTALLED WITH UNDERGROUND GUYING.
- TREE POT SIZES ARE INDICATIVE AND SUBJECT TO STOCK AVAILABILITY AT TIME OF PROCUREMENT.
- SPECIES SELECTION SUBJECT TO AVAILABILITY AT TIME OF PROCUREMENT. ALTERNATIVE SPECIES AND STOCK SIZES NOMINATED WITHIN OVERALL PLANT SCHEDULE INTENDED TO BE USED WHERE PRIMARY SELECTION IS NOT AVAILABLE.
- TREES ARE TO SETBACK 1M FROM FOOTPATHS, 2.5M FROM STRUCTURES INCLUDING WALLS, BUILT ELEMENTS, SIDE ENTRY PITS, SIGNS AND STREETLIGHTS.
- TREES NOMINATED ON PLAN AND/OR LOCATED WITHIN 1.5M OF HARD EDGE/PAVING/KERBLINE ARE TO BE INSTALLED WITH 6M LONG 800MM DEEP ROOT CONTROL BARRIER POSITIONED AGAINST THE HARD EDGE WITH TOP OF RCB TO BE 50MM BELOW TOP OF MULCH
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- PUBLIC ART TO BE A CONTINUATION OF SANDBLASTED CONCRETE ARTWORK INSTALLED WITHIN CATALINA STAGE 2 CENTRAL GREENLINK.

LEGEND

SURFACE FINISHES

- EXISTING CONCRETE PAVEMENT
- PROPOSED CONCRETE PAVEMENT — STANDARD GREY CONCRETE — 01-05 4.01
- PROPOSED CONCRETE PAVEMENT — EXPOSED AGGREGATE 1 : HOLCIM 'MAGNOLIA' — 01-05 4.01
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- MULCH MAINTENANCE STRIP 600mm
- EXISTING STONE PITCHING
- IRRIGATED PLANTING BED — REFER TO SOFTSCAPE PLAN
- VEGETATED SWALE — REFER TO SOFTSCAPE PLAN

FURNITURE & SITE FEATURES

- SEAT HEIGHT FREESTANDING WALL — 06 4.01
- FEATURE BOULDERS — 07 4.01
- SHADE STRUCTURE — 4.02
- PICNIC SETTING — 03-04 4.03
- BENCH SEAT — 01-02 4.03
- BOLLARD — 05 4.03
- LP LIGHT POLE BY OTHERS
- ART PROPOSED PUBLIC ART LOCATION BY OTHERS

TREES

- PROPOSED TREE MARKER — REFER TO SOFTSCAPE PLAN

0 1 2 4 6 10 20 25m

CATALINA ESTATE
CATALINA CENTRAL

REVISION	DESCRIPTION	BY	DATE
AC	AS CONSTRUCTED	JZ	04.10.22

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CLIENT	SATTERLEY PROPERTY GROUP & TPRC		
DESIGNED	AF	DRAWING TITLE	HARDSCAPE PLAN 2
DRAWN	AF		
APPROVED	GD	DRAWING No.	12606-CC-GL-202
SCALE	1:250A1		REVISION AC

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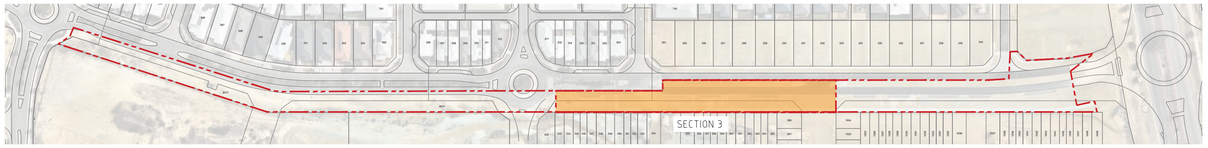
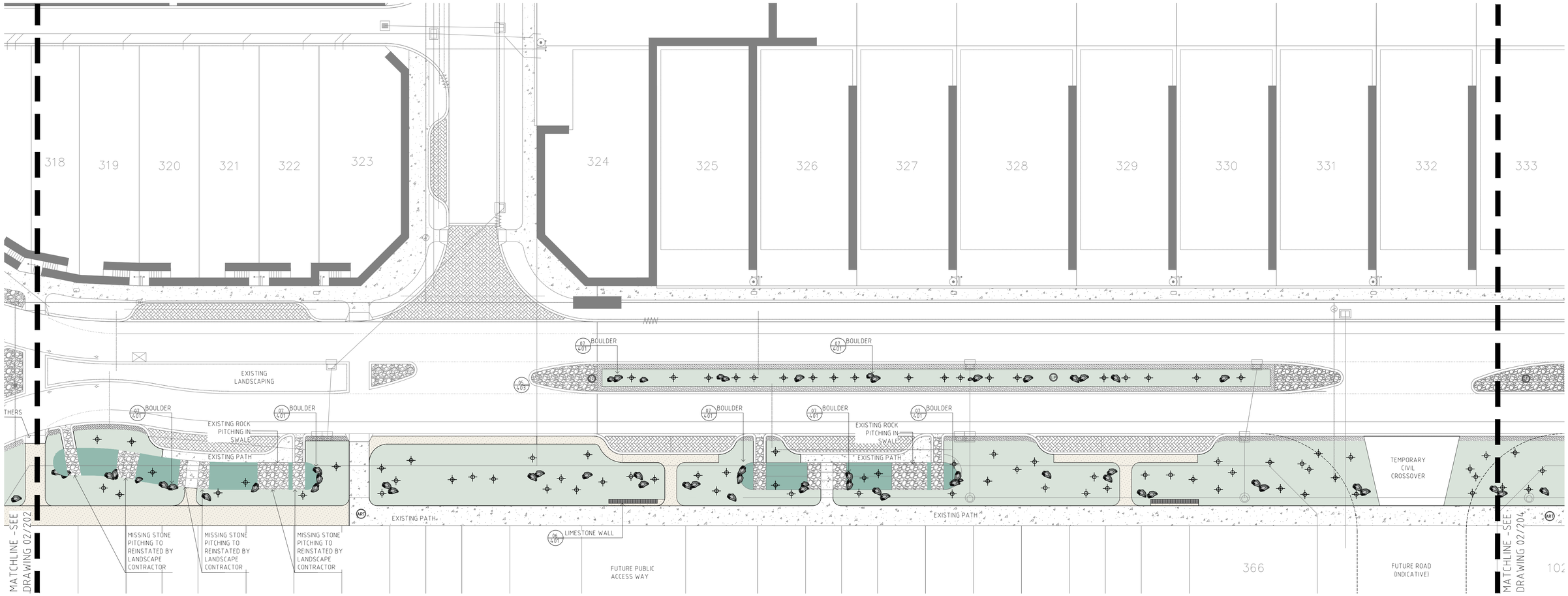


01 / 203 KEY PLAN
PLAN 1:2000 @ A1



02 / 203 HARDSCAPE PLAN
PLAN 1:250 @ A1

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- EXISTING GRADES ARE TO BE MAINTAINED.
- VERGES TO HAVE 2-3% CROSSFALL TOWARDS ROAD EDGE.
- ALL EXISTING SITE FEATURES, SUCH AS KERBLINES, PATHS, SIGN POSTS, LIGHT POLES ETC ARE TO BE RETAINED AND PROTECTED UNLESS OTHERWISE NOMINATED ON PLAN.
- WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER MEASUREMENTS.

EXCAVATION AND SITE PREPARATION:

- EXCAVATE AS REQUIRED ALONG KERBLINE TO ACHIEVE FINISHED LEVELS AFTER SOIL PREPARATION AND MULCH. EXCAVATED MATERIAL MAY BE RE-SPREAD ON SITE WITHIN LOT BOUNDARY. LOCATION TO BE CONFIRMED BY SUPERINTENDENT
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- FINISHED LEVELS OF NEW PATHS AND PAVING TO TIE IN WITH EXISTING PAVING AND KERBS.
- FOR COOK ISLAND TRANSPLANTS, CONTRACTOR TO PREPARE 3×3×2M DEEP PLANTING HOLE. FOR ERYTHRINA TRANSPLANTS, PREPARE 2×2×1M DEEP HOLES. TRANSPLANT SUPPLY BY CLIENT. TRANSPLANT INSTALLATION AND MANAGEMENT WORKS ARE TO BE COORDINATED WITH SPECIALIST GROWER BY CONTRACTOR.
- CONTRACTOR TO EXCAVATE ALONG EXISTING CIVIL KERBLINE AS REQUIRED BY SPECIALIST TRANSPLANT GROWER TO ENABLE SPRAY ON ROOT CONTROL BARRIER INSTALLATION TO ALL COOK ISLAND TRANSPLANTS LOCATED WITHIN 5M OF EXISTING KERBLINE AT A LENGTH OF 10M TO EACH SIDE OF TREE.
- FOR ALL HARD AND SOFTSCAPE DETAILS, REFER TO DETAILS 01-03
- FOR ALL MATERIALS AND FURNITURE SELECTIONS, REFER TO SCHEDULES (LS-500) AND SPECIFICATION

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FURNITURE & SITE FEATURES

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0 1 2 4 6 10 20 25m

CATALINA ESTATE
CATALINA CENTRAL

REVISION	DESCRIPTION	BY	DATE
AC	AS CONSTRUCTED	IZ	04.10.22

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facsimile +61 8 9441 0203
enq@tdl.com.au

CLIENT	SATTERLEY PROPERTY GROUP & TPRC
DESIGNED	AF
DRAWN	AF
APPROVED	GD
SCALE	1:250@A1
DRAWING TITLE	HARDSCAPE PLAN 3
DRAWING No.	12606-CC-GL-203
REVISION	AC

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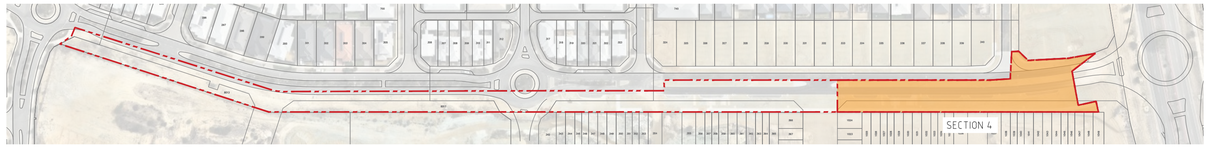
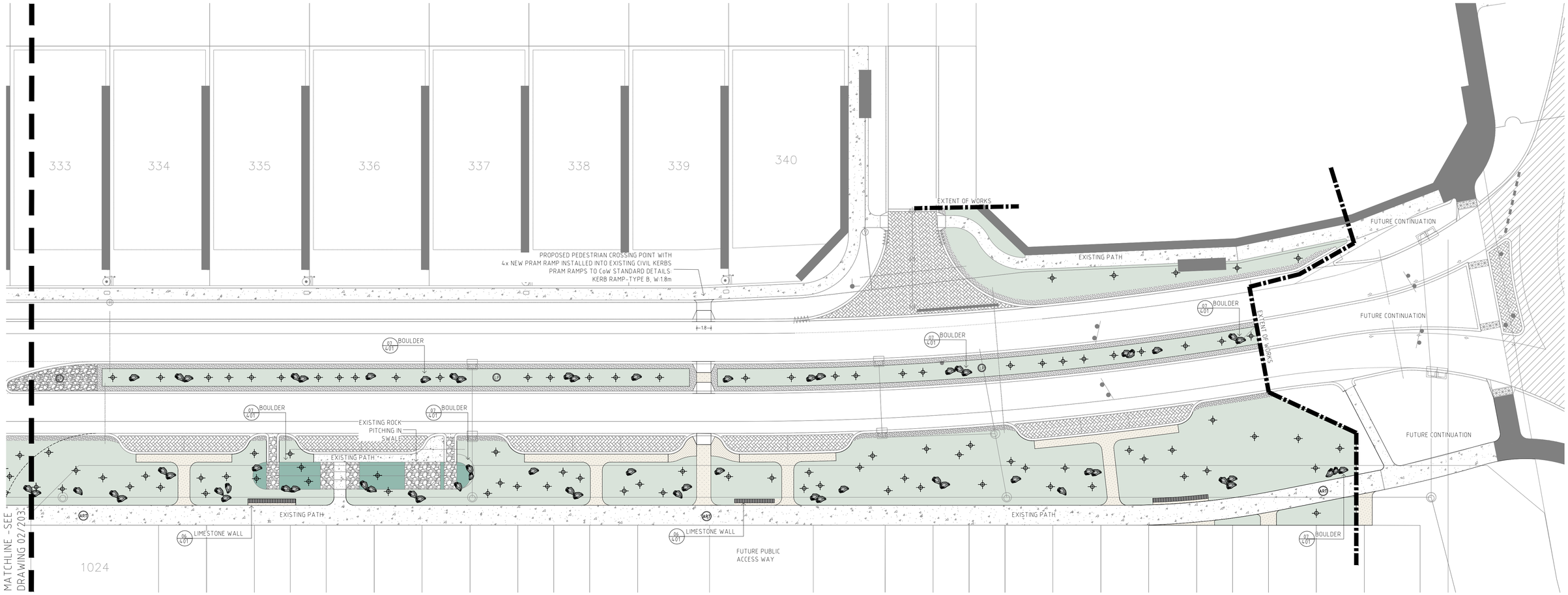


01/204 KEY PLAN
PLAN 1:2000 @ A1



02/204 HARDSCAPE PLAN
PLAN 1:250 @ A1

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FURNITURE & SITE FEATURES

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- PICNIC SETTING — 03-04/403
- BENCH SEAT — 01-02/403
- BOLLARD — 05/403
- LIGHT POLE BY OTHERS
- PROPOSED PUBLIC ART LOCATION BY OTHERS

TREES

- PROPOSED TREE MARKER — REFER TO SOFTSCAPE PLAN

0 1 2 4 6 10 20 25m

REVISION	DESCRIPTION	BY	DATE
AC	**AS-CONSTRUCTED** AND CONSTRUCTION	AF/ NL	09.10.22
B	RE-ISSUE FOR CONSTRUCTION	AF/ NL	23.05.22

CATALINA ESTATE
CATALINA CENTRAL

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western australia 6017
telephone +61 8 9441 0200
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enq@tdl.com.au

CLIENT	SATTERLEY PROPERTY GROUP & TPRC		
DESIGNED	AF	DRAWING TITLE	HARDSCAPE PLAN 4
DRAWN	AF		
APPROVED	GD	DRAWING No.	12606-CC-GL-204
SCALE	1:250@A1		REVISION AC

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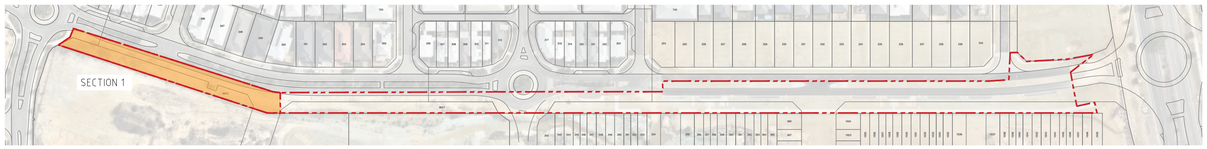

01
301
KEY PLAN
PLAN 1:2000 @ A1



02
301
SOFTSCAPE PLAN
PLAN 1:250 @ A1

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LEGEND

TREES & PLANTING

- PROPOSED TRANSPLANT — COOK ISLAND PINE
- PROPOSED TRANSPLANT — ERYTHRINA
- PROPOSED 1500L TREE — SEE SCHEDULE
- PROPOSED 1000LT TREE — SEE SCHEDULE
- PROPOSED 500LT TREE — SEE SCHEDULE — 10/401
- PROPOSED 200LT TREE — SEE SCHEDULE
- PROPOSED GRASS TREE — SEE SCHEDULE
- IRRIGATED PLANTING BED — REFER TO PLANT PLAN AND SCHEDULE — 08/401
- VEGETATED SWALE — REFER TO PLANT PLAN AND SCHEDULE — 09/401
- TREE INSTALLED WITH ROOT CONTROL BARRIER — 11/401

SURFACE FINISHES

- EXISTING CONCRETE PAVEMENT
- PROPOSED CONCRETE PAVEMENT — REFER TO HARDSCAPE PLAN 1 -4
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0 1 2 4 6 10 20 25m

CATALINA ESTATE
CATALINA CENTRAL

REVISION	DESCRIPTION	BY	DATE
AC	AS CONSTRUCTED	JZ	04.10.22

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CLIENT	SATTERLEY PROPERTY GROUP & TPRC		
DESIGNED	AF	DRAWING TITLE	SOFTSCAPE PLAN 1
DRAWN	AF		
APPROVED	GD	DRAWING No.	12606-CC-GL-301
SCALE	1:250A1		REVISION AC

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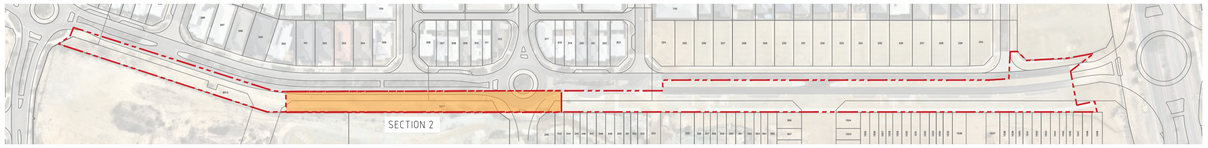
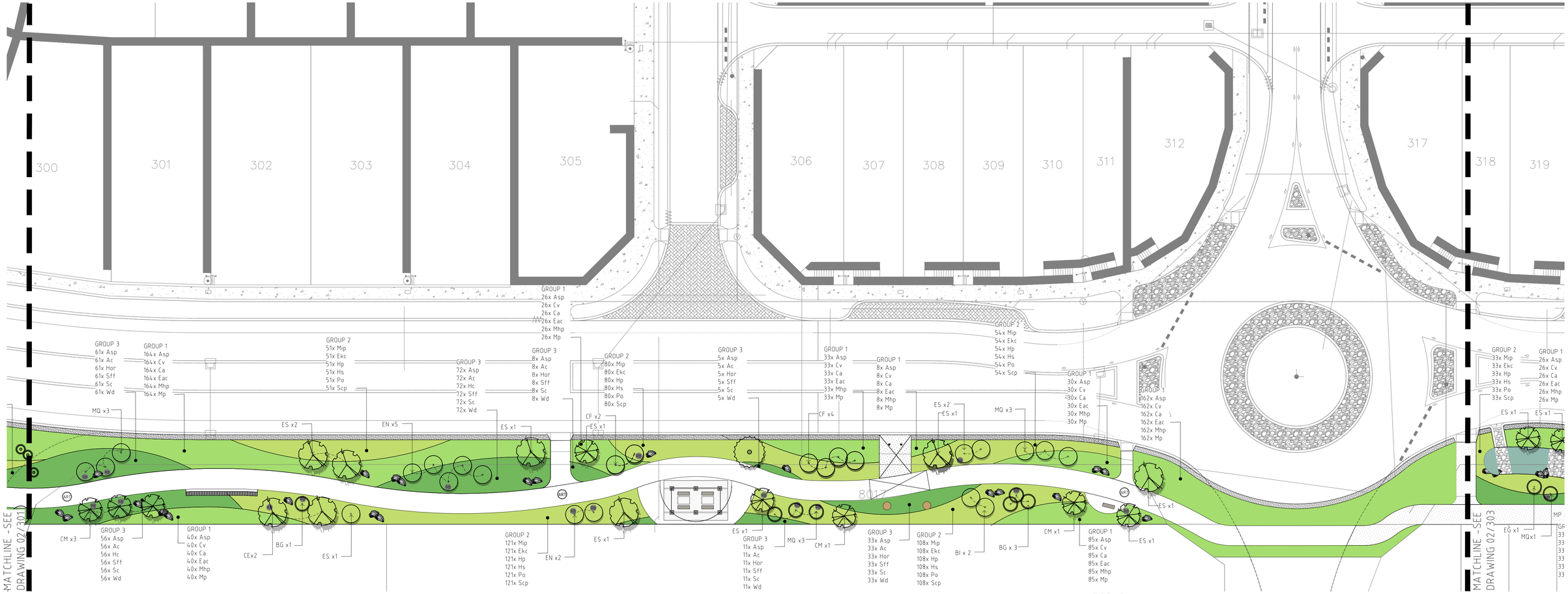


01
302
KEY PLAN
PLAN 1:2000 @ A1



02
302
SOFTSCAPE PLAN
PLAN 1:250 @ A1

GENERAL NOTES:

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- EXISTING GRADES ARE TO BE MAINTAINED.
- VERGES TO HAVE 2-3% CROSSFALL TOWARDS ROAD EDGE.
- ALL EXISTING SITE FEATURES, SUCH AS KERBLINES, PATHS, SIGN POSTS, LIGHT POLES ETC ARE TO BE RETAINED AND PROTECTED UNLESS OTHERWISE NOMINATED ON PLAN.
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EXCAVATION AND SITE PREPARATION:

- EXCAVATE AS REQUIRED ALONG KERBLINE TO ACHIEVE FINISHED LEVELS AFTER SOIL PREPARATION AND MULCH. EXCAVATED MATERIAL MAY BE RE-SPREAD ON SITE WITHIN LOT BOUNDARY. LOCATION TO BE CONFIRMED BY SUPERINTENDENT
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- FOR COOK ISLAND TRANSPLANTS, CONTRACTOR TO PREPARE 3×3×2M DEEP PLANTING HOLE. FOR ERYTHRINA TRANSPLANTS, PREPARE 2×2×1M DEEP HOLES. TRANSPLANT SUPPLY BY CLIENT. TRANSPLANT INSTALLATION AND MANAGEMENT WORKS ARE TO BE COORDINATED WITH SPECIALIST GROWER BY CONTRACTOR.
- CONTRACTOR TO EXCAVATE ALONG EXISTING CIVIL KERBLINE AS REQUIRED BY SPECIALIST TRANSPLANT GROWER TO ENABLE SPRAY ON ROOT CONTROL BARRIER INSTALLATION TO ALL COOK ISLAND TRANSPLANTS LOCATED WITHIN 5M OF EXISTING KERBLINE AT A LENGTH OF 10M TO EACH SIDE OF TREE.
- FOR ALL HARD AND SOFTSCAPE DETAILS, REFER TO DETAILS 01-03
- FOR ALL MATERIALS AND FURNITURE SELECTIONS, REFER TO SCHEDULES (LS-500) AND SPECIFICATION

PLANTING NOTES:

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- FOR OVERALL PLANT SCHEDULES, REFER TO DRAWING LS-500
- FOR ALL HARD AND SOFTSCAPE DETAILS, REFER TO DETAILS 01-03
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PUBLIC ART NOTES:

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LEGEND

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- PROPOSED TRANSPLANT — ERYTHRINA
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- PROPOSED 1000LT TREE — SEE SCHEDULE
- PROPOSED 500LT TREE — SEE SCHEDULE — 10 / 4.01
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- PROPOSED GRASS TREE — SEE SCHEDULE
- IRRIGATED PLANTING BED — REFER TO PLANT PLAN AND SCHEDULE — 08 / 4.01
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- TREE INSTALLED WITH ROOT CONTROL BARRIER — 11 / 4.01

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- EXISTING CONCRETE PAVEMENT
- PROPOSED CONCRETE PAVEMENT — REFER TO HARDSCAPE PLAN 1-4
- MULCH MAINTENANCE STRIP 600mm
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- BOLLARD
- LP — LIGHT POLE BY OTHERS
- ART — PROPOSED PUBLIC ART LOCATION BY OTHERS

0 1 2 4 6 10 20 25m

CATALINA ESTATE
CATALINA CENTRAL

REVISION	DESCRIPTION	BY	DATE
AC	AS CONSTRUCTED	IZ	04.10.22

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CLIENT	SATTERLEY PROPERTY GROUP & TPRC
DESIGNED	AF
DRAWN	AF
APPROVED	GD
SCALE	1:250A1
DRAWING TITLE	SOFTSCAPE PLAN 2
DRAWING No.	12606-CC-GL-302
REVISION	AC

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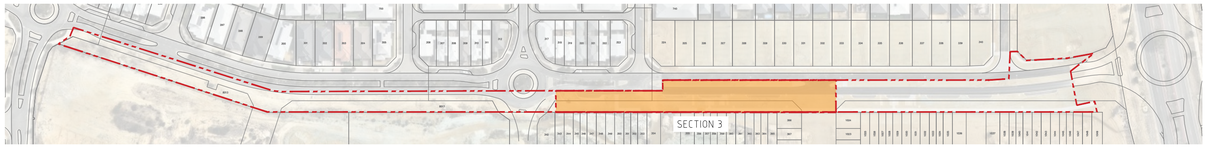
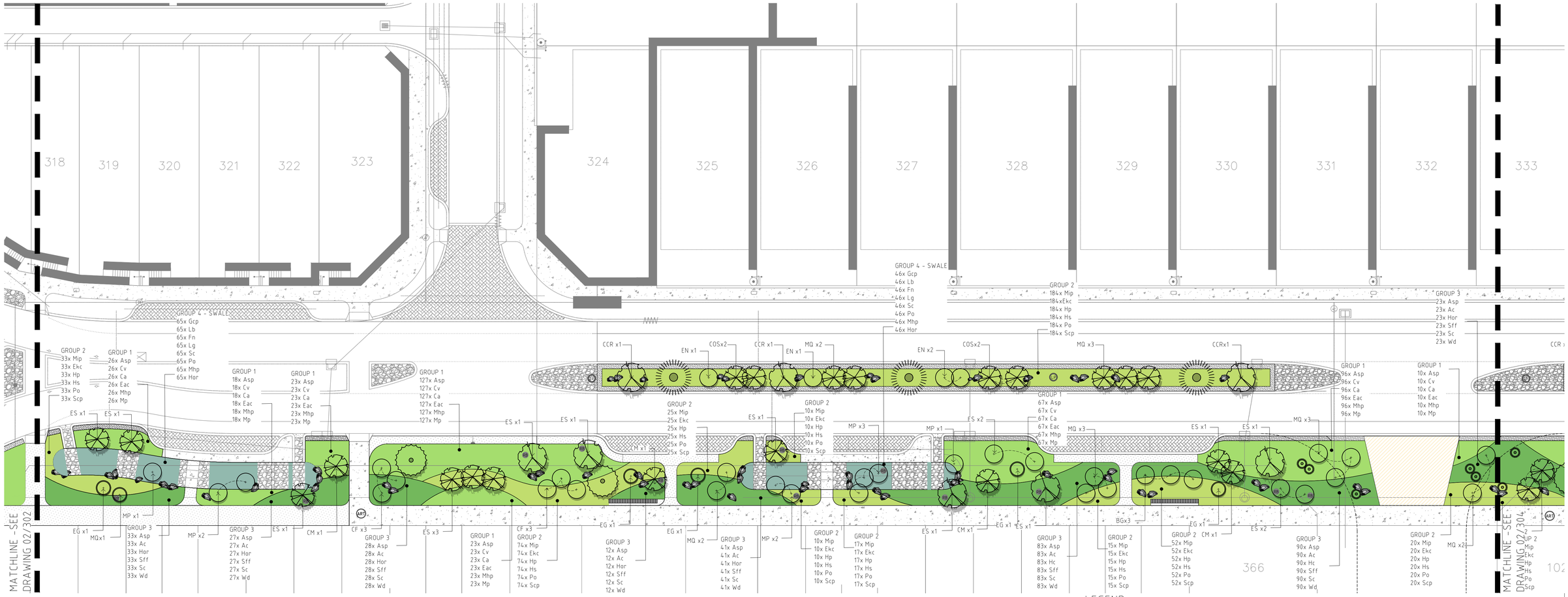


01
303
KEY PLAN
PLAN 1:2000 @ A1



02
303
SOFTSCAPE PLAN
PLAN 1:250 @ A1

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0 1 2 4 6 10 20 25m

CATALINA ESTATE
CATALINA CENTRAL

REVISION	DESCRIPTION	BY	DATE
AC	ISSUE FOR PRICING AND CONSTRUCTION	AF / NL	24.10.22
1	RE-ISSUE FOR CONSTRUCTION	AF / NL	23.05.22

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western australia 6017
telephone +61 8 9441 0200
facsimile +61 8 9441 0201
enq@tdl.com.au

CLIENT	SATTERLEY PROPERTY GROUP & TPRC
DESIGNED	AF
DRAWN	AF
APPROVED	GD
SCALE	1:250A1
DRAWING TITLE	SOFTSCAPE PLAN 3
DRAWING No.	12606-CC-GL-303
REVISION	AC

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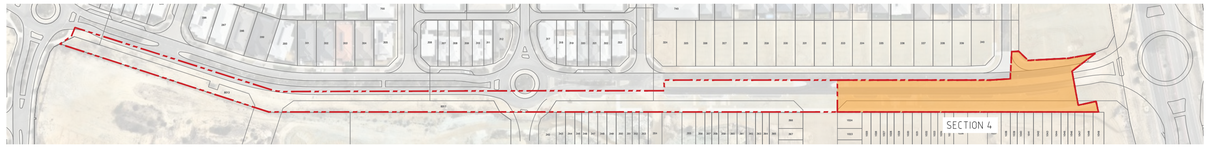

01
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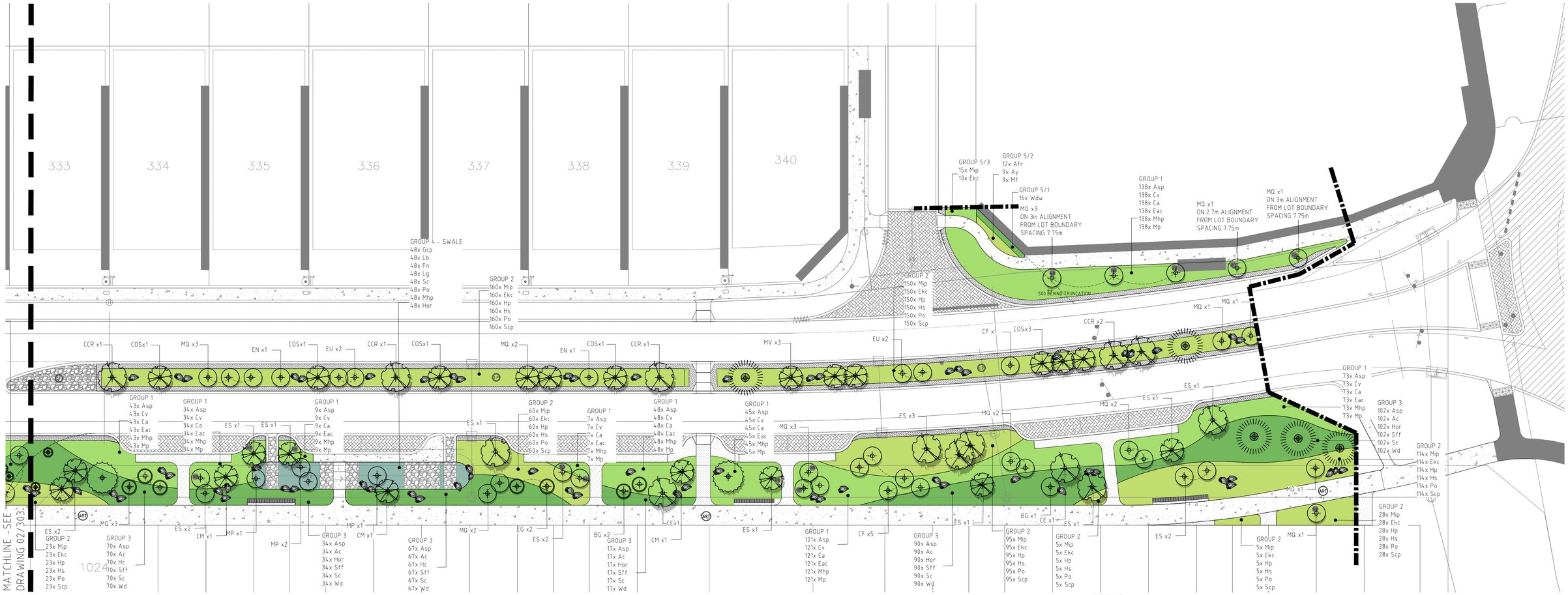
KEY PLAN
PLAN 1:2000 @ A1



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0 1 2 4 6 10 20 25m

REVISION	DESCRIPTION	BY	DATE
~~AC~~	~~AS-CONSTRUCTING~~ AND CONSTRUCTION	~~AF/ NL~~	~~09.10.22~~
1	RE-ISSUE FOR CONSTRUCTION	AF/ NL	23.05.22
2	RE-ISSUE FOR CONSTRUCTION - TREE SPECIES SUB FROM CONNOLLY WORKS	AF/ NL	25.05.22
3	RE-ISSUE FOR CONSTRUCTION - TRANSPLANT LOCATION MODIFIED	AF/ NL	02.06.22

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CLIENT	SATTERLEY PROPERTY GROUP & TPRC		
DESIGNED	AF	DRAWING TITLE	SOFTSCAPE PLAN 4
DRAWN	AF		
APPROVED	GD	DRAWING No.	12606-CC-GL-304
SCALE	1:250A1		REVISION AC

CATALINA ESTATE
CATALINA CENTRAL

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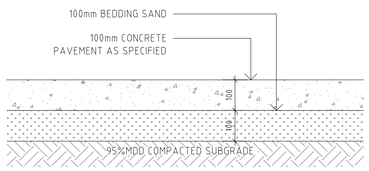
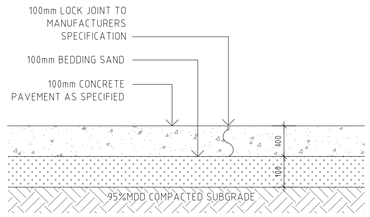
NOTE:
- MINIMUM 1% FALL TO NEAREST PLANTING OR DRAIN
- WHERE CONCRETE PAVING IS ADJACENT TO TURF, FINISH LEVEL OF TURF SHALL BE FLUSH WITH THE FINISH LEVEL OF CONCRETE.
- WHERE CONCRETE PAVING IS ADJACENT TO PLANTING, FINISH LEVEL OF MULCH TO PLANTING SHALL BE 20MM BELOW FINISHED PAVING LEVEL.
- ALL CONCRETE TO BE 32 MPa, MIN 20mm AGGREGATE & MAX SLUMP OF 65mm
- EXPANSION JOINT EVERY 6M, CONTRACTION JOINT EVERY 2M
- FINISH - AS NOMINATED IN LEGEND



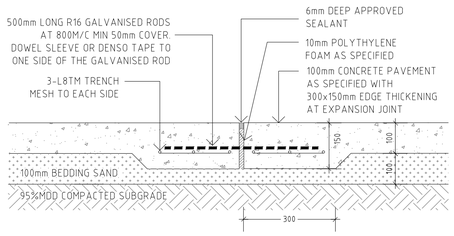
01 / 401 CONCRETE FOOTPATH
TYPICAL DETAIL 1:10 @ A1

NOTE:
- INSTALL LOCK JOINT @ 2m MAX CTS

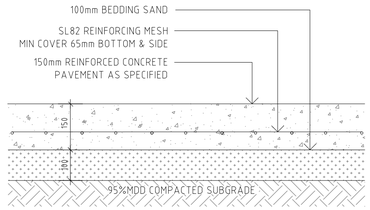


02 / 401 CONTRACTION JOINT - LOCK JOINT
TYPICAL DETAIL 1:10 @ A1

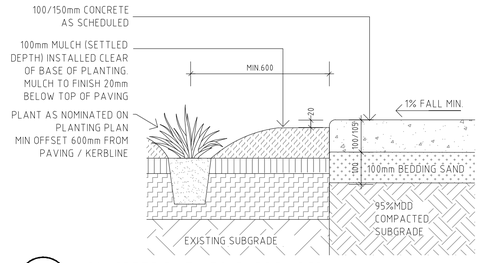
NOTE:
- INSTALL EXPANSION JOINTS @ 6m MAX CTS
- INSTALL WHERE ABUTTING WALLS
- INSTALL WHERE CHANGING CC COLOUR / FINISH



03 / 401 EXPANSION JOINT
TYPICAL DETAIL 1:10 @ A1



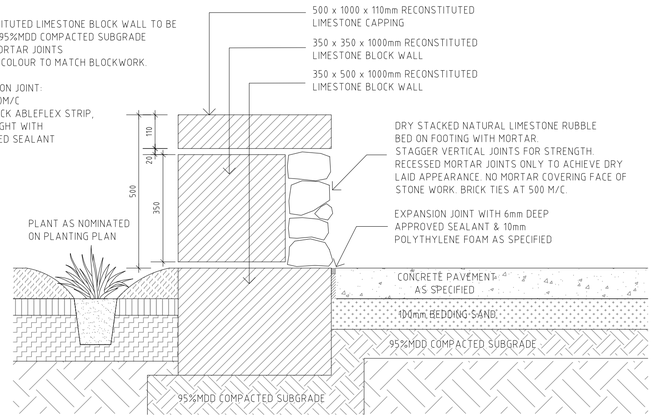
04 / 401 REINFORCED CONCRETE
TYPICAL DETAIL 1:10 @ A1



05 / 401 CONCRETE PATH TO GARDEN BED
TYPICAL SECTION 1:10 @ A1

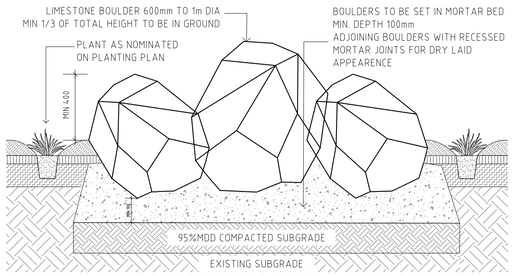
NOTE:
RECONSTITUTED LIMESTONE BLOCK WALL TO BE LAID ON 95%MDD COMPACTED SUBGRADE
20MM MORTAR JOINTS
MORTAR COLOUR TO MATCH BLOCKWORK.

EXPANSION JOINT:
EVERY 10M/C
10mm THICK ABLEFLEX STRIP, FULL HEIGHT WITH APPROVED SEALANT



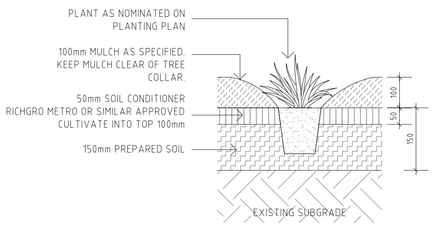
06 / 401 LIMESTONE WALL
TYPICAL DETAIL 1:10 @ A1

LIMESTONE BOULDERS:
SOURCE: ON SITE
CONTRACTOR TO LIAISE WITH SUPERINTENDENT FOR SOURCING

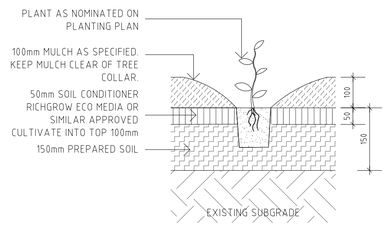


07 / 401 FEATURE BOULDER
TYPICAL DETAIL 1:20 @ A1

FERTILISER SCHEDULE AT INSTALLATION (REFER TO SPEC):		
LANGLEY AND AGRIFORM FERTILISER TABLETS OR SIMILAR APPROVED	TREE STOCK	4 TABLETS PER TREE
BAYLEYS NATIVE PLANT FOOD FERTILISER GRANULES OR SIMILAR APPROVED	SHRUBS AND GROUNDCOVERS	15g PER T/S 20g PER 130/140mm STOCK



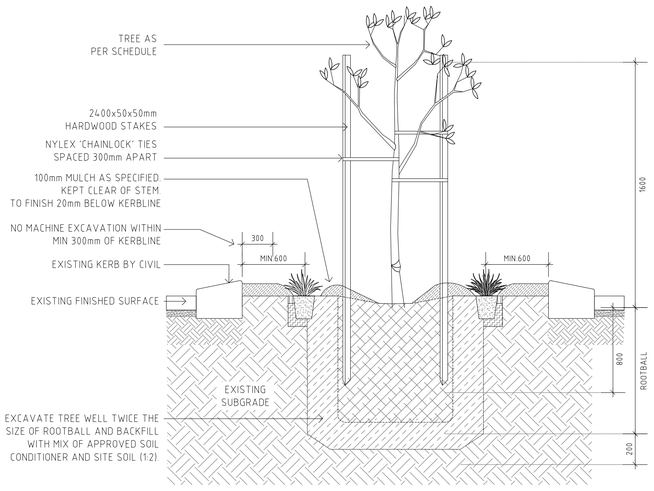
08 / 401 140mm SHRUB PLANTING
TYPICAL DETAIL 1:10 @ A1



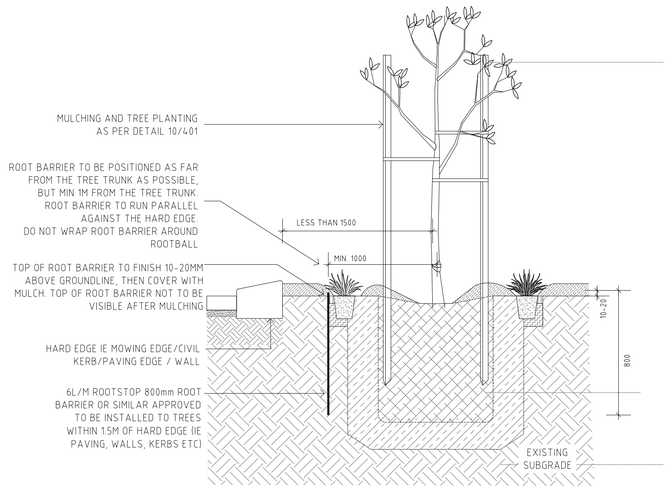
09 / 401 T/S SHRUB PLANTING IN SWALE
TYPICAL DETAIL 1:10 @ A1

STAKING AND GUYING

>500LT AND TRANSPLANTS:	UNDERGROUND GUYING
200-500LT TREE STOCK:	3 X 2400x50x50mm HARDWOOD STAKES
45-150LT TREE STOCK:	2 X 1800x50x50mm HARDWOOD STAKES



10 / 401 45-500L TREE PLANTING
TYPICAL DETAIL 1:20 @ A1



11 / 401 LINEAR ROOT CONTROL BARRIER
TYPICAL DETAIL 1:20 @ A1

GENERAL NOTES:

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- WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER MEASUREMENTS.

CATALINA ESTATE
CATALINA CENTRAL

REVISION	DESCRIPTION	BY	DATE
AC	AS-CONSTRUCTION AND CONSTRUCTION RE-ISSUE FOR CONSTRUCTION	AF / NL AF / NL	24.10.22 23.05.22

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DRAWN	AF		
APPROVED	GD	DRAWING No.	12606-CC-GL-401
SCALE	AS SHOWN		REVISION AC

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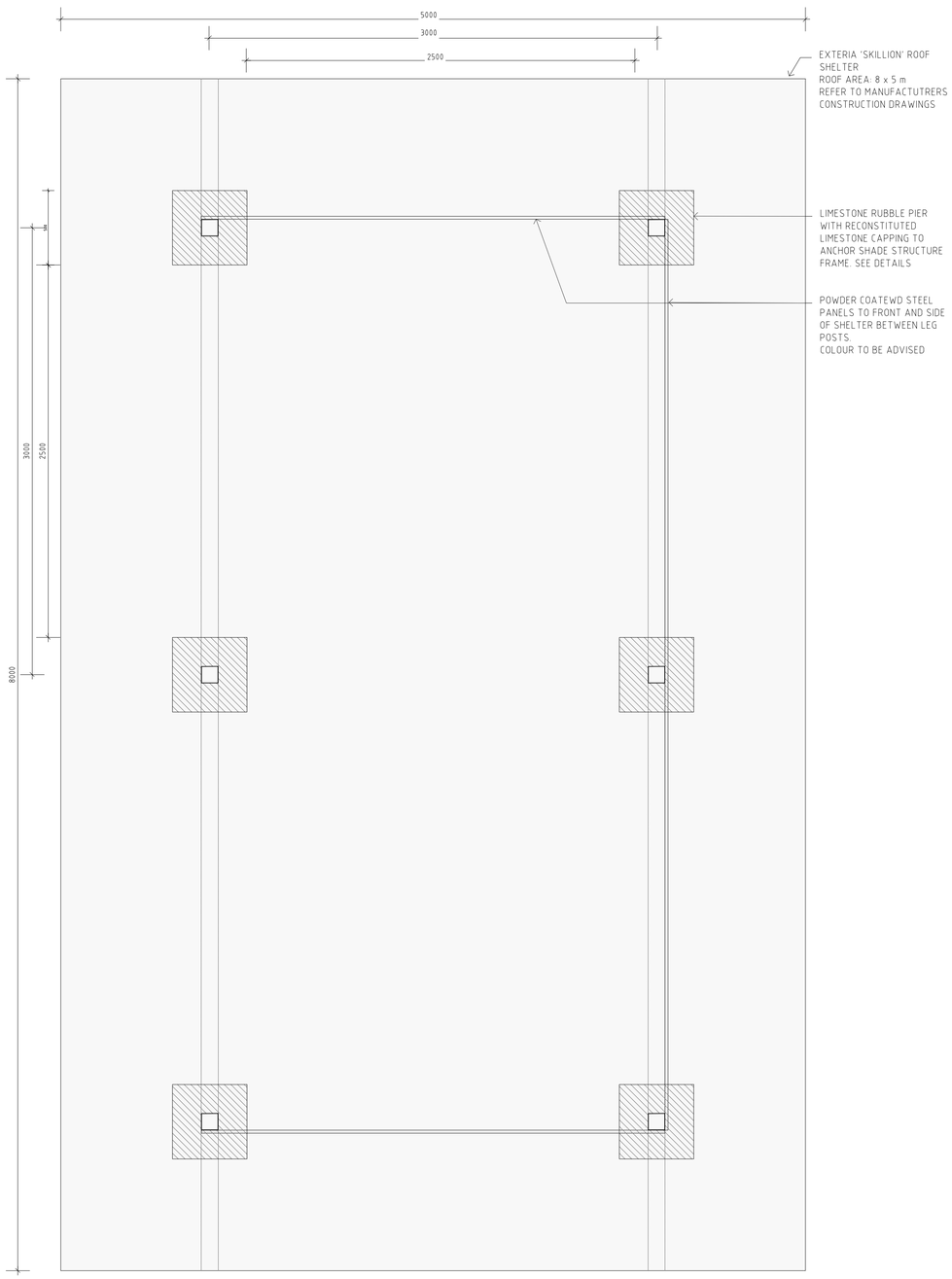
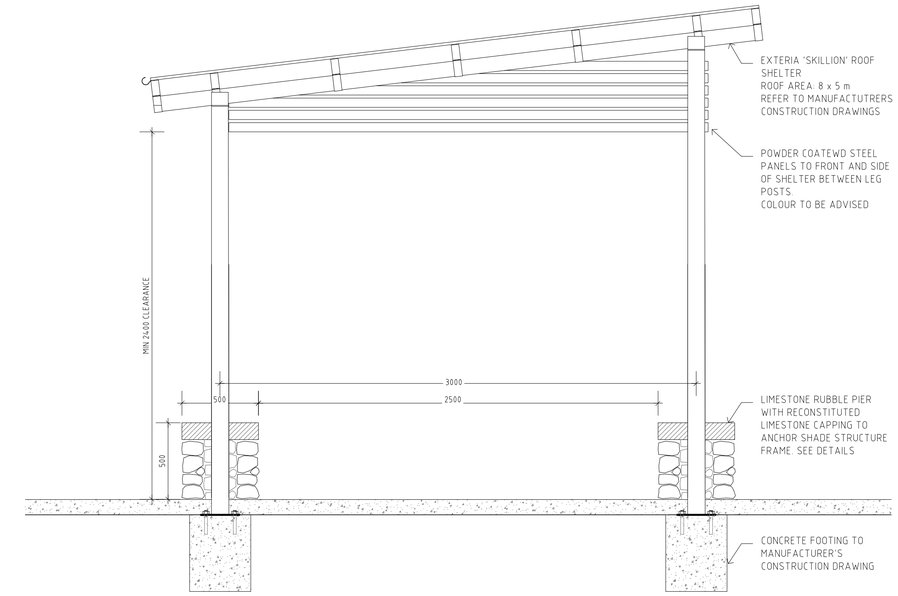
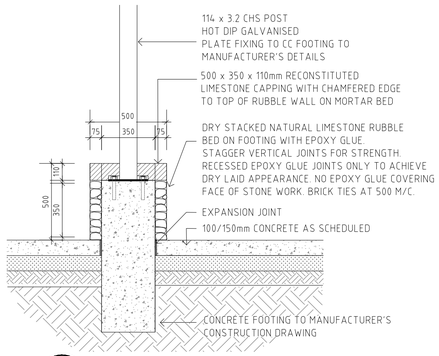


01 / 402 SHELTER
TYPICAL PLAN 1:20 @ A1



02 / 402 SHELTER
SECTION TYPICAL 1:20 @ A1



03 / 402 LIMESTONE RUBBLE PIER TO SHELTER
SECTION 1:20 @ A1

SHELTER DETAILS FOR INFORMATION ONLY
REFER TO MANUFACTURER'S DETAILS FOR CONSTRUCTION

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CATALINA ESTATE
CATALINA CENTRAL

REVISION	DESCRIPTION	BY	DATE
AC	**ISSUED FOR PRICING** AND CONSTRUCTION	AF/ NL	06.10.22
1	RE-ISSUE FOR CONSTRUCTION	AF/ NL	23.05.22

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DRAWN	AF		
APPROVED	GD	DRAWING No.	12606-CC-GL-402 AC
SCALE	AS SHOWN		

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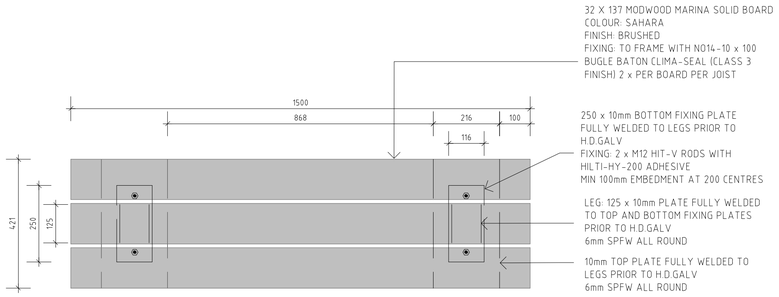
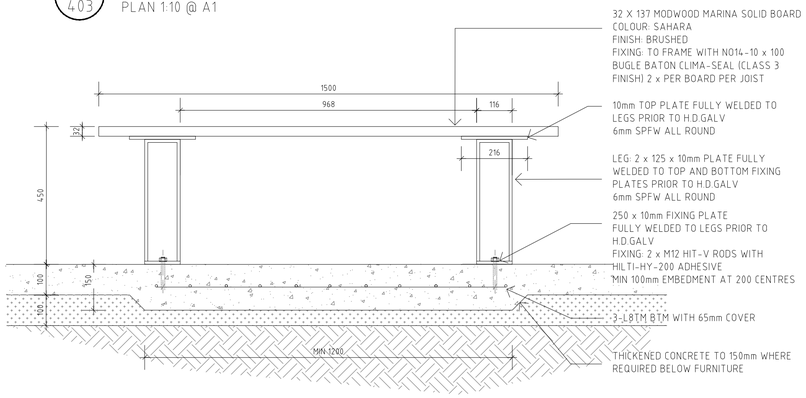
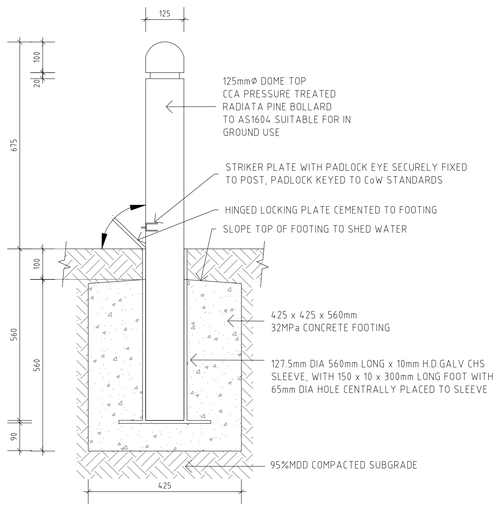


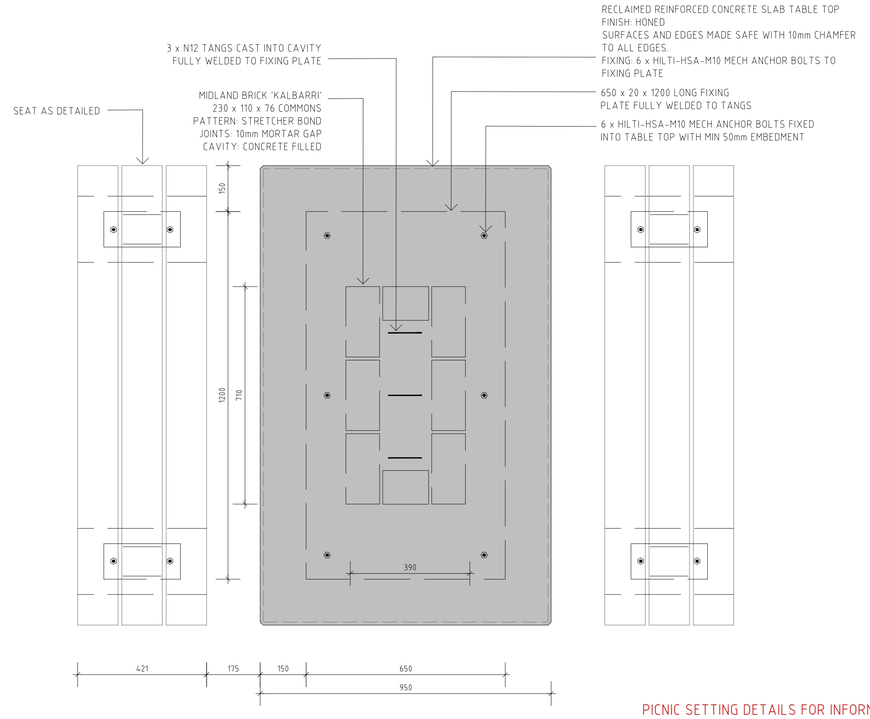
01 403 SEAT
PLAN 1:10 @ A1



02 403 SEAT
ELEVATION 1:10 @ A1

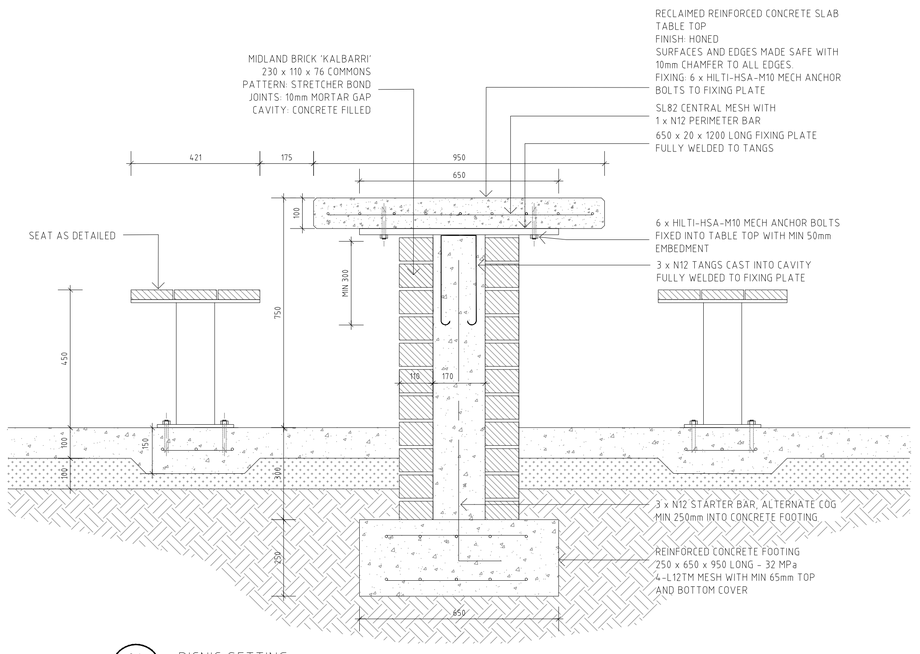


05 403 REMOVABLE BOLLARD
PLAN 1:10 @ A1



03 403 PICNIC SETTING
PLAN 1:10 @ A1

PICNIC SETTING DETAILS FOR INFORMATION ONLY
REFER TO ENGINEERING DETAILS FOR CONSTRUCTION



04 403 PICNIC SETTING
ELEVATION 1:10 @ A1

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CATALINA ESTATE
CATALINA CENTRAL

REVISION	DESCRIPTION	BY	DATE
AC	**RE-ISSUE FOR PRICING** AND CONSTRUCTION	AF / NL	**06.10.22**
I	RE-ISSUE FOR CONSTRUCTION	AF / NL	23.05.22

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DESIGNED	AF	DRAWING TITLE	DETAILS 3
DRAWN	AF		
APPROVED	GD	DRAWING No.	12606-CC-GL-403
SCALE	AS SHOWN		REVISION AC

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Key	Species	Common Name	Plant per m2	Pot size	Qty Plan 01	Qty Plan 02	Qty Plan 03	Qty Plan 04	Qty TOTAL
Trees									
AC	Araucaria columnaris	Cook Island Pine	As shown	Transplant	-	-	3	5	8
EI	Erythrina indica	Coral Tree	As shown	Transplant	1	1	1	2	5
COS	Corymbia 'Orange Splendour'	Flowering Gum	As shown	1000L			4	7	11
ES	Erythrina x skyesii	Coral Tree	As shown	500L	3	9	10	12	13
CF	Corymbia ficifolia	Red Flowering Gum	As shown	500L		incl above			21
CE	Casuarina equisitifolia	Coastal Sheoak	As shown	1500L		2		2	4
BI	Banksia integrifolia	Coast Banksia	As shown	500L	3	6	3	3	5
BG	Banksia grandis	Bull Banksia	As shown	500L		incl above			4
BG	Banksia grandis	Bull Banksia	As shown	150L		incl above			6
CM	Eucalyptus cladocalyx nana	Dwarf Sugar Gum	As shown	1500L	2				2
CM	Corymbia maculata	Spotted Gum	As shown	1000L	7	5	4	3	19
EU	Eucalyptus utilis	Coastal Mort	As shown	500L				4	4
EG	Eucalyptus gomphocephala	Tuart	As shown	200L			5	2	7
EN	Eucalyptus nicholii	Willow Leaf Peppermint	As shown	500L	5	7	4	2	18
ES	Erythrina x skyesii	Coral Tree	As shown	Transplant	4	5	6	6	21
ES	Erythrina x skyesii	Coral Tree	As shown	Transplant	3	3	8	7	21
MP	Melaleuca preissiana	Moonah	As shown	500L			9	4	13
CCR	Corymbia 'Carramar Red'	Red Flowering Paperbark	As shown	1000L			3	5	8
MQ	Melaleuca quinquenervia	Red Flowering Paperbark	As shown	1000L			5	10	10
MQ	Melaleuca quinquenervia	Flowering Gum	As shown	500L	16	9	11	19	53
MQ	Melaleuca quinquenervia	Red Flowering Paperbark	As shown	150L		incl above			7
XP	Xanthorrhoea preissii	Grass Tree	As shown	Various trunk height	8	1	5	2	16
Shrubs and groundcovers - Group 1			6						
Asp	Acacia saligna 'Prostrate'	Dwarf Wattle		140mm	330	548	390	518	
Cv	Carpobrotus virescens	Pigface		140mm	330	548	390	518	
Ca	Conostylis aculeata	Cottonhead		140mm	330	548	390	518	
Eac	Eremophila 'Amber Carpet'	Emu Bush		140mm	330	548	390	518	
Mhp	Melaleuca huegelii 'Prostrate'	Rambler		140mm	330	548	390	518	
Mp	Myoporum parvifolium	Creeping Boobialla		140mm	330	548	390	518	
Shrubs and groundcovers - Group 2			6						
Mip	Myoporum insulare 'Prostrate'	Boobialla		140mm	411	414	443	637	
Ekc	Eremophila glabra 'Kalbarri Carpet'	Emu bush		140mm	411	414	443	637	
Hp	Hemiandra pungens	Purple Snake Bush		140mm	411	414	443	637	
Hs	Hibbertia scandens	Snake Vine		140mm	411	414	443	637	
Po	Pattersonis occidentalis	Purple flag		t/s	411	414	443	637	
Scp	Scaevola crassifolia 'Prostrate'	Fanflower		140mm	411	414	443	637	
Shrubs - Group 3			6						
Asp	Acacia saligna 'Prostrate'	Dwarf Wattle		140mm	424	246	337	370	
Ac	Adenanthos cuneatus	Basket Flower		140mm	424	246	337	370	
Hor	Hibbertia 'Ocean Reef'	Glossy-Leaved Coastal Guinea Flower		140mm	125	118	164	243	
Hc	Hibbertia cuneiformis			140mm	299	128	173	137	
Sff	Scaevola Flat Fred	Fanflower		140mm	424	246	337	370	
Sc	Scaevola crassifolia	Fanflower		140mm	424	246	337	370	
Wd	Westringia dampieri	Shore Westringia		140mm	424	246	337	370	
Sedges and shrubs - Group 4			8						
Gcp	Grevillea crithmifolia 'Prostrate'	Bare Twig Sedge		t/s	-	-	111	48	
Lb	Leucophyta brownii	Cushion bush		t/s	-	-	111	48	
Fn	Ficinia nodosa	Knobby Club Rush		t/s	-	-	111	48	
Lg	Lepidosperma gladiatum	Sea Rush		t/s	-	-	111	48	
Sc	Scaevola crassifolia	Fanflower		t/s	-	-	111	48	
Po	Pattersonis occidentalis	Purple flag		t/s	-	-	111	48	
Mhp	Melaleuca huegelii 'Prostrate'	Rambler		t/s	-	-	111	48	
Hor	Hibbertia 'Ocean Reef'	Glossy-Leaved Coastal Guinea Flower		t/s	-	-	111	48	
Shrubs - Group 5			6						
Wdw	Westringia 'Double Wonder'	Naringa Westringia	500mm spacing	140mm	-	-	-	16	
Afr	Anigozanthos flavidus Red	Kangaroo Paw		140mm	-	-	-	12	
Ay	Anigozanthos 'Yellow'	Kangaroo Paw		140mm	-	-	-	9	
Mf	Macropidia fuliginosa	Black Kangaroo Paw		140mm	-	-	-	9	
Mip	Myoporum insulare 'Prostrate'	Boobialla		140mm	-	-	-	15	
Ekc	Eremophila glabra 'Kalbarri Carpet'	Emu bush		140mm	-	-	-	10	

01 / 500 OVERALL PLANT SCHEDULE

N/A

Type	Detail Reference	Plan 01	Plan 02	Plan 03	Plan 04	TOTAL
Customised Shelter 8 x 5m Exteria 'Skyllion'	LS-402	-	1	-	-	1
Seat - Custom made, 1500L X 421W	01-02 / LS-403	2	1	-	-	3
Picnic Setting - Custom made	03-04 / LS-403	-	2	-	-	2
Removable pine bollard 125 dia	05 / LS-403	-	2	-	-	2
Artwork	By Artist	2	3	1	3	9
Pram Ramp	Ref CoW standard detail TS 05-03-4	4	-	-	4	8

02 / 500 OVERALL FURNITURE SCHEDULE

N/A

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EXCAVATION AND SITE PREPARATION:

- EXCAVATE AS REQUIRED ALONG KERBLINE TO ACHIEVE FINISHED LEVELS AFTER SOIL PREPARATION AND MULCH. EXCAVATED MATERIAL MAY BE RE-SPREAD ON SITE WITHIN LOT BOUNDARY. LOCATION TO BE CONFIRMED BY SUPERINTENDENT
- EXISTING GRADES WITHIN VERGES AND MEDIANS ARE TO BE MAINTAINED. PREPARE EVEN SURFACE SUITABLE FOR PLANTING AND HARDSCAPE INSTALLATION THAT TIES INTO EXSITNG LEVELS
- FINISHED LEVELS OF NEW PATHS AND PAVING TO TIE IN WITH EXISTING PAVING AND KERBS
- FOR COOK ISLAND TRANSPLANTS, CONTRACTOR TO PREPARE 3x3x2M DEEP PLANTING HOLE. FOR ERYTHRINA TRANSPLANTS, PREPARE 2x2x1M DEEP HOLES. TRANSPLANT SUPPLY BY CLIENT. TRANSPLANT INSTALLATION AND MANAGEMENT WORKS ARE TO BE COORDINATED WITH SPECIALIST GROWER BY CONTRACTOR.
- CONTRACTOR TO EXCAVATE ALONG EXISTING CIVIL KERBLINE AS REQUIRED BY SPECIALIST TRANSPLANT GROWER TO ENABLE SPRAY ON ROOT CONTROL BARRIER INSTALLATION TO ALL COOK ISLAND TRANSPLANTS LOCATED WITHIN 5M OF EXISTING KERBLINE AT A LENGTH OF 10M TO EACH SIDE OF TREE.
- FOR ALL HARD AND SOFTSCAPE DETAILS, REFER TO DETAILS 01-03
- FOR ALL MATERIALS AND FURNITURE SELECTIONS, REFER TO SCHEDULES (LS-500) AND SPECIFICATION

PLANTING NOTES:

- PROPOSED TREES MAY BE REALIGNED BASED ON SERVICES LOCATIONS WHERE APPROVED BY SUPERINTENDENT
- SHRUB AND GROUNDCOVER PLANTING OFFSET: MIN 600mm FROM ROAD EDGES, KERBLINES AND OTHER HARD EDGE
- FOR SHRUB PLANTING MIXES: PLANTS ARE TO BE PLANTED IN GROUPS OF 7-9-11 OF EACH SPECIES
- FOR OVERALL PLANT SCHEDULES, REFER TO DRAWING LS-500
- FOR ALL HARD AND SOFTSCAPE DETAILS, REFER TO DETAILS 01-03
- FOR ALL MATERIALS AND FURNITURE SELECTIONS, REFER TO SCHEDULES (LS-500) AND SPECIFICATION
- ALL 1000LT & 1500LT TREES ARE TO BE INSTALLED WITH UNDERGROUND GUYING.
- TREE POT SIZES ARE INDICATIVE AND SUBJECT TO STOCK AVAILABILITY AT TIME OF PROCUREMENT.
- SPECIES SELECTION SUBJECT TO AVAILABILITY AT TIME OF PROCUREMENT. ALTERNATIVE SPECIES AND STOCK SIZES NOMINATED WITHIN OVERALL PLANT SCHEDULE INTENDED TO BE USED WHERE PRIMARY SELECTION IS NOT AVAILABLE.
- TREES ARE TO SETBACK 1M FROM FOOTPATHS, 2.5M FROM STRUCTURES INCLUDING WALLS, BUILT ELEMENTS, SIDE ENTRY PITS, SIGNS AND STREETLIGHTS.
- TREES NOMINATED ON PLAN AND/OR LOCATED WITHIN 1.5M OF HARD EDGE/PAVING/KERBLINE ARE TO BE INSTALLED WITH 6M LONG 800MM DEEP ROOT CONTROL BARRIER POSITIONED AGAINST THE HARD EDGE WITH TOP OF RCB TO BE 50MM BELOW TOP OF MULCH
- FEATURE BOULDERS ARE TO SETBACK 0.6M FROM ALL FOOTPATHS AND 1.2M FROM THE BACK OF KERB.

CATALINA ESTATE
CATALINA CENTRAL

REVISION	DESCRIPTION	BY	DATE
AC	**AS CONSTRUCTING** AND CONSTRUCTION	AF/ NL	04.10.22
I	RE-ISSUE FOR CONSTRUCTION	AF/ NL	23.05.22

TIM DAVIES **LANDSCAPING**
Three prime court osborne park
western australia 6017
telephone +61 8 9441 0200
facsimile +61 8 9441 0201
ens@tpl.com.au

CLIENT	SATTERLEY PROPERTY GROUP & TPRC		
DESIGNED	AF	DRAWING TITLE	SCHEDULES AND NOTES
DRAWN	AF		
APPROVED	GD	DRAWING No.	12606-CC-GL-500
SCALE	AS SHOWN		REVISION AC

TAMALA PARK REGIONAL COUNCIL
CATALINA BEACH: STAGE 25 LANDSCAPE WORKS

CONTRACTS CB-01 & 1711308 LANDSCAPE WORKS
AS CONSTRUCTED

SCHEDULE OF DRAWINGS:

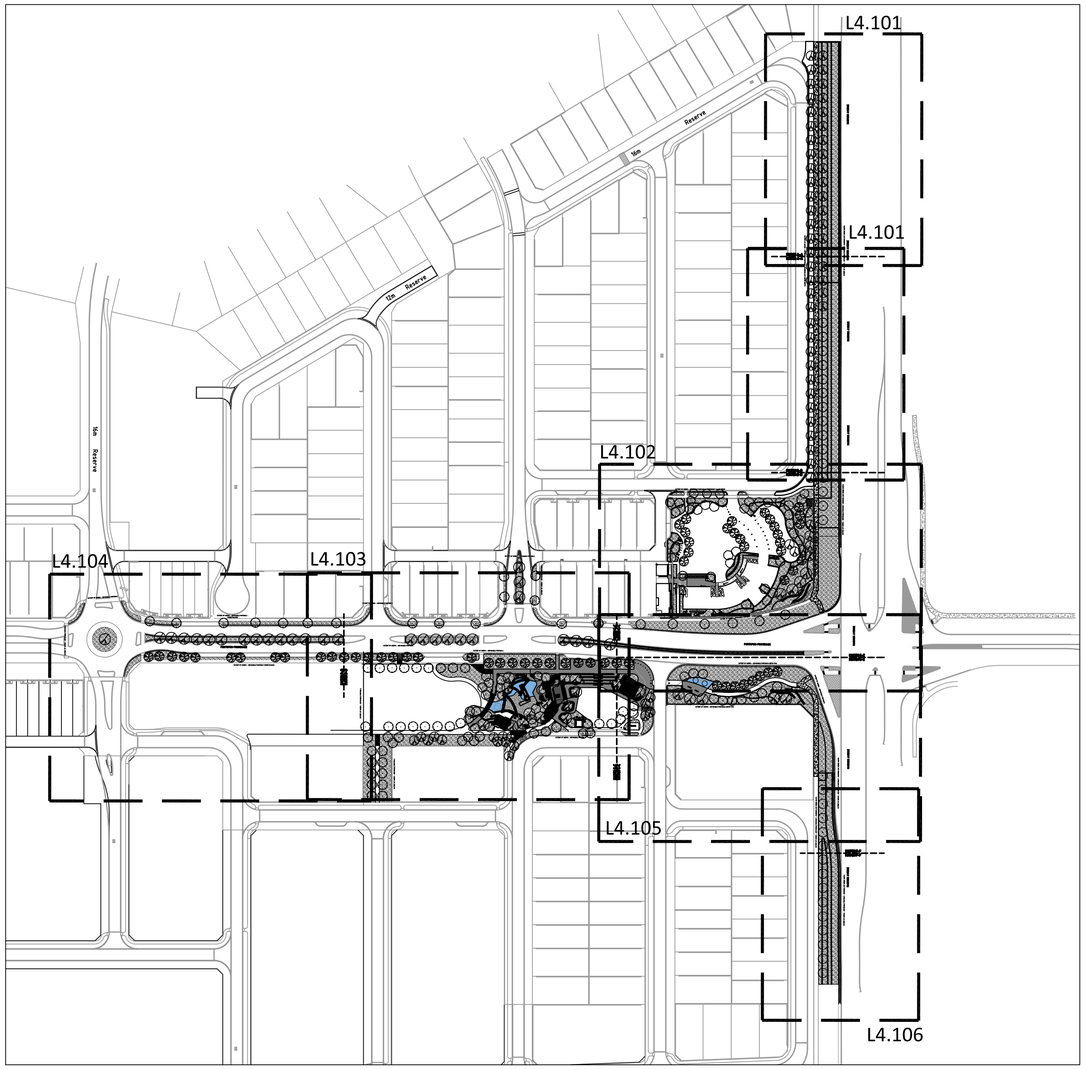
LANDSCAPE DRAWINGS:

L2.100 COVER SHEET
L2.102 OVERALL SITE PLAN

L4 HARD & SOFT WORKS
L4.101 MARMION AVENUE VERGE NORTH
L4.102 TEMPORARY SALES OFFICE
L4.103 POS 25
L4.104 STREETSCAPES
L4.105 ENTRY POS
L4.106 MARMION AVENUE VERGE SOUTH

REFER EMERGE DRAWINGS FOR DETAIL SET

MAY 2019



LOCATION PLAN
NOT TO SCALE

LANDSCAPE ARCHITECTS
414 ROKEBY RD SUBIACO WA 6008
T: (08) 9388 9566 E: mail@plane.com.au
LANDSPACE PTY LTD ACN 056 538 679

PLAN E

CERTIFICATION:
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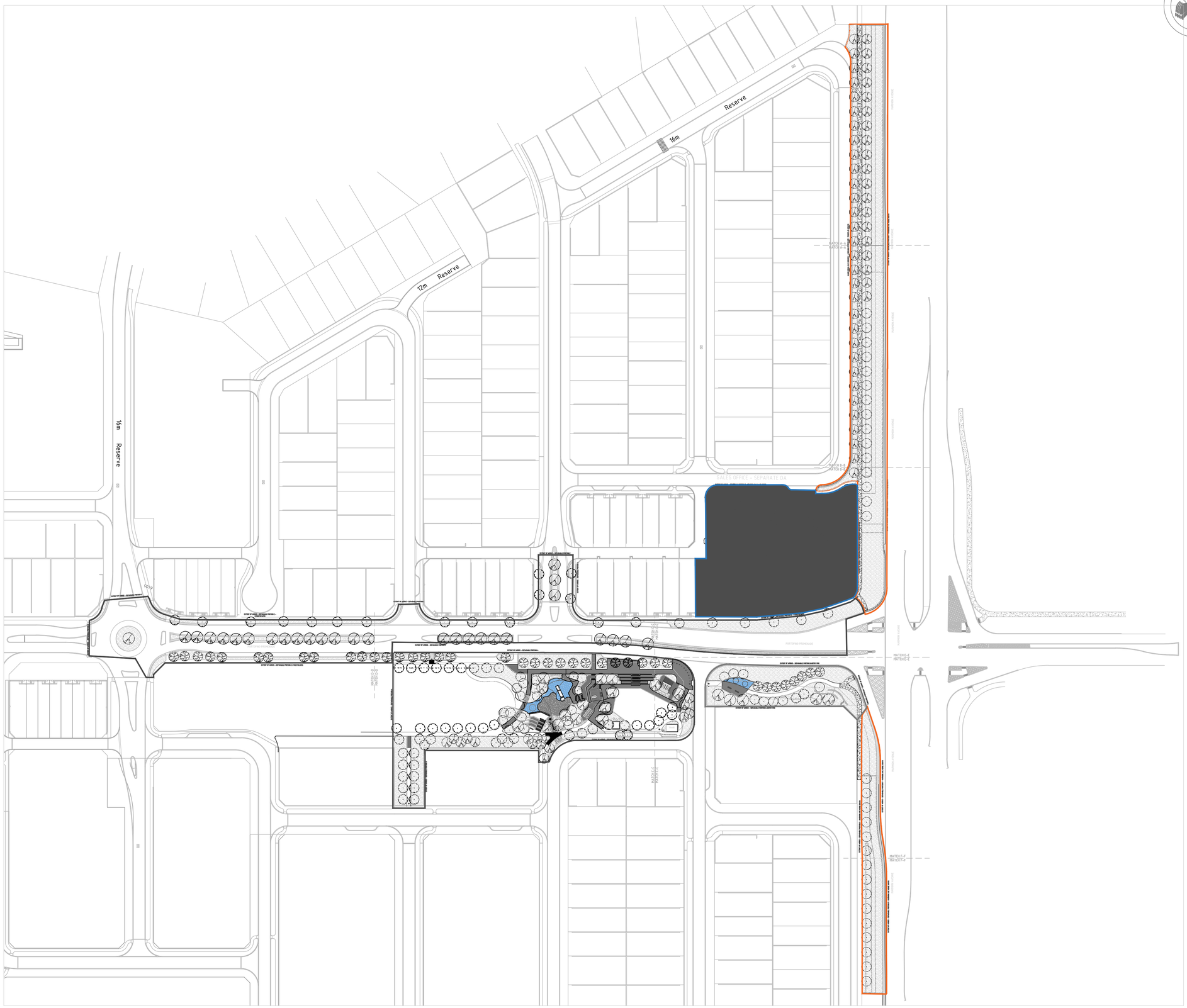
DO NOT SCALE FROM THE DRAWING

DATE	REV.	DESCRIPTION	BY	AP
15.05.19	A	AS CONSTRUCTED	ML	KD



CATALINA BEACH: STAGE 25

PREPARED FOR TAMALA PARK REGIONAL COUNCIL

LANDSCAPE AS CONSTRUCTED

OVERALL SITE PLAN

JOB NO. 1711308 | L2.101 | REV A | MAY 2019

1:1000 @ A1

0 20 40 60 100

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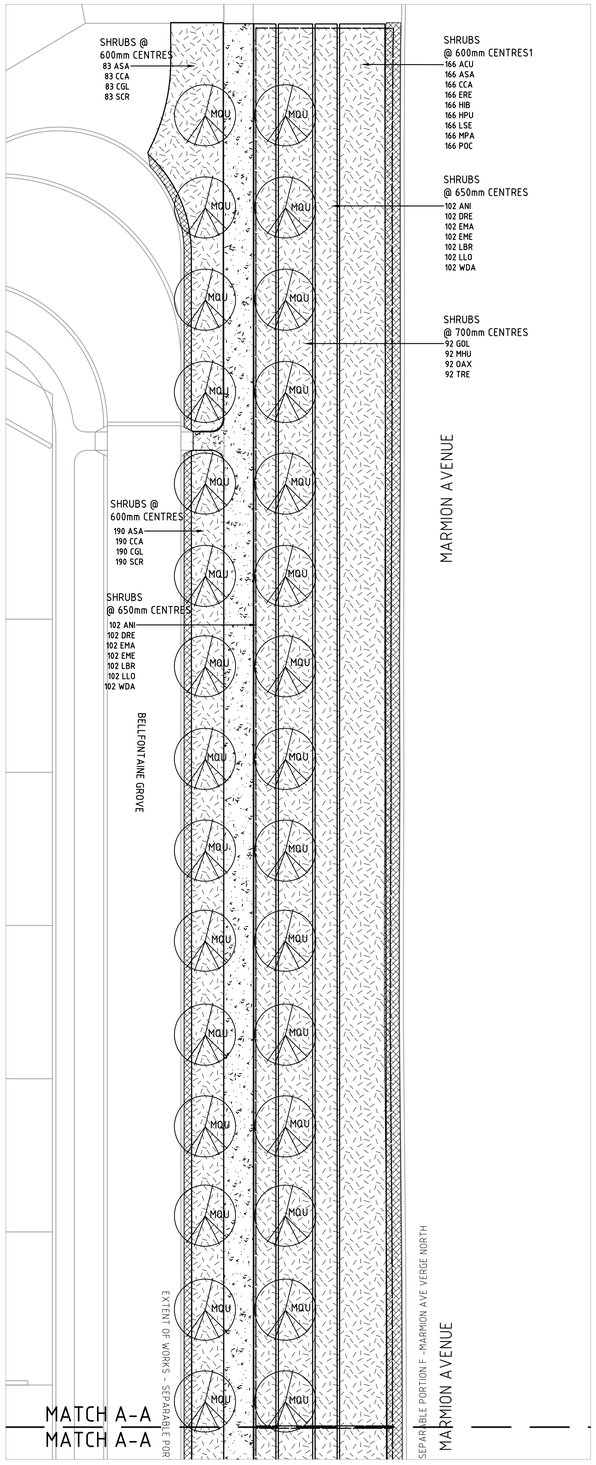
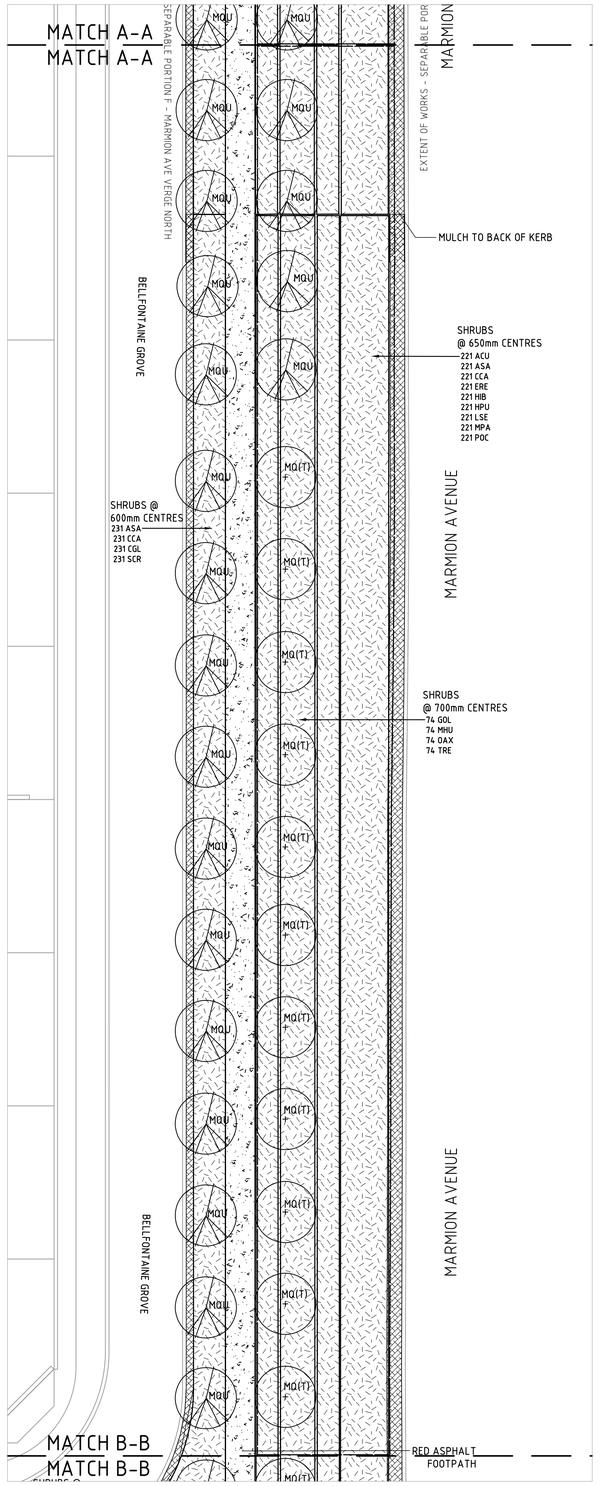
PLAN \ E

FILE LOCATION: L:\PROJECTS\2017 PROJECTS\17113 CATALINA ESTATE\1711308 STAGE 25 SP C & D\CONSTRUCTION\C9 DRAWINGS\AS CONSTRUCTED\1711308 STAGE 25 AS CONS.DWG

PLOTTED BY: KDAWSON

PLOT DATE: 19/02/2021 4:39:59 PM





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DATE	REV	DESCRIPTION	BY	AP
15.05.19	A	AS CONSTRUCTED	ML	KD

LEGEND:

SYM.	DESCRIPTION
	STADARD GREY CONCETE PATHS 32MPA 100mm THICK
	EXPOSED AGGREGATE PAVING 32MPA 100mm THICK (1/901)
	REINFORCED CONCRETE PAVING FOR MAINTENANCE ACCESS (2/901)
	RED ASPHALT PAVING
	MORTARED LIMESTONE SPALLING.
	DECKING MODWOOD. (1-9/902)
	STANDARD LIMESTONE WALL (1-3/906)
	LIMESTONE CLAD WALL (1-3/906)
	MOWING KERB INSITU CONCRETE 32MPA (5/901)
	STAIRS: LIMESTONE BLOCKS.
	SOFTFALL CLEAN WHITE SAND 400mm DEPTH
	SOFTFALL RUBBER SURFACE (1/931)
	IRRIGATED SHRUBS
	IRRIGATED TURF
	MULCH ONLY
HA	HANDRAIL
•	BOLLARD FIXED: CITY OF WANNEROO DETAIL
RB	BOLLARD REMOVABLE: CITY OF WANNEROO DETAIL
	PICNIC TABLE (2/927)
	PARK BENCH. (1/927)

CATALINA BEACH : STAGE 25, MARMION AVE VERGE NORTH

PREPARED FOR TAMALA PARK REGIONAL COUNCIL

LANDSCAPE AS CONSTRUCTED

HARD & SOFT WORKS DRAWING

JOB NO. 1711308 L4.101 REV A MAY 2019

1:250 @ A1

0 5 10 15 25

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LANDSPACE PTY LTD ACN 056 538 679

PLAN \ E

FILE LOCATION: L:\PROJECTS\2017 PROJECTS\17113 CATALINA ESTATE\1711308 STAGE 25 SP C & D\CONSTRUCTION\C9 DRAWINGS\AS CONSTRUCTED\1711308 AS CONS.DWG

PLOTTED BY: KDAWSON

PLOT DATE: 20/05/2019 8:35:46 AM

SALES OFFICE UNDER SEPARATE DA

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DATE	REV	DESCRIPTION	BY	AP
15.05.19	A	AS CONSTRUCTED	ML	KD



LEGEND:

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	STAIRS: LIMESTONE BLOCKS.
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	SOFTFALL RUBBER SURFACE (1/931)
	IRRIGATED SHRUBS
	IRRIGATED TURF
	MULCH ONLY
HA	HANDRAIL
•	BOLLARD FIXED: CITY OF WANNEROO DETAIL
RB	BOLLARD REMOVABLE: CITY OF WANNEROO DETAIL
	PICNIC TABLE (2/927)
	PARK BENCH. (1/927)

CATALINA BEACH : STAGE 25, TEMPORARY SALES OFFICE

PREPARED FOR TAMALA PARK REGIONAL COUNCIL

LANDSCAPE AS CONSTRUCTED

HARD & SOFT WORKS DRAWING

JOB NO. 1711308 L4.102 REV A MAY 2019

1:250 @ A1

0 5 10 15 25

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PLAN E

FILE LOCATION: L:\PROJECTS\2017 PROJECTS\17113 CATALINA ESTATE\1711308 STAGE 25 SP C & D\CONSTRUCTION\C9 DRAWINGS\AS CONSTRUCTED\1711308 AS CONS.DWG

PLOTTED BY: KDAWSON

PLOT DATE: 20/05/2019 8:43:16 AM

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LEGEND:

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- STADARD GREY CONCETE PATHS 32MPA 100mm THICK
- EXPOSED AGGREGATE PAVING 32MPA 100mm THICK (1/901)
- REINFORCED CONCRETE PAVING FOR MAINTENANCE ACCESS (2/901)
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- DECKING MODWOOD. (1-9/902)
- STANDARD LIMESTONE WALL (1-3/906)
- LIMESTONE CLAD WALL (1-3/906)
- MOWING KERB INSITU CONCRETE 32MPA (5/901)
- STAIRS: LIMESTONE BLOCKS.
- SOFTFALL CLEAN WHITE SAND 400mm DEPTH
- SOFTFALL RUBBER SURFACE (1/931)
- IRRIGATED SHRUBS
- IRRIGATED TURF
- MULCH ONLY
- HA HANDRAIL
- BOLLARD FIXED: CITY OF WANNEROO DETAIL
- RB BOLLARD REMOVABLE: CITY OF WANNEROO DETAIL
- PICNIC TABLE (2/927)
- PARK BENCH (1/927)

CATALINA BEACH : POS 25

PREPARED FOR TAMALA PARK REGIONAL COUNCIL

LANDSCAPE AS CONSTRUCTED

HARD & SOFT WORKS DRAWING

JOB NO. 1711308 | L4.103 | REV A | MAY 2019

1:250 @ A1

0 5 10 15 25

PLAN \ E

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FILE LOCATION: L:\PROJECTS\2017 PROJECTS\17113 CATALINA ESTATE\1711308 STAGE 25 SP C & D\CONSTRUCTION\C9 DRAWINGS\AS CONSTRUCTED\1711308 AS CONS.DWG

PLOTTED BY: KDAWSON

PLOT DATE: 20/05/2019 8:46:38 AM

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15.05.19	A	AS CONSTRUCTED	ML	KD

9019

EXTENT OF WORKS - SEPARABLE PORTION E

EXTENT OF WORKS - SEPARABLE PORTION E - STREETSCAPES

EXTENT OF WORKS -

EXTENT OF WORKS - SEPARABLE PORTION E

SHRUBS
57No ASA

SHRUBS
81No ASA

SHRUBS
53No ASA
53No LSE

SHRUBS
216No ASA
216No LSE

HTI (T)

AGF

PORTOFINO PROMENADE

SHRUBS @
650mm CENTRES
120No ASA
120No CGL
120No LSE

SHRUBS
90No ASA

AHE

SHRUBS
183No ASA
183No CCA
183No CGL
183No LSE
183No MPA

SHRUBS
215No ASA
215No CGL
215No LSE

EXTENT OF WORKS - SEPARABLE PORTION E STREETSCAPES

SHRU
650mm CEN
60N
60N
60N
120N

ERY

REMOVEAB

REINFORC
FOR MA

MATCH D-D
MATCH D-D

EXTENT OF WORKS - SEPARABLE PORTION A

ERY

AFL

DLE

SHRUBS @ 650mm CENTRES
78No ACU
78No CCA
78No EMA
78No EKA
78No LSE
78No MPA
78No MHU
78No TRE
78No SCR

FIXED BOLLARDS 5/927

LEGEND:

SYM.	DESCRIPTION
	STADARD GREY CONCETE PATHS 32MPA 100mm THICK
	EXPOSED AGGREGATE PAVING 32MPA 100mm THICK 1/901
	REINFORCED CONCRETE PAVING FOR MAINTENANCE ACCESS 2/901
	RED ASPHALT PAVING
	MORTARED LIMESTONE SPALLING.
	DECKING MODWOOD. 1-9/902
	STANDARD LIMESTONE WALL 1-3/906
	LIMESTONE CLAD WALL 1-3/906
	MOWING KERB INSITU CONCRETE 32MPA 5/901
	STAIRS: LIMESTONE BLOCKS.
	SOFTFALL CLEAN WHITE SAND 400mm DEPTH
	SOFTFALL RUBBER SURFACE 1/931
	IRRIGATED SHRUBS
	IRRIGATED TURF
	MULCH ONLY
HA	HANDRAIL
•	BOLLARD FIXED: CITY OF WANNEROO DETAIL
RB	BOLLARD REMOVABLE: CITY OF WANNEROO DETAIL
	PICNIC TABLE 2/927
	PARK BENCH. 1/927

CATALINA BEACH : STAGE 25 STREETSCAPES

PREPARED FOR TAMALA PARK REGIONAL COUNCIL

LANDSCAPE AS CONSTRUCTED

HARD & SOFT WORKS DRAWING

JOB NO. 1711308 L4.104 REV A MAY 2019

1:250 @ A1

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PLAN \ E

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FILE LOCATION: L:\PROJECTS\2017 PROJECTS\17113 CATALINA ESTATE\1711308 STAGE 25 SP C & D\CONSTRUCTION\C9 DRAWINGS\AS CONSTRUCTED\1711308 AS CONS.DWG

PLOTTED BY: KDAWSON

PLOT DATE: 20/05/2019 8:47:36 AM

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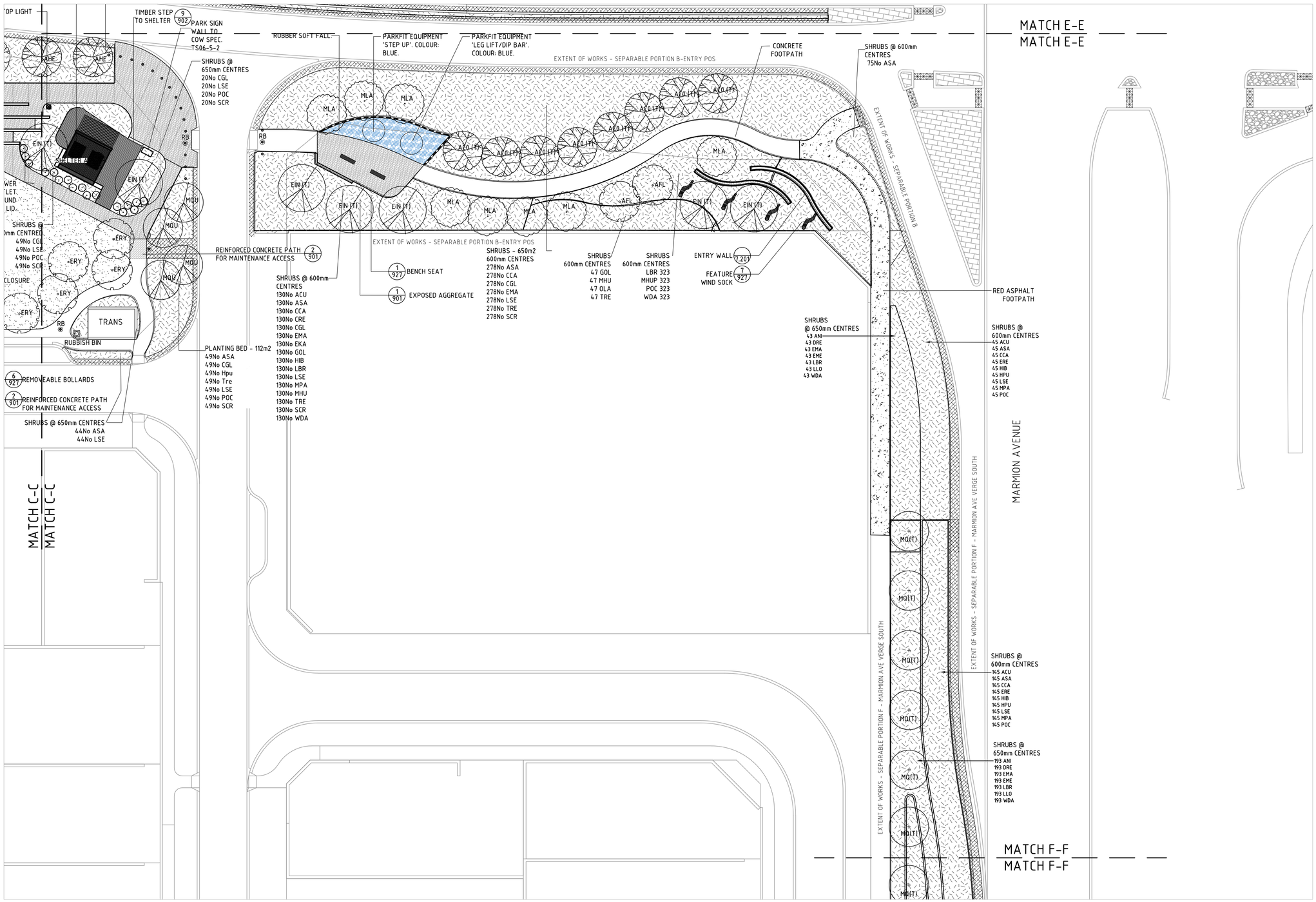

LEGEND:

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RB	BOLLARD REMOVABLE: CITY OF WANNEROO DETAIL
	PICNIC TABLE 2/927
	PARK BENCH. 1/927

CATALINA BEACH : STAGE 25, ENTRY POS

PREPARED FOR TAMALA PARK REGIONAL COUNCIL

LANDSCAPE AS CONSTRUCTED

HARD & SOFT WORKS DRAWING

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PLAN E

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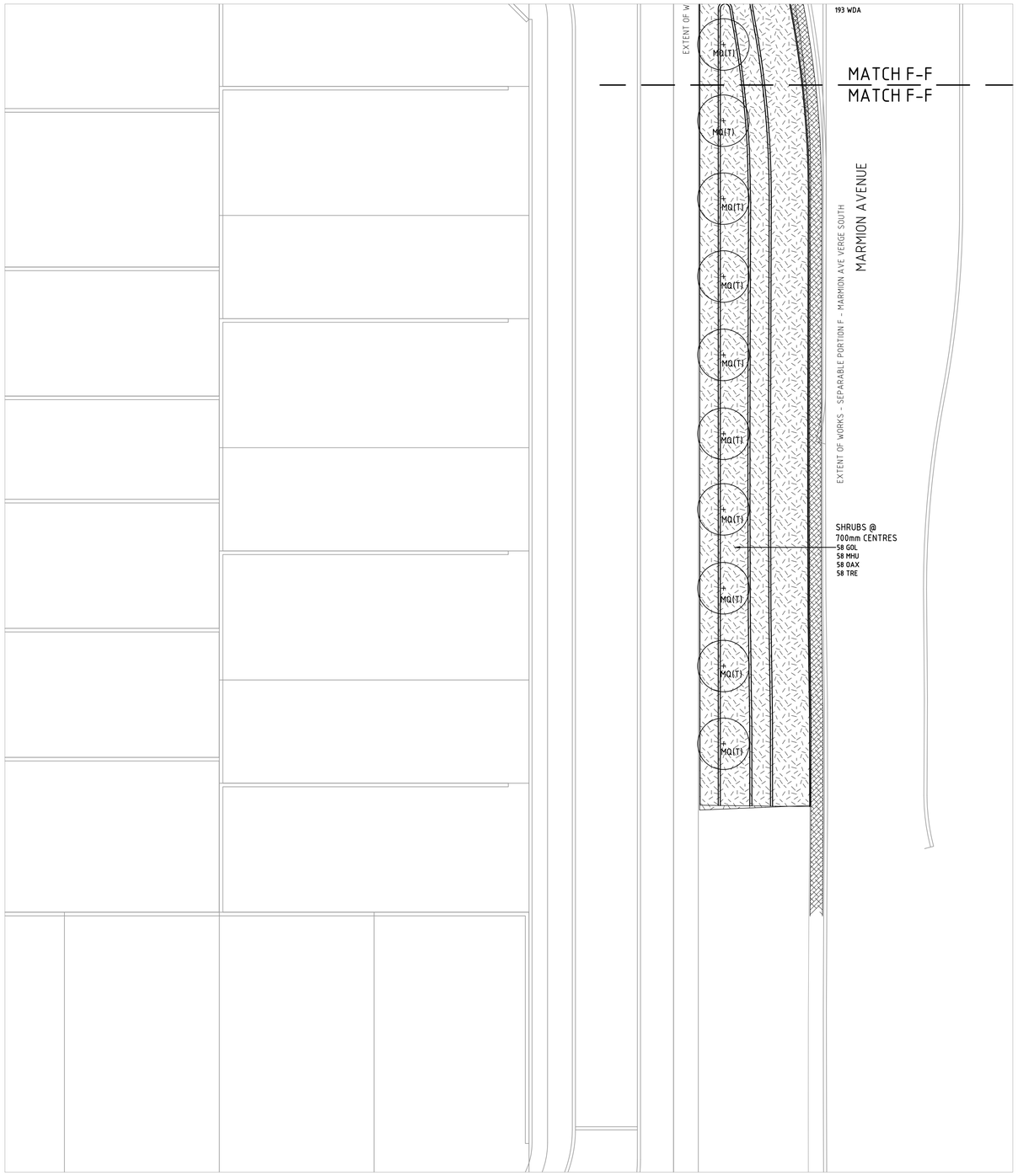
PLOTTED BY: KDAWSON

PLOT DATE: 20/05/2019 8:48:29 AM



SHRUB PLANTING

Key	Botanic Name	Size @ installation
ACU	ADENANTHOS CUNEATUS	200mm
ASA	ACACIA SALIGNA PROSTRATE	200mm
ANI	ANIGOZANTHOS FLAVIDUS	200mm
CCA	CONOSTYLIS CANDICANS	200mm
CGL	CARPOBROTUS GLAUCESCENS	200mm
DRE	DIANELLA REVOLUTA 'LITTLE REV'	200mm
EMA	EREMOPHILA MACULATA	200mm
EME	EREMOPHILA MACULATA 'LEMON DELIGHT'	200mm
ERE	EREMOPHILA 'KALBARRI CARPET'	200mm
GOL	GREVILLEA OLIVACEA	200mm
HIB	HIBBERTIA 'OCEAN REEF'	200mm
HPU	HEMIANDRA PUNGENS	200mm
LBR	LEUCOPHYTA BROWNII	200mm
LLO	LOMANDRA LONGIFOLIA	200mm
LSE	LOMANDRA 'SEASCAPE'	200mm
MHU	MELALEUCA HUEGELII PROSTRATE	200mm
MPA	MYOPORUM PARVIFOLIUM	200mm
OAX	OLEARIA AXILLARIS 'LITTLE SILVER'	200mm
POC	PATERSONIA OCCIDENTALIS	200mm
SCR	SCAEVOLA CRASSIFOLIA 'FLAT FRED'	200mm
TRE	TEMPLETONIA RETUSA	200mm
WDA	WESTRINGIA DAMPIERI	200mm

TREE PLANTING

Key	Botanic Name	Size @ installation
ACO	ARAUCARIA COLUMNARIS	500LT
ACO (T)	ARAUCAIRA COLUMNARIS	TRANSPLANT
AHE	ARAUCARIA HETEROPHYLLA	500LT
AFL	AGONIS FLEXUOSA	200LT
AGF	AGONIS FLEXUOSA	500LT
ERY	ERYTHRINA INDICA	500LT
EIN (T)	ERYTHRINA INDICA	TRANSPLANT
HTI (T)	HIBISCUS TILEACEUS	TRANSPLANT
HTI	HIBISCUS TILEACEUS	100LT
MLA	MELALEUCA LANCEOLATA	200LT
MQU	MELALEUCA QUINQUENERVIA	500LT
MQT	MELALEUCA QUINQUENERVIA	TRANSPLANT
OLE	OLEA EUROPAEA	500LT
TTI (T)	TIPUANA TIPU	TRANSPLANT

LEGEND:

SYM. DESCRIPTION

- STADARD GREY CONCETE PATHS 32MPA 100mm THICK
- EXPOSED AGGREGATE PAVING 32MPA 100mm THICK (1/901)
- REINFORCED CONCRETE PAVING FOR MAINTENANCE ACCESS (2/901)
- RED ASPHALT PAVING
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- DECKING MODWOOD. (1-9/902)
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- LIMESTONE CLAD WALL (1-3/906)
- MOWING KERB INSITU CONCRETE 32MPA (5/901)
- STAIRS: LIMESTONE BLOCKS.
- SOFTFALL CLEAN WHITE SAND 400mm DEPTH
- SOFTFALL RUBBER SURFACE (1/931)
- IRRIGATED SHRUBS
- IRRIGATED TURF
- MULCH ONLY
- HA HANDRAIL
- BOLLARD FIXED: CITY OF WANNEROO DETAIL
- RB BOLLARD REMOVABLE: CITY OF WANNEROO DETAIL
- PICNIC TABLE (2/927)
- PARK BENCH. (1/927)

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15.05.19	A	AS CONSTRUCTED	ML	KD

CATALINA BEACH : STAGE 25, MARMION AVE VERGE SOUTH

PREPARED FOR TAMALA PARK REGIONAL COUNCIL

LANDSCAPE AS CONSTRUCTED

HARD & SOFT WORKS DRAWING

JOB NO. 1711308 L4.106 REV A MAY 2019

1:250 @ A1

0 5 10 15 25

LANDSCAPE ARCHITECTS
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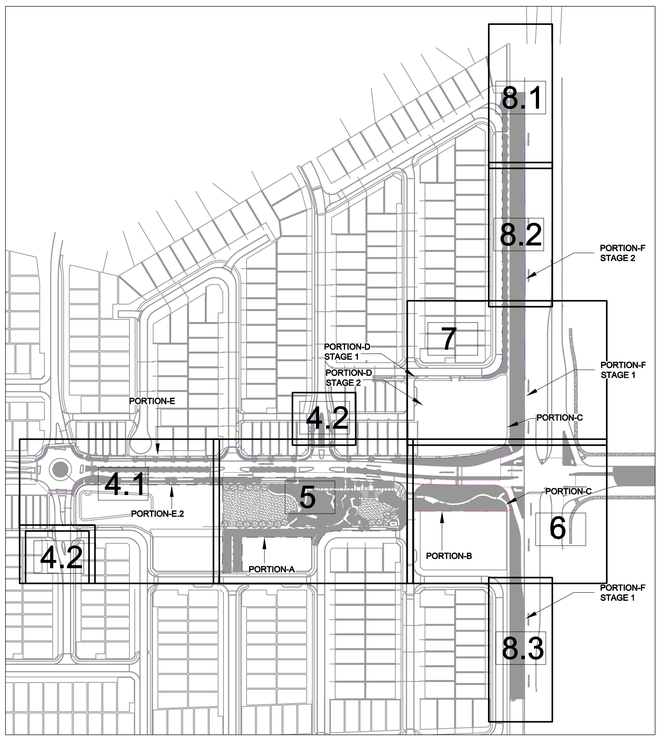
FILE LOCATION: L:\PROJECTS\2017 PROJECTS\17113 CATALINA ESTATE\1711308 STAGE 25 SP C & D\CONSTRUCTION\C9 DRAWINGS\AS CONSTRUCTED\1711308 AS CONS.DWG

PLOTTED BY: KDAWSON

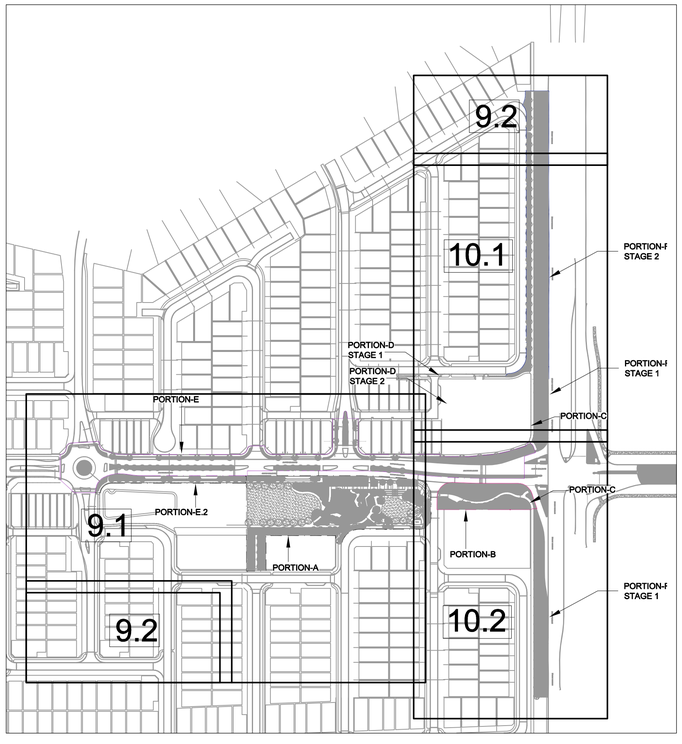
PLOT DATE: 20/05/2019 8:49:16 AM

CATALINA BEACH ESTATE
STAGE 25
IRRIGATION WORKS

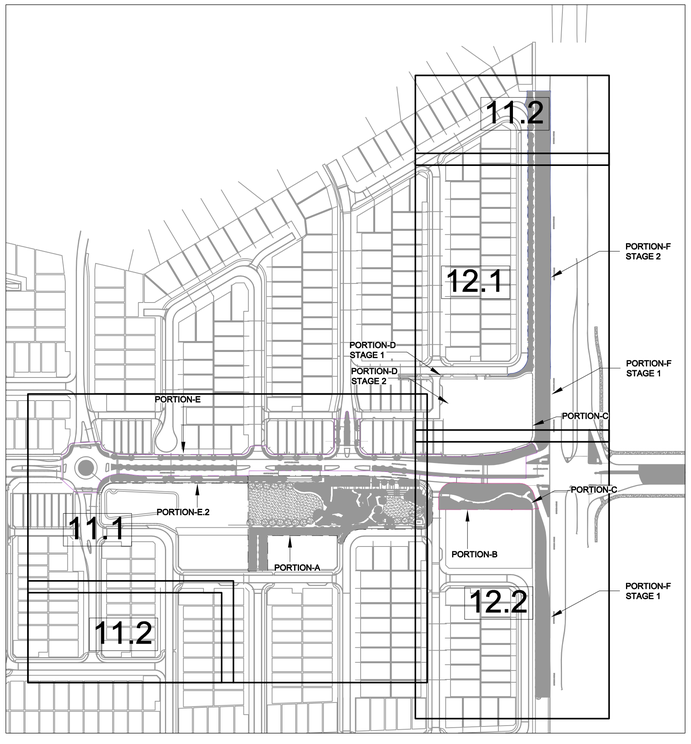
TURF & GARDEN IRRIGATION



TREE IRRIGATION



TREE IRRIGATION (MATURE TRANSPLANTED TREES)



AUTOCAD FILENAME: AC - Amended Catalina Beach Design (Rev 0).dwg

REV	DATE	DESCRIPTION	DWN	CKD
A	16/09/2016	ISSUED FOR APPROVAL	R.V	J.S
B	28/09/2016	ISSUED FOR APPROVAL	R.V	J.S
C	05/10/2016	ISSUED FOR APPROVAL, REVISED FLOWS	I.B	J.S
D	15/03/2017	REVISED IRRIGATION TO SUIT THE NEW LANDSCAPE PLAN	R.V	J.S
E	30/03/2017	CID STAMP & LIGHTNING SURGE PROTECTION WERE ADDED ON THE DRAWING	R.V	J.S

REV	DATE	DESCRIPTION	DWN	CKD
F	21/04/17	ADDED ADDITIONAL IRON FILTER DETAILS	J.S	
G	06/06/2017	REVISED IRRIGATION TO SUIT THE NEW LANDSCAPE PLAN	R.V	J.S
0	20/07/2017	ISSUED FOR CONSTRUCTION	J.S	
1	01/05/2018	PART AS CONSTRUCTED BY LD TOTAL	S.J	
2	13/05/2019	AMENDED AS CONSTRUCTED BY LD TOTAL	M.S	

N

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TOTAL EDEN

SCALE :	1 : NTS @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

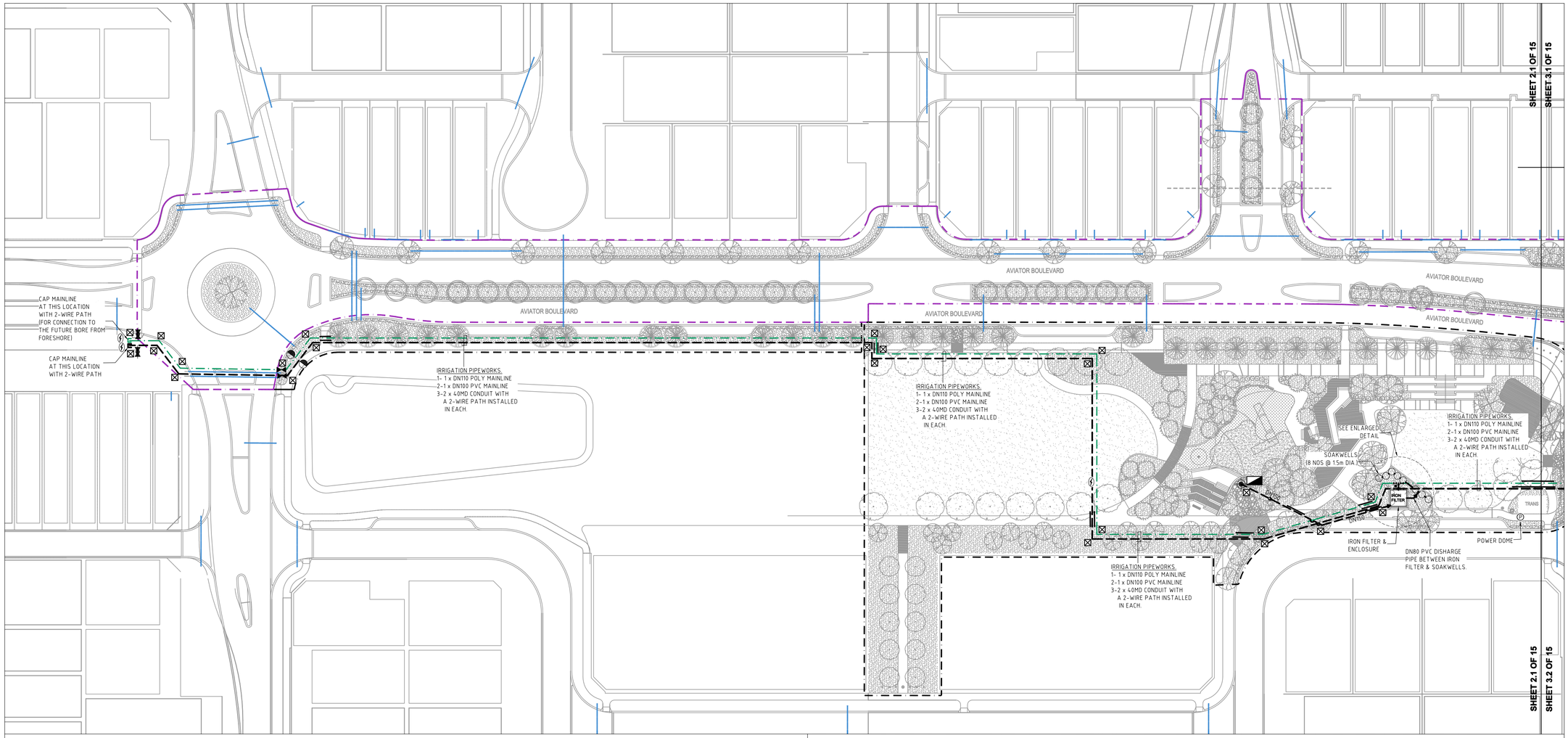
CLIENT :

EMERGE ASSOCIATES

PROJECT :

CATALINA BEACH ESTATE
STAGE 25
KEY PLAN

DATE :	DESIGN NO. :	SHEET NO. :
16/09/2016	17367-01	1 OF 15

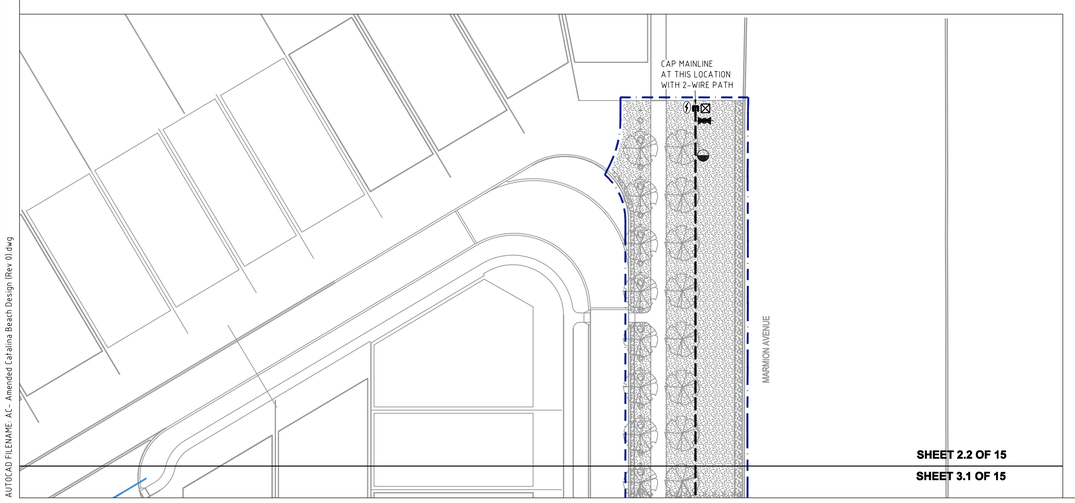


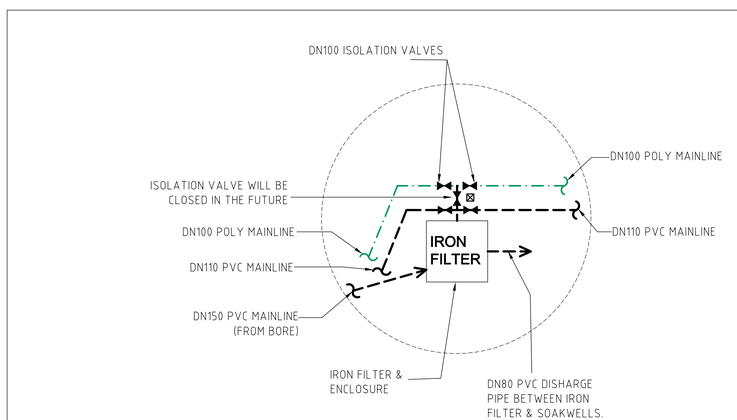
LEGEND:

SYMBOL	DESCRIPTION
	BORE LOCATION
	IRRIGATION CONTROLLER : HUNTER-ACC 99D TO BE TO CITY OF WANNEROO SPECIFICATIONS
	MAINLINE ISOLATION VALVE SAME SIZE AS MAINLINE
	50mm MAINLINE FLUSHING VALVE
	DN50 AIR RELEASE, TO BE INSTALLED AT HIGH POINT ON MAINLINE PER C.O.W. SPECIFICATION
	P2 CABLE PIT
	LIGHTNING SURGE PROTECTION
DN100	DN100 mPVC RRJ CLASS 12 MAINLINE (UNLESS OTHERWISE NOTED)
	DN110 PN12.5 MDPE MAINLINE (PRE-LAY) (IRRIGATION MAINLINE FOR MATURE TRANSPLANTED TREES. TO BE LAID BESIDE PVC MAINLINE)
	DN200 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR (UNLESS OTHERWISE NOTED)
	EXISTING DN200 SLEEVE

NOTE:

1. MAINLINE AND LATERAL PIPES ARE TO BE INSTALLED TO A MINIMUM DEPTH OF 350mm AND BE INSTALLED TO A MAXIMUM DEPTH OF 450mm.
2. THE CONTRACTOR TO UNDERTAKE FLOW (PRESSURE) ADJUSTMENT OF ALL SOLENOID VALVES IN ACCORDANCE WITH THE NOMINAL OPERATING PRESSURE OF THE SPRINKLERS ATTACHED TO THE PARTICULAR SOLENOID VALVE.
3. CABLE PITS TO BEEN LOCATED AT EVERY BEND IN THE MAINLINE AND EVERY 100m IN STRAIGHT RUNS.
4. ALL 2-WIRE PATHS TO BE INSTALLED IN 40MD CONDUIT.
5. THE IRRIGATION SUB CONTRACTOR SHALL SUPPLY A 13mm X 1200mm GROUND ROD FOR SURGE PROTECTION AND HOUSED WITHIN A VALVE BOX AS BELOW:-
   - AT THE END OF EACH COMMUNICATION CABLE RUN.
   - AT SPACING NOT EXCEEDING 250 METRES ALONG COMMUNICATION RUNS, OR AT EVERY 8TH DECODER.
   - OR AS PER MANUFACTURERS SPECIFICATIONS.





ENLARGED DETAIL
NOT TO SCALE

0 5 10 15 20 25m
SCALE 1:500 ON A1

AUTOCAD FILENAME: AC - Amended Catalina Beach Design (Rev 0).dwg

REV	DATE	DESCRIPTION	DWN	CKD
A	16/09/2016	ISSUED FOR APPROVAL	R.V	J.S
B	28/09/2016	ISSUED FOR APPROVAL	R.V	J.S
C	05/10/2016	ISSUED FOR APPROVAL, REVISED FLOWS	I.B	J.S
D	15/03/2017	REVISED IRRIGATION TO SUIT THE NEW LANDSCAPE PLAN	R.V	J.S
E	30/03/2017	CID STAMP & LIGHTNING SURGE PROTECTION WERE ADDED ON THE DRAWING	R.V	J.S
F	21/04/17	ADDED ADDITIONAL IRON FILTER DETAILS	J.S	
G	06/06/2017	REVISED IRRIGATION TO SUIT THE NEW LANDSCAPE PLAN	R.V	J.S
0	20/07/2017	ISSUED FOR CONSTRUCTION	J.S	
1	01/05/2018	PART AS CONSTRUCTED BY LD TOTAL	S.J	
2	13/05/2019	AMENDED AS CONSTRUCTED BY LD TOTAL	M.S	

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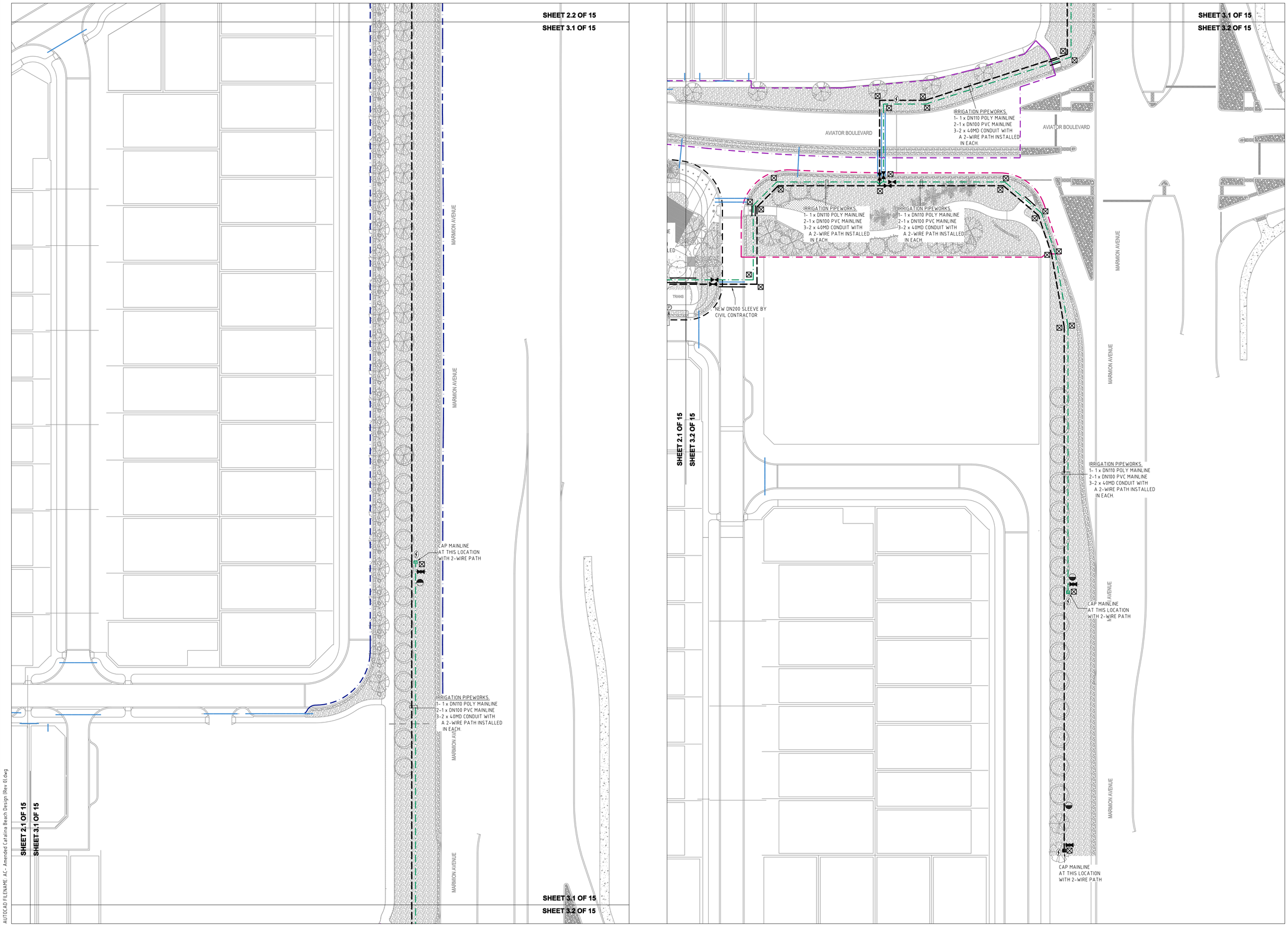
TOTAL EDEN

SCALE :	1 : 500 @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT :
EMERGE ASSOCIATES

PROJECT :
CATALINA BEACH ESTATE
STAGE 25
IRRIGATION MAINLINE

DATE :	DESIGN NO. :	SHEET NO. :
16/09/2016	17367-02	2 OF 15



LEGEND:	
SYMBOL	DESCRIPTION
	BORE LOCATION
	IRRIGATION CONTROLLER : HUNTER-ACC 99D TO BE TO CITY OF WANNEROO SPECIFICATIONS
	MAINLINE ISOLATION VALVE SAME SIZE AS MAINLINE
	50mm MAINLINE FLUSHING VALVE
	DN50 AIR RELEASE, TO BE INSTALLED AT HIGH POINT ON MAINLINE PER C.O.W. SPECIFICATION
	P2 CABLE PIT
	LIGHTNING SURGE PROTECTION
DN100	DN100 mPVC RRJ CLASS 12 MAINLINE (UNLESS OTHERWISE NOTED)
	DN110 PN12.5 MDPE MAINLINE (PRE-LAY) (IRRIGATION MAINLINE FOR MATURE TRANSPLANTED TREES. TO BE LAID BESIDE PVC MAINLINE)
	DN200 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR (UNLESS OTHERWISE NOTED)
	EXISTING DN200 SLEEVE

NOTE:

1. MAINLINE AND LATERAL PIPES ARE TO BE INSTALLED TO A MINIMUM DEPTH OF 350mm AND BE INSTALLED TO A MAXIMUM DEPTH OF 450mm.
2. THE CONTRACTOR TO UNDERTAKE FLOW (PRESSURE) ADJUSTMENT OF ALL SOLENOID VALVES IN ACCORDANCE WITH THE NOMINAL OPERATING PRESSURE OF THE SPRINKLERS ATTACHED TO THE PARTICULAR SOLENOID VALVE.
3. CABLE PITS TO BEEN LOCATED AT EVERY BEND IN THE MAINLINE AND EVERY 100m IN STRAIGHT RUNS.
4. ALL 2-WIRE PATHS TO BE INSTALLED IN 40MD CONDUIT.
5. THE IRRIGATION SUB CONTRACTOR SHALL SUPPLY A 13mm X 1200mm GROUND ROD FOR SURGE PROTECTION AND HOUSED WITHIN A VALVE BOX AS BELOW:-
   - AT THE END OF EACH COMMUNICATION CABLE RUN.
   - AT SPACING NOT EXCEEDING 250 METRES ALONG COMMUNICATION RUNS, OR AT EVERY 8TH DECODER.
   - OR AS PER MANUFACTURERS SPECIFICATIONS.

SCALE 1:500 ON A1

AUTOCAD FILENAME: AC - Amended Catalina Beach Design (Rev 0).dwg

REV	DATE	DESCRIPTION	DWN	CKD
A	16/09/2016	ISSUED FOR APPROVAL	R.V	J.S
B	28/09/2016	ISSUED FOR APPROVAL	R.V	J.S
C	05/10/2016	ISSUED FOR APPROVAL, REVISED FLOWS	I.B	J.S
D	15/03/2017	REVISED IRRIGATION TO SUIT THE NEW LANDSCAPE PLAN	R.V	J.S
E	30/03/2017	CID STAMP & LIGHTNING SURGE PROTECTION WERE ADDED ON THE DRAWING	R.V	J.S

REV	DATE	DESCRIPTION	DWN	CKD
F	21/04/17	ADDED ADDITIONAL IRON FILTER DETAILS	J.S	
G	06/06/2017	REVISED IRRIGATION TO SUIT THE NEW LANDSCAPE PLAN	R.V	J.S
0	20/07/2017	ISSUED FOR CONSTRUCTION	J.S	
1	01/05/2018	PART AS CONSTRUCTED BY LD TOTAL	S.J	
2	13/05/2019	AMENDED AS CONSTRUCTED BY LD TOTAL	M.S	

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TOTAL EDEN

SCALE :	1 : 500 @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

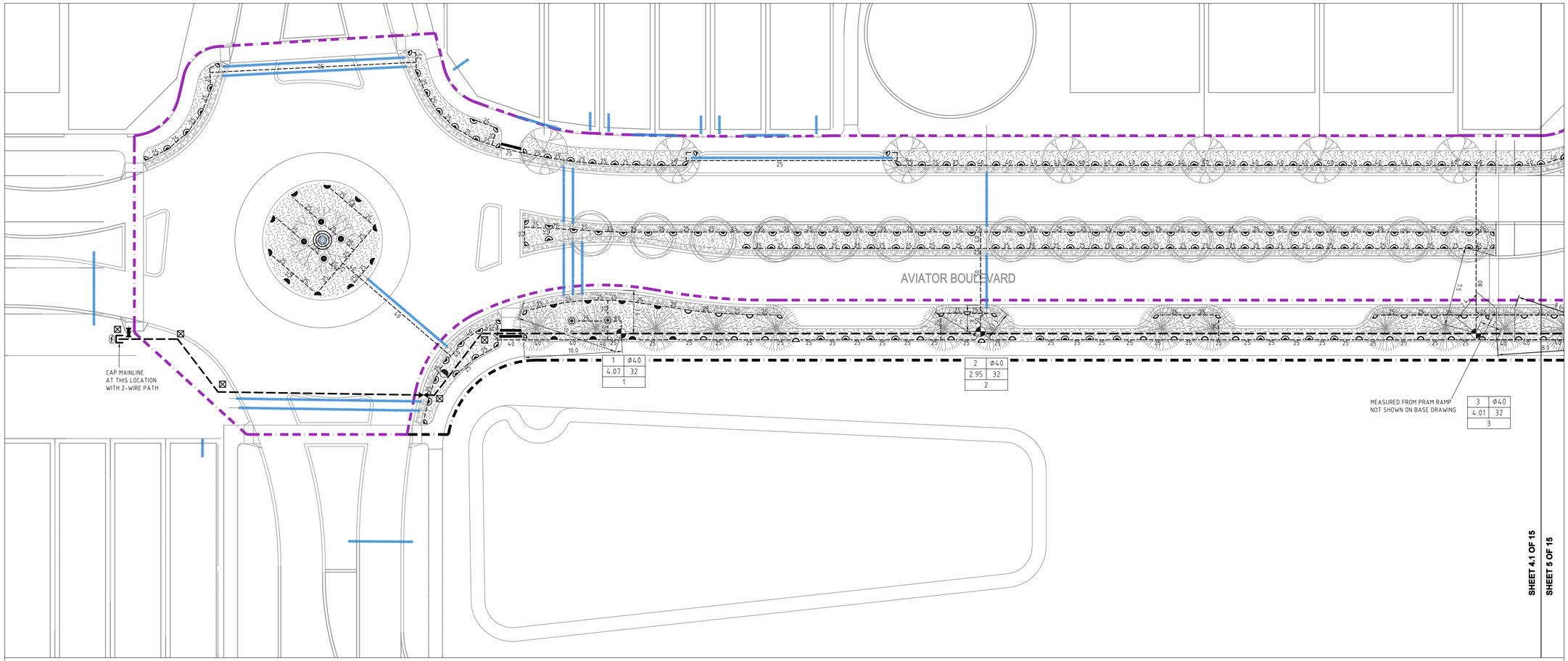
CLIENT :

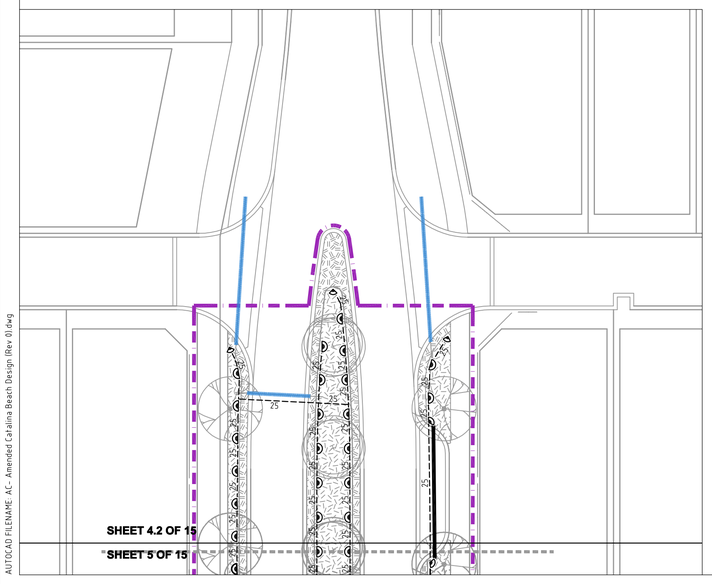
EMERGE ASSOCIATES

PROJECT :

CATALINA BEACH ESTATE
STAGE 25
IRRIGATION MAINLINE

DATE :	DESIGN NO. :	SHEET NO. :
16/09/2016	17367-03	3 OF 15





AUTOCAD FILENAME: AC - Amended Catalina Beach Design (Rev 0).dwg

LEGEND:

"SPRINKLERS"

SYMBOL	BRAND NAME	MODEL DESCRIPTION	NOZZ. NO.	PRESS. (KPA)	FLOW (LPM)	RADIUS (M)
	HUNTER	I-20-04-SS	6.0	350	24.5	13.1
	HUNTER	I-20-04-SS	3.0	350	12.3	11.9
	HUNTER	I-20-04-SS	2.5	350	9.7	10.7
	HUNTER	I-20-04-SS	2.0	350	7.8	10.4
	HUNTER	I-20-04-SS	4.5LA	350	16.6	10.7
	HUNTER	I-20-04-SS	2.0LA	350	8	8.5
	HUNTER	I-20-04-SS	3.0SR	350	11.2	7.6
	TORO	570XF-6P	15	250	2.84-11.36	4.6
	TORO	570XF-6P	12	250	1.82-7.27	3.7
	TORO	570XF-6P	10	250	1.25-5.04	3.0
	TORO	570XF-6P	4EST	250	1.63	1.2x4.4
	TORO	570XF-6P	4SST	250	3.33	1.2x9.1
	TORO	570XF-12P	15	250	2.84-11.36	4.6
	TORO	570XF-12P	12	250	1.82-7.27	3.7
	TORO	570XF-12P	10	250	1.25-5.04	3.0

LARGE GARDEN AREAS - TO HAVE HUNTER I-20-12
SMALL GARDEN AREAS -REFER TO C.O.W. SPECIFICATION ITEM 3.7.5 SPRAY SPRINKLERS FOR DEFINING AREAS REQUIRING EITHER 570XF-6P'S OR 570XF-12P'S

	BERMAD 200 SERIES SOLENOID CONTROL VALVE SIZE AS SHOWN
	BORE LOCATION
	IRRIGATION CONTROLLER : HUNTER-ACC 99D TO BE TO CITY OF WANNEROO SPECIFICATIONS
	MAINLINE ISOLATION VALVE SAME SIZE AS MAINLINE
	50mm MAINLINE FLUSHING VALVE
	DN50 AIR RELEASE, TO BE INSTALLED AT HIGH POINT ON MAINLINE PER C.O.W. SPECIFICATION
	P2 CABLE PIT
	LIGHTNING SURGE PROTECTION
DN100	DN100 mPVC RRJ CLASS 12 MAINLINE (UNLESS OTHERWISE NOTED)
25	uPVC SWJ CLASS 9 LATERAL LINE SIZE AS SHOWN
	DN100 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR
	DN150 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR
	DN200 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR (UNLESS OTHERWISE NOTED)
	EXISTING DN200 SLEEVE

STATION DATA / VALVE DATA

ST'N NO.	FLOW (L/s)	PR. (kPa)	PR'N mm/hr	APP'N mm/week	ST'N TIME (min)	AREA TYPE	VAL. NO.	FLOW (L/s)	DECODER NO.
1	9.94	250	32	40	15	GARDEN	1	4.07	-
							2	2.95	-
							8	2.92	-
2	7.59	250	32	40	15	GARDEN	3	4.01	-
							12	3.58	-
3	9.57	250	32	40	15	GARDEN	4	3.92	-
							7	5.65	-
4	9.48	250	32	40	15	GARDEN	5	8.05	-
							20	1.43	-
5	10.03	350	12	40	40	TURF	6	7.31	-
							11	2.72	-
6	8.45	250	32	40	15	GARDEN	9	4.38	-
							17	4.07	-
7	9.97	250	32	40	15	GARDEN	10	7.89	-
							14	2.08	-
8	8.02	350	12	40	40	GARDEN	13	8.02	-
9	8.51	250	32	40	15	GARDEN	15	4.88	-
							22	3.63	-
10	9.05	350	12	40	40	GARDEN	16	4.54	-
11	8.19	350	12	40	40	TURF	18	8.19	-
12	9.81	350	12	40	40	GARDEN	19	4.26	-
							21	5.55	-
13	7.59	350	12	40	40	GARDEN	23	7.59	-
14	8.41	250	32	40	15	GARDEN	24	4.19	-
							26	4.22	-
15	6.82	250	-	-	15	TREES	27	6.82	-
16	8.08	250	-	-	15	TREES	28	8.08	-
17	8.08	250	-	-	15	TREES	29	8.08	-
18	10.47	250	-	-	15	TREES	30	3.76	-
							32	6.71	-
19	6.94	250	-	-	15	TREES	31	6.94	-
20	7.06	250	-	-	15	TREES	33	7.06	-
21	8.42	250	-	-	15	TREES	34	8.42	-
22	10.30	250	-	-	15	TREES	35	4.68	-
							37	5.62	-
23	6.08	250	-	-	15	TREES	36	6.08	-
24	7.49	250	-	-	15	TREES	38	7.49	-
25	7.02	250	-	-	15	TREES	39	7.02	-
26	8.42	250	-	-	15	TREES	40	8.42	-

DAILY RUN TIME: 9 HRS WEEKLY RUN TIME: 45 HRS

VALVE LABEL LEGEND

VALVE NO	2	ø50 VALVE SIZE
FLOW (LPS)	3.29	32 PRECIPITATION RATE
	-	DECODER NO.

NOTE:
1. MAINLINE AND LATERAL PIPES ARE TO BE INSTALLED TO A MINIMUM DEPTH OF 350mm AND BE INSTALLED TO A MAXIMUM DEPTH OF 450mm.
2. THE CONTRACTOR TO UNDERTAKE FLOW (PRESSURE) ADJUSTMENT OF ALL SOLENOID VALVES IN ACCORDANCE WITH THE NOMINAL OPERATING PRESSURE OF THE SPRINKLERS ATTACHED TO THE PARTICULAR SOLENOID VALVE.
3. CABLE PITS TO BEEN LOCATED AT EVERY BEND IN THE MAINLINE AND EVERY 100m IN STRAIGHT RUNS.
4. ALL 2-WIRE PATHS TO BE INSTALLED IN 40MD CONDUIT.
5. THE IRRIGATION SUB CONTRACTOR SHALL SUPPLY A 13mm X 1200mm GROUND ROD FOR SURGE PROTECTION AND HOUSED WITHIN A VALVE BOX AS BELOW:-
   - AT THE END OF EACH COMMUNICATION CABLE RUN.
   - AT SPACING NOT EXCEEDING 250 METRES ALONG COMMUNICATION RUNS, OR AT EVERY 8TH DECODER.
   - OR AS PER MANUFACTURERS SPECIFICATIONS.

SCALE 1:250 ON A1

REV	DATE	DESCRIPTION	DWN	CKD
A	16/09/2016	ISSUED FOR APPROVAL	R.V	J.S
B	28/09/2016	ISSUED FOR APPROVAL	R.V	J.S
C	05/10/2016	ISSUED FOR APPROVAL, REVISED FLOWS	I.B	J.S
D	15/03/2017	REVISED IRRIGATION TO SUIT THE NEW LANDSCAPE PLAN	R.V	J.S
E	30/03/2017	CID STAMP & LIGHTNING SURGE PROTECTION WERE ADDED ON THE DRAWING	R.V	J.S
F	21/04/17	ADDED ADDITIONAL IRON FILTER DETAILS	J.S	
G	06/06/2017	REVISED IRRIGATION TO SUIT THE NEW LANDSCAPE PLAN	R.V	J.S
0	20/07/2017	ISSUED FOR CONSTRUCTION	J.S	
1	01/05/2018	PART AS CONSTRUCTED BY LD TOTAL	S.J	
2	13/05/2019	AMENDED AS CONSTRUCTED BY LD TOTAL	M.S	

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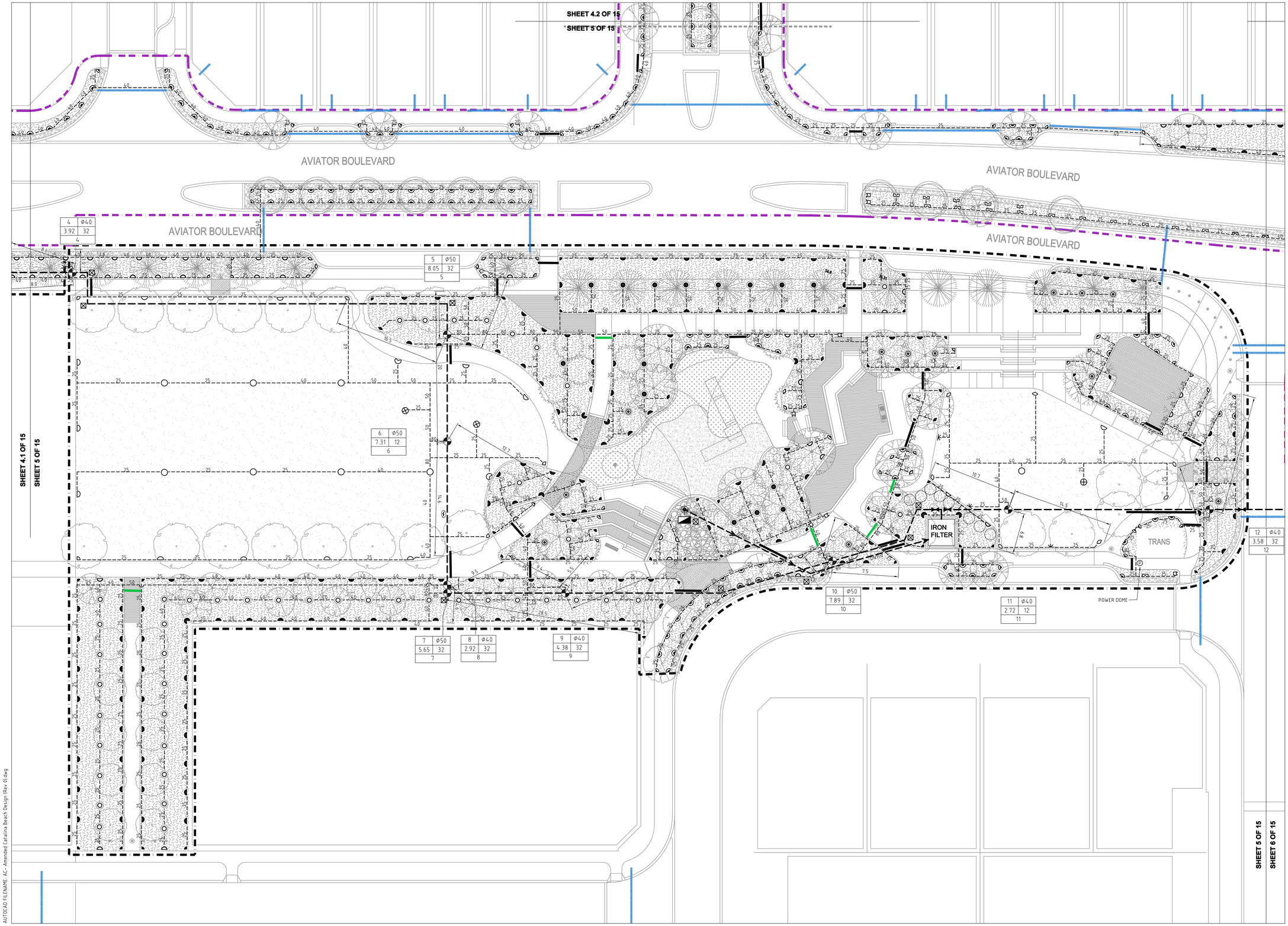
TOTAL EDEN

SCALE :	1 : 250 @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT :
EMERGE ASSOCIATES

PROJECT :
CATALINA BEACH ESTATE
STAGE 25
IRRIGATION WORKS

DATE :	DESIGN NO. :	SHEET NO. :
16/09/2016	17367-04	4 OF 15



LEGEND:

"SPRINKLERS"

SYMBOL	BRAND NAME	MODEL DESCRIPTION	NOZZ. NO.	PRESS. (KPA)	FLOW (LPM)	RADIUS (M)
	HUNTER	I-20-04-SS	6.0	350	24.5	13.1
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	TORO	570XF-12P	10	250	1.25-5.04	3.0

	LARGE GARDEN AREAS - TO HAVE HUNTER I-20-12 SMALL GARDEN AREAS -REFER TO C.O.W. SPECIFICATION ITEM 3.7.5 SPRAY SPRINKLERS FOR DEFINING AREAS REQUIRING EITHER 570XF-6P'S OR 570XF-12P'S
	BERMAD 200 SERIES SOLENOID CONTROL VALVE SIZE AS SHOWN
	BORE LOCATION
	IRRIGATION CONTROLLER : HUNTER-ACC 99D TO BE TO CITY OF WANNEROO SPECIFICATIONS
	MAINLINE ISOLATION VALVE SAME SIZE AS MAINLINE
	50mm MAINLINE FLUSHING VALVE
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	P2 CABLE PIT
	LIGHTNING SURGE PROTECTION
DN100	DN100 mPVC RRJ CLASS 12 MAINLINE (UNLESS OTHERWISE NOTED)
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	DN100 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR
	DN150 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR
	DN200 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR (UNLESS OTHERWISE NOTED)
	EXISTING DN200 SLEEVE

VALVE LABEL LEGEND

VALVE NO	2	ø50	VALVE SIZE
FLOW (LPS)	3.29	32	PRECIPITATION RATE
	-		DECODER NO.

NOTE:

1. MAINLINE AND LATERAL PIPES ARE TO BE INSTALLED TO A MINIMUM DEPTH OF 350mm AND BE INSTALLED TO A MAXIMUM DEPTH OF 450mm.
2. THE CONTRACTOR TO UNDERTAKE FLOW (PRESSURE) ADJUSTMENT OF ALL SOLENOID VALVES IN ACCORDANCE WITH THE NOMINAL OPERATING PRESSURE OF THE SPRINKLERS ATTACHED TO THE PARTICULAR SOLENOID VALVE.
3. CABLE PITS TO BEEN LOCATED AT EVERY BEND IN THE MAINLINE AND EVERY 100m IN STRAIGHT RUNS.
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   - AT THE END OF EACH COMMUNICATION CABLE RUN.
   - AT SPACING NOT EXCEEDING 250 METRES ALONG COMMUNICATION RUNS, OR AT EVERY 8TH DECODER.
   - OR AS PER MANUFACTURERS SPECIFICATIONS.

0 2.5 5 7.5 10 12.5m

SCALE 1:250 ON A1

REV	DATE	DESCRIPTION	DWN	CKD
A	16/09/2016	ISSUED FOR APPROVAL	R.V	J.S
B	28/09/2016	ISSUED FOR APPROVAL	R.V	J.S
C	05/10/2016	ISSUED FOR APPROVAL, REVISED FLOWS	I.B	J.S
D	15/03/2017	REVISED IRRIGATION TO SUIT THE NEW LANDSCAPE PLAN	R.V	J.S
E	30/03/2017	CID STAMP & LIGHTNING SURGE PROTECTION WERE ADDED ON THE DRAWING	R.V	J.S

REV	DATE	DESCRIPTION	DWN	CKD
F	21/04/17	ADDED ADDITIONAL IRON FILTER DETAILS	J.S	
G	06/06/2017	REVISED IRRIGATION TO SUIT THE NEW LANDSCAPE PLAN	R.V	J.S
0	20/07/2017	ISSUED FOR CONSTRUCTION	J.S	
1	01/05/2018	PART AS CONSTRUCTED BY LD TOTAL	S.J	
2	13/05/2019	AMENDED AS CONSTRUCTED BY LD TOTAL	M.S	

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TOTAL EDEN

SCALE :	1 : 250 @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT :

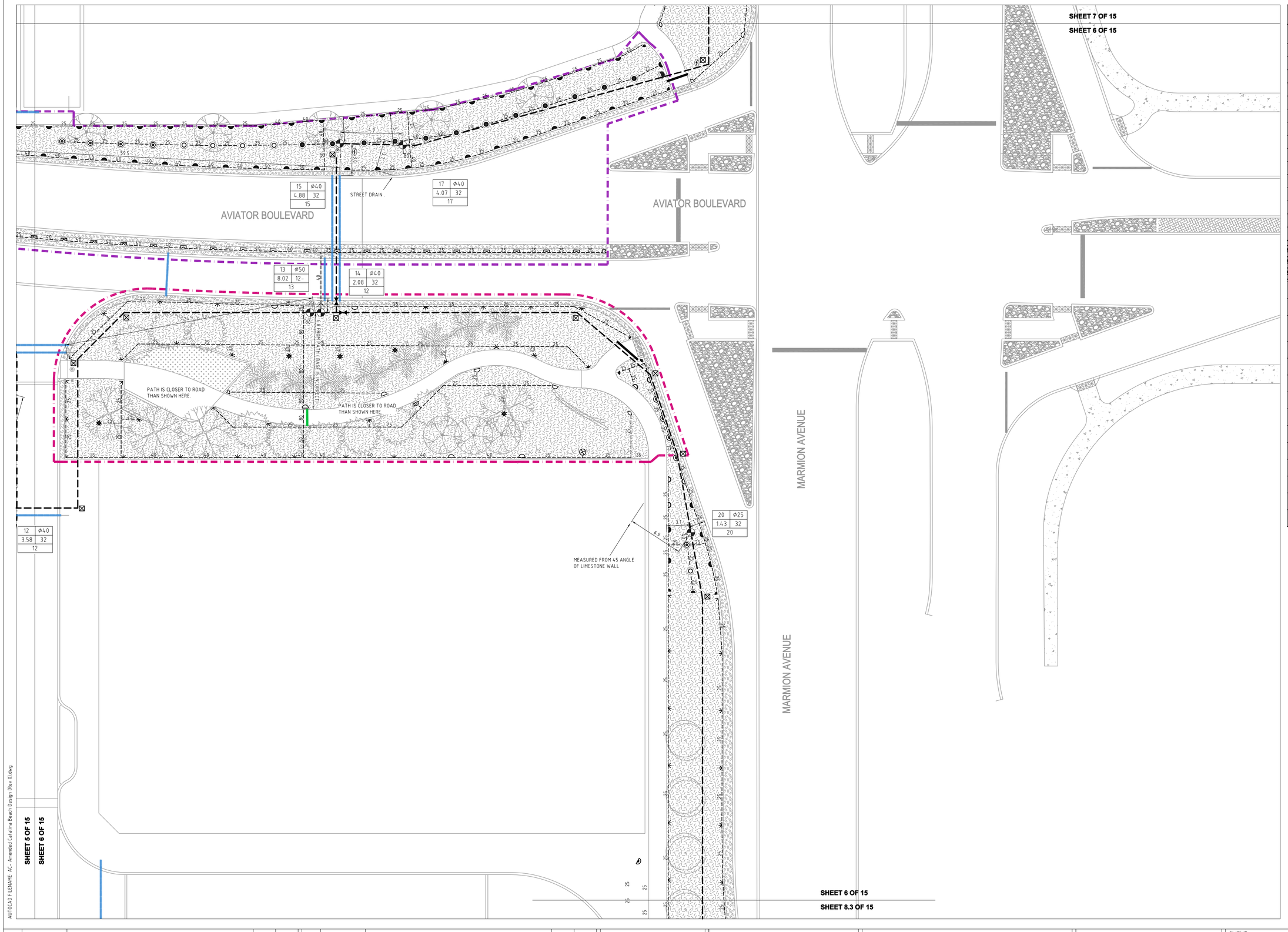
EMERGE ASSOCIATES

PROJECT :

CATALINA BEACH ESTATE
STAGE 25
IRRIGATION WORKS

DATE :	DESIGN NO. :	SHEET NO. :
16/09/2016	17367-05	5 OF 15

AUTOCAD FILENAME: A/C - Amended Catalina Beach Design (Rev 0).dwg



LEGEND:

"SPRINKLERS"

SYMBOL	BRAND NAME	MODEL DESCRIPTION	NOZZ. NO.	PRESS. (KPA)	FLOW (LPM)	RADIUS (M)
	HUNTER	I-20-04-SS	6.0	350	24.5	13.1
	HUNTER	I-20-04-SS	3.0	350	12.3	11.9
	HUNTER	I-20-04-SS	2.5	350	9.7	10.7
	HUNTER	I-20-04-SS	2.0	350	7.8	10.4
	HUNTER	I-20-04-SS	4.5LA	350	16.6	10.7
	HUNTER	I-20-04-SS	2.0LA	350	8	8.5
	HUNTER	I-20-04-SS	3.0SR	350	11.2	7.6
	TORO	570XF-6P	15	250	2.84-11.36	4.6
	TORO	570XF-6P	12	250	1.82-7.27	3.7
	TORO	570XF-6P	10	250	1.25-5.04	3.0
	TORO	570XF-6P	4EST	250	1.63	1.2x4.4
	TORO	570XF-6P	4SST	250	3.33	1.2x9.1
	TORO	570XF-12P	15	250	2.84-11.36	4.6
	TORO	570XF-12P	12	250	1.82-7.27	3.7
	TORO	570XF-12P	10	250	1.25-5.04	3.0

	LARGE GARDEN AREAS - TO HAVE HUNTER I-20-12 SMALL GARDEN AREAS -REFER TO C.O.W. SPECIFICATION ITEM 3.7.5 SPRAY SPRINKLERS FOR DEFINING AREAS REQUIRING EITHER 570XF-6P'S OR 570XF-12P'S
	BERMAD 200 SERIES SOLENOID CONTROL VALVE SIZE AS SHOWN
	BORE LOCATION
	IRRIGATION CONTROLLER : HUNTER-ACC 99D TO BE TO CITY OF WANNEROO SPECIFICATIONS
	MAINLINE ISOLATION VALVE SAME SIZE AS MAINLINE
	50mm MAINLINE FLUSHING VALVE
	DN50 AIR RELEASE, TO BE INSTALLED AT HIGH POINT ON MAINLINE PER C.O.W. SPECIFICATION
	P2 CABLE PIT
	LIGHTNING SURGE PROTECTION
DN100	DN100 mPVC RRJ CLASS 12 MAINLINE (UNLESS OTHERWISE NOTED)
25	uPVC SWJ CLASS 9 LATERAL LINE SIZE AS SHOWN
	DN100 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR
	DN150 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR
	DN200 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR (UNLESS OTHERWISE NOTED)
	EXISTING DN200 SLEEVE

VALVE LABEL LEGEND

VALVE NO	2	Φ50 VALVE SIZE
FLOW (LPS)	3.29	32 PRECIPITATION RATE
	-	DECODER NO.

NOTE:

1. MAINLINE AND LATERAL PIPES ARE TO BE INSTALLED TO A MINIMUM DEPTH OF 350mm AND BE INSTALLED TO A MAXIMUM DEPTH OF 450mm.
2. THE CONTRACTOR TO UNDERTAKE FLOW (PRESSURE) ADJUSTMENT OF ALL SOLENOID VALVES IN ACCORDANCE WITH THE NOMINAL OPERATING PRESSURE OF THE SPRINKLERS ATTACHED TO THE PARTICULAR SOLENOID VALVE.
3. CABLE PITS TO BEEN LOCATED AT EVERY BEND IN THE MAINLINE AND EVERY 100m IN STRAIGHT RUNS.
4. ALL 2-WIRE PATHS TO BE INSTALLED IN 40MD CONDUIT.
5. THE IRRIGATION SUB CONTRACTOR SHALL SUPPLY A 13mm X 1200mm GROUND ROD FOR SURGE PROTECTION AND HOUSED WITHIN A VALVE BOX AS BELOW:-
   - AT THE END OF EACH COMMUNICATION CABLE RUN.
   - AT SPACING NOT EXCEEDING 250 METRES ALONG COMMUNICATION RUNS, OR AT EVERY 8TH DECODER.
   - OR AS PER MANUFACTURERS SPECIFICATIONS.

CERTIFIED IRRIGATION DESIGNER — IRRIGATION AUSTRALIA — LTCIRR — LANDSCAPE/TURF CONNECTION

0 2.5 5 7.5 10 12.5m

SCALE 1:250 ON A1

AUTOCAD FILENAME: AC - Amended Catalina Beach Design (Rev 0).dwg

REV	DATE	DESCRIPTION	DWN	CKD
A	16/09/2016	ISSUED FOR APPROVAL	R.V	J.S
B	28/09/2016	ISSUED FOR APPROVAL	R.V	J.S
C	05/10/2016	ISSUED FOR APPROVAL, REVISED FLOWS	I.B	J.S
D	15/03/2017	REVISED IRRIGATION TO SUIT THE NEW LANDSCAPE PLAN	R.V	J.S
E	30/03/2017	CID STAMP & LIGHTNING SURGE PROTECTION WERE ADDED ON THE DRAWING	R.V	J.S
F	21/04/17	ADDED ADDITIONAL IRON FILTER DETAILS	J.S	
G	06/06/2017	REVISED IRRIGATION TO SUIT THE NEW LANDSCAPE PLAN	R.V	J.S
0	20/07/2017	ISSUED FOR CONSTRUCTION	J.S	
1	01/05/2018	PART AS CONSTRUCTED BY LD TOTAL	S.J	
2	13/05/2019	AMENDED AS CONSTRUCTED BY LD TOTAL	M.S	

N

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TOTAL EDEN

SCALE :	1 : 250 @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

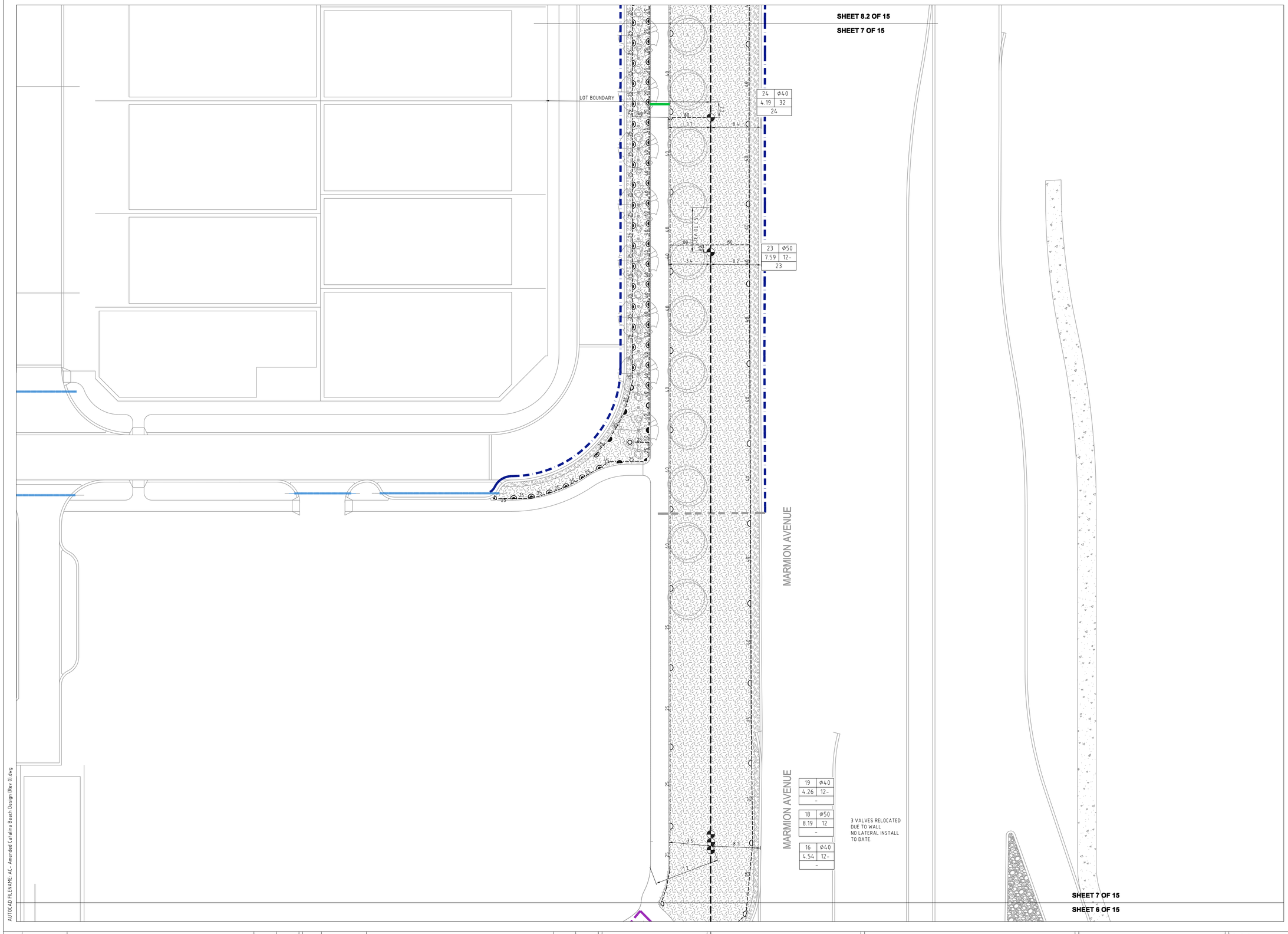
CLIENT :

EMERGE ASSOCIATES

PROJECT :

CATALINA BEACH ESTATE
STAGE 25
IRRIGATION WORKS

DATE :	DESIGN NO. :	SHEET NO. :
16/09/2016	17367-06	6 OF 15



LEGEND:

"SPRINKLERS"

SYMBOL	BRAND NAME	MODEL DESCRIPTION	NOZZ. NO.	PRESS. (KPA)	FLOW (LPM)	RADIUS (M)
	HUNTER	I-20-04-SS	6.0	350	24.5	13.1
	HUNTER	I-20-04-SS	3.0	350	12.3	11.9
	HUNTER	I-20-04-SS	2.5	350	9.7	10.7
	HUNTER	I-20-04-SS	2.0	350	7.8	10.4
	HUNTER	I-20-04-SS	4.5LA	350	16.6	10.7
	HUNTER	I-20-04-SS	2.0LA	350	8	8.5
	HUNTER	I-20-04-SS	3.0SR	350	11.2	7.6
	TORO	570XF-6P	15	250	2.84-11.36	4.6
	TORO	570XF-6P	12	250	1.82-7.27	3.7
	TORO	570XF-6P	10	250	1.25-5.04	3.0
	TORO	570XF-6P	4EST	250	1.63	1.2x4.4
	TORO	570XF-6P	4SST	250	3.33	1.2x9.1
	TORO	570XF-12P	15	250	2.84-11.36	4.6
	TORO	570XF-12P	12	250	1.82-7.27	3.7
	TORO	570XF-12P	10	250	1.25-5.04	3.0

	LARGE GARDEN AREAS - TO HAVE HUNTER I-20-12 SMALL GARDEN AREAS -REFER TO C.O.W. SPECIFICATION ITEM 3.7.5 SPRAY SPRINKLERS FOR DEFINING AREAS REQUIRING EITHER 570XF-6P'S OR 570XF-12P'S
	BERMAD 200 SERIES SOLENOID CONTROL VALVE SIZE AS SHOWN
	BORE LOCATION
	IRRIGATION CONTROLLER : HUNTER-ACC 99D TO BE TO CITY OF WANNEROO SPECIFICATIONS
	MAINLINE ISOLATION VALVE SAME SIZE AS MAINLINE
	50mm MAINLINE FLUSHING VALVE
	DN50 AIR RELEASE, TO BE INSTALLED AT HIGH POINT ON MAINLINE PER C.O.W. SPECIFICATION
	P2 CABLE PIT
	LIGHTNING SURGE PROTECTION
DN100	DN100 mPVC RRJ CLASS 12 MAINLINE (UNLESS OTHERWISE NOTED)
25	uPVC SWJ CLASS 9 LATERAL LINE SIZE AS SHOWN
	DN100 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR
	DN150 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR
	DN200 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR (UNLESS OTHERWISE NOTED)
	EXISTING DN200 SLEEVE

VALVE LABEL LEGEND

VALVE NO FLOW (LPS)		
2	ø50	VALVE SIZE
3.29	32	PRECIPITATION RATE
-		DECODER NO.

NOTE:

1. MAINLINE AND LATERAL PIPES ARE TO BE INSTALLED TO A MINIMUM DEPTH OF 350mm AND BE INSTALLED TO A MAXIMUM DEPTH OF 450mm.
2. THE CONTRACTOR TO UNDERTAKE FLOW (PRESSURE) ADJUSTMENT OF ALL SOLENOID VALVES IN ACCORDANCE WITH THE NOMINAL OPERATING PRESSURE OF THE SPRINKLERS ATTACHED TO THE PARTICULAR SOLENOID VALVE.
3. CABLE PITS TO BEEN LOCATED AT EVERY BEND IN THE MAINLINE AND EVERY 100m IN STRAIGHT RUNS.
4. ALL 2-WIRE PATHS TO BE INSTALLED IN 40MD CONDUIT.
5. THE IRRIGATION SUB CONTRACTOR SHALL SUPPLY A 13mm X 1200mm GROUND ROD FOR SURGE PROTECTION AND HOUSED WITHIN A VALVE BOX AS BELOW:-
   - AT THE END OF EACH COMMUNICATION CABLE RUN.
   - AT SPACING NOT EXCEEDING 250 METRES ALONG COMMUNICATION RUNS, OR AT EVERY 8TH DECODER.
   - OR AS PER MANUFACTURERS SPECIFICATIONS.

CERTIFIED IRRIGATION DESIGNER IRRIGATION AUSTRALIA LANDSCAPE/TURF COMMERCIAL

0 2.5 5 7.5 10 12.5m

SCALE 1:250 ON A1

AUTOCAD FILENAME: AC - Amended Catalina Beach Design (Rev 0).dwg

REV	DATE	DESCRIPTION	DWN	CKD
A	16/09/2016	ISSUED FOR APPROVAL	R.V	J.S
B	28/09/2016	ISSUED FOR APPROVAL	R.V	J.S
C	05/10/2016	ISSUED FOR APPROVAL, REVISED FLOWS	I.B	J.S
D	15/03/2017	REVISED IRRIGATION TO SUIT THE NEW LANDSCAPE PLAN	R.V	J.S
E	30/03/2017	CID STAMP & LIGHTNING SURGE PROTECTION WERE ADDED ON THE DRAWING	R.V	J.S

REV	DATE	DESCRIPTION	DWN	CKD
F	21/04/17	ADDED ADDITIONAL IRON FILTER DETAILS	J.S	
G	06/06/2017	REVISED IRRIGATION TO SUIT THE NEW LANDSCAPE PLAN	R.V	J.S
0	20/07/2017	ISSUED FOR CONSTRUCTION	J.S	
1	01/05/2018	PART AS CONSTRUCTED BY LD TOTAL	S.J	
2	13/05/2019	AMENDED AS CONSTRUCTED BY LD TOTAL	M.S	

N

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TOTAL EDEN

SCALE :	1 : 250 @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

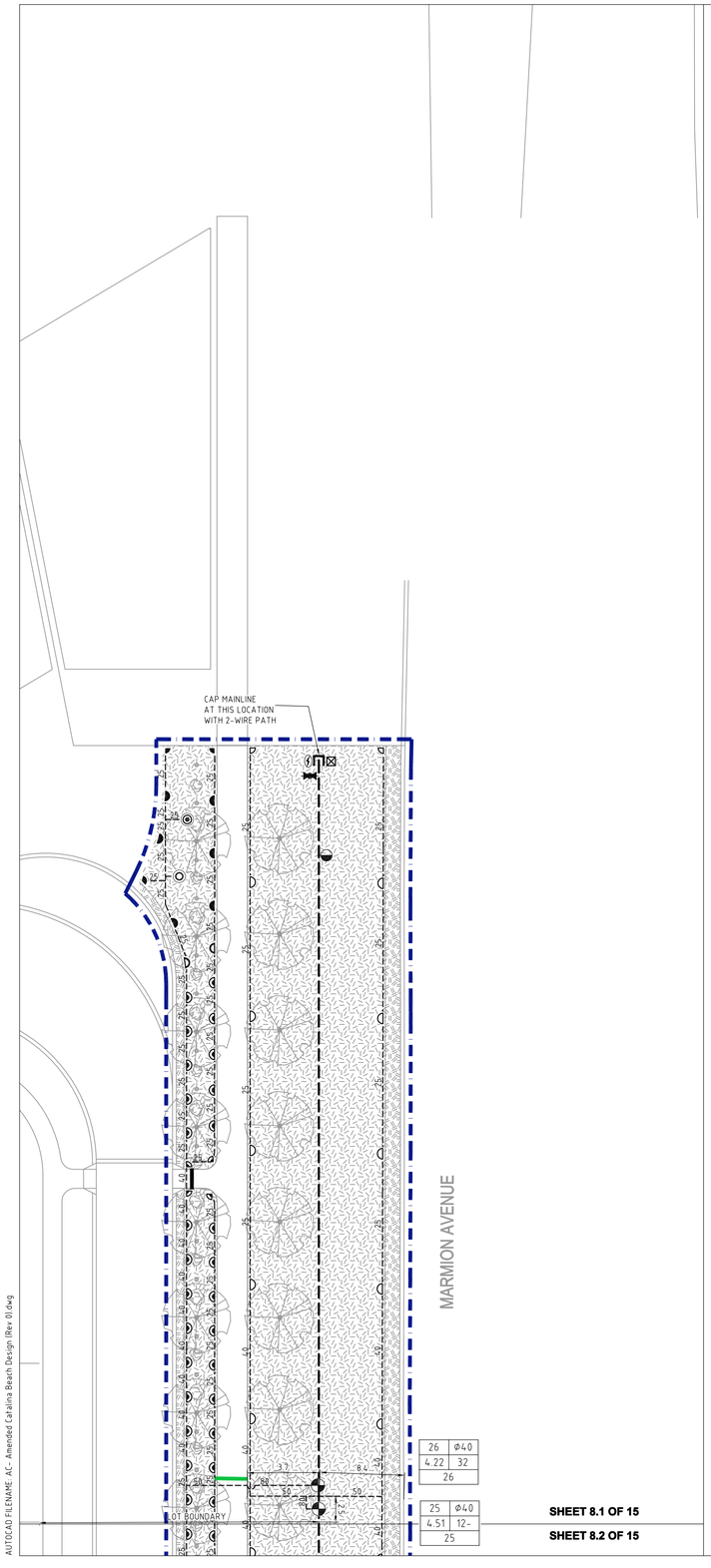
CLIENT :

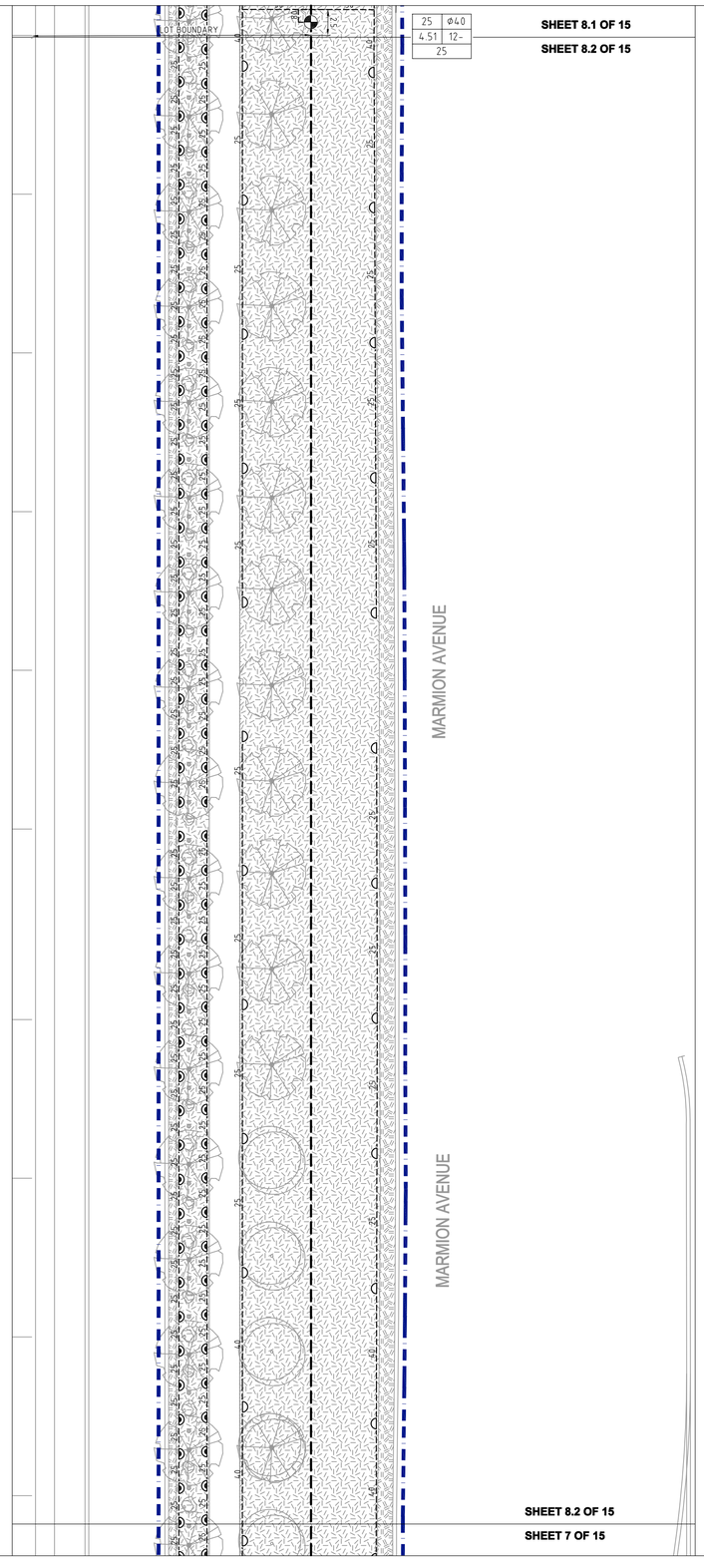
EMERGE ASSOCIATES

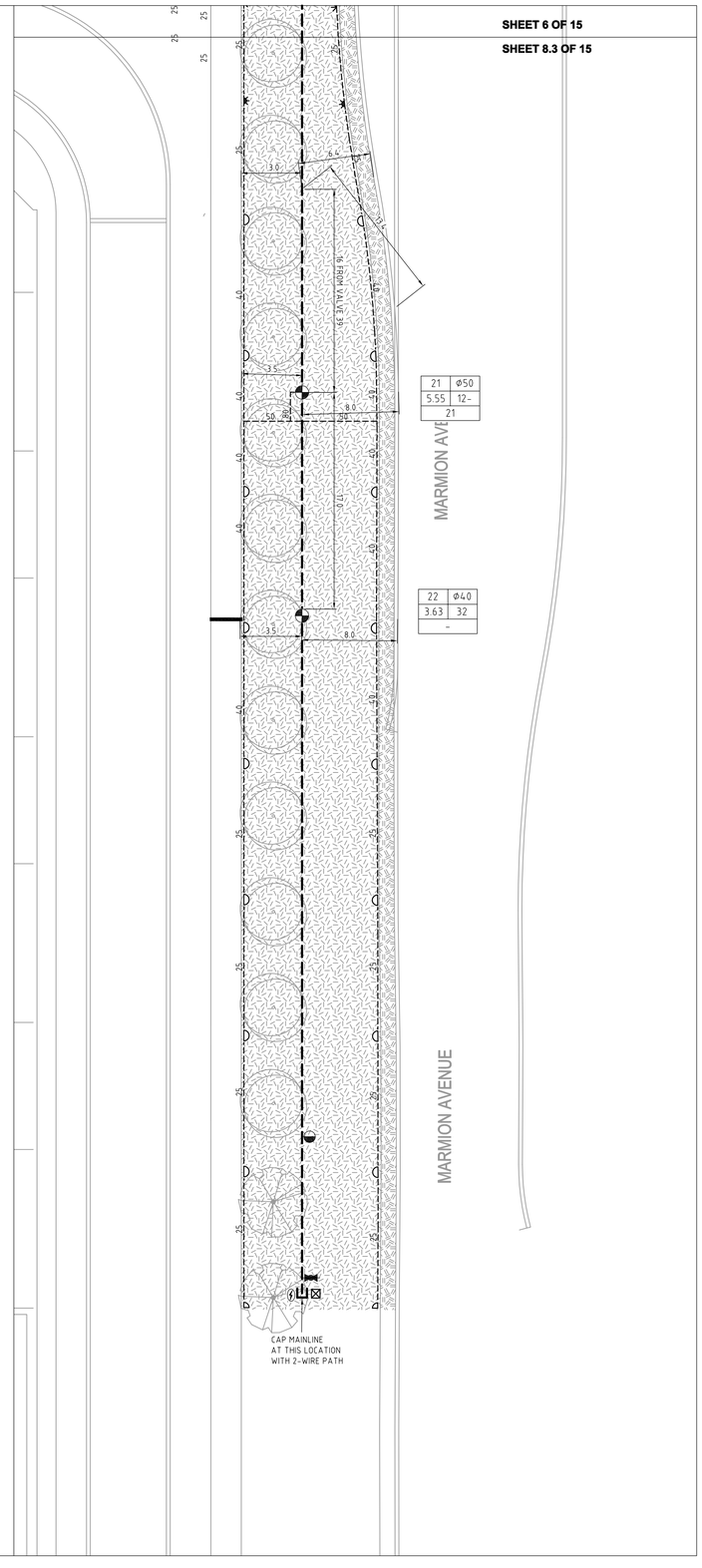
PROJECT :

CATALINA BEACH ESTATE
STAGE 25
IRRIGATION WORKS

DATE :	DESIGN NO. :	SHEET NO. :
16/09/2016	17367-07	7 OF 15







LEGEND: "SPRINKLERS"

SYMBOL	BRAND NAME	MODEL DESCRIPTION	NOZZ. NO.	PRESS. (KPA)	FLOW (LPM)	RADIUS (M)
	HUNTER	I-20-04-SS	6.0	350	24.5	13.1
	HUNTER	I-20-04-SS	3.0	350	12.3	11.9
	HUNTER	I-20-04-SS	2.5	350	9.7	10.7
	HUNTER	I-20-04-SS	2.0	350	7.8	10.4
	HUNTER	I-20-04-SS	4.5LA	350	16.6	10.7
	HUNTER	I-20-04-SS	2.0LA	350	8	8.5
	HUNTER	I-20-04-SS	3.0SR	350	11.2	7.6
	TORO	570XF-6P	15	250	2.84-11.36	4.6
	TORO	570XF-6P	12	250	1.82-7.27	3.7
	TORO	570XF-6P	10	250	1.25-5.04	3.0
	TORO	570XF-6P	4EST	250	1.63	1.2x4.4
	TORO	570XF-6P	4SST	250	3.33	1.2x9.1
	TORO	570XF-12P	15	250	2.84-11.36	4.6
	TORO	570XF-12P	12	250	1.82-7.27	3.7
	TORO	570XF-12P	10	250	1.25-5.04	3.0
	LARGE GARDEN AREAS - TO HAVE HUNTER I-20-12 SMALL GARDEN AREAS -REFER TO C.O.W. SPECIFICATION ITEM 3.7.5 SPRAY SPRINKLERS FOR DEFINING AREAS REQUIRING EITHER 570XF-6P'S OR 570XF-12P'S					
	BERMAD 200 SERIES SOLENOID CONTROL VALVE SIZE AS SHOWN					
	BORE LOCATION					
	IRRIGATION CONTROLLER : HUNTER-ACC 99D TO BE TO CITY OF WANNEROO SPECIFICATIONS					
	MAINLINE ISOLATION VALVE SAME SIZE AS MAINLINE					
	50mm MAINLINE FLUSHING VALVE					
	DN50 AIR RELEASE, TO BE INSTALLED AT HIGH POINT ON MAINLINE PER C.O.W. SPECIFICATION					
	P2 CABLE PIT					
	LIGHTNING SURGE PROTECTION					
DN100	DN100 mPVC RRJ CLASS 12 MAINLINE (UNLESS OTHERWISE NOTED)					
25	uPVC SWJ CLASS 9 LATERAL LINE SIZE AS SHOWN					
	DN100 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR					
	DN150 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR					
	DN200 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR (UNLESS OTHERWISE NOTED)					
	EXISTING DN200 SLEEVE					

VALVE LABEL LEGEND

VALVE NO
FLOW (LPS)

2	Φ50
3.29	32
-	

VALVE SIZE
PRECIPITATION RATE
DECODER NO.

NOTE:

1. MAINLINE AND LATERAL PIPES ARE TO BE INSTALLED TO A MINIMUM DEPTH OF 350mm AND BE INSTALLED TO A MAXIMUM DEPTH OF 450mm.
2. THE CONTRACTOR TO UNDERTAKE FLOW (PRESSURE) ADJUSTMENT OF ALL SOLENOID VALVES IN ACCORDANCE WITH THE NOMINAL OPERATING PRESSURE OF THE SPRINKLERS ATTACHED TO THE PARTICULAR SOLENOID VALVE.
3. CABLE PITS TO BEEN LOCATED AT EVERY BEND IN THE MAINLINE AND EVERY 100m IN STRAIGHT RUNS.
4. ALL 2-WIRE PATHS TO BE INSTALLED IN 40MD CONDUIT.
5. THE IRRIGATION SUB CONTRACTOR SHALL SUPPLY A 13mm X 1200mm GROUND ROD FOR SURGE PROTECTION AND HOUSED WITHIN A VALVE BOX AS BELOW:-
   - AT THE END OF EACH COMMUNICATION CABLE RUN.
   - AT SPACING NOT EXCEEDING 250 METRES ALONG COMMUNICATION RUNS, OR AT EVERY 8TH DECODER.
   - OR AS PER MANUFACTURERS SPECIFICATIONS.

CERTIFIED IRRIGATION DESIGNER – IRRIGATION AUSTRALIA – LANDSCAPE/TURF CONNECTION – LIC4190

0 2.5 5 7.5 10 12.5m
SCALE 1:250 ON A1

REV	DATE	DESCRIPTION	DWN	CKD
A	16/09/2016	ISSUED FOR APPROVAL	R.V	J.S
B	28/09/2016	ISSUED FOR APPROVAL	R.V	J.S
C	05/10/2016	ISSUED FOR APPROVAL, REVISED FLOWS	I.B	J.S
D	15/03/2017	REVISED IRRIGATION TO SUIT THE NEW LANDSCAPE PLAN	R.V	J.S
E	30/03/2017	CID STAMP & LIGHTNING SURGE PROTECTION WERE ADDED ON THE DRAWING	R.V	J.S
F	21/04/17	ADDED ADDITIONAL IRON FILTER DETAILS	J.S	
G	06/06/2017	REVISED IRRIGATION TO SUIT THE NEW LANDSCAPE PLAN	R.V	J.S
0	20/07/2017	ISSUED FOR CONSTRUCTION	J.S	
1	01/05/2018	PART AS CONSTRUCTED BY LD TOTAL	S.J	
2	13/05/2019	AMENDED AS CONSTRUCTED BY LD TOTAL	M.S	

N

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TOTAL EDEN

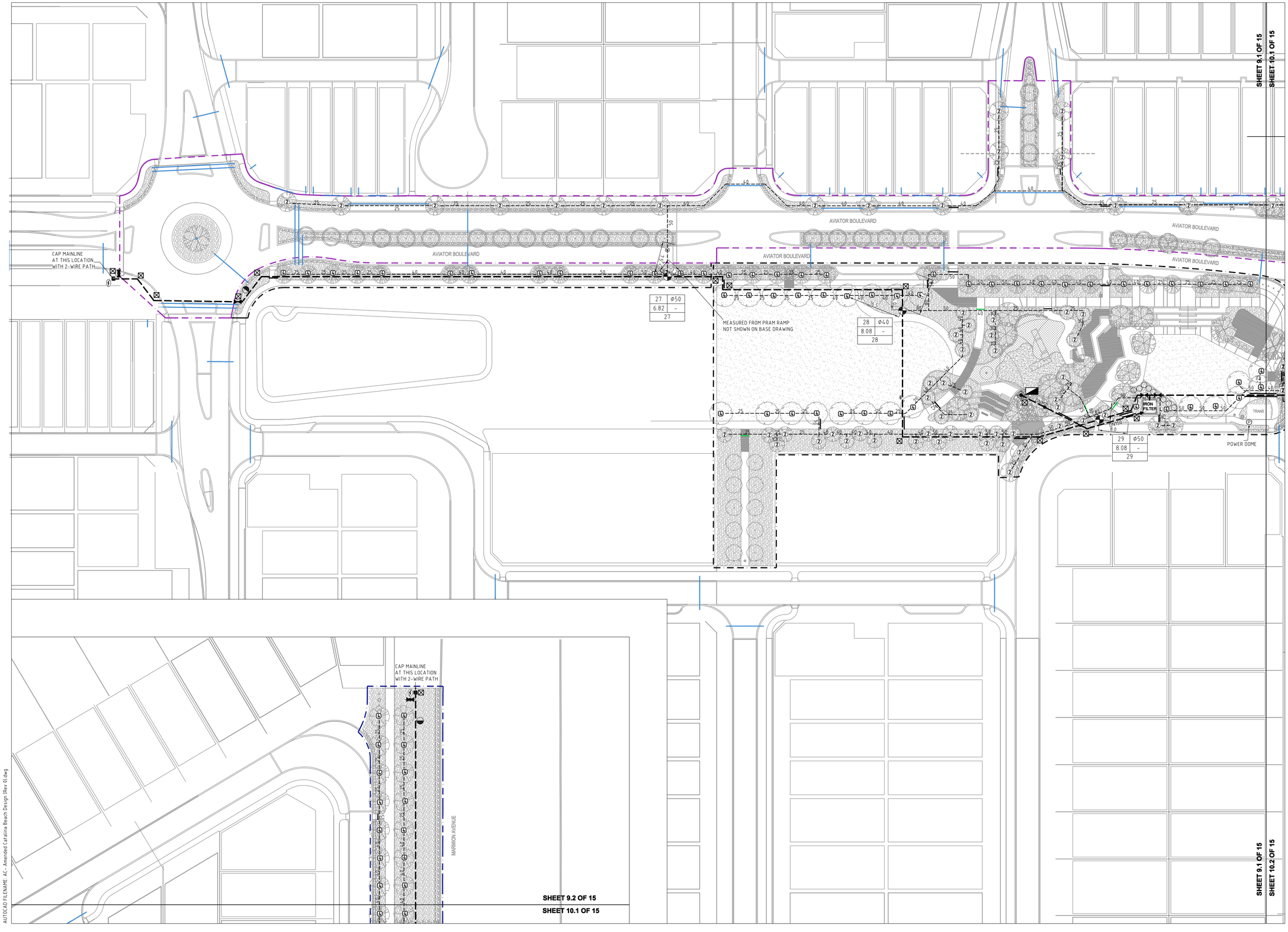
SCALE :	1 : 250 @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT :
EMERGE ASSOCIATES

PROJECT :
CATALINA BEACH ESTATE
STAGE 25
IRRIGATION WORKS

DATE :	DESIGN NO. :	SHEET NO. :
16/09/2016	17367-08	8 OF 15

AUTOCAD FILENAME AC - Amended Catalina Beach Design (Rev 0).dwg



LEGEND:

SYMBOL	DESCRIPTION
② 200 L	2-TORO FLOOD BUBBLERS MODEL FB-100PC ON A TORO 570XF-6P WITH BLUE FLEX 7.06 LPM @ 250 kPA
④ 500 L	4-TORO FLOOD BUBBLERS MODEL FB-100PC ON A TORO 570Z 6P WITH BLUE FLEX 14.12 LPM @ 250 kPA
	BERMAD 200 SERIES SOLENOID CONTROL VALVE SIZE AS SHOWN
	BORE LOCATION
	IRRIGATION CONTROLLER : HUNTER-ACC 99D TO BE TO CITY OF WANNEROO SPECIFICATIONS
	MAINLINE ISOLATION VALVE SAME SIZE AS MAINLINE
	50mm MAINLINE FLUSHING VALVE
	DN50 AIR RELEASE, TO BE INSTALLED AT HIGH POINT ON MAINLINE PER C.O.W. SPECIFICATION
	P2 CABLE PIT
	LIGHTNING SURGE PROTECTION
DN100	DN100 mPVC RRJ CLASS 12 MAINLINE (UNLESS OTHERWISE NOTED)
25	uPVC SWJ CLASS 9 LATERAL LINE SIZE AS SHOWN
	DN100 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR
	DN150 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR
	DN200 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR (UNLESS OTHERWISE NOTED)
	EXISTING DN200 SLEEVE

VALVE LABEL LEGEND

VALVE NO	2	Ø50	VALVE SIZE
FLOW (LPS)	3.29	32	PRECIPITATION RATE
	–		DECODER NO.

NOTE:

1. MAINLINE AND LATERAL PIPES ARE TO BE INSTALLED TO A MINIMUM DEPTH OF 350mm AND BE INSTALLED TO A MAXIMUM DEPTH OF 450mm.
2. THE CONTRACTOR TO UNDERTAKE FLOW (PRESSURE) ADJUSTMENT OF ALL SOLENOID VALVES IN ACCORDANCE WITH THE NOMINAL OPERATING PRESSURE OF THE SPRINKLERS ATTACHED TO THE PARTICULAR SOLENOID VALVE.
3. CABLE PITS TO BEEN LOCATED AT EVERY BEND IN THE MAINLINE AND EVERY 100m IN STRAIGHT RUNS.
4. ALL 2-WIRE PATHS TO BE INSTALLED IN 40MD CONDUIT.
5. THE IRRIGATION SUB CONTRACTOR SHALL SUPPLY A 13mm X 1200mm GROUND ROD FOR SURGE PROTECTION AND HOUSED WITHIN A VALVE BOX AS BELOW:-
   - AT THE END OF EACH COMMUNICATION CABLE RUN.
   - AT SPACING NOT EXCEEDING 250 METRES ALONG COMMUNICATION RUNS, OR AT EVERY 8TH DECODER.
   - OR AS PER MANUFACTURERS SPECIFICATIONS.

CERTIFIED IRRIGATION DESIGNER — IRRIGATION AUSTRALIA — LIC4186 — LANDSCAPE / TURF CONNECTION

0 5 10 15 20 25m
SCALE 1:500 ON A1

AUTOCAD FILENAME AC - Amended Catalina Beach Design (Rev 0).dwg

REV	DATE	DESCRIPTION	DWN	CKD
A	16/09/2016	ISSUED FOR APPROVAL	R.V	J.S
B	28/09/2016	ISSUED FOR APPROVAL	R.V	J.S
C	05/10/2016	ISSUED FOR APPROVAL, REVISED FLOWS	I.B	J.S
D	15/03/2017	REVISED IRRIGATION TO SUIT THE NEW LANDSCAPE PLAN	R.V	J.S
E	30/03/2017	CID STAMP & LIGHTNING SURGE PROTECTION WERE ADDED ON THE DRAWING	R.V	J.S
F	21/04/17	ADDED ADDITIONAL IRON FILTER DETAILS	J.S	
G	06/06/2017	REVISED IRRIGATION TO SUIT THE NEW LANDSCAPE PLAN	R.V	J.S
0	20/07/2017	ISSUED FOR CONSTRUCTION	J.S	
1	01/05/2018	PART AS CONSTRUCTED BY LD TOTAL	S.J	
2	13/05/2019	AMENDED AS CONSTRUCTED BY LD TOTAL	M.S	

N

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TOTAL EDEN

SCALE :	1 : 500 @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

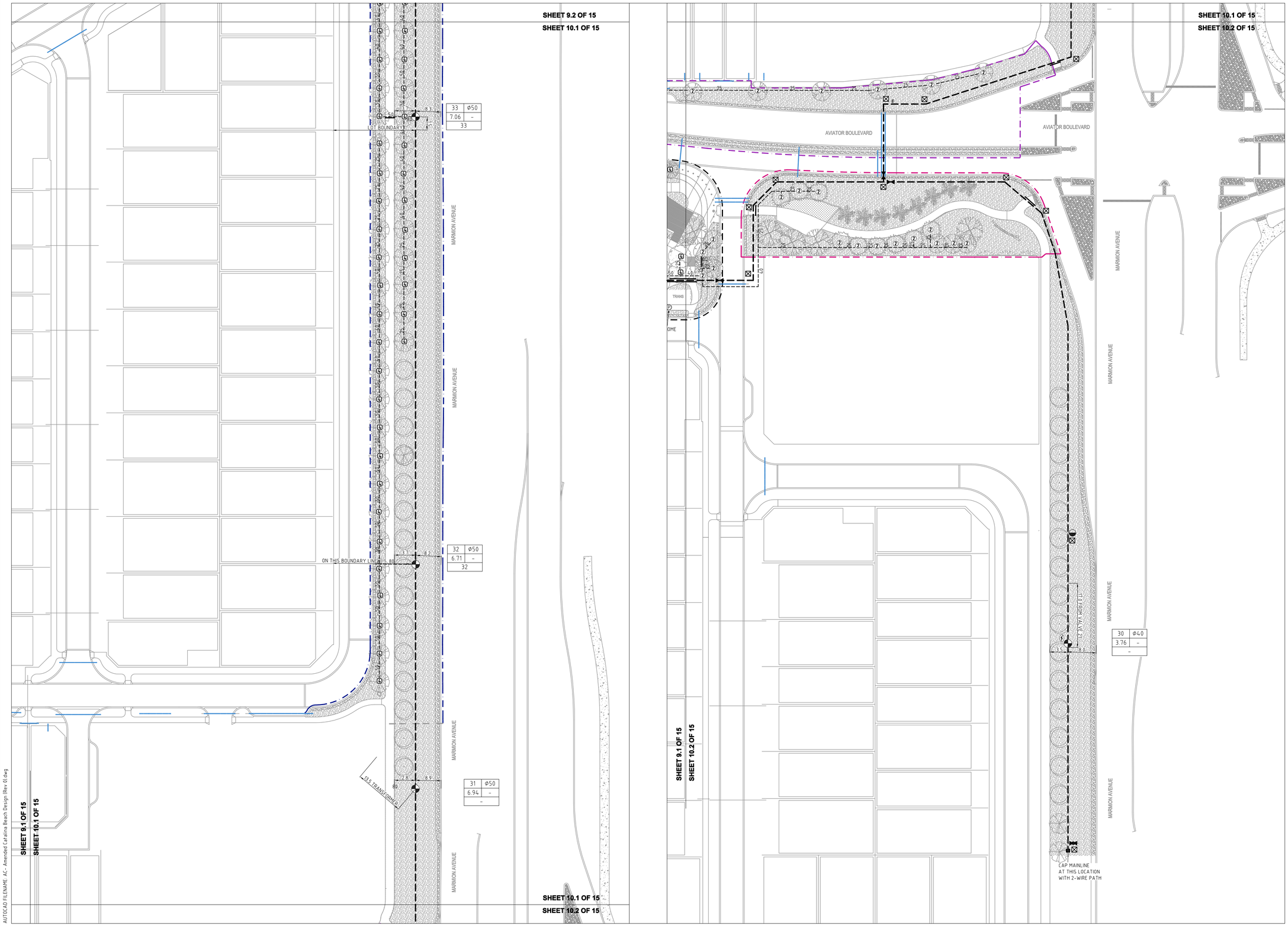
CLIENT :

EMERGE ASSOCIATES

PROJECT :

CATALINA BEACH ESTATE
STAGE 25
IMMATURE TREE IRRIGATION

DATE :	DESIGN NO. :	SHEET NO. :
16/09/2016	17367-09	9 OF 15



LEGEND:

SYMBOL	DESCRIPTION
2 200 L	2-TORO FLOOD BUBBLERS MODEL FB-100PC ON A TORO 570XF-6P WITH BLUE FLEX 7.06 LPM @ 250 kPA
4 500 L	4-TORO FLOOD BUBBLERS MODEL FB-100PC ON A TORO 570Z 6P WITH BLUE FLEX 14.12 LPM @ 250 kPA
	BERMAD 200 SERIES SOLENOID CONTROL VALVE SIZE AS SHOWN
	BORE LOCATION
	IRRIGATION CONTROLLER : HUNTER-ACC 99D TO BE TO CITY OF WANNEROO SPECIFICATIONS
	MAINLINE ISOLATION VALVE SAME SIZE AS MAINLINE
	50mm MAINLINE FLUSHING VALVE
	DN50 AIR RELEASE, TO BE INSTALLED AT HIGH POINT ON MAINLINE PER C.O.W. SPECIFICATION
	P2 CABLE PIT
	LIGHTNING SURGE PROTECTION
DN100	DN100 mPVC RRJ CLASS 12 MAINLINE (UNLESS OTHERWISE NOTED)
25	uPVC SWJ CLASS 9 LATERAL LINE SIZE AS SHOWN
	DN100 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR
	DN150 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR
	DN200 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR (UNLESS OTHERWISE NOTED)
	EXISTING DN200 SLEEVE

VALVE LABEL LEGEND

VALVE NO | 2 | ø50 | VALVE SIZE
FLOW (LPS) | 3.29 | 32 | PRECIPITATION RATE
– | DECODER NO.

NOTE:

1. MAINLINE AND LATERAL PIPES ARE TO BE INSTALLED TO A MINIMUM DEPTH OF 350mm AND BE INSTALLED TO A MAXIMUM DEPTH OF 450mm.
2. THE CONTRACTOR TO UNDERTAKE FLOW (PRESSURE) ADJUSTMENT OF ALL SOLENOID VALVES IN ACCORDANCE WITH THE NOMINAL OPERATING PRESSURE OF THE SPRINKLERS ATTACHED TO THE PARTICULAR SOLENOID VALVE.
3. CABLE PITS TO BEEN LOCATED AT EVERY BEND IN THE MAINLINE AND EVERY 100m IN STRAIGHT RUNS.
4. ALL 2-WIRE PATHS TO BE INSTALLED IN 40MD CONDUIT.
5. THE IRRIGATION SUB CONTRACTOR SHALL SUPPLY A 13mm X 1200mm GROUND ROD FOR SURGE PROTECTION AND HOUSED WITHIN A VALVE BOX AS BELOW:-
   - AT THE END OF EACH COMMUNICATION CABLE RUN.
   - AT SPACING NOT EXCEEDING 250 METRES ALONG COMMUNICATION RUNS, OR AT EVERY 8TH DECODER.
   - OR AS PER MANUFACTURERS SPECIFICATIONS.

AUTOCAD FILENAME: AC - Amended Catalina Beach Design (Rev 0).dwg

REV	DATE	DESCRIPTION	DWN	CKD
A	16/09/2016	ISSUED FOR APPROVAL	R.V	J.S
B	28/09/2016	ISSUED FOR APPROVAL	R.V	J.S
C	05/10/2016	ISSUED FOR APPROVAL, REVISED FLOWS	I.B	J.S
D	15/03/2017	REVISED IRRIGATION TO SUIT THE NEW LANDSCAPE PLAN	R.V	J.S
E	30/03/2017	CID STAMP & LIGHTNING SURGE PROTECTION WERE ADDED ON THE DRAWING	R.V	J.S

REV	DATE	DESCRIPTION	DWN	CKD
F	21/04/17	ADDED ADDITIONAL IRON FILTER DETAILS	J.S	
G	06/06/2017	REVISED IRRIGATION TO SUIT THE NEW LANDSCAPE PLAN	R.V	J.S
0	20/07/2017	ISSUED FOR CONSTRUCTION	J.S	
1	01/05/2018	PART AS CONSTRUCTED BY LD TOTAL	S.J	
2	13/05/2019	AMENDED AS CONSTRUCTED BY LD TOTAL	M.S	

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TOTAL EDEN

SCALE :	1 : 500 @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

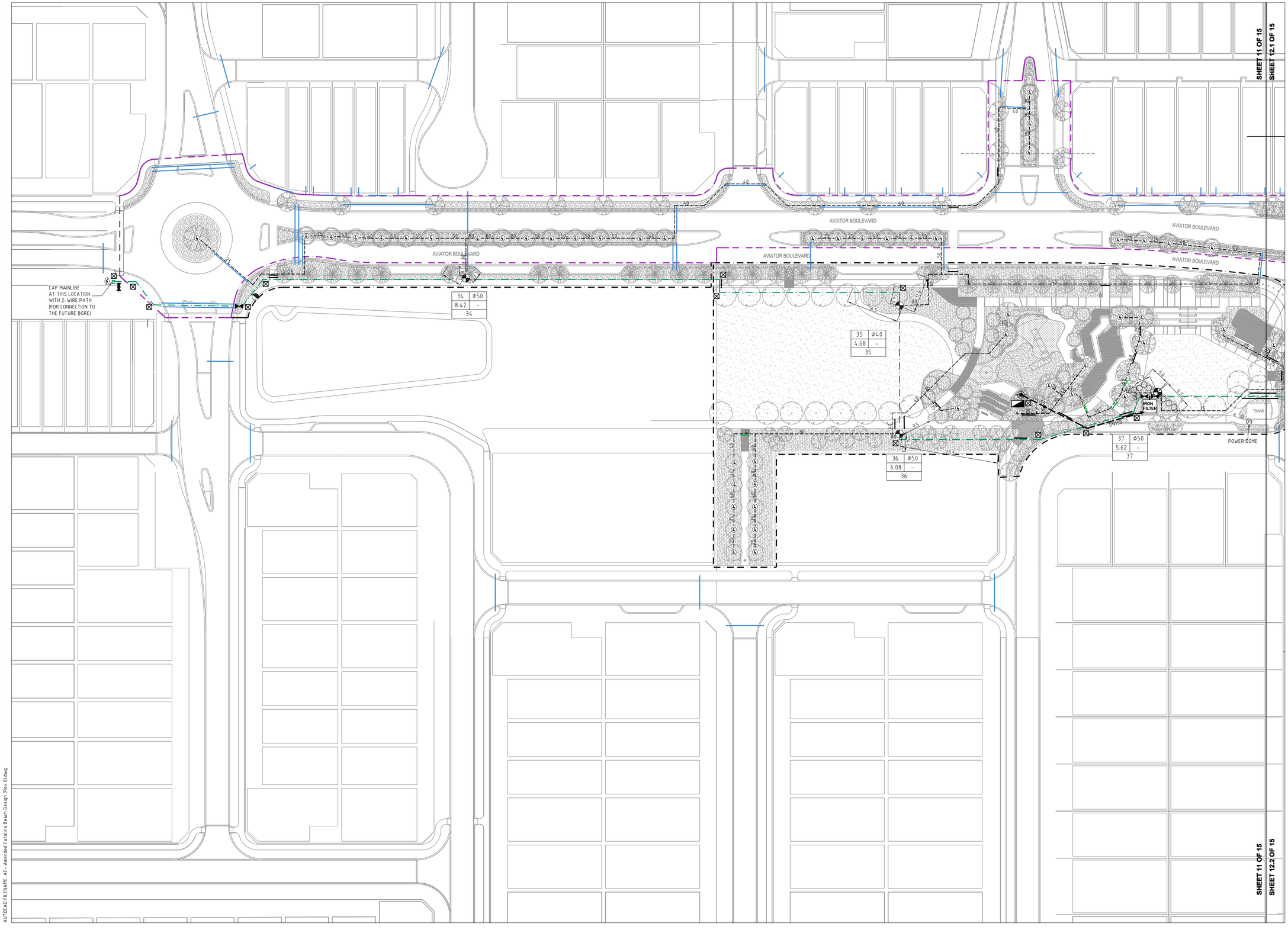
CLIENT :

EMERGE ASSOCIATES

PROJECT :

CATALINA BEACH ESTATE
STAGE 25
IMMATURE TREE IRRIGATION

DATE :	DESIGN NO. :	SHEET NO. :
16/09/2016	17367-10	10 OF 15



LEGEND:

SYMBOL	DESCRIPTION
1000 L	4-TORO FLOOD BUBBLERS MODEL FB-200PC ON A TORO 570XF-6P WITH BLUE FLEX 28.08 LPM @ 250 kPA
	BERMAD 200 SERIES SOLENOID CONTROL VALVE SIZE AS SHOWN
	BORE LOCATION
	IRRIGATION CONTROLLER : HUNTER-ACC 99D TO BE TO CITY OF WANNEROO SPECIFICATIONS
	MAINLINE ISOLATION VALVE SAME SIZE AS MAINLINE
	50mm MAINLINE FLUSHING VALVE
	DN50 AIR RELEASE, TO BE INSTALLED AT HIGH POINT ON MAINLINE PER C.O.W. SPECIFICATION
	P2 CABLE PIT
	LIGHTNING SURGE PROTECTION
DN100	DN100 mPVC RRJ CLASS 12 MAINLINE (UNLESS OTHERWISE NOTED)
	DN110 PN12.5 MDPE MAINLINE (PRE-LAY) (IRRIGATION MAINLINE FOR MATURE TRANSPLANTED TREES. TO BE LAID BESIDE PVC MAINLINE)
25	uPVC SWJ CLASS 9 LATERAL LINE SIZE AS SHOWN
	DN100 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR
	DN150 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR
	DN200 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR (UNLESS OTHERWISE NOTED)
	EXISTING DN200 SLEEVE

VALVE LABEL LEGEND

VALVE NO	2	Ø50	VALVE SIZE
FLOW (LPS)	3.29	32	PRECIPITATION RATE
	-		DECODER NO.

NOTE:

1. MAINLINE AND LATERAL PIPES ARE TO BE INSTALLED TO A MINIMUM DEPTH OF 350mm AND BE INSTALLED TO A MAXIMUM DEPTH OF 450mm.
2. THE CONTRACTOR TO UNDERTAKE FLOW (PRESSURE) ADJUSTMENT OF ALL SOLENOID VALVES IN ACCORDANCE WITH THE NOMINAL OPERATING PRESSURE OF THE SPRINKLERS ATTACHED TO THE PARTICULAR SOLENOID VALVE.
3. CABLE PITS TO BEEN LOCATED AT EVERY BEND IN THE MAINLINE AND EVERY 100m IN STRAIGHT RUNS.
4. ALL 2-WIRE PATHS TO BE INSTALLED IN 40MD CONDUIT.
5. THE IRRIGATION SUB CONTRACTOR SHALL SUPPLY A 13mm X 1200mm GROUND ROD FOR SURGE PROTECTION AND HOUSED WITHIN A VALVE BOX AS BELOW:-
   - AT THE END OF EACH COMMUNICATION CABLE RUN.
   - AT SPACING NOT EXCEEDING 250 METRES ALONG COMMUNICATION RUNS, OR AT EVERY 8TH DECODER.
   - OR AS PER MANUFACTURERS SPECIFICATIONS.

0 5 10 15 20 25m

SCALE 1:500 ON A1

REV	DATE	DESCRIPTION	DWN	CKD
A	16/09/2016	ISSUED FOR APPROVAL	R.V	J.S
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D	15/03/2017	REVISED IRRIGATION TO SUIT THE NEW LANDSCAPE PLAN	R.V	J.S
E	30/03/2017	CID STAMP & LIGHTNING SURGE PROTECTION WERE ADDED ON THE DRAWING	R.V	J.S
F	21/04/17	ADDED ADDITIONAL IRON FILTER DETAILS	J.S	
G	06/06/2017	REVISED IRRIGATION TO SUIT THE NEW LANDSCAPE PLAN	R.V	J.S
0	20/07/2017	ISSUED FOR CONSTRUCTION	J.S	
1	01/05/2018	PART AS CONSTRUCTED BY LD TOTAL	S.J	
2	13/05/2019	AMENDED AS CONSTRUCTED BY LD TOTAL	M.S	

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TOTAL EDEN

SCALE :	1 : 500 @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT :

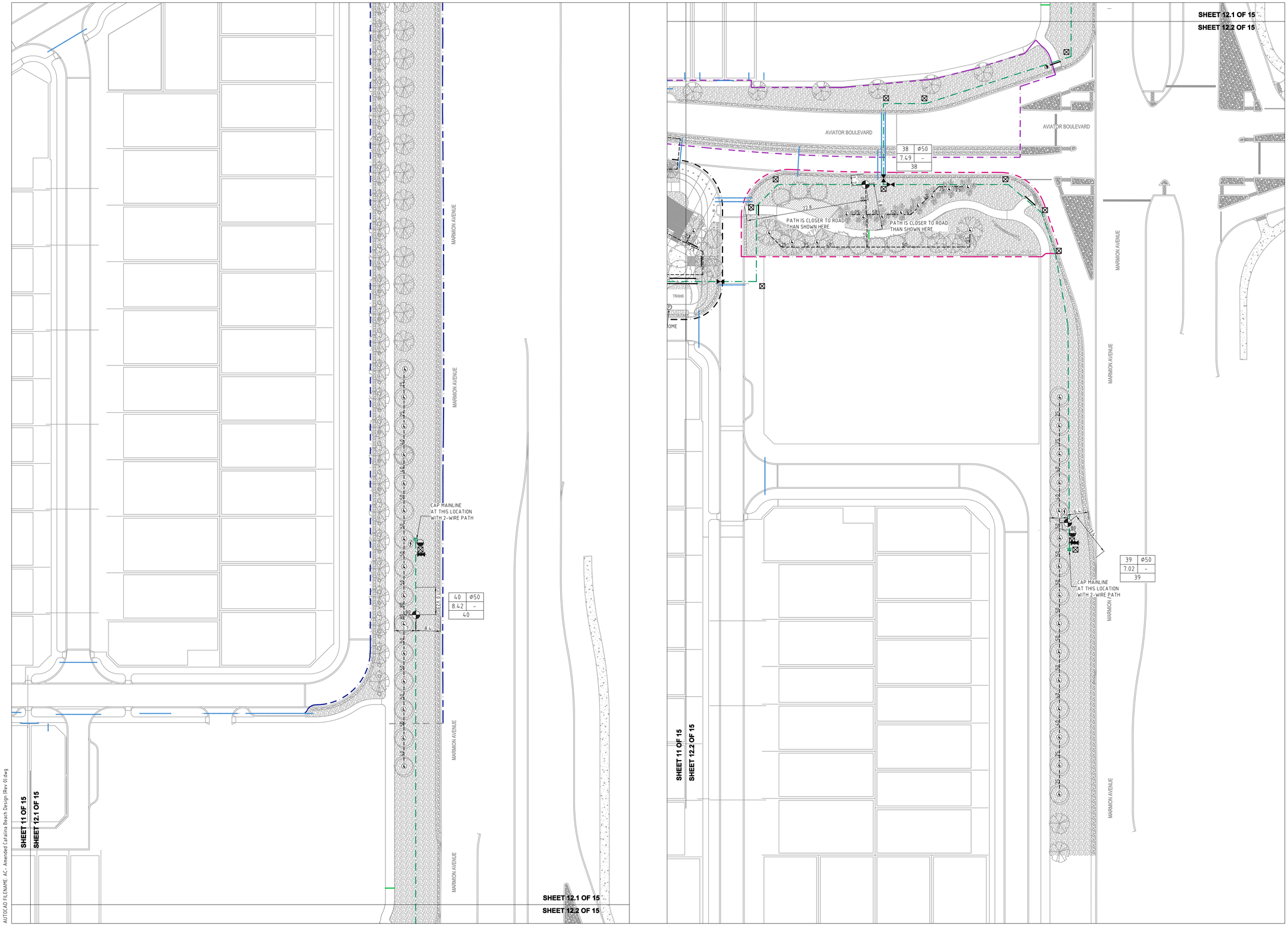
EMERGE ASSOCIATES

PROJECT :

CATALINA BEACH ESTATE
STAGE 25
MATURE TREE IRRIGATION

DATE :	DESIGN NO. :	SHEET NO. :
16/09/2016	17367-11	11 OF 15

AUTOCAD FILENAME: AC - Amended Catalina Beach Design (Rev 0).dwg



LEGEND:

SYMBOL	DESCRIPTION
1000 L	4-TORO FLOOD BUBBLERS MODEL FB-200PC ON A TORO 570XF-6P WITH BLUE FLEX 28.08 LPM @ 250 kPA
	BERMAD 200 SERIES SOLENOID CONTROL VALVE SIZE AS SHOWN
	BORE LOCATION
	IRRIGATION CONTROLLER : HUNTER-ACC 99D TO BE TO CITY OF WANNEROO SPECIFICATIONS
	MAINLINE ISOLATION VALVE SAME SIZE AS MAINLINE
	50mm MAINLINE FLUSHING VALVE
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	LIGHTNING SURGE PROTECTION
DN100	DN100 mPVC RRJ CLASS 12 MAINLINE (UNLESS OTHERWISE NOTED)
	DN110 PN12.5 MDPE MAINLINE (PRE-LAY) (IRRIGATION MAINLINE FOR MATURE TRANSPLANTED TREES. TO BE LAID BESIDE PVC MAINLINE)
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	DN150 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR
	DN200 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR (UNLESS OTHERWISE NOTED)
	EXISTING DN200 SLEEVE

VALVE LABEL LEGEND

VALVE NO	2	ø50	VALVE SIZE
FLOW (LPS)	3.29	32	PRECIPITATION RATE
	-		DECODER NO.

NOTE:

1. MAINLINE AND LATERAL PIPES ARE TO BE INSTALLED TO A MINIMUM DEPTH OF 350mm AND BE INSTALLED TO A MAXIMUM DEPTH OF 450mm.
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0 5 10 15 20 25m
SCALE 1:500 ON A1

AUTOCAD FILENAME: AC - Amended Catalina Beach Design (Rev 0).dwg

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E	30/03/2017	CID STAMP & LIGHTNING SURGE PROTECTION WERE ADDED ON THE DRAWING	R.V	J.S

REV	DATE	DESCRIPTION	DWN	CKD
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0	20/07/2017	ISSUED FOR CONSTRUCTION	J.S	
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TOTAL EDEN

SCALE :	1 : 500 @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT :
EMERGE ASSOCIATES

PROJECT :
CATALINA BEACH ESTATE
STAGE 25
MATURE TREE IRRIGATION

DATE :	DESIGN NO. :	SHEET NO. :
16/09/2016	17367-12	12 OF 15



TYPICAL 48" ELLIOTTS IRON FILTER

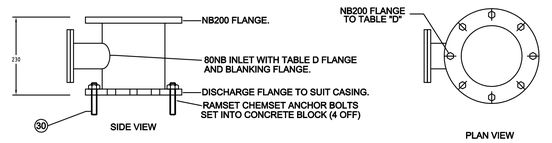
NOT TO SCALE

- CONCRETE PAD 3.0m x 3.0m x 120mm THICK.
- FILTRATION VESSEL (1 x 48" DIAMETER) AND ASSOCIATED FILTER MEDIA.
- ASSOCIATED VALVES AND BACKWASH CONTROLLER.
- GRUNDFOS BOOSTER PUMP UNIT TO CATER FOR BORE WATER AERATION WITH VENTURI.
- 8 - 1.5m DIA. SOAK WELLS FOR IRON WASTE. APPROX. 15,000L WILL BE PRODUCED DURING EACH BACKWASH CYCLE.

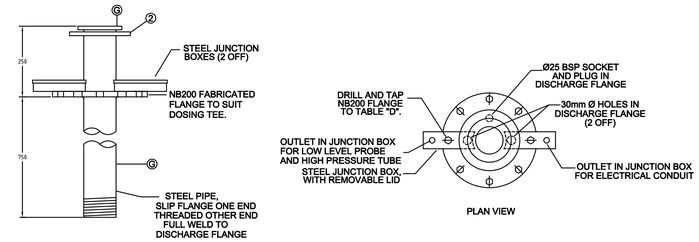
PIPE SIZE.	DIMENSIONS (mm)							CONCRETE PLINTH
	A.	B.	C.	D.	E.	F.	G.	
Ø50	300	150	500	150	1305	Ø25	50	Ø650 x 450
Ø80	600	200	800	200	1430	Ø25	80	Ø650 x 600
Ø100	600	200	1000	250	1430	Ø50	100	Ø750 x 600

ITEM DESCRIPTION
1. DISCHARGE FLANGE ASSEMBLY.
2. TE SLIP FLANGE
3. 90° LONG RADIUS FLANGED ELBOW.
4. 90° LONG RADIUS BUTTWELD ELBOW.
5. AUTOMATIC AIR/VACUUM RELEASE VALVE - METAL CONSTRUCTION.
6. STANDARD WT. BUTWELD TE FLANGED TEE.
7. TE BLANK FLANGE.
8. ARAD OCTAVE FLOW METER SIZED TO DISCHARGE Ø.
9. HEAVY DUTY ELECTRICAL CONDUIT.
10. CONCRETE PLINTH.
11. PRESSURE TUBE.
12. STEEL JUNCTION BOXES.
13. BORE CASING.
14. LOCKABLE COMMERCIAL VALVE BOX TO HOLD ARAD OCTAVE METER.
15. CONCRETE THRUST BLOCK.
16. C.I. FLANGE TO SOCKET CONNECTOR.
17. P.V.C. MAINLINE.
18. BSP SOCKET AND NIPPLE.
19. MILNES GUNMETAL TAPPING BAND. INSTALL HUNTER FLOW CLICK WHERE SPECIFIED. PLUG IF SOCKET NOT USED.
20. BUTTERFLY VALVE WITH NOTCH PLATE AND HANDLE. REMOVE HANDLE AND STORE IN PUMP CUBICLE.
21. TABLE "E" FLANGE SET.
22. GALVANISED STEEL DISCHARGE PIPE.
23. MILNES GUNMETAL TAPPING BAND. INSTALL FLOW SWITCH WHERE SPECIFIED. PLUG IF SOCKET NOT USED.
24. RAINBIRD MAXI JUMBO RECTANGULAR VALVE BOX (VB-MAX 102.4X68.8X45.7 CM)
25. DRILL & TAP FOR PRESSURE TAKE OFF TUBE. RUN TUBE BACK TO PRESSURE GAUGE IN CONTROL CABINET.
26. DUAL FLAP CHECK VALVE
27. LOCKABLE GALVANISED METER ENCLOSURE.
28. PUMP COLUMN.
29. 200NB GALVANISED STEEL FABRICATED DOSING TEE WITH 80NB INLET.
30. STUD BOLTS TO SUIT TABLE "D" FLANGE.
31. NOT ALLOCATED.
32. NOT ALLOCATED.

NOTES:
1. DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
2. ALL STEEL PIPEWORK TO BE SCHEDULE 40.
3. ALL FLANGES TO BE TABLE "E".
4. ALL STEEL PIPEWORK AND FITTINGS TO BE HOT DIPPED GALVANISED AFTER FABRICATION.
5. ALL BOLTS STUDS AND NUTS TO BE GALVANISED, ALL BOLT TREADS TO PROTRUDE PAST NUT AFTER INSTALLATION.
6. ALL BOLTS USED IN CONCRETE TO BE "RAMSET CHEMSET" MASONRY ANCHORS UNLESS OTHERWISE STATED.
7. ALL BURIED STEEL PIPE TO BE "DENSO" WRAPPED AS PER MANUFACTURERS SPECIFICATIONS.
8. BUTTERFLY VALVES TO BE FITTED WITH STAINLESS STEEL DISC AND PADLOCK TAB.
9. ALL UNUSED SOCKETS TO BE FITTED WITH STEEL PLUG.
10. FLOW METER AND BUTTERFLY VALVE TO BE SAME SIZE AS PIPEWORK.
11. HIGH, LOW PRESSURE AND NO FLOW FITTINGS NOT SHOWN.



STANDARD DOSING TEE ASSEMBLY DETAIL - ITEM 29.



STANDARD DISCHARGE FLANGE ASSEMBLY DETAIL - ITEM 1.

PIPE SIZE.	DIMENSIONS (mm)							CONCRETE PLINTH
	A.	B.	C.	D.	E.	F.	G.	
Ø50	300	150	500	150	1305	Ø25	50	Ø650 x 450
Ø80	600	200	800	200	1430	Ø25	80	Ø650 x 600
Ø100	600	200	1000	250	1430	Ø50	100	Ø750 x 600

ITEM DESCRIPTION
1. DISCHARGE FLANGE ASSEMBLY.
2. TE SLIP FLANGE
3. 90° LONG RADIUS FLANGED ELBOW.
4. 90° LONG RADIUS BUTTWELD ELBOW.
5. AUTOMATIC AIR/VACUUM RELEASE VALVE - METAL CONSTRUCTION.
6. STANDARD WT. BUTWELD TE FLANGED TEE.
7. TE BLANK FLANGE.
8. ARAD OCTAVE FLOW METER SIZED TO DISCHARGE Ø.
9. HEAVY DUTY ELECTRICAL CONDUIT.
10. CONCRETE PLINTH.
11. PRESSURE TUBE.
12. STEEL JUNCTION BOXES.
13. BORE CASING.
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15. CONCRETE THRUST BLOCK.
16. C.I. FLANGE TO SOCKET CONNECTOR.
17. P.V.C. MAINLINE.
18. BSP SOCKET AND NIPPLE.
19. MILNES GUNMETAL TAPPING BAND. INSTALL HUNTER FLOW CLICK WHERE SPECIFIED. PLUG IF SOCKET NOT USED.
20. BUTTERFLY VALVE WITH NOTCH PLATE AND HANDLE. REMOVE HANDLE AND STORE IN PUMP CUBICLE.
21. TABLE "E" FLANGE SET.
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26. DUAL FLAP CHECK VALVE.
27. LOCKABLE GALVANISED METER ENCLOSURE.
28. PUMP COLUMN.
29. 200NB GALVANISED STEEL FABRICATED DOSING TEE WITH 80NB INLET.
30. STUD BOLTS TO SUIT TABLE "D" FLANGE.
31. NOT ALLOCATED.
32. NOT ALLOCATED.

NOTES:
1. DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
2. ALL STEEL PIPEWORK TO BE SCHEDULE 40.
3. ALL FLANGES TO BE TABLE "E".
4. ALL STEEL PIPEWORK AND FITTINGS TO BE HOT DIPPED GALVANISED AFTER FABRICATION.
5. ALL BOLTS STUDS AND NUTS TO BE GALVANISED, ALL BOLT TREADS TO PROTRUDE PAST NUT AFTER INSTALLATION.
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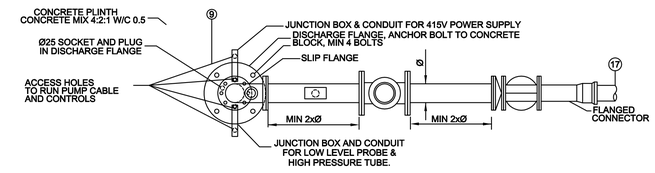
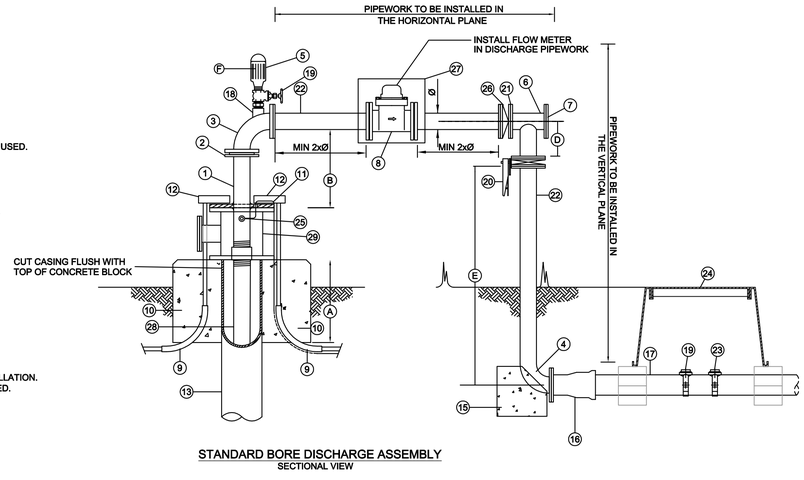
10. FLOW METER AND BUTTERFLY VALVE TO BE SAME SIZE AS PIPEWORK.
11. HIGH, LOW PRESSURE AND NO FLOW FITTINGS NOT SHOWN.



STANDARD BORE DISCHARGE ASSEMBLY

PLAN VIEW (JUNCTION BOXES ROTATED FOR CLARITY)



STANDARD BORE DISCHARGE ASSEMBLY

SECTIONAL VIEW

AUTOCAD FILENAME AC- Amended Catalina Beach Design (Rev 0).dwg

REV	DATE	DESCRIPTION	DWN	CKD
A	16/09/2016	ISSUED FOR APPROVAL	R.V	J.S
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TOTAL EDEN

SCALE :	1 : NTS @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

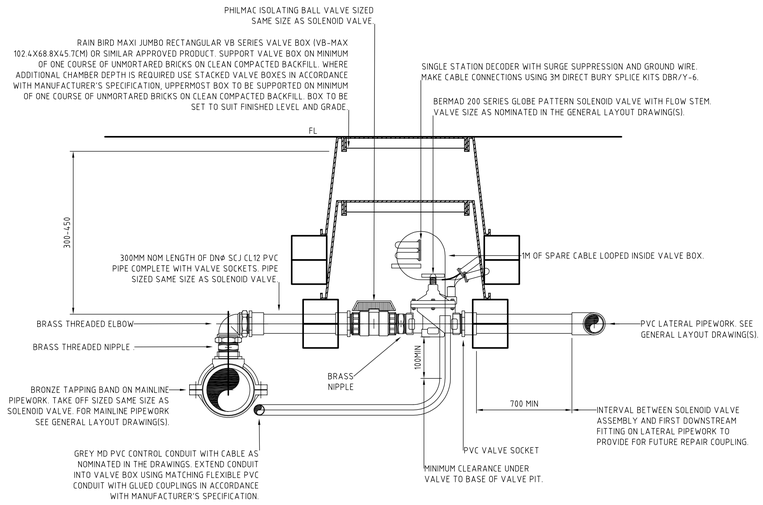
CLIENT :

EMERGE ASSOCIATES

PROJECT :

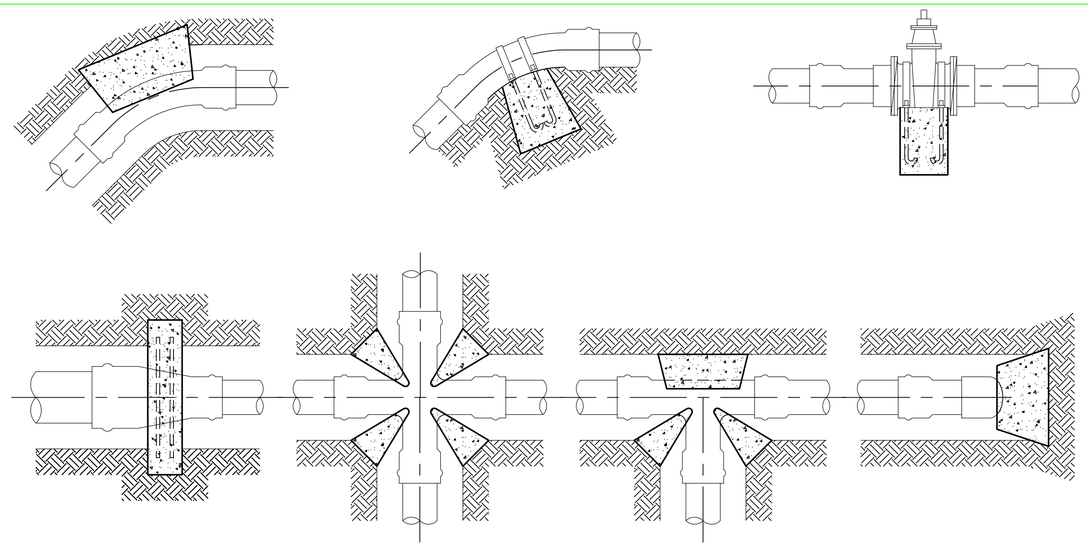
CATALINA BEACH ESTATE
STAGE 25
IRRIGATION WORKS-TYPICAL DETAILS

DATE :	DESIGN NO. :	SHEET NO. :
16/09/2016	17367-13	13 OF 15



TYPICAL GLOBE PATTERN SOLENOID VALVE INSTALLATION

NOT TO SCALE



TYPICAL THRUST BLOCK DETAILS

NOT TO SCALE

NOTE:
MINIMUM BEARING AREA TO BE IN ACCORDANCE WITH TYPE OF FITTING AND SOIL TYPE AS PER PIPE MANUFACTURERS RECOMMENDATIONS

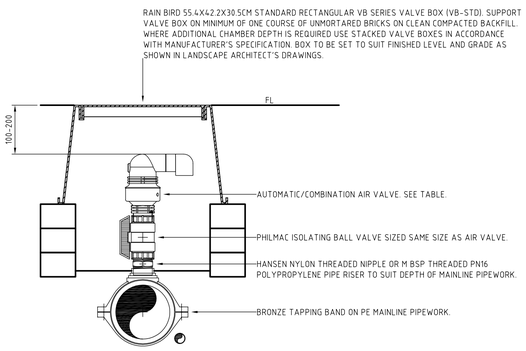
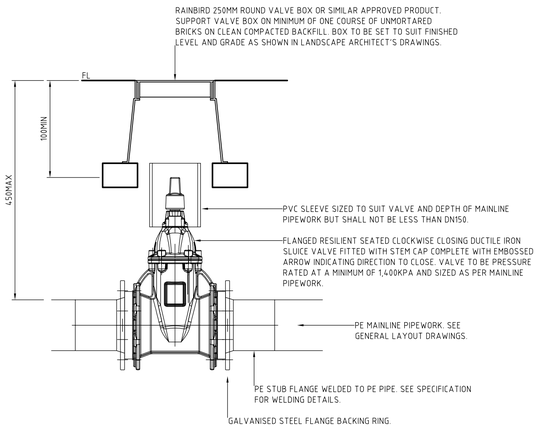


TABLE OF AIR VALVES	
MAINLINE SIZE (DN)†	AIR VALVE‡
LESS THAN 63	PN16 DN20 COMBINATION AIR VALVE
75-140	PN16 DN25 COMBINATION AIR VALVE
150-200	PN16 DN50 COMBINATION AIR VALVE
† SEE GENERAL LAYOUT DRAWING(S).	
‡ SEE ALSO SPECIFICATION.	

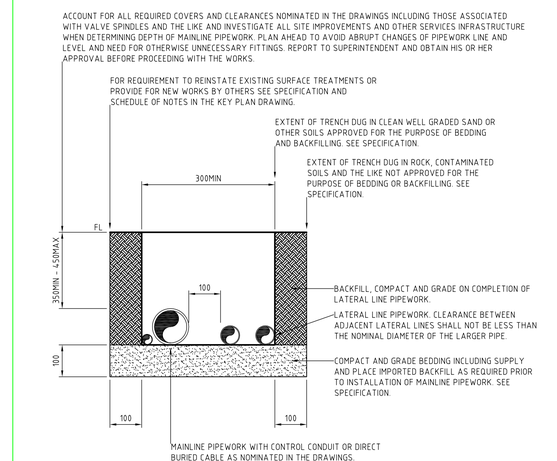
TYPICAL AIR VALVE INSTALLATION ON MAINLINE PIPEWORK

NOT TO SCALE



TYPICAL MAINLINE ISOLATION VALVE INSTALLATION

NOT TO SCALE



TYPICAL ARRANGEMENT OF MULTIPLE PIPES IN A COMMON TRENCH

NOT TO SCALE

AUTOCAD FILENAME: AC - Amended Catalina Beach Design (Rev 0).dwg

REV	DATE	DESCRIPTION	DWN	CKD
A	16/09/2016	ISSUED FOR APPROVAL	R.V	J.S
B	28/09/2016	ISSUED FOR APPROVAL	R.V	J.S
C	05/10/2016	ISSUED FOR APPROVAL, REVISED FLOWS	I.B	J.S
D	15/03/2017	REVISED IRRIGATION TO SUIT THE NEW LANDSCAPE PLAN	R.V	J.S
E	30/03/2017	CID STAMP & LIGHTNING SURGE PROTECTION WERE ADDED ON THE DRAWING	R.V	J.S

REV	DATE	DESCRIPTION	DWN	CKD
F	21/04/17	ADDED ADDITIONAL IRON FILTER DETAILS	J.S	
G	06/06/2017	REVISED IRRIGATION TO SUIT THE NEW LANDSCAPE PLAN	R.V	J.S
0	20/07/2017	ISSUED FOR CONSTRUCTION	J.S	
1	01/05/2018	PART AS CONSTRUCTED BY LD TOTAL	S.J	
2	13/05/2019	AMENDED AS CONSTRUCTED BY LD TOTAL	M.S	

N

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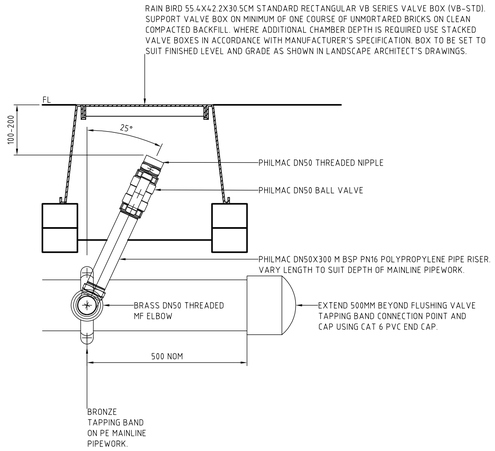
TOTAL EDEN

SCALE :	1 : NTS @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT :
EMERGE ASSOCIATES

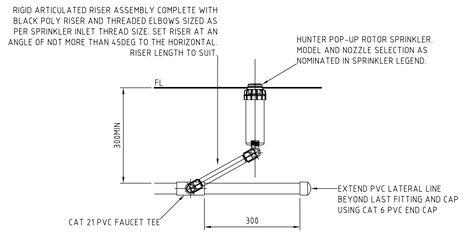
PROJECT :
CATALINA BEACH ESTATE
STAGE 25
IRRIGATION WORKS-TYPICAL DETAILS

DATE :	DESIGN NO. :	SHEET NO. :
16/09/2016	17367-14	14 OF 15



TYPICAL FLUSHING (BALL) VALVE INSTALLATION ON MAINLINE PIPEWORK

NOT TO SCALE



TYPICAL POP-UP ROTOR SPRINKLER INSTALLATION ON PVC PIPEWORK

NOT TO SCALE

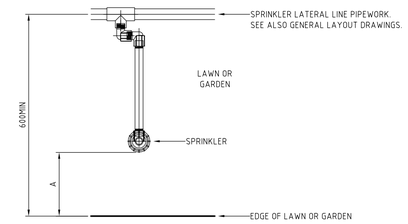
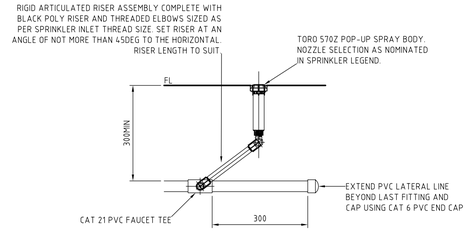


TABLE OF SPRINKLER OFFSETS			
EDGE TYPE	DIMENSION A		
	SPRAY†	ROTOR†	
BACK OF KERB OR EDGE OF PAVEMENT.	100	300	
GARDEN WALL WITH NO MOWING STRIP.	200	200	
BUILDING FACADE WITH NO MOWING STRIP.	600	600	

† SPRINKLER TYPE. SEE GENERAL LAYOUT DRAWINGS.

SPRINKLER AND LATERAL PIPE OFFSETS FROM LAWN AND GARDEN EDGES

NOT TO SCALE



TYPICAL POP-UP SPRAY SPRINKLER INSTALLATION ON PVC PIPEWORK

NOT TO SCALE

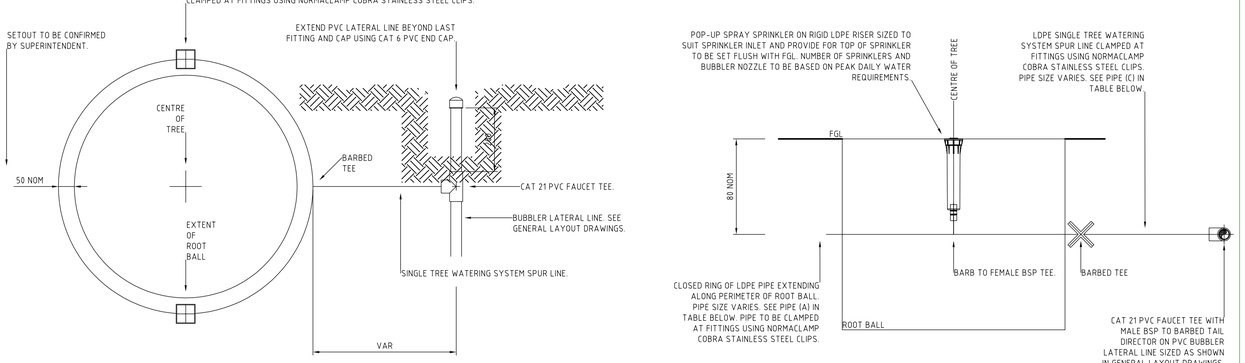


TABLE OF TREE WATERING SYSTEMS†						
SYSTEM	PLANT STOCK‡	SYSTEM FLOW(L/MIN)	20MIN VOL (L)¥	PIPE (A)	PIPE (B)	PIPE (C)
-	-	0-6	-	DN19	-	DN19
-	-	6-15	-	DN19	-	DN25
-	-	15-30	-	DN25	-	DN25

† SYSTEM DESIGN BASED ON THE PEAK DAILY WATER REQUIREMENTS SUPPLIED BY NURSERY INDUSTRY SOURCES AND OTHERS
‡ BAG STOCK SIZE (L) AND/OR NOMINAL DIAMETER OF TRANSPLANT ROOT BALL (M).
¥ VOLUME PROVIDED BY A 20MIN RUN TIME. RUN TIME TO BE ADJUSTED IN ACCORDANCE WITH PLANT WATER REQUIREMENTS AND CLIMATIC CONDITIONS.

TREE WATERING SYSTEMS

NOT TO SCALE

AUTOCAD FILENAME: AC - Amended Catalina Beach Design (Rev 0).dwg

REV	DATE	DESCRIPTION	DWN	CKD
A	16/09/2016	ISSUED FOR APPROVAL	R.V	J.S
B	28/09/2016	ISSUED FOR APPROVAL	R.V	J.S
C	05/10/2016	ISSUED FOR APPROVAL, REVISED FLOWS	I.B	J.S
D	15/03/2017	REVISED IRRIGATION TO SUIT THE NEW LANDSCAPE PLAN	R.V	J.S
E	30/03/2017	CID STAMP & LIGHTNING SURGE PROTECTION WERE ADDED ON THE DRAWING	R.V	J.S

REV	DATE	DESCRIPTION	DWN	CKD
F	21/04/17	ADDED ADDITIONAL IRON FILTER DETAILS	J.S	
G	06/06/2017	REVISED IRRIGATION TO SUIT THE NEW LANDSCAPE PLAN	R.V	J.S
0	20/07/2017	ISSUED FOR CONSTRUCTION	J.S	
1	01/05/2018	PART AS CONSTRUCTED BY LD TOTAL	S.J	
2	13/05/2019	AMENDED AS CONSTRUCTED BY LD TOTAL	M.S	

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TOTAL EDEN

SCALE :	1 : NTS @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT :

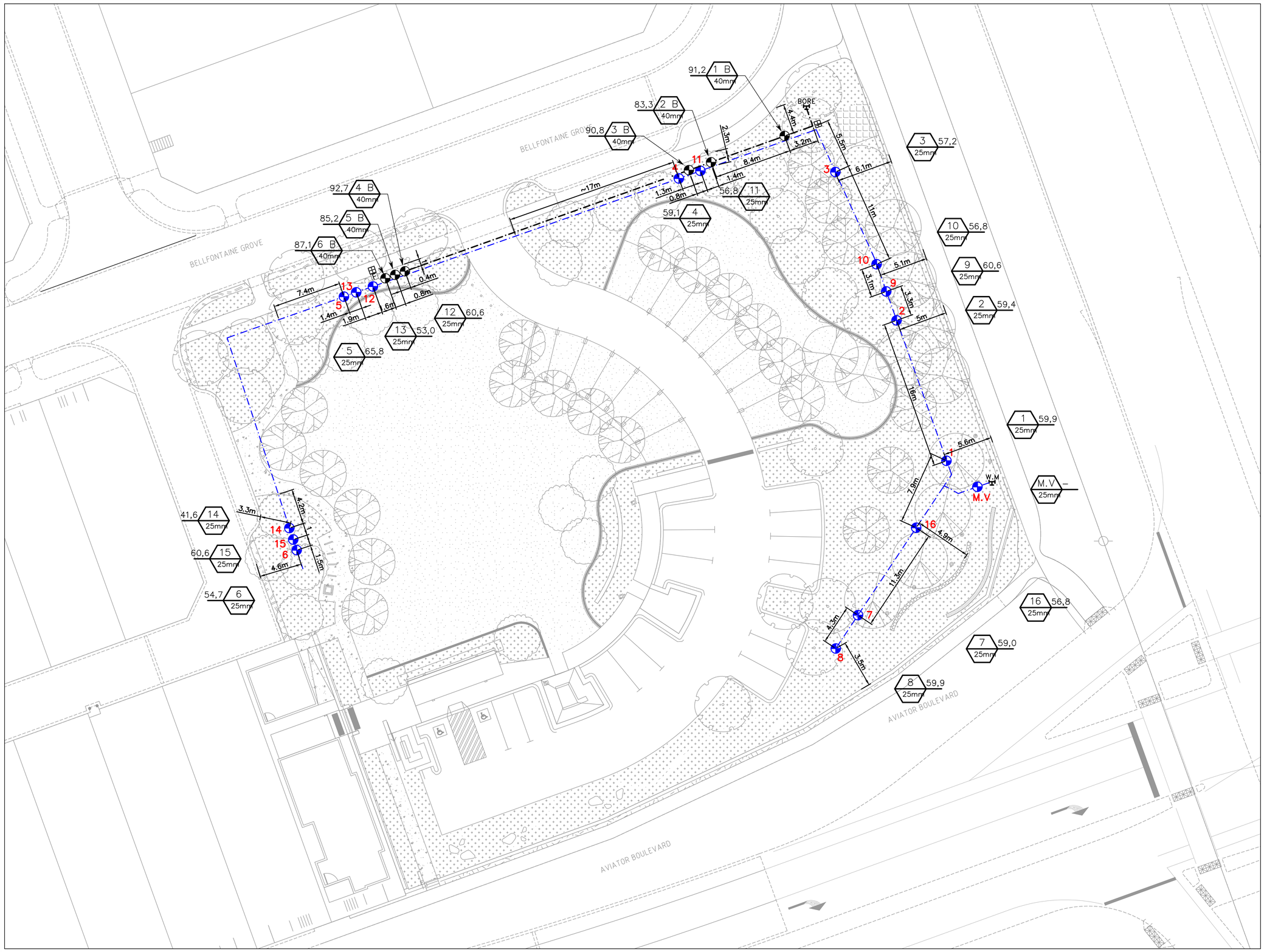
EMERGE ASSOCIATES

PROJECT :

CATALINA BEACH ESTATE
STAGE 25
IRRIGATION WORKS-TYPICAL DETAILS

DATE :	DESIGN NO. :	SHEET NO. :
16/09/2016	17367-15	15 OF 15

AS CONSTRUCTED MAINLINE & VALVE LAYOUT
WITH DIMENSIONS



AS CONSTRUCTED

REV	DATE	DWN	DESCRIPTION
0	16/02/2019	IDS	AS CONSTRUCTED BY NEWGROUND WATER SERVICES

LD TOTAL
172 BURSWOOD ROAD, BURSWOOD WA 6100
P: (08) 6436 1111 F: (08) 9367 2034

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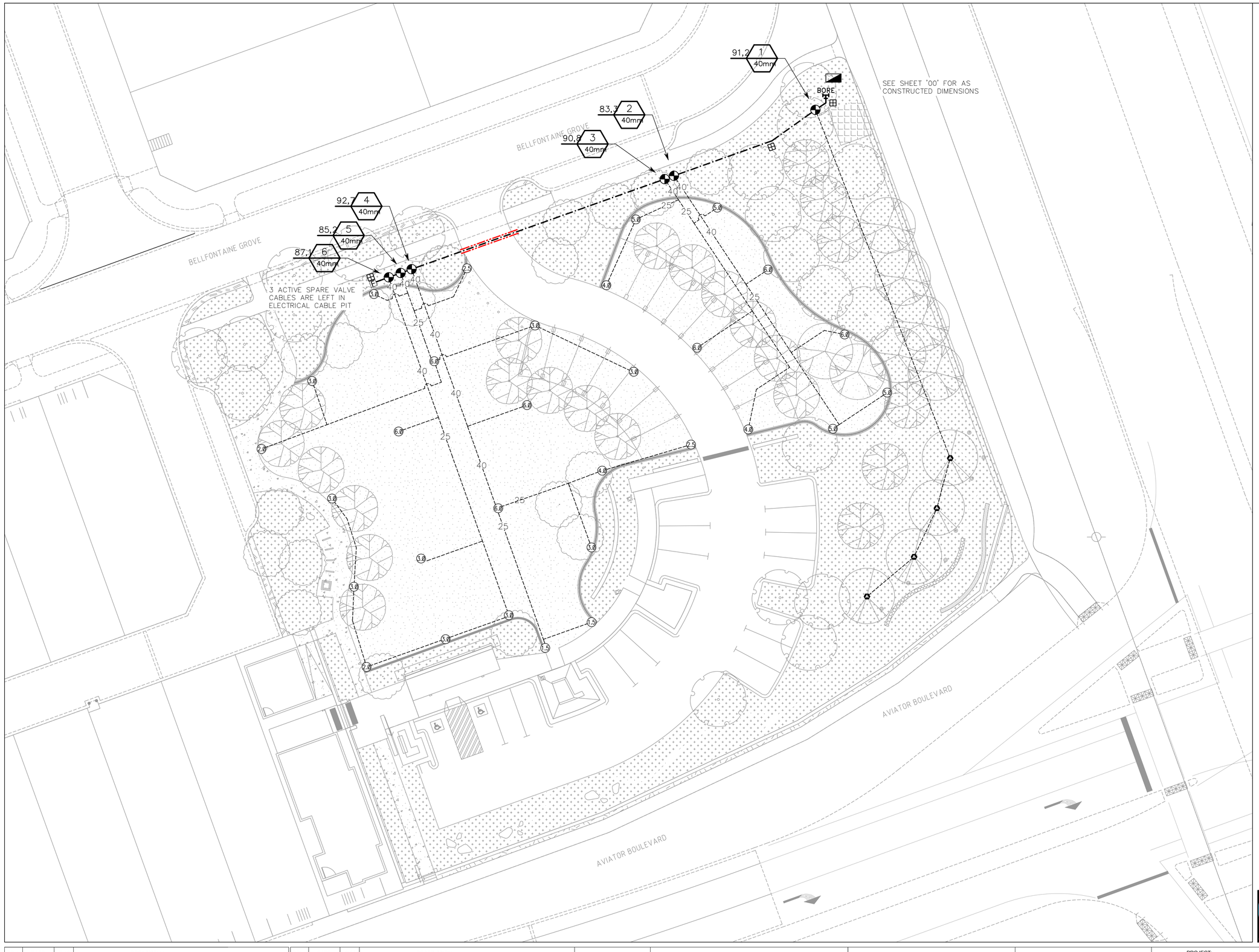
SCALE:	1:200@ A1 SHEET
DESIGNED:	AC
DRAWN BY:	AC
CHECKED BY:	AC

PROJECT: CATALINA STAGE 25 SP C&D
CLIENT: PLAN E
TITLE: MAINLINE & VALVE LAYOUT (AS CON)

DATE:	16/02/2019
DWG NO:	CS25SP-IRR-00
SHEET NO:	1 OF 5
REV:	0

AUTOCAD FILENAME: D:\AS CONSTRUCTED\AC Catalina Stage 25 SP C&D Design Rev 0.dwg



IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION
T	Hunter MP Corner Rotator nozzle on Toro 570z 6" pop-up body. T=Turquoise adj arc 45-105 on PRS40 body.
LST RST SST	Hunter MP Strip Rotator nozzle on Toro 570z 6" pop-up body. LST=Ivory left strip, SST=Brown side strip, RST=Copper right strip on PRS40 body.
M L O	Hunter MP1000 Rotator nozzle on Toro 570z 6" pop-up body. M=Maroon adj arc 90 to 210, L=Light Blue 210 to 270 arc, O=Olive 360 arc on PRS40 body.
K G R	Hunter MP2000 Rotator nozzle on Toro 570z 6" pop-up body. K=Black adj arc 90-210, G=Green adj arc 210-270, R=Red 360 arc on PRS40 body.
B Y A	Hunter MP3000 Rotator nozzle on Toro 570z 6" pop-up body. B=Blue adj arc 90-210, Ye=Yellow adj arc 210-270, A=Gray 360 arc on PRS40 body.
△	2 x Toro FB-50-PC FB (1.9 lpm) Installed on 15mm blue flex pipe.
□	2 x Toro FB-100-PC FB (3.8 lpm) Installed on 15mm blue flex pipe.
♻	4 x Toro FB-100-PC FB (3.8 lpm) Installed on 15mm blue flex pipe.
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION
1.5 2.0 2.5 3.0 4.0 5.0 6.0	Hunter I-20-04-SS Turf Rotor, 10 cm Pop-Up. Adjustable and Full Circle. Stainless Steel Riser. Drain Check Valve. Standard Nozzle.
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION
BORE	Bore
W.M	Water Meter / Backflow Prevention
	Bore Cubicle and Rain Bird ESP-RZX 8 Fix Station Controller
	Rain Bird ESP- Me Outdoor Controller with 3 x 6 Station Modules (Scheme Water System)
	Bermad 200 Series Remote Control Valve. (Sized as shown)
F	Mainline Flushing Valve.
	Electrical Cable Pit
	Irrigation Lateral Line: UPVC PN 9, Class C, AS/NZS1477 Size 25mm (unless otherwise shown)
	Bore water Irrigation Mainline: UPVC PN 12, Class D, AS/NZS 1477 Size 50 mm
	Scheme Water Irrigation Mainline: UPVC PN 12, Class D, AS/NZS 1477 Size 40 mm
	Irrigation Sleeves By Irrigation Contractor Sized 200mm

AS CONSTRUCTED

REV	DATE	DWN	DESCRIPTION
A	15/11/2018	M.W	ISSUED FOR APPROVAL
0	16/02/2019	IDS	AS CONSTRUCTED BY NEWGROUND WATER SERVICES

LD TOTAL
172 BURSWOOD ROAD, BURSWOOD WA 6100
P: (08) 6436 1111 F: (08) 9367 2034

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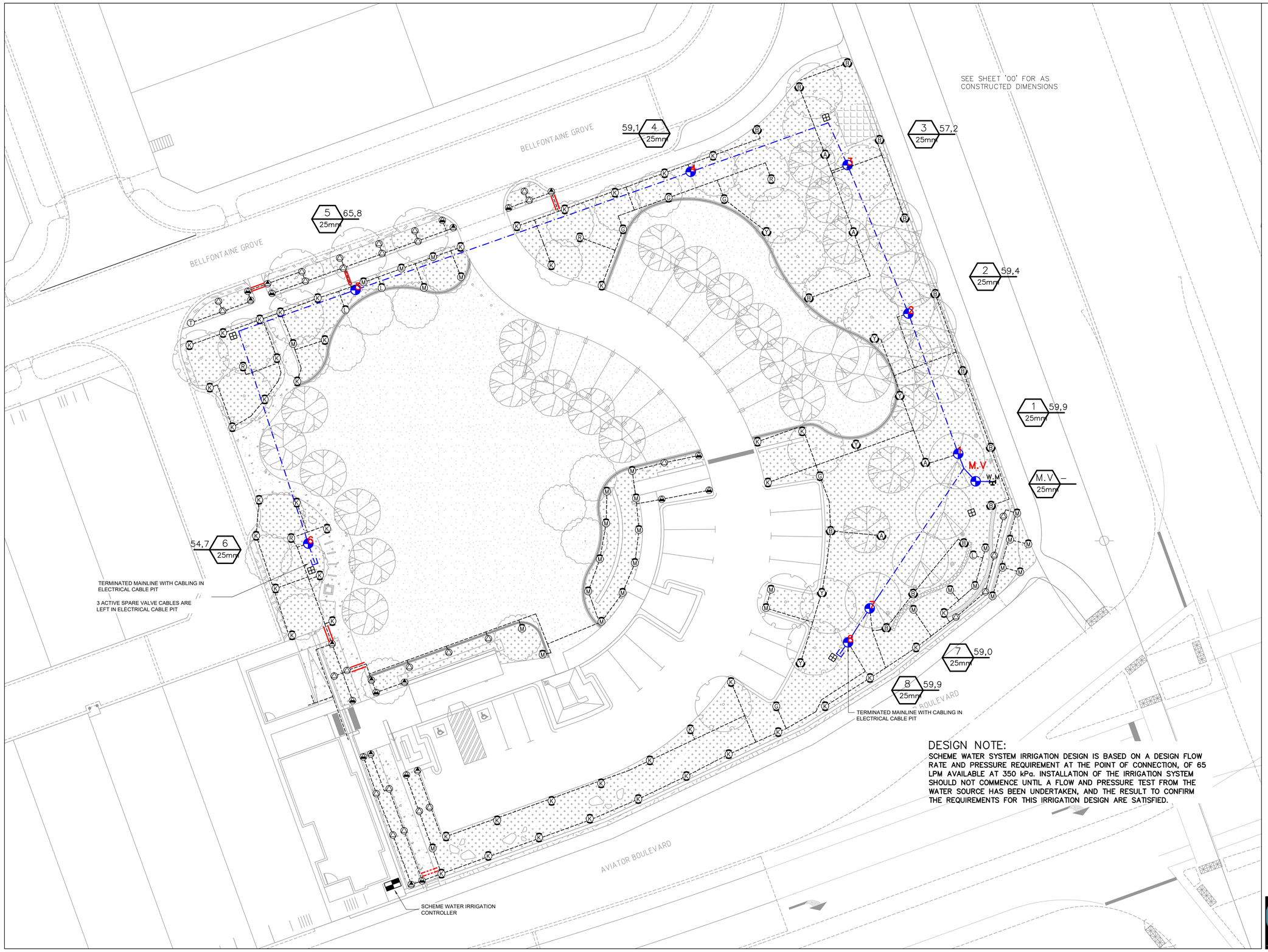
SCALE:	1:200@ A1 SHEET
DESIGNED:	M.W
DRAWN BY:	M.W
CHECKED BY:	M.S

PROJECT: CATALINA STAGE 25 SP C&D
CLIENT: PLAN E
TITLE: IRRIGATION LAYOUT (BORE WATER)

DATE:	15/11/2018
DWG NO:	CS25SP-IRR-01
SHEET NO:	2 OF 5
REV:	0

AUTOCAD FILENAME: D:\AS CONSTRUCTED\AC Catalina Stage 25 SP C&D Design Rev 0.dwg



IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION
T	Hunter MP Corner Rotator nozzle on Toro 570z 6" pop-up body. T=Turquoise adj arc 45-105 on PRS40 body.
LST RST SST	Hunter MP Strip Rotator nozzle on Toro 570z 6" pop-up body. LST=Ivory left strip, SST=Brown side strip, RST=Copper right strip on PRS40 body.
M L O	Hunter MP1000 Rotator nozzle on Toro 570z 6" pop-up body. M=Maroon adj arc 90 to 210, L=Light Blue 210 to 270 arc, O=Olive 360 arc on PRS40 body.
K G R	Hunter MP2000 Rotator nozzle on Toro 570z 6" pop-up body. K=Black adj arc 90-210, G=Green adj arc 210-270, R=Red 360 arc on PRS40 body.
B Y A	Hunter MP3000 Rotator nozzle on Toro 570z 6" pop-up body. B=Blue adj arc 90-210, Y=Yellow adj arc 210-270, A=Gray 360 arc on PRS40 body.
△	2 x Toro FB-50-PC FB (1.9 lpm) Installed on 15mm blue flex pipe.
□	2 x Toro FB-100-PC FB (3.8 lpm) Installed on 15mm blue flex pipe.
♻	4 x Toro FB-100-PC FB (3.8 lpm) Installed on 15mm blue flex pipe.
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION
1 2 3 4 5 6 8	Hunter I-20-04-SS Turf Rotor, 10 cm Pop-Up. Adjustable and Full Circle. Stainless Steel Riser. Drain Check Valve. Standard Nozzle. Stainless Steel Riser.
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION
BORE	Bore
W.M	Water Meter / Backflow Prevention
	Bore Cubicle and Rain Bird ESP-RZX 8 Fix Station Controller
	Rain Bird ESP- Me Outdoor Controller with 3 x 6 Station Modules (Scheme Water System)
	Bermad 200 Series Remote Control Valve. (Sized as shown)
F	Mainline Flushing Valve.
	Electrical Cable Pit
	Irrigation Lateral Line: UPVC PN 9, Class C, AS/NZS1477 Size 25mm (unless otherwise shown)
	Bore water Irrigation Mainline: UPVC PN 12, Class D, AS/NZS 1477 Size 50 mm
	Scheme Water Irrigation Mainline: UPVC PN 12, Class D, AS/NZS 1477 Size 40 mm
	Irrigation Sleeves By Irrigation Contractor Sized 200mm

DESIGN NOTE:

SCHEME WATER SYSTEM IRRIGATION DESIGN IS BASED ON A DESIGN FLOW RATE AND PRESSURE REQUIREMENT AT THE POINT OF CONNECTION, OF 65 LPM AVAILABLE AT 350 kPa. INSTALLATION OF THE IRRIGATION SYSTEM SHOULD NOT COMMENCE UNTIL A FLOW AND PRESSURE TEST FROM THE WATER SOURCE HAS BEEN UNDERTAKEN, AND THE RESULT TO CONFIRM THE REQUIREMENTS FOR THIS IRRIGATION DESIGN ARE SATISFIED.

AS CONSTRUCTED

REV	DATE	DWN	DESCRIPTION
A	15/11/2018	M.W	ISSUED FOR APPROVAL
0	16/02/2019	IDS	AS CONSTRUCTED BY NEWGROUND WATER SERVICES

REV	DATE	DWN	DESCRIPTION

LD TOTAL
172 BURSWOOD ROAD, BURSWOOD WA 6100
P: (08) 6436 1111 F: (08) 9367 2034

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SCALE:	1:200@ A1 SHEET
DESIGNED:	M.W
DRAWN BY:	M.W
CHECKED BY:	M.S

PROJECT: CATALINA STAGE 25 SP C&D

CLIENT: PLAN E

TITLE: IRRIGATION LAYOUT (SCHEME WATER)

DATE:	15/11/2018
DWG NO:	CS25SP-IRR-02
SHEET NO:	3 OF 5
REV:	0

AUTOCAD FILENAME: D:\AS CONSTRUCTED\AC Catalina Stage 25 SP C&D Design Rev 0.dwg



IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION
T	Hunter MP Corner Rotator nozzle on Toro 570z 6" pop-up body. T=Turquoise adj arc 45–105 on PRS40 body.
LST RST SST	Hunter MP Strip Rotator nozzle on Toro 570z 6" pop-up body. LST=Ivory left strip, SST=Brown side strip, RST=Copper right strip on PRS40 body.
M L O	Hunter MP1000 Rotator nozzle on Toro 570z 6" pop-up body. M=Maroon adj arc 90 to 210, L=Light Blue 210 to 270 arc, O=Olive 360 arc on PRS40 body.
K G R	Hunter MP2000 Rotator nozzle on Toro 570z 6" pop-up body. K=Black adj arc 90–210, G=Green adj arc 210–270, R=Red 360 arc on PRS40 body.
B Y A	Hunter MP3000 Rotator nozzle on Toro 570z 6" pop-up body. B=Blue adj arc 90–210, Ye=Yellow adj arc 210–270, A=Gray 360 arc on PRS40 body.
△	2 x Toro FB–50–PC FB (1.9 lpm) Installed on 15mm blue flex pipe.
□	2 x Toro FB–100–PC FB (3.8 lpm) Installed on 15mm blue flex pipe.
♻	4 x Toro FB–100–PC FB (3.8 lpm) Installed on 15mm blue flex pipe.
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION
1 2 0 2 5 3 0 4 0 5 0 6 0	Hunter I–20–04–SS Turf Rotor, 10 cm Pop–Up. Adjustable and Full Circle. Stainless Steel Riser. Drain Check Valve. Standard Nozzle.
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION
BORE	Bore
W.M	Water Meter / Backflow Prevention
	Bore Cubicle and Rain Bird ESP–RZX 8 Fix Station Controller
	Rain Bird ESP– Me Outdoor Controller with 3 x 6 Station Modules (Scheme Water System)
	Bermad 200 Series Remote Control Valve. (Sized as shown)
F	Mainline Flushing Valve.
	Electrical Cable Pit
	Irrigation Lateral Line: UPVC PN 9, Class C, AS/NZS1477 Size 25mm (unless otherwise shown)
	Bore water Irrigation Mainline: UPVC PN 12, Class D, AS/NZS 1477 Size 50 mm
	Scheme Water Irrigation Mainline: UPVC PN 12, Class D, AS/NZS 1477 Size 40 mm
	Irrigation Sleeves By Irrigation Contractor Sized 200mm

AS CONSTRUCTED

REV	DATE	DWN	DESCRIPTION
A	15/11/2018	M.W	ISSUED FOR APPROVAL
0	16/02/2019	IDS	AS CONSTRUCTED BY NEWGROUND WATER SERVICES

REV	DATE	DWN	DESCRIPTION

LD TOTAL
172 BURSWOOD ROAD, BURSWOOD WA 6100
P: (08) 6436 1111 F: (08) 9367 2034

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SCALE:	1:200@ A1 SHEET
DESIGNED:	M.W
DRAWN BY:	M.W
CHECKED BY:	M.S

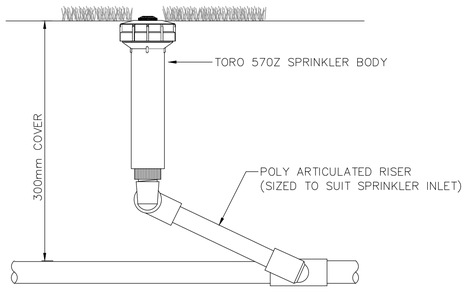
PROJECT: CATALINA STAGE 25 SP C&D

CLIENT: PLAN E

TITLE: IRRIGATION LAYOUT

DATE:	15/11/2018
DWG NO:	CS25SP-IRR-03
SHEET NO:	4 OF 5
REV:	0

AUTOCAD FILENAME: D:\AS CONSTRUCTED\AC Catalina Stage 25 SP C&D Design Rev 0.dwg

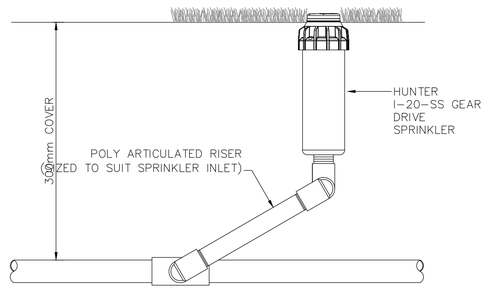


TYPICAL TORO 570Z (MP ROTATOR) SPRINKLER DETAIL

DO NOT SCALE

VALVE SCHEDULE – BORE WATER SYSTEM							
NUMBER	MODEL	SIZE	TYPE	l/min	kPa	kPa @ POC	PRECIP
1	Bermad 200 Series	40mm	Bubbler	91,20	232,9	234,1	292,6 mm/h
2	Bermad 200 Series	40mm	Turf Rotor	83,28	336,7	346,0	29,0 mm/h
3	Bermad 200 Series	40mm	Turf Rotor	90,85	328,4	340,0	29,0 mm/h
4	Bermad 200 Series	40mm	Turf Rotor	92,74	335,1	364,5	29,0 mm/h
5	Bermad 200 Series	40mm	Turf Rotor	85,17	328,1	353,8	29,0 mm/h
6	Bermad 200 Series	40mm	Turf Rotor	87,06	340,0	367,6	29,0 mm/h

VALVE SCHEDULE – SCHEME WATER SYSTEM							
NUMBER	MODEL	SIZE	TYPE	l/min	kPa	kPa @ POC	PRECIP
1	Bermad 200 Series	25mm	Shrub	59,92	302,6	303,9	9,0 mm/h
2	Bermad 200 Series	25mm	Rotary Shrub	59,40	299,3	303,4	9,0 mm/h
3	Bermad 200 Series	25mm	Rotary Shrub	57,18	298,5	308,7	9,0 mm/h
4	Bermad 200 Series	25mm	Rotary Shrub	59,05	299,3	316,7	9,0 mm/h
5	Bermad 200 Series	25mm	Rotary Shrub	65,79	299,0	330,6	9,0 mm/h
6	Bermad 200 Series	25mm	Rotary Shrub	54,70	304,6	354,5	9,0 mm/h
7	Bermad 200 Series	25mm	Rotary Shrub	58,95	300,0	316,5	9,0 mm/h
8	Bermad 200 Series	25mm	Rotary Shrub	59,92	304,7	330,3	9,0 mm/h
9	Bermad 200 Series	25mm	Rotary Bubbler	60,57	236,8	256,1	177,6 mm/h
10	Bermad 200 Series	25mm	Bubbler	56,78	229,5	251,5	131,0 mm/h
11	Bermad 200 Series	25mm	Bubbler	56,78	229,8	275,2	145,0 mm/h
12	Bermad 200 Series	25mm	Bubbler	60,57	247,4	326,4	177,6 mm/h
13	Bermad 200 Series	25mm	Bubbler	53,00	229,1	291,6	155,0 mm/h
14	Bermad 200 Series	25mm	Bubbler	41,64	228,8	285,4	131,2 mm/h
15	Bermad 200 Series	25mm	Bubbler	60,57	236,6	350,7	177,6 mm/h
16	Bermad 200 Series	25mm	Bubbler	56,78	235,7	243,9	131,0 mm/h
M.V	Bermad 200 Series	25mm	Master Val				mm/h



TYPICAL ROTOR SPRINKLER DETAIL

DO NOT SCALE

NOTES:

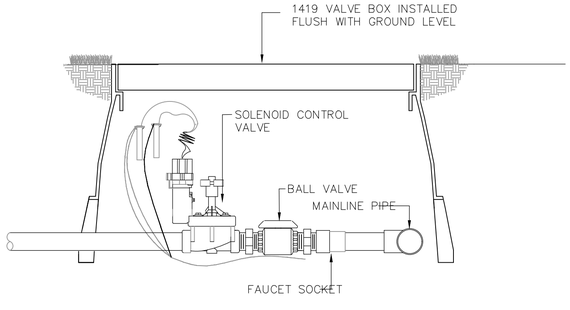
1. CONTRACTOR HAVE INSTALLED 1m LOOP MINIMUM OF CABLE WITHIN ALL VALVE BOXES AND CABLE PITS.
2. CONTROL VALVE CABLING IS 1.0mm² MULTI STRAND INSTALLED IN 40mm ELECTRICAL CONDUIT.
3. MAINLINE IS INSTALLED WITH 450mm SOIL COVER AND LATERALS INSTALLED WITH 300mm SOIL COVER.
4. PRIMING FLUID IS USED ON ALL uPVC SWJ JOINTS. (NO EXCEPTIONS)
5. TORO 570Z-6P'S WITH MP NOZZLE (PART CIRCLE) AND TORO 570Z-12P'S WITH MP NOZZLE (FULL CIRCLE) POP-UP SPRINKLERS ARE USED IN GARDENS AS INDICATED.
6. ARC ADJUSTMENT WERE UNDERTAKEN AS REQUIRED.

NOTE:

SCHEME WATER SYSTEM IRRIGATION DESIGN IS BASED ON A DESIGN FLOW RATE AND PRESSURE REQUIREMENT AT THE POINT OF CONNECTION, OF 65 LPM AVAILABLE AT 350 kPa. INSTALLATION OF THE IRRIGATION SYSTEM SHOULD NOT COMMENCE UNTIL A FLOW AND PRESSURE TEST FROM THE WATER SOURCE HAS BEEN UNDERTAKEN, AND THE RESULT TO CONFIRM THE REQUIREMENTS FOR THIS IRRIGATION DESIGN ARE SATISFIED.

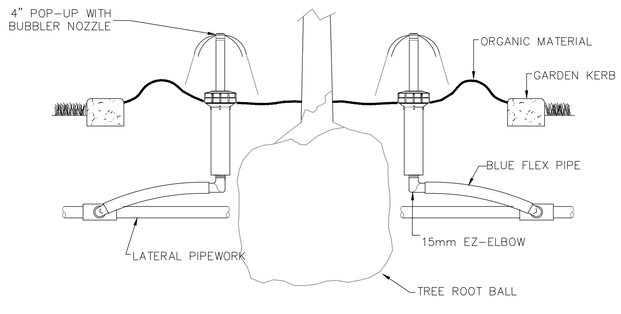
IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION
T	Hunter MP Corner Rotator nozzle on Toro 570z 6" pop-up body. T=Turquoise adj arc 45-105 on PRS40 body.
LST RST SST	Hunter MP Strip Rotator nozzle on Toro 570z 6" pop-up body. LST=Ivory left strip, SST=Brown side strip, RST=Copper right strip on PRS40 body.
M L O	Hunter MP1000 Rotator nozzle on Toro 570z 6" pop-up body. M=Maroon adj arc 90 to 210, L=Light Blue 210 to 270 arc, O=Olive 360 arc on PRS40 body.
K G R	Hunter MP2000 Rotator nozzle on Toro 570z 6" pop-up body. K=Black adj arc 90-210, G=Green adj arc 210-270, R=Red 360 arc on PRS40 body.
B Y A	Hunter MP3000 Rotator nozzle on Toro 570z 6" pop-up body. B=Blue adj arc 90-210, Ye=Yellow adj arc 210-270, A=Gray 360 arc on PRS40 body.
△	2 x Toro FB-50-PC FB (1.9 lpm) Installed on 15mm blue flex pipe.
□	2 x Toro FB-100-PC FB (3.8 lpm) Installed on 15mm blue flex pipe.
♻	4 x Toro FB-100-PC FB (3.8 lpm) Installed on 15mm blue flex pipe.
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION
1 2 2.5 3 4 5 6	Hunter I-20-04-SS Turf Rotor, 10 cm Pop-Up. Adjustable and Full Circle. Stainless Steel Riser. Drain Check Valve. Standard Nozzle.
SYMBOL	MANUFACTURER/MODEL/DESCRIPTION
BORE	Bore
W.M	Water Meter / Backflow Prevention
	Bore Cubicle and Rain Bird ESP-RZX 8 Fix Station Controller
	Rain Bird ESP- Me Outdoor Controller with 3 x 6 Station Modules (Scheme Water System)
	Bermad 200 Series Remote Control Valve. (Sized as shown)
F	Mainline Flushing Valve.
	Electrical Cable Pit
	Irrigation Lateral Line: UPVC PN 9, Class C, AS/NZS1477 Size 25mm (unless otherwise shown)
	Bore water Irrigation Mainline: UPVC PN 12, Class D, AS/NZS 1477
	Scheme Water Irrigation Mainline: UPVC PN 12, Class D, AS/NZS 1477 Size 40 mm
	Irrigation Sleeves By Irrigation Contractor Sized 200mm



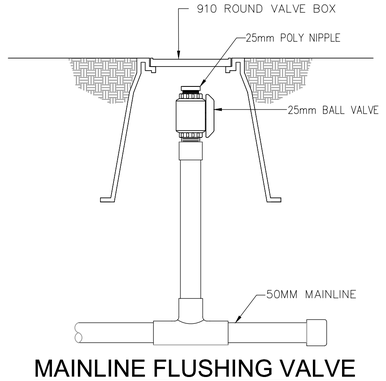
TYPICAL LIGHT COMMERCIAL SOLENOID VALVE DETAIL

DO NOT SCALE



TYPICAL TREE BUBBLER INSTALLATION DETAIL

DO NOT SCALE



MAINLINE FLUSHING VALVE

DO NOT SCALE

AS CONSTRUCTED

REV	DATE	DWN	DESCRIPTION
A	15/11/2018	M.W	ISSUED FOR APPROVAL
0	16/02/2019	IDS	AS CONSTRUCTED BY NEWGROUND WATER SERVICES

LD TOTAL
172 BURSWOOD ROAD, BURSWOOD WA 6100
P: (08) 6436 1111 F: (08) 9367 2034

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SCALE:	N.T.S
DESIGNED:	M.W
DRAWN BY:	M.W
CHECKED BY:	M.S

PROJECT: CATALINA STAGE 25 SP C&D

CLIENT: PLAN E

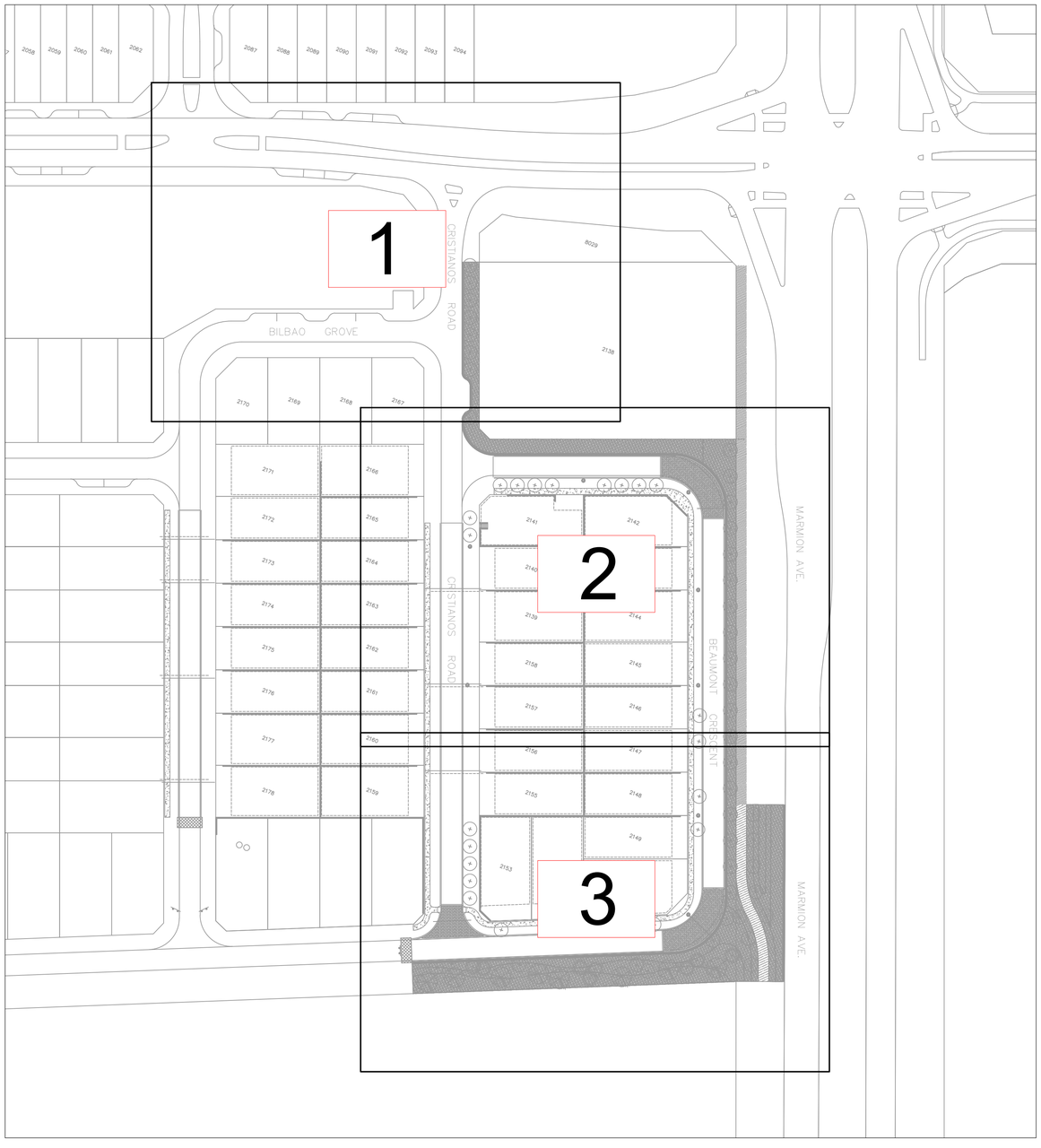
TITLE: DETAILS

DATE:	15/11/2018
DWG NO:	CS25SP-IRR-04
SHEET NO:	5 OF 5
REV:	0

AUTOCAD FILENAME: D:\AS CONSTRUCTED\AC Catalina Stage 25 SP C&D Design Rev 0.dwg

MARMION AVE. WEST VERGE AND DISPLAY VILLAGE

IRRIGATION WORKS



AUTOCAD FILENAME: Marmion & Display Village Design (Rev A).dwg

REV	DATE	DESCRIPTION	DWN	CKD
A	24/09/2021	ISSUED FOR APPROVAL	R.V	J.S
B	19/11/2021	ADD EXISTING LIGHTNING SURGE PROTECTION AS REQUESTED BY COW	J.S	
0	23/12/2021	ISSUED FOR CONSTRUCTION	J.S	
A.C	06/04/2022	AS CONSTRUCTED BY LD TOTAL	LDT	

REV	DATE	DESCRIPTION	DWN	CKD

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SCALE :	1 : NTS @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

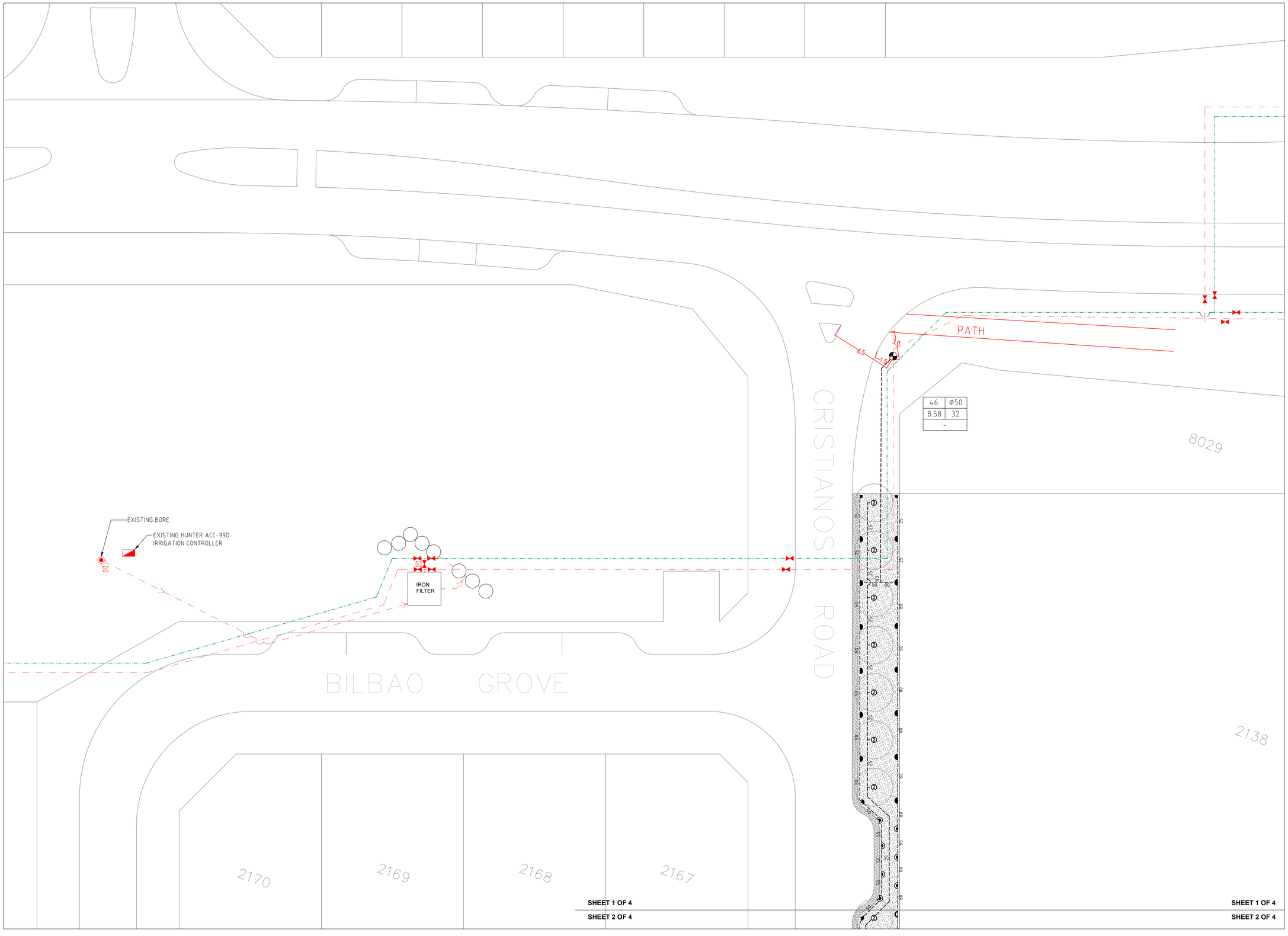
CLIENT :

TDL

PROJECT :

MARMION AVE. WEST VERGE AND DISPLAY VILLAGE
IRRIGATION WORKS (KEY PLAN)
-

DATE :	DESIGN NO. :	SHEET NO. :
24/09/2021	18304-00	COVER PAGE



LEGEND:

"SPRINKLERS"

SYMBOL	BRAND NAME	MODEL DESCRIPTION	NOZZ. NO.	PRESS. (KPA)	FLOW (LPM)	RADIUS (M)
	HUNTER	I-20-12	6.0	350	24.5	13.1
	HUNTER	I-20-12	3.0	350	12.3	11.9
	HUNTER	I-20-12	2.5	350	9.7	10.7
	HUNTER	I-20-12	4.5LA	350	16.6	10.7
	TORO	570Z-12P	15	250	2.84-11.36	4.6
	TORO	570Z-12P	12	250	1.82-7.27	3.7
	TORO	570Z-12P	10	250	1.25-5.04	3.0

	LARGE GARDEN AREAS - TO HAVE HUNTER I-20-12 ON A Ø20x300mm POLY ARTIC RISER SMALL GARDEN AREAS - TO HAVE TORO 570Z-12P'S (PART & FULL CIRCLES) ON A Ø15 x 300mm POLY ARTIC RISER (NOZZLES AS SHOWN)
200 L	2-TORO FLOOD BUBBLERS MODEL FB-100PC ON A TORO 570Z-6P WITH BLUE FLEX 7.06 LPM @ 250 kPA
	BERMAD 200 SERIES SOLENOID CONTROL VALVE SIZE AS SHOWN
	EXISTING BORE
	EXISTING HUNTER ACC-99D IRRIGATION CONTROLLER
	50mm MAINLINE FLUSHING VALVE
	EXISTING DN50 AIR RELEASE, TO BE INSTALLED AT HIGH POINT ON MAINLINE
	EXISTING LIGHTNING SURGE PROTECTION
	EXISTING DN100 uPVC RRJ CLASS 12 MAINLINE
	EXISTING DN110 PN12.5 PE100 MDPE POLY MAINLINE (MATURE TREES)
25	uPVC SWJ CLASS 9 LATERAL LINE SIZE AS SHOWN
	DN150 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR

STATION DATA							VALVE DATA		
ST'N NO.	FLOW (L/s)	PR. (kPa)	PR'N mm hr	APP'N mm/week	ST'N TIME (min)	AREA TYPE	VAL. NO.	FLOW (L/s)	DECODER NO.
46	8.58	250	32	40	15	GARDEN	1	8.58	–
47	6.59	250	–	–	8	TREES	2	6.59	–
48	7.25	350	12	40	40	GARDEN	3	7.25	–

DAILY RUN TIME 1 HRS & 3 MIN — WEEKLY RUN TIME 5 HRS & 15 MIN

VALVE LABEL LEGEND

VALVE NO / FLOW (LPS)

2	Ø50
3.29	32
–	

VALVE SIZE
PRECIPITATION RATE
DECODER NO.

NOTE:
1. MAINLINE AND LATERAL PIPES ARE TO BE INSTALLED TO A MINIMUM DEPTH OF 350mm AND BE INSTALLED TO A MAXIMUM DEPTH OF 450mm.
2. THE CONTRACTOR TO UNDERTAKE FLOW (PRESSURE) ADJUSTMENT OF ALL SOLENOID VALVES IN ACCORDANCE WITH THE NOMINAL OPERATING PRESSURE OF THE SPRINKLERS ATTACHED TO THE PARTICULAR SOLENOID VALVE.

CERTIFIED IRRIGATION DESIGNER — IRRIGATION AUSTRALIA — LIC4156 — LANDSCAPE/TURF CONNECTION

0 2 4 6 8 10m
SCALE 1:200 ON A1

AUTOCAD FILENAME: Marmion & Display Village Design (Rev A).dwg

REV	DATE	DESCRIPTION	DWN	CKD
A	24/09/2021	ISSUED FOR APPROVAL	R.V	J.S
B	19/11/2021	ADD EXISTING LIGHTNING SURGE PROTECTION AS REQUESTED BY COW	J.S	
0	23/12/2021	ISSUED FOR CONSTRUCTION	J.S	
A.C	06/04/2022	AS CONSTRUCTED BY LD TOTAL	LDT	

NewGround DESIGN SERVICES

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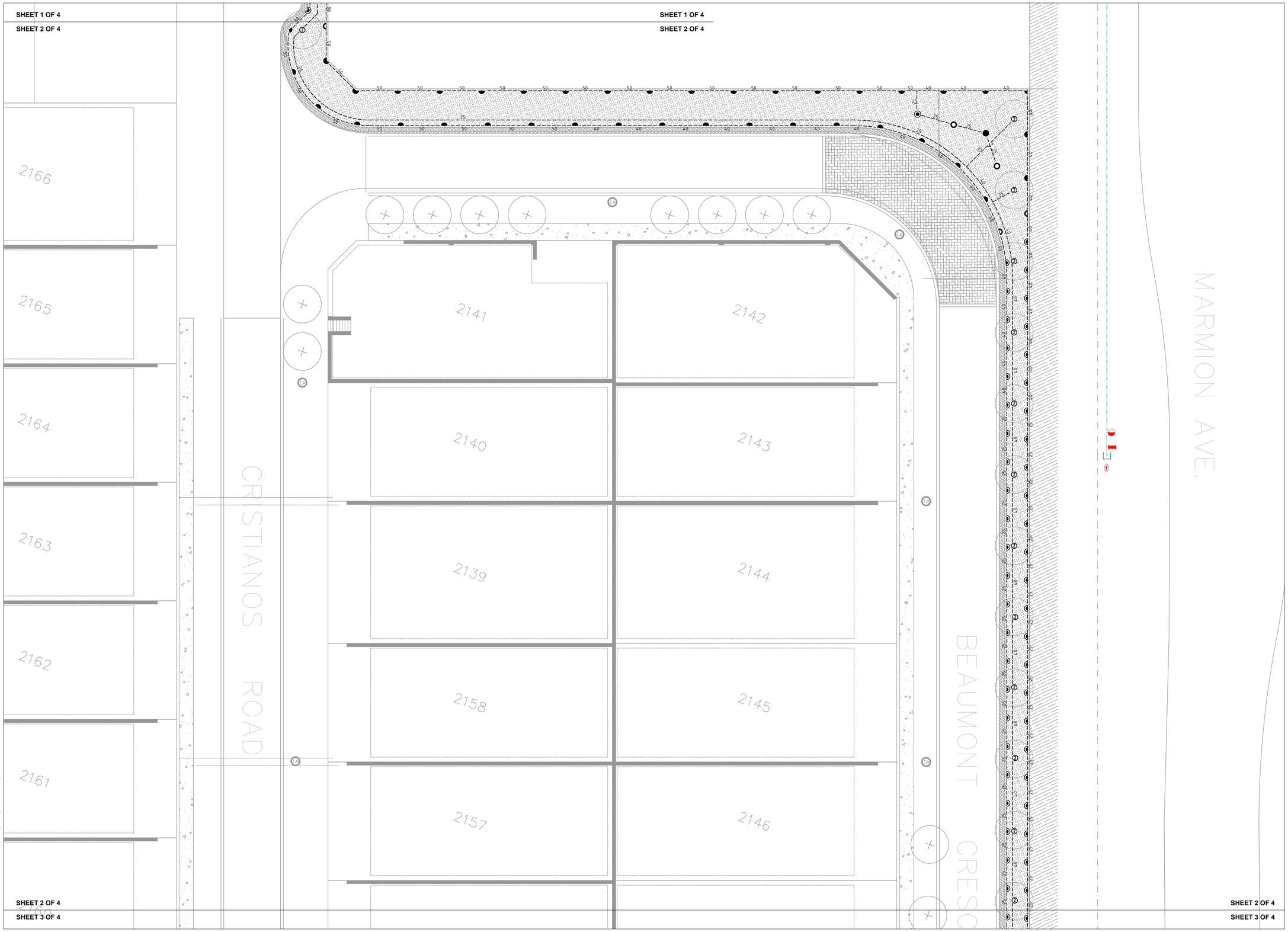
SCALE :	1 : 200 @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT : TDL

PROJECT : MARMION AVE. WEST VERGE AND DISPLAY VILLAGE IRRIGATION WORKS -

DATE :	DESIGN NO. :	SHEET NO. :
24/09/2021	18304-01	1 OF 4



LEGEND:

"SPRINKLERS"

SYMBOL	BRAND NAME	MODEL DESCRIPTION	NOZZ. NO.	PRESS. (KPA)	FLOW (LPM)	RADIUS (M)
	HUNTER	I-20-12	6.0	350	24.5	13.1
	HUNTER	I-20-12	3.0	350	12.3	11.9
	HUNTER	I-20-12	2.5	350	9.7	10.7
	HUNTER	I-20-12	4.5LA	350	16.6	10.7
	TORO	570Z-12P	15	250	2.84-11.36	4.6
	TORO	570Z-12P	12	250	1.82-7.27	3.7
	TORO	570Z-12P	10	250	1.25-5.04	3.0

LARGE GARDEN AREAS - TO HAVE HUNTER I-20-12 ON A Ø20x300mm POLY ARTIC RISER
SMALL GARDEN AREAS - TO HAVE TORO 570Z-12P'S (PART & FULL CIRCLES) ON A Ø15 x 300mm POLY ARTIC RISER (NOZZLES AS SHOWN)

200 L — 2-TORO FLOOD BUBBLERS MODEL FB-100PC ON A TORO 570Z-6P WITH BLUE FLEX 7.06 LPM @ 250 kPA

BERMAD 200 SERIES SOLENOID CONTROL VALVE SIZE AS SHOWN

EXISTING BORE

EXISTING HUNTER ACC-99D IRRIGATION CONTROLLER

50mm MAINLINE FLUSHING VALVE

EXISTING DN50 AIR RELEASE, TO BE INSTALLED AT HIGH POINT ON MAINLINE

EXISTING LIGHTNING SURGE PROTECTION

EXISTING DN100 uPVC RRJ CLASS 12 MAINLINE

EXISTING DN110 PN12.5 PE100 MDPE POLY MAINLINE (MATURE TREES)

25 — uPVC SWJ CLASS 9 LATERAL LINE SIZE AS SHOWN

DN150 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR

STATION DATA

ST'N NO.	FLOW (L/s)	PR. (kPa)	PR'N mm hr	APP'N mm week	ST'N TIME (min)	AREA TYPE
46	8.58	250	32	40	15	GARDEN
47	6.59	250	-	-	8	TREES
48	7.25	350	12	40	40	GARDEN

VALVE DATA

VAL. NO.	FLOW (L/s)	DECODER NO.
1	8.58	-
2	6.59	-
3	7.25	-

DAILY RUN TIME: 1 HRS & 3 MIN — WEEKLY RUN TIME: 5 HRS & 15 MIN

VALVE LABEL LEGEND

VALVE NO	2	Ø50 — VALVE SIZE
FLOW (LPS)	3.29	32 — PRECIPITATION RATE
	-	DECODER NO.

NOTE:
1. MAINLINE AND LATERAL PIPES ARE TO BE INSTALLED TO A MINIMUM DEPTH OF 350mm AND BE INSTALLED TO A MAXIMUM DEPTH OF 450mm.
2. THE CONTRACTOR TO UNDERTAKE FLOW (PRESSURE) ADJUSTMENT OF ALL SOLENOID VALVES IN ACCORDANCE WITH THE NOMINAL OPERATING PRESSURE OF THE SPRINKLERS ATTACHED TO THE PARTICULAR SOLENOID VALVE.

CERTIFIED IRRIGATION DESIGNER — IRRIGATION AUSTRALIA — LANDSCAPE/TURF CONTRACTOR

0 2 4 6 8 10m
SCALE 1:200 ON A1

AUTOCAD FILENAME: Marmion & Display Village Design (Rev A.C).dwg

REV	DATE	DESCRIPTION	DWN	CKD
A	24/09/2021	ISSUED FOR APPROVAL	R.V	J.S
B	19/11/2021	ADD EXISTING LIGHTNING SURGE PROTECTION AS REQUESTED BY COW	J.S	
0	23/12/2021	ISSUED FOR CONSTRUCTION	J.S	
A.C	06/04/2022	AS CONSTRUCTED BY LD TOTAL	LDT	

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NewGround DESIGN SERVICES

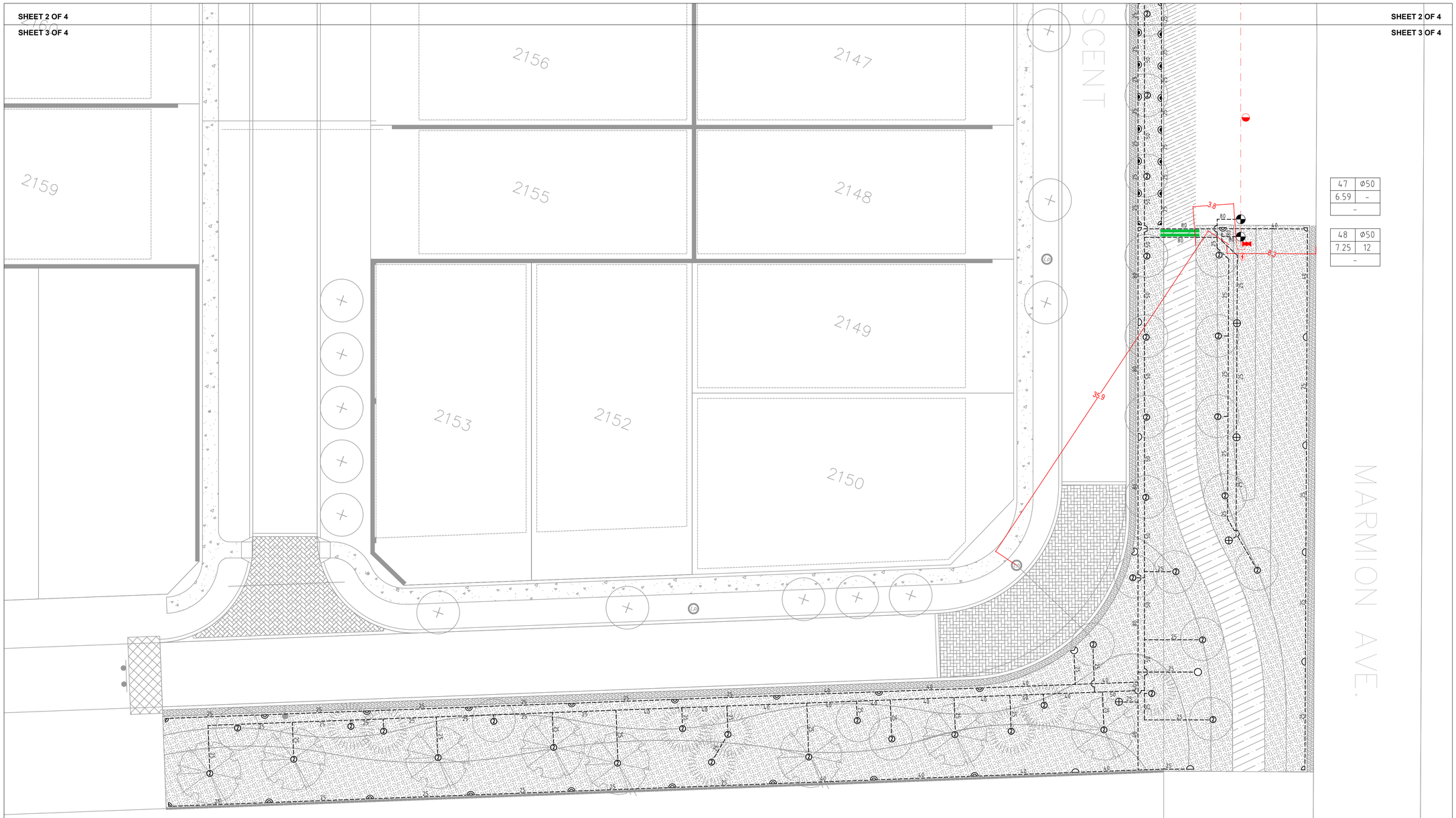
SCALE :	1 : 200 @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT : TDL

PROJECT : MARMION AVE. WEST VERGE AND DISPLAY VILLAGE IRRIGATION WORKS
-

DATE :	DESIGN NO. :	SHEET NO. :
24/09/2021	18304-02	2 OF 4

SHEET 2 OF 4
SHEET 3 OF 4



SHEET 2 OF 4
SHEET 3 OF 4

LEGEND: "SPRINKLERS"

SYMBOL	BRAND NAME	MODEL DESCRIPTION	NOZZ. NO.	PRESS. (KPA)	FLOW (LPM)	RADIUS (M)
	HUNTER	I-20-12	6.0	350	24.5	13.1
	HUNTER	I-20-12	3.0	350	12.3	11.9
	HUNTER	I-20-12	2.5	350	9.7	10.7
	HUNTER	I-20-12	4.5LA	350	16.6	10.7
	TORO	570Z-12P	15	250	2.84-11.36	4.6
	TORO	570Z-12P	12	250	1.82-7.27	3.7
	TORO	570Z-12P	10	250	1.25-5.04	3.0

LARGE GARDEN AREAS - TO HAVE HUNTER I-20-12 ON A Ø20x300mm POLY ARTIC RISER
SMALL GARDEN AREAS - TO HAVE TORO 570Z-12P'S (PART & FULL CIRCLES) ON A Ø15 x 300mm POLY ARTIC RISER (NOZZLES AS SHOWN)

200 L — 2-TORO FLOOD BUBBLERS MODEL FB-100PC ON A TORO 570Z-6P WITH BLUE FLEX 7.06 LPM @ 250 kPA

BERMAD 200 SERIES SOLENOID CONTROL VALVE SIZE AS SHOWN

EXISTING BORE

EXISTING HUNTER ACC-99D IRRIGATION CONTROLLER

50mm MAINLINE FLUSHING VALVE

EXISTING DN50 AIR RELEASE, TO BE INSTALLED AT HIGH POINT ON MAINLINE

EXISTING LIGHTNING SURGE PROTECTION

EXISTING DN100 uPVC RRJ CLASS 12 MAINLINE

EXISTING DN110 PN12.5 PE100 MDPE POLY MAINLINE (MATURE TREES)

25 — uPVC SWJ CLASS 9 LATERAL LINE SIZE AS SHOWN

DN150 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR

STATION DATA							VALVE DATA		
ST'N NO.	FLOW (L/s)	PR. (kPa)	PR'N mm hr	APP'N mm/week	ST'N TIME (min)	AREA TYPE	VAL. NO.	FLOW (L/s)	DECODER NO.
46	8.58	250	32	40	15	GARDEN	1	8.58	–
47	6.59	250	–	–	8	TREES	2	6.59	–
48	7.25	350	12	40	40	GARDEN	3	7.25	–
DAILY RUN TIME: 1 HRS & 3 MIN							WEEKLY RUN TIME: 5 HRS & 15 MIN		

VALVE LABEL LEGEND

VALVE NO / FLOW (LPS)

2	Ø50
3.29	32
–	

VALVE SIZE
PRECIPITATION RATE
DECODER NO.

NOTE:
1. MAINLINE AND LATERAL PIPES ARE TO BE INSTALLED TO A MINIMUM DEPTH OF 350mm AND BE INSTALLED TO A MAXIMUM DEPTH OF 450mm.
2. THE CONTRACTOR TO UNDERTAKE FLOW (PRESSURE) ADJUSTMENT OF ALL SOLENOID VALVES IN ACCORDANCE WITH THE NOMINAL OPERATING PRESSURE OF THE SPRINKLERS ATTACHED TO THE PARTICULAR SOLENOID VALVE.

CERTIFIED IRRIGATION DESIGNER — IRRIGATION AUSTRALIA — LIC14192 — LANDSCAPE/TURF CONNECTION

0 2 4 6 8 10m
SCALE 1:200 ON A1

AUTOCAD FILENAME: Marmion & Display Village Design (Rev A.C).dwg

REV	DATE	DESCRIPTION	DWN	CKD
A	24/09/2021	ISSUED FOR APPROVAL	R.V	J.S
B	19/11/2021	ADD EXISTING LIGHTNING SURGE PROTECTION AS REQUESTED BY COW	J.S	
0	23/12/2021	ISSUED FOR CONSTRUCTION	J.S	
A.C	06/04/2022	AS CONSTRUCTED BY LD TOTAL	LDT	

N

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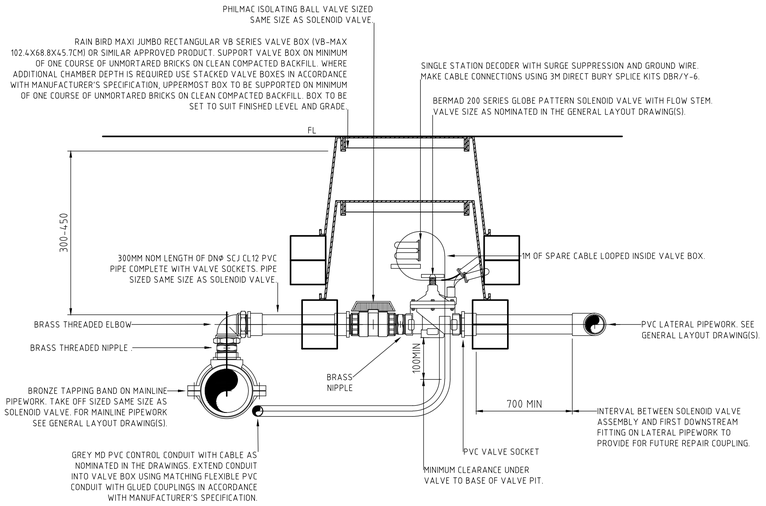
NewGround DESIGN SERVICES

SCALE :	1 : 200 @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT : TDL

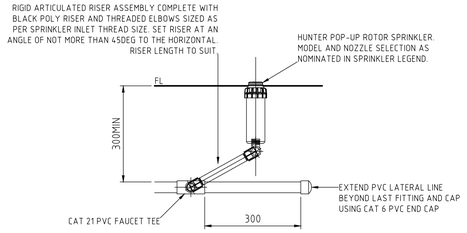
PROJECT : MARMION AVE. WEST VERGE AND DISPLAY VILLAGE IRRIGATION WORKS
-

DATE :	DESIGN NO. :	SHEET NO. :
24/09/2021	18304-03	3 OF 4



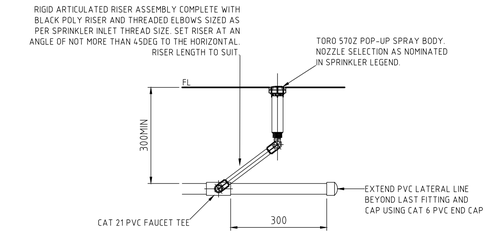
TYPICAL GLOBE PATTERN SOLENOID VALVE INSTALLATION

NOT TO SCALE



TYPICAL POP-UP ROTOR SPRINKLER INSTALLATION ON PVC PIPEWORK

NOT TO SCALE



TYPICAL POP-UP SPRAY SPRINKLER INSTALLATION ON PVC PIPEWORK

NOT TO SCALE

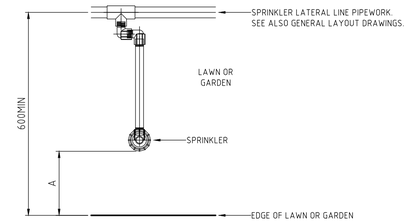


TABLE OF SPRINKLER OFFSETS			
EDGE TYPE	DIMENSION A		
	SPRAY†	ROTOR†	
BACK OF KERB OR EDGE OF PAVEMENT.	100	300	
GARDEN WALL WITH NO MOWING STRIP.	200	200	
BUILDING FACADE WITH NO MOWING STRIP.	600	600	

† SPRINKLER TYPE. SEE GENERAL LAYOUT DRAWINGS.

SPRINKLER AND LATERAL PIPE OFFSETS FROM LAWN AND GARDEN EDGES

NOT TO SCALE

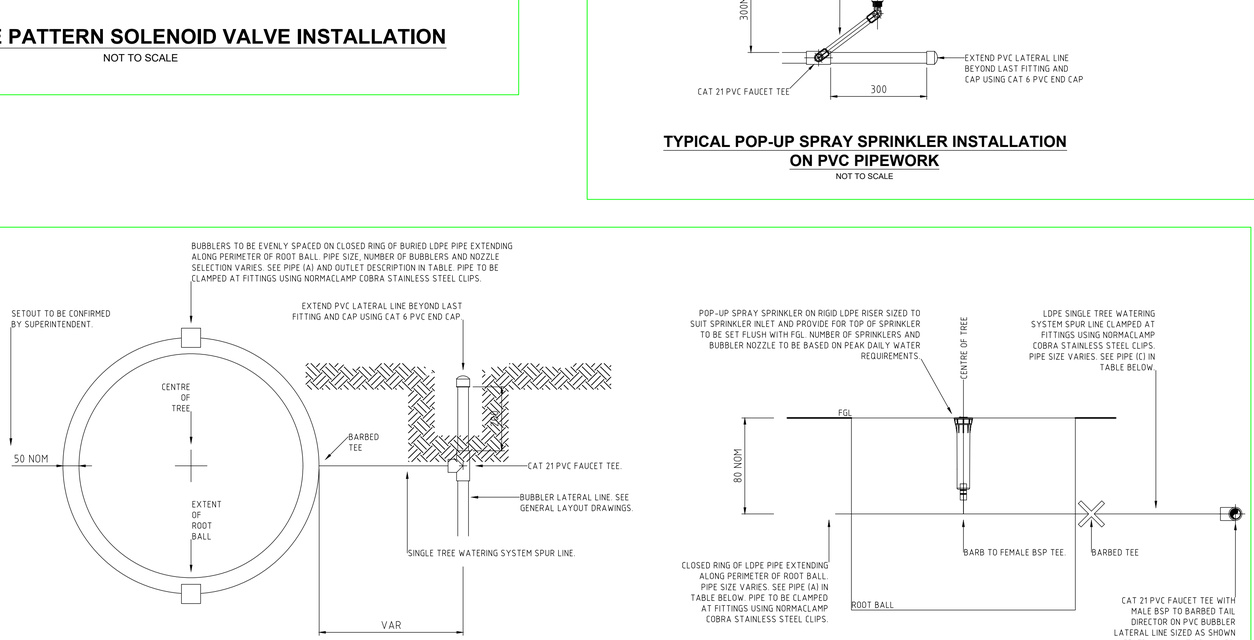


TABLE OF TREE WATERING SYSTEMS†						
SYSTEM	PLANT STOCK‡	SYSTEM FLOW(L/MIN)	20MIN VOL (L)¥	PIPE (A)	PIPE (B)	PIPE (C)
-	-	0-6	-	DN19	-	DN19
-	-	6-15	-	DN19	-	DN25
-	-	15-30	-	DN25	-	DN25

† SYSTEM DESIGN BASED ON THE PEAK DAILY WATER REQUIREMENTS SUPPLIED BY NURSERY INDUSTRY SOURCES AND OTHERS
‡ BAG STOCK SIZE (L) AND/OR NOMINAL DIAMETER OF TRANSPLANT ROOT BALL (M).
¥ VOLUME PROVIDED BY A 20MIN RUN TIME. RUN TIME TO BE ADJUSTED IN ACCORDANCE WITH PLANT WATER REQUIREMENTS AND CLIMATIC CONDITIONS.

TREE WATERING SYSTEMS

NOT TO SCALE

AUTOCAD FILENAME: Marmion & Display Village Design (Rev A.C).dwg

REV	DATE	DESCRIPTION	DWN	CKD
A	24/09/2021	ISSUED FOR APPROVAL	R.V	J.S
B	19/11/2021	ADD EXISTING LIGHTNING SURGE PROTECTION AS REQUESTED BY COW	J.S	
0	23/12/2021	ISSUED FOR CONSTRUCTION	J.S	
A.C	06/04/2022	AS CONSTRUCTED BY LD TOTAL	LDT	

REV	DATE	DESCRIPTION	DWN	CKD

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SCALE :	1 : NTS @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT : TDL

PROJECT : MARMION AVE. WEST VERGE AND DISPLAY VILLAGE IRRIGATION WORKS (TYPICAL DETAILS)
-

DATE :	DESIGN NO. :	SHEET NO. :
24/09/2021	18304-04	4 OF 4

© TIM DAVIES LANDSCAPING

CATALINA BEACH - STAGE 28



DWG	DWG NAME	SCALE @ A1	REV
LS -101	COVER PAGE	1:500	AC
LS -201	VERGE LANDSCAPING	1:250	AC
LS -202	BUFFER PLANTING	1:250	AC
LS-301	DETAILS AND PLANTING SCHEDULE	AS SHOWN	AC

01/101 KEY PLAN
PLAN 1:500 @ A1

0 2.5 5 10 15 20 30 50m

CATALINA ESTATE
CATALINA BEACH

REVISION	DESCRIPTION	BY	DATE
0	ISSUE FOR PRICING AND CONSTRUCTION	AF/NL	19.11.21
1	ISSUE FOR CONSTRUCTION	AF	22.12.21
AC	AS CONSTRUCTED	AF	12.04.21

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western australia 6017
telephone +61 8 9441 0200
facsimile +61 8 9441 0201
easy@tdl.com.au

CLIENT	SATTERLEY PROPERTY GROUP & TPRC		
DESIGNED	AF	DRAWING TITLE	COVER PAGE
DRAWN	AF		
APPROVED	GD	DRAWING No.	12606-CB-MV-101
SCALE	1:500@A1		REVISION AC

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01/201 VERGE LANDSCAPING
PLAN 1:250 @ A1



02/201 VERGE LANDSCAPING
PLAN 1:250 @ A1

LEGEND

TREES (04/05/301)

- MELALEUCA QUINQUENERVIA 200L
- CORYMBIA MACULATA 200L
- AGONIS FLEXUOSA 200L

FURNITURE & SITE FEATURES

- LIGHT POLE BY OTHERS
- BOUNDARY FENCE (06/301)

SURFACE FINISHES

- EXISTING CONCRETE PAVEMENT
- EXISTING ASPHALT PAVEMENT
- EXISTING ASPHALT REINSTATED
- PROPOSED ASPHALT PAVEMENT (01/301)
- MULCH MAINTENANCE STRIP 600mm/1m REFER TO PLAN
- PLANTING BED WITH TEMPORARY IRRIGATION AS SCHEDULED (02/03/301)

GENERAL NOTES:

- FOR GENERAL ARRANGEMENT PLEASE REFER TO TDL DRAWINGS AND SPECIFICATIONS.
- ANY DIFFERENCES NOTED BETWEEN THE LAYOUT PLANS, DETAIL DRAWINGS AND SPECIFICATION IS TO BE CLARIFIED BY THE CONTRACTOR PRIOR TO WORKS COMMENCING ON SITE.
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- ALL SITE SET OUT AND PROPOSED FINISHED LEVELS ARE TO BE CONFIRMED ON SITE WITH THE SUPERINTENDENT PRIOR TO CONSTRUCTION.
- EXISTING GRADES ARE TO BE MAINTAINED.
- VERGES TO HAVE 2-3% CROSSFALL TOWARDS ROAD EDGE.
- ALL EXISTING SITE FEATURES, SUCH AS KERBLINES, PATHS, SIGN POSTS, LIGHT POLES ETC ARE TO BE RETAINED AND PROTECTED UNLESS OTHERWISE NOMINATED ON PLAN.
- WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER MEASUREMENTS.

EXCAVATION AND SITE PREPARATION:

- EXCAVATE AS REQUIRED ALONG KERBLINE TO ACHIEVE FINISHED LEVELS AFTER SOIL PREPARATION AND MULCH. EXCAVATED MATERIAL MAY BE RE-SPREAD ON SITE WITHIN LOT BOUNDARY. LOCATION TO BE CONFIRMED BY SUPERINTENDENT.
- EXISTING GRADES WITHIN VERGES AND MEDIANS ARE TO BE MAINTAINED. PREPARE EVEN SURFACE SUITABLE FOR PLANTING AND HARDSCAPE INSTALLATION THAT TIES INTO EXISTING LEVELS.
- FINISHED LEVELS OF NEW PATHS AND PAVING TO TIE IN WITH EXISTING PAVING AND KERBS
- FOR ALL HARD AND SOFTSCAPE DETAILS AND OVERALL PLANTING SCHEDULES, REFER TO DETAILS LS-301

PLANTING NOTES:

- SHRUB AND GROUNDCOVER PLANTING OFFSET: MIN 600mm/1m FROM ROAD EDGES, KERBLINES AND OTHER HARD EDGE
- FOR SHRUB PLANTING MIXES: PLANTS ARE TO BE PLANTED IN GROUPS OF 3-5-7 OF EACH SPECIES
- FOR OVERALL PLANT SCHEDULES, REFER TO DRAWING LS-301
- FOR ALL HARD AND SOFTSCAPE DETAILS, REFER TO DETAILS LS-301
- TREE STOCK SIZE SUBJECT TO AVAILABILITY AT TIME OF PROCUREMENT AND TO BE WITHIN THE RANGE OF 90-300L STOCK
- TREES NOMINATED ON PLAN AND/OR LOCATED WITHIN 1.5M OF HARD EDGE/PAVING/KERBLINE ARE TO BE INSTALLED WITH 6M LONG 800MM DEEP ROOT CONTROL BARRIER POSITIONED AGAINST THE HARD EDGE WITH TOP OF RCB TO BE 50MM BELOW TOP OF MULCH

0 1 2 4 6 10 20 25m

CATALINA ESTATE
CATALINA BEACH

REVISION	DESCRIPTION	BY	DATE
D	ISSUE FOR PRICING AND CONSTRUCTION	AF/NL	19.11.21
E	ISSUE FOR CONSTRUCTION	AF	22.12.21
AC	AS CONSTRUCTED	AF	12.04.21

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western australia 6017
telephone +61 8 9441 0200
facsimile +61 8 9441 0201
enq@tdl.com.au

CLIENT	SATTERLEY PROPERTY GROUP & TPRC		
DESIGNED	AF	DRAWING TITLE	STG 28 VERGE LANDSCAPING
DRAWN	AF		
APPROVED	GD	DRAWING No.	12606-CB-MV-201
SCALE	1:250@A1		REVISION AC

© TIM DAVIES LANDSCAPING



01
202
BUFFER PLANTING
PLAN 1:250 @ A1

LEGEND

TREES 04/02 301

- MELALEUCA QUINQUENERVIA 200L
- CORYMBIA MACULATA 200L
- AGONIS FLEXUOSA 200L

FURNITURE & SITE FEATURES

- LIGHT POLE BY OTHERS (LP)
- BOUNDARY FENCE 06 301

SURFACE FINISHES

- EXISTING CONCRETE PAVEMENT
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CATALINA BEACH

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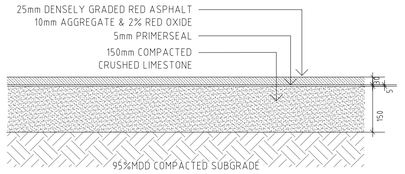
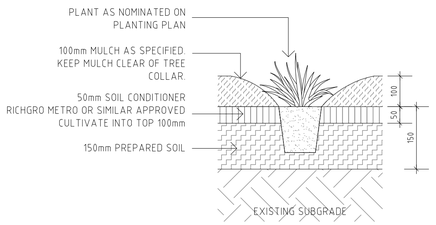
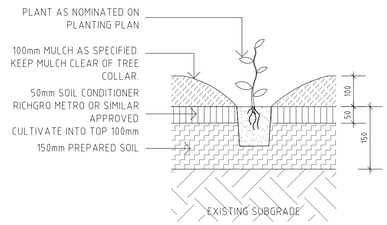


01 301 RED ASPHALT - DUP
TYPICAL DETAIL 1:10 @ A1



02 301 200/140mm SHRUB PLANTING
TYPICAL DETAIL 1:10 @ A1

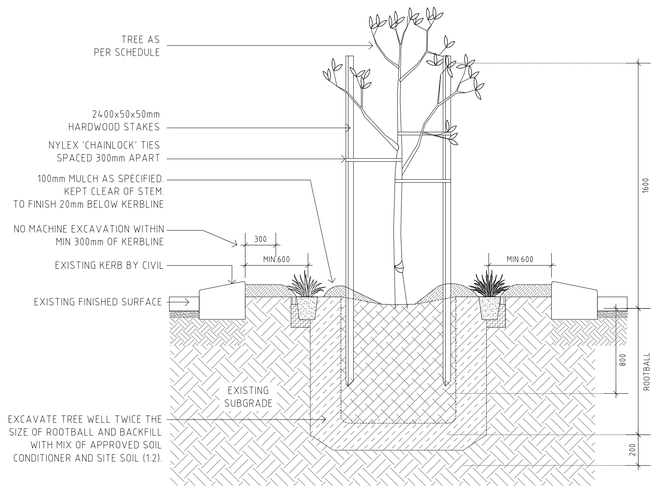


03 301 T/S SHRUB PLANTING IN SWALE
TYPICAL DETAIL 1:10 @ A1

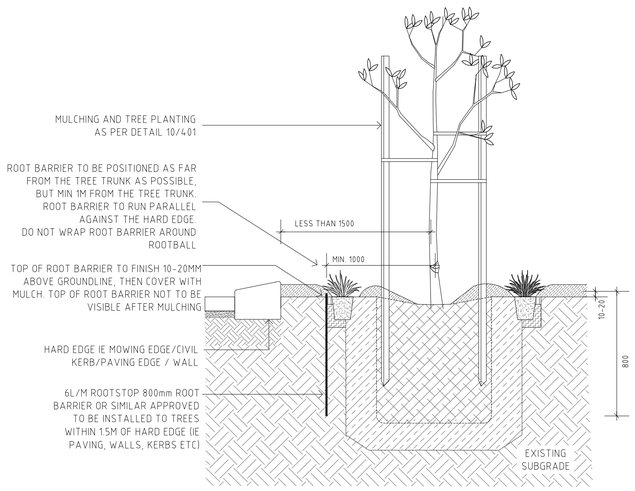
FERTILISER SCHEDULE AT INSTALLATION (REFER TO SPEC):		
LANGLEY AND AGRIFORM FERTILISER TABLETS OR SIMILAR APPROVED	TREE STOCK	4 TABLETS PER TREE
BAYLEYS NATIVE PLANT FOOD FERTILISER GRANULES OR SIMILAR APPROVED	SHRUBS AND GROUNDCOVERS	15g PER T/S 20g PER 130/140mm STOCK

MULCH SCHEDULE	
STG 28 BUFFER	SITE MULCH FROM FORESHORE WORKS
MARMION AVE AND DISPLAY VILLAGE VERGES	PINE BARK MULCH

STAKING AND GUYING
>500LT AND TRANSPLANTS: UNDERGROUND GUYING
200-500LT TREE STOCK: 3 X 2400x50x50mm HARDWOOD STAKES
45-150LT TREE STOCK: 2 X 1800x50x50mm HARDWOOD STAKES

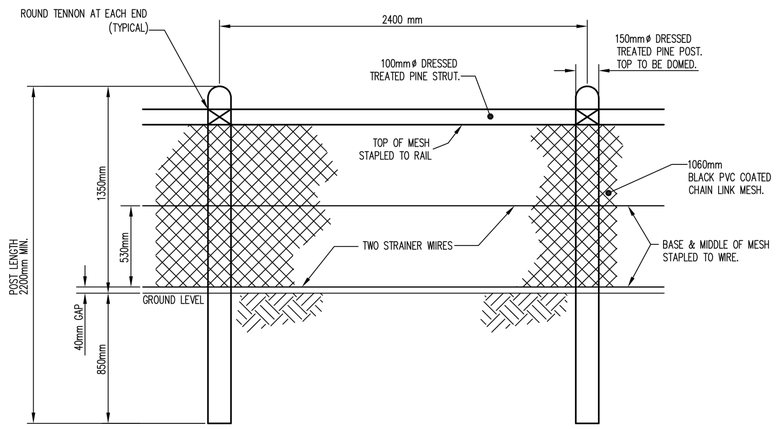


04 301 45-500L TREE PLANTING
TYPICAL DETAIL 1:20 @ A1



05 301 LINEAR ROOT CONTROL BARRIER
TYPICAL DETAIL 1:20 @ A1

CONSERVATION PINE RAIL FENCING
AS PER CITY OF WANNEROO STANDARD DETAIL TO 01-7-1



06 301 BOUNDARY FENCE
TYPICAL DETAIL 1:20 @ A1

Key	Species	Common Name	Plant per m2	Size	Qty Verge	Qty Buffer
Trees						
AF	Agonis flexuosa	WA Peppermint	As shown	200L		8
CM	Corymbia maculata	Spotted Gum	As shown	200L		8
MV	Melaleuca quinquenervia	Broad-Leaved Paperbark	As shown	200L	28	4
Shrubs and groundcovers						
Ac	Adenanthos cuneatus	Basket Flower	As shown	130mm	99	
Al	Acacia lasiocarpa	Glow Wattle	As shown	t/s		260
Alp	Acacia lasiocarpa 'Prostrate'	Dwarf Wattle	As shown	200mm	99	
Gmt	Grevillea lan. Mt Tamboritha	Woolly Grevillea	As shown	5lt	918	187
As	Acacia saligna	Orange Wattle	As shown	t/s		1478
Ca	Conostylis aculeata	Cottonhead	As shown	130mm	355	
Cc	Conostylis candicans	Cotton Heads	As shown	t/s		657
Cv	Carpobrotus virescens	Pigface	As shown	t/s	879	200
Wm	Westringea 'Mundii'	Coastal Rosemary	As shown	200mm	420	
Lw	Lomandra 'Wingarra'	Lomandra	As shown	200mm	378	
Dd	Dampiera diversifolia	Dampiera	As shown	130mm	879	
Dr	Dianella revoluta	Blue Flax Lily	As shown	t/s		698
Fn	Ficinia nodosa	Knobby Club Rush	As shown	t/s		568
Ebg	Eremophila 'Balalla Gold'	Tar Bush	As shown	130mm	321	
Go	Grevillea olivacea	Olive Grevillea	As shown	200mm	42	
Gcp	Grevillea crithmifolia 'Prostrate'	Green Carpet	As shown	200mm	191	
Hp	Hemiandra pungens	Purple Snake Bush	As shown	t/s	841	
Hgs	Hibbertia 'Golden Sunburst'	Golden Sunburst Guinea Flower	As shown	200mm	191	
Kp	Kennedia prostrata	Running Postman	As shown	t/s		220
Lb	Leucophyta brownii	Cushion Bush	As shown	130mm	71	
Lg	Lepidosperma gladiatum	Coast Sword Sedge	As shown	t/s	70	500
Ll	Lomandra longifolia	Mat Rush	As shown	200mm	70	
Mp	Myoporum parvifolium	Creeping Boobialla	As shown	200mm	114	
Mt	Melaleuca thymoides	Coastal Honey myrtle	As shown	t/s		260
Oa	Olearia axillaris	Coastal Daisy Bush	As shown	130mm	42	
Oals	Olearia axillaris 'Little Smokie'	Coastal Daisy Bush	As shown	130mm	727	
Po	Pattersonis occidentalis	Purple flag	As shown	200mm	321	
Sc	Scaevola crassifolia	Fanflower	As shown	140mm	375	568
Tr	Templetonia retusa	Cockies Tongue	As shown	200mm	29	
Tr	Templetonia retusa	Cockies Tongue	As shown	t/s	42	260
Wf	Westringia fruticosa	Coastal Rosemary	As shown	200mm	42	
Mls	Melaleuca 'Little Nessie'	Dwarf Honey Myrtle	As shown	200mm	99	

07 301 OVERALL PLANT SCHEDULE

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CATALINA ESTATE
CATALINA BEACH

REVISION	DESCRIPTION	BY	DATE
0	ISSUE FOR PRICING AND CONSTRUCTION	AF/ NL	19.11.21
I	ISSUE FOR CONSTRUCTION	AF	22.12.21
AC	AS CONSTRUCTED	AF	12.04.21

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CLIENT	SATTERLEY PROPERTY GROUP & TPRC		
DESIGNED	AF	DRAWING TITLE	DETAILS & PLANTING SCHEDULE
DRAWN	AF		
APPROVED	GD	DRAWING No.	12606-CB-MV-301
SCALE	AS SHOWN		REVISION AC

File Ref: 2022.66.1 AD411132 8154
Your Ref: Online ref: 461211
Enquiries: Mrs Chelsea Timms 9405 5822

8 August 2022

Ms A Feher
Tim Davies Landscaping
3 Pitino Court
OSBORNE PARK WA 6017

Dear Andrea

LANDSCAPE AND IRRIGATION APPROVAL
CATALINA PORTOFINO PARK STAGE 2 MINDARIE WAPC 159334 & 16855

I refer to your correspondence dated 19 April 2022 and write to advise that the City grants approval of the above-mentioned works as detailed in the attached plans. This conditional approval is subject to your compliance with:

1. The City's policies and standard specifications available on the City's website.
2. The conditions listed below and those marked-up in red on the attached plans.

Please note that this approval is an endorsement that the plans comply in general with the City's requirements; it is not an approval of the integrity and functionality of the design which remains the responsibility of the landscape architects.

Specific Conditions:

1. Leave a 1.5m wide unplanted area as marked up on the approved plan to access the BUP
2. Extend the maintenance access as marked up on the approved plan to allow adequate access. Remove tree and extend removable bollards as required.
3. Grass pavers are not approved, please substitute for reinforced concrete crossover with mountable kerb.
4. Remove the turf and extend the garden beds as marked up on the approved plan.
5. The area highlighted in blue on the approved plan does not require reinforced concrete
6. Root barriers are not required
7. Non sacrificial anti-graffiti coating is to be applied to all limestone walls, seating and decking
8. The specification for removable bollards has been provided to TDL via email
9. Add a full circle sprinkler to valve #2 and move some of the part circle sprinklers to valve #1 to compensate.
10. Include local Spinifex species to the ground cover mix

Standard Conditions:

1. The applicant and the contractor shall be responsible for the dust and sand drift control during the construction of the project in accordance with Department of Environmental Regulation guidelines. Disturbed areas shall be stabilised on completion and thereafter maintained to the City's satisfaction.
2. Where works impact traffic movement or public safety, temporary traffic management shall be employed in accordance with the current AS 1742.3 (Traffic Control Devices for Works on Roads). A traffic management plan is to be prepared in accordance with "Main Roads WA Traffic Management for Works on Roads Code of Practice" and submitted to the City for endorsement.
3. Hard landscaping is to be provided to medians and verge areas where applicable to provide adequate clear zones as per Australian Standard Manual of Uniform Traffic Control Devices Part 3: Traffic Control Devices for Works on Roads - Maintaining a Safe Workplace. Generally no planting in 0.6m strip from road kerb on roads with road speeds of less than 80km/hr unless approved by the City. Generally no planting in 1.2m strip from road kerb on roads with road speeds of equal or greater than 80km/hr unless approved by the City.

As of 1 July 2022, the City introduced new Land Development fees and charges. The new fees include assessment fees that cover the actual cost and expenses incurred by the City in providing services, commissioning or undertaking any review of documentation associated with development engineering and landscape matters including administrative services, technical resources, specialist advice and consultation. All fees are charged in accordance with Section 6.15, 6.16 and 6.17 of the Local Government Act (WA) 1995 (as amended). An invoice will be issued to the developer.

This approval is valid until 10 June 2024.

Should you require clarification on any of the above then please contact the City's Landscape and Conservation Development Officer, Mrs Chelsea Timms on telephone 9405 5822.

Yours sincerely



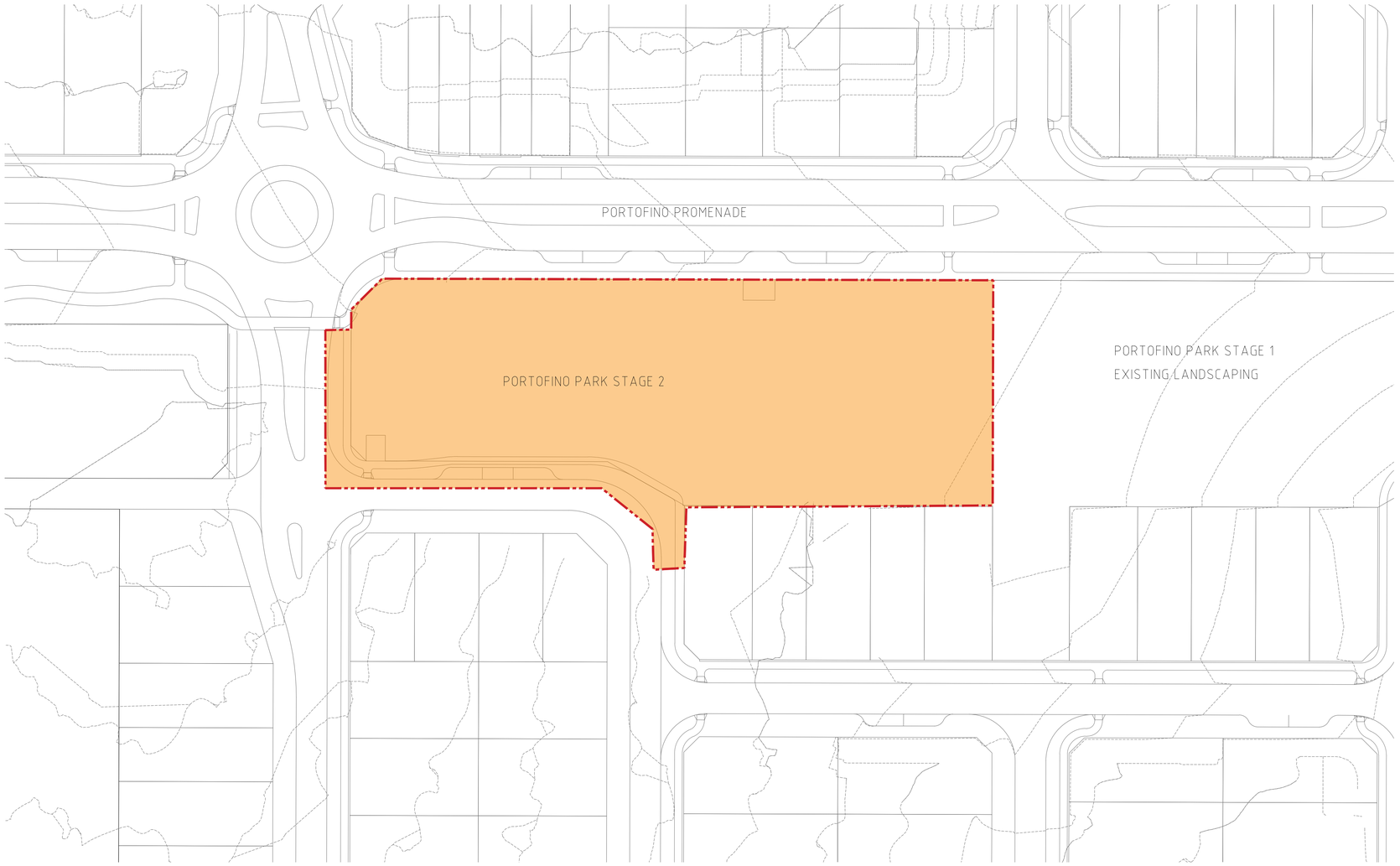
Craig Wansbrough

MANAGER LAND DEVELOPMENT

Cc Tamala Park Regional Council

© TIM DAVIES LANDSCAPING

CATALINA PORTOFINO PARK STAGE 2



01
101
COVER PAGE
PLAN 1:500 @ A1

CITY OF WANNEROO

LETTER OF APPROVAL DATED 8 AUGUST 2022
TRIM NO AD411132

CITY OF WANNEROO
APPROVAL CONDITIONS

APPROVED SUBJECT TO STRICT ADHERENCE TO THE
- ENDORSEMENTS THEREON
- CONDITIONS IN THE CITY OF WANNEROO APPROVAL LETTER
- CONDITIONS LAID DOWN IN THE WAPC SUBDIVISION APPROVAL WAPC NO.159334

CITY OF WANNEROO
QUALITY CONTROL

LAND DEVELOPMENT OFFICER: CT

ASSETS PARKS	TRIM NO. 22/174853
ASSETS CONSERVATION	TRIM NO. N/A
ASSETS IRRIGATION	TRIM NO. 22/174624
COMMUNITY FACILITIES	TRIM NO. N/A
LD ENGINEERING	TRIM NO. 22/154472

CITY OF WANNEROO
PLAN APPROVAL

Mark Jumeaux

SENIOR LANDSCAPE
& CONSERVATION DEVELOPMENT OFFICER

DWG	DWG NAME	SCALE @ A1	REV
LS -101	COVER PAGE	1:500	B
LS -201	HARDSCAPE PLAN	1:200	B
LS -301	SOFTSCAPE PLAN	1:200	B
LS -401	DETAILS 1	AS SHOWN	B
LS -402	DETAILS 2	AS SHOWN	B
LS -403	DETAILS 3, SPEC & SCHEDULES	AS SHOWN	B

CATALINA ESTATE
CATALINA BEACH, PORTOFINO PARK STG2

REVISION	DESCRIPTION	BY	DATE
A - DRAFT	ISSUE FOR REVIEW	IZ	18.02.22
A	ISSUE FOR APPROVAL	AF	02.03.22
B	REISSUE FOR APPROVAL	IZ	15.03.22

0 10 20 50m

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DESIGNED	AF	DRAWING TITLE	COVER PAGE
DRAWN	IZ		
APPROVED	GD	DRAWING No.	12606-CC-PP-LS 101
SCALE	1:500@A1		REVISION B

© TIM DAVIES LANDSCAPING



CITY OF WANNEROO
PLAN APPROVAL
Mark Jumeaux
SENIOR LANDSCAPE
& CONSERVATION DEVELOPMENT OFFICER

01 201 HARDSCAPE PLAN
PLAN 1:200 @ A1

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- ALL SITE SET OUT AND PROPOSED FINISHED LEVELS ARE TO BE CONFIRMED ON SITE WITH THE SUPERINTENDENT PRIOR TO CONSTRUCTION.
- EXISTING GRADES ARE TO BE MAINTAINED.
- VERGES TO HAVE 2-3% CROSSFALL TOWARDS ROAD EDGE.
- ALL EXISTING SITE FEATURES, SUCH AS KERBLINES, PATHS, SIGN POSTS, LIGHT POLES ETC ARE TO BE RETAINED AND PROTECTED UNLESS OTHERWISE NOMINATED ON PLAN.
- WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER MEASUREMENTS.

EXCAVATION AND SITE PREPARATION:

- EXCAVATE AS REQUIRED ALONG KERBLINE TO ACHIEVE FINISHED LEVELS AFTER SOIL PREPARATION AND MULCH. EXCAVATED MATERIAL MAY BE RE-SPREAD ON SITE WITHIN LOT BOUNDARY. LOCATION TO BE CONFIRMED BY SUPERINTENDENT.
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- FINISHED LEVELS OF NEW PATHS AND PAVING TO TIE IN WITH EXISTING PAVING AND KERBS.
- EXISTING LANDSCAPING OUTSIDE EXTENT OF WORKS IS TO BE RETAINED AND PROTECTED(INC. ROOTS OF EXISTING TREES MAY BE PRECEDED WITHIN SITE BOUNDARY). ANY DAMAGE TO EXISTING LANDSCAPE IRRIGATION SYSTEM TO BE REINSTATED AT CONTRACTOR EXPOSE.
- FOR ALL HARD AND SOFTSCAPE DETAILS, REFER TO DETAILS LS401-LS403
- FOR ALL MATERIALS AND FURNITURE SELECTIONS, REFER TO SCHEDULES (LS403) AND SPECIFICATION

PLANTING NOTES:

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- FOR ALL HARD AND SOFTSCAPE DETAILS, REFER TO DETAILS LS401-403
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LEGEND

- EXTENT OF WORK
- EXISTING CONTOUR
- 25.50 CONTOUR BY CIVIL
- 27.00 POS CONTOUR

SURFACE FINISHES

- EXISTING CONCRETE PAVEMENT
- TRAFFICABLE CONCRETE PAVING BY OTHERS
- CONCRETE PAVEMENT BY CIVIL
- PROPOSED CONCRETE PAVEMENT — STANDARD GREY CONCRETE — 01-02,10 401
- PROPOSED CONCRETE PAVEMENT — 3M WIDE REINFORCED CONCRETE CROSSOVER REFER TO COW STANDARD — 06 401
- PROPOSED COMPOSITE DECK — 03-07 402
- IRRIGATED PLANTING BED — REFER TO SOFTSCAPE PLAN LS301
- VEGETATED BASIN — REFER TO SOFTSCAPE PLAN LS301
- ROLLING ON TURF
- MULCH MAINTENANCE STRIP 600mm — 05 401

FURNITURE & SITE FEATURES

- CONCRETE MOWING KERB — COLOUR: NATURAL GREY — 07 401
- BALUSTRADES — 07 402
- 450mm HEIGHT LIMESTONE RETAINING WALL — 01-02 402
- FEATURE BOULDERS — 11 401
- BENCH SEAT — FOR FURNITURE SELECTION SEE DRAWING 403
- LOCKABLE REMOVABLE BOLLARD — 12 401
- FIXED BOLLARD — 13 401
- LIGHT POLE BY OTHERS

TREES

- PROPOSED TREE MARKER — REFER TO SOFTSCAPE PLAN

0 1 2 4 6 10 20m

REVISION	DESCRIPTION	BY	DATE
A - DRAFT	ISSUE FOR REVIEW	IZ	16.02.22
A	ISSUE FOR APPROVAL	AF	10.03.22
B	REISSUE FOR APPROVAL	IZ	11.03.22

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CLIENT	SATTERLEY PROPERTY GROUP & TPRC
DESIGNED	AF
DRAWN	IZ
APPROVED	GD
SCALE	1:200@A1
DRAWING TITLE	HARDSCAPE PLAN
DRAWING No.	12606-CC-PP-LS 201
REVISION	B

CATALINA ESTATE
CATALINA BEACH, PORTOFINO PARK STG2

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01 SOFTSCAPE PLAN
301 PLAN 1:200 @ A1

CITY OF WANNEROO
PLAN APPROVAL
Mark Jumeaux
SENIOR LANDSCAPE
& CONSERVATION DEVELOPMENT OFFICER

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LEGEND

TREES & PLANTING

- PROPOSED 300LT TREE SEE SCHEDULE — 03-06 / 403
- PROPOSED 150-200LT TREE SEE SCHEDULE
- PROPOSED 100LT TREE SEE SCHEDULE
- PROPOSED 45LT TREE SEE SCHEDULE
- IRRIGATED PLANTING BED REFER TO PLANT PLAN AND SCHEDULE — 02 / 403
- VEGETATED BASIN REFER TO PLANT PLAN AND SCHEDULE — 01 / 403
- ROLLING ON TURF — 08-02 / 401
- ~~TREE INSTALLED WITH ROOT CONTROL BARRIER~~ — 04 / 403

ROOT BARRIERS ARE NOT REQUIRED (TYP)

SURFACE FINISHES

- MULCH — 05 / 401

FURNITURE & SITE FEATURES

- CONCRETE MOWING KERB COLOUR: NATURAL GREY — 07 / 401
- 450mm HEIGHT LIMESTONE RETAINING WALL — 01-02 / 402
- FEATURE BOULDERS — 11 / 401
- LOCKABLE REMOVABLE BOLLARD — 12 / 401
- FIXED BOLLARD — 13 / 401

0 1 2 4 6 10 20m

CATALINA ESTATE
CATALINA BEACH, PORTOFINO PARK STG2

REVISION	DESCRIPTION	BY	DATE
A - DRAFT	ISSUE FOR REVIEW	IZ	18.02.22
A	ISSUE FOR APPROVAL	AF	02.03.22
B	REISSUE FOR APPROVAL	IZ	15.03.22

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CLIENT	SATTERLEY PROPERTY GROUP & TPRC
DESIGNED	AF
DRAWN	IZ
APPROVED	GD
SCALE	1:200@A1
DRAWING TITLE	SOFTSCAPE PLAN
DRAWING No.	12606-CC-PP-LS 301
REVISION	B

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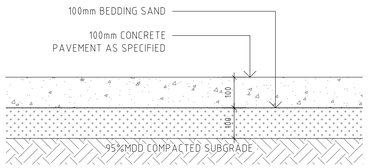
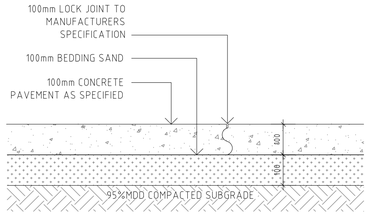
NOTE:
- MINIMUM 1% FALL TO NEAREST PLANTING OR DRAIN
- WHERE CONCRETE PAVING IS ADJACENT TO TURF, FINISH LEVEL OF TURF SHALL BE FLUSH WITH THE FINISH LEVEL OF CONCRETE.
- WHERE CONCRETE PAVING IS ADJACENT TO PLANTING, FINISH LEVEL OF MULCH TO PLANTING SHALL BE 20MM BELOW FINISHED PAVING LEVEL.
- ALL CONCRETE TO BE 32 MPa, MIN 20mm AGGREGATE & MAX SLUMP OF 65mm
- EXPANSION JOINT EVERY 6M, CONTRACTION JOINT EVERY 2M
- FINISH - AS NOMINATED IN LEGEND



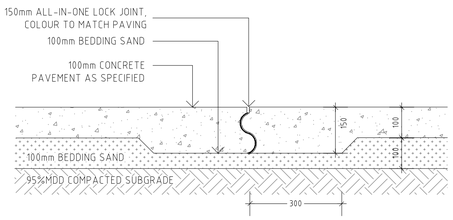
01 / 401 CONCRETE FOOTPATH
TYPICAL DETAIL 1:10 @ A1

NOTE:
- INSTALL LOCK JOINT @ 2m MAX CTS

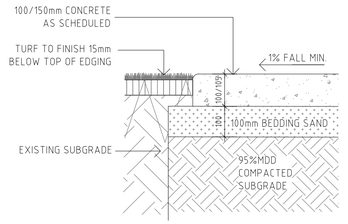


02 / 401 CONTRACTION JOINT - LOCK JOINT
TYPICAL DETAIL 1:10 @ A1

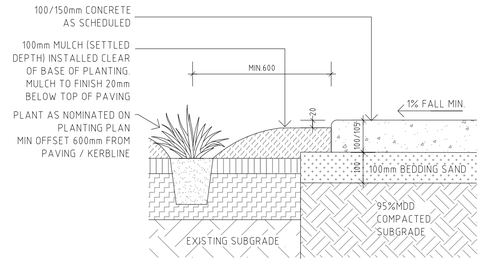
NOTE:
- INSTALL EXPANSION JOINTS @ 6m MAX CTS
- INSTALL WHERE ABUTTING WALLS
- INSTALL WHERE CHANGING CC COLOUR / FINISH



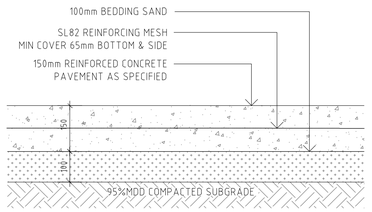
03 / 401 EXPANSION JOINT
TYPICAL DETAIL 1:10 @ A1



04 / 401 CONCRETE PATH TO LAWN
TYPICAL DETAIL 1:10 @ A1

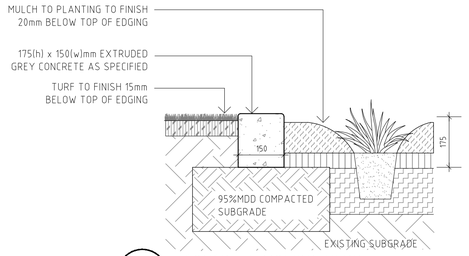


05 / 401 CONCRETE PATH TO GARDEN BED
TYPICAL SECTION 1:10 @ A1

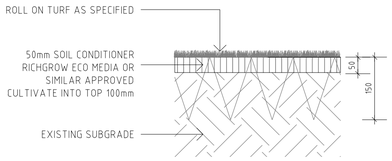


06 / 401 REINFORCED CONCRETE PATH
TYPICAL DETAIL 1:10 @ A1

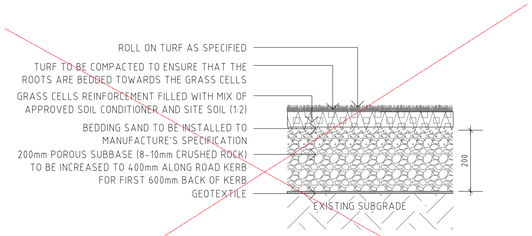
NOTE:
- ALL CONCRETE TO BE 32 MPa, MIN 20mm AGGREGATE & MAX SLUMP OF 65mm



07 / 401 CONCRETE MOWING KERB
TYPICAL DETAIL 1:10 @ A1

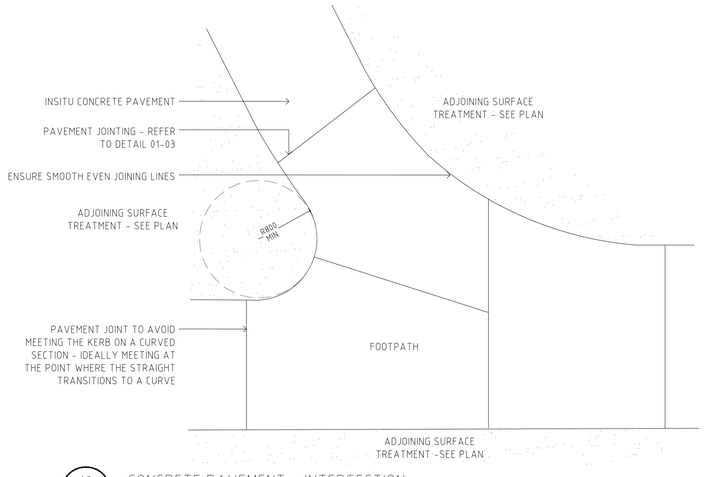


08 / 401 ROLL ON TURF
TYPICAL DETAIL 1:10 @ A1



09 / 401 GRASS REINFORCEMENT PAVING
TYPICAL DETAIL 1:10 @ A1
NOT APPROVED

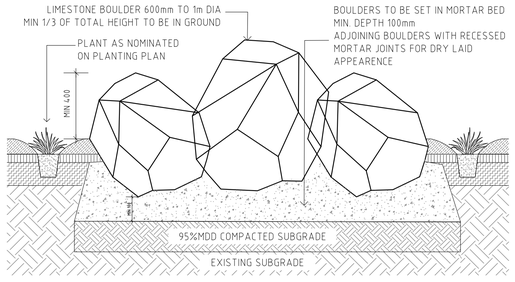
REMOVABLE BOLLARD TO BE INSTALLED AS PER SPECIFICATION PROVIDED VIA EMAIL (TYP)



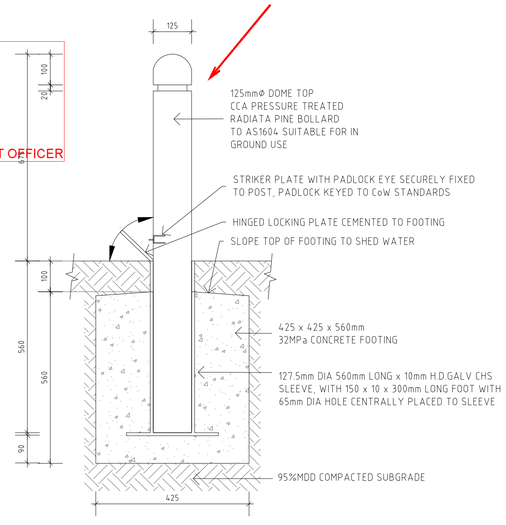
10 / 401 CONCRETE PAVEMENT - INTERSECTION
TYPICAL DETAIL 1:50 @ A1

CITY OF WANNEROO
PLAN APPROVAL
Mark Jumeaux
SENIOR LANDSCAPE
& CONSERVATION DEVELOPMENT OFFICER

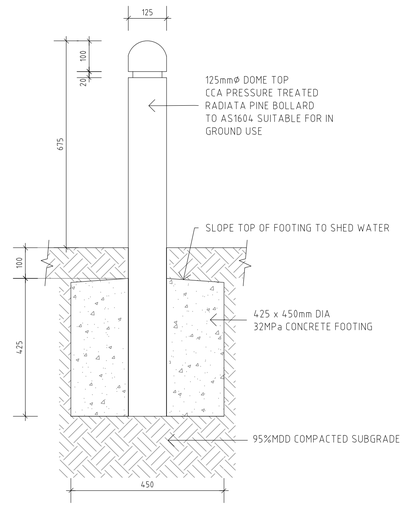
LIMESTONE BOULDERS:
SOURCE: ON SITE
CONTRACTOR TO LIAISE WITH SUPERINTENDENT FOR SOURCING



11 / 401 FEATURE BOULDER
TYPICAL DETAIL 1:20 @ A1



12 / 401 PINE BOLLARD REMOVABLE
TYPICAL DETAIL 1:10 @ A1



13 / 401 PINE BOLLARD FIXED
TYPICAL DETAIL 1:10 @ A1

CATALINA ESTATE
CATALINA BEACH, PORTOFINO PARK STG2

REVISION	DESCRIPTION	BY	DATE
A - DRAFT	ISSUE FOR REVIEW	IZ	16.02.22
A	ISSUE FOR APPROVAL	AF	10.03.22
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DESIGNED	AF
DRAWN	IZ
APPROVED	GD
SCALE	NTS@A1
DRAWING TITLE	DETAILS 1
DRAWING No.	12606-CC-PP-LS 401
REVISION	B

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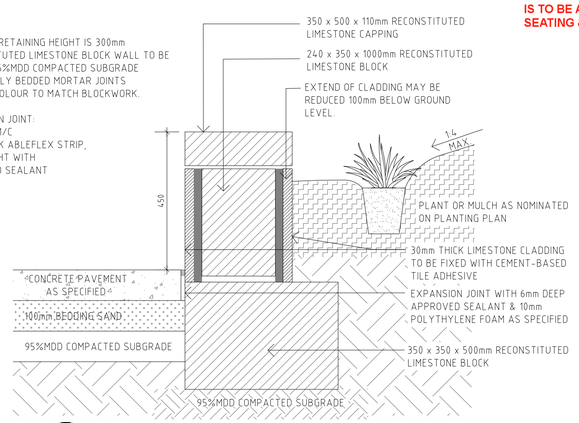
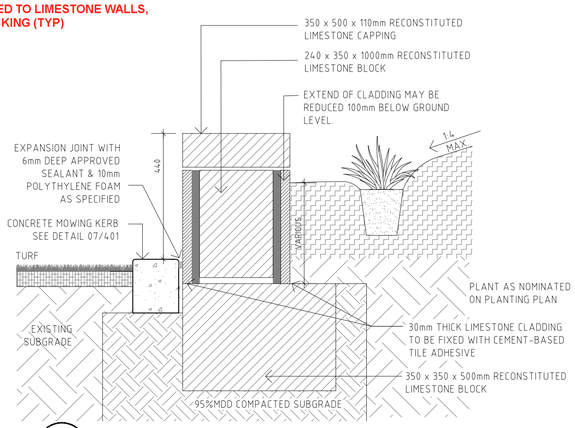
NOTE:
MAXIMUM RETAINING HEIGHT IS 300mm
RECONSTITUTED LIMESTONE BLOCK WALL TO BE LAID ON 95%MDD COMPACTED SUBGRADE
20MM FULLY BEDDED MORTAR JOINTS
MORTAR COLOUR TO MATCH BLOCKWORK.

EXPANSION JOINT:
EVERY 10M/C
10mm THICK ABLEFLEX STRIP,
FULL HEIGHT WITH
APPROVED SEALANT

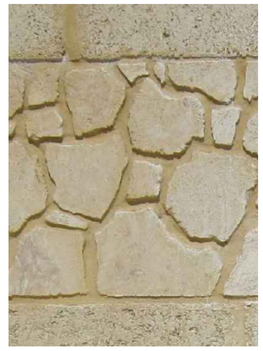


01 402 CONCRETE PATH TO RETAINING WALL
TYPICAL DETAIL 1:10 @ A1

NON SACRIFICAL ANTI-GRAFFITI COATING IS TO BE APPLIED TO LIMESTONE WALLS, SEATING & DECKING (TYP)



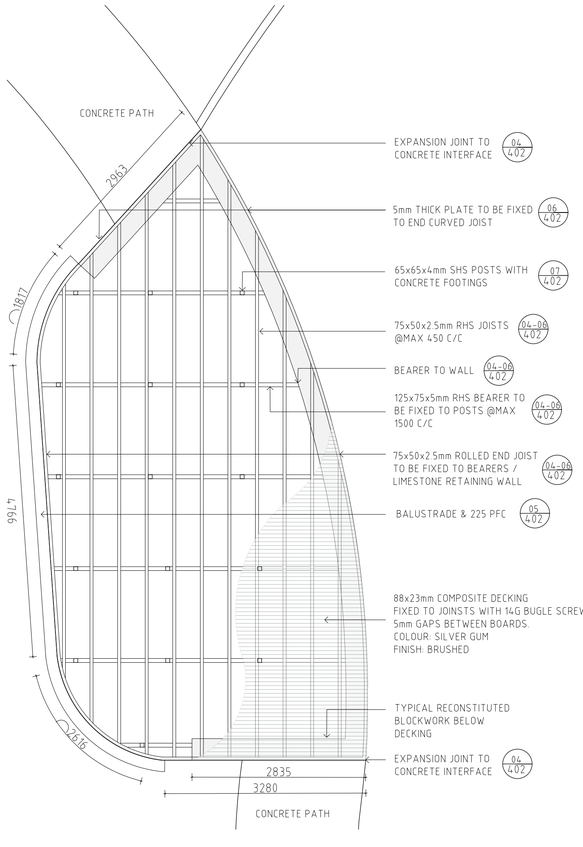
02 402 RETAINING WALL
TYPICAL DETAIL 1:10 @ A1



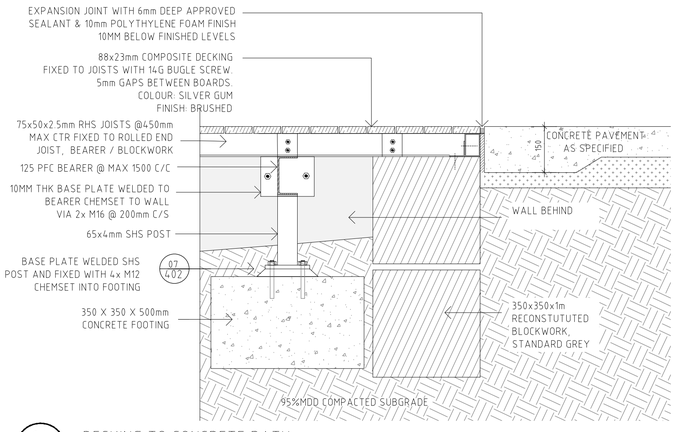
NOTE:
30mm THICK NATURAL CUT LIMESTONE CLADDING TO MATCH EXISTING LIMESTONE RETAINING WALL IN STAGE ONE,
LIMESTONE CLADDING TO BE FIXED WITH CEMENT BASED TILE ADHESIVE.
NO MORTAR OVER SURFACE OF STONE.



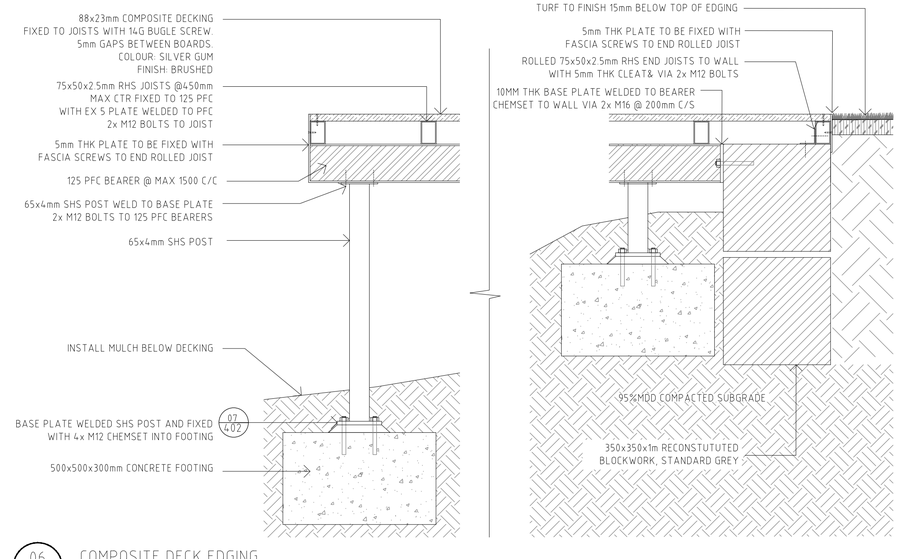
NOTE:
BALUSTRADES CONSTRUCTION REFER TO EXISTING BALUSTRADE DETAILS IN STAGE ONE.



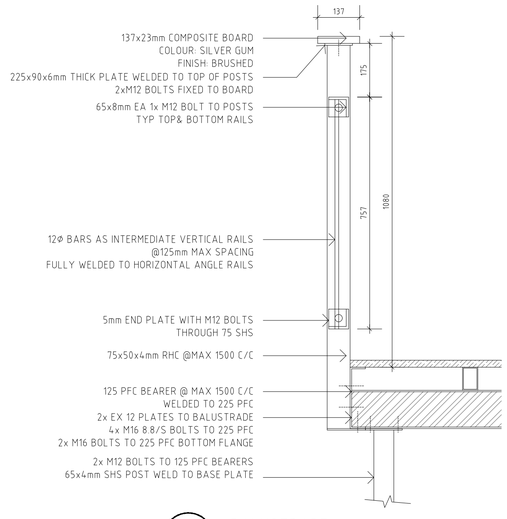
03 402 COMPOSITE DECKING
DETAILED PLAN 1:50 @ A1



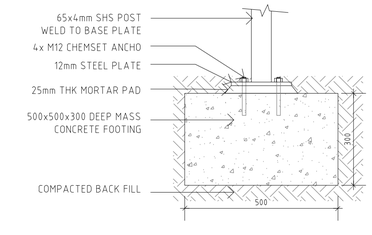
04 402 DECKING TO CONCRETE PATH
TYPICAL DETAIL 1:10 @ A1

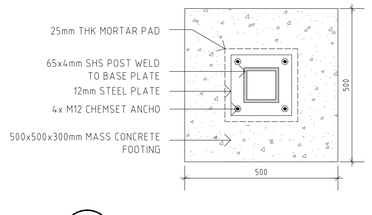


06 402 COMPOSITE DECK EDGING
TYPICAL DETAIL 1:10 @ A1



05 402 BALUSTRADE
TYPICAL DETAIL 1:10 @ A1





07 402 CONCRETE FOOTING
TYPICAL DETAIL 1:10 @ A1

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- THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL SERVICES ON SITE. SERVICES DIAGRAMS ARE PROVIDED AS A GUIDE ONLY. THE CONTRACTOR WILL BE FULLY RESPONSIBLE TO SURVEY SERVICES ON SITE. ANY DAMAGE TO SERVICES IS TO BE RECTIFIED AT THE CONTRACTORS OWN EXPENSE. ANY DAMAGE NEEDS TO BE IMMEDIATELY NOTIFIED TO THE RELEVANT SERVICE PROVIDER.
- THE CONTRACTOR IS TO PROVIDE A FULL TRAFFIC MANAGEMENT PLAN (TMP) FOR APPROVAL BY CITY OF WANNEROO (CoW). THE TMP IS TO BE IMPLEMENTED AND MONITORED AT ALL TIMES DURING CONSTRUCTION WITH WEEKLY UPDATES OF TRAFFIC MANAGEMENT IS OCCURRING.
- THE CONTRACTOR IS TO PROVIDE A FULL OH&S PLAN FOR APPROVAL BY CoW. THE PLAN IS TO BE FULLY IMPLEMENTED AND MONITORED AT ALL TIMES DURING CONSTRUCTION WITH WEEKLY UPDATES PROVIDED BY THE CONTRACTOR OF INCIDENTS ETC.
- ALL SITE SET OUT AND PROPOSED FINISHED LEVELS ARE TO BE CONFIRMED ON SITE WITH THE SUPERINTENDENT PRIOR TO CONSTRUCTION.
- EXISTING GRADES ARE TO BE MAINTAINED.
- VERGES TO HAVE 2-3% CROSSFALL TOWARDS ROAD EDGE.
- ALL EXISTING SITE FEATURES, SUCH AS KERBLINES, PATHS, SIGN POSTS, LIGHT POLES ETC ARE TO BE RETAINED AND PROTECTED UNLESS OTHERWISE NOMINATED ON PLAN.
- WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER MEASUREMENTS.

STEELWORK NOTES:

- CONTRACTOR TO PROVIDE CERTIFIED SHOP DRAWING FOR ALL DECKING INCLUDING ASSOCIATED SUBSTRUCTURE AND BALUSTRADE
- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING THE BUILDING LICENSE FOR THE WORKS. FABRICATION IS NOT TO COMMENCE UNTIL THE BUILDING LICENSE APPROVAL IS IN PLACE AND PROVIDED TO THE SUPERINTENDENT. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE CERTIFICATE OF DESIGN COMPLIANCE FOR ALL SHOP DRAWINGS PROVIDED AS PART OF THE BUILDING LICENSE AND FABRICATION WORKS.
- ALL STEEL FABRICATION AND CONSTRUCTION WORKS TO BE TO ALL RELEVANT AUSTRALIAN STANDARDS.
- ALL STEEL WORK, FIXTURES AND FITTINGS TO BE HOT DIP GALVANISED. GALVANISATION TO BE CARRIED OUT AFTER ALL CUTTING, WELDING AND DRILLING HAS BEEN COMPLETED DURING FABRICATION. NO WELDING OR CUTTING IS TO BE CARRIED OUT ONCE STEEL HAS BEEN GALVANISED.
- ALL WELDS TO BE FULL. NO STITCH WELDING PERMITTED.
- THE CONTRACTOR IS TO PROVIDE A FULL SET OF DETAILED SHOP DRAWINGS FOR ALL STRUCTURES FOR APPROVAL BY THE SUPERINTENDENT PRIOR TO FABRICATION TAKING PLACE.
- FINISH: HOT DIP GALVANISED (HDG).
- EVIDENCE OF COMPACTION TESTING UNDER ALL CONCRETE FOOTINGS, WALLS AND SURFACES IS TO BE PROVIDED BY THE CONTRACTOR.
- ALL SITE SET OUT AND PROPOSED FINISHED LEVELS ARE TO BE AGREED ON SITE WITH THE SUPERINTENDENT PRIOR TO CONSTRUCTION.
- ALL CONCRETE TO BE A MINIMUM OF 32MPA UNLESS OTHERWISE INDICATED ON THE DRAWINGS.

CITY OF WANNEROO
PLAN APPROVAL
Mark Jumeaux
SENIOR LANDSCAPE
& CONSERVATION DEVELOPMENT OFFICER

CATALINA ESTATE
CATALINA BEACH, PORTOFINO PARK STG2

REVISION	DESCRIPTION	BY	DATE
A - DRAFT	ISSUE FOR REVIEW	IZ	16.02.22
A	ISSUE FOR APPROVAL	AF	02.03.22
B	REISSUE FOR APPROVAL	IZ	15.03.22

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DESIGNED	AF
DRAWN	DP
APPROVED	GD
SCALE	NTS@A1
DRAWING TITLE	DETAIL 2
DRAWING No.	12606-CC-PP-LS 402
REVISION	B

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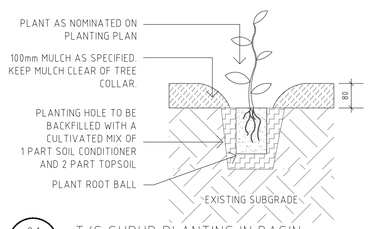
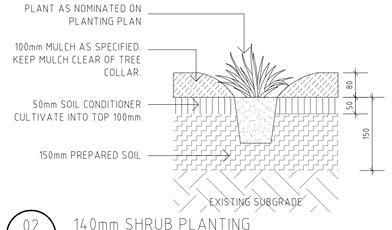


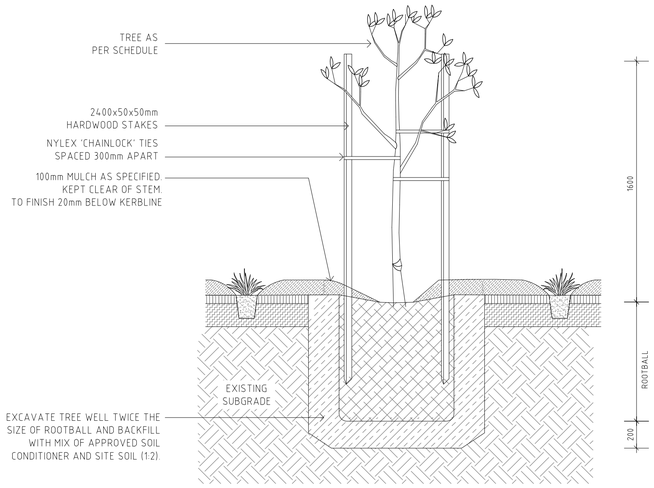
01 403 T/S SHRUB PLANTING IN BASIN
TYPICAL DETAIL 1:10 @ A1



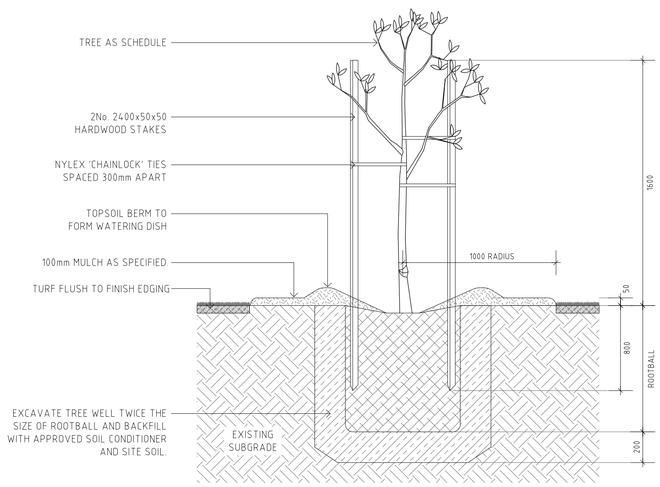
02 403 140mm SHRUB PLANTING
TYPICAL DETAIL 1:10 @ A1

STAKING AND GUYING

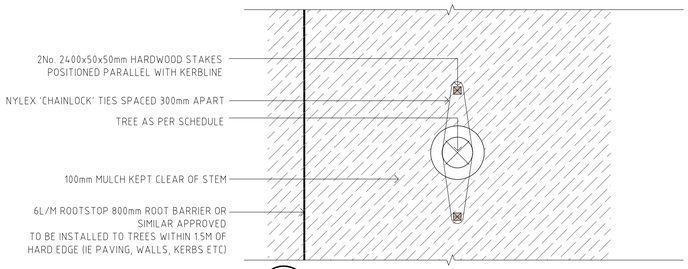
>500LT AND TRANSPLANTS:	UNDERGROUND GUYING
200-500LT TREE STOCK:	3 X 2400x50x50mm HARDWOOD S
45-150LT TREE STOCK:	2 X 1800x50x50mm HARDWOOD S1



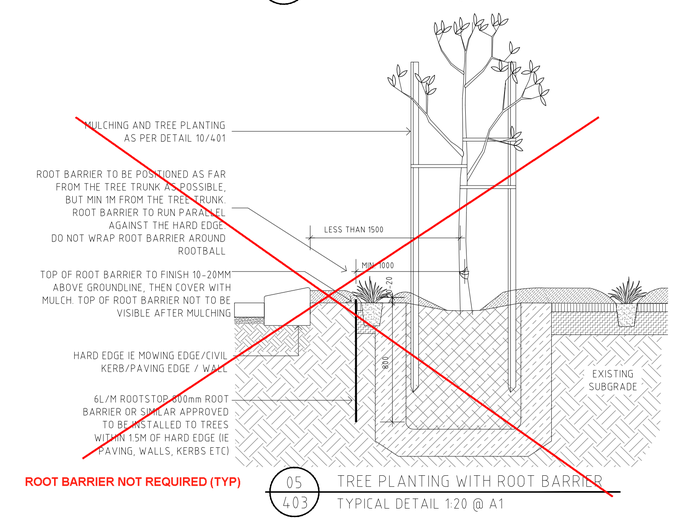
04 403 TREE PLANTING IN GARDEN BED
TYPICAL DETAIL 1:20 @ A1



06 403 TREE PLANTING IN TURF
TYPICAL DETAIL 1:20 @ A1



03 403 45-500L TREE PLANTING
DETAILED PLAN 1:20 @ A1



05 403 TREE PLANTING WITH ROOT BARRIER
TYPICAL DETAIL 1:20 @ A1

Key	Species	Common Name	Plant per m2	Preferred pot size subject to avaibility at time of purchase	Qty
Trees					
EI	Erythrina indica	Coral Tree	As shown	300L	24
MLE	Melaleuca Leucadendra	Weeping Paperbark	As shown	150-200L	7
MLE	Melaleuca Leucadendra	Weeping Paperbark	As shown	100L	3
TT	Tipuana tipu	Pride of Bolivia	As shown	300L	5
TT	Tipuana tipu	Pride of Bolivia	As shown	150-200L	6
MLA	Melaleuca Lanceolata	Rottnest island Tea Tree	As shown	100L	9
ME	Metrosideros excelsa	NZ Christmas Tree	As shown	150-200L	21
BI	Banksia ilicifolia	Holly leaved banksia	As shown	45L	5
CF	Corymbia ficifolia	Red Flowering Gum	As shown	100L	9
EG	Eucalyptus gomphocephala	Tuart	As shown	45L	5
MLA	Melaleuca Lanceolata	Rottnest island Tea Tree	As shown	45L	6
ED	Eucalyptus decipiens	Limestone Marlock	As shown	45L	6
MV	Melaleuca viridiflora	Red Flowering Paperbark	As shown	45L	4
Shrubs and groundcovers - Mix 1 (Low shrubs)					
As	Acacia lasaiocarpa 'Prostrate'	Dwarf Wattle	6	140mm	674
Ca	Conostylis aculeata	Cottonhead	6	140mm	674
Cv	Carpobrotus virescens	Pigface	6	140mm	674
Ec	Eremophila 'Carramar Carpet'	Emu Bush	6	140mm	673
Gc	Grevillea crithmifolia 'Prostrate'	Green Carpet	6	140mm	673
Ho	Hibbertia 'Ocean Reef'	Glossy-Leaved Coastal Guinea Flower	6	140mm	673
Hp	Hemiandra pungens	Purple Snake Bush	6	140mm	672
Hs	Hibbertia 'Golden Sunburst'	Golden Sunburst Guinea Flower	6	140mm	672
Mp	Myoporum parvifolium 'Purpurea'	Creeping Boobialla	6	140mm	672
Oam	Olearia axillaris 'Mini'	Coastal Daisy Bush	6	140mm	672
Om	Orthrosanthus multiflorus	Morning Iris	6	140mm	672
Wm	Westringia 'Mundi'	Dwarf Coast Rosemary	6	140mm	672
Shrubs and groundcovers - Mix 2 (Medium shrubs)					
Dr	Dianella revoluta	Flax Lily	6	140mm	183
Go	Grevillea olivacea	Olive leaf grevillea	6	140mm	183
Lb	Leucophyta brownii	Cushion Bush	6	140mm	181
Ll	Lomandra longifolia	Spiny Headed Mat Rush	6	140mm	180
Ml	Melaleuca 'Little Nessie'	Dwarf Honey Myrtle	6	140mm	178
Tr	Templetonia retusa	Cockies Tongue	6	140mm	178
Wd	Westringia dampieri	Shore Westringia	6	140mm	178
Wf	Westringia fruticosa	Coast Rosemary	6	140mm	178
Shrubs and groundcovers - Mix 3 (Medium to Tall shrubs)					
Mh	Melaleuca huegelii	Chenille Honey-Myrtle	6	140mm	671
Go	Grevillea olivacea	Olive leaf grevillea	6	140mm	667
Oa	Olearia axillaris	Coastal Daisy Bush	6	140mm	666
Ml	Melaleuca 'Little Nessie'	Dwarf Honey Myrtle	6	140mm	666
Lg	Lepidosperma gladiatum	Coast Sword Sedge	6	140mm	666
Shrubs and groundcovers - Mix 4 (Basin)					
Dr	Dianella revoluta	Flax Lily	8	tube	1204
Go	Grevillea olivacea	Olive leaf grevillea	8	tube	1204
Lg	Lepidosperma gladiatum	Coast Sword Sedge	8	tube	1204
Mh	Melaleuca huegelii	Chenille Honey-Myrtle	8	tube	1204
Oa	Olearia axillaris	Coastal Daisy Bush	8	tube	1204
Om	Orthrosanthus multiflorus	Morning Iris	8	tube	1204
Sc	Scaevola crassifolia	Fanflower	8	tube	1204
Tr	Templetonia retusa	Cockies Tongue	8	tube	1204

07 403 OVERALL PLANT SCHEDULE
N/A

GENERAL NOTES:

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PLANTING NOTES:

- PROPOSED TREES MAY BE REALIGNED BASED ON SERVICES LOCATIONS WHERE APPROVED BY SUPERINTENDENT.
- SHRUB AND GROUNDCOVER PLANTING OFFSET: MIN 600mm FROM ROAD EDGES, KERBLINES AND OTHER HARD EDGE.
- FOR SHRUB PLANTING MIXES: PLANTS ARE TO BE PLANTED IN GROUPS OF 7-9-11 OF EACH SPECIES.
- FOR OVERALL PLANT SCHEDULES, REFER TO DRAWING LS403
- FOR ALL HARD AND SOFTSCAPE DETAILS, REFER TO DETAILS LS401-403
- FOR ALL MATERIALS AND FURNITURE SELECTIONS, REFER TO SCHEDULES (LS403) AND SPECIFICATION
- POT SIZES ARE INDICATIVE AND SUBJECT TO STOCK AVAILABILITY AT TIME OF PROCUREMENT.
- TREES NOMINATED ON PLAN AND/OR LOCATED WITHIN 1.5M OF HARD EDGE/PAVING/KERBLINE ARE TO BE INSTALLED WITH 6M LONG 800MM DEEP ROOT CONTROL BARRIER POSITIONED AGAINST THE HARD EDGE WITH TOP OF RCB TO BE 50MM BELOW TOP OF MULCH.

CITY OF WANNEROO
PLAN APPROVAL
Mark Jumeaux
SENIOR LANDSCAPE
& CONSERVATION DEVELOPMENT OFFICER

FERTILISER SCHEDULE AT INSTALLATION (REFER TO SPEC):		
LANGLEY AND AGRIFORM FERTILISER TABLETS OR SIMILAR APPROVED	TREE STOCK	4 TABLETS PER TREE
BAYLEYS NATIVE PLANT FOOD FERTILISER GRANULES OR SIMILAR APPROVED	SHRUBS AND GROUNDCOVERS	15g PER T/S 20g PER 130/140mm STOCK

SPECIFICATION NOTE:		
SOIL CONDITIONER	TO TURF & GARDEN BED BASIN & SWALES	RICHGRO METRO OR SIMILAR APPROVED RICHGRO ECO MEDIA OR SIMILAR APPROVED
TURF	AS INDICATED ON DRAWINGS	KIKUYU (Pennisetum clandestinum)
REINFORCED TURF	MAINTENANCE ACCESS	RODCYCLE GR RECYCLED PLASTIC TURF REINFORCEMENT MAT OR SIMILAR APPROVED
CONCRETE	PATHS, KERBS AND FOOTINGS	MIN 32MPA, MIN 20mm AGGREGATE & MAX SLUMP OF 65mm STANDARD GREY FINISH TO PATHS: BRUSH WITH NO PICTURE FRAME EDGES
GEOTEXTILE FABRIC	AS INDICATED ON DETAIL DRAWINGS	BIDIM A12 OR SIMILAR APPROVED
MULCH	GARDEN BEDS	PINE BARK MULCH
BOULDERS	GARDEN BED	SALVAGED LIMESTONE
BLOCKWORK	RETAINING WALL	RECONSTITUTED METER BLOCK 'LIMESTONE' FROM BRIKMAKERS OR SIMILAR APPROVED 350/240 AND 350x350x500 AS DETAILED MIN BULK DENSITY 1600kg/m³
CAPPING	RETAINING WALL	RECONSTITUTED 350/500/110
CLADDING	RETAINING WALL	30mm THICK NATURAL CUT LIMESTONE
PARK FURNITURE	BENCH SEATS	'URBAN EDGE' STREET FURNITURE FROM COX URB: SAT m332 E BENCH SEAT 3 BACKRESTS AND 2 CENTRAL ARMRESTS(FINISH: CLEAR ANODISED FINISH) FRAME - ALUMINUM SEAT MATERIAL: RECYCLED PLASTIC INSTALLATION REFER TO MANUFACTURE'S DESIGN
BOLLARD FIXED	TURF EDGING	125mmΦ DOME TOP CCA PRESSURE TREATED RADIATA PINE BOLLARD TO AS1604 SUITABLE FOR IN GROUND USE
BOLLARD REMOVABLE	TURF EDGING	125mmΦ DOME TOP CCA PRESSURE TREATED RADIATA PINE BOLLARD TO AS1604 SUITABLE FOR IN GROUND USE STRIKER PLATE WITH PADLOCK EYE TO CoW STANDARDS HINGED LOCKING PLATE
DECKING	COMPOSITE BOARD	88x23mm COMPOSITE BOARD COLOUR: SILVER GUM FINISH: BRUSHED
	JOIST	75x50x2.5mm RHS @450mm, HDG STEEL
	BEARER	125 PFC @MAX 1500 C/C, HDG STEEL
	FASCIA	5mm THICK, HDG STEEL
	LEGS	65x4mm SHS POST, HDG STEEL
BALUSTRADE	POST	75x50x4mm RHC, HDG STEEL
	INFILL	12mm DIAMETER BARS, HDG STEEL
	HANDRAIL	137x23mm COMPOSITE BOARD COLOUR: SILVER GUM FINISH: BRUSHED

CATALINA ESTATE
CATALINA BEACH, PORTOFINO PARK STG2

REVISION	DESCRIPTION	BY	DATE
A - DRAFT	ISSUE FOR REVIEW	AF	16.02.22
B	REISSUE FOR APPROVAL	AF	02.03.22
		IZ	15.03.22

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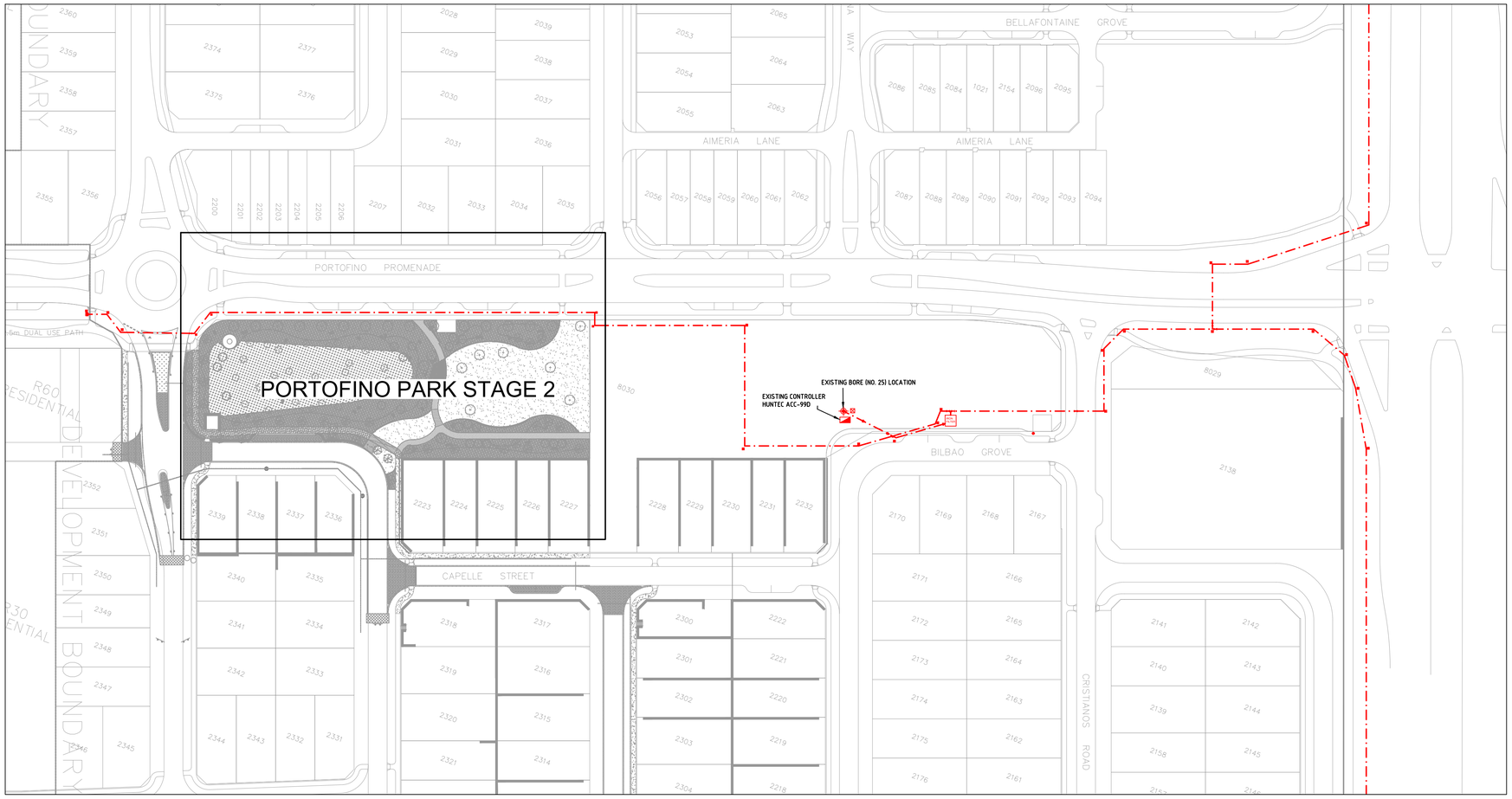
CLIENT	SATTERLEY PROPERTY GROUP & TPRC		
DESIGNED	AF	DRAWING TITLE	DETAILS 3, SPEC & SCHEDULES
DRAWN	IZ		
APPROVED	GD	DRAWING NO.	12606-CC-PP-LS 403
SCALE	NTS@A1		REVISION B

CATALINA PORTOFINO PARK STAGE 2

IRRIGATION WORKS



CITY OF WANNEROO
PLAN APPROVAL

Mark Jumeaux

SENIOR LANDSCAPE
& CONSERVATION DEVELOPMENT OFFICER

REVISED

AUTOCAD FILENAME: Portofino Park Stg2 Design (Rev C).dwg

REV	DATE	DESCRIPTION	DWN	CKD
A	18/03/2022	ISSUED FOR APPROVAL	RV	JS
B	20/05/2022	ADDITIONAL IRRIGATION LAYOUT FOR SWALE AREA	R.V	J.S
C	05/07/2022	REVISED IRRIGATION IN THE TURF AREAS	R.V	J.S

REV	DATE	DESCRIPTION	DWN	CKD

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NewGround DESIGN SERVICES

SCALE :	1 : 200 @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

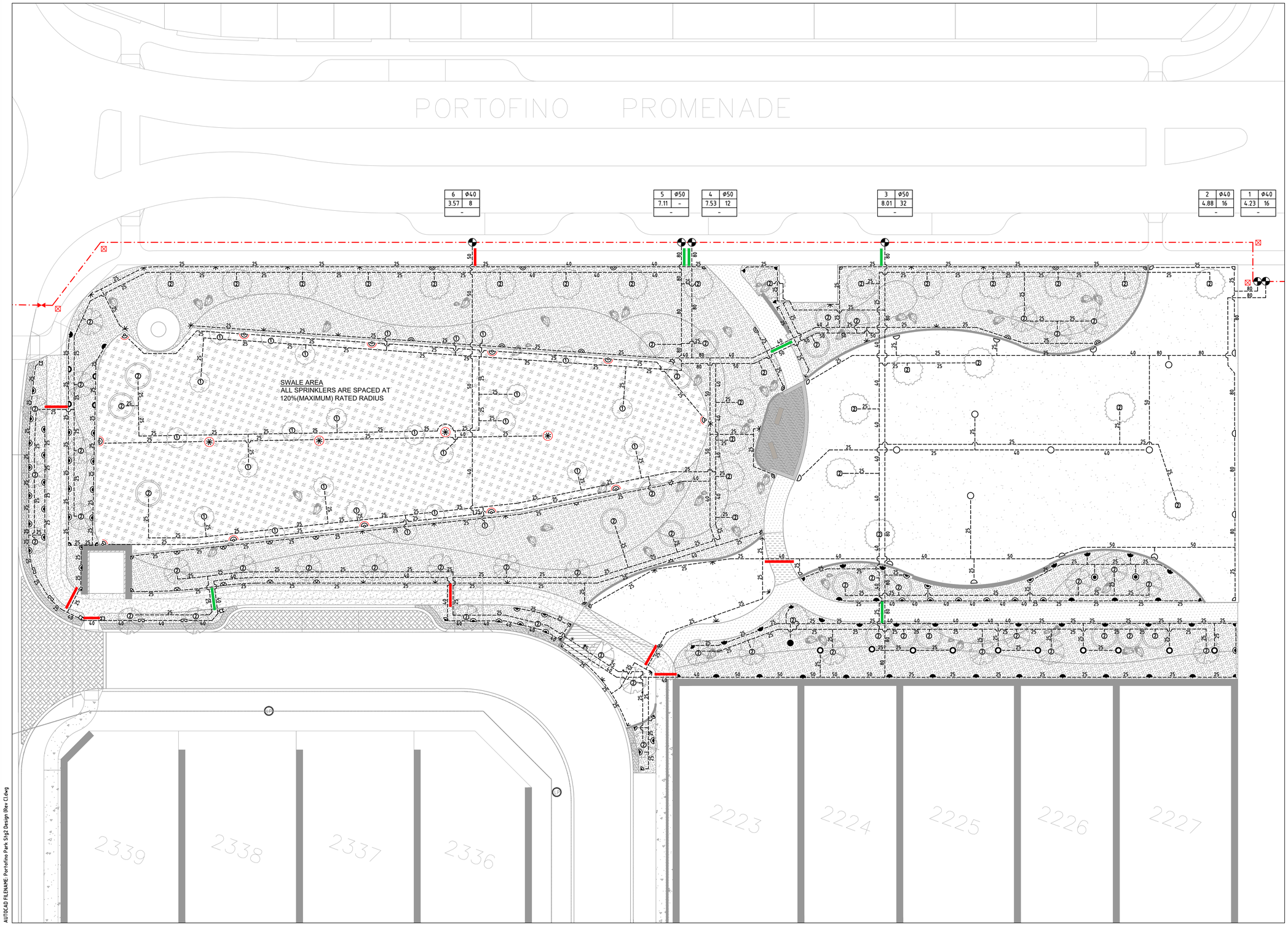
CLIENT :

TIM DAVIES LANDSCAPING

PROJECT :

CATALINA PORTOFINO PARK STAGE 2
IRRIGATION WORKS (KEY PLAN)
-

DATE :	DESIGN NO. :	SHEET NO. :
18/03/2022	18384-00	COVER PAGE



AUTOCAD FILENAME: Portofino Park Stg2 Design (Rev C).dwg

LEGEND: "SPRINKLERS"

SYMBOL	BRAND NAME	MODEL DESCRIPTION	NOZZ. NO.	PRESS. (KPA)	FLOW (LPM)	RADIUS (M)
	HUNTER	I-20-04-SS	8.0	350	32.6	13.7
	HUNTER	I-20-04-SS	4.0	350	16.2	12.2
	HUNTER	I-20-04-SS	3.0	350	12.3	11.9
	HUNTER	I-20-04-SS	2.5	350	9.7	10.7
	HUNTER	I-20-04-SS	2.0LA	350	8	8.5
	HUNTER	I-20-04-SS	1.0SR	350	3.8	5.5
	HUNTER	I-20-12	3.0	350	12.3	11.9
	HUNTER	I-20-12	4.5LA	350	16.6	10.7
	TORO	570Z-12P	15	250	2.84-11.36	4.6
	TORO	570Z-12P	12	250	1.82-7.27	3.7
	TORO	570Z-12P	10	250	1.25-5.04	3.0
	TORO	570Z-12P	4EST	250	1.63	1.2x4.4
	TORO	570Z-12P	4SST	250	3.33	1.2x9.1

LARGE GARDEN AREAS - TO HAVE HUNTER I-20-12 ON A Ø20x300mm POLY ARTIC RISER
SMALL GARDEN AREAS - TO HAVE TORO 570Z-12P'S (PART & FULL CIRCLES) ON A Ø15 x 300mm POLY ARTIC RISER (NOZZLES AS SHOWN)

SWALE AREA - TO HAVE HUNTER I-20-12 ON A Ø20x300mm POLY ARTIC RISER (NOZZLES AS SHOWN)
ALL SPRINKLERS ARE SPACED AT 120% RATED RADIUS

1 45 L	1-TORO FLOOD BUBBLERS MODEL FB-50PC ON A TORO 570Z-6P WITH BLUE FLEX 1.63 LPM @ 250 kPA
2 100/200 L	2-TORO FLOOD BUBBLERS MODEL FB-50PC ON A TORO 570Z-6P WITH BLUE FLEX 3.26 LPM @ 250 kPA
2 300 L	2-TORO FLOOD BUBBLERS MODEL FB-100PC ON A TORO 570Z-6P WITH BLUE FLEX 7.06 LPM @ 250 kPA
	BERMAD 200 SERIES SOLENOID CONTROL VALVE SIZE AS SHOWN
	EXISTING BORE LOCATION
	EXISTING IRRIGATION CONTROLLER : HUNTER-ACC 99D
	EXISTING MAINLINE ISOLATION VALVE
	EXISTING P2 CABLE PIT
	EXISTING DN100 mPVC RRJ CLASS 12 MAINLINE
25	uPVC SWJ CLASS 9 LATERAL LINE SIZE AS SHOWN
	DN100 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR
	DN150 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR

STATION DATA

ST'N NO.	FLOW (L/s)	PR. (kPa)	PR'N mm hr	APP'N mm week	ST'N TIME (min)	AREA TYPE
1	9.11	350	16	40	30	TURF
2	8.01	250	32	40	15	GARDEN
3	7.53	350	12	40	40	GARDEN
4	7.11	250	–	–	15	TREES
5	3.57	350	8	25	37	SWALE

VALVE DATA

VAL. NO.	FLOW (L/s)	DECODER NO.
1	4.23	–
2	4.88	–
3	8.01	–
4	7.53	–
5	7.11	–
6	3.57	–

DAILY RUN TIME: 2 HRS & 17 MIN WEEKLY RUN TIME: 11 HRS & 25 MIN

VALVE LABEL LEGEND

VALVE NO / FLOW (LPS)

2	Ø50 VALVE SIZE
3.29	32 PRECIPITATION RATE
–	DECODER NO.

NOTE:
1. LATERAL PIPES ARE TO BE INSTALLED TO A MINIMUM DEPTH OF 350mm.
2. THE CONTRACTOR TO UNDERTAKE FLOW (PRESSURE) ADJUSTMENT OF ALL SOLENOID VALVES IN ACCORDANCE WITH THE NOMINAL OPERATING PRESSURE OF THE SPRINKLERS ATTACHED TO THE PARTICULAR SOLENOID VALVE.

REVISED

ADD FULL CIRCLE SPRINKLER TO VALVE #2 AND MOVE SOME OF THE PART CIRCLE SPRINKLERS TO VALVE #1 TO COMPENSATE (TYP)

CITY OF WANNEROO
PLAN APPROVAL
Mark Jumeaux
SENIOR LANDSCAPE & CONSERVATION DEVELOPMENT OFFICER

CERTIFIED IRRIGATION DESIGNER IRRIGATION AUSTRALIA 1702616 Irrigation & Turf Conditions

0 2 4 6 8 10m
SCALE 1:200 ON A1

REV	DATE	DESCRIPTION	DWN	CKD
A	18/03/2022	ISSUED FOR APPROVAL	RV	JS
B	20/05/2022	ADDITIONAL IRRIGATION LAYOUT FOR SWALE AREA	R.V	J.S
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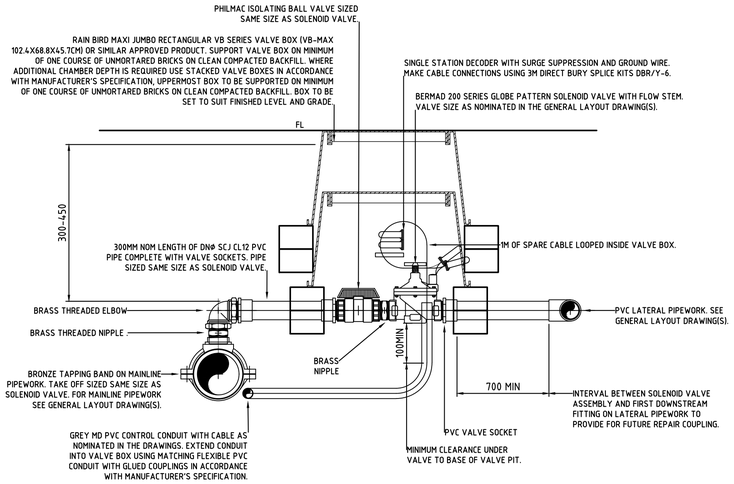
SCALE :	1 : 200 @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT :
TIM DAVIES LANDSCAPING

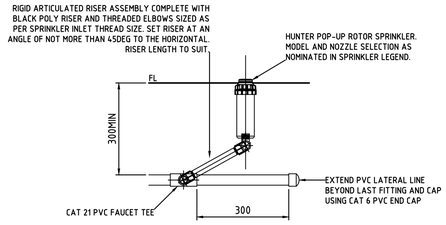
PROJECT :
CATALINA PORTOFINO PARK STAGE 2
IRRIGATION WORKS
-

DATE :	DESIGN NO. :	SHEET NO. :
18/03/2022	18384-01	1 OF 2



TYPICAL GLOBE PATTERN SOLENOID VALVE INSTALLATION

NOT TO SCALE



TYPICAL POP-UP ROTOR SPRINKLER INSTALLATION ON PVC PIPEWORK

NOT TO SCALE

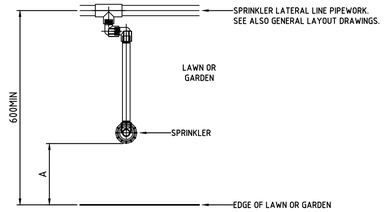
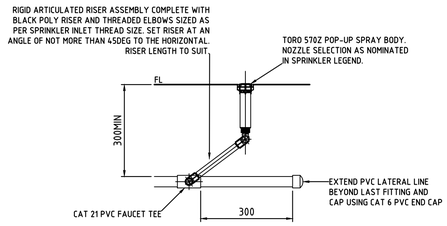


TABLE OF SPRINKLER OFFSETS			
EDGE TYPE	DIMENSION A		
	SPRAY†	ROTOR†	
BACK OF KERB OR EDGE OF PAVEMENT.	100	300	
GARDEN WALL WITH NO MOWING STRIP.	200	200	
BUILDING FACADE WITH NO MOWING STRIP.	600	600	
† SPRINKLER TYPE. SEE GENERAL LAYOUT DRAWINGS.			

SPRINKLER AND LATERAL PIPE OFFSETS FROM LAWN AND GARDEN EDGES

NOT TO SCALE



TYPICAL POP-UP SPRAY SPRINKLER INSTALLATION ON PVC PIPEWORK

NOT TO SCALE

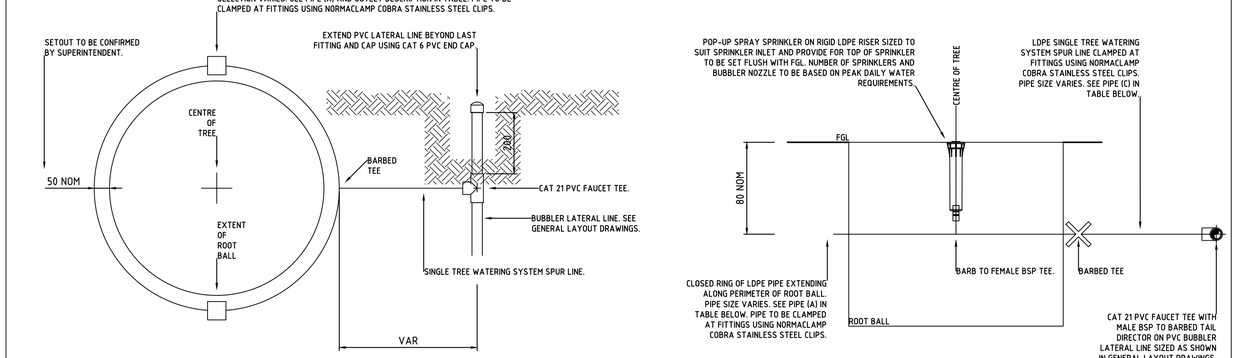
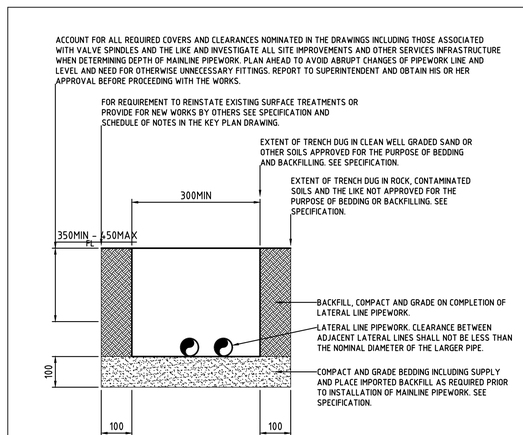


TABLE OF TREE WATERING SYSTEMS†						
SYSTEM	PLANT STOCK‡	SYSTEM FLOW(L/MIN)	20MIN VOL (L)¥	PIPE (A)	PIPE (B)	PIPE (C)
-	-	0-6	-	DN19	-	DN19
-	-	6-15	-	DN19	-	DN25
-	-	15-30	-	DN25	-	DN25

† SYSTEM DESIGN BASED ON THE PEAK DAILY WATER REQUIREMENTS SUPPLIED BY NURSERY INDUSTRY SOURCES AND OTHERS
‡ BAG STOCK SIZE (L) AND/OR NOMINAL DIAMETER OF TRANSPLANT ROOT BALL (M).
¥ VOLUME PROVIDED BY A 20MIN RUN TIME. RUN TIME TO BE ADJUSTED IN ACCORDANCE WITH PLANT WATER REQUIREMENTS AND CLIMATIC CONDITIONS.

TREE WATERING SYSTEMS

NOT TO SCALE



TYPICAL ARRANGEMENT OF MULTIPLE PIPES IN A COMMON TRENCH

NOT TO SCALE

CITY OF WANNEROO
PLAN APPROVAL
Mark Jumeaux
SENIOR LANDSCAPE
& CONSERVATION DEVELOPMENT OFFICER

REVISED

REV	DATE	DESCRIPTION	DWN	CKD
A	18/03/2022	ISSUED FOR APPROVAL	RV	JS
B	20/05/2022	ADDITIONAL IRRIGATION LAYOUT FOR SWALE AREA	R.V	J.S
C	05/07/2022	REVISED IRRIGATION IN THE TURF AREAS	R.V	J.S

REV	DATE	DESCRIPTION	DWN	CKD

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NewGround DESIGN SERVICES

SCALE :	1 : NTS @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT :
TIM DAVIES LANDSCAPING

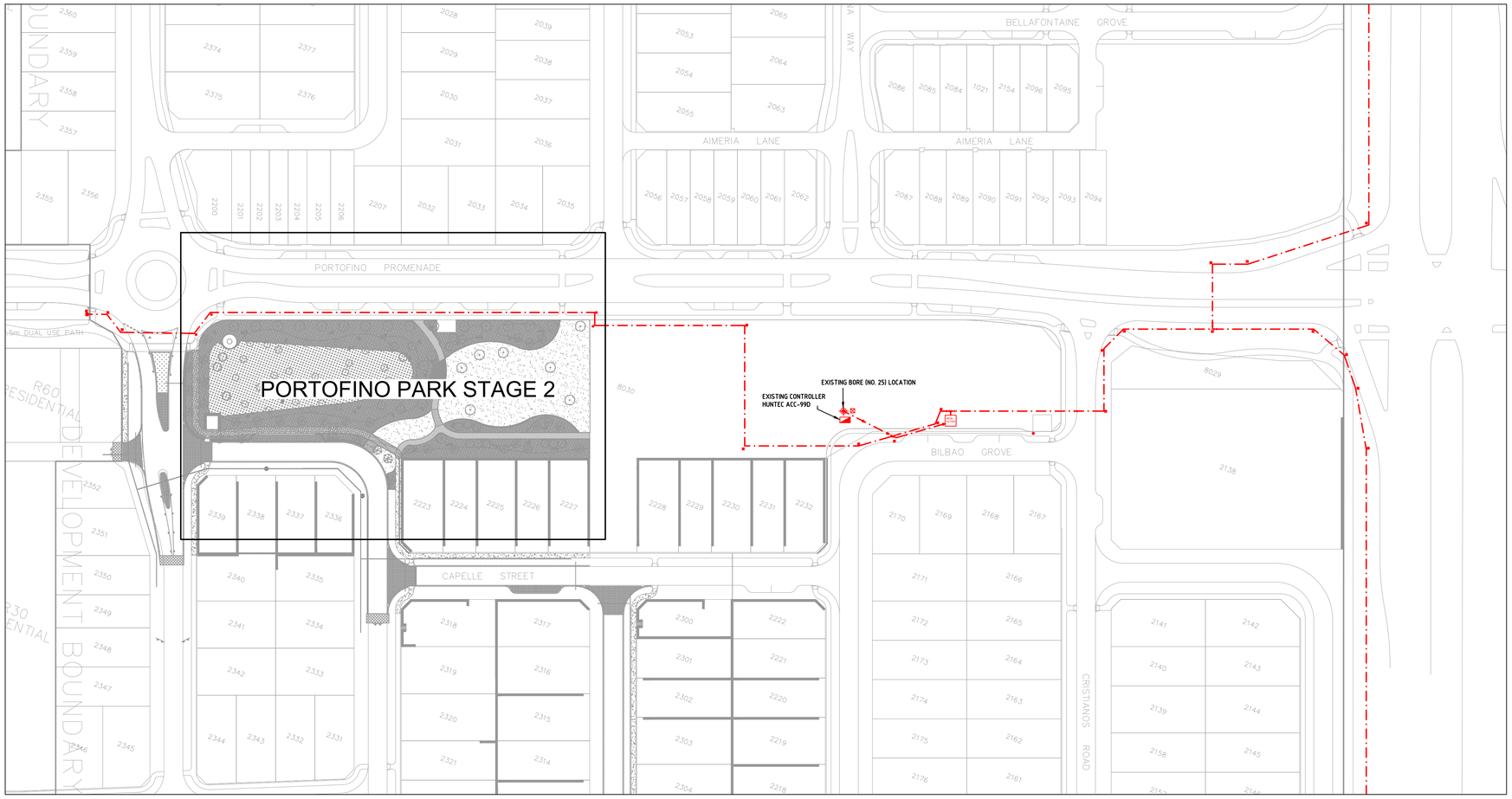
PROJECT :
CATALINA PORTOFINO PARK STAGE 2
IRRIGATION WORKS (TYPICAL DETAILS)
-

DATE :	DESIGN NO. :	SHEET NO. :
18/03/2022	18384-02	2 OF 2

AUTOCAD FILENAME: Portofino Park Stg2 Design (Rev C).dwg

CATALINA PORTOFINO PARK STAGE 2

IRRIGATION WORKS



CITY OF WANNEROO
PLAN APPROVAL

Mark Jumeaux

SENIOR LANDSCAPE
& CONSERVATION DEVELOPMENT OFFICER

SUPERSEDED

AUTOCAD FILENAME: Portofino Park Stg2 Design (Rev A).dwg

REV	DATE	DESCRIPTION	DWN	CKD
A	18/03/2022	ISSUED FOR APPROVAL	RV	JS

REV	DATE	DESCRIPTION	DWN	CKD

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NewGround DESIGN SERVICES

SCALE :	1 : 200 @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

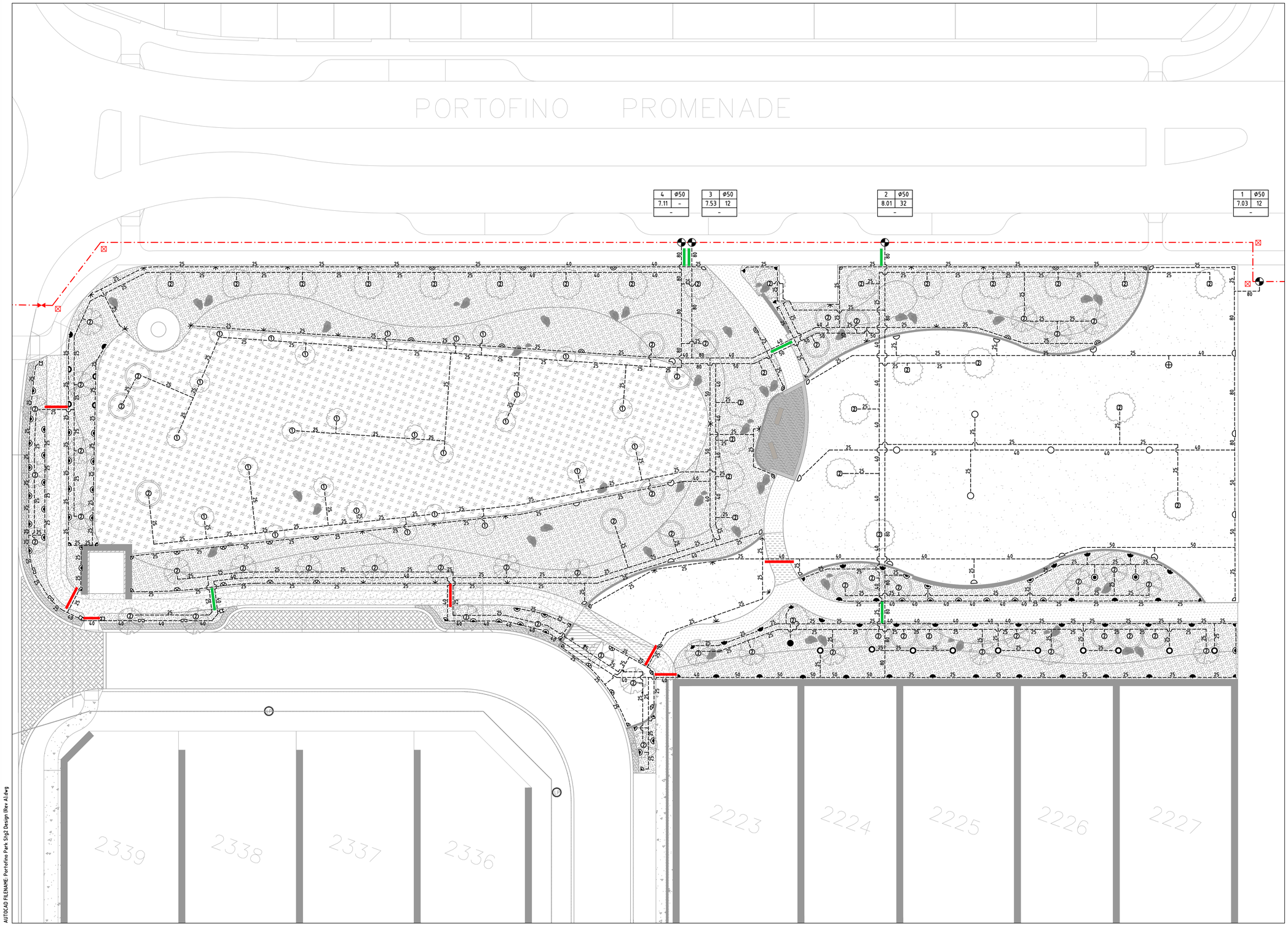
CLIENT :

TIM DAVIES LANDSCAPING

PROJECT :

CATALINA PORTOFINO PARK STAGE 2
IRRIGATION WORKS (KEY PLAN)
-

DATE :	DESIGN NO. :	SHEET NO. :
18/03/2022	18384-00	COVER PAGE



AUTOCAD FILENAME: Portofino Park Stg2 Design (Rev A).dwg

LEGEND: "SPRINKLERS"

SYMBOL	BRAND NAME	MODEL DESCRIPTION	NOZZ. NO.	PRESS. (KPA)	FLOW (LPM)	RADIUS (M)
	HUNTER	I-20-04-SS	6.0	350	24.5	13.1
	HUNTER	I-20-04-SS	3.0	350	12.3	11.9
	HUNTER	I-20-04-SS	2.5	350	9.7	10.7
	HUNTER	I-20-04-SS	4.5LA	350	16.6	10.7
	HUNTER	I-20-04-SS	2.0LA	350	8	8.5
	HUNTER	I-20-04-SS	1.0SR	350	3.8	5.5
	TORO	570Z-12P	15	250	2.84-11.36	4.6
	TORO	570Z-12P	12	250	1.82-7.27	3.7
	TORO	570Z-12P	10	250	1.25-5.04	3.0
	TORO	570Z-12P	4EST	250	1.63	1.2x4.4
	TORO	570Z-12P	4SST	250	3.33	1.2x9.1

LARGE GARDEN AREAS - TO HAVE HUNTER I-20-12 ON A Φ20x300mm POLY ARTIC RISER
SMALL GARDEN AREAS - TO HAVE TORO 570Z-12P'S (PART & FULL CIRCLES) ON A Φ15 x 300mm POLY ARTIC RISER (NOZZLES AS SHOWN)

① 45 L	1-TORO FLOOD BUBBLERS MODEL FB-50PC ON A TORO 570Z-6P WITH BLUE FLEX 1.63 LPM @ 250 kPA
② 100/200 L	2-TORO FLOOD BUBBLERS MODEL FB-50PC ON A TORO 570Z-6P WITH BLUE FLEX 3.26 LPM @ 250 kPA
② 300 L	2-TORO FLOOD BUBBLERS MODEL FB-100PC ON A TORO 570Z-6P WITH BLUE FLEX 7.06 LPM @ 250 kPA
	BERMAD 200 SERIES SOLENOID CONTROL VALVE SIZE AS SHOWN
	EXISTING BORE LOCATION
	EXISTING IRRIGATION CONTROLLER : HUNTER-ACC 99D
	EXISTING MAINLINE ISOLATION VALVE
	EXISTING P2 CABLE PIT
	EXISTING DN100 mPVC RRJ CLASS 12 MAINLINE
25	uPVC SWJ CLASS 9 LATERAL LINE SIZE AS SHOWN
	DN100 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR
	DN150 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR

STATION DATA

ST'N NO.	FLOW (L/s)	PR. (kPa)	PR'N mm hr	APP'N mm week	ST'N TIME (min)	AREA TYPE
1	7.03	350	12	40	40	TURF
2	8.01	250	32	40	15	GARDEN
3	7.53	350	12	40	40	GARDEN
4	7.11	250	–	–	15	TREES

VALVE DATA

VAL. NO.	FLOW (L/s)	DECODER NO.
1	7.03	–
2	8.01	–
3	7.53	–
4	7.11	–

DAILY RUN TIME: 1 HRS & 50 MIN WEEKLY RUN TIME: 9 HRS & 10 MIN

VALVE LABEL LEGEND

VALVE NO / FLOW (LPS)

2	ø50 VALVE SIZE
3.29	32 PRECIPITATION RATE
–	DECODER NO.

NOTE:
1. LATERAL PIPES ARE TO BE INSTALLED TO A MINIMUM DEPTH OF 350mm.
2. THE CONTRACTOR TO UNDERTAKE FLOW (PRESSURE) ADJUSTMENT OF ALL SOLENOID VALVES IN ACCORDANCE WITH THE NOMINAL OPERATING PRESSURE OF THE SPRINKLERS ATTACHED TO THE PARTICULAR SOLENOID VALVE.

CITY OF WANNEROO
PLAN APPROVAL
Mark Jumeaux
SENIOR LANDSCAPE
& CONSERVATION DEVELOPMENT OFFICER

SUPERSEDED

CERTIFIED IRRIGATION DESIGNER – IRRIGATION AUSTRALIA – LTD4788 – IRRIGATION | TURF | COMMERCIAL

0 2 4 6 8 10m
SCALE 1:200 ON A1

REV	DATE	DESCRIPTION	DWN	CKD
A	18/03/2022	ISSUED FOR APPROVAL	RV	JS

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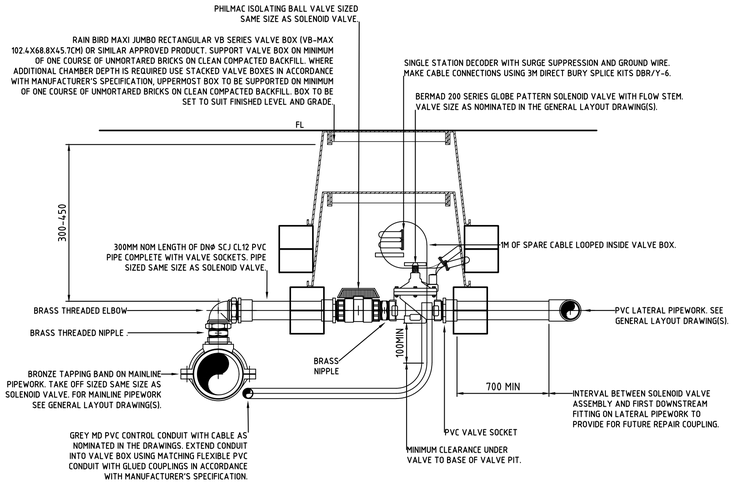
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT : TIM DAVIES LANDSCAPING

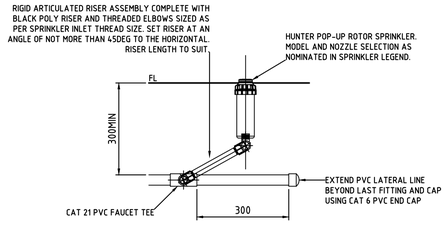
PROJECT : CATALINA PORTOFINO PARK STAGE 2 IRRIGATION WORKS -

DATE :	DESIGN NO. :	SHEET NO. :
18/03/2022	18384-01	1 OF 2



TYPICAL GLOBE PATTERN SOLENOID VALVE INSTALLATION

NOT TO SCALE



TYPICAL POP-UP ROTOR SPRINKLER INSTALLATION ON PVC PIPEWORK

NOT TO SCALE

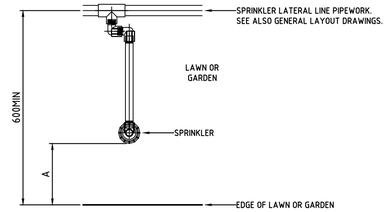


TABLE OF SPRINKLER OFFSETS			
EDGE TYPE	DIMENSION A		
	SPRAY†	ROTOR†	
BACK OF KERB OR EDGE OF PAVEMENT.	100	300	
GARDEN WALL WITH NO MOWING STRIP.	200	200	
BUILDING FACADE WITH NO MOWING STRIP.	600	600	

† SPRINKLER TYPE. SEE GENERAL LAYOUT DRAWINGS.

SPRINKLER AND LATERAL PIPE OFFSETS FROM LAWN AND GARDEN EDGES

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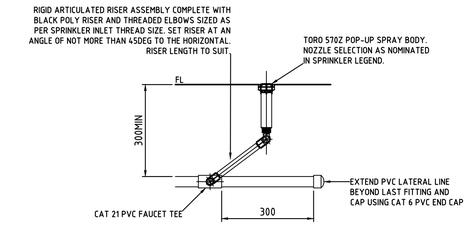
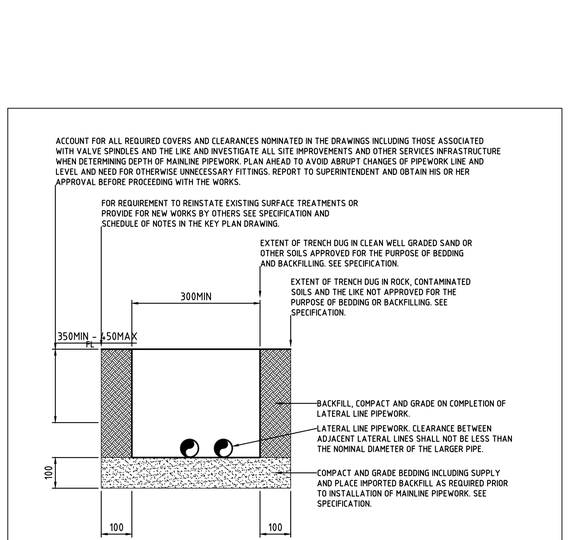


TYPICAL POP-UP SPRAY SPRINKLER INSTALLATION ON PVC PIPEWORK

NOT TO SCALE



TYPICAL ARRANGEMENT OF MULTIPLE PIPES IN A COMMON TRENCH

NOT TO SCALE

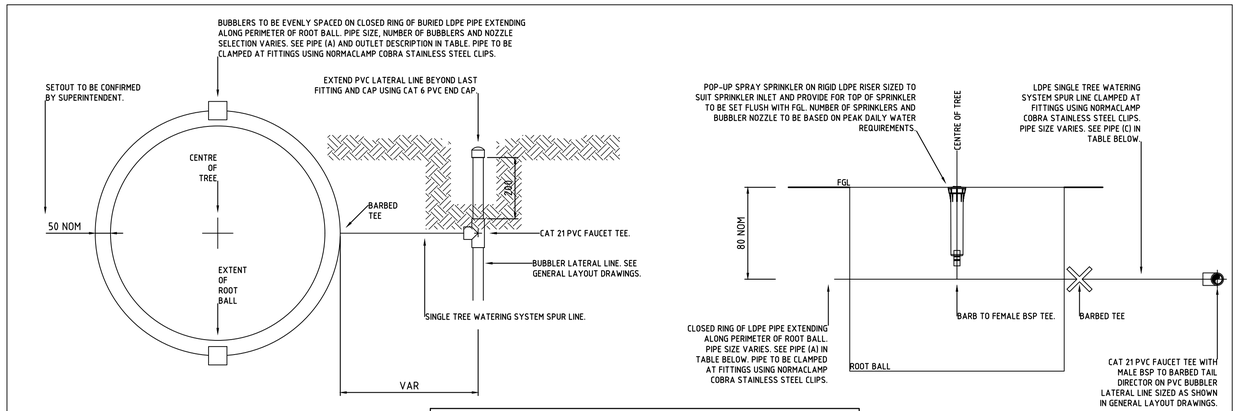


TABLE OF TREE WATERING SYSTEMS†						
SYSTEM	PLANT STOCK‡	SYSTEM FLOW(L/MIN)	20MIN VOL (L)¥	PIPE (A)	PIPE (B)	PIPE (C)
-	-	0-6	-	DN19	-	DN19
-	-	6-15	-	DN19	-	DN25
-	-	15-30	-	DN25	-	DN25

† SYSTEM DESIGN BASED ON THE PEAK DAILY WATER REQUIREMENTS SUPPLIED BY NURSERY INDUSTRY SOURCES AND OTHERS
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TREE WATERING SYSTEMS

NOT TO SCALE

CITY OF WANNEROO
PLAN APPROVAL

Mark Jumeaux

SENIOR LANDSCAPE
& CONSERVATION DEVELOPMENT OFFICER

SUPERSEDED

REV	DATE	DESCRIPTION	DWN	CKD
A	18/03/2022	ISSUED FOR APPROVAL	RV	JS

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NewGround DESIGN SERVICES

SCALE :	1 : NTS @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT : TIM DAVIES LANDSCAPING

PROJECT : CATALINA PORTOFINO PARK STAGE 2
IRRIGATION WORKS (TYPICAL DETAILS)
-

DATE :	DESIGN NO. :	SHEET NO. :
18/03/2022	18384-02	2 OF 2

AUTOCAD FILENAME: Portofino Park Stg2 Design IRev A1.dwg

CATALINA BEACH

CLARKSON, W.A.

STAGE 31 BUFFER

LANDSCAPE CONTRACT: CAT58

LANDSCAPE & IRRIGATION WORKS

CLIENT:TAMALA PARK REGIONAL COUNCIL

ISSUE FOR: ***REVISED FOR CONSTRUCTION***

DATE: **NOVEMBER 2023**

Sheet List Table		
SHEET NUMBER	SHEET TITLE	REVISION
CAT58-000	COVERSHEET	1
CAT58-101	LANDSCAPE PLAN 1	1
CAT58-102	LANDSCAPE PLAN 2	1
CAT58-901	TYP DETAILS	1



LOCATION PLAN
1:1500 @ A1

emerge ASSOCIATES
Integrated Science & Design



LOCATION PLAN

LEGEND

- EXTENT OF WORKS
- CONSERVATION FENCING — 4/901
- PROPOSED PLANTING — 2,3/901
- MULCH ONLY
- PROPOSED TREES — 1/901

STANDARD NOTES

1. **SET OUT & DIMENSIONS.** THE CONTRACTOR SHALL SET OUT ALL PATHS, WALLS, HARD SURFACES AND ELEMENTS EITHER ON OR OFF-SITE PRIOR TO CONSTRUCTION AND SHALL OBTAIN THE SUPERINTENDENTS SET OUT APPROVAL PRIOR TO WORKS COMMENCING. WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALE. CHECK ALL DRAWING SCALES IN CONJUNCTION WITH DRAWING SIZE.
2. **SERVICES & SITE ASSETS.** THE CONTRACTOR SHALL INVESTIGATE THE NATURE AND LOCATION OF ALL EXISTING SERVICES AND RETAINED SITE ASSETS AFFECTED BY THEIR WORKS. FAILURE TO TAKE DUE CARE SHALL NOT LIMIT THE CONTRACTORS LIABILITIES
3. **REFERENCE.** THE CONTRACTOR SHALL REFER TO ALL CONTRACT DOCUMENTS, THE SPECIFICATION AND DRAWINGS PRIOR TO AND DURING THE WORKS.
4. **DISCREPANCIES.** NOTIFY SUPERINTENDENT OF ANY SUSPECTED OR KNOWN DISCREPANCIES OR ERRORS PRIOR TO THE ORDERING OF AFFECTED MATERIALS AND OR CONSTRUCTION OF AFFECTED WORKS.
5. **RELEVANT STANDARDS.** THE CONTRACTOR SHALL UNDERTAKE ALL PRICING AND WORKS IN ACCORDANCE WITH CURRENT INDUSTRY BEST PRACTICE AND ALL RELEVANT AUSTRALIAN STANDARDS.
6. **SERVICE LOCATOR.** THE CONTRACTOR SHALL UNDERTAKE A DIAL BEFORE YOU DIG PROCESS PRIOR TO COMMENCING WORKS ON SITE. THE CONTRACTOR SHALL ENGAGE A SERVICE LOCATOR TO MAP THE SPECIFIC LOCATIONS AND DEPTH OF ALL SERVICES AND ADVISE ALL RELEVANT STAFF AND SUBCONTRACTORS IN WRITING PRIOR TO COMMENCING WORKS ON SITE.

REV	DATE	BY	ISSUE OR AMENDMENT
1	30.11.23	JL	REVISED FOR CONSTRUCTION
0	18.08.23	OW	ISSUE FOR CONSTRUCTION
A	18.07.23	OW	ISSUE FOR APPROVAL

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INTERNAL PRETENDER REVIEW
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MATCHLINE. REFER TO DWG PAGE CAT58-102

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emerge ASSOCIATES
Integrated Science & Design
PERTH (08) 9380 4988 • MARGARET RIVER (08) 9758 8159

PROJECT
CATALINA BEACH
CLARKSON, W.A.
STAGE OR PHASE
STAGE 31 BUFFER

DRAWING TITLE
LANDSCAPE PLAN 1

CLIENT
TAMALA PARK REGIONAL COUNCIL

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DESIGNED BY	ZF	PRELIM DESIGN REVIEWED BY	ZF
DRAWN BY	OW	PRELIM DWG REVIEWED BY	ZF
DATE INITIALLY DRAWN	18.07.23		

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

DRAWING NUMBER CAT58-101
REV 1

REF: \\EMGLOCAL\EMERGE\PROJECTS\CURRENT PROJECTS\CATALINA, TAMALA PARK\CIVIL DRAWINGS\LOR CODE\ AUTOCAD\LOR CODE\ LANDSCAPE\ STAGE 31 BUFFER\CAT58-LP1 BUFFER.DWG



MATCHLINE. REFER TO DWG PAGE CAT58-101

PRELIMINARY
NOT FOR CONSTRUCTION
INFORMATION ONLY

LOCATION PLAN

LEGEND

- EXTENT OF WORKS
- CONSERVATION FENCING — 4 901
- PROPOSED PLANTING — 2,3 901
- MULCH ONLY
- PROPOSED TREES — 1 901

MIX 1

Sym.	Key	Botanic Name	Common Name	Pot	Qty.
	Acsa	Acacia saligna prostrate	Dwarf Wattle	Tube	521
	Cavi	Carpobrotus virescens	Coastal Pigface	Tube	521
	Coac	Conostylis aculeata	Cottonhead	Tube	521
	Kepr	Kennedia prostrata	Running Postman	Tube	521

MIX 2

Sym.	Key	Botanic Name	Common Name	Pot	Qty.
	Dire	Dianella revoluta	Black-anther Flax-lily	Tube	784
	Legl	Lepidosperma gladiatum	Coast Sword-sedge	Tube	784
	Sccr	Scaevola crassifolia	Cushion Fanflower	Tube	784
	Spse	Spinifex sericeus	Rolling Spinifex	Tube	784

MIX 3

Sym.	Key	Botanic Name	Common Name	Pot	Qty.
	Acsa	Acacia saligna prostrate	Golden Wreath Wattle	Tube	731
	Kepr	Kennedia prostrata	Running Postman	Tube	731
	Legl	Lepidosperma gladiatum	Coast Sword-sedge	Tube	731
	Sccr	Scaevola crassifolia	Cushion Fanflower	Tube	731

TREE LIST

Sym.	Key	Botanic Name	Common Name	Pot	Qty.
Bapr	Bapr	Banksia prionotes	Orange or Acorn Banksia	100 Litre	17
Eugo	Eugo	Eucalyptus gomphocephala	Tuart	100 Litre	14
Euto	Euto	Eucalyptus Todiana	Coastal Blackbutt	100 Litre	4
Mequ	Mela	Melaleuca lanceolata	Black Paperbark Moonah	100 Litre	13

PLANT AND TREE NUMBERS IN SCHEDULE ARE TO BE USED AS GUIDE ONLY. TENDERERS TO REFER LABELS ON PLANS FOR NUMBERS. PLANT NUMBERS AND SPECIES ARE SUBJECT TO AVAILABILITY.

STANDARD NOTES

1. **SET OUT & DIMENSIONS.** THE CONTRACTOR SHALL SET OUT ALL PATHS, WALLS, HARD SURFACES AND ELEMENTS EITHER ON OR OFFSITE PRIOR TO CONSTRUCTION AND SHALL OBTAIN THE SUPERINTENDENTS SET OUT APPROVAL PRIOR TO WORKS COMMENCING. WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALE. CHECK ALL DRAWING SCALES IN CONJUNCTION WITH DRAWING SIZE.
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PROJECT
CATALINA BEACH
CLARKSON, W.A.
STAGE OR PHASE
STAGE 31 BUFFER

DRAWING TITLE
LANDSCAPE PLAN 2

CLIENT
TAMALA PARK REGIONAL COUNCIL

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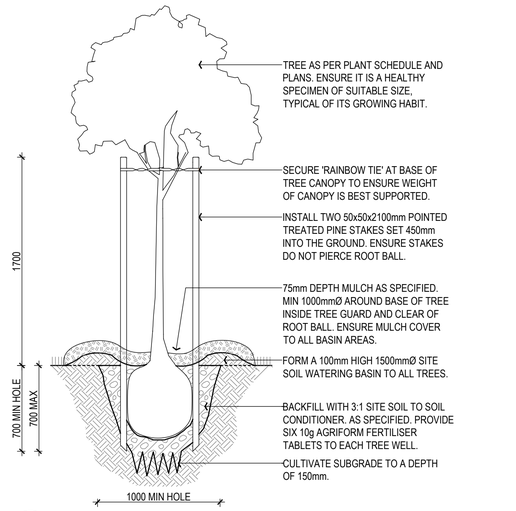
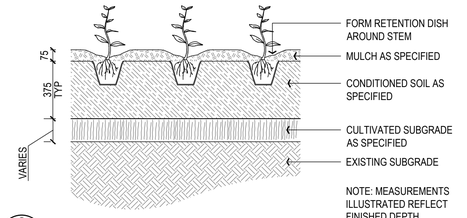
SCALE 1: 250 @ A1 METRES
0 2.5 5 7.5 10 12.5

DRAWING NUMBER CAT58-102
REV 1

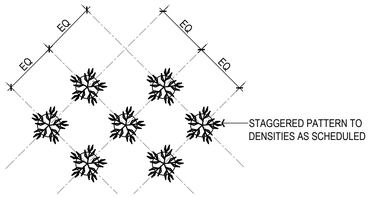
REF: I:\EMAIL\LOCAL\EMERGE\PROJECTS\CURRENT PROJECTS\CATALINA, TAMALA PARK\CAD\DRAWINGS\JOB CODE\ LANDSCAPE\ 31 BUFFER\CAT58_CATALINA S31\CAD\31 BUFFER CAT58_CATALINA S31\CAD\CAT58-102.DWG



1 / 901 TYPICAL 100 & 200 LITRE TREE PLANTING
SECTION SCALE 1:25



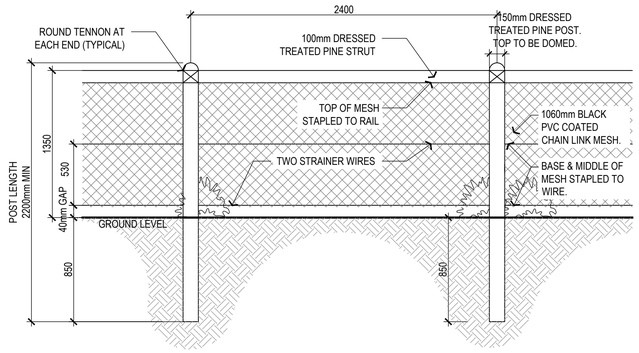
2 / 901 TUBESTOCK - 200mm POT PLANTING
SECTION SCALE 1:20



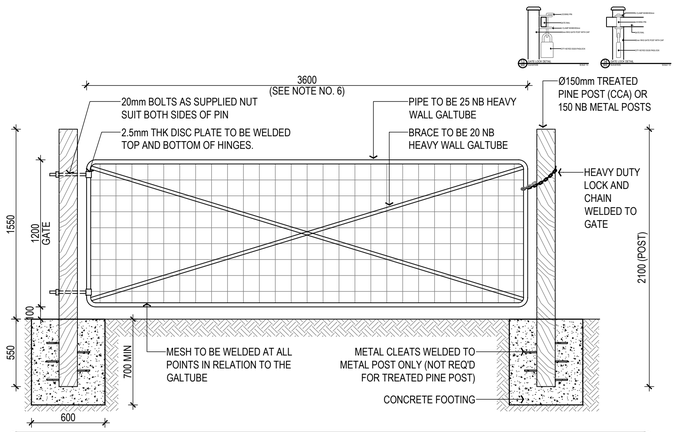
3 / 901 TYPICAL STAGGERED PLANTING PATTERN
PLAN SCALE 1:20

MATERIAL SPECIFICATIONS:
150-175mm x 2.2m CCA TREATED PINE LOG (FOR PINE UPRIGHTS).
1.57mm GALVANISED TIE WIRE.

NOTE:
1. ALL ENDS, JOINS AND TIES TO BE FINISHED NEATLY WITH NO WIRE PROTRUSIONS.
2. WIRE TO BE WRAPPED AROUND PINE POSTS TWICE, THEN WOUND BACK AROUND WIRE THREE TIMES AND CUT OFF FLUSH.
3. FENCING WIRE TO BE FIXED TO OUTSIDE OF FENCE, EXPECT WHERE PARK ADJOINS PRIVATE PROPERTY, WHERE IT SHOULD BE FIXED TO INSIDE OF FENCE.
4. FENCE TO SMOOTHLY FOLLOW THE OVERALL CONTOURS OF THE LAND AS FOR BOLLARDS (NOT TO HAVE SUDDEN DIPS AND RISES).
5. REFER TO STANDARD DRAWING TS 01-09 FOR BOX STRAINER DTAIL



4 / 901 CONSERVATION FENCE
SECTION SCALE 1:25



NOTES
1. ALL STEEL TO BE GALVANISED.
2. ALL STEEL POSTS TO BE SECURELY CAPPED.
3. ALL WELDS TO BE POWER WIRE BRUSHED AND COLD GALVANISED.
4. ALL DIMENSIONS IN MILLIMETRES UNLESS OTHERWISE SHOWN.
5. MESH TO BE METRIC MESH 466G5 AND GALVANISED FINISHED COMPLETE WITH FITTINGS.
6. A 3.9M GATE SHALL ONLY BE INSTALLED WHEN THE INTERNAL VEHICLE TRACK DOES NOT RUN PERPENDICULAR TO THE GATE LOCATION, ALL GATES WITH WIDTHS LARGER THAN 3.9M SHALL ONLY BE CONSIDERED IN EXCEPTIONAL CIRCUMSTANCES AND TECHNICAL SPECIFICATIONS WILL REQUIRE APPROVAL PRIOR TO INSTALLATION.
7. CONCRETE FOOTINGS TO BE GRADE N32 TO AS 1379.
8. ALL GALVANISED STEEL TO MEET AS/NZS 4792 FOR HOT-DIP GALVANISED (ZINC) COATING ON FABRICATED FERROUS ARTICLES.

5 / 901 MAINTENANCE ACCESS GATE
SECTION SCALE 1:25

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PROJECT
CATALINA BEACH
CLARKSON, W.A.
STAGE OR PHASE
STAGE 31 BUFFER

DRAWING TITLE
TYP DETAILS

CLIENT
TAMALA PARK REGIONAL COUNCIL

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SCALE	AS SHOWN		
DRAWING NUMBER	CAT58-901	REV	1

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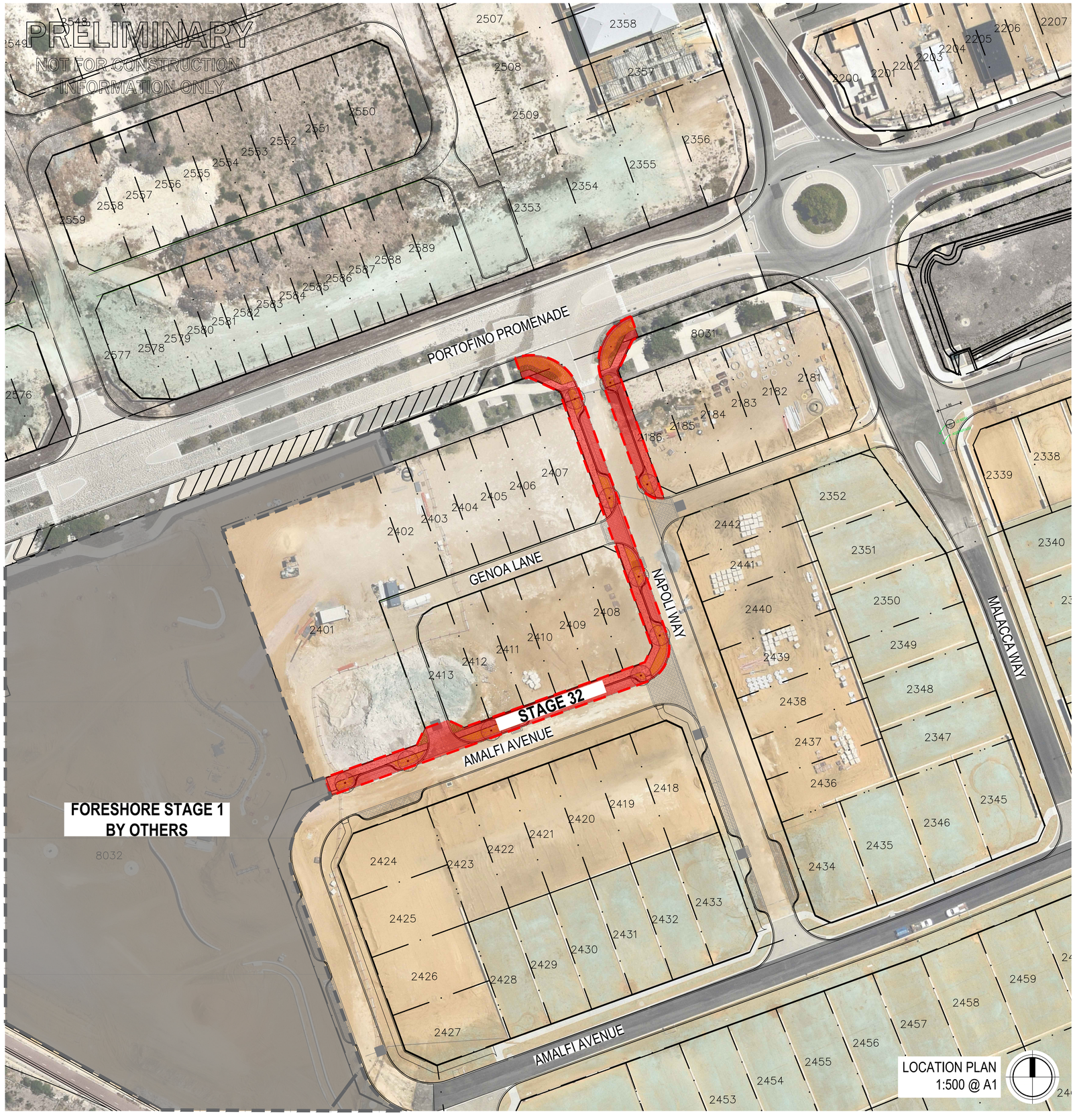

CATALINA

CLARKSON, WA

Catalina

STAGE 32 STREETSCAPES

LANDSCAPE CONTRACT: CAT-67

LANDSCAPE & IRRIGATION WORKS

CLIENT:TAMALA PARK REGIONAL COUNCIL

ISSUE FOR: ***CONSTRUCTION***

DATE: **MAY 2024**

LANDSCAPE DRAWING LIST		
SHEET NUMBER	SHEET TITLE	SHEET REVISION NUMBER
CAT-67-000	COVER	0
CAT-67-100	LAYOUT	0
CAT-67-501	PLANTING PLAN 1 of 3	0
CAT-67-502	PLANTING PLAN 2 of 3	0
CAT-67-503	PLANTING PLAN 3 of 3	0
CAT-67-900	TYPICAL DETAILS	0
CAT-67-980	NOTES	0

CATALINA Regional Council

emerge ASSOCIATES
Integrated Science & Design

CAT-67-503

PORTOFINO PROMENADE

2402 2403 2404 2405 2406 2407

2186 2185 2184 2182 2181

CAT-67-502

GENOA LANE

NAPOLI WAY

CAT-67-501

2442 2441 2440 2439 2438 2437

2352 2351 2350 2349 2348

2401 2413 2412 2411 2410 2409 2408

AMALFI AVENUE

2424 2423 2422 2421 2420 2419 2418

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LEGEND

- EXTENT OF WORKS
- CONCRETE PATH BY OTHERS
- GROUNDCOVER PLANTING (1/900) (2/900)
- LOW SHRUB PLANTING (1/900) (2/900)
- PROPOSED TREES (3/900)

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PROJECT
CATALINA
CLARKSON, WA
STAGE OR PHASE
STAGE 32 STREETSCAPES

DRAWING TITLE
LAYOUT

CLIENT
TAMALA PARK REGIONAL COUNCIL

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0 2.5 5 7.5 10 12.5

DRAWING NUMBER
CAT-67-100

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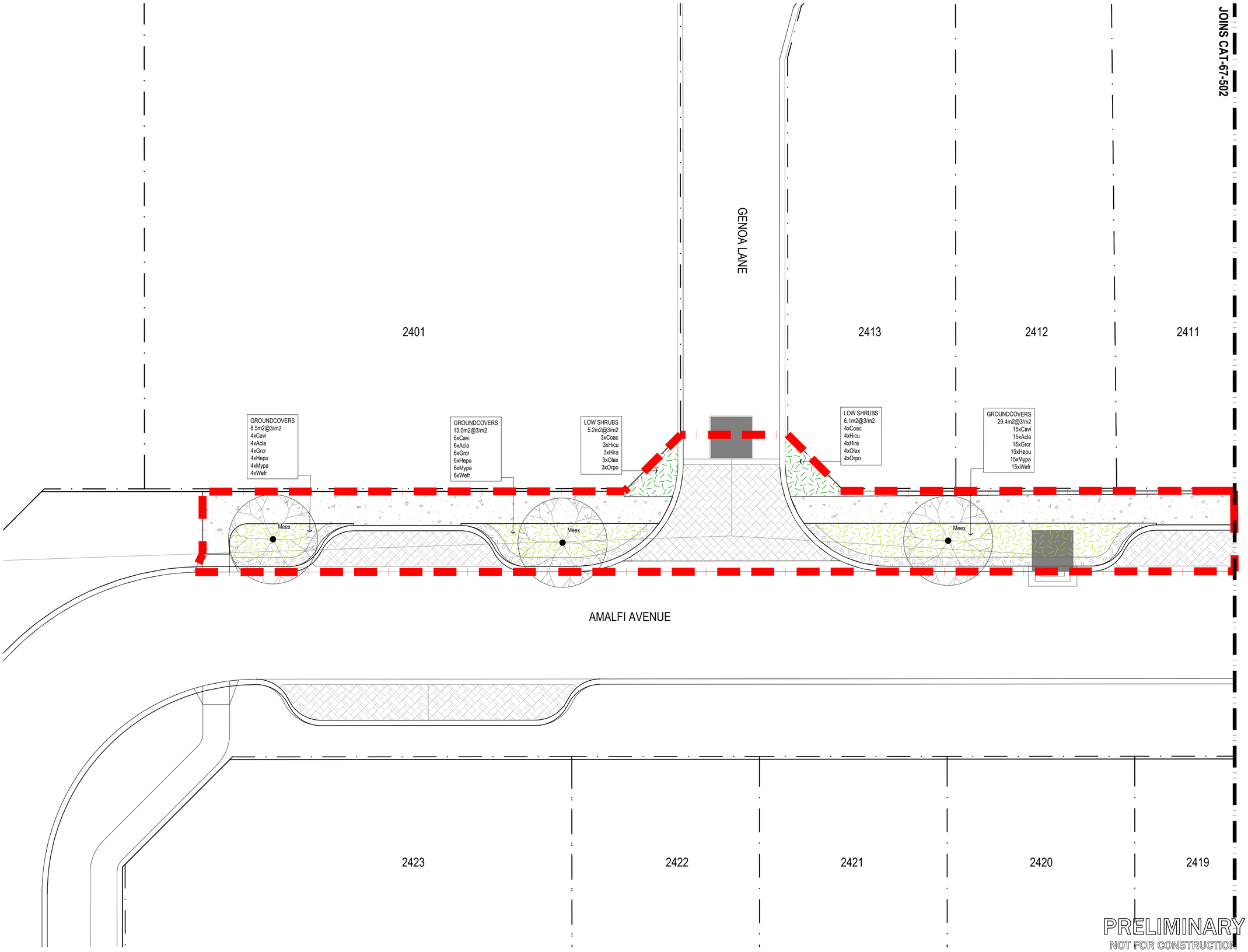

LEGEND

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- CONCRETE PATH BY OTHERS
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- LOW SHRUB PLANTING (1/900, 2/900)
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PROJECT
CATALINA
CLARKSON, WA
STAGE OR PHASE
STAGE 32 STREETSCAPES

DRAWING TITLE
PLANTING PLAN 1 OF 3
.
CLIENT
TAMALA PARK REGIONAL COUNCIL

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DRAWING NUMBER CAT-67-501

REV 0

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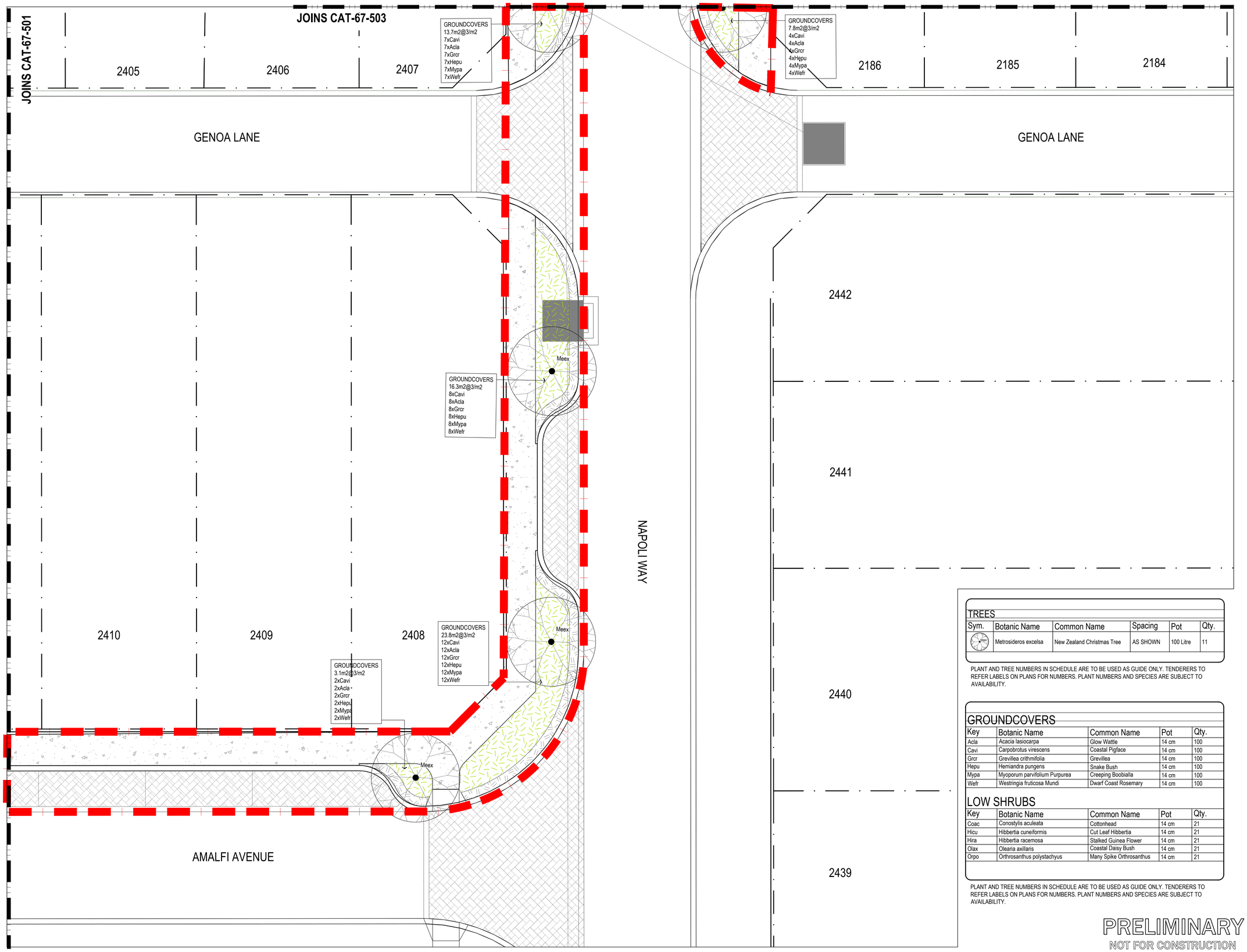

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TREES					
Sym.	Botanic Name	Common Name	Spacing	Pot	Qty.
Meex	Metrosideros excelsa	New Zealand Christmas Tree	AS SHOWN	100 Litre	11

PLANT AND TREE NUMBERS IN SCHEDULE ARE TO BE USED AS GUIDE ONLY. TENDERERS TO REFER LABELS ON PLANS FOR NUMBERS. PLANT NUMBERS AND SPECIES ARE SUBJECT TO AVAILABILITY.

GROUNDCOVERS				
Key	Botanic Name	Common Name	Pot	Qty.
Acla	Acacia lasiocarpa	Glow Wattle	14 cm	100
Cavi	Carpobrotus virescens	Coastal Pigface	14 cm	100
Grcr	Grevillea crithmifolia	Grevillea	14 cm	100
Hepu	Hemiandra pungens	Snake Bush	14 cm	100
Mypa	Myoporum parvifolium Purpurea	Creeping Boobialla	14 cm	100
Wefr	Westringia fruticosa Mundi	Dwarf Coast Rosemary	14 cm	100

LOW SHRUBS				
Key	Botanic Name	Common Name	Pot	Qty.
Coac	Conostylis aculeata	Cottonhead	14 cm	21
Hicu	Hibbertia cuneiformis	Cut Leaf Hibbertia	14 cm	21
Hira	Hibbertia racemosa	Stalked Guinea Flower	14 cm	21
Olax	Olearia axillaris	Coastal Daisy Bush	14 cm	21
Orpo	Orthrosanthus polystachyus	Many Spike Orthrosanthus	14 cm	21

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DRAWING TITLE
PLANTING PLAN 2 OF 3
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DESIGNED BY	JL	PRELIM DESIGN REVIEWED BY	ZF
DRAWN BY	JL	PRELIM DWG REVIEWED BY	ZF
DATE INITIALLY DRAWN	18.01.24		

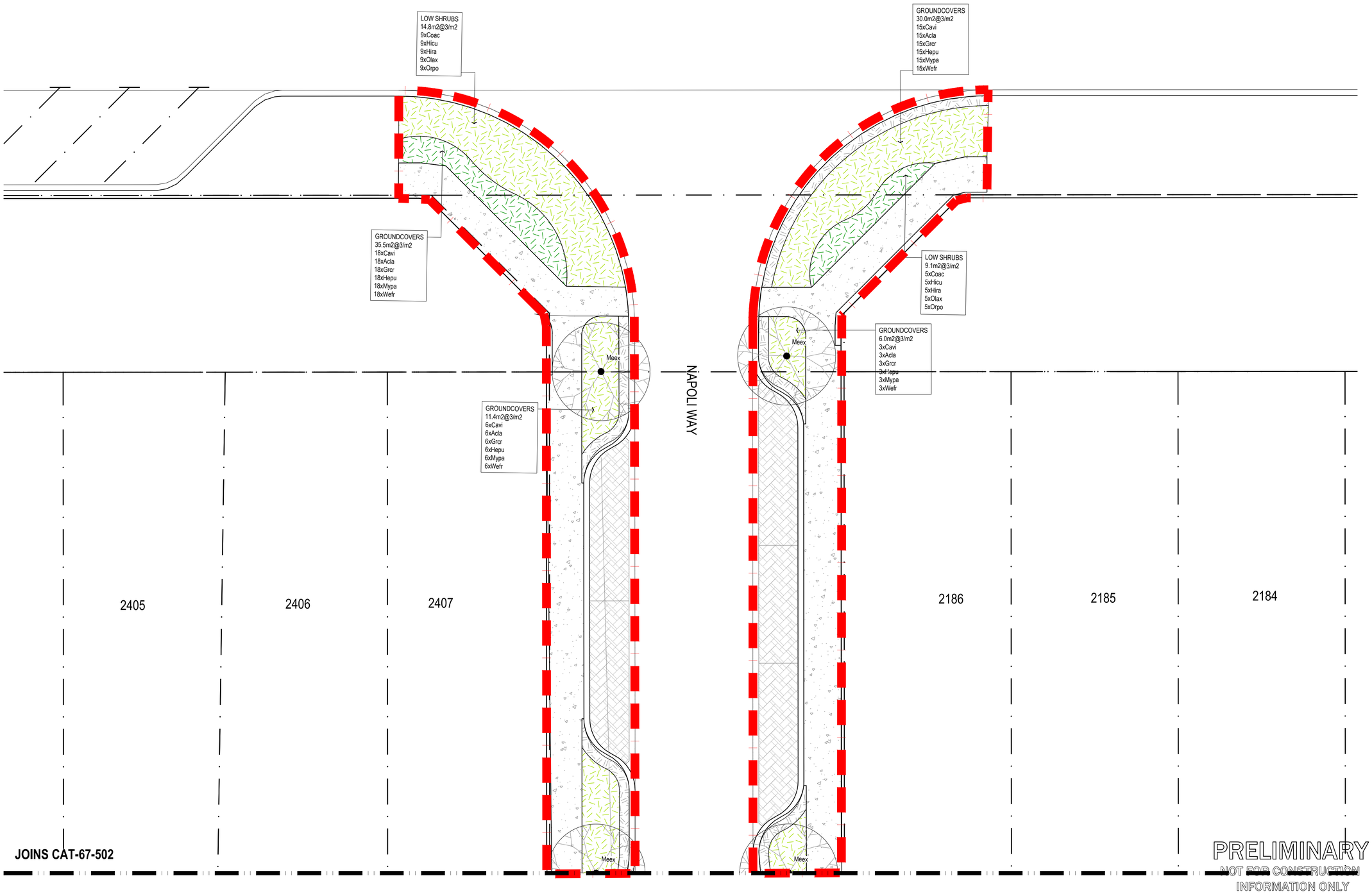
SCALE 1: 100 @ A1 METRES (0 1 2 3 4 5)

DRAWING NUMBER CAT-67-502

REV 0

REF: U:\CURRENT PROJECTS\CATALINA, TAMALA PARK\CC\DRAWINGS\JOB CODE\ LANDSCAPE\STAGE 32\CONTD CATALINA STAGE 32 DES.DWG

PORTOFINO PROMENADE



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LEGEND

- EXTENT OF WORKS
- CONCRETE PATH BY OTHERS
- GROUNDCOVER PLANTING (1/900, 2/900)
- LOW SHRUB PLANTING (1/900, 2/900)
- PROPOSED TREES (3/900)

STANDARD NOTES

1. **SET OUT & DIMENSIONS.** THE CONTRACTOR SHALL SET OUT ALL PATHS, WALLS, HARD SURFACES AND ELEMENTS EITHER ON OR OFFSITE PRIOR TO CONSTRUCTION AND SHALL OBTAIN THE SUPERINTENDENTS SET OUT APPROVAL PRIOR TO WORKS COMMENCING. WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALE. CHECK ALL DRAWING SCALES IN CONJUNCTION WITH DRAWING SIZE.
2. **SERVICES & SITE ASSETS.** THE CONTRACTOR SHALL INVESTIGATE THE NATURE AND LOCATION OF ALL EXISTING SERVICES AND RETAINED SITE ASSETS AFFECTED BY THEIR WORKS. FAILURE TO TAKE DUE CARE SHALL NOT LIMIT THE CONTRACTORS LIABILITIES.
3. **REFERENCE.** THE CONTRACTOR SHALL REFER TO ALL CONTRACT DOCUMENTS, THE SPECIFICATION AND DRAWINGS PRIOR TO AND DURING THE WORKS.
4. **DISCREPANCIES.** NOTIFY SUPERINTENDENT OF ANY SUSPECTED OR KNOWN DISCREPANCIES OR ERRORS PRIOR TO THE ORDERING OF AFFECTED MATERIALS AND OR CONSTRUCTION OF AFFECTED WORKS.
5. **RELEVANT STANDARDS.** THE CONTRACTOR SHALL UNDERTAKE ALL PRICING AND WORKS IN ACCORDANCE WITH CURRENT INDUSTRY BEST PRACTICE AND ALL RELEVANT AUSTRALIAN STANDARDS.
6. **SERVICE LOCATOR.** THE CONTRACTOR SHALL UNDERTAKE A DIAL BEFORE YOU DIG PROCESS PRIOR TO COMMENCING WORKS ON SITE. THE CONTRACTOR SHALL ENGAGE A SERVICE LOCATOR TO MAP THE SPECIFIC LOCATIONS AND DEPTH OF ALL SERVICES AND ADVISE ALL RELEVANT STAFF AND SUBCONTRACTORS IN WRITING PRIOR TO COMMENCING WORKS ON SITE.

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0	29.05.24	JL	ISSUE FOR CONSTRUCTION
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PROJECT
CATALINA
CLARKSON, WA
STAGE OR PHASE
STAGE 32 STREETSCAPES
DRAWING TITLE
PLANTING PLAN 3 OF 3
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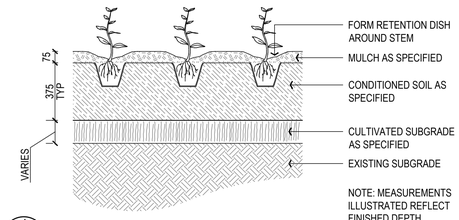
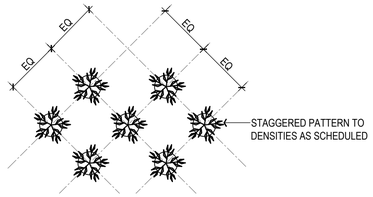
SCALE 1: 100 @ A1 METRES (0 1 2 3 4 5)

DRAWING NUMBER CAT-67-503 REV 0

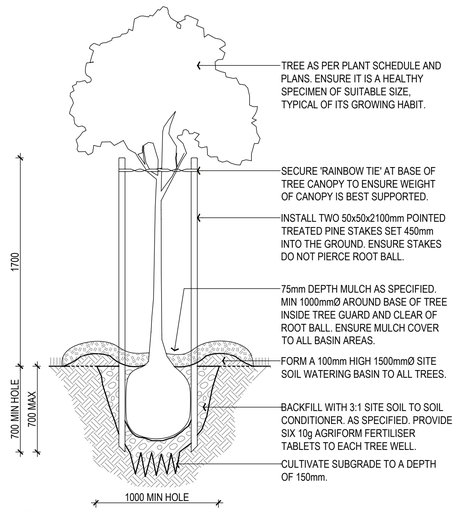
REF \\CURRENT PROJECTS\CATALINA, TAMALA PARK\CLD\DRAWINGS\JOB CODE\ JOB CODE\ AUTOCAD\JOB CODE\ LANDSCAPE\STAGE 32\CAT CATALINA STAGE 32 V05.DWG



1 / 900 TUBESTOCK - 200mm POT PLANTING
SECTION SCALE 1:20



2 / 900 TYPICAL STAGGERED PLANTING PATTERN
PLAN SCALE 1:20



3 / 900 TYPICAL 100 & 200 LITRE TREE PLANTING
SECTION SCALE 1:25

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PROJECT
CATALINA
CLARKSON, WA
STAGE OR PHASE
STAGE 32 STREETSCAPES
DRAWING TITLE
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DATE INITIALLY DRAWN	18.01.24		
SCALE	AS SHOWN		
DRAWING NUMBER	CAT-67-900	REV.	0

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GENERAL NOTES

1. These drawings are to be read in conjunction with all architectural and other consultants' drawings and specifications and with such other written instructions as may be issued. Any discrepancies shall be referred to the superintendent for clarification before proceeding with work.
2. All dimensions are in millimetres and those relevant to setting out (excludes finishes) and offsite work shall be verified by the contractor before construction and fabrication are commenced. The engineer's drawings shall not be scaled.
3. All levels and grid co-ordinates are in metres.
4. During construction the contractor shall be responsible for maintaining the structure in a stable condition and no part shall be over stressed under construction activities.
5. Workmanship and materials shall be in accordance with the current edition of the relevant SAA codes and the by-laws and ordinances of the relevant building authority, except where varied by the contract documents.

DESIGN CRITERIA

1. Dead, live, wind and earthquake loads to AS1170.
2. Design Wind Speed
   Region A
   Terrain Category 2.5
   Regional Gust Wind Speed = 45m/sec (ULTIMATE LIMIT STATE)
   Regional Gust Wind Speed = 37m/sec (SERVICE LIMIT STATE)
3. Earthquake
   kp = 1.0
   Hazard Factor Z = 0.09 (Perth)
4. Foundations
   Foundations designed for Class 'S' site with minimum 150kPa allowable bearing pressure.
5. Live Loads

Decking:	3kPa to AS1170.1
Balustrade:	C3 to AS1170.1
Roof construction load:	0.25kPa to AS1170.1
Retaining Wall Surcharge:	3kPa to AS1170.1

BUILDER NOTE - COMPLIANCE INSPECTIONS

1. As part of the building licence for this project, the builder may be required to have the structural engineer certify the completed structure has been built in accordance with the approved drawings & /or with any subsequent written instructions.
2. If WA Structural Consulting are to provide this certification, the builder must arrange for WA Structural Consulting to inspect each of the structural items at appropriate stages. These items and stages include, but are not limited to the following:,
   - 2.1. Concrete reinforcement, prior to pouring of concrete in:
     - 2.1.1. Footing Excavations
     - 2.1.2. Slabs on ground
     - 2.1.3. Suspended slabs and beams
     - 2.1.4. Concrete columns and walls
     - 2.1.5. Retaining walls
   - 2.2. Structural steelwork prior to any cladding being fixed.
   - 2.3. Concrete wall panel connections.
3. The builder must provide appropriate evidence that the specified concrete has been supplied for each concrete element.
4. The builder must provide evidence that the required levels of foundation compaction have been achieved.
5. Where a geotechnical engineer has made specific recommendations, evidence that these have been achieved must be provided.
6. Unless fees for our inspections and certifications have been previously negotiated with WA Structural Consulting by others, these fees will be the builder's responsibility. It is required that the builder negotiate these fees with the engineer at a tender stage.
7. If the builder requires the fabrication drawings to be checked & certified by the project engineer, the costs associated with this will be the builder's responsibility, unless these fees have been previously negotiated with WA Structural Consulting by others. This must be confirmed by the builder.

CONCRETE AND REINFORCEMENT

1. All concrete works shall be in accordance with AS3600.
   Concrete specification shall be U.N.O.:

Location	F'C (MPA)	MAX.AGG SIZE (mm)	SLUMP (mm)
Footings	25	20	65
Slab on Ground	25	20	65
In Situ Retaining Walls	32	20	60
Precast	32	20	80
Cavity Fill	15	10	100

   Cover to Reinforcement shall be:

Location	Bottom (mm)	Top (mm)	Sides (mm)
Footing	70	50	50
Slab on Ground	50	40	50
In Situ Retaining Walls	32	20	60
Precast	50	40	40
Cavity Fill	50	50	20 U.N.O

2. Reinforcement shall be supported on approved plastic or plastic tipped wire chairs and hold rigidly in position as follows:
   a. Bars up to N12 and fabric - 800mm centres
   b. Bars N16 and larger - 1200mm centres
   * Welding reinforcement is not permitted unless approved by engineer.
3. Construction joints shall be scabbled, cleaned and coated with a cement/water slurry immediately prior to placing concrete.
4. Concrete shall be compacted using mechanical vibrators.
5. Concrete shall be cured for a minimum of 7 days by flooding, keeping continuously moist, the application of an approved curing compound or by other means approved by the engineer.
6. No holes or chases other than those shown on the drawings shall be made unless approved by engineer. Pipework passing through footing beams shall be to the approval of the engineer and shall be wrapped with a compressible material of minimum 6mm thickness.
7. Formwork and stripping times shall comply with AS3610. Remove formwork only when concrete has attained its design (f 'c) strength unless otherwise instructed by the structural engineer.
8. Control, expansion and contraction joints shall be constructed as detailed. Saw cut joints shall be made within 12 hours of concrete placement.
9. All mesh to conform with AS1304.
10. Reinforcement shall be in accordance with the following standards:

R	Indicates plain reinforcing bar R250N to AS/NZS4671
L	Indicates plain or deformed wire R500L or D500L to AS/NZS4671
RL	Indicates deformed rectangular mesh D500L to AS/NZS4671
SL	Indicates deformed square mesh D500L to AS/NZS4671
N	Indicates deformed bars D500N to AS/NZS4671
S	Indicates deformed bars D250N to AS/NZS4671
TM	Suffix indicates trench mesh using deformed bars D500L to AS/NZS4671

11. All galvanized items which are cast into concrete are to be passivated in a 0.2% sodium dichromate solution or equivalent.
12. All formwork shall be rigidly constructed of approved material. Formwork and supports shall be designed to withstand all possible load combinations during construction.

BAR DIAMETER (LARGEST)	LAP
12	600
16	800
20	1000
24	1200
28	1400
32	1600

Note: To be used U.N.O

14. Chemset Anchors U.N.O to be M16 HCR 8.8 rods with HILTI-HIT-HY-200 Adheisive minimum 150mm embedment. Installed in accordance with Manufacturers Specification and Installation Procedure.

FOUNDATIONS

1. Design is based on an allowable bearing pressure of 150kPa. It is the builder's responsibility to confirm the foundation type prior to commencing construction. Should the foundation type or bearing capacity not satisfy the above criteria the builder shall immediately contact engineer prior to construction proceeding.
2. Builder to grub out and remove all organic material and debris from the building platform.
3. Any soft areas shall be dug out and replaced with approved non-plastic fill.
4. All site preparation works shall be in accordance with site specific Geotechnical report and requirements.
5. Ensure a minimum of 8 blows per 300mm is achieved with a calibrated Perth Sand Penetrometer in accordance with AS1289.6.3.3
6. The building platform is to be shaped to ensure it drains to its perimeter and that such drainage is taken away from the platform area.
7. Footings at the lowest level must be the first footings constructed.
8. Located plumbing lines over top of footings and step footings.

MASONRY

1. All blockwork and brickwork shall be in accordance with AS3700
2. Concrete blocks shall be in accordance with AS2733
3. Reinforcement and concrete core filling shall comply with the notes on "concrete and reinforcement".
4. Mortar shall be classification M3 or M4 within 1km of open water or other severe corrosive environments. All mortar mix to AS3700.
5. Masonry units shall have a minimum compressive strength of 15MPa.
6. As follows:
   a. Bond beam reinforcement shall be continuous at intersecting walls and bars anchored and lapped to develop full tensile stress.
   b. Support reinforced brick lintels for 14 days minimum.
7. Cleanout blocks shall be provided at the base of all cores to be concrete filled. Alternatively the builder shall open such cores for cleaning by an approved method.
8. All cores to be concrete filled shall be cleaned out by hosing prior to final setting or mortar at all lifts or by rodding prior to concrete filling.
9. Retaining walls shall be fully core filled. Backfill to retaining walls shall not be carried out until 14 days after core filling.
10. Provide 10mm stack bonded control joints where shown. Control joint to consist of flexible masonry anchors every 3rd course. Brunswick type MFA 3/3. Apply flexible sealant over backing rod.
11. Cross walls shall be fully bonded for the full height of intersecting wall.
12. Horizontal chasing is not permitted without written approval from the engineer.
13. Lap wires 500mm at splices and around corners and COG 500mm into intersecting walls. 20mm cover to all wires.
14. All wires in external face of external leaf to be galvanised to AS/NZS4680.
15. Masonry ties are to be provided at no more than 600mm spacing in each direction, and max 300mm from top of wall, side of control joint or perimeter of opening.
16. Ties to be grade 316 stainless steel in corrosive environments.
17. Masonry abutting concrete footings to typically be isolated with 10mm Ableflex expansion foam or similar approved product UNO.

STRUCTURAL STEEL

1. All steelwork shall be in accordance with:
   AS4100 steel structures
   AS4600 cold formed steel structures
2. Fabricator to check all dimensions before cutting materials or manufacturing. fabrication to AS4100 UON. These drawing are to be read in conjunction with the project architectural and other consultants' drawings.
3. Unless noted otherwise all steel shall be:
   a. AS3678 grade 250 hot rolled plates
   b. AS3679.1 grade 300 hot rolled UB, PFC, TFC, TFB, EA, UA and FLATS
   c. AS3679.2 grade 300 WB and WC
   d. AS1163 grade 250 for circular hollow sections Ø165mm and less
   e. AS1163 grade 350 for circular hollow sections larger than Ø165mm and rectangular hollow sections.
   f. AS1397 500MPa for 1.2mm thick purlins and girts
   g. 450MPa for 1.6mm thick purlins and girts
   h. 450MPa for 1.0 thick CF Channels
   i. 450MPa for 1.6mm thick CF Channels
4. Galvanising shall be hot dipped to AS/NZS 4680
5. Bolts shall be galvanised and of sufficient length to exclude the thread from the shear plane. A suitable washer shall be used under all nuts, when tensioning is specified high strength bolts shall be fully tensioned with load indicating washers to the requirements of AS4100.
6. Bolt legend 4.6/S commercial grade 4.6 bolts snug tightened 8.8/S high strength grade 8.8 bolts snug tightened. 8.8/TB high strength grade 8.8 bolts tensioned bearing connection. 8.8/TF high strength grade 8.8 bolts tensioned friction connection.
7. Unless otherwise specified the following shall apply -
   a. Cleats, brackets, stiffeners etc. to be 10mm thick, ex-standard square edge flats U.N.O.
   b. Welding to be carried out in accordance with AS/NZS 1554. 1:1995 welding consumables to be E48XX or W50X U.N.O. all welds to be 6MM CFW SP category U.N.O CPBW to be SP category U.N.O.
   c. Inspection to be carried to AS/NZS 1554.1:1995. All GP/SP welds to be 100% visually scanned. SP welds allow for 25% visual examination U.N.O.
   d. 6mm end plates to all hollow sections (seal weld).
   e. Bolts to be G 8.8/S
   f. Bolt hole clearance 2mm
   g. Hold down bolt clearance 4mm
   h. Grout - a space for 40mm of 2:1 sand: cement mortar of damp earth consistency under all base plates.
   i. Connections - minimum of 2-M16 8.8/S bolts
   j. Bracing intersects on centrelines and centre of gravity for angles.
8. Fabricator shall allow for all cleats and other fixings required by the supervisor.
9. All column base plates shall be set on 20mm min. of 1:2 cement and sand grout.
10. Seal all open ends of pipes or RHS members. Grind off all visible welds and brand marks to neat appearance where specified.
11. See below:
    a. The contractor shall remain responsible at all times for providing all necessary temporary bracing and other supports during erection, to stabilise the partially constructed building.
    b. Particular attention must be paid to the buckling stability of beams and columns prior to the connection of purlins, girts, fly braces and other bracing elements.
    c. It is the responsibility of the builder to obtain proper technical advice wherever necessary to ensure the partially completed structure is safe from collapse.
12. Treatment:
    All steel connection plate and bolts to be hot dip galvanize (600 g/sqm)
    Holding down bolts - hot dip galvanize (600 g/sqm)
13. Bitumen paint all steelwork for 50mm above ground level / top of footing and 100mm into footing depth with Taubmans Interzone or equivalent

STRUCTURAL TIMBER

1. Structural timber shall comply with AS1720 timber structure code.
2. All timber to be seasoned F14, class 2, strength group SD5, joint group JD2 and treated with creosote to hazard class H4 unless noted otherwise.
3. All timber work to be in accordance with :
   - AS1684 - SAA timber framing code.
   - AS1720 - SAA timber structures code.
4. All timber and steel connections to be in accordance with AS1720.
5. Ensure no knots or gum veins in timber used.
6. Coat all timber in contact with ground with bitumen paint or similar approved.
7. All structural details to be confirmed, checked and site measured by builder prior to construction. Report any discrepancies to structural engineer.
8. Treatment :
   - H1 - Interior use, above ground.
   - H2 - Interior use, above ground, subject to termites.
   - H3 - Exterior use, above ground, subject to periodic wetting.
   - H4 - Exterior use, in ground, subject to severe wetting.
   - H5 - Exterior use, in ground, with or in fresh water.
   - H6 - Exposed to marine water.
9. Required bending stress:
   - MGP10 fb = 16 MPa
   - MGP12 fb = 28 MPa
   - F14 fb = 36 MPa
   - GL17 fb = 40 MPa
   - LVL13 fb = 48 MPa
   - LVL15 fb = 59 MPa
   - LVL18 fb = 72 MPa
10. All bolted timber connections to be re-tightened at end of project prior to completion, ensure no splitting of timber occurs.
11. All proprietary systems (floor/wall/roofing) to be installed in strict accordance with manufacturer's specifications and details.
12. Bush Poles :
    - All timber to AS1720.
    - Minimum F11 grade CCA / H4 treated seasoned softwood. S6 strength group.
    - Free from decay, shakes & fractures,resin pockets and surface damage.
    - Heartwood not to exceed 50% of the diameter at each end or be within 35mm from the surface.
13. Bitumen paint all timber posts/columns for 50mm above ground level / top of footing and 100mm into footing depth with Taubmans Interzone or equivalent

LIMESTONE RETAINING WALL SPECIFICATION NOTES

1. Width 'b' at any height to be no less than half of retained height 'h'. step wall to suit
2. Walls to be built on compacted sand, compact ground under footing to resist 7 blows per 300mm of a standard 16mm dia penetrometer over a depth of 600mm.
3. These walls are applicable to well drained sandy soil conditions only.
4. Walls resisting clay soil pressures and/or hydrostatic pressures to be referred to the engineer.
5. All reconstituted limestone to be first grade quality & free from soft pockets.
6. Rubble shall not be used to fill voids.
7. Reconstituted limestone to have a dry density of at least 1600 kg/m3 and a crushing strength of at least 5mpa.
8. Mortar shall be classification M3 or M4 within 1km of open water or other severe corrosive environments. All mortar mix to AS3700. All mortar joints to be 20mm thick and fully mortared.
9. All topsoil, vegetation and deleterious matter shall be removed from the foundation area.
10. Vertical thickness of wall to be adequately bonded by building in header blocks - refer cross section
11. No backfilling until 7 days after walls have been built.
12. All backfilling shall be carried out using material which shall generally be sandy in nature and free from large pieces of rock to the extent that the
    material can be compacted using a vibrating plate compactor to meet the requirements of the specification.
13. Backfill shall not be dumped behind wall in a manner which will cause shock loading on the wall
14. Backfill shall be clean sand compacted in shallow (300) layers using light compacting equipment
15. In all cases the backfill material shall be selected such that once compacted, the standard of compaction can be measured using a standard perth penetrometer.
16. Compaction of the backfill material to the front and back of the wall to be compacted 95% modified max dry density.
17. Prior to practical completion the contractor shall provide written certification from a practising structural engineer that the wall construction & backfill compaction has been carried out in accordance with this drawing and the specification.
18. Construction Joints (CJ) shall be constructed within the retaining wall where noted below:
    (i) at max. 10m centres along wall face
    (ii) where the angle between faces of two walls exceeds 180 degrees, in which case the CJ is to be located on one side of the change in direction, at a distance away from the direction change equal to the base width of the wall.
19. Construction joints shall be 15mm wide and filled with expanded polyethylene (100mm deep) covered with a 25mm deep mastic of colour to match wall mortar. joints are to extend through wall and any fences, but need not extend through base course of limestone wall.
20. Select blocks to ensure intact faces only visible in facework.

ALUMINIUM

1. All Aluminium shall be in accordance with AS1664.
2. All Aluminium welding shall comply with AS1664.
3. Unless noted otherwise, all aluminium to be:
   - Plates: Grade 5083 H116/h321 or 5083 H112 Aluminium
   - SHS/RHS/CHS: Grade 6060-t5 aluminium
   - Fixings: grade 316 stainless steel
   - Welds: 5mm continuous fillet, category sp, filler allow to be grade 5186,5356 or 5556 aluminium
4. All fixings into Aluminium members to be stainless steel (SS316) or equivalent capacity aluminium fixings.
5. Provide nylon washers and packers for all and any connections between steel and aluminium.
6. Adequate protective coatings are to be applied to aluminum cast into concrete.

PRECAST CONCRETE

1. All precast units shown are for service conditions only. The contractor is responsible for all casting,lifting, transportation and propping requirements and must satisfy himself that they have been constructed to meet the design criteria noted. Any queries regarding precast concrete units shall be flagged during the tender process. If in doubt, ask.
2. Contractor to obtain Engineer's Design Certification for all elements of precast concrete work as required to the relevant Australian Standards (Lifting, bracing, propping as required).
3. Panels are to be securely propped until designed connections have been installed and are sufficiently restraining panels.
4. U.N.O all chemical anchors fixed into concrete panels to be galvanised HILTI-HAS-E-F rods with HILTI-HIT-HY-200 adhesive.
5. All grout used for panels shall be non shrink high strength grout to achieve min 40mpa compressive strength typ.
6. Precast concrete strength is for final position. Contractor to confirm required lifting strength in accordance with lifting engineers requirements. Shall be no less than 15 MPA.

HDPE DECKING AND BOARDS

1. All HDPE battens and other HDPE members to be supplied and installed in strict accordance with manufacturers specification.

PRELIMINARY
NOT FOR CONSTRUCTION
INFORMATION ONLY

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PROJECT
CATALINA
CLARKSON, WA
STAGE OR PHASE
STAGE 32 STREETSCAPES

DRAWING TITLE
NOTES
.
CLIENT
TAMALA PARK REGIONAL COUNCIL

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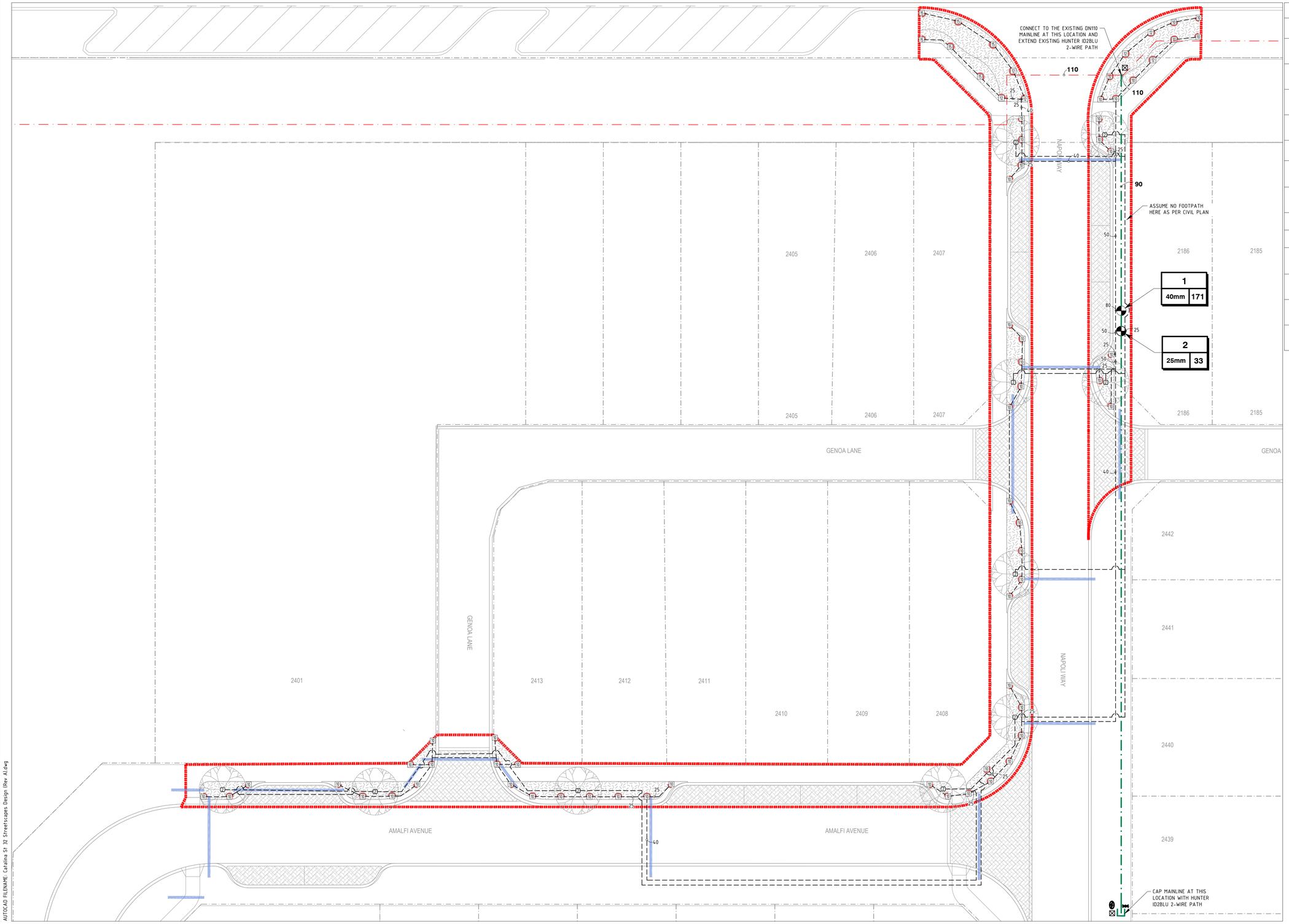
DRAWN BY	JL	PRELIM DWG REVIEWED BY	ZF
DATE INITIALLY DRAWN	18.01.24		
SCALE	AS SHOWN		
DRAWING NUMBER	CAT-67-980	REV	0

REF: U:\CURRENT PROJECTS\CATALINA, TAMALA PARK(CL) DRAWINGS\(JOB CODE) AUTOCAD\(JOB CODE) LANDSCAPE\STAGE 32\CAT67 CATALINA STAGE 32 DET.DWG



IRRIGATION SCHEDULE

SYMBOL	MODEL/DESCRIPTION	kPa
Q T H TT TQ F	TORO 570Z-12P 10 Series MPR NOZZLE ON 15mm x 300mm POLY ARTIC RISER	200
Q T H TT TQ F	TORO 570Z-12P 12 Series MPR NOZZLE ON 15mm x 300mm POLY ARTIC RISER	200
Q T H TT TQ F	TORO 570Z-12P 15 Series MPR NOZZLE ON 15mm x 300mm POLY ARTIC RISER	200
	2 x TORO FB-50 PC FLOOD BUBBLERS ON A TORO 570Z-06P WITH BLUE FLEX	250

SYMBOL	MODEL/DESCRIPTION
	BERMAD 200 SERIES SOLENOID CONTROL VALVE (SIZE AS SHOWN)
	50mm MAINLINE FLUSHING VALVE
	LIGHTENING SURGE PROTECTION
	P2 CABLE PIT
	Irrigation Lateral Line: PN9 uPVC SWJ LATERAL PIPEWORK (SIZE AS SHOWN)
	DN90 PE100 PN12.5 POLY MAINLINE WITH LILAC STRIPE OR PLAIN BLACK
	EXISTING DN110 PE100 PN12.5 POLY MAINLINE
	DN200 PN9 uPVC SLEEVE BY CIVIL CONTRACTOR

Valve Callout



0 2 4 6 8 10m

SCALE 1:200 ON A1

AUTOCAD FILENAME: Catalina St 32 Streetscapes Design (Rev A).dwg

REV	DATE	DESCRIPTION	DWN	CKD
A	19/02/2024	ISSUED FOR APPROVAL	P.K	J.S

REV	DATE	DESCRIPTION	DWN	CKD

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SCALE :	1 :200 @ A1 SHEET
DESIGNER :	P. KULKARNI
DRAWN BY :	P. KULKARNI
APPROVED BY :	J. STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT :

EMERGE ASSOCIATES

PROJECT :

CATALINA
STAGE 32 - STREETSCAPES
IRRIGATION WORKS

DATE :	DESIGN NO. :	SHEET NO. :
01/02/2024	18715-01	1 OF 2

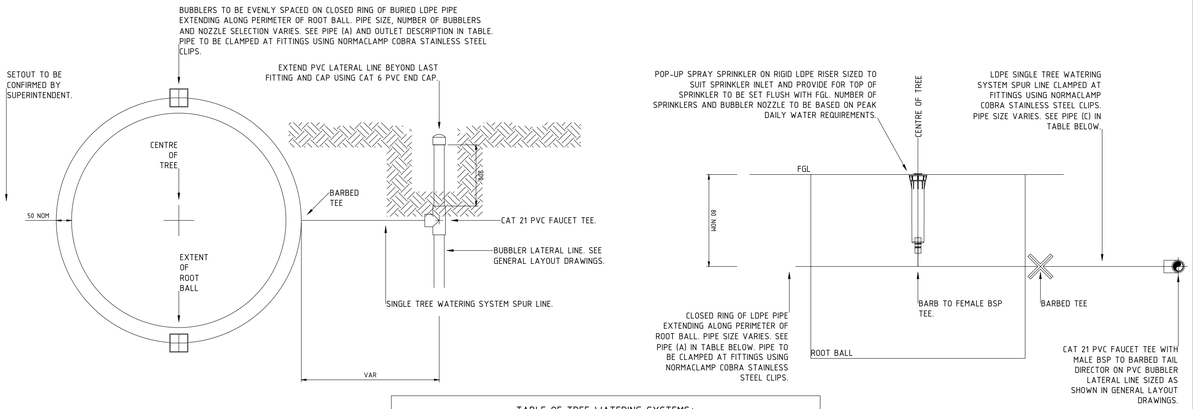
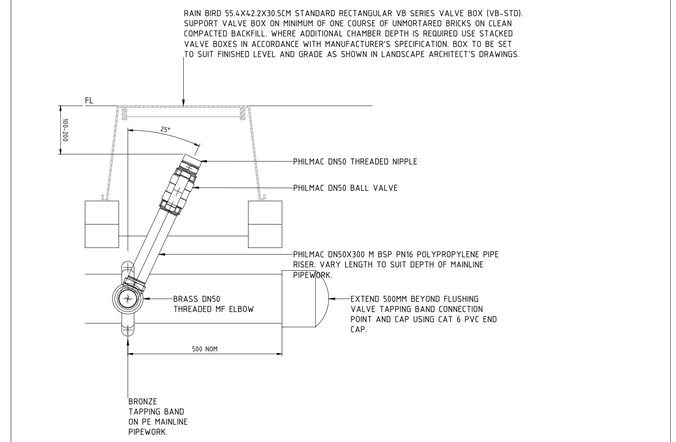


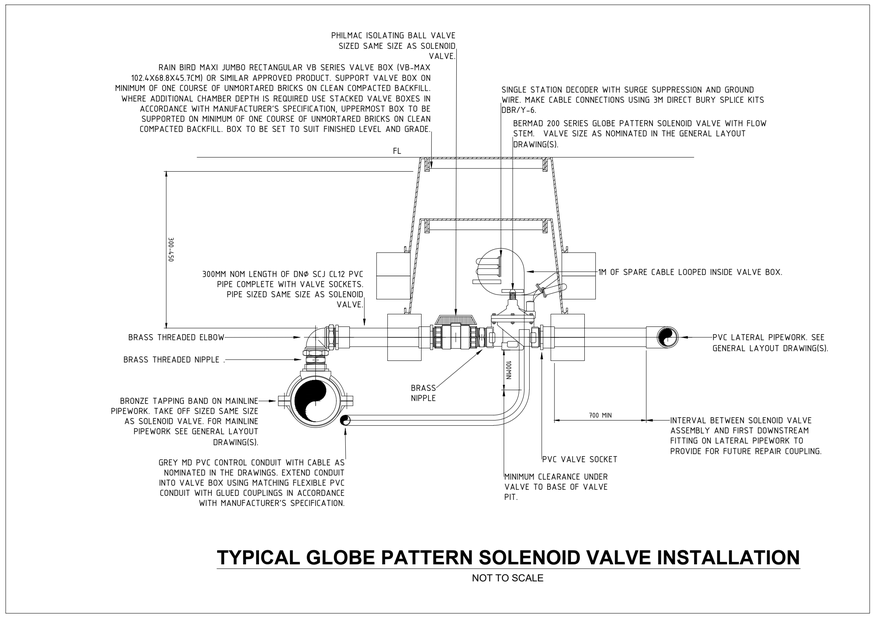
TABLE OF TREE WATERING SYSTEMS†						
SYSTEM	PLANT STOCK‡	SYSTEM FLOW(L/MIN)	20MIN VOL (L)¥	PIPE (A)	PIPE (B)	PIPE (C)
–	–	0-6	–	DN19	–	DN19
–	–	6-15	–	DN19	–	DN25
–	–	15-30	–	DN25	–	DN25

† SYSTEM DESIGN BASED ON THE PEAK DAILY WATER REQUIREMENTS SUPPLIED BY NURSERY INDUSTRY SOURCES AND OTHERS
‡ BAG STOCK SIZE (L) AND/OR NOMINAL DIAMETER OF TRANSPLANT ROOT BALL (M).
¥ VOLUME PROVIDED BY A 20MIN RUN TIME. RUN TIME TO BE ADJUSTED IN ACCORDANCE WITH PLANT WATER REQUIREMENTS AND CLIMATIC CONDITIONS.

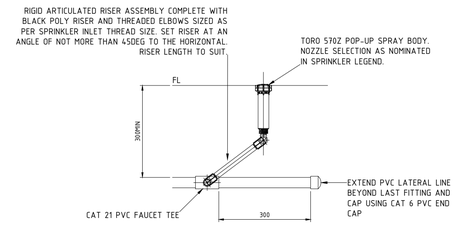
TREE WATERING SYSTEMS
NOT TO SCALE



TYPICAL FLUSHING (BALL) VALVE INSTALLATION ON MAINLINE PIPEWORK
NOT TO SCALE



TYPICAL GLOBE PATTERN SOLENOID VALVE INSTALLATION
NOT TO SCALE



TYPICAL POP-UP SPRAY SPRINKLER INSTALLATION ON PVC PIPEWORK
NOT TO SCALE

VALVE SCHEDULE					
NUMBER	TYPE	FLOW (l/min)	PRECIP (mm/hr)	APP'N (mm/week)	ST'N TIME (min)
1	Shrub Spray	170.72	32	40	15
2	Bubbler	33	–	40	15

NOTE:
1. THESE WORKS ARE TO BE INSTALLED TO MEET THE CITY OF WANNEROO IRRIGATION SPECIFICATIONS (JAN 2024 VERSION 1.0).
2. MAINLINE AND LATERAL PIPES ARE TO BE INSTALLED TO A MINIMUM DEPTH OF 350mm AND BE INSTALLED TO A MAXIMUM DEPTH OF 450mm.
3. THE CONTRACTOR TO UNDERTAKE FLOW (PRESSURE) ADJUSTMENT OF ALL SOLENOID VALVES IN ACCORDANCE WITH THE NOMINAL OPERATING PRESSURE OF THE SPRINKLERS ATTACHED TO THE PARTICULAR SOLENOID VALVE.
4. CABLE PITS TO BEEN LOCATED AT EVERY BEND IN THE MAINLINE AND EVERY 100m IN STRAIGHT RUNS.
5. ALL HUNTER ID2BLU 2-WIRE PATHS TO BE INSTALLED IN 40MD GREY CONDUIT.
6. THE IRRIGATION SUB CONTRACTOR SHALL SUPPLY A 13mm X 1200mm GROUND ROD FOR SURGE PROTECTION AND HOUSED WITHIN A VALVE BOX AS BELOW:-
   - AT THE END OF EACH COMMUNICATION CABLE RUN.
   - AT SPACING NOT EXCEEDING 250 METRES ALONG COMMUNICATION RUNS, OR AT EVERY 8TH DECODER.
   - OR AS PER MANUFACTURERS SPECIFICATIONS.
8. EXISTING CONTROLLER IS HUNTER ACC-99-D INSTALLED AS A PART OF FORESHORE POS WORKS.

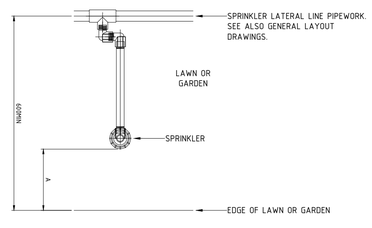


TABLE OF SPRINKLER OFFSETS			
EDGE TYPE	DIMENSION A		
	SPRAY†	ROTOR†	
BACK OF KERB OR EDGE OF PAVEMENT.	100	300	
GARDEN WALL WITH NO MOWING STRIP.	200	200	
BUILDING FACADE WITH NO MOWING STRIP.	600	600	

† SPRINKLER TYPE. SEE GENERAL LAYOUT DRAWINGS.

SPRINKLER AND LATERAL PIPE OFFSETS FROM LAWN AND GARDEN EDGES
NOT TO SCALE

AUTOCAD FILENAME: Catalina S1 32 Streetscapes Design (Rev A).dwg

REV	DATE	DESCRIPTION	DWN	CKD
A	19/02/2024	ISSUED FOR APPROVAL	P.K	J.S

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DRAWN BY :	P. KULKARNI
APPROVED BY :	J. STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT :
EMERGE ASSOCIATES

PROJECT :
CATALINA
STAGE 32 - STREETSCAPES
IRRIGATION WORKS

DATE :	DESIGN NO. :	SHEET NO. :
19/02/2024	18715-02	2 OF 2

CATALINA

CLARKSON, WA

Catalina

STAGE 33 & 34 STREETSCAPES

LANDSCAPE CONTRACT: CAT-74

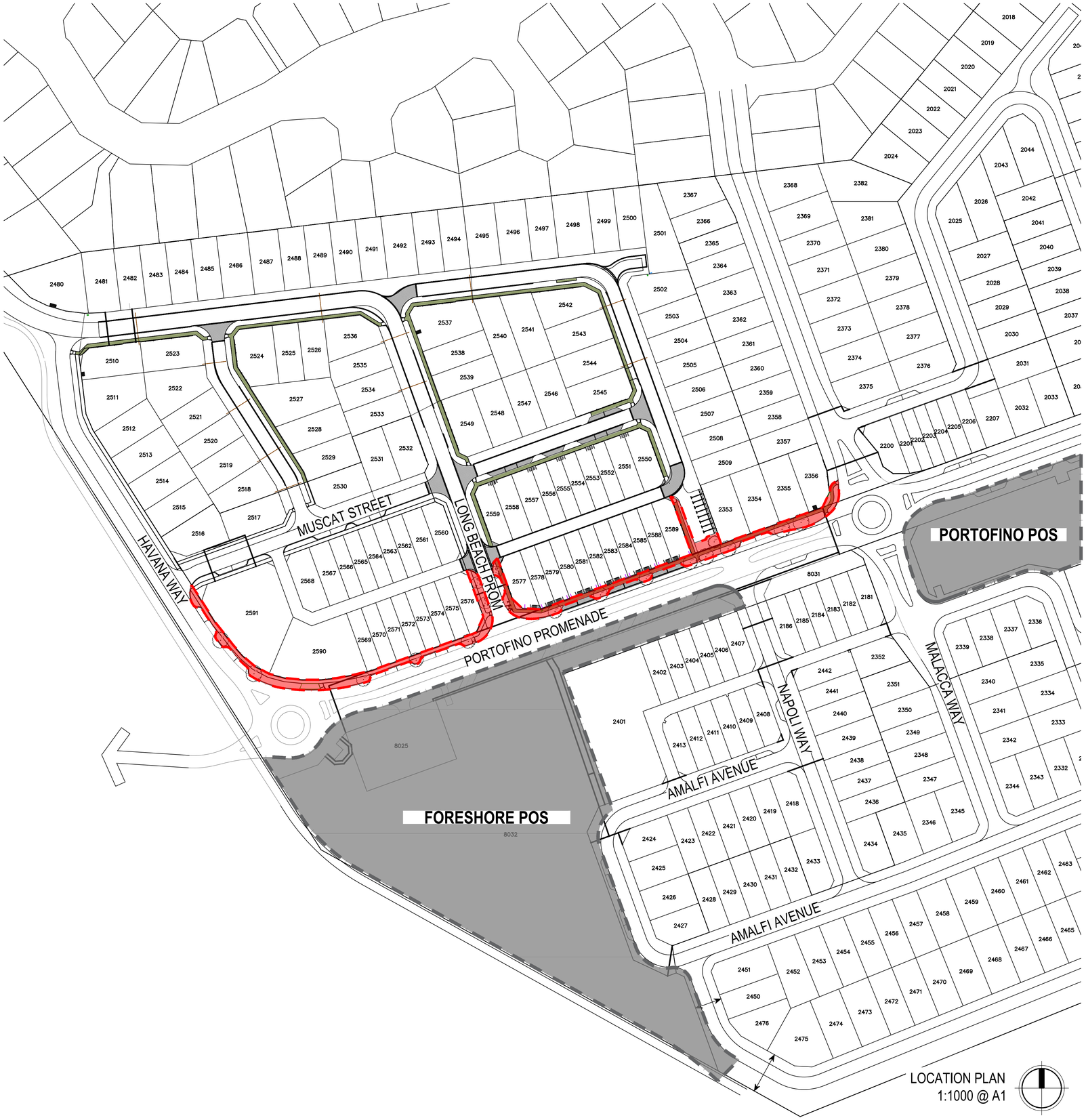
LANDSCAPE & IRRIGATION WORKS

CLIENT:LANDSCAPE & IRRIGATION WORKS

ISSUE FOR: ***CONSTRUCTION***

DATE: **AUGUST 2025**

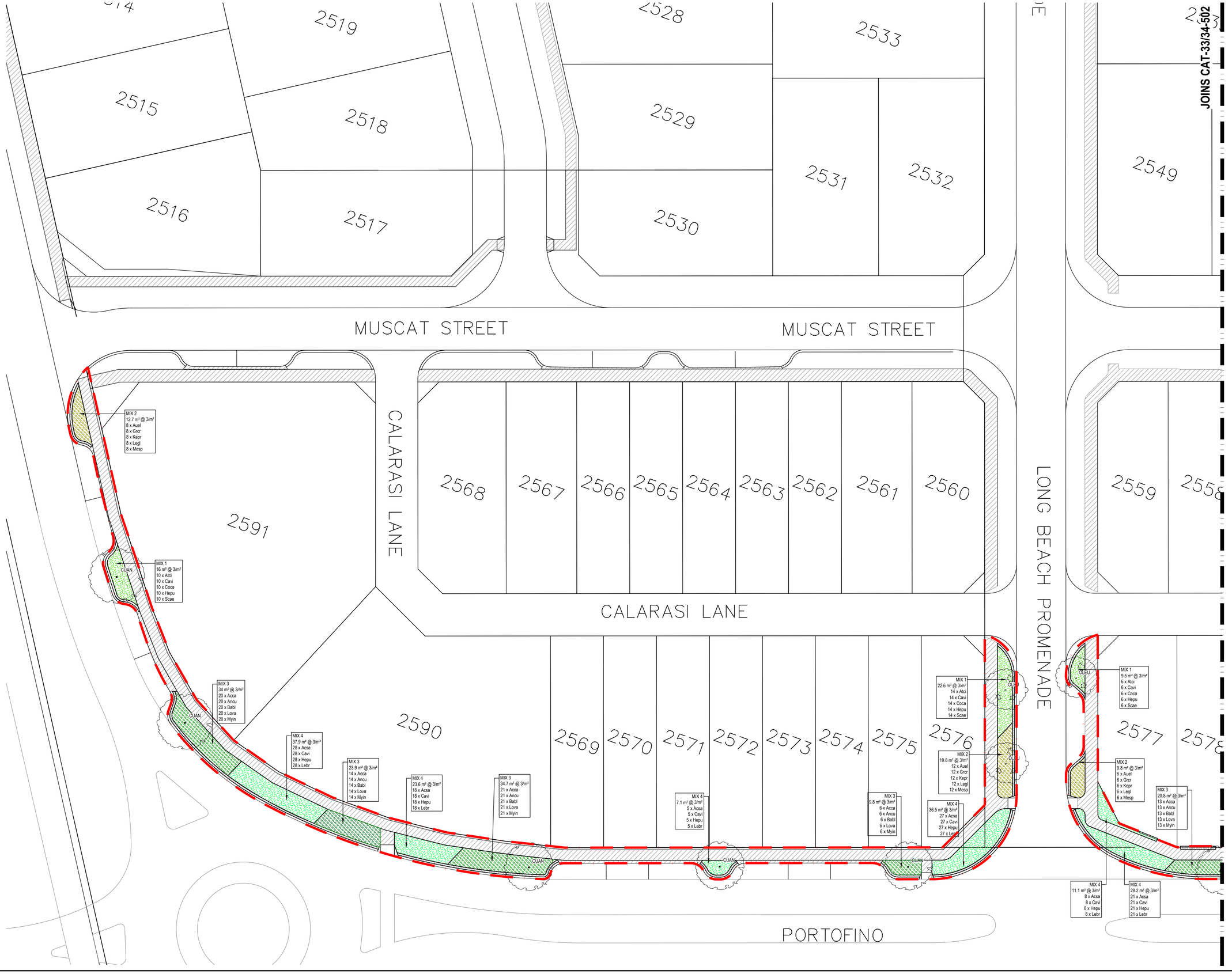
Sheet List Table		
Sheet Number	Sheet Title	Revision
CAT-74-000	COVER	C
CAT-74-501	PLANTING PLAN 1 of 2	C
CAT-74-502	PLANTING PLAN 2 OF 2	C
CAT-74-971	SOFTWORKS	C



LOCATION PLAN
1:1000 @ A1

CATALINA Regional Council

emerge ASSOCIATES
Integrated Science & Design



LEGEND

- EXTENT OF WORKS
- PROPOSED PLANTING (1-2 960)
- MULCH ONLY
- PROPOSED TREES (3-4 960)

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PROJECT
CATALINA
CLARKSON, WA
STAGE OR PHASE

STAGE 33 & 34 STREETSCAPES
DRAWING TITLE
PLANTING PLAN 1 OF 2
CLIENT
LANDSCAPE & IRRIGATION WORKS

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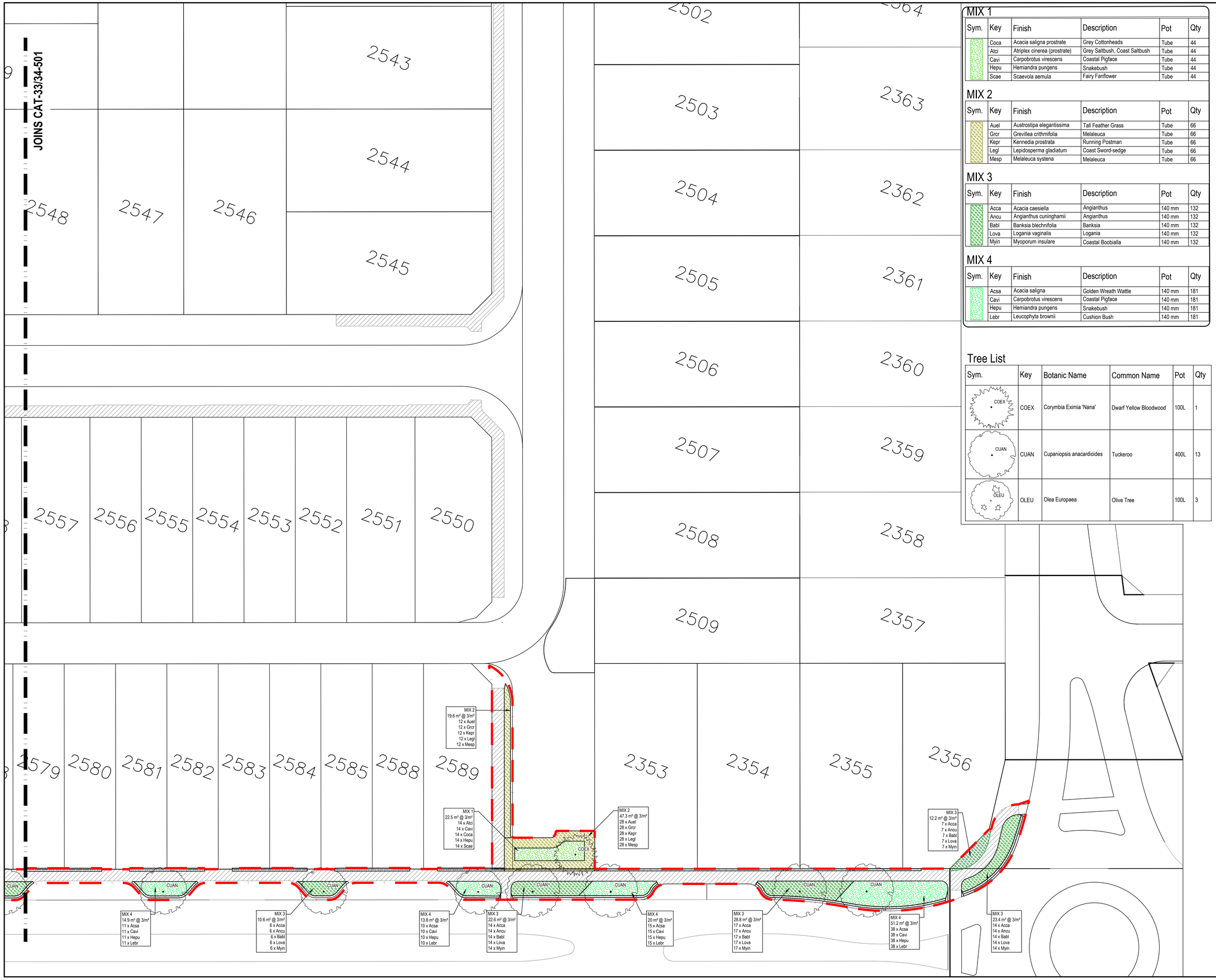
DRAWN BY	ZF	PRELIM DWG REVIEWED BY	SC
DATE INITIALLY DRAWN	21.05.24		

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

DRAWING NUMBER
CAT-74-501

REV
0

S:\JOBS\33-34 CATALINA\STAGE 33\CAT CATALINA\LANDSCAPE\CAD\ LANDSCAPE CODE\ AUTOCAD\JOB CODE\ DRAWINGS\JOB CODE\ PARKS\ PROJECTS\CATALINA, YAMALA PARK\



MIX 1

Sym.	Key	Finish	Description	Pot	Qty
	Coca	Acacia saligna prostrate	Grey Cottonheads	Tube	44
	Atci	Atriplex cinerea (prostrate)	Grey Saltbush, Coast Saltbush	Tube	44
	Cavi	Carpobrotus virescens	Coastal Pigface	Tube	44
	Hepu	Hemiandra pungens	Snakebush	Tube	44
	Scae	Scaevola aemula	Fairy Fanflower	Tube	44

MIX 2

Sym.	Key	Finish	Description	Pot	Qty
	Auel	Austrostipa elegantissima	Tall Feather Grass	Tube	66
	Grcr	Grevillea crithmifolia	Melaleuca	Tube	66
	Kepr	Kennedia prostrata	Running Postman	Tube	66
	Legl	Lepidosperma gladiatum	Coast Sword-sedge	Tube	66
	Mesp	Melaleuca systena	Melaleuca	Tube	66

MIX 3

Sym.	Key	Finish	Description	Pot	Qty
	Acca	Acacia caesiella	Angianthus	140 mm	132
	Ancu	Angianthus cuninghamii	Angianthus	140 mm	132
	Babl	Banksia blechnifolia	Banksia	140 mm	132
	Lova	Logania vaginalis	Logania	140 mm	132
	Myin	Myoporum insulare	Coastal Boobialla	140 mm	132

MIX 4

Sym.	Key	Finish	Description	Pot	Qty
	Acsa	Acacia saligna	Golden Wreath Wattle	140 mm	181
	Cavi	Carpobrotus virescens	Coastal Pigface	140 mm	181
	Hepu	Hemiandra pungens	Snakebush	140 mm	181
	Lebr	Leucophyta brownii	Cushion Bush	140 mm	181

Tree List

Sym.	Key	Botanic Name	Common Name	Pot	Qty
COEX	COEX	Corymbia Eximia 'Nana'	Dwarf Yellow Bloodwood	100L	1
CUAN	CUAN	Cupaniopsis anacardioides	Tuckeroo	400L	13
OLEU	OLEU	Olea Europaea	Olive Tree	100L	3

LEGEND

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STAGE 33 & 34 STREETSCAPES
DRAWING TITLE
PLANTING PLAN 2 OF 2
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LANDSCAPE & IRRIGATION WORKS

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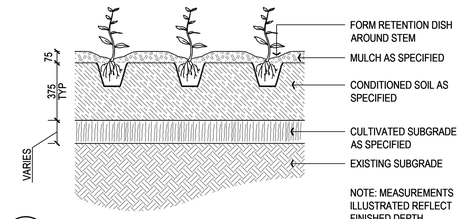
DATE INITIALLY DRAWN	21.05.24		

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

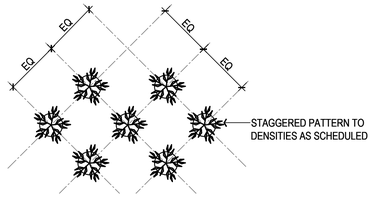
DRAWING NUMBER
CAT-74-502

REV
0

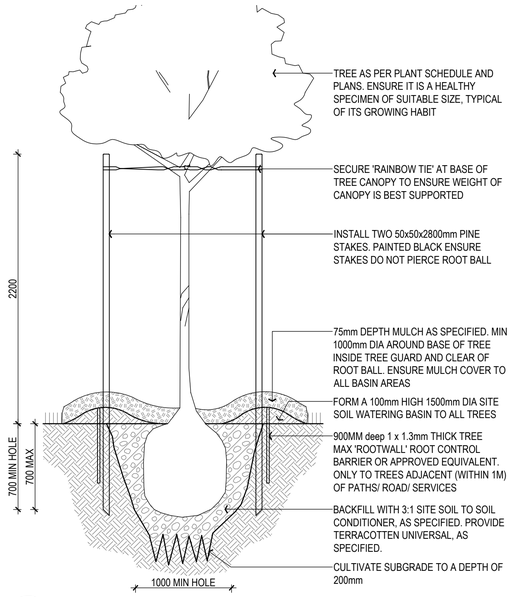
REF: J:\CURRENT PROJECTS\CATALINA, TAMALA PARK\CLIENT DRAWINGS\DB CODE\ AUTOCAD\DB CODE\ LANDSCAPE\STAGE 33,34\CAT CATALINA STG 33,34 DESIGN.DWG



1/900 TUBESTOCK - 200mm POT PLANTING
SECTION — SCALE 1:20



2/900 TYPICAL STAGGERED PLANTING PATTERN
PLAN — SCALE 1:20



2,4/A01 TYPICAL 400 & 500 LITRE TREE PLANTING
SECTION — SCALE 1:25

3/900 TYPICAL 100 & 200 LITRE TREE PLANTING
SECTION — SCALE 1:25

STANDARD NOTES

1. **SET OUT & DIMENSIONS.** THE CONTRACTOR SHALL SET OUT ALL PATHS, WALLS, HARD SURFACES AND ELEMENTS EITHER ON OR OFF SITE PRIOR TO CONSTRUCTION AND SHALL OBTAIN THE SUPERINTENDENTS SET OUT APPROVAL PRIOR TO WORKS COMMENCING. WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALE. CHECK ALL DRAWING SCALES IN CONJUNCTION WITH DRAWING SIZE.
2. **SERVICES & SITE ASSETS.** THE CONTRACTOR SHALL INVESTIGATE THE NATURE AND LOCATION OF ALL EXISTING SERVICES AND RETAINED SITE ASSETS AFFECTED BY THEIR WORKS. FAILURE TO TAKE DUE CARE SHALL NOT LIMIT THE CONTRACTORS LIABILITIES.
3. **REFERENCE.** THE CONTRACTOR SHALL REFER TO ALL CONTRACT DOCUMENTS, THE SPECIFICATION AND DRAWINGS PRIOR TO AND DURING THE WORKS.
4. **DISCREPANCIES.** NOTIFY SUPERINTENDENT OF ANY SUSPECTED OR KNOWN DISCREPANCIES OR ERRORS PRIOR TO THE ORDERING OF AFFECTED MATERIALS AND OR CONSTRUCTION OF AFFECTED WORKS.
5. **RELEVANT STANDARDS.** THE CONTRACTOR SHALL UNDERTAKE ALL PRICING AND WORKS IN ACCORDANCE WITH CURRENT INDUSTRY BEST PRACTICE AND ALL RELEVANT AUSTRALIAN STANDARDS.
6. **SERVICE LOCATOR.** THE CONTRACTOR SHALL UNDERTAKE A DIAL BEFORE YOU DIG PROCESS PRIOR TO COMMENCING WORKS ON SITE. THE CONTRACTOR SHALL ENGAGE A SERVICE LOCATOR TO MAP THE SPECIFIC LOCATIONS AND DEPTH OF ALL SERVICES AND ADVISE ALL RELEVANT STAFF AND SUBCONTRACTORS IN WRITING PRIOR TO COMMENCING WORKS ON SITE.

REV	DATE	BY	ISSUE OR AMENDMENT
0	12.08.25	JL	ISSUE FOR CONSTRUCTION
C	08.08.24	JL	REVISED FOR APPROVAL
B	31.05.2024	AC	ISSUE FOR COUNCIL APPROVAL
A	19.01.24	JL	ISSUE FOR COMMENT

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emerge ASSOCIATES
Integrated Science & Design
PERTH (08) 9380 4988 • MARGARET RIVER (08) 9758 8159

PROJECT
CATALINA
CLARKSON, WA
STAGE OR PHASE
—
STAGE 33 & 34 STREETSCAPES
DRAWING TITLE
SOFTWORKS
.
CLIENT
LANDSCAPE & IRRIGATION WORKS

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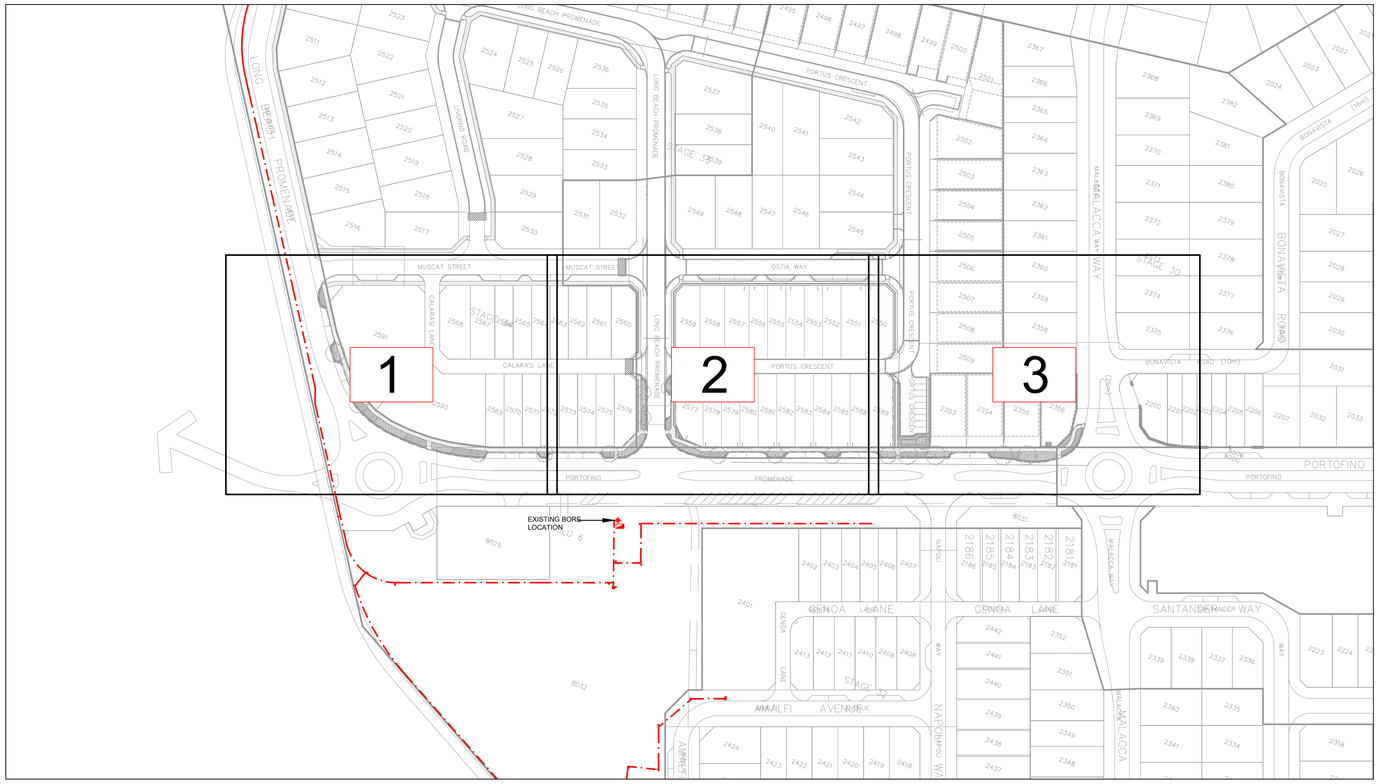
DRAWN BY	ZF	PRELIM DWG REVIEWED BY	SC
DATE INITIALLY DRAWN	21.05.24		
SCALE	AS SHOWN		
DRAWING NUMBER	CAT-74-971	REV	0

REF: I:\CURRENT PROJECTS\CATALINA, TAMALA PARK\CL\DRAWINGS\LDR CODE\ AUTOCAD\LDR CODE\ LANDSCAPE\STAGE 33\MASTER CATALINA MASTER PLAN DETAILS.DWG

CATALINA GREEN STAGE 33-34 STREETSCAPES

IRRIGATION WORKS



AUTOCAD FILENAME: Catalina Stage 33-34 Design (Rev 01).dwg

REV	DATE	DESCRIPTION	DWN	CKD
A	11/07/2024	ISSUED FOR APPROVAL	R.V	J.S
0	13/08/2025	ISSUED FOR CONSTRUCTION	R.V	J.S

REV	DATE	DESCRIPTION	DWN	CKD

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SCALE :	1 : NTS @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

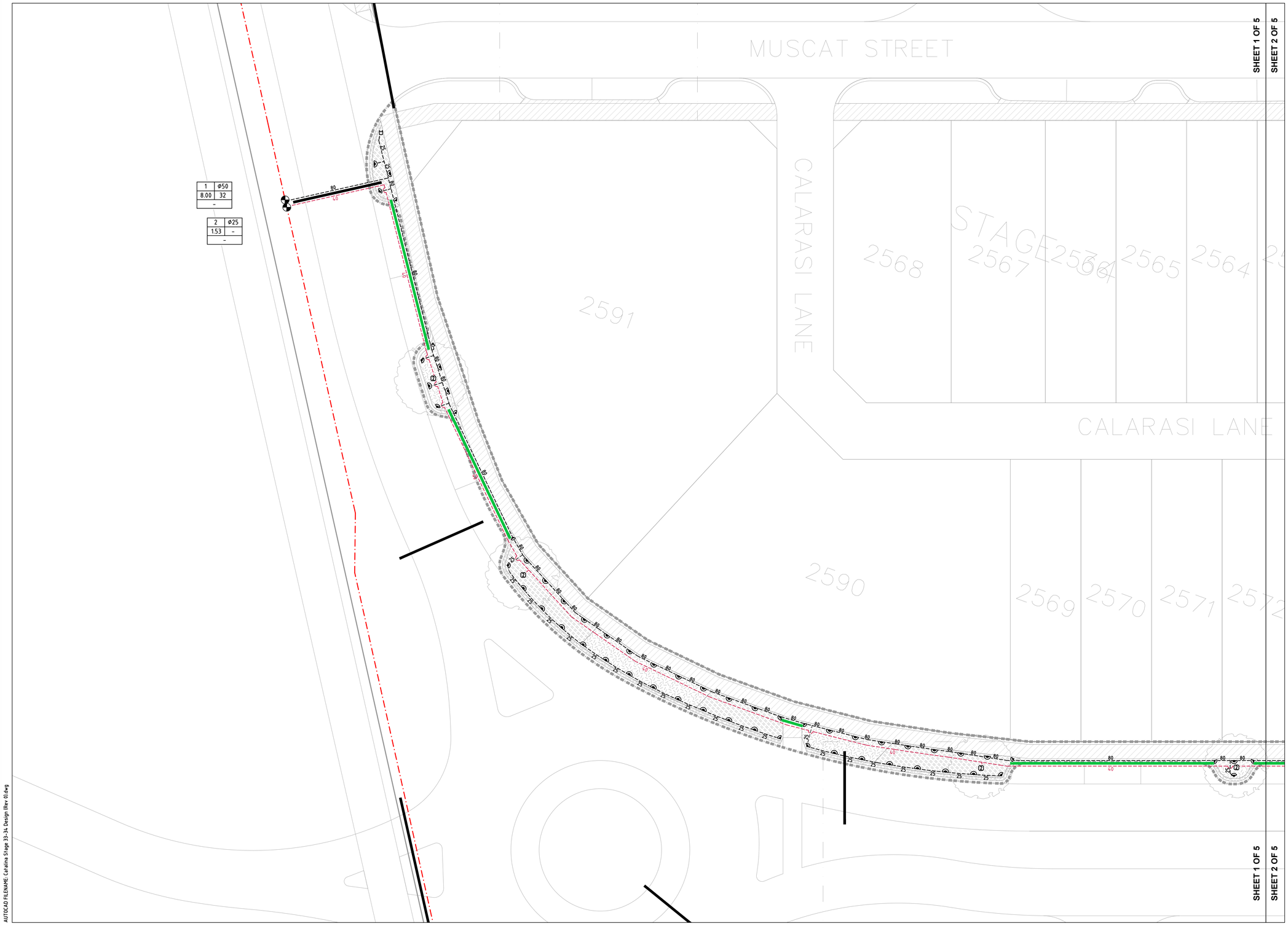
CLIENT :

EMERGE ASSOCIATES

PROJECT :

CATALINA GREEN STAGE 33-34 STREETSCAPES
IRRIGATION WORKS (KEY PLAN)
-

DATE :	DESIGN NO. :	SHEET NO. :
11/07/2024	18800-00	COVER PAGE



LEGEND: "SPRINKLERS"

SYMBOL	BRAND NAME	MODEL DESCRIPTION	NOZZ. NO.	PRESS. (KPA)	FLOW (LPM)	RADIUS (M)
	TORO	570Z-12P	15	250	2.84-11.36	4.6
	TORO	570Z-12P	12	250	1.82-7.27	3.7
	TORO	570Z-12P	10	250	1.25-5.04	3.0
	TORO	570Z-12P	4EST	250	1.63	1.2x4.4
	TORO	570Z-12P	4SST	250	3.33	1.2x9.1

	FOR GARDEN AREAS REFER TO C.O.W. SPECIFICATION ITEM 1.6.2 SPRAY SPRINKLERS FOR DEFINING AREAS REQUIRING 570Z-12P'S
400 L	2-TORO FLOOD BUBBLERS MODEL FB-100PC ON A TORO 570Z-6P WITH BLUE FLEX 7.06 LPM @ 250 kPA
	EXISTING BORE LOCATION
	EXISTING HUNTER ACC-99-D TWO-WIRE IRRIGATION CONTROLLER
	BERMAD 200 SERIES SOLENOID CONTROL VALVE SIZE AS SHOWN
	EXISTING DN110 PN12.5 PE100 MDPE POLY MAINLINE
25	uPVC SWJ CLASS 9 LATERAL LINE SIZE AS SHOWN
25	uPVC SWJ CLASS 9 LATERAL LINE FOR TREES SIZE AS SHOWN
	DN110 PN10 PE100 POLY SLEEVE INSTALLED BY IRRIGATION CONTRACTOR IN COORDINATION WITH THE CIVIL AND LANDSCAPING CONTRACTORS
	DN160 PN10 PE100 POLY SLEEVE INSTALLED BY IRRIGATION CONTRACTOR IN COORDINATION WITH THE CIVIL AND LANDSCAPING CONTRACTORS
	EXISTING SLEEVE

STATION DATA							VALVE DATA		
ST'N NO.	FLOW (L/s)	PR. (kPa)	PR'N mm hr	APP'N mm/week	ST'N TIME (min)	AREA TYPE	VAL. NO.	FLOW (L/s)	DECODER NO.
-	8.00	250	32	40	15	GARDEN	1	8.00	-
-	1.53	250	-	-	15	TREES	2	1.53	-

VALVE LABEL LEGEND

VALVE NO / FLOW (LPS)

2 | ø50	VALVE SIZE
3.29 | 32	PRECIPITATION RATE
-	DECODER NO.

NOTE:
1. THESE WORKS ARE TO BE INSTALLED TO MEET THE CITY OF WANNEROO IRRIGATION SPECIFICATIONS (JAN 2024 VERSION 1.0).
2. LATERAL PIPES ARE TO BE INSTALLED TO A MINIMUM DEPTH OF 350mm
3. THE CONTRACTOR TO UNDERTAKE FLOW (PRESSURE) ADJUSTMENT OF ALL SOLENOID VALVES IN ACCORDANCE WITH THE NOMINAL OPERATING PRESSURE OF THE SPRINKLERS ATTACHED TO THE PARTICULAR SOLENOID VALVE.

0 2 4 6 8 10m
SCALE 1:200 ON A1

AUTOCAD FILENAME: Catalina Stage 33-34 Design (Rev 0).dwg

REV	DATE	DESCRIPTION	DWN	CKD
A	11/07/2024	ISSUED FOR APPROVAL	R.V	J.S
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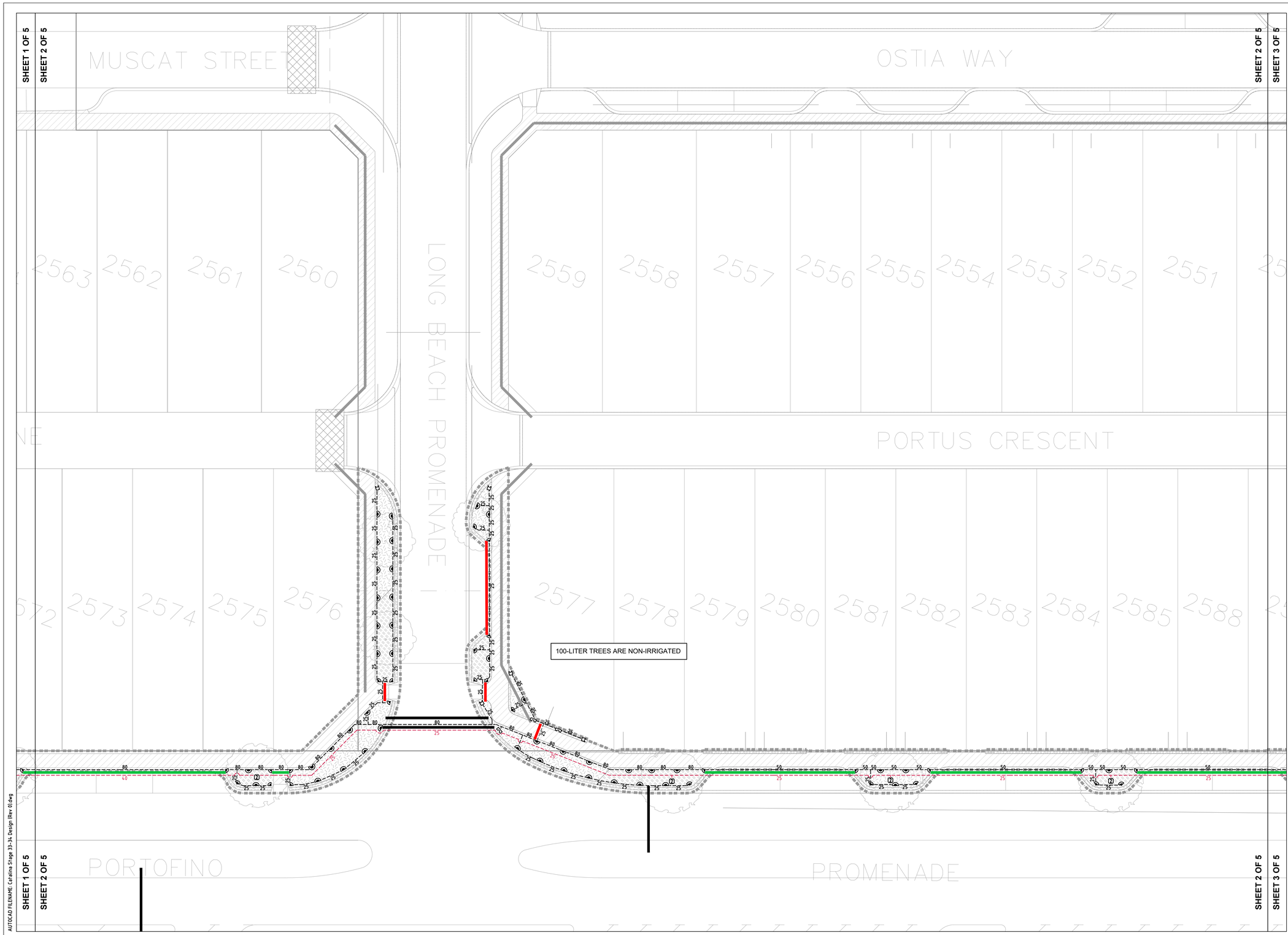
NewGround DESIGN SERVICES

SCALE :	1 : 200 @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT :
EMERGE ASSOCIATES

PROJECT :
CATALINA GREEN STAGE 33-34 STREETSCAPES
IRRIGATION WORKS
-

DATE :	DESIGN NO. :	SHEET NO. :
11/07/2024	18800-01	1 OF 5



AUTOCAD FILENAME: Catalina Stage 33-34 Design (Rev 0).dwg

LEGEND: "SPRINKLERS"

SYMBOL	BRAND NAME	MODEL DESCRIPTION	NOZZ. NO.	PRESS. (KPA)	FLOW (LPM)	RADIUS (M)
	TORO	570Z-12P	15	250	2.84-11.36	4.6
	TORO	570Z-12P	12	250	1.82-7.27	3.7
	TORO	570Z-12P	10	250	1.25-5.04	3.0
	TORO	570Z-12P	4EST	250	1.63	1.2x4.4
	TORO	570Z-12P	4SST	250	3.33	1.2x9.1
		FOR GARDEN AREAS REFER TO C.O.W. SPECIFICATION ITEM 1.6.2 SPRAY SPRINKLERS FOR DEFINING AREAS REQUIRING 570Z-12P'S				
400 L		2-TORO FLOOD BUBBLERS MODEL FB-100PC ON A TORO 570Z-6P WITH BLUE FLEX 7.06 LPM @ 250 kPA				
		EXISTING BORE LOCATION				
		EXISTING HUNTER ACC-99-D TWO-WIRE IRRIGATION CONTROLLER				
		BERMAD 200 SERIES SOLENOID CONTROL VALVE SIZE AS SHOWN				
		EXISTING DN110 PN12.5 PE100 MDPE POLY MAINLINE				
25		uPVC SWJ CLASS 9 LATERAL LINE SIZE AS SHOWN				
25		uPVC SWJ CLASS 9 LATERAL LINE FOR TREES SIZE AS SHOWN				
		DN110 PN10 PE100 POLY SLEEVE INSTALLED BY IRRIGATION CONTRACTOR IN COORDINATION WITH THE CIVIL AND LANDSCAPING CONTRACTORS				
		DN160 PN10 PE100 POLY SLEEVE INSTALLED BY IRRIGATION CONTRACTOR IN COORDINATION WITH THE CIVIL AND LANDSCAPING CONTRACTORS				
		EXISTING SLEEVE				

STATION DATA							VALVE DATA		
ST'N NO.	FLOW (L/s)	PR. (kPa)	PR'N mm hr	APP'N mm week	ST'N TIME (min)	AREA TYPE	VAL. NO.	FLOW (L/s)	DECODER NO.
-	8.00	250	32	40	15	GARDEN	1	8.00	-
-	1.53	250	-	-	15	TREES	2	1.53	-

VALVE LABEL LEGEND

VALVE NO	2	ø50	VALVE SIZE
FLOW (LPS)	3.29	32	PRECIPITATION RATE
	-		DECODER NO.

NOTE:
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3. THE CONTRACTOR TO UNDERTAKE FLOW (PRESSURE) ADJUSTMENT OF ALL SOLENOID VALVES IN ACCORDANCE WITH THE NOMINAL OPERATING PRESSURE OF THE SPRINKLERS ATTACHED TO THE PARTICULAR SOLENOID VALVE.

CERTIFIED IRRIGATION DESIGNER — IRRIGATION AUSTRALIA — IRRIGATION | TURF COMMISSION

0 2 4 6 8 10m
SCALE 1:200 ON A1

REV	DATE	DESCRIPTION	DWN	CKD
A	11/07/2024	ISSUED FOR APPROVAL	R.V	J.S
0	13/08/2025	ISSUED FOR CONSTRUCTION	R.V	J.S

REV	DATE	DESCRIPTION	DWN	CKD

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SCALE :	1 : 200 @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT :
EMERGE ASSOCIATES

PROJECT :
CATALINA GREEN STAGE 33-34 STREETSCAPES
IRRIGATION WORKS
-

DATE :	DESIGN NO. :	SHEET NO. :
11/07/2024	18800-02	2 OF 5



LEGEND: "SPRINKLERS"

SYMBOL	BRAND NAME	MODEL DESCRIPTION	NOZZ. NO.	PRESS. (KPA)	FLOW (LPM)	RADIUS (M)
	TORO	570Z-12P	15	250	2.84-11.36	4.6
	TORO	570Z-12P	12	250	1.82-7.27	3.7
	TORO	570Z-12P	10	250	1.25-5.04	3.0
	TORO	570Z-12P	4EST	250	1.63	1.2x4.4
	TORO	570Z-12P	4SST	250	3.33	1.2x9.1
		FOR GARDEN AREAS REFER TO C.O.W. SPECIFICATION ITEM 1.6.2 SPRAY SPRINKLERS FOR DEFINING AREAS REQUIRING 570Z-12P'S				
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		EXISTING BORE LOCATION				
		EXISTING HUNTER ACC-99-D TWO-WIRE IRRIGATION CONTROLLER				
		BERMAD 200 SERIES SOLENOID CONTROL VALVE SIZE AS SHOWN				
		EXISTING DN110 PN12.5 PE100 MDPE POLY MAINLINE				
25		uPVC SWJ CLASS 9 LATERAL LINE SIZE AS SHOWN				
25		uPVC SWJ CLASS 9 LATERAL LINE FOR TREES SIZE AS SHOWN				
		DN110 PN10 PE100 POLY SLEEVE INSTALLED BY IRRIGATION CONTRACTOR IN COORDINATION WITH THE CIVIL AND LANDSCAPING CONTRACTORS				
		DN160 PN10 PE100 POLY SLEEVE INSTALLED BY IRRIGATION CONTRACTOR IN COORDINATION WITH THE CIVIL AND LANDSCAPING CONTRACTORS				
		EXISTING SLEEVE				

STATION DATA							VALVE DATA		
ST'N NO.	FLOW (L/s)	PR. (kPa)	PR'N mm hr	APP'N mm week	ST'N TIME (min)	AREA TYPE	VAL. NO.	FLOW (L/s)	DECODER NO.
-	8.00	250	32	40	15	GARDEN	1	8.00	-
-	1.53	250	-	-	15	TREES	2	1.53	-

VALVE LABEL LEGEND

VALVE NO	2	ø50	VALVE SIZE
FLOW (LPS)	3.29	32	PRECIPITATION RATE
	-		DECODER NO.

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SCALE 1:200 ON A1

AUTOCAD FILENAME: Catalina Stage 33-34 Design (Rev 0).dwg

REV	DATE	DESCRIPTION	DWN	CKD
A	11/07/2024	ISSUED FOR APPROVAL	R.V	J.S
0	13/08/2025	ISSUED FOR CONSTRUCTION	R.V	J.S

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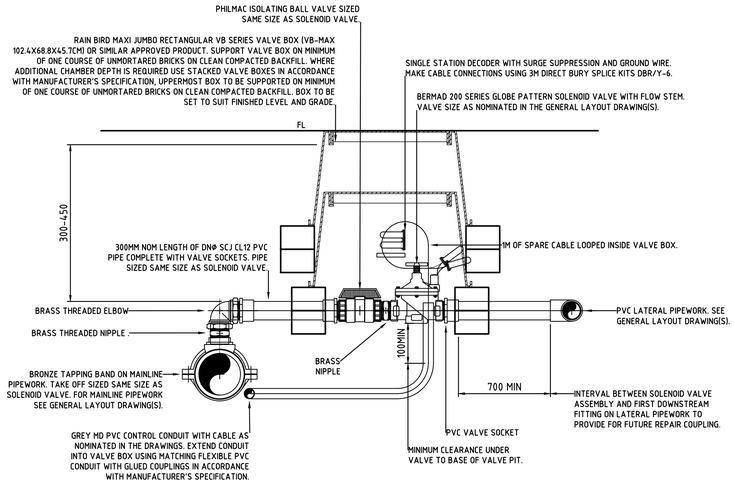
SCALE :	1 : 200 @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT : EMERGE ASSOCIATES

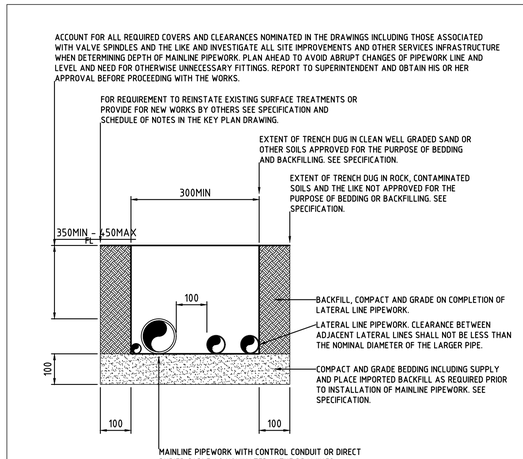
PROJECT : CATALINA GREEN STAGE 33-34 STREETSCAPES IRRIGATION WORKS -

DATE :	DESIGN NO. :	SHEET NO. :
11/07/2024	18800-03	3 OF 5



TYPICAL GLOBE PATTERN SOLENOID VALVE INSTALLATION

NOT TO SCALE



TYPICAL ARRANGEMENT OF MULTIPLE PIPES IN A COMMON TRENCH

NOT TO SCALE

AUTOCAD FILENAME: Catalina Stage 33-34 Design (Rev 0).dwg

REV	DATE	DESCRIPTION	DWN	CKD
A	11/07/2024	ISSUED FOR APPROVAL	R.V	J.S
0	13/08/2025	ISSUED FOR CONSTRUCTION	R.V	J.S

REV	DATE	DESCRIPTION	DWN	CKD

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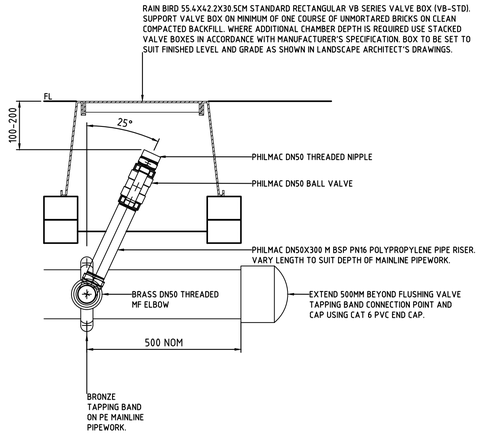
NewGround DESIGN SERVICES

SCALE :	1 : NTS @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT :
EMERGE ASSOCIATES

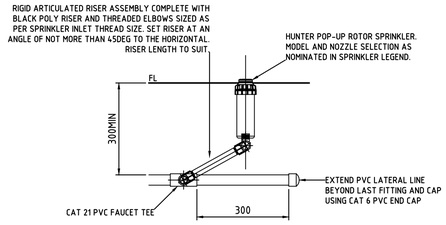
PROJECT :
CATALINA GREEN STAGE 33-34 STREETSCAPES
IRRIGATION WORKS (TYPICAL DETAILS)
-

DATE :	DESIGN NO. :	SHEET NO. :
11/07/2024	18800-04	4 OF 5



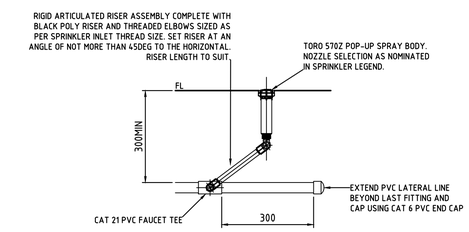
TYPICAL FLUSHING (BALL) VALVE INSTALLATION ON MAINLINE PIPEWORK

NOT TO SCALE



TYPICAL POP-UP ROTOR SPRINKLER INSTALLATION ON PVC PIPEWORK

NOT TO SCALE



TYPICAL POP-UP SPRAY SPRINKLER INSTALLATION ON PVC PIPEWORK

NOT TO SCALE

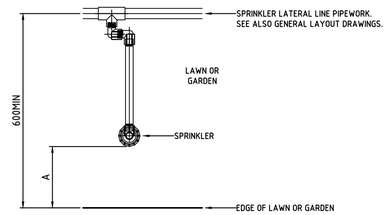


TABLE OF SPRINKLER OFFSETS			
EDGE TYPE	DIMENSION A		
	SPRAY†	ROTOR†	
BACK OF KERB OR EDGE OF PAVEMENT.	100	300	
GARDEN WALL WITH NO MOWING STRIP.	200	200	
BUILDING FACADE WITH NO MOWING STRIP.	600	600	

† SPRINKLER TYPE. SEE GENERAL LAYOUT DRAWINGS.

SPRINKLER AND LATERAL PIPE OFFSETS FROM LAWN AND GARDEN EDGES

NOT TO SCALE

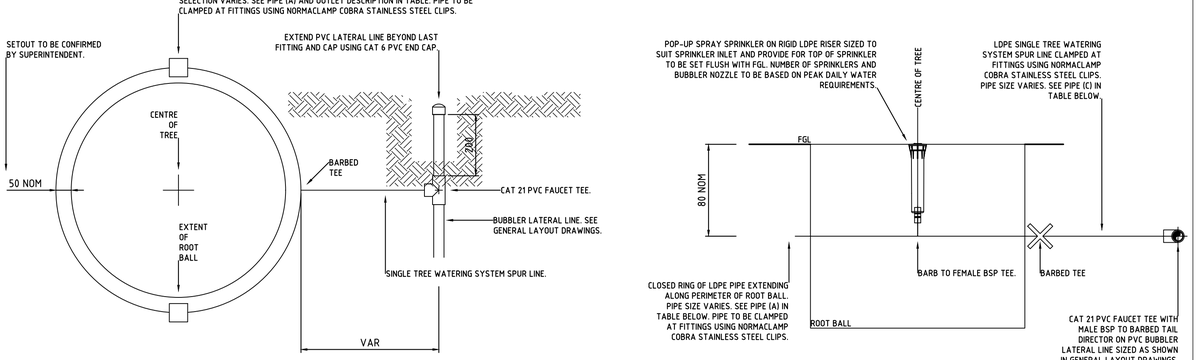


TABLE OF TREE WATERING SYSTEMS†						
SYSTEM	PLANT STOCK‡	SYSTEM FLOW(L/MIN)	20MIN VOL (L)¥	PIPE (A)	PIPE (B)	PIPE (C)
-	-	0-6	-	DN19	-	DN19
-	-	6-15	-	DN19	-	DN25
-	-	15-30	-	DN25	-	DN25

† SYSTEM DESIGN BASED ON THE PEAK DAILY WATER REQUIREMENTS SUPPLIED BY NURSERY INDUSTRY SOURCES AND OTHERS
‡ BAG STOCK SIZE (L) AND/OR NOMINAL DIAMETER OF TRANSPLANT ROOT BALL (M).
¥ VOLUME PROVIDED BY A 20MIN RUN TIME. RUN TIME TO BE ADJUSTED IN ACCORDANCE WITH PLANT WATER REQUIREMENTS AND CLIMATIC CONDITIONS.

TREE WATERING SYSTEMS

NOT TO SCALE

AUTOCAD FILENAME: Catalina Stage 33-34 Design (Rev 0).dwg

REV	DATE	DESCRIPTION	DWN	CKD
A	11/07/2024	ISSUED FOR APPROVAL	R.V	J.S
0	13/08/2025	ISSUED FOR CONSTRUCTION	R.V	J.S

REV	DATE	DESCRIPTION	DWN	CKD

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SCALE :	1 : NTS @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT :

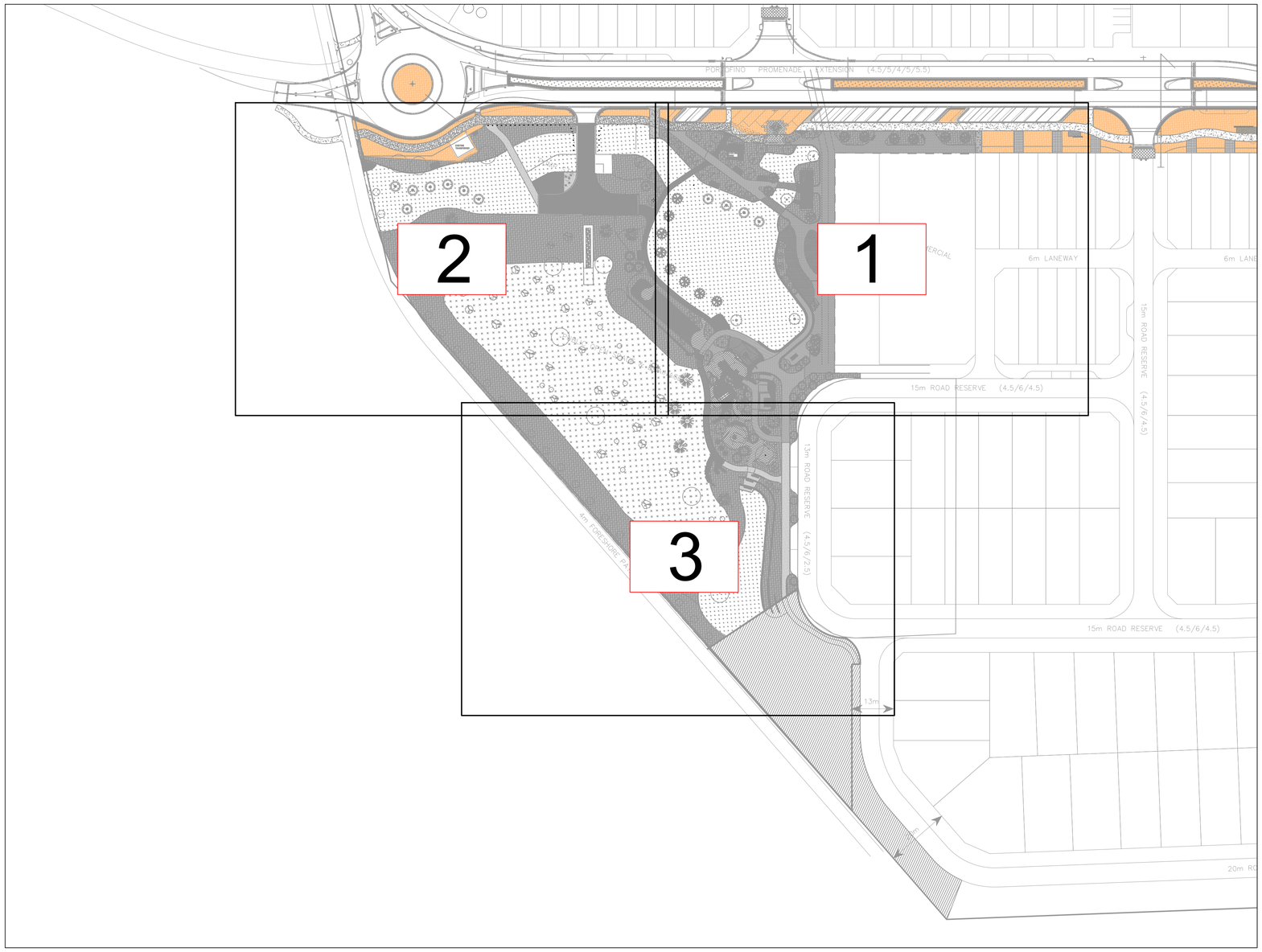
EMERGE ASSOCIATES

PROJECT :

CATALINA GREEN STAGE 33-34 STREETSCAPES
IRRIGATION WORKS (TYPICAL DETAILS)
-

DATE :	DESIGN NO. :	SHEET NO. :
11/07/2024	18800-05	5 OF 5

CATALINA BEACH - FORESHORE POS
IRRIGATION WORKS



AUTOCAD FILENAME: Catalina - Foreshore POS Design (Rev 01).dwg

REV	DATE	DESCRIPTION	DWN	CKD
A	01/12/2022	ISSUED FOR APPROVAL	R.V	J.S
B	14/12/2022	REVISED IRRIGATION TO SUIT THE NEW LANDSCAPE PLAN	R.V	J.S
C	12/07/2023	REVISED IRRIGATION TO SUIT THE LATEST LANDSCAPE PLAN	R.V	J.S
0	05/10/2023	ISSUED FOR CONSTRUCTION	R.V	J.S

REV	DATE	DESCRIPTION	DWN	CKD

N

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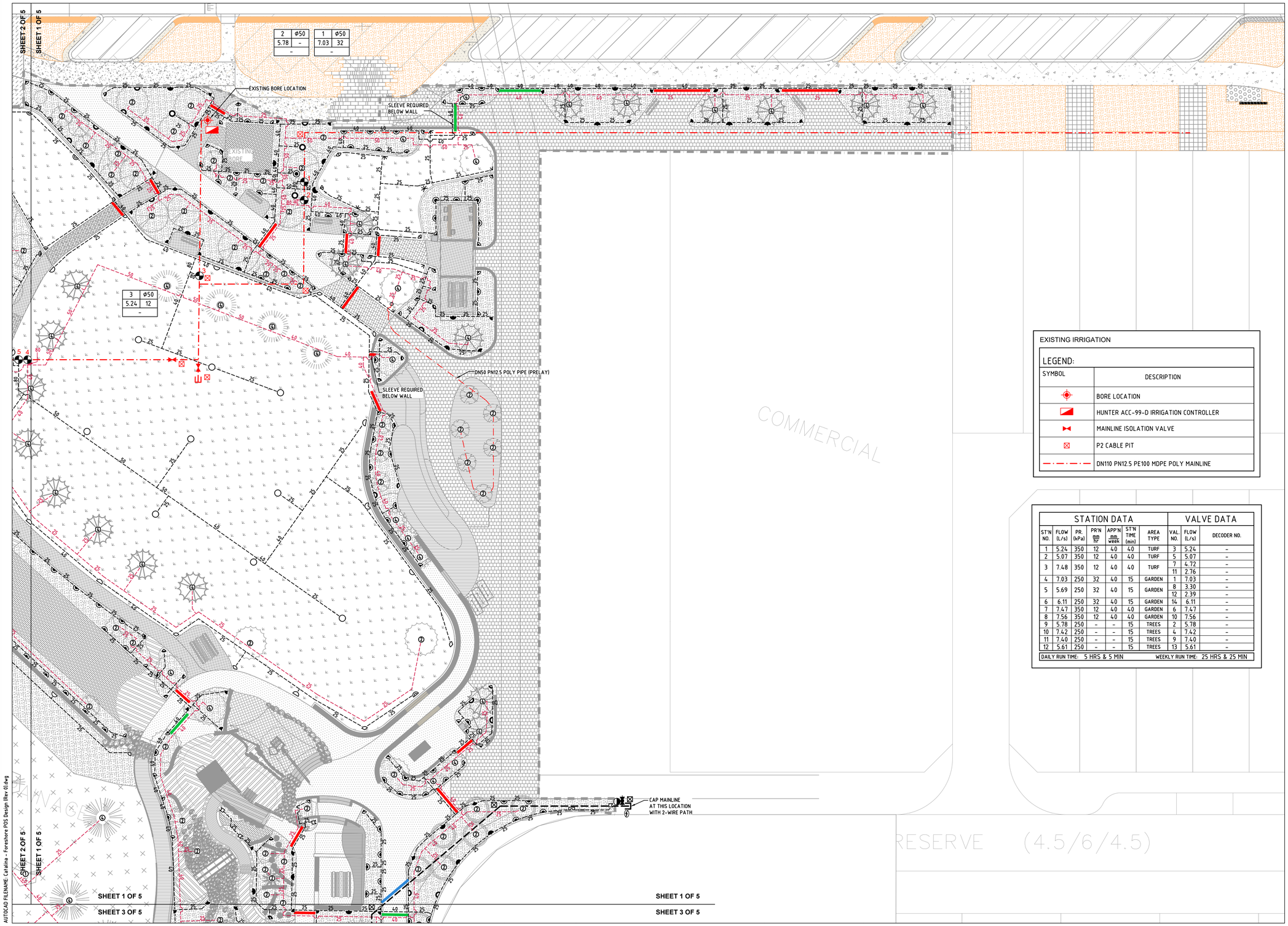
SCALE :	1 : NTS @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT :
TIM DAVIES LANDSCAPING

PROJECT :
CATALINA BEACH - FORESHORE POS
IRRIGATION WORKS (KEY PLAN)
-

DATE :	DESIGN NO. :	SHEET NO. :
22/11/2022	18515-00	COVER PAGE



AUTOCAD FILENAME: Catalina - Foreshore POS Design (Rev 0).dwg

EXISTING IRRIGATION

LEGEND:

SYMBOL	DESCRIPTION
	BORE LOCATION
	HUNTER ACC-99-D IRRIGATION CONTROLLER
	MAINLINE ISOLATION VALVE
	P2 CABLE PIT
	DN110 PN12.5 PE100 MDPE POLY MAINLINE

STATION DATA / VALVE DATA

ST'N NO.	FLOW (L/s)	PR. (kPa)	PR'N hr	APP'N mm/week	ST'N TIME (min)	AREA TYPE	VAL NO.	FLOW (L/s)	DECODER NO.
1	5.24	350	12	40	40	TURF	3	5.24	–
2	5.07	350	12	40	40	TURF	5	5.07	–
3	7.48	350	12	40	40	TURF	7	4.72	–
							11	2.76	–
4	7.03	250	32	40	15	GARDEN	1	7.03	–
5	5.69	250	32	40	15	GARDEN	8	3.30	–
							12	2.39	–
6	6.11	250	32	40	15	GARDEN	14	6.11	–
7	7.47	350	12	40	40	GARDEN	6	7.47	–
8	7.56	350	12	40	40	GARDEN	10	7.56	–
9	5.78	250	–	–	15	TREES	2	5.78	–
10	7.42	250	–	–	15	TREES	4	7.42	–
11	7.40	250	–	–	15	TREES	9	7.40	–
12	5.61	250	–	–	15	TREES	13	5.61	–

DAILY RUN TIME: 5 HRS & 5 MIN — WEEKLY RUN TIME: 25 HRS & 25 MIN

LEGEND: "SPRINKLERS"

SYMBOL	BRAND NAME	MODEL DESCRIPTION	NOZZ. NO.	PRESS. (KPA)	FLOW (LPM)	RADIUS (M)
	HUNTER	I-20-06-SS	6.0	350	24.5	13.1
	HUNTER	I-20-06-SS	4.0	350	16.2	12.2
	HUNTER	I-20-06-SS	3.0	350	12.3	11.9
	HUNTER	I-20-06-SS	2.5	350	9.7	10.7
	HUNTER	I-20-06-SS	4.5LA	350	16.6	10.7
	HUNTER	I-20-06-SS	2.0LA	350	8	8.5
	HUNTER	I-20-06-SS	3.0SR	350	11.2	7.6
	HUNTER	I-20-06-SS	1.0SR	350	3.8	5.5
	TORO	570Z-12P	15	250	2.84–11.36	4.6
	TORO	570Z-12P	12	250	1.82–7.27	3.7
	TORO	570Z-12P	10	250	1.25–5.04	3.0
	TORO	570Z-12P	4EST	250	1.63	1.2x4.4
	TORO	570Z-12P	4SST	250	3.33	1.2x9.1
	ALL GARDEN AREAS - TO HAVE HUNTER I-20-12 ON A Ø20x300mm POLY ARTIC RISER OR TORO 570Z-12P'S (PART & FULL CIRCLES) ON A Φ15 x 300mm POLY ARTIC RISER (NOZZLES AS SHOWN)					
45 L	1-TORO FLOOD BUBBLERS MODEL FB-50PC ON A TORO 570Z-6P WITH BLUE FLEX 1.63 LPM @ 250 kPA					
100 L	2-TORO FLOOD BUBBLERS MODEL FB-50PC ON A TORO 570Z-6P WITH BLUE FLEX 3.26 LPM @ 250 kPA					
500 L	2-TORO FLOOD BUBBLERS MODEL FB-100PC ON A TORO 570Z-6P WITH BLUE FLEX 7.06 LPM @ 250 kPA					
1000 L	4-TORO FLOOD BUBBLERS MODEL FB-100PC ON A TORO 570Z-6P WITH BLUE FLEX 14.12 LPM @ 250 kPA					
TRANS	4-TORO FLOOD BUBBLERS MODEL FB-200PC ON A TORO 570Z-6P WITH BLUE FLEX 28.08 LPM @ 250 kPA					
	BERMAD 200 SERIES SOLENOID CONTROL VALVE SIZE AS SHOWN					
	MAINLINE ISOLATION VALVE SAME SIZE AS MAINLINE					
	50mm MAINLINE FLUSHING VALVE					
	DN50 AIR RELEASE, TO BE INSTALLED AT HIGH POINT ON MAINLINE PER C.O.W. SPECIFICATION					
	P2 CABLE PIT					
	LIGHTNING SURGE PROTECTION					
	DN110 PN12.5 PE100 MDPE POLY MAINLINE					
25	uPVC SWJ CLASS 9 LATERAL LINE SIZE AS SHOWN					
25	uPVC SWJ CLASS 9 LATERAL LINE FOR TREES SIZE AS SHOWN					
	DN50 MDPE PN12.5 POLY LATERAL PIPE (PRE-LAY) UNLESS OTHERWISE NOTED					
	SUITABLY SIZED CONDUIT FOR POWER CABLE					
	DN100 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR					
	DN150 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR					
	DN200 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR					

VALVE LABEL LEGEND

VALVE NO / FLOW (LPS): 2 ø50 / 3.29 32 / – — VALVE SIZE; PRECIPITATION RATE; DECODER NO.

NOTE:

1. MAINLINE AND LATERAL PIPES ARE TO BE INSTALLED TO A MINIMUM DEPTH OF 350mm AND BE INSTALLED TO A MAXIMUM DEPTH OF 450mm.
2. THE CONTRACTOR TO UNDERTAKE FLOW (PRESSURE) ADJUSTMENT OF ALL SOLENOID VALVES IN ACCORDANCE WITH THE NOMINAL OPERATING PRESSURE OF THE SPRINKLERS ATTACHED TO THE PARTICULAR SOLENOID VALVE.
3. CABLE PITS TO BEEN LOCATED AT EVERY BEND IN THE MAINLINE AND EVERY 100m IN STRAIGHT RUNS.
4. ALL 2-WIRE PATHS TO BE INSTALLED IN 40MD CONDUIT.
5. THE IRRIGATION SUB CONTRACTOR SHALL SUPPLY A 13mm X 1200mm GROUND ROD FOR SURGE PROTECTION AND HOUSED WITHIN A VALVE BOX AS BELOW:–
   - AT THE END OF EACH COMMUNICATION CABLE RUN.
   - AT SPACING NOT EXCEEDING 250 METRES ALONG COMMUNICATION RUNS, OR AT EVERY 8TH DECODER.
   - OR AS PER MANUFACTURERS SPECIFICATIONS.

CERTIFIED IRRIGATION DESIGNER — IRRIGATION AUSTRALIA — IRRIGATION FUTURE COMMISSIONED

0 2 4 6 8 10m

SCALE 1:200 ON A1

REV	DATE	DESCRIPTION	DWN	CKD
A	01/12/2022	ISSUED FOR APPROVAL	R.V	J.S
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0	05/10/2023	ISSUED FOR CONSTRUCTION	R.V	J.S

REV	DATE	DESCRIPTION	DWN	CKD

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SCALE :	1 : 200 @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT :

TIM DAVIES LANDSCAPING

PROJECT :

CATALINA BEACH - FORESHORE POS
IRRIGATION WORKS
-

DATE :	DESIGN NO. :	SHEET NO. :
22/11/2022	18515-01	1 OF 5



LEGEND: "SPRINKLERS"

SYMBOL	BRAND NAME	MODEL DESCRIPTION	NOZZ. NO.	PRESS. (KPA)	FLOW (LPM)	RADIUS (M)
	HUNTER	I-20-06-SS	6.0	350	24.5	13.1
	HUNTER	I-20-06-SS	4.0	350	16.2	12.2
	HUNTER	I-20-06-SS	3.0	350	12.3	11.9
	HUNTER	I-20-06-SS	2.5	350	9.7	10.7
	HUNTER	I-20-06-SS	4.5LA	350	16.6	10.7
	HUNTER	I-20-06-SS	2.0LA	350	8	8.5
	HUNTER	I-20-06-SS	3.0SR	350	11.2	7.6
	HUNTER	I-20-06-SS	1.0SR	350	3.8	5.5
	TORO	570Z-12P	15	250	2.84-11.36	4.6
	TORO	570Z-12P	12	250	1.82-7.27	3.7
	TORO	570Z-12P	10	250	1.25-5.04	3.0
	TORO	570Z-12P	4EST	250	1.63	1.2x4.4
	TORO	570Z-12P	4SST	250	3.33	1.2x9.1

	ALL GARDEN AREAS - TO HAVE HUNTER I-20-12 ON A ø20x300mm POLY ARTIC RISER OR TORO 570Z-12P'S (PART & FULL CIRCLES) ON A ø15 x 300mm POLY ARTIC RISER (NOZZLES AS SHOWN)
1 45 L	1-TORO FLOOD BUBBLERS MODEL FB-50PC ON A TORO 570Z-6P WITH BLUE FLEX 1.63 LPM @ 250 kPA
2 100 L	2-TORO FLOOD BUBBLERS MODEL FB-50PC ON A TORO 570Z-6P WITH BLUE FLEX 3.26 LPM @ 250 kPA
2 500 L	2-TORO FLOOD BUBBLERS MODEL FB-100PC ON A TORO 570Z-6P WITH BLUE FLEX 7.06 LPM @ 250 kPA
4 1000 L	4-TORO FLOOD BUBBLERS MODEL FB-100PC ON A TORO 570Z-6P WITH BLUE FLEX 14.12 LPM @ 250 kPA
4 TRANS	4-TORO FLOOD BUBBLERS MODEL FB-200PC ON A TORO 570Z-6P WITH BLUE FLEX 28.08 LPM @ 250 kPA
	BERMAD 200 SERIES SOLENOID CONTROL VALVE SIZE AS SHOWN
	MAINLINE ISOLATION VALVE SAME SIZE AS MAINLINE
	50mm MAINLINE FLUSHING VALVE
	DN50 AIR RELEASE, TO BE INSTALLED AT HIGH POINT ON MAINLINE PER C.O.W. SPECIFICATION
	P2 CABLE PIT
	LIGHTNING SURGE PROTECTION
	DN110 PN12.5 PE100 MDPE POLY MAINLINE
25	uPVC SWJ CLASS 9 LATERAL LINE SIZE AS SHOWN
25	uPVC SWJ CLASS 9 LATERAL LINE FOR TREES SIZE AS SHOWN
	DN50 MDPE PN12.5 POLY LATERAL PIPE (PRE-LAY) UNLESS OTHERWISE NOTED
	SUITABLY SIZED CONDUIT FOR POWER CABLE
	DN100 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR
	DN150 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR
	DN200 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR

VALVE LABEL LEGEND

VALVE NO	2	ø50	VALVE SIZE
FLOW (LPS)	3.29	32	PRECIPITATION RATE
	-		DECODER NO.

NOTE:

1. MAINLINE AND LATERAL PIPES ARE TO BE INSTALLED TO A MINIMUM DEPTH OF 350mm AND BE INSTALLED TO A MAXIMUM DEPTH OF 450mm.
2. THE CONTRACTOR TO UNDERTAKE FLOW (PRESSURE) ADJUSTMENT OF ALL SOLENOID VALVES IN ACCORDANCE WITH THE NOMINAL OPERATING PRESSURE OF THE SPRINKLERS ATTACHED TO THE PARTICULAR SOLENOID VALVE.
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   - AT SPACING NOT EXCEEDING 250 METRES ALONG COMMUNICATION RUNS, OR AT EVERY 8TH DECODER.
   - OR AS PER MANUFACTURERS SPECIFICATIONS.

PUBLIC OPEN SPACE & LANDSCAPE

0 2 4 6 8 10m
SCALE 1:200 ON A1

AUTOCAD FILENAME: Catalina - Foreshore POS Design (Rev 01).dwg

REV	DATE	DESCRIPTION	DWN	CKD
A	01/12/2022	ISSUED FOR APPROVAL	R.V	J.S
B	14/12/2022	REVISED IRRIGATION TO SUIT THE NEW LANDSCAPE PLAN	R.V	J.S
C	12/07/2023	REVISED IRRIGATION TO SUIT THE LATEST LANDSCAPE PLAN	R.V	J.S
0	05/10/2023	ISSUED FOR CONSTRUCTION	R.V	J.S

REV	DATE	DESCRIPTION	DWN	CKD

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SCALE :	1 : 200 @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT :
TIM DAVIES LANDSCAPING

PROJECT :
CATALINA BEACH - FORESHORE POS
IRRIGATION WORKS
-

DATE :	DESIGN NO. :	SHEET NO. :
22/11/2022	18515-02	2 OF 5

SHEET 2 OF 5
SHEET 3 OF 5
SHEET 2 OF 5
SHEET 3 OF 5
SHEET 1 OF 5
SHEET 3 OF 5
SHEET 1 OF 5
SHEET 3 OF 5



LEGEND: "SPRINKLERS"

SYMBOL	BRAND NAME	MODEL DESCRIPTION	NOZZ. NO.	PRESS. (KPA)	FLOW (LPM)	RADIUS (M)
	HUNTER	I-20-06-SS	6.0	350	24.5	13.1
	HUNTER	I-20-06-SS	4.0	350	16.2	12.2
	HUNTER	I-20-06-SS	3.0	350	12.3	11.9
	HUNTER	I-20-06-SS	2.5	350	9.7	10.7
	HUNTER	I-20-06-SS	4.5LA	350	16.6	10.7
	HUNTER	I-20-06-SS	2.0LA	350	8	8.5
	HUNTER	I-20-06-SS	3.0SR	350	11.2	7.6
	HUNTER	I-20-06-SS	1.0SR	350	3.8	5.5
	TORO	570Z-12P	15	250	2.84-11.36	4.6
	TORO	570Z-12P	12	250	1.82-7.27	3.7
	TORO	570Z-12P	10	250	1.25-5.04	3.0
	TORO	570Z-12P	4EST	250	1.63	1.2x4.4
	TORO	570Z-12P	4SST	250	3.33	1.2x9.1

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	50mm MAINLINE FLUSHING VALVE
	DN50 AIR RELEASE, TO BE INSTALLED AT HIGH POINT ON MAINLINE PER C.O.W. SPECIFICATION
	P2 CABLE PIT
	LIGHTNING SURGE PROTECTION
	DN110 PN12.5 PE100 MDPE POLY MAINLINE
25	uPVC SWJ CLASS 9 LATERAL LINE SIZE AS SHOWN
25	uPVC SWJ CLASS 9 LATERAL LINE FOR TREES SIZE AS SHOWN
	DN50 MDPE PN12.5 POLY LATERAL PIPE (PRE-LAY) UNLESS OTHERWISE NOTED
	SUITABLY SIZED CONDUIT FOR POWER CABLE
	DN100 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR
	DN150 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR
	DN200 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR

VALVE LABEL LEGEND

VALVE NO	2	Ø50 VALVE SIZE
FLOW (LPS)	3.29	32 PRECIPITATION RATE
	-	DECODER NO.

NOTE:
1. MAINLINE AND LATERAL PIPES ARE TO BE INSTALLED TO A MINIMUM DEPTH OF 350mm AND BE INSTALLED TO A MAXIMUM DEPTH OF 450mm.
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CERTIFIED IRRIGATION DESIGNER – IRRIGATION AUSTRALIA – IRRIGATION | LANDSCAPE | TURF COMMITTEE

0 2 4 6 8 10m
SCALE 1:200 ON A1

AUTOCAD FILENAME: Catalina - Foreshore POS Design (Rev 0).dwg

REV	DATE	DESCRIPTION	DWN	CKD
A	01/12/2022	ISSUED FOR APPROVAL	R.V	J.S
B	14/12/2022	REVISED IRRIGATION TO SUIT THE NEW LANDSCAPE PLAN	R.V	J.S
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0	05/10/2023	ISSUED FOR CONSTRUCTION	R.V	J.S

REV	DATE	DESCRIPTION	DWN	CKD

N

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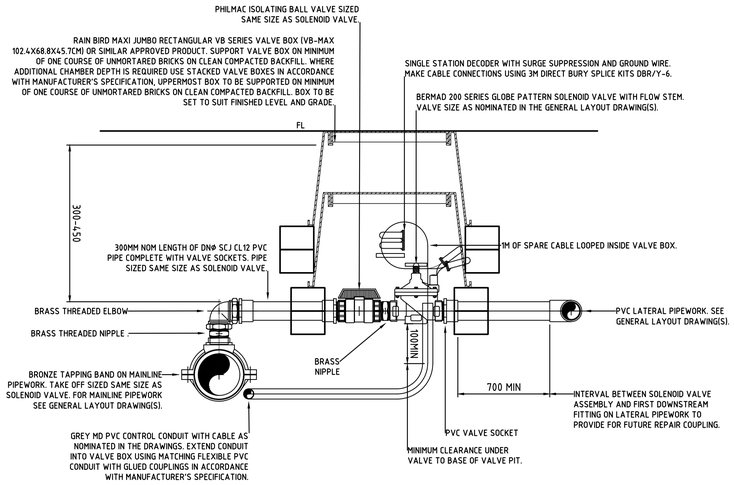
SCALE :	1 : 200 @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT :
TIM DAVIES LANDSCAPING

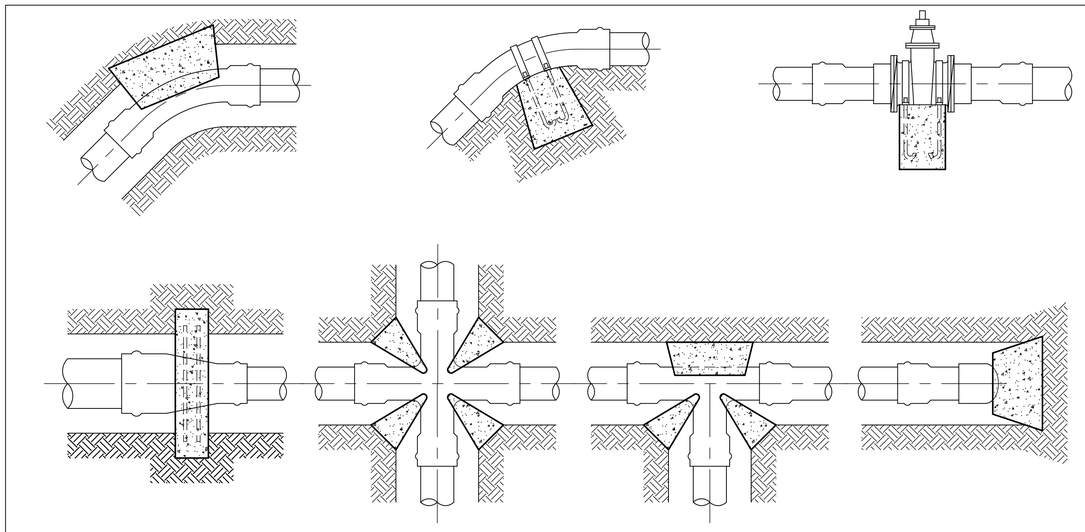
PROJECT :
CATALINA BEACH - FORESHORE POS
IRRIGATION WORKS
-

DATE :	DESIGN NO. :	SHEET NO. :
22/11/2022	18515-03	3 OF 5



TYPICAL GLOBE PATTERN SOLENOID VALVE INSTALLATION

NOT TO SCALE



TYPICAL THRUST BLOCK DETAILS

NOT TO SCALE

NOTE:
MINIMUM BEARING AREA TO BE IN ACCORDANCE WITH TYPE OF FITTING AND SOIL TYPE AS PER PIPE MANUFACTURERS RECOMMENDATIONS

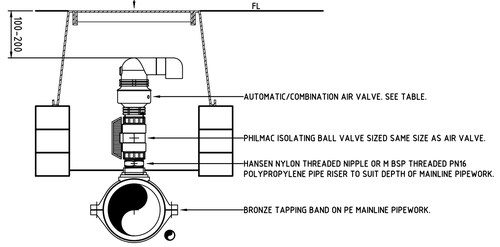
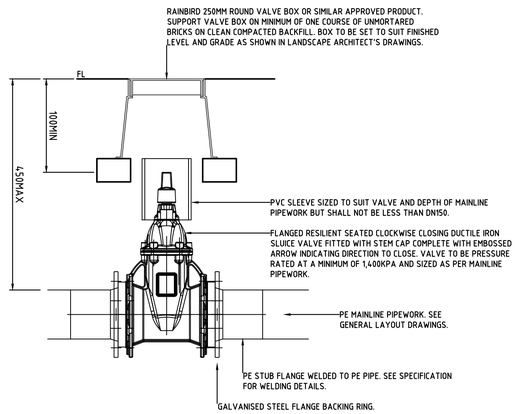


TABLE OF AIR VALVES	
MAINLINE SIZE (DN)†	AIR VALVE‡
LESS THAN 63	PN16 DN20 COMBINATION AIR VALVE
75-140	PN16 DN25 COMBINATION AIR VALVE
150-200	PN16 DN50 COMBINATION AIR VALVE
† SEE GENERAL LAYOUT DRAWING(S). ‡ SEE ALSO SPECIFICATION.	

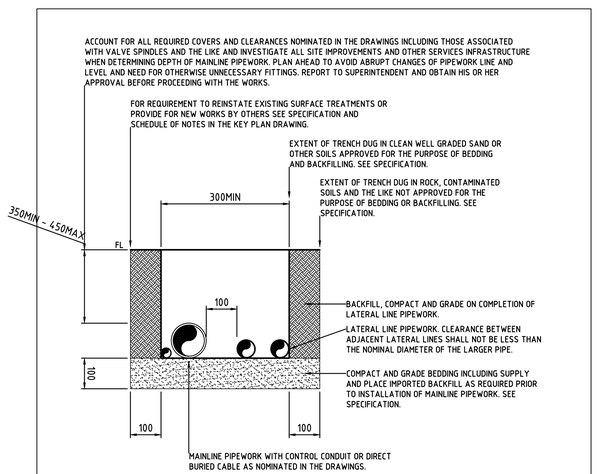
TYPICAL AIR VALVE INSTALLATION ON MAINLINE PIPEWORK

NOT TO SCALE



TYPICAL MAINLINE ISOLATION VALVE INSTALLATION

NOT TO SCALE



TYPICAL ARRANGEMENT OF MULTIPLE PIPES IN A COMMON TRENCH

NOT TO SCALE

AUTOCAD FILENAME: Catalina - Foreshore POS Design (Rev 01).dwg

REV	DATE	DESCRIPTION	DWN	CKD
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0	05/10/2023	ISSUED FOR CONSTRUCTION	R.V	J.S

REV	DATE	DESCRIPTION	DWN	CKD

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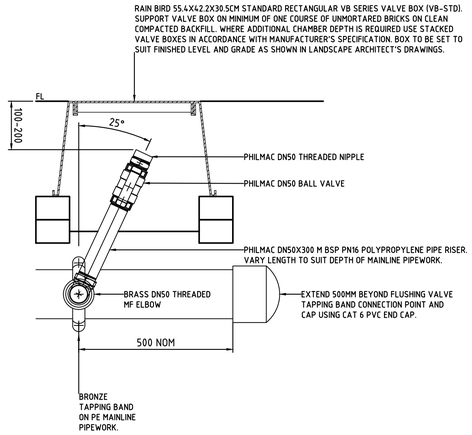
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT :
TIM DAVIES LANDSCAPING

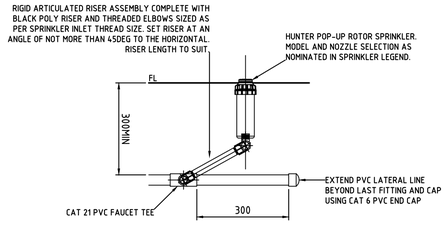
PROJECT :
CATALINA BEACH - FORESHORE POS
IRRIGATION WORKS (TYPICAL DETAILS)
-

DATE :	DESIGN NO. :	SHEET NO. :
22/11/2022	18515-04	4 OF 5



TYPICAL FLUSHING (BALL) VALVE INSTALLATION ON MAINLINE PIPEWORK

NOT TO SCALE



TYPICAL POP-UP ROTOR SPRINKLER INSTALLATION ON PVC PIPEWORK

NOT TO SCALE

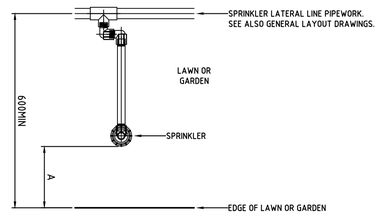
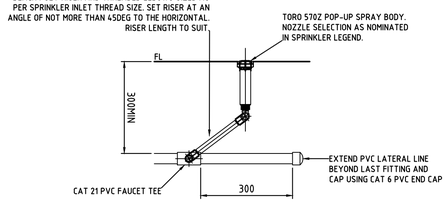


TABLE OF SPRINKLER OFFSETS			
EDGE TYPE	DIMENSION A		
	SPRAY†	ROTOR†	
BACK OF KERB OR EDGE OF PAVEMENT.	100	300	
GARDEN WALL WITH NO MOWING STRIP.	200	200	
BUILDING FACADE WITH NO MOWING STRIP.	600	600	
† SPRINKLER TYPE. SEE GENERAL LAYOUT DRAWINGS.			

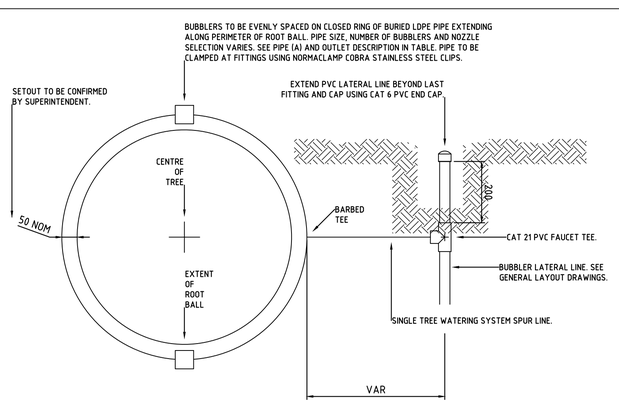
SPRINKLER AND LATERAL PIPE OFFSETS FROM LAWN AND GARDEN EDGES

NOT TO SCALE



TYPICAL POP-UP SPRAY SPRINKLER INSTALLATION ON PVC PIPEWORK

NOT TO SCALE



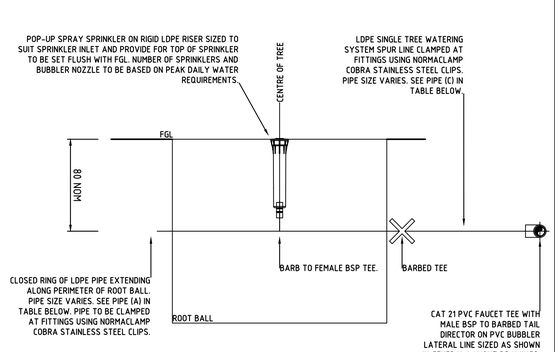


TABLE OF TREE WATERING SYSTEMS†						
SYSTEM	PLANT STOCK‡	SYSTEM FLOW(L/MIN)	20MIN VOL (L)¥	PIPE (A)	PIPE (B)	PIPE (C)
-	-	0-6	-	DN19	-	DN19
-	-	6-15	-	DN19	-	DN25
-	-	15-30	-	DN25	-	DN25

† SYSTEM DESIGN BASED ON THE PEAK DAILY WATER REQUIREMENTS SUPPLIED BY NURSERY INDUSTRY SOURCES AND OTHERS
‡ BAG STOCK SIZE (L) AND/OR NOMINAL DIAMETER OF TRANSPLANT ROOT BALL (M).
¥ VOLUME PROVIDED BY A 20MIN RUN TIME. RUN TIME TO BE ADJUSTED IN ACCORDANCE WITH PLANT WATER REQUIREMENTS AND CLIMATIC CONDITIONS.

TREE WATERING SYSTEMS

NOT TO SCALE

AUTOCAD FILENAME: Catalina - Foreshore POS Design (Rev 0).dwg

REV	DATE	DESCRIPTION	DWN	CKD
A	01/12/2022	ISSUED FOR APPROVAL	R.V	J.S
B	14/12/2022	REVISED IRRIGATION TO SUIT THE NEW LANDSCAPE PLAN	R.V	J.S
C	12/07/2023	REVISED IRRIGATION TO SUIT THE LATEST LANDSCAPE PLAN	R.V	J.S
0	05/10/2023	ISSUED FOR CONSTRUCTION	R.V	J.S

REV	DATE	DESCRIPTION	DWN	CKD

NewGround DESIGN SERVICES

COPYRIGHT TO THIS DRAWING IS RESERVED BY NEWGROUND DESIGN SERVICES AND MUST NOT BE RETAINED OR PRODUCED WITHOUT THEIR WRITTEN PERMISSION. THE DRAWING IS ESSENTIALLY DIAGRAMMATIC AND MUST BE APPLIED TO THE CIRCUMSTANCES AS FOUND ON SITE.

SCALE :	1 : NTS @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT :
TIM DAVIES LANDSCAPING

PROJECT :
CATALINA BEACH - FORESHORE POS
IRRIGATION WORKS (TYPICAL DETAILS)
-

DATE :	DESIGN NO. :	SHEET NO. :
22/11/2022	18515-05	5 OF 5

File Ref: 2022.50.1 8052 AD410951
Your Ref: Online ref: 461211
Enquiries: Mrs Chelsea Timms 9405 5822

6 July 2022

Mr A Feher
Tim Davies Landscaping
3 Pitino Court
OSBORNE PARK WA 6017

Dear Andrea

LANDSCAPE AND IRRIGATION APPROVAL
CATALINA BEACH PORTOFINO PROMENADE EXTENSION MINDARIE WAPC 158933

I refer to your correspondence dated 29 March 2022 and write to advise that the City grants approval of the above-mentioned works as detailed in the attached plans. This conditional approval is subject to your compliance with:

1. The City's policies and standard specifications available on the City's website.
2. The conditions listed below and those marked-up in red on the attached plans.

Please note that this approval is an endorsement that the plans comply in general with the City's requirements; it is not an approval of the integrity and functionality of the design which remains the responsibility of the landscape architects.

Specific Conditions:

1. The proposed feature low screens are not approved
2. The feature boulders are to be kept in the centre of the median islands
3. The feature boulders on the southern verge are to be located a minimum of 2m from the footpath and road pavement
4. The public artwork is not included in this approval and requires a separate DA
5. Replace the single cube seat with a bench seat and reduce the length of the seating wall to accommodate the bench in the western seating node.
6. Install temporary fencing and silt mesh to the landscaping adjacent to the future cottage lots
7. Non sacrificial anti-graffiti coating is to be applied to the low limestone seating walls, seating cubes and benches
8. Mature tree transplants require a 5-year maintenance period for adequate establishment
9. Please substitute *Dianella* and *Pimelia* for low growing local *Banksia* species.
10. Melaleuca 'Green Globe' is *Melaleuca armillaris* (Bracelet honey-myrtle). This is a native to South Australia and Victoria and an environmental weed in Western Australia. Please substitute for some local coastal plant species (e.g. *Melaleuca systena*, *Rhagodia baccata, Grevillea crithmifolia* etc.).
11. Please substitute some of the Westringia 'mundi' and Westringia 'Zena' with the local *Westringia dampieri*.

12. Please refer to the City's standard drawings for the irrigation electrical cubicle (available on the City's website)

Standard Conditions:

The applicant and the contractor shall be responsible for the dust and sand drift control during the construction of the project in accordance with Department of Environmental Regulation guidelines. Disturbed areas shall be stabilised on completion and thereafter maintained to the City's satisfaction.

1. Where works impact traffic movement or public safety, temporary traffic management shall be employed in accordance with the current AS 1742.3 (Traffic Control Devices for Works on Roads). A traffic management plan is to be prepared in accordance with "Main Roads WA Traffic Management for Works on Roads Code of Practice" and submitted to the City for endorsement.
2. Hard landscaping is to be provided to medians and verge areas where applicable to provide adequate clear zones as per Australian Standard Manual of Uniform Traffic Control Devices Part 3: Traffic Control Devices for Works on Roads - Maintaining a Safe Workplace. Generally no planting in 0.6m strip from road kerb on roads with road speeds of less than 80km/hr unless approved by the City. Generally no planting in 1.2m strip from road kerb on roads with road speeds of equal or greater than 80km/hr unless approved by the City.

As of 1 July 2021, the City introduced new Land Development fees and charges. The new fees include assessment fees that cover the actual cost and expenses incurred by the City in providing services, commissioning or undertaking any review of documentation associated with development engineering and landscape matters including administrative services, technical resources, specialist advice and consultation. All fees are charged in accordance with Section 6.15, 6.16 and 6.17 of the Local Government Act (WA) 1995 (as amended). An invoice will be issued to the developer.

This approval is valid until 31 January 2023 and may be subject to Part 18 Extension of Time for endorsement of diagram or plan of survey due to COVID-19 pandemic, which grants an automatic two-year extension to certain subdivision approvals as a result of the State of emergency coming into effect on 16 March 2020.

Should you require clarification on any of the above then please contact the City's Landscape and Conservation Development Officer, Mrs Chelsea Timms on telephone 9405 5300.

Yours sincerely



Craig Wansbrough
MANAGER LAND DEVELOPMENT

Cc Tamala Park Regional Council

© TIM DAVIES LANDSCAPING

CITY OF WANNEROO

LETTER OF APPROVAL DATED 6 JULY 2022
TRIM NO AD410951

CITY OF WANNEROO
APPROVAL CONDITIONS

APPROVED SUBJECT TO STRICT ADHERENCE TO THE
- ENDORSEMENTS THEREON
- CONDITIONS IN THE CITY OF WANNEROO APPROVAL LETTER
- CONDITIONS LAID DOWN IN THE WAPC SUBDIVISION APPROVAL WAPC NO.158933

CITY OF WANNEROO
QUALITY CONTROL

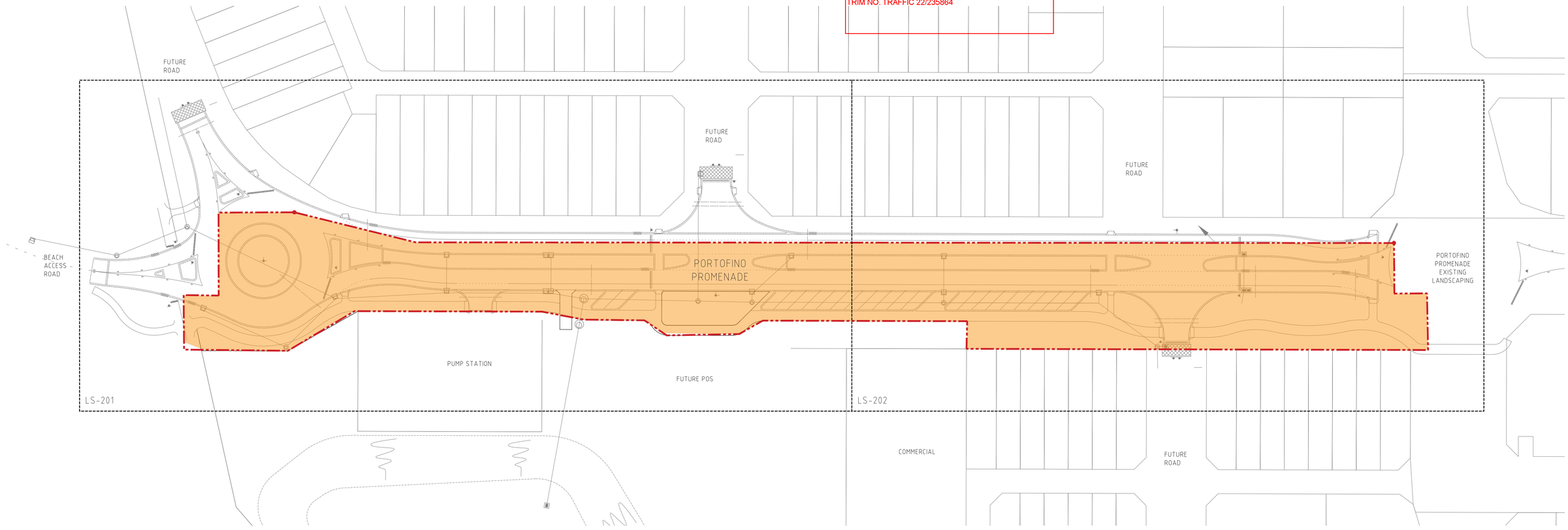
LAND DEVELOPMENT OFFICER: CT
ASSETS PARKS TRIM NO. 22/215700
ASSETS CONSERVATION TRIM NO. N/A
ASSETS IRRIGATION TRIM NO. 22/221839
COMMUNITY FACILITIES TRIM NO. N/A
LD ENGINEERING TRIM NO. 2022.50.1
TRIM NO. TRAFFIC 22/235864

CITY OF WANNEROO
PLAN APPROVAL

Mark Jumeaux

SENIOR LANDSCAPE
& CONSERVATION DEVELOPMENT OFFICER

CATALINA BEACH
PORTOFINO PROMENADE EXTENSION



01 / 101 COVER PAGE
PLAN 1:500 @ A1

DWG	DWG NAME	SCALE @ A1	REV
LS -101	COVER PAGE	1:500	A
LS -201	LANDSCAPE PLAN 1	1:250	A
LS -202	LANDSCAPE PLAN 2	1:250	A
LS -301	DETAILS 1	AS SHOWN	A
LS -302	DETAILS 2	AS SHOWN	A

0 10 20 50m

CATALINA ESTATE
CATALINA BEACH, PORTOFINO PROMENADE EXTENSION

REVISION	DESCRIPTION	BY	DATE
A - DRAFT	ISSUE FOR REVIEW	IZ	01.03.22
A	ISSUE FOR APPROVAL	IZ	15.03.22

TIM DAVIES LANDSCAPING
three points court osborne park
western australia 6017
telephone +61 8 9441 0200
facsimile +61 8 9441 0201
enq@tdl.com.au

CLIENT	SATTERLEY PROPERTY GROUP & TPRC		
DESIGNED	AF	DRAWING TITLE	PORTOFINO PROMENADE
DRAWN	IZ		
APPROVED	GD	DRAWING No.	12606-CC-PP-101
SCALE	1:500@A1		REVISION A

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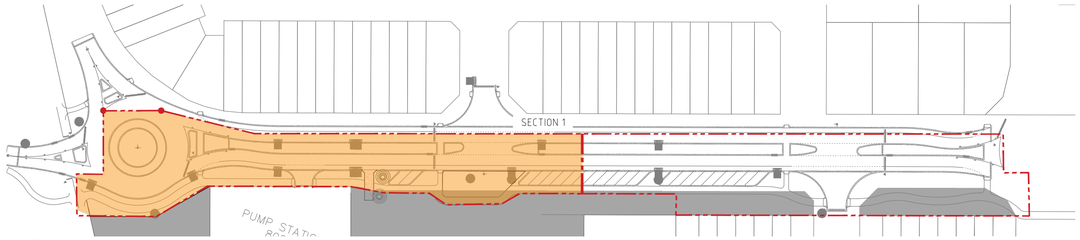
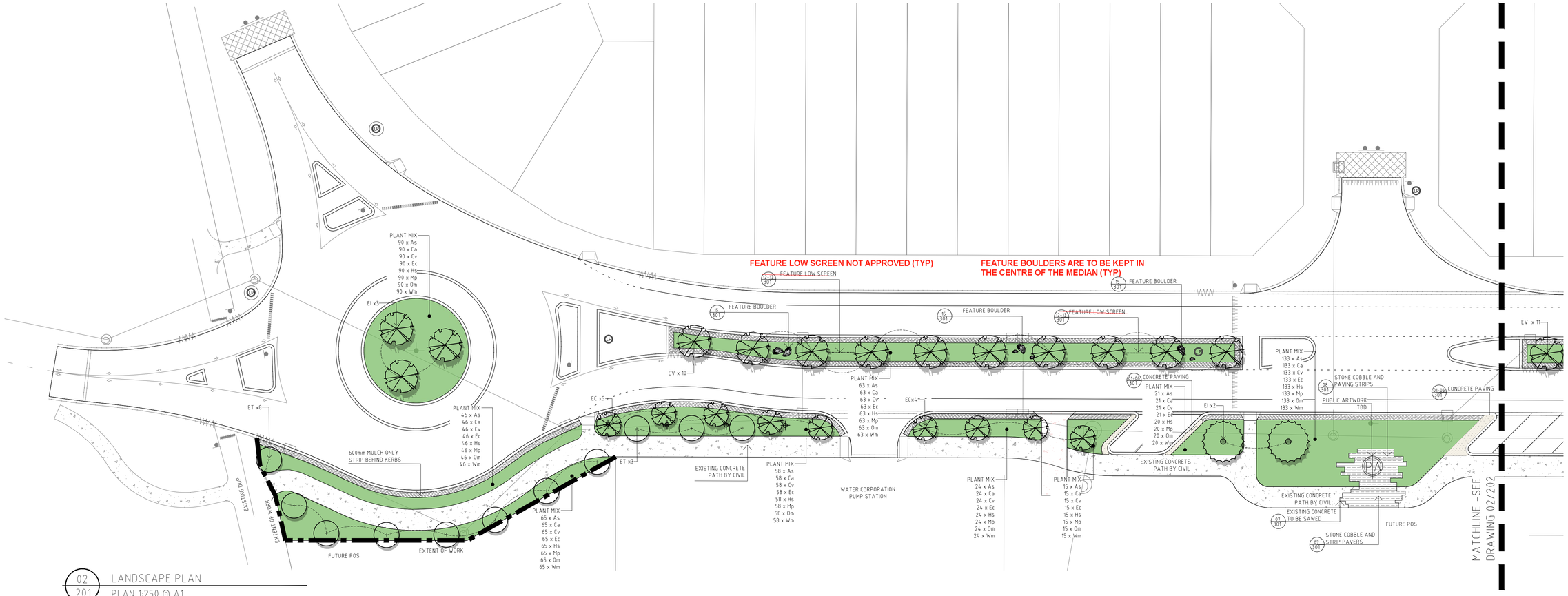


01/201 KEY PLAN
PLAN 1:1000 @ A1

CITY OF WANNEROO
PLAN APPROVAL

Mark Jumeaux

SENIOR LANDSCAPE
& CONSERVATION DEVELOPMENT OFFICER



02/201 LANDSCAPE PLAN
PLAN 1:250 @ A1

GENERAL NOTES:

- FOR GENERAL ARRANGEMENT PLEASE REFER TO TDL DRAWINGS AND SPECIFICATIONS.
- ANY DIFFERENCES NOTED BETWEEN THE LAYOUT PLANS, DETAIL DRAWINGS AND SPECIFICATION IS TO BE CLARIFIED BY THE CONTRACTOR PRIOR TO WORKS COMMENCING ON SITE.
- THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL SERVICES ON SITE. SERVICES DIAGRAMS ARE PROVIDED AS A GUIDE ONLY. THE CONTRACTOR WILL BE FULLY RESPONSIBLE TO SURVEY SERVICES ON SITE. ANY DAMAGE TO SERVICES IS TO BE RECTIFIED AT THE CONTRACTORS OWN EXPENSE. ANY DAMAGE NEEDS TO BE IMMEDIATELY NOTIFIED TO THE RELEVANT SERVICE PROVIDER.
- THE CONTRACTOR IS TO PROVIDE A FULL TRAFFIC MANAGEMENT PLAN (TMP) FOR APPROVAL BY CITY OF WANNEROO (CoW). THE TMP IS TO BE IMPLEMENTED AND MONITORED AT ALL TIMES DURING CONSTRUCTION WITH WEEKLY UPDATES OF TRAFFIC MANAGEMENT IS OCCURRING.
- THE CONTRACTOR IS TO PROVIDE A FULL OH&S PLAN FOR APPROVAL BY CoW. THE PLAN IS TO BE FULLY IMPLEMENTED AND MONITORED AT ALL TIMES DURING CONSTRUCTION WITH WEEKLY UPDATES PROVIDED BY THE CONTRACTOR OF INCIDENTS ETC.
- ALL SITE SET OUT AND PROPOSED FINISHED LEVELS ARE TO BE CONFIRMED ON SITE WITH THE SUPERINTENDENT PRIOR TO CONSTRUCTION.
- EXISTING GRADES ARE TO BE MAINTAINED.
- VERGES TO HAVE 2-3% CROSSFALL TOWARDS ROAD EDGE.
- ALL EXISTING SITE FEATURES, SUCH AS KERBLINES, PATHS, SIGN POSTS, LIGHT POLES ETC ARE TO BE RETAINED AND PROTECTED UNLESS OTHERWISE NOMINATED ON PLAN.
- WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER MEASUREMENTS.

EXCAVATION AND SITE PREPARATION:

- EXCAVATE AS REQUIRED ALONG KERBLINE TO ACHIEVE FINISHED LEVELS AFTER SOIL PREPARATION AND MULCH. EXCAVATED MATERIAL MAY BE RE-SPREAD ON SITE WITHIN LOT BOUNDARY. LOCATION TO BE CONFIRMED BY SUPERINTENDENT.
- EXISTING GRADES WITHIN VERGES AND MEDIANS ARE TO BE MAINTAINED. PREPARE EVEN SURFACE SUITABLE FOR PLANTING AND HARDSCAPE INSTALLATION THAT TIES INTO EXSITNG LEVELS.
- FINISHED LEVELS OF NEW PATHS AND PAVING TO TIE IN WITH EXISTING PAVING AND KERBS.
- FOR ALL HARD AND SOFTSCAPE DETAILS, REFER TO DETAILS 01-02
- FOR ALL MATERIALS AND FURNITURE SELECTIONS, REFER TO SCHEDULES (LS-302) AND SPECIFICATION.

PLANTING NOTES:

- PROPOSED TREES MAY BE REALIGNED BASED ON SERVICES LOCATIONS WHERE APPROVED BY SUPERINTENDENT
- SHRUB AND GROUNDCOVER PLANTING OFFSET: MIN 600mm FROM ROAD EDGES, KERBLINES AND OTHER HARD EDGE
- FOR SHRUB PLANTING MIXES: PLANTS ARE TO BE PLANTED IN GROUPS OF 7-9-11 OF EACH SPECIES.
- FOR OVERALL PLANT SCHEDULES, REFER TO DRAWING LS-302
- FOR ALL HARD AND SOFTSCAPE DETAILS, REFER TO DETAILS 01-02
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- TREE POT SIZES ARE INDICATIVE AND SUBJECT TO STOCK AVAILABILITY AT TIME OF PROCUREMENT.
- TREES NOMINATED ON PLAN AND/OR LOCATED WITHIN 1.5M OF HARD EDGE/PAVING/KERBLINE ARE TO BE INSTALLED WITH 6M LONG 800MM DEEP ROOT CONTROL BARRIER POSITIONED AGAINST THE HARD EDGE WITH TOP OF RCB TO BE 50MM BELOW TOP OF MULCH
- FOR ERYTHRINA TRANSPLANTS, PREPARE 2×2×1M DEEP HOLES. TRANSPLANT SUPPLY BY CLIENT. TRANSPLANT INSTALLATION AND MANAGEMENT WORKS ARE TO BE COORDINATED WITH SPECIALIST GROWER BY CONTRACTOR.

LEGEND

SURFACE FINISHES

- EXISTING CONCRETE PATH BY CIVIL
- GREY CONCRETE PAVING — 01-06/301
- PROPOSED BRICK PAVEMENT — 190x190x60mm SQUARE PAVER, BRICKMAKERS VISTAPAVE — 09-11/301
- PROPOSED CONCRETE PAVEMENT — EXPOSED AGGREGATE: HOLCIM 'KARRI' — 01-06/301
- PROPOSED STONE COBBLE & STRIP PAVER — 07-08/301
- MULCH MAINTENANCE STRIP 600mm — 04-05/301

FURNITURE & SITE FEATURES

- LIMESTONE SEAT WALL — 14/301
- FEATURE BOULDERS — 15/301
- SEATING CUBE — 650mm L x 450mm W x 430mm H, 'URBAN EDGE' STREET FURNITURE FROM COX, CODE: SAT B100
- BENCH SEAT — 1250mm L x 590mm W x 820mm H, 'URBAN EDGE' STREET FURNITURE FROM COX, CODE: SAT B220
- LP — LIGHT POLE BY OTHERS
- ~~FEATURE LOW SCREEN IN MEDIAN VERGE 75x25x2.5mm RHS ALUMINUM POWDER COATED COLOUR: CARGO RIVER~~ — 12-13/301
- ~~PUBLIC ARTWORK(TBD)~~

PUBLIC ARTWORK NOT INCLUDED IN THIS APPROVAL. REQUIRES SEPERATE D/A (TYP)

TREES & PLANTING

- PROPOSED TRANSPLANT — ERYTHRINA(SUPPLIED BY SUPERINTENDENT)
- PROPOSED 1000/1500L TREE — SEE SCHEDULE — 02-04/302
- PROPOSED 500LT TREE — SEE SCHEDULE — 02-04/302
- IRRIGATED PLANTING BED — REFER TO PLANT PLAN AND SCHEDULE — 01/302

0 1 2 4 6 10 20 25m

CATALINA ESTATE
CATALINA BEACH, PORTOFINO PROMENADE EXTENSION

REVISION	DESCRIPTION	BY	DATE
A - DRAFT	ISSUE FOR REVIEW	IZ	01.03.22
A	ISSUE FOR APPROVAL	IZ	15.03.22

TIM DAVIES LANDSCAPING
three prime court osborne park
western australia 6017
telephone +61 8 9441 0200
facsimile +61 8 9441 0201
enq@tdl.com.au

CLIENT	SATTERLEY PROPERTY GROUP & TPRC
DESIGNED	AF
DRAWN	IZ
APPROVED	GD
SCALE	1:250@A1
DRAWING TITLE	LANSCAPE PLAN 1
DRAWING No.	12606-CC-PP-201
REVISION	A

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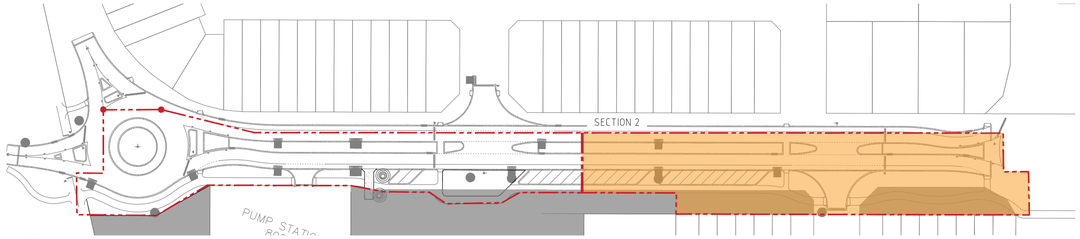
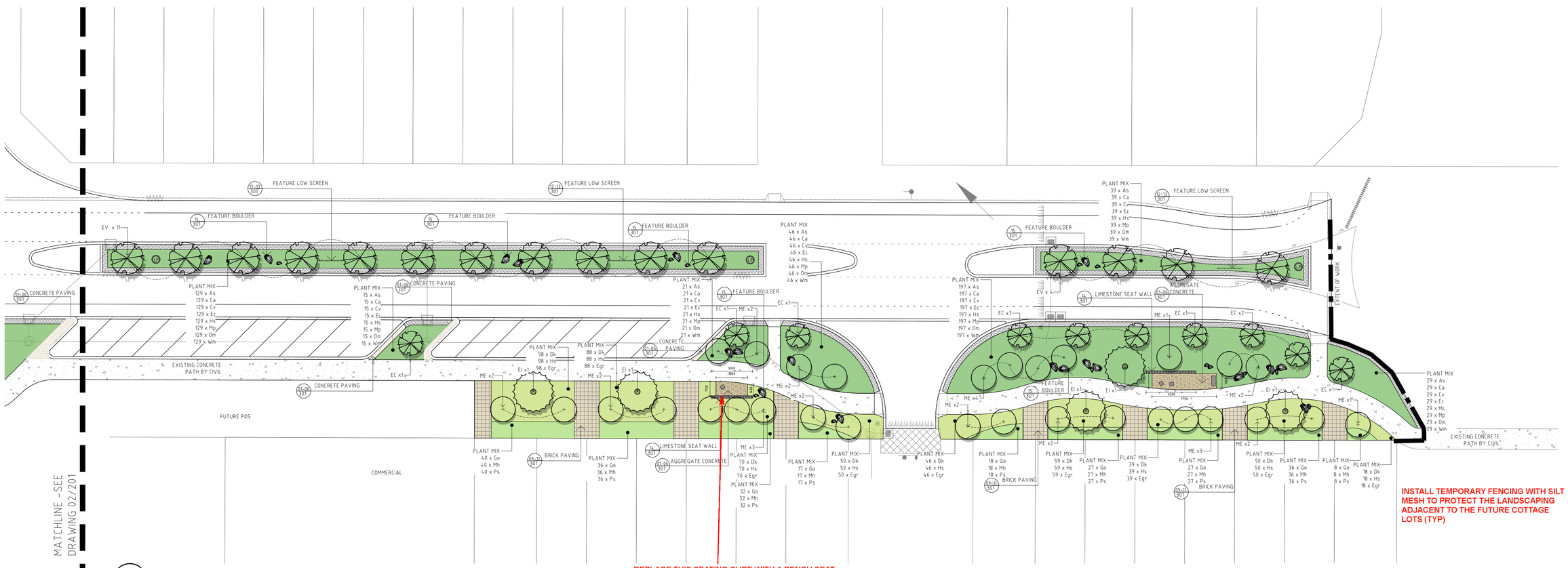


01 / 202 KEY PLAN
PLAN 1:1000 @ A1

CITY OF WANNEROO
PLAN APPROVAL

Mark Jumeaux

SENIOR LANDSCAPE
& CONSERVATION DEVELOPMENT OFFICER



INSTALL TEMPORARY FENCING WITH SILT MESH TO PROTECT THE LANDSCAPING ADJACENT TO THE FUTURE COTTAGE LOTS (TYP)

REPLACE THIS SEATING CUBE WITH A BENCH SEAT. REDUCE LENGTH OF SEATING WALL TO ACCOMODATE BENCH (TYP)

THE FEATURE BOULDERS ON THE SOUTHERN VERGE ARE TO BE LOCATED A MINIMUM OF 2M FROM THE FOOTPATH & ROAD PAVEMENT (TYP)

02 / 202 LANDSCAPE PLAN
PLAN 1:250 @ A1

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LEGEND

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- GREY CONCRETE PAVING — 01-06 / 301
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- PROPOSED STONE COBBLE & STRIP PAVER — 07-08 / 301
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- LP LIGHT POLE BY OTHERS
- ~~FEATURE LOW SCREEN IN MEDIAN VERGE — 75x25x2.5mm RHS ALUMINUM POWDER COATED COLOUR: CARGO RIVER~~ — 12-13 / 301
- PA PUBLIC ARTWORK(TBD)

TREES & PLANTING

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- IRRIGATED PLANTING BED — REFER TO PLANT PLAN AND SCHEDULE — 01 / 302

CATALINA ESTATE
CATALINA BEACH, PORTOFINO PROMENADE EXTENSION

REVISION	DESCRIPTION	BY	DATE
A - DRAFT	ISSUE FOR REVIEW	IZ	01.03.22
A	ISSUE FOR APPROVAL	IZ	15.03.22

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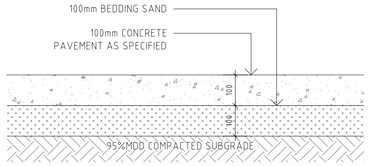
three pilina court osborne park western australia 6017
telephone +61 8 9441 0200
facsimile +61 8 9441 0201
ens@tdl.com.au

CLIENT	SATTERLEY PROPERTY GROUP & TPRC
DESIGNED	AF
DRAWN	IZ
APPROVED	GD
SCALE	1:250@A1
DRAWING TITLE	LANDSCAPE PLAN 2
DRAWING No.	12606-CC-PP-202
REVISION	A

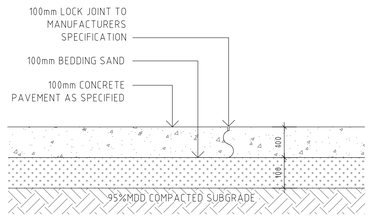
© TIM DAVIES LANDSCAPING

NOTE:
- MINIMUM 1% FALL TO NEAREST PLANTING OR DRAIN
- WHERE CONCRETE PAVING IS ADJACENT TO TURF, FINISH LEVEL OF TURF SHALL BE FLUSH WITH THE FINISH LEVEL OF CONCRETE.
- WHERE CONCRETE PAVING IS ADJACENT TO PLANTING, FINISH LEVEL OF MULCH TO PLANTING SHALL BE 20MM BELOW FINISHED PAVING LEVEL.
- ALL CONCRETE TO BE 32 MPa, MIN 20mm AGGREGATE & MAX SLUMP OF 65mm
- EXPANSION JOINT EVERY 6M, CONTRACTION JOINT EVERY 2M
- FINISH – AS NOMINATED IN LEGEND



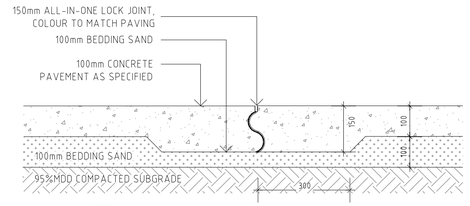
01 / 301 CONCRETE PAVEMENT
TYPICAL DETAIL 1:10 @ A1

NOTE:
- INSTALL LOCK JOINT @ 2m MAX CTS

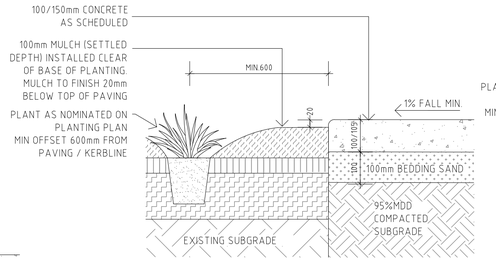


02 / 301 CONTRACTION JOINT – LOCK JOINT
TYPICAL DETAIL 1:10 @ A1

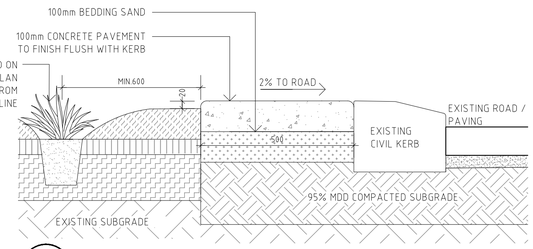
NOTE:
- INSTALL EXPANSION JOINTS @ 6m MAX CTS
- INSTALL WHERE ABUTTING WALLS
- INSTALL WHERE CHANGING CC COLOUR / FINISH



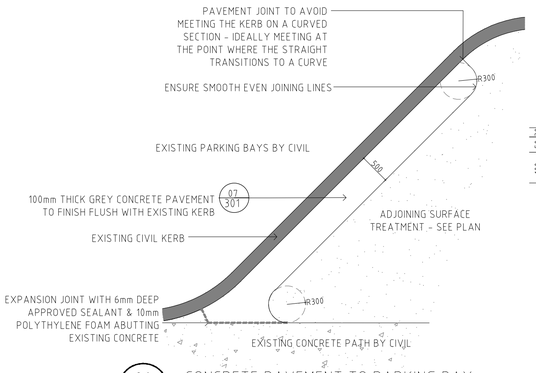
03 / 301 EXPANSION JOINT
TYPICAL DETAIL 1:10 @ A1



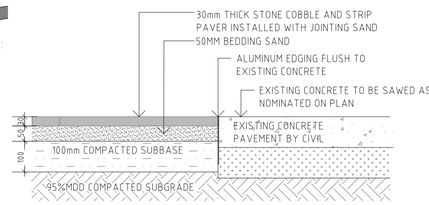
04 / 301 CONCRETE PAVEMENT TO GARDEN BED
TYPICAL DETAIL 1:10 @ A1



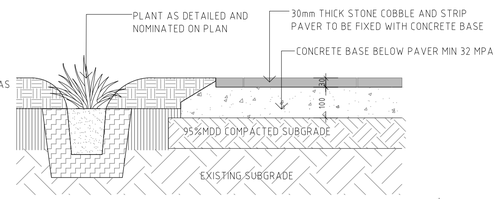
05 / 301 CONCRETE PAVEMENT TO PARKING BAY
TYPICAL DETAIL 1:10 @ A1



06 / 301 CONCRETE PAVEMENT TO PARKING BAY
DETAILED PLAN 1:50 @ A1

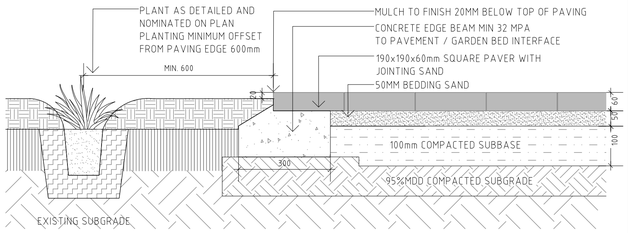


07 / 301 STONE PAVER TO CONCRETE PATH
TYPICAL DETAIL 1:10 @ A1

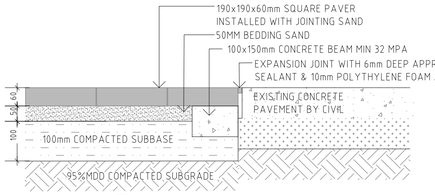


08 / 301 STONE PAVER TO GARDEN BED
TYPICAL DETAIL 1:10 @ A1

09 / 301 BRICK PAVING
TYPICAL DETAIL 1:10 @ A1



11 / 301 BRICK PAVING TO GARDEN BED
TYPICAL DETAIL 1:10 @ A1

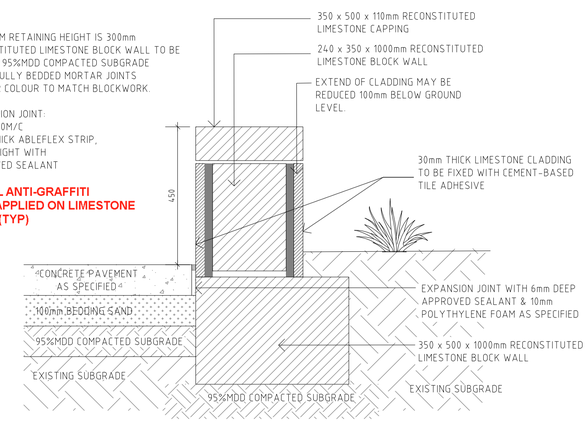


10 / 301 BRICK PAVING TO CONCRETE PATH
TYPICAL DETAIL 1:10 @ A1

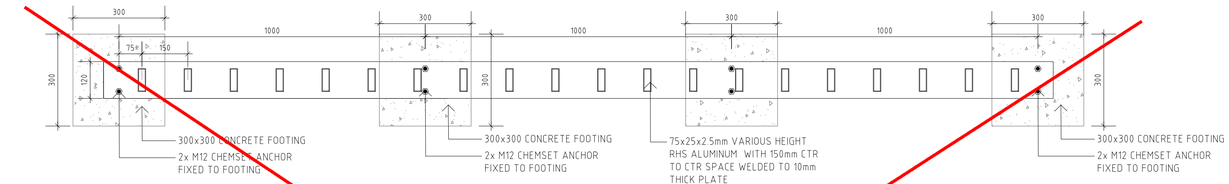
NOTE:
MAXIMUM RETAINING HEIGHT IS 300mm
RECONSTITUTED LIMESTONE BLOCK WALL TO BE LAID ON 95%MDD COMPACTED SUBGRADE
20MM FULLY BEDDED MORTAR JOINTS
MORTAR COLOUR TO MATCH BLOCKWORK.

EXPANSION JOINT:
EVERY 10M/C
10mm THICK ABLEFLEX STRIP, FULL HEIGHT WITH APPROVED SEALANT

NON SACRIFICIAL ANTI-GRAFFITI COATING TO BE APPLIED ON LIMESTONE SEATING WALLS (TYP)

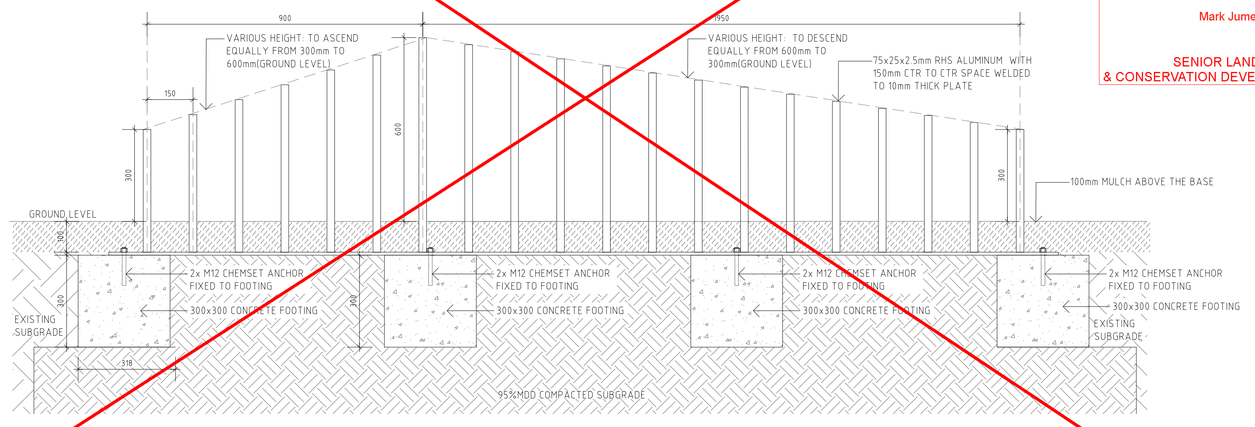


14 / 301 LIMESTONE SEAT WALL
TYPICAL DETAIL 1:10 @ A1



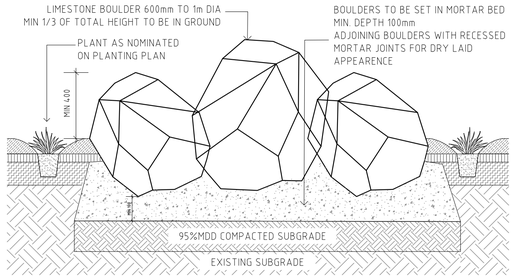
12 / 301 FEATURE SCREEN IN GARDEN BED
DETAILED PLAN 1:10 @ A1

CITY OF WANNEROO
PLAN APPROVAL
Mark Jumeaux
SENIOR LANDSCAPE
& CONSERVATION DEVELOPMENT OFFICER



13 / 301 FEATURE SCREEN IN GARDEN BED
TYPICAL DETAIL 1:10 @ A1

LIMESTONE BOULDERS:
SOURCE: ON SITE
CONTRACTOR TO LIAISE WITH SUPERINTENDENT FOR SOURCING



15 / 301 LIMESTONE BOULDERS
TYPICAL DETAIL 1:20 @ A1

GENERAL NOTES:

- FOR GENERAL ARRANGEMENT PLEASE REFER TO TDL DRAWINGS AND SPECIFICATIONS.
- ANY DIFFERENCES NOTED BETWEEN THE LAYOUT PLANS, DETAIL DRAWINGS AND SPECIFICATION IS TO BE CLARIFIED BY THE CONTRACTOR PRIOR TO WORKS COMMENCING ON SITE.
- THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL SERVICES ON SITE. SERVICES DIAGRAMS ARE PROVIDED AS A GUIDE ONLY. THE CONTRACTOR WILL BE FULLY RESPONSIBLE TO SURVEY SERVICES ON SITE. ANY DAMAGE TO SERVICES IS TO BE RECTIFIED AT THE CONTRACTORS OWN EXPENSE. ANY DAMAGE NEEDS TO BE IMMEDIATELY NOTIFIED TO THE RELEVANT SERVICE PROVIDER.
- THE CONTRACTOR IS TO PROVIDE A FULL TRAFFIC MANAGEMENT PLAN (TMP) FOR APPROVAL BY CITY OF WANNEROO (CoW). THE TMP IS TO BE IMPLEMENTED AND MONITORED AT ALL TIMES DURING CONSTRUCTION WITH WEEKLY UPDATES OF TRAFFIC MANAGEMENT IS OCCURRING.
- THE CONTRACTOR IS TO PROVIDE A FULL OH&S PLAN FOR APPROVAL BY CoW. THE PLAN IS TO BE FULLY IMPLEMENTED AND MONITORED AT ALL TIMES DURING CONSTRUCTION WITH WEEKLY UPDATES PROVIDED BY THE CONTRACTOR OF INCIDENTS ETC.
- ALL SITE SET OUT AND PROPOSED FINISHED LEVELS ARE TO BE CONFIRMED ON SITE WITH THE SUPERINTENDENT PRIOR TO CONSTRUCTION.
- EXISTING GRADES ARE TO BE MAINTAINED.
- VERGES TO HAVE 2-3% CROSSFALL TOWARDS ROAD EDGE.
- ALL EXISTING SITE FEATURES, SUCH AS KERBLINES, PATHS, SIGN POSTS, LIGHT POLES ETC ARE TO BE RETAINED AND PROTECTED UNLESS OTHERWISE NOMINATED ON PLAN.
- WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER MEASUREMENTS.

STEELWORK NOTES:

- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING THE BUILDING LICENSE FOR THE WORKS. FABRICATION IS NOT TO COMMENCE UNTIL THE BUILDING LICENSE APPROVAL IS IN PLACE AND PROVIDED TO THE SUPERINTENDENT. THE CONTRACTOR WILL BE RESPONSIBLE FOR THE CERTIFICATE OF DESIGN COMPLIANCE FOR ALL SHOP DRAWINGS PROVIDED AS PART OF THE BUILDING LICENSE AND FABRICATION WORKS.
- ALL STEEL FABRICATION AND CONSTRUCTION WORKS TO BE TO ALL RELEVANT AUSTRALIAN STANDARDS.
- ALL STEEL WORK, FIXTURES AND FITTINGS TO BE HOT DIP GALVANISED. GALVANISATION TO BE CARRIED OUT AFTER ALL CUTTING, WELDING AND DRILLING HAS BEEN COMPLETED DURING FABRICATION. NO WELDING OR CUTTING IS TO BE CARRIED OUT ONCE STEEL HAS BEEN GALVANISED.
- ALL WELDS TO BE FULL. NO STITCH WELDING PERMITTED.
- THE CONTRACTOR IS TO PROVIDE A FULL SET OF DETAILED SHOP DRAWINGS FOR ALL STRUCTURES FOR APPROVAL BY THE SUPERINTENDENT PRIOR TO FABRICATION TAKING PLACE.
- FINISH: HOT DIP GALVANISED (HDG).
- EVIDENCE OF COMPACTION TESTING UNDER ALL CONCRETE FOOTINGS, WALLS AND SURFACES IS TO BE PROVIDED BY THE CONTRACTOR.
- ALL SITE SET OUT AND PROPOSED FINISHED LEVELS ARE TO BE AGREED ON SITE WITH THE SUPERINTENDENT PRIOR TO CONSTRUCTION.
- ALL CONCRETE TO BE A MINIMUM OF 32MPA UNLESS OTHERWISE INDICATED ON THE DRAWINGS.

CATALINA ESTATE
CATALINA BEACH, PORTOFINO PROMENADE EXTENSION

REVISION	DESCRIPTION	BY	DATE
A – DRAFT	ISSUE FOR REVIEW	IZ	01.03.22
A	ISSUE FOR APPROVAL	IZ	15.03.22

TIM DAVIES LANDSCAPING
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western australia 6017
telephone +61 8 9441 0200
facsimile +61 8 9441 0201
enq@tdl.com.au

CLIENT	SATTERLEY PROPERTY GROUP & TPRC
DESIGNED	AF
DRAWN	IZ
APPROVED	GD
SCALE	AS SHOWN@A1
DRAWING TITLE	DETAILS 1
DRAWING No.	12606-CC-PP-301
REVISION	A

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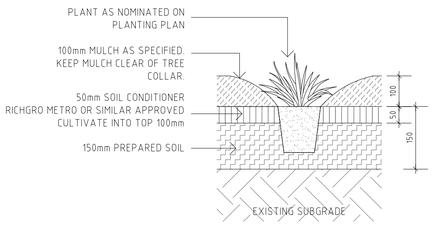
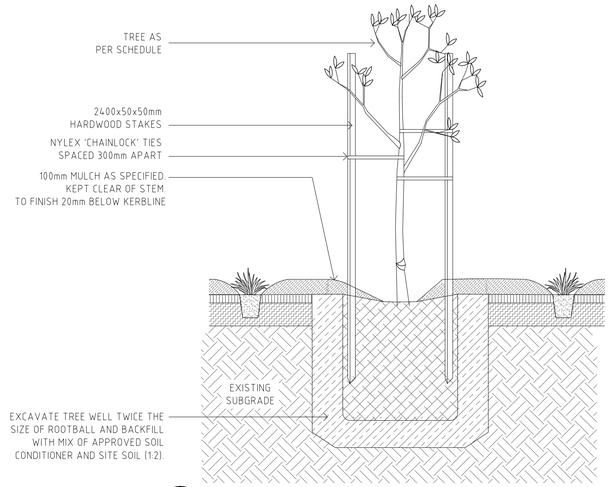
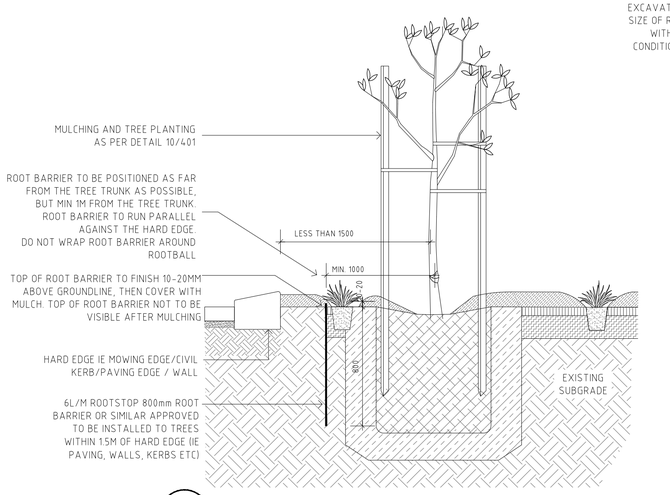


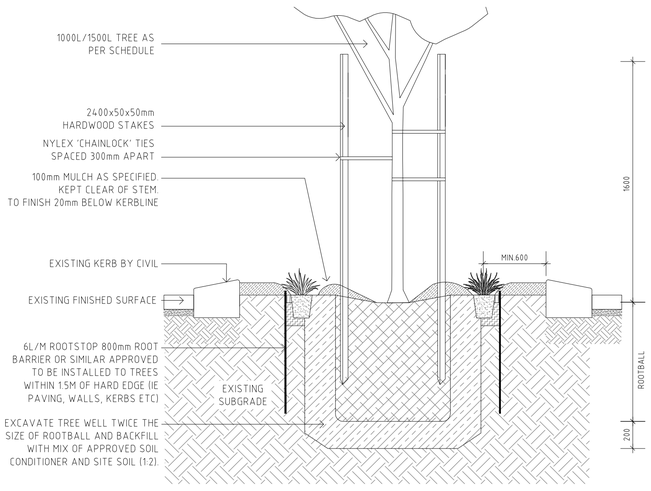
01 302 SHRUB PLANTING
TYPICAL DETAIL 1:10 @ A1



02 302 TREE PLANTING IN GARDEN BED
TYPICAL DETAIL 1:20 @ A1



03 302 TREE PLANTING TO HARD EDGES
TYPICAL DETAIL 1:20 @ A1



04 302 TREE PLANTING IN MEDIAN VERGE
TYPICAL DETAIL 1:20 @ A1

GENERAL NOTES:

- FOR GENERAL ARRANGEMENT PLEASE REFER TO TDL DRAWINGS AND SPECIFICATIONS.
- ANY DIFFERENCES NOTED BETWEEN THE LAYOUT PLANS, DETAIL DRAWINGS AND SPECIFICATION IS TO BE CLARIFIED BY THE CONTRACTOR PRIOR TO WORKS COMMENCING ON SITE.
- THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL SERVICES ON SITE. SERVICES DIAGRAMS ARE PROVIDED AS A GUIDE ONLY. THE CONTRACTOR WILL BE FULLY RESPONSIBLE TO SURVEY SERVICES ON SITE. ANY DAMAGE TO SERVICES IS TO BE RECTIFIED AT THE CONTRACTORS OWN EXPENSE. ANY DAMAGE NEEDS TO BE IMMEDIATELY NOTIFIED TO THE RELEVANT SERVICE PROVIDER.
- THE CONTRACTOR IS TO PROVIDE A FULL TRAFFIC MANAGEMENT PLAN (TMP) FOR APPROVAL BY CITY OF WANNEROO (CoW). THE TMP IS TO BE IMPLEMENTED AND MONITORED AT ALL TIMES DURING CONSTRUCTION WITH WEEKLY UPDATES OF TRAFFIC MANAGEMENT IS OCCURRING.
- THE CONTRACTOR IS TO PROVIDE A FULL OH&S PLAN FOR APPROVAL BY CoW. THE PLAN IS TO BE FULLY IMPLEMENTED AND MONITORED AT ALL TIMES DURING CONSTRUCTION WITH WEEKLY UPDATES PROVIDED BY THE CONTRACTOR OF INCIDENTS ETC.
- ALL SITE SET OUT AND PROPOSED FINISHED LEVELS ARE TO BE CONFIRMED ON SITE WITH THE SUPERINTENDENT PRIOR TO CONSTRUCTION.
- EXISTING GRADES ARE TO BE MAINTAINED.
- VERGES TO HAVE 2-3% CROSSFALL TOWARDS ROAD EDGE.
- ALL EXISTING SITE FEATURES, SUCH AS KERBLINES, PATHS, SIGN POSTS, LIGHT POLES ETC ARE TO BE RETAINED AND PROTECTED UNLESS OTHERWISE NOMINATED ON PLAN.
- WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER MEASUREMENTS.

PLANTING NOTES:

- PROPOSED TREES MAY BE REALIGNED BASED ON SERVICES LOCATIONS WHERE APPROVED BY SUPERINTENDENT
- SHRUB AND GROUNDCOVER PLANTING OFFSET: MIN 600mm FROM ROAD EDGES, KERBLINES AND OTHER HARD EDGE
- FOR SHRUB PLANTING MIXES: PLANTS ARE TO BE PLANTED IN GROUPS OF 7-9-11 OF EACH SPECIES
- FOR OVERALL PLANT SCHEDULES, REFER TO DRAWING LS-302
- FOR ALL HARD AND SOFTSCAPE DETAILS, REFER TO DETAILS 01-02
- FOR ALL MATERIALS AND FURNITURE SELECTIONS, REFER TO SCHEDULES (LS-302) AND SPECIFICATION
- ALL 1000LT & 1500LT TREES ARE TO BE INSTALLED WITH UNDERGROUND GUYING.
- TREE POT SIZES ARE INDICATIVE AND SUBJECT TO STOCK AVAILABILITY AT TIME OF PROCUREMENT.
- TREES NOMINATED ON PLAN AND/OR LOCATED WITHIN 1.5M OF HARD EDGE/PAVING/KERBLINE ARE TO BE INSTALLED WITH 6M LONG 800MM DEEP ROOT CONTROL BARRIER POSITIONED AGAINST THE HARD EDGE WITH TOP OF RCB TO BE 50MM BELOW TOP OF MULCH.
- FOR ERYTHRINA TRANSPLANTS, PREPARE 2×2×1M DEEP HOLES. TRANSPLANT SUPPLY BY CLIENT. TRANSPLANT INSTALLATION AND MANAGEMENT WORKS ARE TO BE COORDINATED WITH SPECIALIST GROWER BY CONTRACTOR.

Species Selection

Key	Species	Common Name	Plant per m2	Preferred pot size subject to avaiability at time of purchase	Qty
Trees - Median					
EV	Eucalyptus victrix	Coolibah	As shown	1000/1500L	25
Trees - Roundabout					
EI	Erythrina indica	Coral Tree	As shown	1500L	3
Trees - Portofino south verge & greenlink					
EI	Erythrina indica	Coral Tree	As shown	Transplant - by superintendent	7
EC	Eucalyptus cladocalyx nana	Dwarf Sugar Gum	As shown	1000/1500L	19
ET	Eucalyptus todtiana	Coastal Blackbutt	As shown	500L	11
ME	Metrosideros excelsa	NZ Christmas Tree	As shown	500L	30
Shrubs and groundcovers - Mix 1					
As	Acacia lasaiocarpa 'Prostrate'	Dwarf Wattle	6	140mm	991
Ca	Conostylis aculeata	Cottonhead	6	140mm	991
Cv	Carpobrotus virescens	Pigface	6	140mm	991
Ec	Eremophila 'Carramar Carpet'	Emu Bush	6	140mm	991
Hs	Hibbertia 'Golden Sunburst'	Golden Sunburst Guinea Flower	6	140mm	990
Mp	Myoporum parvifolium 'Purpurea'	Creeping Boobialla	6	140mm	990
Oam	Olearia axillaris mini	Coastal Daisy Bush	6	140mm	990
Wm	Westringia mundi	Dwarf Coast Rosemary	6	140mm	990
Shrubs - Mix 2 (Low to Medium shrubs)					
Dk	Dianella kentlyn	Native Flax	6	140mm	518
Egr	Eremophila glabra 'Compactum'	Smooth Emu bush	6	140mm	518
Hs	Hibbertia 'Golden Sunburst'	Golden Sunburst Guinea Flower	6	140mm	518
Shrubs - Mix 3 (Medium to Tall shrubs)					
~~Go~~	~~Westringia 'Zena'~~	~~Coastal Rosemary~~	~~6~~	~~200mm~~	~~241~~
~~Mh~~	~~Melaleuca 'Green Globe'~~	~~Dwarf Bracelet Honey Myrtle~~	~~6~~	~~200mm~~	~~241~~
~~Ps~~	~~Pimelea sp.~~	~~Pink Rice Flower~~	~~6~~	~~200mm~~	~~241~~

MATURE TREE TRANSPLANTS REQUIRE A 5 YEAR MAINTENANCE PERIOD FOR ADEQUATE ESTABLISHMENT (TYP)

PLEASE SUBSTITUTE THE DIANELLA & PIMELIA SPECIES FOR A LOW GROWING LOCAL BANKSIA SPECIES

MELALEUCA "GREEN GLOBE" IS AN ENVIRONMENTAL WEED. SUB FOR M. SYTENA, RHAGODIA BACCATA OR GREVILLEA CRITHMIFOLIA

SUB WESTRINGIA MUNDI AND ZENA FOR LOCAL WESTRINGEA DAMPIERI

05 302 OVERALL PLANT SCHEDULE
N/A

SPECIFICATION NOTES:

SOIL CONDITIONER	GARDEN BED	RICHGRO METRO OR SIMILAR APPROVED
CONCRETE	PATHS AND FOOTINGS CONCRETE PAD TO FURNITURE	MIN 32MPA, MIN 20mm AGGREGATE & MAX SLUMP OF 65mm FINISH: STANDARD GREY FINISH: HOLCIM 'KARRI'
MULCH	GARDEN BEDS	PINE BARK MULCH
BOULDERS	GARDEN BED	SALVAGED FROM SITE
FURNITURE	SEATING CUBE BENCH SEAT **BENCH SEATS TO HAVE ARM RESTS ON BOTH SIDES (TYP)** **NON SACRIFICIAL ANTI-GRAFFITI COATING TO BE APPLIED TO ALL SEATING (TYP)**	650mm L x 450mm W x 430mm H 'URBAN EDGE' STREET FURNITURE FROM COX CODE: SAT B100 FRAME - ALUMINUM COLOUR: TBC SEAT MATERIAL: ALUMINUM WOODGRAIN COLOUR: TBC SURFACE FIXING AS PER MANUFACTURE'S SPECIFICATION 1250mm L x 590mm W x 820mm H 'URBAN EDGE' STREET FURNITURE FROM COX CODE: SAT B220 FRAME - ALUMINUM COLOUR: TBC SEAT MATERIAL: ALUMINUM COLOUR: TBC SURFACE FIXING AS PER MANUFACTURE'S SPECIFICATION 
BLOCKWORK	BLOCK CAPPING CLADDING	RECONSTITUTED METER BLOCK 'LIMESTONE' FROM BRIKMAKERS OR SIMILAR APPROVED 240 × 350× 1m AS DETAILED MIN BULK DENSITY 1600kg/m^3 RECONSTITUTED 350/500/110 30mm THICK NATURAL CUT LIMESTONE
PAVER	COTTAGE LOT ACCESS PATH JOINTING SAND	190x190x60mm SQ VISTAPAVE FROM BRIKMAKERS/BROKSHOP FINISH: GRANITE COLOUR TBD PAVE-LOK FROM BORAL OR SIMILAR APPROVED
LOW SCREEN	MEDIAN GARDEN BED	75x25x2.5mm RHS VARIOUS HEIGHT(300-600mm) REFER TO DETAIL

CITY OF WANNEROO
PLAN APPROVAL

Mark Jumeaux

SENIOR LANDSCAPE
& CONSERVATION DEVELOPMENT OFFICER

CATALINA ESTATE
CATALINA BEACH, PORTOFINO PROMENADE EXTENSION

REVISION	DESCRIPTION	BY	DATE
A - DRAFT	ISSUE FOR REVIEW	IZ	01.03.22
A	ISSUE FOR APPROVAL	IZ	15.03.22

TIM DAVIES LANDSCAPING
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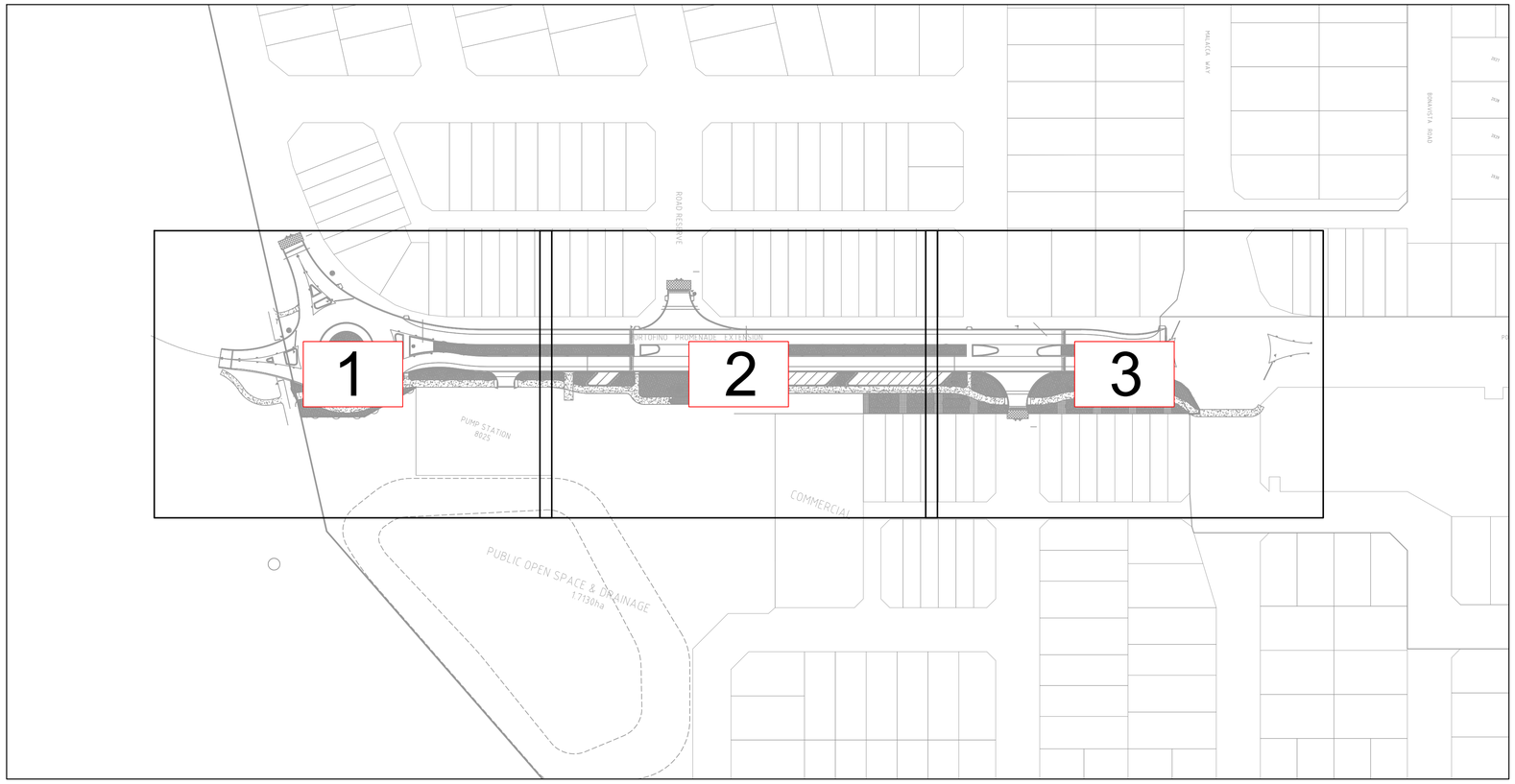
telephone +61 8 9441 0200
facsimile +61 8 9441 0201
ens@tdl.com.au

CLIENT	SATTERLEY PROPERTY GROUP & TPRC		
DESIGNED	AF	DRAWING TITLE	DETAILS 2
DRAWN	IZ		
APPROVED	GD	DRAWING No.	12606-CC-PP-302
SCALE	AS SHOWN@A1		REVISION A

CATALINA BEACH - PORTOFINO PROMENADE EXTENSION

IRRIGATION WORKS



CITY OF WANNEROO
PLAN APPROVAL

Mark Jumeaux

SENIOR LANDSCAPE
& CONSERVATION DEVELOPMENT OFFICER

PLEASE REFER TO THE CITY'S STANDARD DRAWING FOR THE ELECTRICAL CUBICLE AVAILABLE ON THE CITY'S WEBSITE (TYP)

AUTOCAD FILENAME: Catalina Portofino Extension Design (Rev B).dwg

REV	DATE	DESCRIPTION	DWN	CKD
A	24/03/2022	ISSUED FOR APPROVAL	RV	JS
B	18/05/2022	REVISED IRRIGATION DESIGN AS REQUESTED BY THE CLIENT	J.S	

REV	DATE	DESCRIPTION	DWN	CKD

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NewGround DESIGN SERVICES

SCALE :	1 : NTS @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT :
TIM DAVIES LANDSCAPING

PROJECT :
CATALINA - PORTOFINO EXTENSION
IRRIGATION WORKS (KEY PLAN)
-

DATE :	DESIGN NO. :	SHEET NO. :
23/03/2022	18390-00	COVER PAGE

SHEET 1 OF 6

SHEET 2 OF 6

CAP MAINLINE AT THIS LOCATION WITH 2-WIRE PATH

1	Ø50
6.33	–
–	

PUMP STATION 8025

LEGEND:

"SPRINKLERS"

SYMBOL	BRAND NAME	MODEL DESCRIPTION	NOZZ. NO.	PRESS. (KPA)	FLOW (LPM)	RADIUS (M)
	TORO	570Z-12P	15	250	2.84-11.36	4.6
	TORO	570Z-12P	12	250	1.82-7.27	3.7
	TORO	570Z-12P	10	250	1.25-5.04	3.0
	TORO	570Z-12P	4EST	250	1.63	1.2x4.4
	TORO	570Z-12P	4SST	250	3.33	1.2x9.1

	FOR GARDEN AREAS REFER TO C.O.W. SPECIFICATION ITEM 1.6.2 SPRAY SPRINKLERS FOR DEFINING AREAS REQUIRING 570Z-12P'S
500 L	4-TORO FLOOD BUBBLERS MODEL FB-100PC ON A TORO 570Z-6P WITH BLUE FLEX 14.12 LPM @ 250 kPA
1000/1500 L	4-TORO FLOOD BUBBLERS MODEL FB-200PC ON A TORO 570Z-6P WITH BLUE FLEX 28.08 LPM @ 250 kPA
TRANS	4-TORO FLOOD BUBBLERS MODEL FB-200PC ON A TORO 570Z-6P WITH BLUE FLEX 28.08 LPM @ 250 kPA
	BERMAD 200 SERIES SOLENOID CONTROL VALVE SIZE AS SHOWN
	FUTURE BORE WITH NEW GRUNDFOS PUMP: SP30-12 & WITH VFD TO BE TO CITY OF WANNEROO SPECIFICATION
	NEW BORE PUMP CUBICLE WITH A HUNTER ACC-99-D TWO-WIRE IRRIGATION CONTROLLER TO CITY OF WANNEROO SPECIFICATION
	MAINLINE ISOLATION VALVE SAME SIZE AS MAINLINE
	50mm MAINLINE FLUSHING VALVE
	DN50 AIR RELEASE, TO BE INSTALLED AT HIGH POINT ON MAINLINE PER C.O.W. SPECIFICATION
	P2 CABLE PIT
	LIGHTNING SURGE PROTECTION
	EXISTING MAINLINE ISOLATION VALVE
	EXISTING P2 CABLE PIT
	EXISTING DN100 mPVC RRJ CLASS 12 MAINLINE
	DN110 PN12.5 PE100 MDPE POLY MAINLINE
25	uPVC SWJ CLASS 9 LATERAL LINE SIZE AS SHOWN
	DN100 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR
	DN150 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR
	DN200 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR (UNLESS OTHERWISE NOTED)
	EXISTING SLEEVE

STATION DATA							VALVE DATA		
ST'N NO.	FLOW (L/s)	PR. (kPa)	PR'N mm hr	APP'N mm week	ST'N TIME (min)	AREA TYPE	VAL. NO.	FLOW (L/s)	DECODER NO.
1	6.33	250	–	–	15	TREES	1	6.33	–
2	7.49	250	–	–	15	TREES	2	7.49	–
3	8.29	250	32	40	15	GARDEN	3	8.29	–
4	5.73	250	32	40	15	GARDEN	4	5.73	–
5	6.81	250	–	–	15	TREES	5	6.81	–
6	7.02	250	–	–	15	TREES	6	7.02	–
7	5.80	250	32	40	15	GARDEN	7	5.80	–
8	7.26	250	–	–	15	TREES	8	7.26	–

DAILY RUN TIME: 2 HRS & 0 MIN WEEKLY RUN TIME: 10 HRS & 0 MIN

VALVE LABEL LEGEND

VALVE NO	2	Ø50	VALVE SIZE
FLOW (LPS)	3.29	32	PRECIPITATION RATE
	–		DECODER NO.

NOTE:

1. MAINLINE AND LATERAL PIPES ARE TO BE INSTALLED TO A MINIMUM DEPTH OF 350mm AND BE INSTALLED TO A MAXIMUM DEPTH OF 450mm.
2. THE CONTRACTOR TO UNDERTAKE FLOW (PRESSURE) ADJUSTMENT OF ALL SOLENOID VALVES IN ACCORDANCE WITH THE NOMINAL OPERATING PRESSURE OF THE SPRINKLERS ATTACHED TO THE PARTICULAR SOLENOID VALVE.
3. CABLE PITS TO BEEN LOCATED AT EVERY BEND IN THE MAINLINE AND EVERY 100m IN STRAIGHT RUNS.
4. ALL 2-WIRE PATHS TO BE INSTALLED IN 40MD CONDUIT.
5. THE IRRIGATION SUB CONTRACTOR SHALL SUPPLY A 13mm X 1200mm GROUND ROD FOR SURGE PROTECTION AND HOUSED WITHIN A VALVE BOX AS BELOW:-
   - × AT THE END OF EACH COMMUNICATION CABLE RUN.
   - × AT SPACING NOT EXCEEDING 250 METRES ALONG COMMUNICATION RUNS, OR AT EVERY 8TH DECODER.
   - × OR AS PER MANUFACTURERS SPECIFICATIONS.

CITY OF WANNEROO
PLAN APPROVAL

Mark Jumeaux

SENIOR LANDSCAPE
& CONSERVATION DEVELOPMENT OFFICER

SHEET 1 OF 6

SHEET 2 OF 6

0 2 4 6 8 10m

SCALE 1:200 ON A1

AUTOCAD FILENAME: Catalina Portofino Extension Design IRev B1.dwg

REV	DATE	DESCRIPTION	DWN	CKD
A	24/03/2022	ISSUED FOR APPROVAL	RV	JS
B	18/05/2022	REVISED IRRIGATION DESIGN AS REQUESTED BY THE CLIENT	J.S	

REV	DATE	DESCRIPTION	DWN	CKD

N

NewGround DESIGN SERVICES

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SCALE :	1 : 200 @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

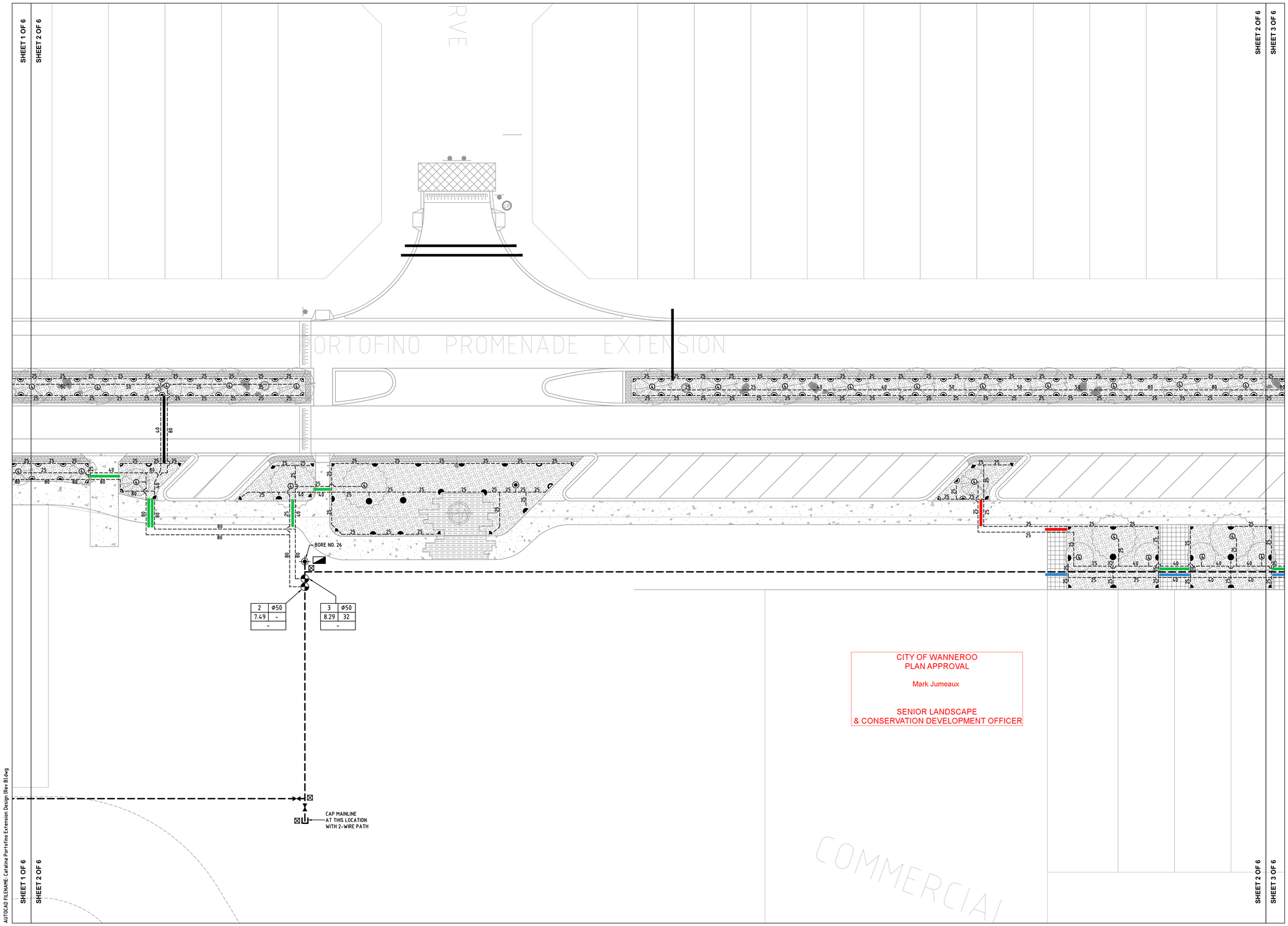
CLIENT :

TIM DAVIES LANDSCAPING

PROJECT :

CATALINA - PORTOFINO EXTENSION
IRRIGATION WORKS
-

DATE :	DESIGN NO. :	SHEET NO. :
23/03/2022	18390-01	1 OF 6



LEGEND: "SPRINKLERS"

SYMBOL	BRAND NAME	MODEL DESCRIPTION	NOZZ. NO.	PRESS. (KPA)	FLOW (LPM)	RADIUS (M)
	TORO	570Z-12P	15	250	2.84-11.36	4.6
	TORO	570Z-12P	12	250	1.82-7.27	3.7
	TORO	570Z-12P	10	250	1.25-5.04	3.0
	TORO	570Z-12P	4EST	250	1.63	1.2x4.4
	TORO	570Z-12P	4SST	250	3.33	1.2x9.1
	FOR GARDEN AREAS REFER TO C.O.W. SPECIFICATION ITEM 1.6.2 SPRAY SPRINKLERS FOR DEFINING AREAS REQUIRING 570Z-12P'S					
500 L	4-TORO FLOOD BUBBLERS MODEL FB-100PC ON A TORO 570Z-6P WITH BLUE FLEX 14.12 LPM @ 250 kPA					
1000/1500 L	4-TORO FLOOD BUBBLERS MODEL FB-200PC ON A TORO 570Z-6P WITH BLUE FLEX 28.08 LPM @ 250 kPA					
TRANS	4-TORO FLOOD BUBBLERS MODEL FB-200PC ON A TORO 570Z-6P WITH BLUE FLEX 28.08 LPM @ 250 kPA					
	BERMAD 200 SERIES SOLENOID CONTROL VALVE SIZE AS SHOWN					
	FUTURE BORE WITH NEW GRUNDFOS PUMP: SP30-12 & WITH VFD TO BE TO CITY OF WANNEROO SPECIFICATION					
	NEW BORE PUMP CUBICLE WITH A HUNTER ACC-99-D TWO-WIRE IRRIGATION CONTROLLER TO CITY OF WANNEROO SPECIFICATION					
	MAINLINE ISOLATION VALVE SAME SIZE AS MAINLINE					
	50mm MAINLINE FLUSHING VALVE					
	DN50 AIR RELEASE, TO BE INSTALLED AT HIGH POINT ON MAINLINE PER C.O.W. SPECIFICATION					
	P2 CABLE PIT					
	LIGHTNING SURGE PROTECTION					
	EXISTING MAINLINE ISOLATION VALVE					
	EXISTING P2 CABLE PIT					
	EXISTING DN100 mPVC RRJ CLASS 12 MAINLINE					
	DN110 PN12.5 PE100 MDPE POLY MAINLINE					
25	uPVC SWJ CLASS 9 LATERAL LINE SIZE AS SHOWN					
	DN100 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR					
	DN150 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR					
	DN200 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR (UNLESS OTHERWISE NOTED)					
	EXISTING SLEEVE					

STATION DATA							VALVE DATA	
ST'N NO.	FLOW (L/s)	PR. (kPa)	PR'N mm hr	APP'N mm week	ST'N TIME (min)	AREA TYPE	VAL. NO.	FLOW (L/s)	DECODER NO.
1	6.33	250	-	-	15	TREES	1	6.33	-
2	7.49	250	-	-	15	TREES	2	7.49	-
3	8.29	250	32	40	15	GARDEN	3	8.29	-
4	5.73	250	32	40	15	GARDEN	4	5.73	-
5	6.81	250	-	-	15	TREES	5	6.81	-
6	7.02	250	-	-	15	TREES	6	7.02	-
7	5.80	250	32	40	15	GARDEN	7	5.80	-
8	7.26	250	-	-	15	TREES	8	7.26	-

DAILY RUN TIME: 2 HRS & 0 MIN WEEKLY RUN TIME: 10 HRS & 0 MIN

VALVE LABEL LEGEND

VALVE NO
FLOW (LPS)

2	Ø50 VALVE SIZE
3.29	32 PRECIPITATION RATE
-	DECODER NO.

NOTE:
1. MAINLINE AND LATERAL PIPES ARE TO BE INSTALLED TO A MINIMUM DEPTH OF 350mm AND BE INSTALLED TO A MAXIMUM DEPTH OF 450mm.
2. THE CONTRACTOR TO UNDERTAKE FLOW (PRESSURE) ADJUSTMENT OF ALL SOLENOID VALVES IN ACCORDANCE WITH THE NOMINAL OPERATING PRESSURE OF THE SPRINKLERS ATTACHED TO THE PARTICULAR SOLENOID VALVE.
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   - OR AS PER MANUFACTURERS SPECIFICATIONS.

CITY OF WANNEROO
PLAN APPROVAL

Mark Jumeaux

SENIOR LANDSCAPE
& CONSERVATION DEVELOPMENT OFFICER

CERTIFIED IRRIGATION DESIGNER
IRRIGATION AUSTRALIA
LIC#1789
IRRIGATION | LANDSCAPE | TURF COMMISSION

0 2 4 6 8 10m
SCALE 1:200 ON A1

AUTOCAD FILENAME: Catalina Portofino Extension Design (Rev B).dwg

REV	DATE	DESCRIPTION	DWN	CKD
A	24/03/2022	ISSUED FOR APPROVAL	RV	JS
B	18/05/2022	REVISED IRRIGATION DESIGN AS REQUESTED BY THE CLIENT	J.S	

REV	DATE	DESCRIPTION	DWN	CKD

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NewGround DESIGN SERVICES

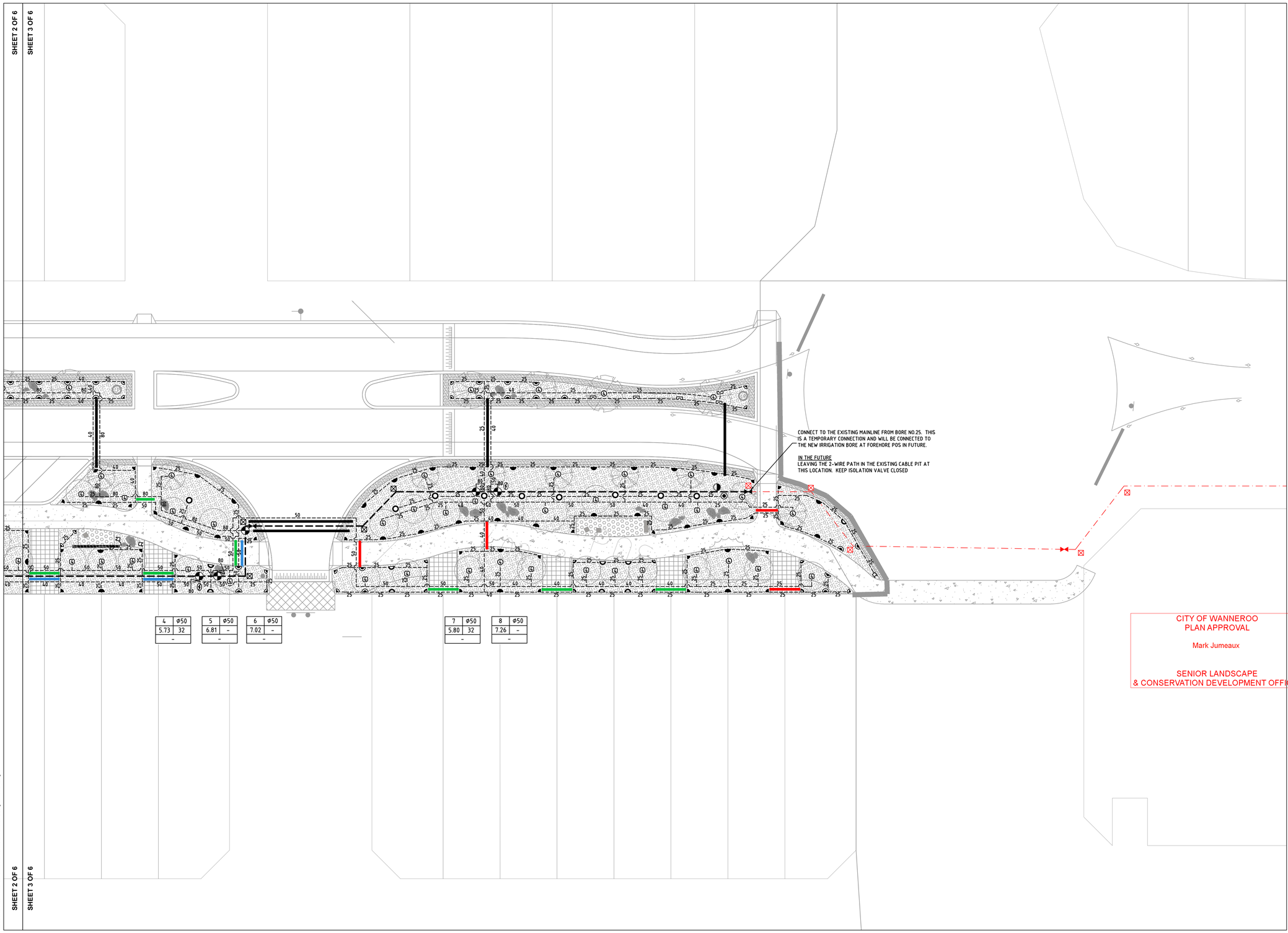
SCALE :	1 : 200 @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT :
TIM DAVIES LANDSCAPING

PROJECT :
CATALINA - PORTOFINO EXTENSION
IRRIGATION WORKS
-

DATE :	DESIGN NO. :	SHEET NO. :
23/03/2022	18390-02	2 OF 6

SHEET 2 OF 6
SHEET 3 OF 6



LEGEND:

"SPRINKLERS"

SYMBOL	BRAND NAME	MODEL DESCRIPTION	NOZZ. NO.	PRESS. (KPA)	FLOW (LPM)	RADIUS (M)
	TORO	570Z-12P	15	250	2.84-11.36	4.6
	TORO	570Z-12P	12	250	1.82-7.27	3.7
	TORO	570Z-12P	10	250	1.25-5.04	3.0
	TORO	570Z-12P	4EST	250	1.63	1.2x4.4
	TORO	570Z-12P	4SST	250	3.33	1.2x9.1

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	BERMAD 200 SERIES SOLENOID CONTROL VALVE SIZE AS SHOWN
	FUTURE BORE WITH NEW GRUNDFOS PUMP: SP30-12 & WITH VFD TO BE TO CITY OF WANNEROO SPECIFICATION
	NEW BORE PUMP CUBICLE WITH A HUNTER ACC-99-D TWO-WIRE IRRIGATION CONTROLLER TO CITY OF WANNEROO SPECIFICATION
	MAINLINE ISOLATION VALVE SAME SIZE AS MAINLINE
	50mm MAINLINE FLUSHING VALVE
	DN50 AIR RELEASE, TO BE INSTALLED AT HIGH POINT ON MAINLINE PER C.O.W. SPECIFICATION
	P2 CABLE PIT
	LIGHTNING SURGE PROTECTION
	EXISTING MAINLINE ISOLATION VALVE
	EXISTING P2 CABLE PIT
	EXISTING DN100 mPVC RRJ CLASS 12 MAINLINE
	DN110 PN12.5 PE100 MDPE POLY MAINLINE
25	uPVC SWJ CLASS 9 LATERAL LINE SIZE AS SHOWN
	DN100 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR
	DN150 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR
	DN200 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR (UNLESS OTHERWISE NOTED)
	EXISTING SLEEVE

STATION DATA / VALVE DATA

ST'N NO.	FLOW (L/s)	PR. (kPa)	PR'N mm	APP'N mm/week	ST'N TIME (min)	AREA TYPE	VAL. NO.	FLOW (L/s)	DECODER NO.
1	6.33	250	–	–	15	TREES	1	6.33	–
2	7.49	250	–	–	15	TREES	2	7.49	–
3	8.29	250	32	40	15	GARDEN	3	8.29	–
4	5.73	250	32	40	15	GARDEN	4	5.73	–
5	6.81	250	–	–	15	TREES	5	6.81	–
6	7.02	250	–	–	15	TREES	6	7.02	–
7	5.80	250	32	40	15	GARDEN	7	5.80	–
8	7.26	250	–	–	15	TREES	8	7.26	–

DAILY RUN TIME: 2 HRS & 0 MIN WEEKLY RUN TIME: 10 HRS & 0 MIN

CITY OF WANNEROO
PLAN APPROVAL

Mark Jumeaux

SENIOR LANDSCAPE
& CONSERVATION DEVELOPMENT OFFICER

VALVE LABEL LEGEND

VALVE NO	2	ø50 VALVE SIZE
FLOW (LPS)	3.29	32 PRECIPITATION RATE
	–	DECODER NO.

NOTE:

1. MAINLINE AND LATERAL PIPES ARE TO BE INSTALLED TO A MINIMUM DEPTH OF 350mm AND BE INSTALLED TO A MAXIMUM DEPTH OF 450mm.
2. THE CONTRACTOR TO UNDERTAKE FLOW (PRESSURE) ADJUSTMENT OF ALL SOLENOID VALVES IN ACCORDANCE WITH THE NOMINAL OPERATING PRESSURE OF THE SPRINKLERS ATTACHED TO THE PARTICULAR SOLENOID VALVE.
3. CABLE PITS TO BEEN LOCATED AT EVERY BEND IN THE MAINLINE AND EVERY 100m IN STRAIGHT RUNS.
4. ALL 2-WIRE PATHS TO BE INSTALLED IN 40MD CONDUIT.
5. THE IRRIGATION SUB CONTRACTOR SHALL SUPPLY A 13mm X 1200mm GROUND ROD FOR SURGE PROTECTION AND HOUSED WITHIN A VALVE BOX AS BELOW:-
   - × AT THE END OF EACH COMMUNICATION CABLE RUN.
   - × AT SPACING NOT EXCEEDING 250 METRES ALONG COMMUNICATION RUNS, OR AT EVERY 8TH DECODER.
   - × OR AS PER MANUFACTURERS SPECIFICATIONS.

CERTIFIED IRRIGATION DESIGNER
IRRIGATION AUSTRALIA
IRRIGATION & TURF CONSULTANTS

0 2 4 6 8 10m
SCALE 1:200 ON A1

SHEET 2 OF 6
SHEET 3 OF 6

AUTOCAD FILENAME: Catalina Portofino Extension Design (Rev B).dwg

REV	DATE	DESCRIPTION	DWN	CKD
A	24/03/2022	ISSUED FOR APPROVAL	RV	JS
B	18/05/2022	REVISED IRRIGATION DESIGN AS REQUESTED BY THE CLIENT	J.S	

REV	DATE	DESCRIPTION	DWN	CKD

N

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SCALE :	1 : 200 @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT :
TIM DAVIES LANDSCAPING

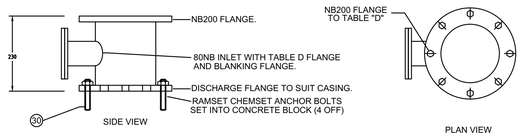
PROJECT :
CATALINA - PORTOFINO EXTENSION
IRRIGATION WORKS
-

DATE :	DESIGN NO. :	SHEET NO. :
23/03/2022	18390-03	3 OF 6

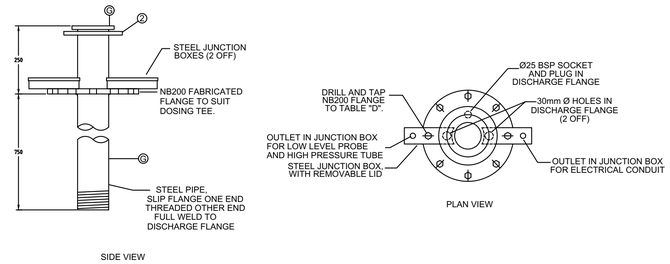
PIPE SIZE.	DIMENSIONS (mm)							CONCRETE PLINTH
	A.	B.	C.	D.	E.	F.	G.	
Ø50	300	150	500	150	1305	Ø25	50	Ø650 x 450
Ø80	600	200	800	200	1430	Ø25	80	Ø650 x 600
Ø100	600	200	1000	250	1430	Ø50	100	Ø750 x 600

ITEM DESCRIPTION
1. DISCHARGE FLANGE ASSEMBLY.
2. TE SLIP FLANGE
3. 90° LONG RADIUS FLANGED ELBOW.
4. 90° LONG RADIUS BUTTWELD ELBOW.
5. AUTOMATIC AIR/VACUUM RELEASE VALVE - METAL CONSTRUCTION.
6. STANDARD WT. BUTWELD TE FLANGED TEE.
7. TE BLANK FLANGE.
8. ARAD OCTAVE FLOW METER SIZED TO DISCHARGE Ø.
9. HEAVY DUTY ELECTRICAL CONDUIT.
10. CONCRETE PLINTH.
11. PRESSURE TUBE.
12. STEEL JUNCTION BOXES.
13. BORE CASING.
14. LOCKABLE COMMERCIAL VALVE BOX TO HOLD ARAD OCTAVE METER.
15. CONCRETE THRUST BLOCK.
16. C.I. FLANGE TO SOCKET CONNECTOR.
17. P.V.C. MAINLINE.
18. BSP SOCKET AND NIPPLE.
19. MILNES GUNMETAL TAPPING BAND. INSTALL HUNTER FLOW CLICK WHERE SPECIFIED. PLUG IF SOCKET NOT USED.
20. BUTTERFLY VALVE WITH NOTCH PLATE AND HANDLE. REMOVE HANDLE AND STORE IN PUMP CUBICLE.
21. TABLE "E" FLANGE SET.
22. GALVANISED STEEL DISCHARGE PIPE.
23. MILNES GUNMETAL TAPPING BAND. INSTALL FLOW SWITCH WHERE SPECIFIED. PLUG IF SOCKET NOT USED.
24. RAINBIRD MAXI JUMBO RECTANGULAR VALVE BOX (VB-MAX 102.4X68.8X45.7 CM)
25. DRILL & TAP FOR PRESSURE TAKE OFF TUBE. RUN TUBE BACK TO PRESSURE GAUGE IN CONTROL CABINET.
26. DUAL FLAP CHECK VALVE.
27. LOCKABLE GALVANISED METER ENCLOSURE.
28. PUMP COLUMN.
29. 200NB GALVANISED STEEL FABRICATED DOSING TEE WITH 80NB INLET.
30. STUD BOLTS TO SUIT TABLE "D" FLANGE.
31. NOT ALLOCATED.
32. NOT ALLOCATED.

NOTES:
1. DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
2. ALL STEEL PIPEWORK TO BE SCHEDULE 40.
3. ALL FLANGES TO BE TABLE "E".
4. ALL STEEL PIPEWORK AND FITTINGS TO BE HOT DIPPED GALVANISED AFTER FABRICATION.
5. ALL BOLTS STUDS AND NUTS TO BE GALVANISED, ALL BOLT TREADS TO PROTRUDE PAST NUT AFTER INSTALLATION.
6. ALL BOLTS USED IN CONCRETE TO BE "RAMSET CHEMSET" MASONRY ANCHORS UNLESS OTHERWISE STATED.
7. ALL BURIED STEEL PIPE TO BE "DENSO" WRAPPED AS PER MANUFACTURERS SPECIFICATIONS.
8. BUTTERFLY VALVES TO BE FITTED WITH STAINLESS STEEL DISC AND PADLOCK TAB.
9. ALL UNUSED SOCKETS TO BE FITTED WITH STEEL PLUG.
10. FLOW METER AND BUTTERFLY VALVE TO BE SAME SIZE AS PIPEWORK.
11. HIGH, LOW PRESSURE AND NO FLOW FITTINGS NOT SHOWN.



STANDARD DOSING TEE ASSEMBLY DETAIL - ITEM 29.



STANDARD DISCHARGE FLANGE ASSEMBLY DETAIL - ITEM 1.

CITY OF WANNEROO
PLAN APPROVAL

Mark Jumeaux

SENIOR LANDSCAPE
& CONSERVATION DEVELOPMENT OFFICER

PIPE SIZE.	DIMENSIONS (mm)							CONCRETE PLINTH
	A.	B.	C.	D.	E.	F.	G.	
Ø50	300	150	500	150	1305	Ø25	50	Ø650 x 450
Ø80	600	200	800	200	1430	Ø25	80	Ø650 x 600
Ø100	600	200	1000	250	1430	Ø50	100	Ø750 x 600

ITEM DESCRIPTION
1. DISCHARGE FLANGE ASSEMBLY.
2. TE SLIP FLANGE
3. 90° LONG RADIUS FLANGED ELBOW.
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5. AUTOMATIC AIR/VACUUM RELEASE VALVE - METAL CONSTRUCTION.
6. STANDARD WT. BUTWELD TE FLANGED TEE.
7. TE BLANK FLANGE.
8. ARAD OCTAVE FLOW METER SIZED TO DISCHARGE Ø.
9. HEAVY DUTY ELECTRICAL CONDUIT.
10. CONCRETE PLINTH.
11. PRESSURE TUBE.
12. STEEL JUNCTION BOXES.
13. BORE CASING.
14. LOCKABLE COMMERCIAL VALVE BOX TO HOLD ARAD OCTAVE METER.
15. CONCRETE THRUST BLOCK.
16. C.I. FLANGE TO SOCKET CONNECTOR.
17. P.V.C. MAINLINE.
18. BSP SOCKET AND NIPPLE.
19. MILNES GUNMETAL TAPPING BAND. INSTALL HUNTER FLOW CLICK WHERE SPECIFIED. PLUG IF SOCKET NOT USED.
20. BUTTERFLY VALVE WITH NOTCH PLATE AND HANDLE. REMOVE HANDLE AND STORE IN PUMP CUBICLE.
21. TABLE "E" FLANGE SET.
22. GALVANISED STEEL DISCHARGE PIPE.
23. MILNES GUNMETAL TAPPING BAND. INSTALL FLOW SWITCH WHERE SPECIFIED. PLUG IF SOCKET NOT USED.
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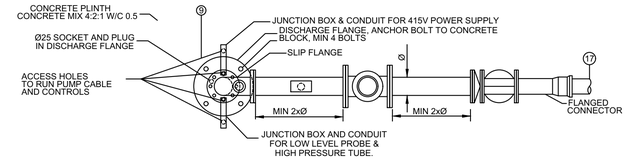
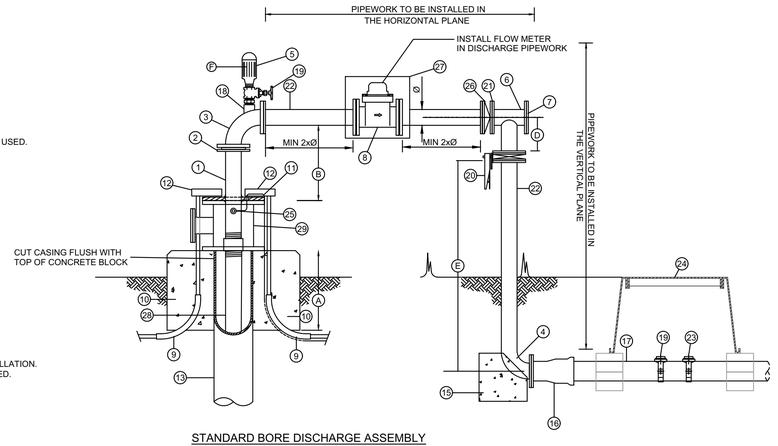
26. DUAL FLAP CHECK VALVE.
27. LOCKABLE GALVANISED METER ENCLOSURE.
28. PUMP COLUMN.
29. 200NB GALVANISED STEEL FABRICATED DOSING TEE WITH 80NB INLET.
30. STUD BOLTS TO SUIT TABLE "D" FLANGE.
31. NOT ALLOCATED.
32. NOT ALLOCATED.

NOTES:
1. DIMENSIONS ARE IN MILLIMETRES UNLESS OTHERWISE STATED.
2. ALL STEEL PIPEWORK TO BE SCHEDULE 40.
3. ALL FLANGES TO BE TABLE "E".
4. ALL STEEL PIPEWORK AND FITTINGS TO BE HOT DIPPED GALVANISED AFTER FABRICATION.
5. ALL BOLTS STUDS AND NUTS TO BE GALVANISED, ALL BOLT TREADS TO PROTRUDE PAST NUT AFTER INSTALLATION.
6. ALL BOLTS USED IN CONCRETE TO BE "RAMSET CHEMSET" MASONRY ANCHORS UNLESS OTHERWISE STATED.
7. ALL BURIED STEEL PIPE TO BE "DENSO" WRAPPED AS PER MANUFACTURERS SPECIFICATIONS.
8. BUTTERFLY VALVES TO BE FITTED WITH STAINLESS STEEL DISC AND PADLOCK TAB.
9. ALL UNUSED SOCKETS TO BE FITTED WITH STEEL PLUG.
10. FLOW METER AND BUTTERFLY VALVE TO BE SAME SIZE AS PIPEWORK.
11. HIGH, LOW PRESSURE AND NO FLOW FITTINGS NOT SHOWN.



STANDARD BORE DISCHARGE ASSEMBLY
PLAN VIEW (JUNCTION BOXES ROTATED FOR CLARITY)



STANDARD BORE DISCHARGE ASSEMBLY
SECTIONAL VIEW

AUTOCAD FILENAME: Catalina Portofino Extension Design (Rev B).dwg

REV	DATE	DESCRIPTION	DWN	CKD
A	24/03/2022	ISSUED FOR APPROVAL	RV	JS
B	18/05/2022	REVISED IRRIGATION DESIGN AS REQUESTED BY THE CLIENT	J.S	

REV	DATE	DESCRIPTION	DWN	CKD

NewGround DESIGN SERVICES

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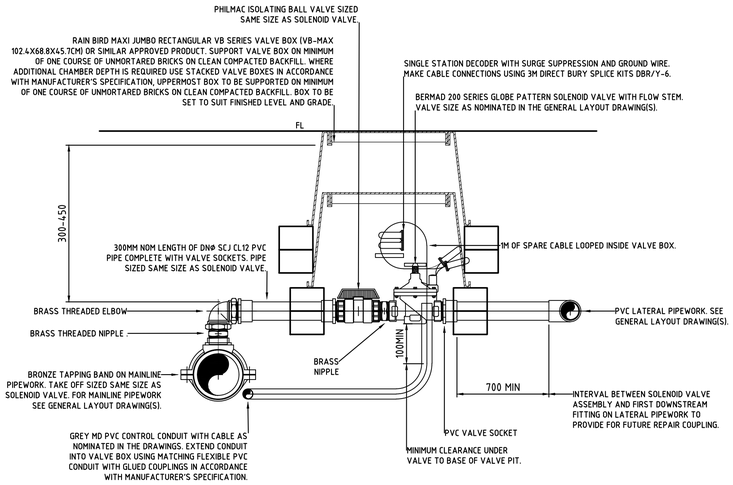
SCALE :	1 : NTS @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT :
TIM DAVIES LANDSCAPING

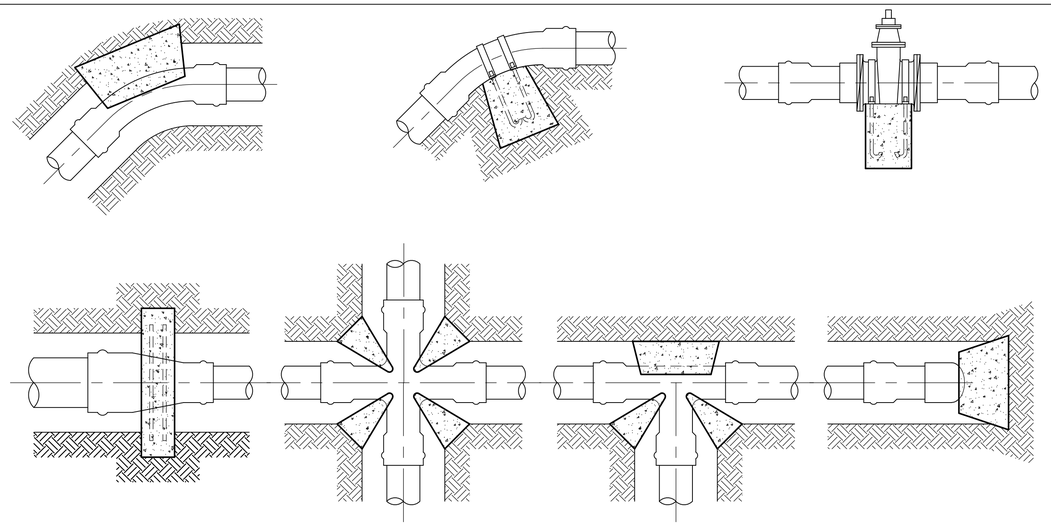
PROJECT :
CATALINA - PORTOFINO EXTENSION
IRRIGATION WORKS (TYPICAL DETAILS)
-

DATE :	DESIGN NO. :	SHEET NO. :
23/03/2022	18390-04	4 OF 6



TYPICAL GLOBE PATTERN SOLENOID VALVE INSTALLATION

NOT TO SCALE



TYPICAL THRUST BLOCK DETAILS

NOT TO SCALE

NOTE:
MINIMUM BEARING AREA TO BE IN ACCORDANCE WITH TYPE OF FITTING AND SOIL TYPE AS PER PIPE MANUFACTURERS RECOMMENDATIONS

CITY OF WANNEROO
PLAN APPROVAL

Mark Jumeaux

SENIOR LANDSCAPE
& CONSERVATION DEVELOPMENT OFFICER

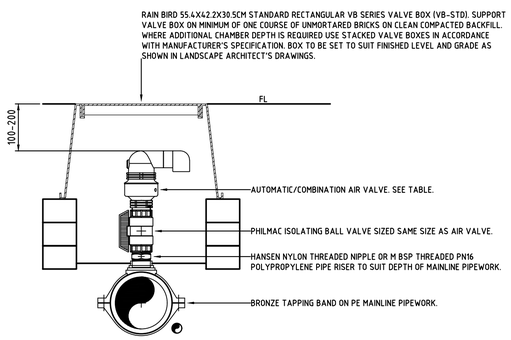
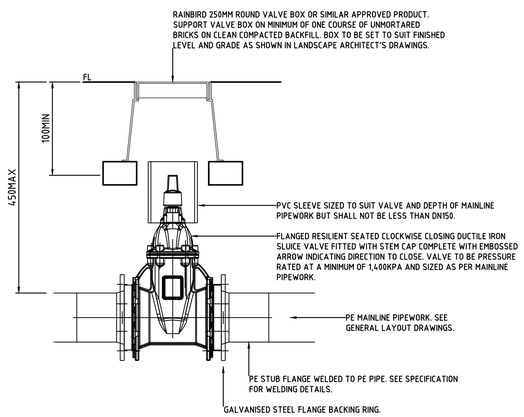


TABLE OF AIR VALVES	
MAINLINE SIZE (DN)†	AIR VALVE‡
LESS THAN 63	PN16 DN20 COMBINATION AIR VALVE
75-140	PN16 DN25 COMBINATION AIR VALVE
150-200	PN16 DN50 COMBINATION AIR VALVE
† SEE GENERAL LAYOUT DRAWING(S). ‡ SEE ALSO SPECIFICATION.	

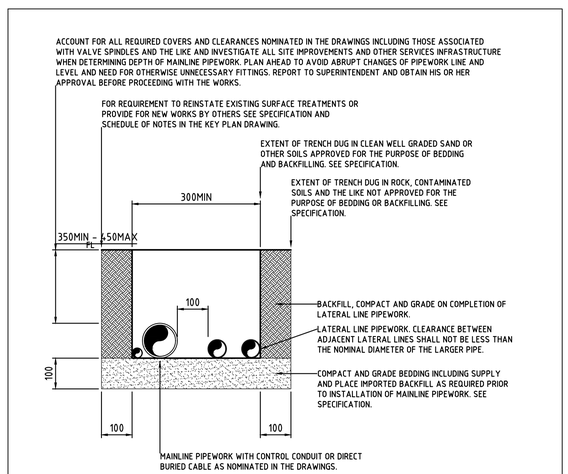
TYPICAL AIR VALVE INSTALLATION ON MAINLINE PIPEWORK

NOT TO SCALE



TYPICAL MAINLINE ISOLATION VALVE INSTALLATION

NOT TO SCALE



TYPICAL ARRANGEMENT OF MULTIPLE PIPES IN A COMMON TRENCH

NOT TO SCALE

AUTOCAD FILENAME: Catalina Portofino Extension Design (Rev B).dwg

REV	DATE	DESCRIPTION	DWN	CKD
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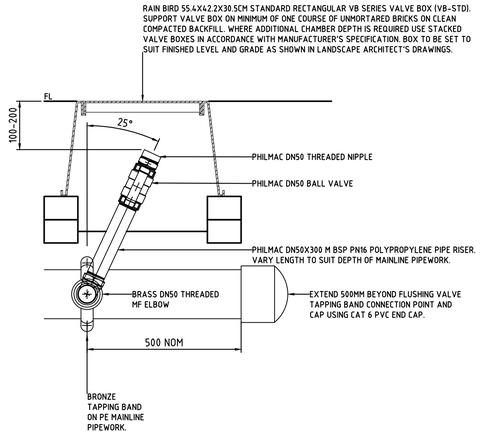
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT :
TIM DAVIES LANDSCAPING

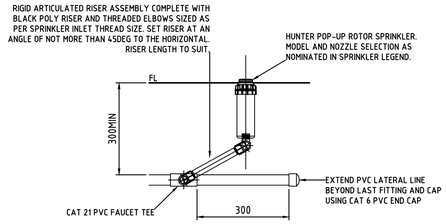
PROJECT :
CATALINA - PORTOFINO EXTENSION
IRRIGATION WORKS (TYPICAL DETAILS)
-

DATE :	DESIGN NO. :	SHEET NO. :
23/03/2022	18390-05	5 OF 6



TYPICAL FLUSHING (BALL) VALVE INSTALLATION ON MAINLINE PIPEWORK

NOT TO SCALE



TYPICAL POP-UP ROTOR SPRINKLER INSTALLATION ON PVC PIPEWORK

NOT TO SCALE

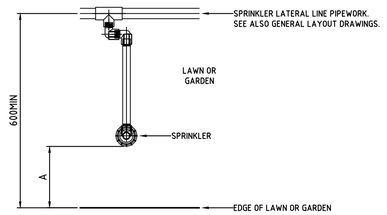
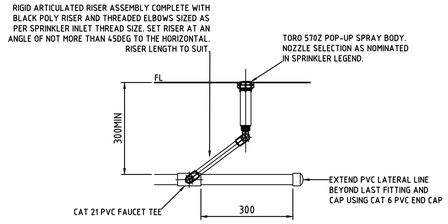


TABLE OF SPRINKLER OFFSETS			
EDGE TYPE	DIMENSION A		
	SPRAY†	ROTOR†	
BACK OF KERB OR EDGE OF PAVEMENT.	100	300	
GARDEN WALL WITH NO MOWING STRIP.	200	200	
BUILDING FACADE WITH NO MOWING STRIP.	600	600	
† SPRINKLER TYPE. SEE GENERAL LAYOUT DRAWINGS.			

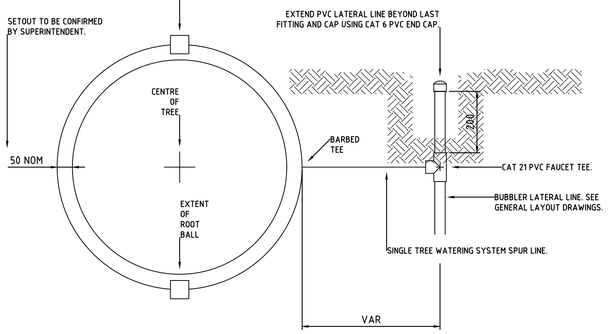
SPRINKLER AND LATERAL PIPE OFFSETS FROM LAWN AND GARDEN EDGES

NOT TO SCALE



TYPICAL POP-UP SPRAY SPRINKLER INSTALLATION ON PVC PIPEWORK

NOT TO SCALE



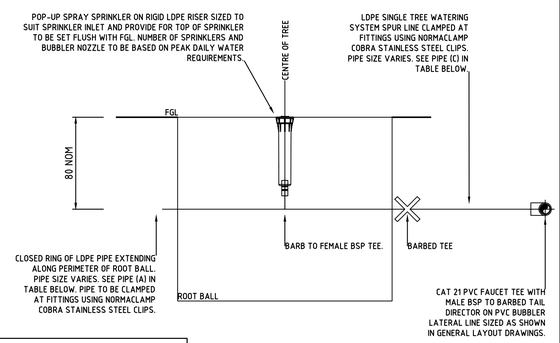


TABLE OF TREE WATERING SYSTEMS†						
SYSTEM	PLANT STOCK‡	SYSTEM FLOW(L/MIN)	20MIN VOL (L)¥	PIPE (A)	PIPE (B)	PIPE (C)
-	-	0-6	-	DN19	-	DN19
-	-	6-15	-	DN19	-	DN25
-	-	15-30	-	DN25	-	DN25

† SYSTEM DESIGN BASED ON THE PEAK DAILY WATER REQUIREMENTS SUPPLIED BY NURSERY INDUSTRY SOURCES AND OTHERS
‡ BAG STOCK SIZE (L) AND/OR NOMINAL DIAMETER OF TRANSPLANT ROOT BALL (M).
¥ VOLUME PROVIDED BY A 20MIN RUN TIME. RUN TIME TO BE ADJUSTED IN ACCORDANCE WITH PLANT WATER REQUIREMENTS AND CLIMATIC CONDITIONS.

TREE WATERING SYSTEMS

NOT TO SCALE

CITY OF WANNEROO
PLAN APPROVAL

Mark Jumeaux

SENIOR LANDSCAPE
& CONSERVATION DEVELOPMENT OFFICER

AUTOCAD FILENAME Catalina Portofino Extension Design (Rev B).dwg

REV	DATE	DESCRIPTION	DWN	CKD
A	24/03/2022	ISSUED FOR APPROVAL	RV	JS
B	18/05/2022	REVISED IRRIGATION DESIGN AS REQUESTED BY THE CLIENT	J.S	

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DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT :
TIM DAVIES LANDSCAPING

PROJECT :
CATALINA - PORTOFINO EXTENSION
IRRIGATION WORKS (TYPICAL DETAILS)
-

DATE :	DESIGN NO. :	SHEET NO. :
23/03/2022	18390-06	6 OF 6

City of Wanneroo

File Ref: 2021.144 8154 AD378382
Your Ref: Online ref: 416861
Enquiries: Miss Sheila Nolan 9405 5644

6 December 2021

Ms A Feher
Tim Davies Landscaping
3 Pitino Court
OSBORNE PARK WA 6017

Dear Andrea

LANDSCAPE AND IRRIGATION APPROVAL
CATALINA BEACH STAGE 28 CLARKSON WAPC 159334

I refer to your correspondence dated 6 October 2021 and write to advise that the City grants approval of the above-mentioned works as detailed in the attached plans. This conditional approval is subject to your compliance with:

1. The City's policies and standard specifications available on the City's website.
2. The conditions listed below and those marked-up in red on the attached plans.

Please note that this approval is an endorsement that the plans comply in general with the City's requirements; it is not an approval of the integrity and functionality of the design which remains the responsibility of the landscape architects.

Specific Conditions:
1. Main Roads WA requirements for TMP to be adhered to.
2. 600mm wide mulch only strip to be extended to 1m abutting Marmion Avenue.
3. Planting to be mixed, not arranged in monocultures.
4. Plants in the internal areas to be substituted for *Scaevola crassifolia*.
5. Irrigation: There are no lightning protection or flushing point shown on the plan at the mainline end point. They may exist, given that the system is utilising the current mainline. If so, this is required to be shown on the irrigation plans.
6. All updates to be reflected in the As Constructed drawings.

Standard Conditions:
7. The applicant and the contractor shall be responsible for the dust and sand drift control during the construction of the project in accordance with Department of Environmental Regulation guidelines. Disturbed areas shall be stabilised on completion and thereafter maintained to the City's satisfaction.
8. Where works impact traffic movement or public safety, temporary traffic management shall be employed in accordance with the current AS 1742.3 (Traffic Control Devices for Works on Roads). A traffic management plan is to be prepared in accordance with "Main Roads WA Traffic Management for Works on Roads Code of Practice" and submitted to the City for endorsement.
9. Hard landscaping is to be provided to medians and verge areas where applicable to provide adequate clear zones as per Australian Standard Manual of Uniform Traffic Control Devices Part 3: Traffic Control Devices for Works on Roads - Maintaining a

23 Dundebar Road, Wanneroo WA 6065 Locked Bag 1, Wanneroo WA 6946
T (08) 9405 5000 F (08) 9405 5499 E enquiries@wanneroo.wa.gov.au wanneroo.wa.gov.au

Safe Workplace. Generally no planting in 0.6m strip from road kerb on roads with road speeds of less than 80km/hr unless approved by the City. Generally no planting in 1.2m strip from road kerb on roads with road speeds of equal or greater than 80km/hr unless approved by the City.

As of 1 July 2021, the City introduced new Land Development fees and charges. The new fees include assessment fees that cover the actual cost and expenses incurred by the City in providing services, commissioning or undertaking any review of documentation associated with development engineering and landscape matters including administrative services, technical resources, specialist advice and consultation. All fees are charged in accordance with Section 6.15, 6.16 and 6.17 of the Local Government Act (WA) 1995 (as amended). An invoice will be issued to the developer.

This approval is valid until 22 February 2025 and may be subject to Part 18 Extension of Time for endorsement of diagram or plan of survey due to COVID-19 pandemic, which grants an automatic two-year extension to certain subdivision approvals as a result of the State of emergency coming into effect on 16 March 2020.

Should you require clarification on any of the above then please contact the City's Landscape and Conservation Development Officer, Ms Wendy Garstone on telephone 9405 5300.

Yours sincerely



Craig Wansbrough
MANAGER LAND DEVELOPMENT

Cc Satterley Property Group, attention Carl Buckley
Tamala Park Regional Council, attention Simon O'Sullivan

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CATALINA BEACH - STAGE 28



01/101 KEY PLAN
PLAN 1:500 @ A1

CITY OF WANNEROO
APPROVAL CONDITIONS

APPROVED SUBJECT TO STRICT ADHERENCE TO THE
- ENDORSEMENTS THEREON
- CONDITIONS IN THE CITY OF WANNEROO APPROVAL LETTER
- CONDITIONS LAID DOWN IN THE WAPC SUBDIVISION APPROVAL
WAPC NO.159334

CITY OF WANNEROO

LETTER OF APPROVAL DATED 6/12/2021 TRIM NO AD378382

LAND DEVELOPMENT NO 2021.144.1

CITY OF WANNEROO
QUALITY CONTROL

LAND DEVELOPMENT OFFICER: WEG	
ASSETS PARKS	TRIM NO. 21/484464
ASSETS CONSERVATION	TRIM NO. 21/485196
ASSETS IRRIGATION	TRIM NO. 21/452256
COMMUNITY FACILITIES	TRIM NO. N/A
LD ENGINEERING	TRIM NO. -

SPECIFIC CONDITIONS:
1. Main Roads WA requirements for TMP to be adhered to.
2. 600mm wide mulch only strip to be extended to 1m abutting Marmion Avenue.
3. Planting to be mixed, not arranged in monocultures.
4. Plants in the internal areas to be substituted for Scaevola crassifolia.
5. Irrigation: There are no lightning protection or flushing point shown on the plan at the mainline end point. They may exist, given that the system is utilising the current mainline. If so, this is required to be shown on the irrigation plans.
6. All updates to be reflected in the As Constructed drawings.

CITY OF WANNEROO
PLAN APPROVAL

MARK JUMEAUX

SENIOR LANDSCAPE
& CONSERVATION DEVELOPMENT OFFICER

DWG	DWG NAME	SCALE @ A1	REV
LS -101	COVER PAGE	1:500	A
LS -201	VERGE LANDSCAPING	1:250	A
LS -202	BUFFER PLANTING	1:250	A
LS-301	DETAILS AND PLANTING SCHEDULE	AS SHOWN	A

0 2.5 5 10 15 20 30 50m

CATALINA ESTATE
CATALINA BEACH

REVISION	DESCRIPTION	BY	DATE
A	ISSUE FOR APPROVAL	AF	30.09.21

TIM DAVIES LANDSCAPING
three gliths court osborne park
western australia 6017
telephone +61 8 9441 0200
facsimile +61 8 9441 0201
easy@tdl.com.au

CLIENT	SATTERLEY PROPERTY GROUP & TPRC		
DESIGNED	AF	DRAWING TITLE	COVER PAGE
DRAWN	AF		
APPROVED	GD	DRAWING No.	12606-CB-MV-101
SCALE	1:500@A1		REVISION A

© TIM DAVIES LANDSCAPING

Plants in the internal areas to be substituted for Scaevola crassifolia (TYP).

All updates to be reflected in the As Constructed drawings.



600mm wide mulch only strip to be extended to 1m abutting Marmion Avenue.

01 201 VERGE LANDSCAPING PLAN 1:250 @ A1

02 201 VERGE LANDSCAPING PLAN 1:250 @ A1

LEGEND

TREES (04/03 301)

- MELALEUCA QUINQUENERVIA 200L
- CORYMBIA MACULATA 200L
- AGONIS FLEXUOSA 200L

FURNITURE & SITE FEATURES

- LIGHT POLE BY OTHERS (LP)
- BOUNDARY FENCE (06 301)

SURFACE FINISHES

- EXISTING CONCRETE PAVEMENT
- EXISTING ASPHALT PAVEMENT
- PROPOSED ASPHALT PAVEMENT (01 301)
- MULCH MAINTENANCE STRIP 600mm
- PLANTING BED WITH TEMPORARY IRRIGATION AS SCHEDULED (02/03 301)

CITY OF WANNEROO
APPROVAL CONDITIONS

APPROVED SUBJECT TO STRICT ADHERENCE TO THE
- ENDORSEMENTS THEREON
- CONDITIONS IN THE CITY OF WANNEROO APPROVAL LETTER
- CONDITIONS LAID DOWN IN THE WAPC SUBDIVISION APPROVAL WAPC NO.159334

CITY OF WANNEROO
PLAN APPROVAL

MARK JUMEAUX

SENIOR LANDSCAPE
& CONSERVATION DEVELOPMENT OFFICER

GENERAL NOTES:

- FOR GENERAL ARRANGEMENT PLEASE REFER TO TDL DRAWINGS AND SPECIFICATIONS.
- ANY DIFFERENCES NOTED BETWEEN THE LAYOUT PLANS, DETAIL DRAWINGS AND SPECIFICATION IS TO BE CLARIFIED BY THE CONTRACTOR PRIOR TO WORKS COMMENCING ON SITE.
- THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL SERVICES ON SITE. SERVICES DIAGRAMS ARE PROVIDED AS A GUIDE ONLY. THE CONTRACTOR WILL BE FULLY RESPONSIBLE TO SURVEY SERVICES ON SITE. ANY DAMAGE TO SERVICES IS TO BE RECTIFIED AT THE CONTRACTORS OWN EXPENSE. ANY DAMAGE NEEDS TO BE IMMEDIATELY NOTIFIED TO THE RELEVANT SERVICE PROVIDER.
- THE CONTRACTOR IS TO PROVIDE A FULL TRAFFIC MANAGEMENT PLAN (TMP) FOR APPROVAL BY CITY OF WANNEROO (CoW). THE TMP IS TO BE IMPLEMENTED AND MONITORED AT ALL TIMES DURING CONSTRUCTION WITH WEEKLY UPDATES OF TRAFFIC MANAGEMENT IS OCCURRING.
- THE CONTRACTOR IS TO PROVIDE A FULL OH&S PLAN FOR APPROVAL BY CoW. THE PLAN IS TO BE FULLY IMPLEMENTED AND MONITORED AT ALL TIMES DURING CONSTRUCTION WITH WEEKLY UPDATES PROVIDED BY THE CONTRACTOR OF INCIDENTS ETC.
- ALL SITE SET OUT AND PROPOSED FINISHED LEVELS ARE TO BE CONFIRMED ON SITE WITH THE SUPERINTENDENT PRIOR TO CONSTRUCTION.
- EXISTING GRADES ARE TO BE MAINTAINED.
- VERGES TO HAVE 2-3% CROSSFALL TOWARDS ROAD EDGE.
- ALL EXISTING SITE FEATURES, SUCH AS KERBLINES, PATHS, SIGN POSTS, LIGHT POLES ETC ARE TO BE RETAINED AND PROTECTED UNLESS OTHERWISE NOMINATED ON PLAN.
- WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER MEASUREMENTS.

EXCAVATION AND SITE PREPARATION:

- EXCAVATE AS REQUIRED ALONG KERBLINE TO ACHIEVE FINISHED LEVELS AFTER SOIL PREPARATION AND MULCH. EXCAVATED MATERIAL MAY BE RE-SPREAD ON SITE WITHIN LOT BOUNDARY. LOCATION TO BE CONFIRMED BY SUPERINTENDENT.
- EXISTING GRADES WITHIN VERGES AND MEDIANS ARE TO BE MAINTAINED. PREPARE EVEN SURFACE SUITABLE FOR PLANTING AND HARDSCAPE INSTALLATION THAT TIES INTO EXISTING LEVELS.
- FINISHED LEVELS OF NEW PATHS AND PAVING TO TIE IN WITH EXISTING PAVING AND KERBS
- FOR ALL HARD AND SOFTSCAPE DETAILS AND OVERALL PLANTING SCHEDULES, REFER TO DETAILS LS-301

PLANTING NOTES:

- SHRUB AND GROUNDCOVER PLANTING OFFSET: MIN 600mm FROM ROAD EDGES, KERBLINES AND OTHER HARD EDGE
- FOR SHRUB PLANTING MIXES: PLANTS ARE TO BE PLANTED IN GROUPS OF 7-9-11 OF EACH SPECIES.
- FOR OVERALL PLANT SCHEDULES, REFER TO DRAWING LS-301
- FOR ALL HARD AND SOFTSCAPE DETAILS, REFER TO DETAILS LS-301
- TREE STOCK SIZE SUBJECT TO AVAILABILITY AT TIME OF PROCUREMENT AND TO BE WITHIN THE RANGE OF 90-300L STOCK
- TREES NOMINATED ON PLAN AND/OR LOCATED WITHIN 1.5M OF HARD EDGE/PAVING/KERBLINE ARE TO BE INSTALLED WITH 6M LONG 800MM DEEP ROOT CONTROL BARRIER POSITIONED AGAINST THE HARD EDGE WITH TOP OF RCB TO BE 50MM BELOW TOP OF MULCH

0 1 2 4 6 10 20 25m

CATALINA ESTATE
CATALINA BEACH

REVISION	DESCRIPTION	BY	DATE
A	ISSUE FOR APPROVAL	AF	30.09.21

TIM DAVIES LANDSCAPING
three prima court osborne park
western australia 6017
telephone +61 8 9441 0200
facsimile +61 8 9441 0201
enq@tdl.com.au

CLIENT	SATTERLEY PROPERTY GROUP & TPRC		
DESIGNED	AF	DRAWING TITLE	STG 28 VERGE LANDSCAPING
DRAWN	AF		
APPROVED	GD	DRAWING No.	12606-CB-MV-201
SCALE	1:250@A1		REVISION A

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01
202
BUFFER PLANTING
PLAN 1:250 @ A1

CITY OF WANNEROO
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- CONDITIONS IN THE CITY OF WANNEROO APPROVAL LETTER
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WAPC NO.159334

CITY OF WANNEROO
PLAN APPROVAL

MARK JUMEAUX

SENIOR LANDSCAPE
& CONSERVATION DEVELOPMENT OFFICER

LEGEND

TREES

04/02
301

MELALEUCA QUINQUENERVIA
200L

CORYMBIA MACULATA
200L

AGONIS FLEXUOSA
200L

FURNITURE & SITE FEATURES

LIGHT POLE BY OTHERS

BOUNDARY FENCE 06/301

SURFACE FINISHES

EXISTING CONCRETE PAVEMENT

EXISTING ASPHALT PAVEMENT

PROPOSED ASPHALT PAVEMENT 01/301

MULCH MAINTENANCE STRIP 600mm

PLANTING BED WITH TEMPORARY IRRIGATION AS SCHEDULED 02/03/301

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- EXCAVATE AS REQUIRED ALONG KERBLINE TO ACHIEVE FINISHED LEVELS AFTER SOIL PREPARATION AND MULCH. EXCAVATED MATERIAL MAY BE RE-SPREAD ON SITE WITHIN LOT BOUNDARY. LOCATION TO BE CONFIRMED BY SUPERINTENDENT.
- EXISTING GRADES WITHIN VERGES AND MEDIANS ARE TO BE MAINTAINED. PREPARE EVEN SURFACE SUITABLE FOR PLANTING AND HARDSCAPE INSTALLATION THAT TIES INTO EXISTING LEVELS.
- FINISHED LEVELS OF NEW PATHS AND PAVING TO TIE IN WITH EXISTING PAVING AND KERBS
- FOR ALL HARD AND SOFTSCAPE DETAILS AND OVERALL PLANTING SCHEDULES, REFER TO DETAILS LS-301

PLANTING NOTES:

- SHRUB AND GROUNDCOVER PLANTING OFFSET: MIN 600mm FROM ROAD EDGES, KERBLINES AND OTHER HARD EDGE
- FOR SHRUB PLANTING MIXES: PLANTS ARE TO BE PLANTED IN GROUPS OF 7-9-11 OF EACH SPECIES.
- FOR OVERALL PLANT SCHEDULES, REFER TO DRAWING LS-301
- FOR ALL HARD AND SOFTSCAPE DETAILS, REFER TO DETAILS LS-301
- TREE STOCK SIZE SUBJECT TO AVAILABILITY AT TIME OF PROCUREMENT AND TO BE WITHIN THE RANGE OF 90-300L STOCK
- TREES NOMINATED ON PLAN AND/OR LOCATED WITHIN 1.5M OF HARD EDGE/PAVING/KERBLINE ARE TO BE INSTALLED WITH 6M LONG 800MM DEEP ROOT CONTROL BARRIER POSITIONED AGAINST THE HARD EDGE WITH TOP OF RCB TO BE 50MM BELOW TOP OF MULCH

0 1 2 4 6 10 20 25m

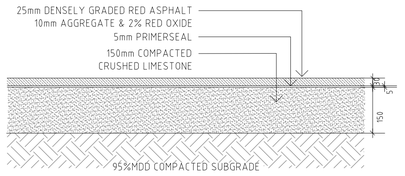
CATALINA ESTATE
CATALINA BEACH

REVISION	DESCRIPTION	BY	DATE
A	ISSUE FOR APPROVAL	AF	30.09.21

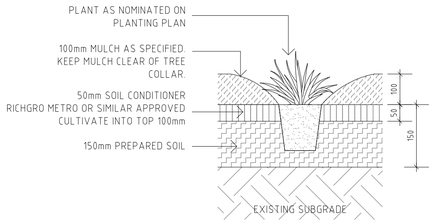
TIM DAVIES LANDSCAPING
three pidna cove osborne park
western australia 6017
telephone +61 8 9441 0200
facsimile +61 8 9441 0201
eeq@tdl.com.au

CLIENT	SATTERLEY PROPERTY GROUP & TPRC		
DESIGNED	AF	DRAWING TITLE	STG 28 BUFFER LANDSCAPING
DRAWN	AF		
APPROVED	GD	DRAWING No.	12606-CB-MV-202
SCALE	1:250@A1		REVISION A

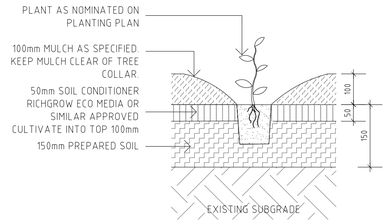
© TIM DAVIES LANDSCAPING



01 / 301 RED ASPHALT - DUP
TYPICAL DETAIL 1:10 @ A1



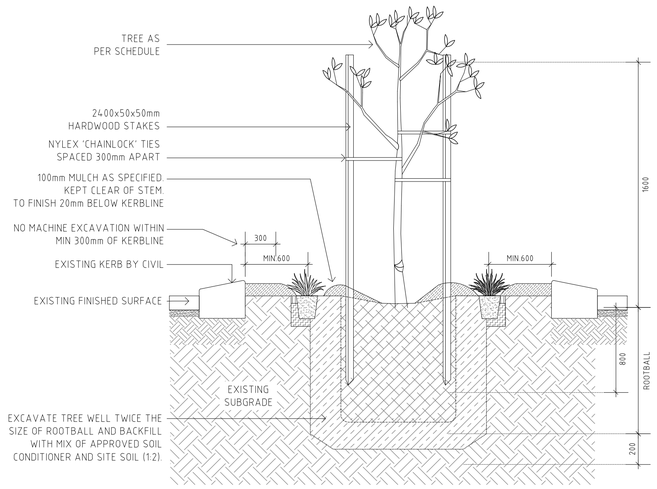
02 / 301 200/140mm SHRUB PLANTING
TYPICAL DETAIL 1:10 @ A1



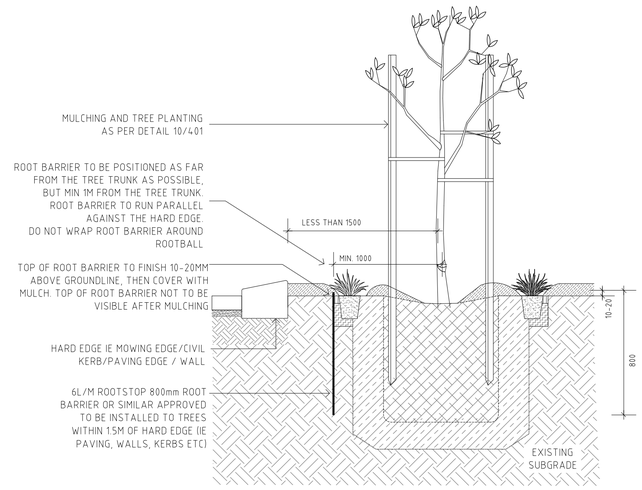
03 / 301 T/S SHRUB PLANTING IN SWALE
TYPICAL DETAIL 1:10 @ A1

FERTILISER SCHEDULE AT INSTALLATION (REFER TO SPEC):		
LANGLEY AND AGRIFORM FERTILISER TABLETS OR SIMILAR APPROVED	TREE STOCK	4 TABLETS PER TREE
BAYLEYS NATIVE PLANT FOOD FERTILISER GRANULES OR SIMILAR APPROVED	SHRUBS AND GROUNDCOVERS	15g PER T/S 20g PER 130/140mm STOCK

STAKING AND GUYING
>500LT AND TRANSPLANTS: UNDERGROUND GUYING
200-500LT TREE STOCK: 3 X 2400x50x50mm HARDWOOD STAKES
45-150LT TREE STOCK: 2 X 1800x50x50mm HARDWOOD STAKES



04 / 301 45-500L TREE PLANTING
TYPICAL DETAIL 1:20 @ A1



05 / 301 LINEAR ROOT CONTROL BARRIER
TYPICAL DETAIL 1:20 @ A1

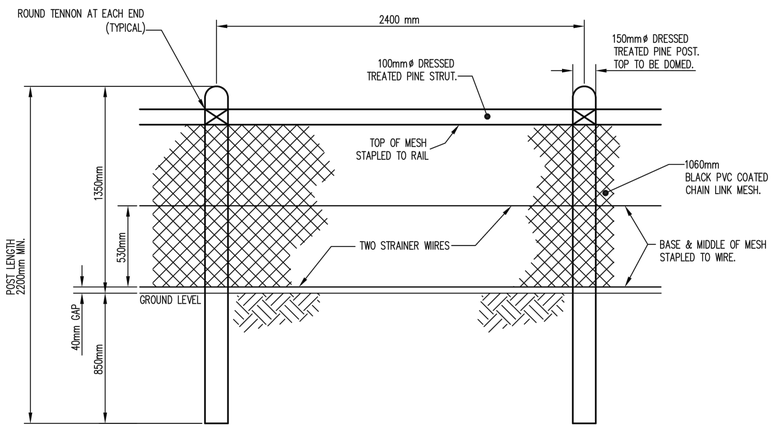
Key	Species	Common Name	Plant per m2	Size	Qty Verge	Qty Buffer
Trees						
AF	Agonis flexuosa	WA Peppermint	As shown	200L		8
CM	Corymbia maculata	Spotted Gum	As shown	200L		8
MV	Melaleuca quinquenervia	Broad-Leaved Paperbark	As shown	200L	28	4
Shrubs and groundcovers						
Ac	Adenanthos cuneatus	Basket Flower	As shown	200mm	114	
Al	Acacia lasiocarpa	Glow Wattle	As shown	t/s		260
Alp	Acacia lasiocarpa 'Prostrate'	Dwarf Wattle	As shown	200mm	114	
Asp	Acacia saligna 'Prostrate'	Dwarf Wattle	As shown	200mm	948	187
As	Acacia saligna	Orange Wattle	As shown	t/s		1478 *
Ca	Conostylis aculeata	Cottonhead	As shown	200mm	375	
Cc	Conostylis candicans	Cotton Heads	As shown	t/s		657 *
Cv	Carpobrotus virescens	Pigface	As shown	200mm	909	
Cv	Carpobrotus virescens	Pigface	As shown	t/s		200
Ccp	Chorizema cordatum 'Prostrate;	Heart-Leaf Flame Pea	As shown	200mm	780	
Dlcm	Dampiera linearis 'Cobalt Mound'	Wedge-leaved Dampiera	As shown	200mm	909	
Dr	Dianella revoluta	Blue Flax Lily	As shown	t/s		698 *
Fn	Ficinia nodosa	Knobby Club Rush	As shown	t/s		568 *
Ebh	Eremophila ' Blue Horizon'	Tar Bush	As shown	200mm	351	
Go	Grevillea olivacea	Olive Grevillea	As shown	200mm	50	
Gcp	Grevillea crithmifolia 'Prostrate'	Green Carpet	As shown	200mm	201	
Hp	Hemiandra pungens	Purple Snake Bush	As shown	200mm	861	
Hor	Hibbertia 'Ocean Reef'	Glossy-Leaved Coastal Guinea Flower	As shown	200mm	201	
Kp	Kennedia prostrata	Running Postman	As shown	t/s		220 *
Lb	Leucophyta brownii	Cushion Bush	As shown	200mm	81	
Lg	Lepidosperma gladiatum	Coast Sword Sedge	As shown	t/s		500 *
Ll	Lomandra longifolia	Mat Rush	As shown	200mm	81	
Ls	Lomandra 'Seascape'	Blue Mat Rush	As shown	200mm	81	
Mhp	Melaleuca huegelii 'Prostrate'	Rambler	As shown	200mm	50	
Mp	Myoporum parvifolium	Creeping Boobialla	As shown	200mm	114	
Ms	Melaleuca systena	Coastal Honey myrtle	As shown	t/s		260
Oa	Olearia axillaris	Coastal Daisy Bush	As shown	200mm	50	
Oam	Olearia axillaris 'Mini'	Coastal Daisy Bush	As shown	200mm	747	
Po	Pattersonis occidentalis	Purple flag	As shown	200mm	351	
Sc	Scaevola crassifolia	Fanflower	As shown	t/s		568 *
Tr	Templetonia retusa	Cockies Tongue	As shown	200mm	33	
Tr	Templetonia retusa	Cockies Tongue	As shown	t/s	50	260
Wf	Westringia fruticosa	Coastal Rosemary	As shown	200mm	50	
Wd	Westringia dampieri	Coastal Rosemary	As shown	200mm	114	

* Plants nominated with * are to be supplied by Client. Seed and stock sourced locally

07 / 301 OVERALL PLANT SCHEDULE

Planting to be mixed, not arranged in monocultures.

CONSERVATION PINE RAIL FENCING
AS PER CITY OF WANNEROO STANDARD DETAIL TD 01-7-1



06 / 301 BOUNDARY FENCE
TYPICAL DETAIL 1:20 @ A1

CITY OF WANNEROO
PLAN APPROVAL
MARK JUMEAUX
SENIOR LANDSCAPE
& CONSERVATION DEVELOPMENT OFFICER

CITY OF WANNEROO
APPROVAL CONDITIONS
APPROVED SUBJECT TO STRICT ADHERENCE TO THE
- ENDORSEMENTS THEREON
- CONDITIONS IN THE CITY OF WANNEROO APPROVAL LETTER
- CONDITIONS LAID DOWN IN THE WAPC SUBDIVISION APPROVAL
WAPC NO.159334

GENERAL NOTES:

- FOR GENERAL ARRANGEMENT PLEASE REFER TO TDL DRAWINGS AND SPECIFICAT
- ANY DIFFERENCES NOTED BETWEEN THE LAYOUT PLANS, DETAIL DRAWINGS AND SPECIFICATION IS TO BE CLARIFIED BY THE CONTRACTOR PRIOR TO WORKS COMMI ON SITE.
- THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL SERVICES ON SITE. SERVI DIAGRAMS ARE PROVIDED AS A GUIDE ONLY. THE CONTRACTOR WILL BE FULLY RESPONSIBLE TO SURVEY SERVICES ON SITE. ANY DAMAGE TO SERVICES IS TO B RECTIFIED AT THE CONTRACTORS OWN EXPENSE. ANY DAMAGE NEEDS TO BE IMMEDIATELY NOTIFIED TO THE RELEVANT SERVICE PROVIDER.
- THE CONTRACTOR IS TO PROVIDE A FULL TRAFFIC MANAGEMENT PLAN (TMP) FOR APPROVAL BY CITY OF WANNEROO (CoW). THE TMP IS TO BE IMPLEMENTED AND MONITORED AT ALL TIMES DURING CONSTRUCTION WITH WEEKLY UPDATES OF TR MANAGEMENT IS OCCURRING.
- THE CONTRACTOR IS TO PROVIDE A FULL OH&S PLAN FOR APPROVAL BY CoW. TH PLAN IS TO BE FULLY IMPLEMENTED AND MONITORED AT ALL TIMES DURING CONSTRUCTION WITH WEEKLY UPDATES PROVIDED BY THE CONTRACTOR OF INCID ETC.
- ALL SITE SET OUT AND PROPOSED FINISHED LEVELS ARE TO BE CONFIRMED ON SI WITH THE SUPERINTENDENT PRIOR TO CONSTRUCTION.
- EXISTING GRADES ARE TO BE MAINTAINED.
- VERGES TO HAVE 2-3% CROSSFALL TOWARDS ROAD EDGE.
- ALL EXISTING SITE FEATURES, SUCH AS KERBLINES, PATHS, SIGN POSTS, LIGHT F ETC ARE TO BE RETAINED AND PROTECTED UNLESS OTHERWISE NOMINATED ON P
- WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER MEASUREMENTS.

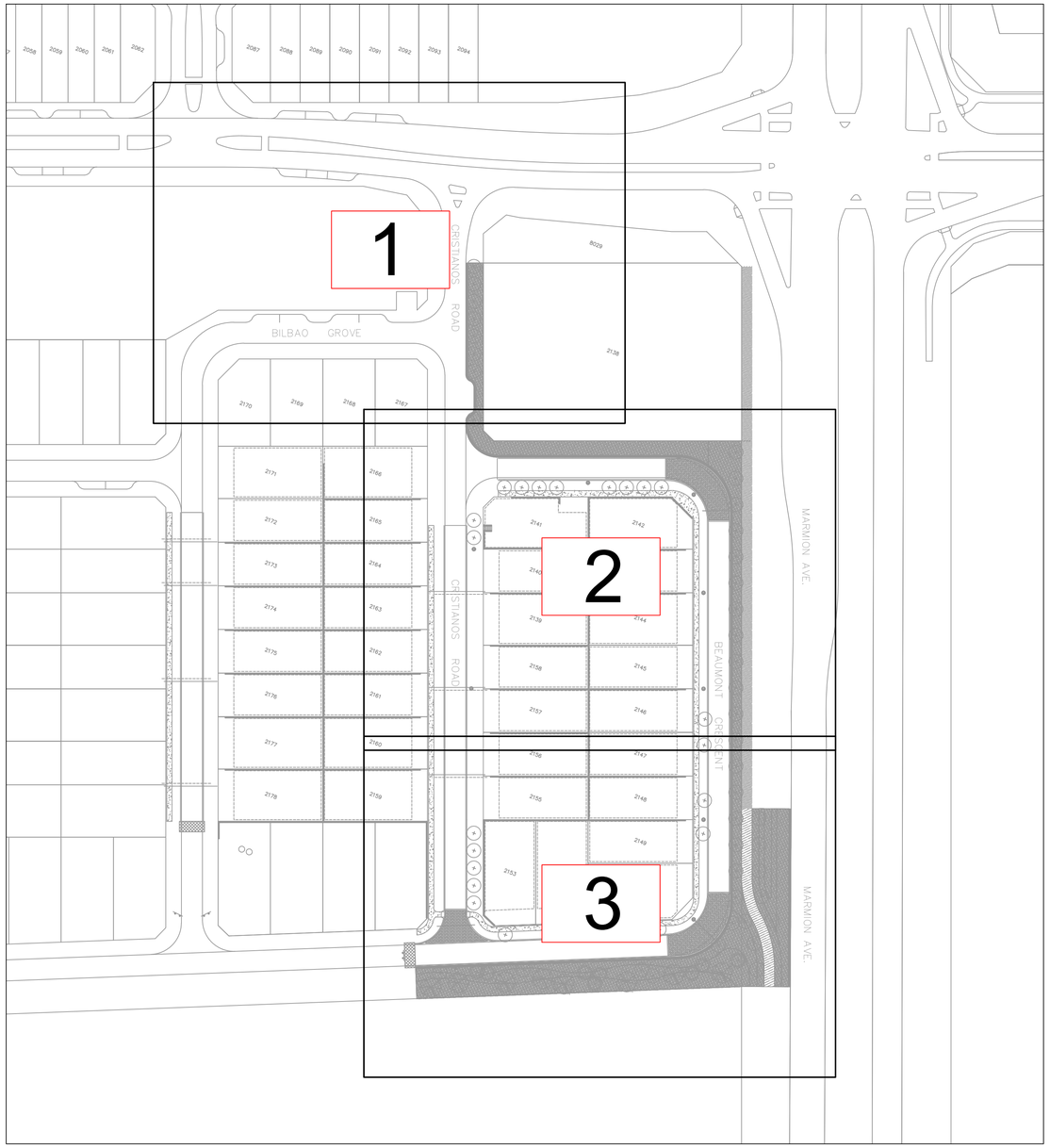
CATALINA ESTATE
CATALINA BEACH

REVISION	DESCRIPTION	BY	DATE
A	ISSUE FOR APPROVAL	AF	30.09.21

TIM DAVIES LANDSCAPING
three prime court osborne park
western australia 6017
telephone +61 8 9441 0200
facsimile +61 8 9441 0201
enq@tdl.com.au

CLIENT	SATTERLEY PROPERTY GROUP & TPRC		
DESIGNED	AF	DRAWING TITLE	DETAILS & PLANTING SCHEDULE
DRAWN	AF		
APPROVED	GD	DRAWING No.	12606-CB-MV-301
SCALE	AS SHOWN		REVISION A

MARMION AVE. WEST VERGE AND DISPLAY VILLAGE
IRRIGATION WORKS



There are no lightning protection or flushing point shown on the plan at the mainline end point. They may exist, given that the system is utilising the current mainline. If so, this is required to be shown on the irrigation plans (TYP).

CITY OF WANNEROO
APPROVAL CONDITIONS

APPROVED SUBJECT TO STRICT ADHERENCE TO THE
- ENDORSEMENTS THEREON
- CONDITIONS IN THE CITY OF WANNEROO APPROVAL LETTER
- CONDITIONS LAID DOWN IN THE WAPC SUBDIVISION APPROVAL
WAPC NO.159334

CITY OF WANNEROO
PLAN APPROVAL

MARK JUMEAUX

SENIOR LANDSCAPE
& CONSERVATION DEVELOPMENT OFFICER

AUTOCAD FILENAME: Harmion & Display Village Design (Rev A1.dwg

REV	DATE	DESCRIPTION	DWN	CKD
A	24/09/2021	ISSUED FOR APPROVAL	R.V	J.S

REV	DATE	DESCRIPTION	DWN	CKD

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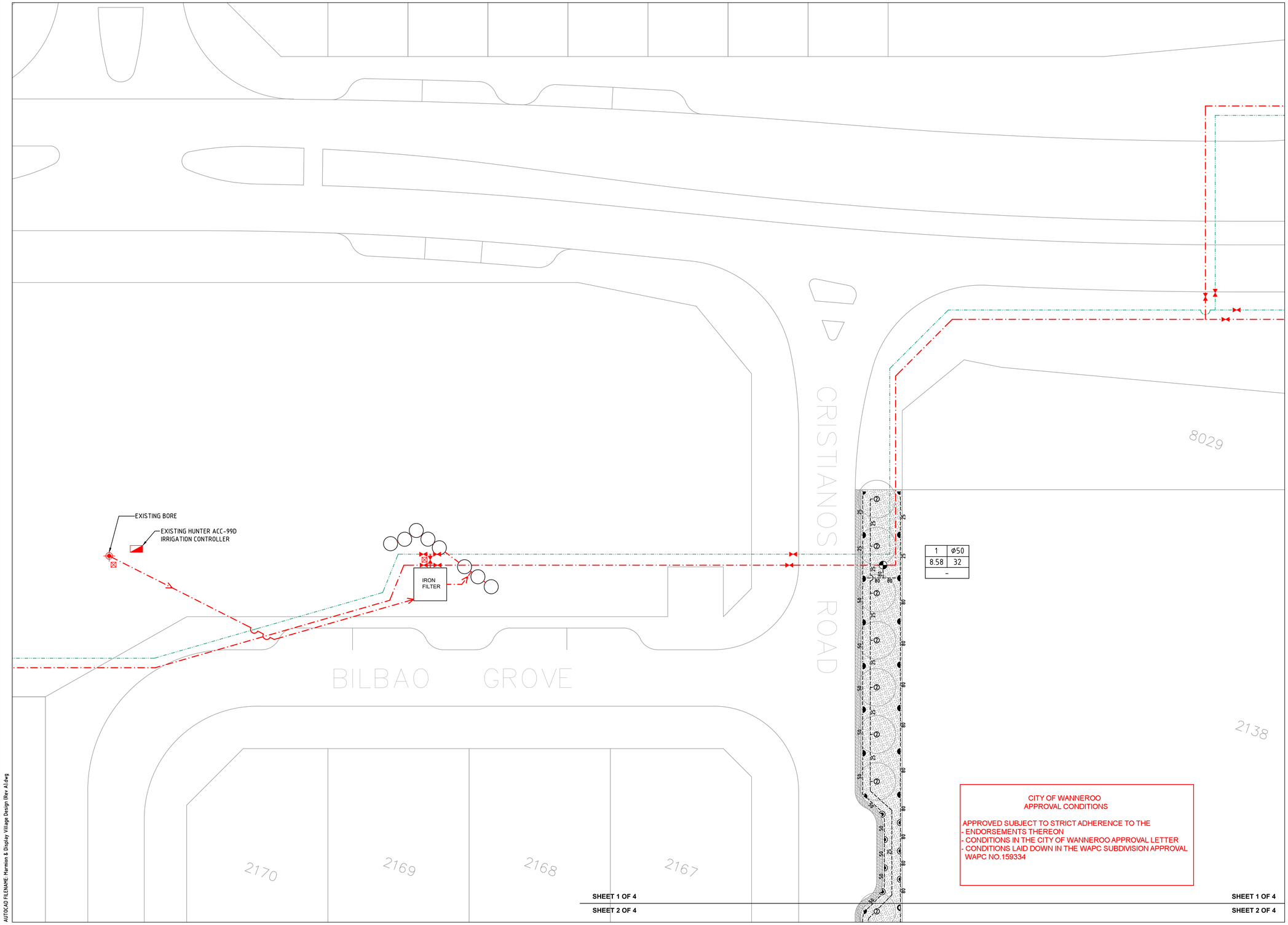
NewGround DESIGN SERVICES

SCALE :	1 : NTS @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT :
TDL

PROJECT :
MARMION AVE. WEST VERGE AND DISPLAY VILLAGE
IRRIGATION WORKS (KEY PLAN)
-

DATE :	DESIGN NO. :	SHEET NO. :
24/09/2021	18304-00	COVER PAGE



LEGEND: "SPRINKLERS"

SYMBOL	BRAND NAME	MODEL DESCRIPTION	NOZZ. NO.	PRESS. (KPA)	FLOW (LPM)	RADIUS (M)
	HUNTER	I-20-12	6.0	350	24.5	13.1
	HUNTER	I-20-12	3.0	350	12.3	11.9
	HUNTER	I-20-12	2.5	350	9.7	10.7
	HUNTER	I-20-12	4.5LA	350	16.6	10.7
	TORO	570Z-12P	15	250	2.84-11.36	4.6
	TORO	570Z-12P	12	250	1.82-7.27	3.7
	TORO	570Z-12P	10	250	1.25-5.04	3.0

LARGE GARDEN AREAS - TO HAVE HUNTER I-20-12 ON A Ø20x300mm POLY ARTIC RISER
SMALL GARDEN AREAS - TO HAVE TORO 570Z-12P'S (PART & FULL CIRCLES) ON A Ø15 x 300mm POLY ARTIC RISER (NOZZLES AS SHOWN)

200 L — 2-TORO FLOOD BUBBLERS MODEL FB-100PC ON A TORO 570Z-6P WITH BLUE FLEX 7.06 LPM @ 250 kPA

BERMAD 200 SERIES SOLENOID CONTROL VALVE SIZE AS SHOWN

EXISTING BORE

EXISTING HUNTER ACC-99D IRRIGATION CONTROLLER

EXISTING DN100 uPVC RRJ CLASS 12 MAINLINE

EXISTING DN110 PN12.5 PE100 MDPE POLY MAINLINE (MATURE TREES)

25 — uPVC SWJ CLASS 9 LATERAL LINE SIZE AS SHOWN

DN150 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR

STATION DATA							VALVE DATA		
ST'N NO.	FLOW (L/s)	PR. (kPa)	PR'N hr	APP'N mm/week	ST'N TIME (min)	AREA TYPE	VAL. NO.	FLOW (L/s)	DECODER NO.
1	8.58	250	32	4.0	15	GARDEN	1	8.58	-
2	6.59	250	-	-	8	TREES	2	6.59	-
3	7.25	350	12	40	40	GARDEN	3	7.25	-

DAILY RUN TIME: 1 HRS & 3 MIN — WEEKLY RUN TIME: 5 HRS & 15 MIN

VALVE LABEL LEGEND

VALVE NO / FLOW (LPS)		
2	Ø50	VALVE SIZE
3.29	32	PRECIPITATION RATE
-		DECODER NO.

NOTE:
1. MAINLINE AND LATERAL PIPES ARE TO BE INSTALLED TO A MINIMUM DEPTH OF 350mm AND BE INSTALLED TO A MAXIMUM DEPTH OF 450mm.
2. THE CONTRACTOR TO UNDERTAKE FLOW (PRESSURE) ADJUSTMENT OF ALL SOLENOID VALVES IN ACCORDANCE WITH THE NOMINAL OPERATING PRESSURE OF THE SPRINKLERS ATTACHED TO THE PARTICULAR SOLENOID VALVE.

CITY OF WANNEROO
APPROVAL CONDITIONS

APPROVED SUBJECT TO STRICT ADHERENCE TO THE
- ENDORSEMENTS THEREON
- CONDITIONS IN THE CITY OF WANNEROO APPROVAL LETTER
- CONDITIONS LAID DOWN IN THE WAPC SUBDIVISION APPROVAL WAPC NO.159334

CITY OF WANNEROO
PLAN APPROVAL

MARK JUMEAUX

SENIOR LANDSCAPE
& CONSERVATION DEVELOPMENT OFFICER

SHEET 1 OF 4
SHEET 2 OF 4

SHEET 1 OF 4
SHEET 2 OF 4

0 2 4 6 8 10m
SCALE 1:200 ON A1

AUTOCAD FILENAME: Marmion & Display Village Design (Rev A).dwg

REV	DATE	DESCRIPTION	DWN	CKD
A	24/09/2021	ISSUED FOR APPROVAL	R.V	J.S

REV	DATE	DESCRIPTION	DWN	CKD

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NewGround DESIGN SERVICES

SCALE :	1 : 200 @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

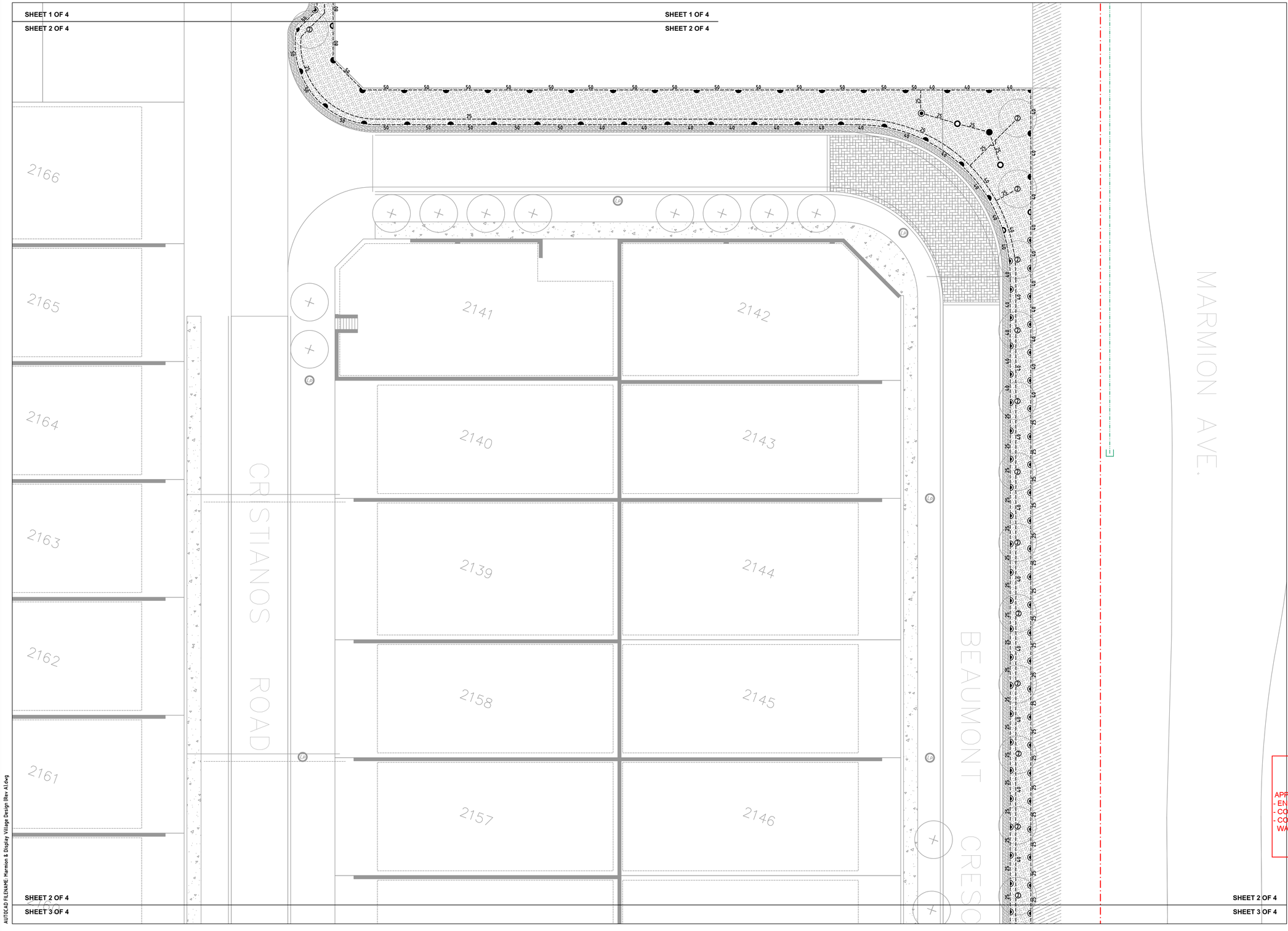
CLIENT : TDL

PROJECT : MARMION AVE. WEST VERGE AND DISPLAY VILLAGE IRRIGATION WORKS -

DATE :	DESIGN NO. :	SHEET NO. :
24/09/2021	18304-01	1 OF 4

SHEET 1 OF 4
SHEET 2 OF 4

SHEET 1 OF 4
SHEET 2 OF 4



SHEET 2 OF 4
SHEET 3 OF 4

SHEET 2 OF 4
SHEET 3 OF 4

AUTOCAD FILENAME: Marmion & Display Village Design (Rev A).dwg

LEGEND: "SPRINKLERS"

SYMBOL	BRAND NAME	MODEL DESCRIPTION	NOZZ. NO.	PRESS. (KPA)	FLOW (LPM)	RADIUS (M)
	HUNTER	I-20-12	6.0	350	24.5	13.1
	HUNTER	I-20-12	3.0	350	12.3	11.9
	HUNTER	I-20-12	2.5	350	9.7	10.7
	HUNTER	I-20-12	4.5LA	350	16.6	10.7
	TORO	570Z-12P	15	250	2.84-11.36	4.6
	TORO	570Z-12P	12	250	1.82-7.27	3.7
	TORO	570Z-12P	10	250	1.25-5.04	3.0
	LARGE GARDEN AREAS - TO HAVE HUNTER I-20-12 ON A Ø20x300mm POLY ARTIC RISER SMALL GARDEN AREAS - TO HAVE TORO 570Z-12P'S (PART & FULL CIRCLES) ON A Ø15 x 300mm POLY ARTIC RISER (NOZZLES AS SHOWN)					
200 L	2-TORO FLOOD BUBBLERS MODEL FB-100PC ON A TORO 570Z-6P WITH BLUE FLEX 7.06 LPM @ 250 kPA					
	BERMAD 200 SERIES SOLENOID CONTROL VALVE SIZE AS SHOWN					
	EXISTING BORE					
	EXISTING HUNTER ACC-99D IRRIGATION CONTROLLER					
	EXISTING DN100 uPVC RRJ CLASS 12 MAINLINE					
	EXISTING DN110 PN12.5 PE100 MDPE POLY MAINLINE (MATURE TREES)					
25	uPVC SWJ CLASS 9 LATERAL LINE SIZE AS SHOWN					
	DN150 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR					

STATION DATA							VALVE DATA		
ST'N NO.	FLOW (L/s)	PR. (kPa)	PR'N hr	APP'N mm/week	ST'N TIME (min)	AREA TYPE	VAL. NO.	FLOW (L/s)	DECODER NO.
1	8.58	250	32	40	15	GARDEN	1	8.58	-
2	6.59	250	-	-	8	TREES	2	6.59	-
3	7.25	350	12	40	40	GARDEN	3	7.25	-

DAILY RUN TIME: 1 HRS & 3 MIN — WEEKLY RUN TIME: 5 HRS & 15 MIN

VALVE LABEL LEGEND

VALVE NO / FLOW (LPS): 2 / 3.29 — Ø50 VALVE SIZE; 32 PRECIPITATION RATE; - DECODER NO.

NOTE:
1. MAINLINE AND LATERAL PIPES ARE TO BE INSTALLED TO A MINIMUM DEPTH OF 350mm AND BE INSTALLED TO A MAXIMUM DEPTH OF 450mm.
2. THE CONTRACTOR TO UNDERTAKE FLOW (PRESSURE) ADJUSTMENT OF ALL SOLENOID VALVES IN ACCORDANCE WITH THE NOMINAL OPERATING PRESSURE OF THE SPRINKLERS ATTACHED TO THE PARTICULAR SOLENOID VALVE.

CITY OF WANNEROO
PLAN APPROVAL

MARK JUMEAUX

SENIOR LANDSCAPE
& CONSERVATION DEVELOPMENT OFFICER

CITY OF WANNEROO
APPROVAL CONDITIONS

APPROVED SUBJECT TO STRICT ADHERENCE TO THE
- ENDORSEMENTS THEREON
- CONDITIONS IN THE CITY OF WANNEROO APPROVAL LETTER
- CONDITIONS LAID DOWN IN THE WAPC SUBDIVISION APPROVAL WAPC NO.159334

CERTIFIED IRRIGATION DESIGNER — IRRIGATION AUSTRALIA — IRRIGATION / LANDSCAPE / TURF COUNTERPART

0 2 4 6 8 10m
SCALE 1:200 ON A1

REV	DATE	DESCRIPTION	DWN	CKD
A	24/09/2021	ISSUED FOR APPROVAL	R.V	J.S

N

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NewGround DESIGN SERVICES

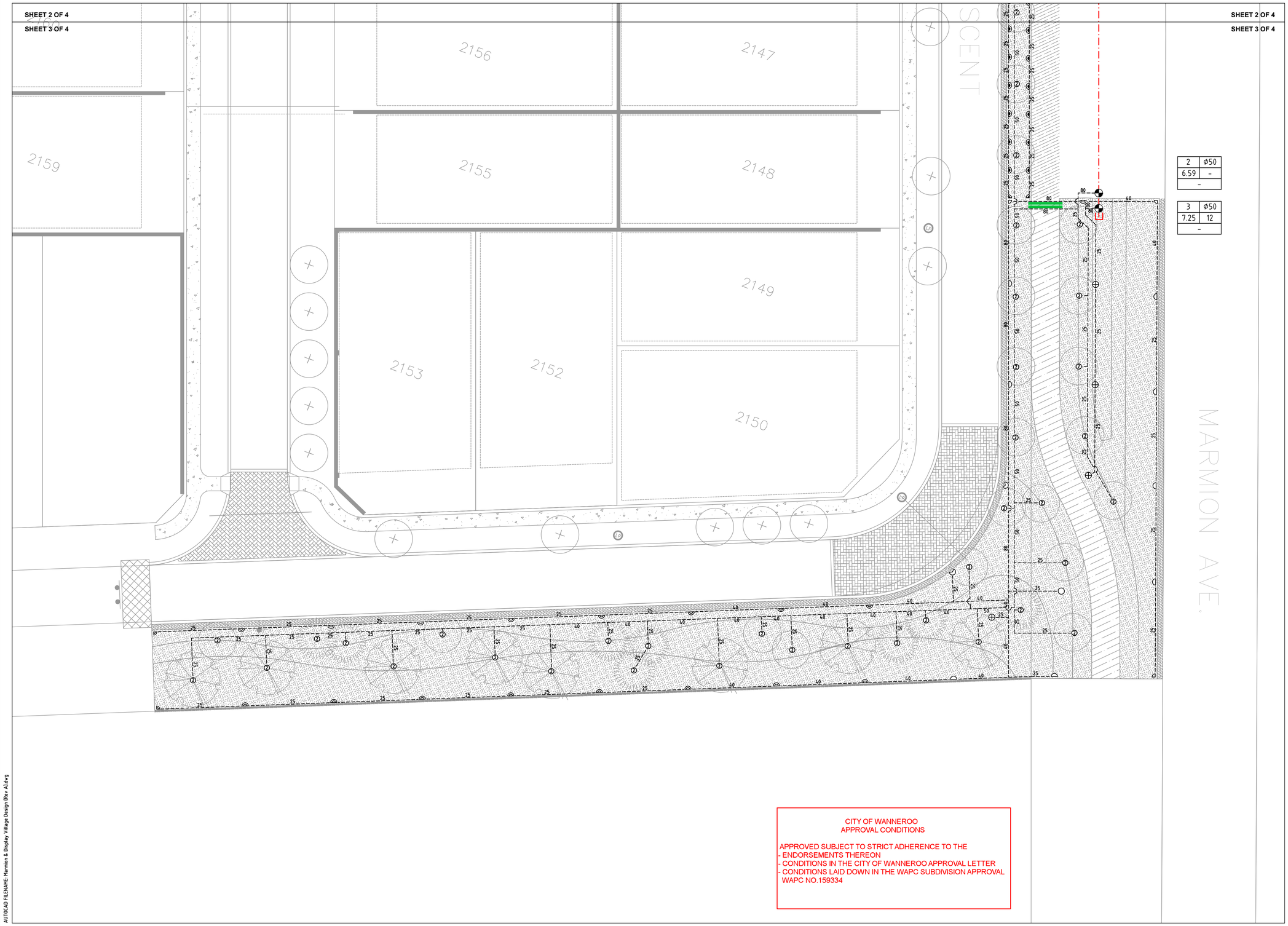
SCALE :	1 : 200 @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT : TDL

PROJECT : MARMION AVE. WEST VERGE AND DISPLAY VILLAGE IRRIGATION WORKS -

DATE :	DESIGN NO. :	SHEET NO. :
24/09/2021	18304-02	2 OF 4

SHEET 2 OF 4
SHEET 3 OF 4



SHEET 2 OF 4
SHEET 3 OF 4

LEGEND: "SPRINKLERS"

SYMBOL	BRAND NAME	MODEL DESCRIPTION	NOZZ. NO.	PRESS. (KPA)	FLOW (LPM)	RADIUS (M)
	HUNTER	I-20-12	6.0	350	24.5	13.1
	HUNTER	I-20-12	3.0	350	12.3	11.9
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	HUNTER	I-20-12	4.5LA	350	16.6	10.7
	TORO	570Z-12P	15	250	2.84-11.36	4.6
	TORO	570Z-12P	12	250	1.82-7.27	3.7
	TORO	570Z-12P	10	250	1.25-5.04	3.0
	LARGE GARDEN AREAS - TO HAVE HUNTER I-20-12 ON A Ø20x300mm POLY ARTIC RISER SMALL GARDEN AREAS - TO HAVE TORO 570Z-12P'S (PART & FULL CIRCLES) ON A Ø15 x 300mm POLY ARTIC RISER (NOZZLES AS SHOWN)					
200 L	2-TORO FLOOD BUBBLERS MODEL FB-100PC ON A TORO 570Z-6P WITH BLUE FLEX 7.06 LPM @ 250 kPA					
	BERMAD 200 SERIES SOLENOID CONTROL VALVE SIZE AS SHOWN					
	EXISTING BORE					
	EXISTING HUNTER ACC-99D IRRIGATION CONTROLLER					
	EXISTING DN100 uPVC RRJ CLASS 12 MAINLINE					
	EXISTING DN110 PN12.5 PE100 MDPE POLY MAINLINE (MATURE TREES)					
25	uPVC SWJ CLASS 9 LATERAL LINE SIZE AS SHOWN					
	DN150 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR					

STATION DATA							VALVE DATA		
ST'N NO.	FLOW (L/s)	PR. (kPa)	PR'N hr	APP'N mm/week	ST'N TIME (min)	AREA TYPE	VAL. NO.	FLOW (L/s)	DECODER NO.
1	8.58	250	32	40	15	GARDEN	1	8.58	-
2	6.59	250	-	-	8	TREES	2	6.59	-
3	7.25	350	12	40	40	GARDEN	3	7.25	-

DAILY RUN TIME: 1 HRS & 3 MIN — WEEKLY RUN TIME: 5 HRS & 15 MIN

VALVE LABEL LEGEND

VALVE NO	2	ø50 — VALVE SIZE
FLOW (LPS)	3.29	32 — PRECIPITATION RATE
	-	DECODER NO.

NOTE:
1. MAINLINE AND LATERAL PIPES ARE TO BE INSTALLED TO A MINIMUM DEPTH OF 350mm AND BE INSTALLED TO A MAXIMUM DEPTH OF 450mm.
2. THE CONTRACTOR TO UNDERTAKE FLOW (PRESSURE) ADJUSTMENT OF ALL SOLENOID VALVES IN ACCORDANCE WITH THE NOMINAL OPERATING PRESSURE OF THE SPRINKLERS ATTACHED TO THE PARTICULAR SOLENOID VALVE.

CITY OF WANNEROO
APPROVAL CONDITIONS

APPROVED SUBJECT TO STRICT ADHERENCE TO THE
- ENDORSEMENTS THEREON
- CONDITIONS IN THE CITY OF WANNEROO APPROVAL LETTER
- CONDITIONS LAID DOWN IN THE WAPC SUBDIVISION APPROVAL WAPC NO.159334

CITY OF WANNEROO
PLAN APPROVAL

MARK JUMEAUX

SENIOR LANDSCAPE
& CONSERVATION DEVELOPMENT OFFICER

CERTIFIED IRRIGATION DESIGNER — IRRIGATION AUSTRALIA — IRCA158

0 2 4 6 8 10m
SCALE 1:200 ON A1

AUTOCAD FILENAME: Marmion & Display Village Design (Rev A).dwg

REV	DATE	DESCRIPTION	DWN	CKD
A	24/09/2021	ISSUED FOR APPROVAL	R.V	J.S

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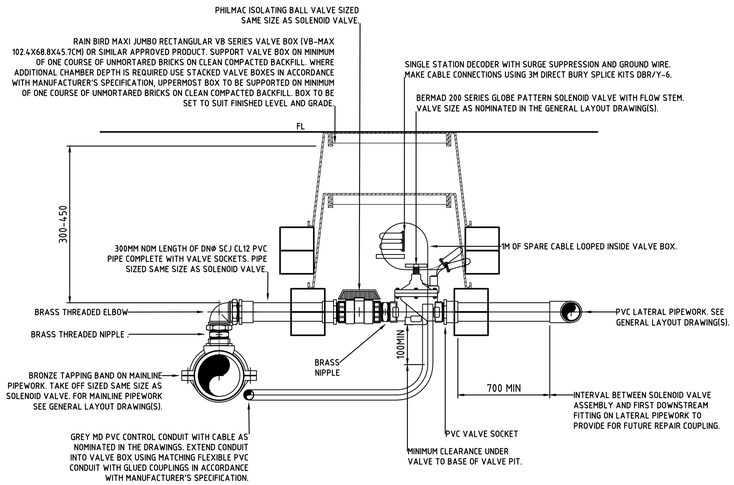
NewGround DESIGN SERVICES

SCALE :	1 : 200 @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT : TDL

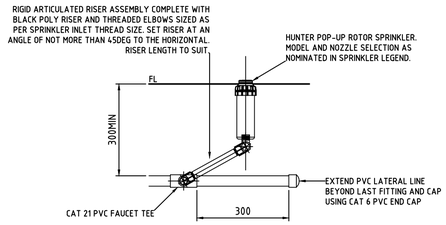
PROJECT : MARMION AVE. WEST VERGE AND DISPLAY VILLAGE IRRIGATION WORKS -

DATE :	DESIGN NO. :	SHEET NO. :
24/09/2021	18304-03	3 OF 4



TYPICAL GLOBE PATTERN SOLENOID VALVE INSTALLATION

NOT TO SCALE



TYPICAL POP-UP ROTOR SPRINKLER INSTALLATION ON PVC PIPEWORK

NOT TO SCALE

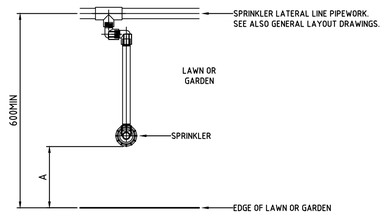
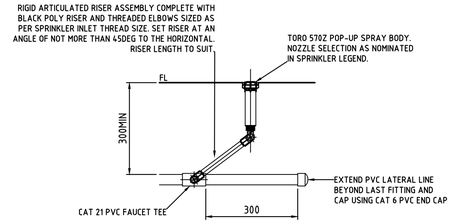


TABLE OF SPRINKLER OFFSETS			
EDGE TYPE	DIMENSION A		
	SPRAY†	ROTOR†	
BACK OF KERB OR EDGE OF PAVEMENT.	100	300	
GARDEN WALL WITH NO MOWING STRIP.	200	200	
BUILDING FACADE WITH NO MOWING STRIP.	600	600	
† SPRINKLER TYPE. SEE GENERAL LAYOUT DRAWINGS.			

SPRINKLER AND LATERAL PIPE OFFSETS FROM LAWN AND GARDEN EDGES

NOT TO SCALE



TYPICAL POP-UP SPRAY SPRINKLER INSTALLATION ON PVC PIPEWORK

NOT TO SCALE

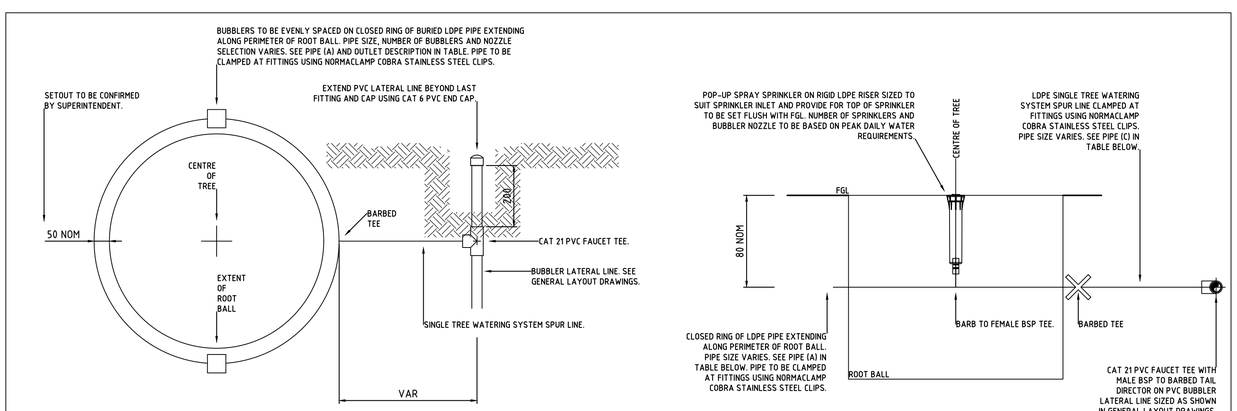


TABLE OF TREE WATERING SYSTEMS†						
SYSTEM	PLANT STOCK‡	SYSTEM FLOW(L/MIN)	20MIN VOL (L)¥	PIPE (A)	PIPE (B)	PIPE (C)
-	-	0-6	-	DN19	-	DN19
-	-	6-15	-	DN19	-	DN25
-	-	15-30	-	DN25	-	DN25

† SYSTEM DESIGN BASED ON THE PEAK DAILY WATER REQUIREMENTS SUPPLIED BY NURSERY INDUSTRY SOURCES AND OTHERS
‡ BAG STOCK SIZE (L) AND/OR NOMINAL DIAMETER OF TRANSPLANT ROOT BALL (M).
¥ VOLUME PROVIDED BY A 20MIN RUN TIME. RUN TIME TO BE ADJUSTED IN ACCORDANCE WITH PLANT WATER REQUIREMENTS AND CLIMATIC CONDITIONS.

TREE WATERING SYSTEMS

NOT TO SCALE

CITY OF WANNEROO
PLAN APPROVAL

MARK JUMEAUX

SENIOR LANDSCAPE
& CONSERVATION DEVELOPMENT OFFICER

CITY OF WANNEROO
APPROVAL CONDITIONS

APPROVED SUBJECT TO STRICT ADHERENCE TO THE
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AUTOCAD FILENAME: Marmion & Display Village Design (Rev A).dwg

REV	DATE	DESCRIPTION	DWN	CKD
A	24/09/2021	ISSUED FOR APPROVAL	R.V	J.S

REV	DATE	DESCRIPTION	DWN	CKD

NewGround DESIGN SERVICES

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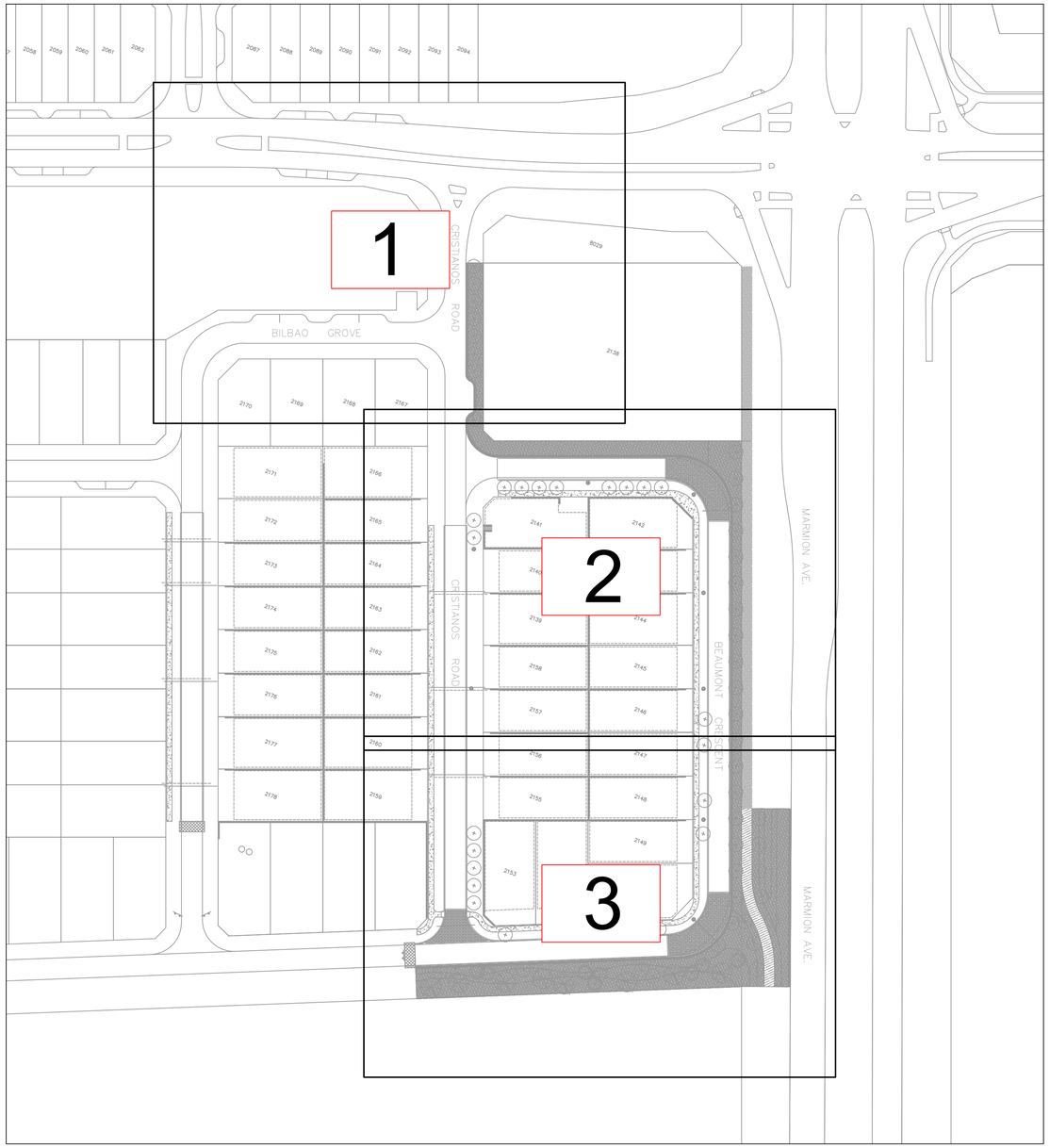
SCALE :	1 : NTS @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT :
TDL

PROJECT :
MARMION AVE. WEST VERGE AND DISPLAY VILLAGE
IRRIGATION WORKS (TYPICAL DETAILS)
-

DATE :	DESIGN NO. :	SHEET NO. :
24/09/2021	18304-04	4 OF 4

MARMION AVE. WEST VERGE AND DISPLAY VILLAGE
IRRIGATION WORKS



CITY OF WANNEROO
PLAN APPROVAL

MARK JUMEAUX

SENIOR LANDSCAPE
& CONSERVATION DEVELOPMENT OFFICER

CITY OF WANNEROO
APPROVAL CONDITIONS

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AUTOCAD FILENAME: Marmion & Display Village Design (Rev A1.dwg

REV	DATE	DESCRIPTION	DWN	CKD
A	24/09/2021	ISSUED FOR APPROVAL	R.V	J.S

REV	DATE	DESCRIPTION	DWN	CKD

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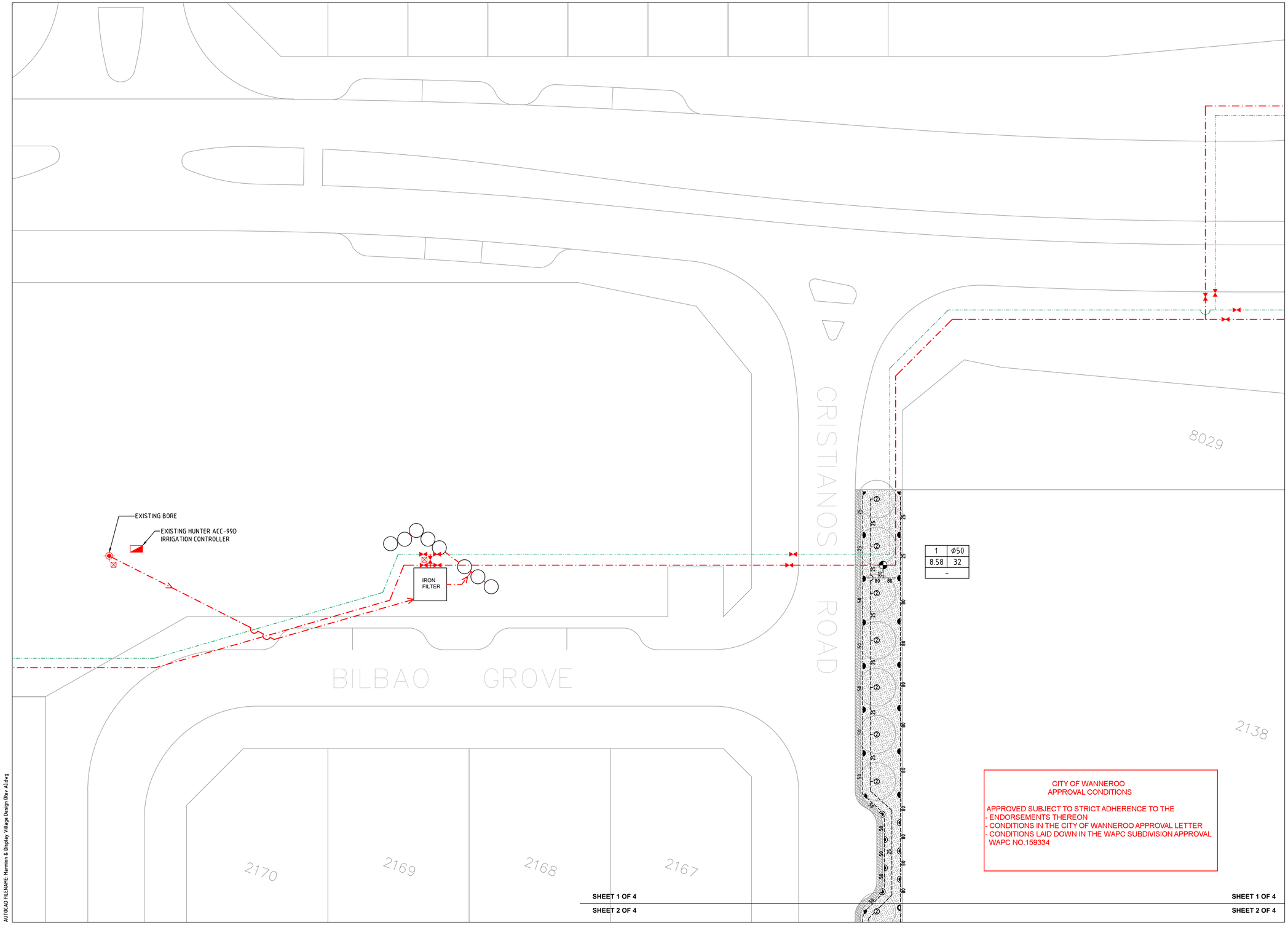
NewGround DESIGN SERVICES

SCALE :	1 : NTS @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT : TDL

PROJECT : MARMION AVE. WEST VERGE AND DISPLAY VILLAGE IRRIGATION WORKS (KEY PLAN)
-

DATE :	DESIGN NO. :	SHEET NO. :
24/09/2021	18304-00	COVER PAGE



LEGEND: "SPRINKLERS"

SYMBOL	BRAND NAME	MODEL DESCRIPTION	NOZZ. NO.	PRESS. (KPA)	FLOW (LPM)	RADIUS (M)
	HUNTER	I-20-12	6.0	350	24.5	13.1
	HUNTER	I-20-12	3.0	350	12.3	11.9
	HUNTER	I-20-12	2.5	350	9.7	10.7
	HUNTER	I-20-12	4.5LA	350	16.6	10.7
	TORO	570Z-12P	15	250	2.84-11.36	4.6
	TORO	570Z-12P	12	250	1.82-7.27	3.7
	TORO	570Z-12P	10	250	1.25-5.04	3.0

LARGE GARDEN AREAS - TO HAVE HUNTER I-20-12 ON A Ø20x300mm POLY ARTIC RISER
SMALL GARDEN AREAS - TO HAVE TORO 570Z-12P'S (PART & FULL CIRCLES) ON A Ø15 x 300mm POLY ARTIC RISER (NOZZLES AS SHOWN)

200 L — 2-TORO FLOOD BUBBLERS MODEL FB-100PC ON A TORO 570Z-6P WITH BLUE FLEX 7.06 LPM @ 250 kPA

BERMAD 200 SERIES SOLENOID CONTROL VALVE SIZE AS SHOWN

EXISTING BORE

EXISTING HUNTER ACC-99D IRRIGATION CONTROLLER

EXISTING DN100 uPVC RRJ CLASS 12 MAINLINE

EXISTING DN110 PN12.5 PE100 MDPE POLY MAINLINE (MATURE TREES)

25 — uPVC SWJ CLASS 9 LATERAL LINE SIZE AS SHOWN

DN150 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR

STATION DATA							VALVE DATA		
ST'N NO.	FLOW (L/s)	PR. (kPa)	PR'N hr	APP'N mm/week	ST'N TIME (min)	AREA TYPE	VAL. NO.	FLOW (L/s)	DECODER NO.
1	8.58	250	32	4.0	15	GARDEN	1	8.58	-
2	6.59	250	-	-	8	TREES	2	6.59	-
3	7.25	350	12	40	40	GARDEN	3	7.25	-

DAILY RUN TIME: 1 HRS & 3 MIN — WEEKLY RUN TIME: 5 HRS & 15 MIN

VALVE LABEL LEGEND

VALVE NO / FLOW (LPS)		
2	Ø50	VALVE SIZE
3.29	32	PRECIPITATION RATE
-		DECODER NO.

NOTE:
1. MAINLINE AND LATERAL PIPES ARE TO BE INSTALLED TO A MINIMUM DEPTH OF 350mm AND BE INSTALLED TO A MAXIMUM DEPTH OF 450mm.
2. THE CONTRACTOR TO UNDERTAKE FLOW (PRESSURE) ADJUSTMENT OF ALL SOLENOID VALVES IN ACCORDANCE WITH THE NOMINAL OPERATING PRESSURE OF THE SPRINKLERS ATTACHED TO THE PARTICULAR SOLENOID VALVE.

CITY OF WANNEROO
PLAN APPROVAL

MARK JUMEAUX

SENIOR LANDSCAPE
& CONSERVATION DEVELOPMENT OFFICER

CITY OF WANNEROO
APPROVAL CONDITIONS

APPROVED SUBJECT TO STRICT ADHERENCE TO THE
- ENDORSEMENTS THEREON
- CONDITIONS IN THE CITY OF WANNEROO APPROVAL LETTER
- CONDITIONS LAID DOWN IN THE WAPC SUBDIVISION APPROVAL WAPC NO.159334

CERTIFIED IRRIGATION DESIGNER — IRRIGATION AUSTRALIA — LICENSE

0 2 4 6 8 10m
SCALE 1:200 ON A1

AUTOCAD FILENAME: Marmion & Display Village Design (Rev A1).dwg

REV	DATE	DESCRIPTION	DWN	CKD
A	24/09/2021	ISSUED FOR APPROVAL	R.V	J.S

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NewGround DESIGN SERVICES

SCALE :	1 : 200 @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

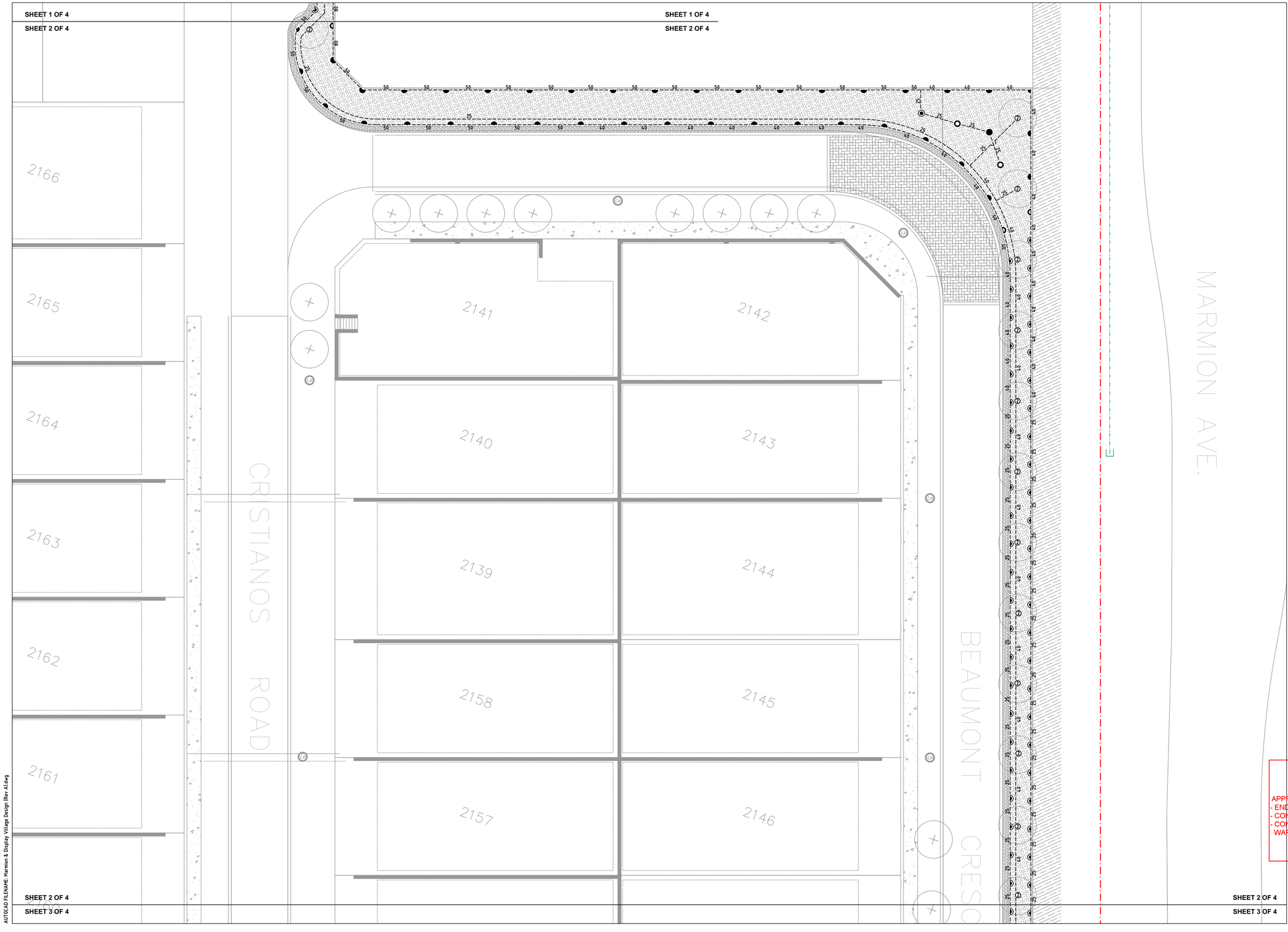
CLIENT : TDL

PROJECT : MARMION AVE. WEST VERGE AND DISPLAY VILLAGE IRRIGATION WORKS -

DATE :	DESIGN NO. :	SHEET NO. :
24/09/2021	18304-01	1 OF 4

SHEET 1 OF 4
SHEET 2 OF 4

SHEET 1 OF 4
SHEET 2 OF 4



SHEET 2 OF 4
SHEET 3 OF 4

AUTOCAD FILENAME: Marmion & Display Village Design (Rev A).dwg

LEGEND: "SPRINKLERS"

SYMBOL	BRAND NAME	MODEL DESCRIPTION	NOZZ. NO.	PRESS. (KPA)	FLOW (LPM)	RADIUS (M)
	HUNTER	I-20-12	6.0	350	24.5	13.1
	HUNTER	I-20-12	3.0	350	12.3	11.9
	HUNTER	I-20-12	2.5	350	9.7	10.7
	HUNTER	I-20-12	4.5LA	350	16.6	10.7
	TORO	570Z-12P	15	250	2.84-11.36	4.6
	TORO	570Z-12P	12	250	1.82-7.27	3.7
	TORO	570Z-12P	10	250	1.25-5.04	3.0
	LARGE GARDEN AREAS - TO HAVE HUNTER I-20-12 ON A Ø20x300mm POLY ARTIC RISER SMALL GARDEN AREAS - TO HAVE TORO 570Z-12P'S (PART & FULL CIRCLES) ON A Ø15 x 300mm POLY ARTIC RISER (NOZZLES AS SHOWN)					
200 L	2-TORO FLOOD BUBBLERS MODEL FB-100PC ON A TORO 570Z-6P WITH BLUE FLEX 7.06 LPM @ 250 kPA					
	BERMAD 200 SERIES SOLENOID CONTROL VALVE SIZE AS SHOWN					
	EXISTING BORE					
	EXISTING HUNTER ACC-99D IRRIGATION CONTROLLER					
	EXISTING DN100 uPVC RRJ CLASS 12 MAINLINE					
	EXISTING DN110 PN12.5 PE100 MDPE POLY MAINLINE (MATURE TREES)					
25	uPVC SWJ CLASS 9 LATERAL LINE SIZE AS SHOWN					
	DN150 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR					

STATION DATA							VALVE DATA		
ST'N NO.	FLOW (L/s)	PR. (kPa)	PR'N hr	APP'N mm/week	ST'N TIME (min)	AREA TYPE	VAL. NO.	FLOW (L/s)	DECODER NO.
1	8.58	250	32	40	15	GARDEN	1	8.58	-
2	6.59	250	-	-	8	TREES	2	6.59	-
3	7.25	350	12	40	40	GARDEN	3	7.25	-

DAILY RUN TIME: 1 HRS & 3 MIN — WEEKLY RUN TIME: 5 HRS & 15 MIN

VALVE LABEL LEGEND

VALVE NO	2	Ø50 — VALVE SIZE
FLOW (LPS)	3.29	32 — PRECIPITATION RATE
	-	DECODER NO.

NOTE:
1. MAINLINE AND LATERAL PIPES ARE TO BE INSTALLED TO A MINIMUM DEPTH OF 350mm AND BE INSTALLED TO A MAXIMUM DEPTH OF 450mm.
2. THE CONTRACTOR TO UNDERTAKE FLOW (PRESSURE) ADJUSTMENT OF ALL SOLENOID VALVES IN ACCORDANCE WITH THE NOMINAL OPERATING PRESSURE OF THE SPRINKLERS ATTACHED TO THE PARTICULAR SOLENOID VALVE.

CITY OF WANNEROO
PLAN APPROVAL

MARK JUMEAUX

SENIOR LANDSCAPE
& CONSERVATION DEVELOPMENT OFFICER

CITY OF WANNEROO
APPROVAL CONDITIONS

APPROVED SUBJECT TO STRICT ADHERENCE TO THE
- ENDORSEMENTS THEREON
- CONDITIONS IN THE CITY OF WANNEROO APPROVAL LETTER
- CONDITIONS LAID DOWN IN THE WAPC SUBDIVISION APPROVAL WAPC NO.159334

CERTIFIED IRRIGATION DESIGNER — IRRIGATION AUSTRALIA — IRRIGATION / TURF COUNTRYWIDE

0 2 4 6 8 10m
SCALE 1:200 ON A1

REV	DATE	DESCRIPTION	DWN	CKD
A	24/09/2021	ISSUED FOR APPROVAL	R.V	J.S

REV	DATE	DESCRIPTION	DWN	CKD

N

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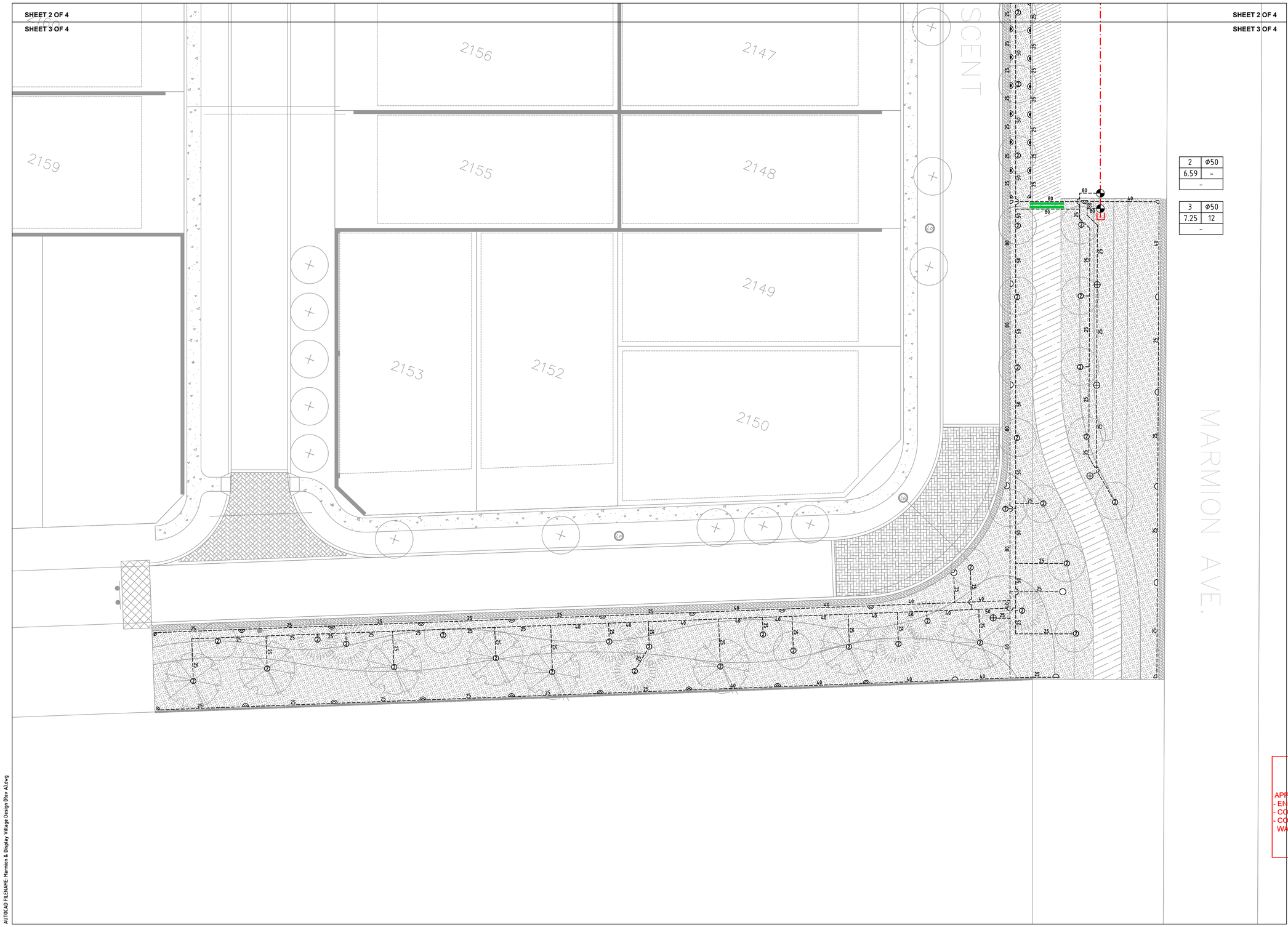
SCALE :	1 : 200 @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT : TDL

PROJECT : MARMION AVE. WEST VERGE AND DISPLAY VILLAGE IRRIGATION WORKS
-

DATE :	DESIGN NO. :	SHEET NO. :
24/09/2021	18304-02	2 OF 4

SHEET 2 OF 4
SHEET 3 OF 4



SHEET 2 OF 4
SHEET 3 OF 4

LEGEND: "SPRINKLERS"

SYMBOL	BRAND NAME	MODEL DESCRIPTION	NOZZ. NO.	PRESS. (KPA)	FLOW (LPM)	RADIUS (M)
	HUNTER	I-20-12	6.0	350	24.5	13.1
	HUNTER	I-20-12	3.0	350	12.3	11.9
	HUNTER	I-20-12	2.5	350	9.7	10.7
	HUNTER	I-20-12	4.5LA	350	16.6	10.7
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	TORO	570Z-12P	12	250	1.82-7.27	3.7
	TORO	570Z-12P	10	250	1.25-5.04	3.0
	LARGE GARDEN AREAS - TO HAVE HUNTER I-20-12 ON A Ø20x300mm POLY ARTIC RISER SMALL GARDEN AREAS - TO HAVE TORO 570Z-12P'S (PART & FULL CIRCLES) ON A Ø15 x 300mm POLY ARTIC RISER (NOZZLES AS SHOWN)					
200 L	2-TORO FLOOD BUBBLERS MODEL FB-100PC ON A TORO 570Z-6P WITH BLUE FLEX 7.06 LPM @ 250 kPA					
	BERMAD 200 SERIES SOLENOID CONTROL VALVE SIZE AS SHOWN					
	EXISTING BORE					
	EXISTING HUNTER ACC-99D IRRIGATION CONTROLLER					
	EXISTING DN100 uPVC RRJ CLASS 12 MAINLINE					
	EXISTING DN110 PN12.5 PE100 MDPE POLY MAINLINE (MATURE TREES)					
25	uPVC SWJ CLASS 9 LATERAL LINE SIZE AS SHOWN					
	DN150 SLEEVE INSTALLED BY LANDSCAPE CONTRACTOR					

STATION DATA							VALVE DATA		
ST'N NO.	FLOW (L/s)	PR. (kPa)	PR'N hr	APP'N mm/week	ST'N TIME (min)	AREA TYPE	VAL. NO.	FLOW (L/s)	DECODER NO.
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3	7.25	350	12	40	40	GARDEN	3	7.25	-

DAILY RUN TIME: 1 HRS & 3 MIN — WEEKLY RUN TIME: 5 HRS & 15 MIN

VALVE LABEL LEGEND

VALVE NO	2	ø50 — VALVE SIZE
FLOW (LPS)	3.29	32 — PRECIPITATION RATE
	-	DECODER NO.

NOTE:
1. MAINLINE AND LATERAL PIPES ARE TO BE INSTALLED TO A MINIMUM DEPTH OF 350mm AND BE INSTALLED TO A MAXIMUM DEPTH OF 450mm.
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CITY OF WANNEROO
PLAN APPROVAL

MARK JUMEAUX

SENIOR LANDSCAPE
& CONSERVATION DEVELOPMENT OFFICER

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CERTIFIED IRRIGATION DESIGNER — IRRIGATION AUSTRALIA — 1124199

0 2 4 6 8 10m
SCALE 1:200 ON A1

AUTOCAD FILENAME: Marmion & Display Village Design (Rev A).dwg

REV	DATE	DESCRIPTION	DWN	CKD
A	24/09/2021	ISSUED FOR APPROVAL	R.V	J.S

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NewGround DESIGN SERVICES

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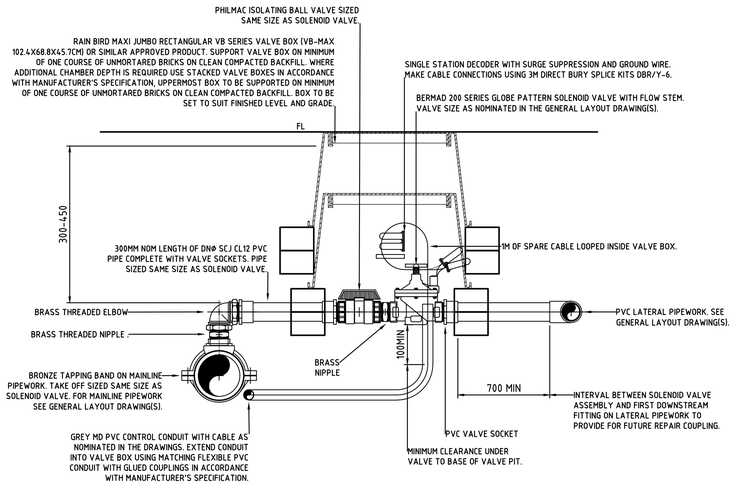
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT : TDL

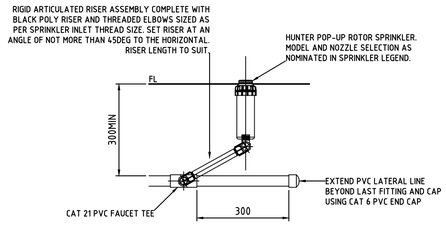
PROJECT : MARMION AVE. WEST VERGE AND DISPLAY VILLAGE IRRIGATION WORKS -

DATE :	DESIGN NO. :	SHEET NO. :
24/09/2021	18304-03	3 OF 4



TYPICAL GLOBE PATTERN SOLENOID VALVE INSTALLATION

NOT TO SCALE



TYPICAL POP-UP ROTOR SPRINKLER INSTALLATION ON PVC PIPEWORK

NOT TO SCALE

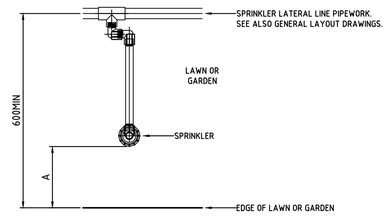
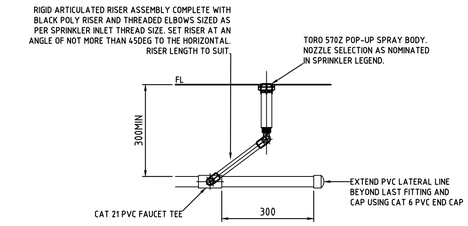


TABLE OF SPRINKLER OFFSETS			
EDGE TYPE	DIMENSION A		
	SPRAY†	ROTOR†	
BACK OF KERB OR EDGE OF PAVEMENT.	100	300	
GARDEN WALL WITH NO MOWING STRIP.	200	200	
BUILDING FACADE WITH NO MOWING STRIP.	600	600	
† SPRINKLER TYPE. SEE GENERAL LAYOUT DRAWINGS.			

SPRINKLER AND LATERAL PIPE OFFSETS FROM LAWN AND GARDEN EDGES

NOT TO SCALE



TYPICAL POP-UP SPRAY SPRINKLER INSTALLATION ON PVC PIPEWORK

NOT TO SCALE

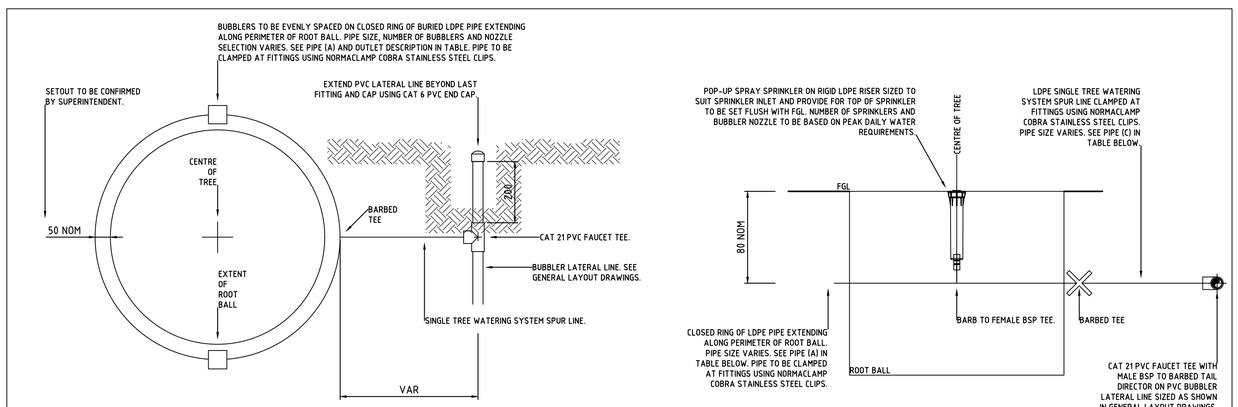


TABLE OF TREE WATERING SYSTEMS†						
SYSTEM	PLANT STOCK‡	SYSTEM FLOW(L/MIN)	20MIN VOL (L)¥	PIPE (A)	PIPE (B)	PIPE (C)
-	-	0-6	-	DN19	-	DN19
-	-	6-15	-	DN19	-	DN25
-	-	15-30	-	DN25	-	DN25

† SYSTEM DESIGN BASED ON THE PEAK DAILY WATER REQUIREMENTS SUPPLIED BY NURSERY INDUSTRY SOURCES AND OTHERS
‡ BAG STOCK SIZE (L) AND/OR NOMINAL DIAMETER OF TRANSPLANT ROOT BALL (M).
¥ VOLUME PROVIDED BY A 20MIN RUN TIME. RUN TIME TO BE ADJUSTED IN ACCORDANCE WITH PLANT WATER REQUIREMENTS AND CLIMATIC CONDITIONS.

TREE WATERING SYSTEMS

NOT TO SCALE

CITY OF WANNEROO
PLAN APPROVAL

MARK JUMEAUX

SENIOR LANDSCAPE
& CONSERVATION DEVELOPMENT OFFICER

CITY OF WANNEROO
APPROVAL CONDITIONS

APPROVED SUBJECT TO STRICT ADHERENCE TO THE
- ENDORSEMENTS THEREON
- CONDITIONS IN THE CITY OF WANNEROO APPROVAL LETTER
- CONDITIONS LAID DOWN IN THE WAPC SUBDIVISION APPROVAL WAPC NO.159334

CERTIFIED IRRIGATION DESIGNER — IRRIGATION AUSTRALIA — IRRIGATION, TURF, LANDSCAPE

AUTOCAD FILENAME: Marmion & Display Village Design (Rev A).dwg

REV	DATE	DESCRIPTION	DWN	CKD
A	24/09/2021	ISSUED FOR APPROVAL	R.V	J.S

REV	DATE	DESCRIPTION	DWN	CKD

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SCALE :	1 : NTS @ A1 SHEET
DESIGNER :	R.VIRTUDAZO
DRAWN BY :	R.VIRTUDAZO
APPROVED BY :	J.STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT :
TDL

PROJECT :
MARMION AVE. WEST VERGE AND DISPLAY VILLAGE IRRIGATION WORKS (TYPICAL DETAILS)
-

DATE :	DESIGN NO. :	SHEET NO. :
24/09/2021	18304-04	4 OF 4



LOCATION PLAN
1:1000 @ A1

CATALINA

CLARKSON, WA

Catalina

FORESHORE STAGE 2

LANDSCAPE CONTRACT: CAT-58

LANDSCAPE & IRRIGATION WORKS

CLIENT: CATALINA REGIONAL COUNCIL

ISSUE AS: ***CONSTRUCTED***

DATE: **SEPTEMBER 2024**

LANDSCAPE DRAWING LIST

SHEET NUMBER	SHEET TITLE	SHEET REVISION NUMBER
CAT-64-000	COVER PAGE	1
CAT-64-300	GRADING PLAN	1
CAT-64-400	HARDSCAPE PLAN	1
CAT-64-500	PLANTING PLAN	1
CAT-64-900	HARDSCAPE DETAILS	1
CAT-64-970	SOFTWORKS DETAILS	1
CAT-64-980	NOTES	1

CATALINA Regional Council

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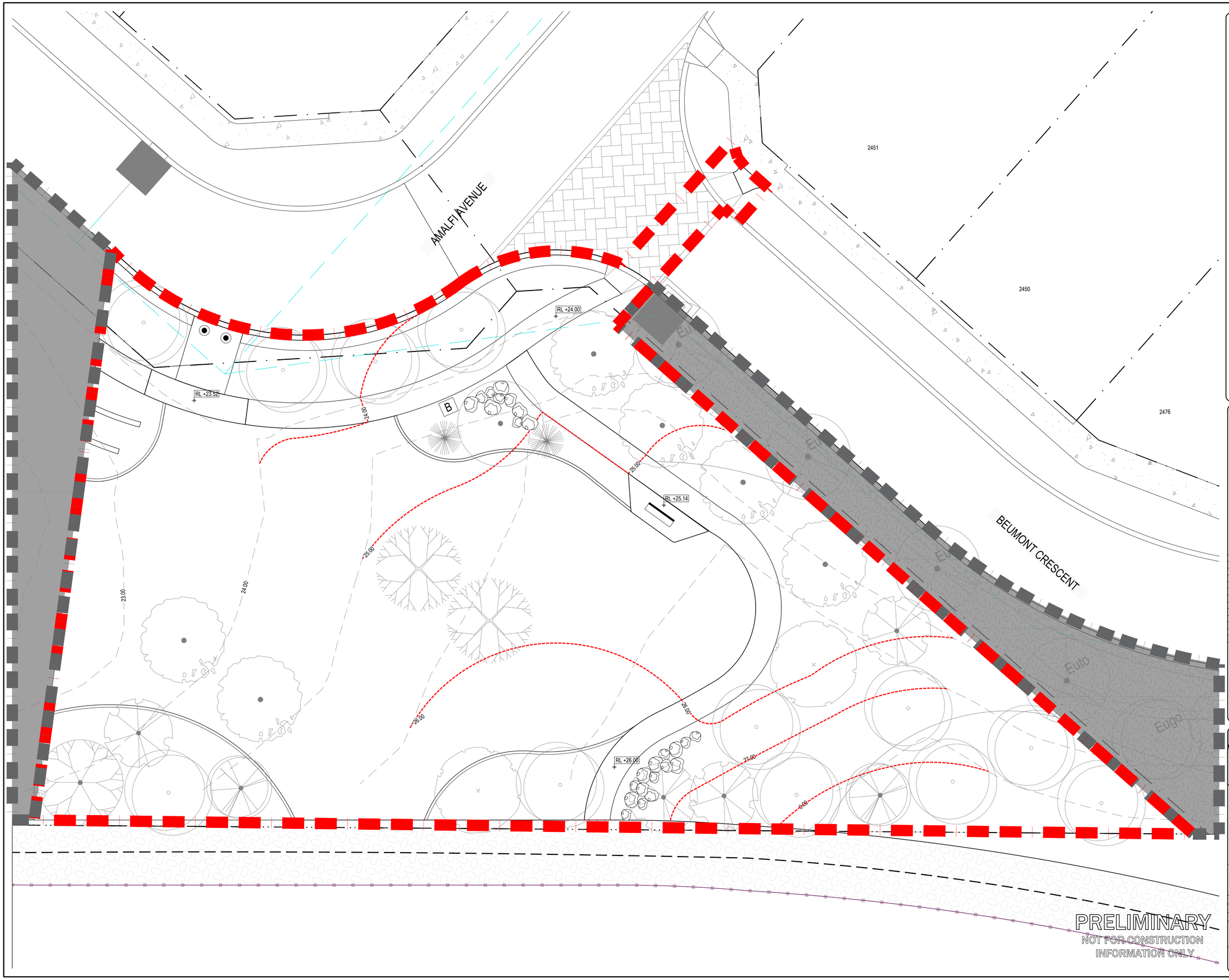

LEGEND

- EXTENT OF WORKS
- 0.00 EXISTING CONTOURS
- 0.00 PROPOSED CONTOURS
- RL 8.00 SPOT LEVELS
- EXISTING DRAINAGE BY CIVIL

STANDARD NOTES

1. **SET OUT & DIMENSIONS.** THE CONTRACTOR SHALL SET OUT ALL PATHS, WALLS, HARD SURFACES AND ELEMENTS EITHER ON OR OFFSITE PRIOR TO CONSTRUCTION AND SHALL OBTAIN THE SUPERINTENDENTS SET OUT APPROVAL PRIOR TO WORKS COMMENCING. WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALE. CHECK ALL DRAWING SCALES IN CONJUNCTION WITH DRAWING SIZE.
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PROJECT
CATALINA
TAMALA PARK, WA
STAGE OR PHASE
FORESHORE STAGE 2

DRAWING TITLE
GRADING PLAN

CLIENT
TAMALA PARK REGIONAL COUNCIL

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

DRAWING NUMBER CAT-64-300
REV 1

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AMALFI AVENUE

BEUMONT CRESCENT

2451

2450

2476

RETAINING WALLS FROM STAGE 1 (NOTE: EXISTING, NOT PART OF THIS SCOPE)

2/900 REINFORCED CONCRETE MAINTENANCE PATH

7/900 REMOVABLE BOLLARD

11/900 PRAM RAMP BY LANDSCAPE CONTRACTOR

11/900 PRAM RAMP BY LANDSCAPE CONTRACTOR

8/900 WHEELED BIN & STAND DETAIL

9/900 BENCH SEAT

B

MK

TURF

EXISTING CONSERVATION FENCING

EXISTING D.U.P TO BE PROTECTED DURING CONSTRUCTION WORKS

LIMESTONE BOULDER RETAINING 10/900

PRELIMINARY

NOT FOR CONSTRUCTION

INFORMATION ONLY

LEGEND

- EXTENT OF WORKS
- PROPOSED CONCRETE PATH 1/900
- REINFORCED CONCRETE PATH 2/900
- EXPOSED AGGREGATE HARDSTAND COLOUR: HOLCIM MAGNOLIA 6/900
- PROPOSED PLANTING 1/970
- MULCH ONLY
- TURF 3/970
- MK CONCRETE MOW KERB 3/900
- EXISTING D.U.P PATH TO BE PROTECTED DURING CONSTRUCTION
- EXISTING CONSERVATION FENCING
- BENCH SEAT 9/900
- B WHEELED BIN & STAND DETAIL 8/900
- LIMESTONE ROCKS 10/900
- REMOVABLE BOLLARD 7/900
- PROPOSED TREES 4-6/900

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PROJECT
CATALINA
TAMALA PARK, WA
STAGE OR PHASE
FORESHORE STAGE 2

DRAWING TITLE
HARDSCAPE PLAN

CLIENT
TAMALA PARK REGIONAL COUNCIL

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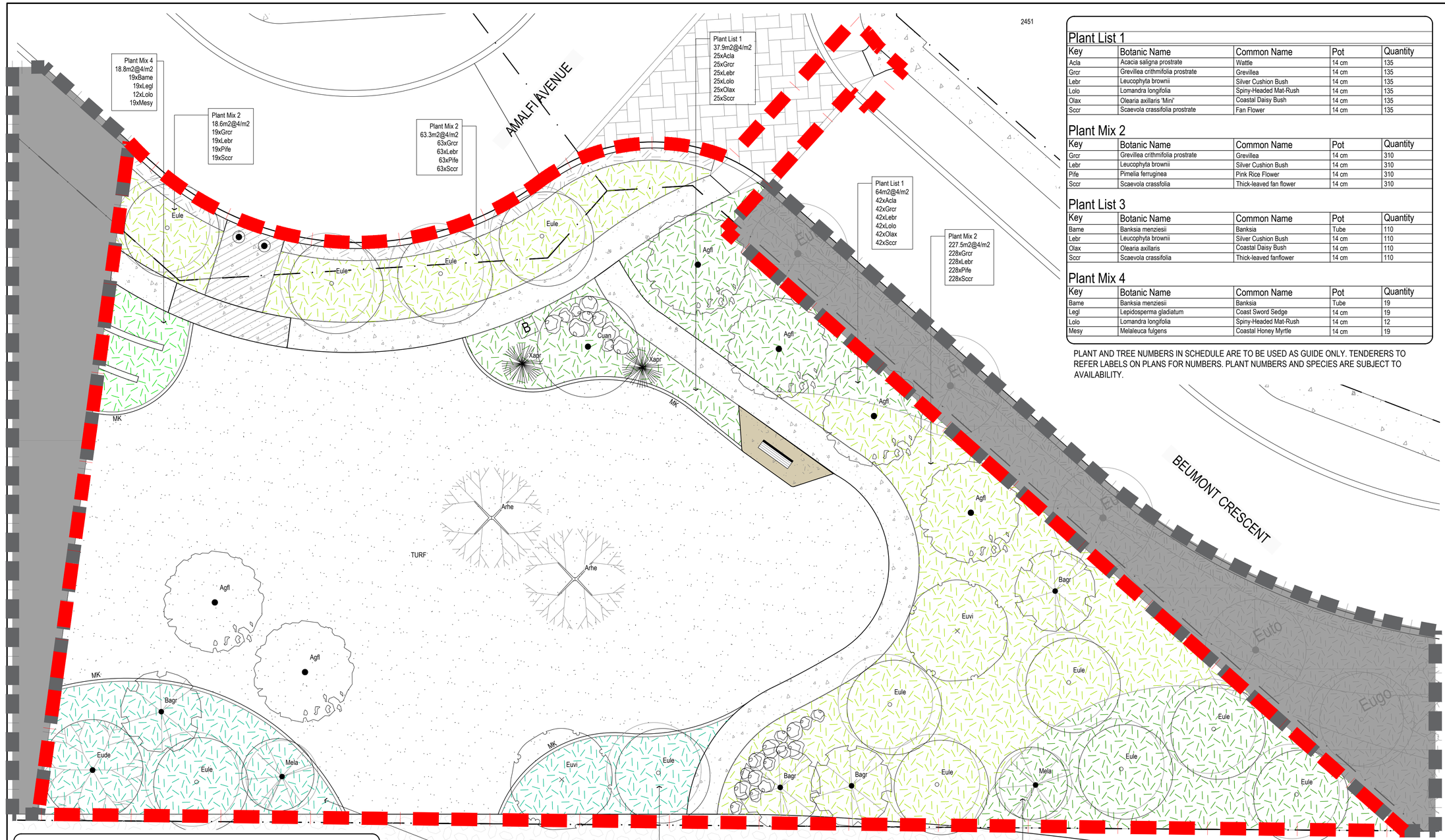
DRAWING NUMBER CAT-64-400
REV 1

REF \\CURRENT PROJECTS\CATALINA, TAMALA PARK\CLI DRAWINGS\JOB CODE\ AUTOCAD\JOB CODE\ LANDSCAPE\STAGE 3 1\FORSCTP8.DWG PLOTTED: 27/09/2024 2:47:31 PM BY: DAVID MCGINTY



Plant List 1

Key	Botanic Name	Common Name	Pot	Quantity
Acla	Acacia saligna prostrate	Wattle	14 cm	135
Grcr	Grevillea crithmifolia prostrate	Grevillea	14 cm	135
Lebr	Leucophyta brownii	Silver Cushion Bush	14 cm	135
Lolo	Lomandra longifolia	Spiny-Headed Mat-Rush	14 cm	135
Olax	Olearia axillaris 'Mini'	Coastal Daisy Bush	14 cm	135
Sccr	Scaevola crassifolia prostrate	Fan Flower	14 cm	135

Plant Mix 2

Key	Botanic Name	Common Name	Pot	Quantity
Grcr	Grevillea crithmifolia prostrate	Grevillea	14 cm	310
Lebr	Leucophyta brownii	Silver Cushion Bush	14 cm	310
Pife	Pimelia ferruginea	Pink Rice Flower	14 cm	310
Sccr	Scaevola crassfolia	Thick-leaved fan flower	14 cm	310

Plant List 3

Key	Botanic Name	Common Name	Pot	Quantity
Bame	Banksia menziesii	Banksia	Tube	110
Lebr	Leucophyta brownii	Silver Cushion Bush	14 cm	110
Olax	Olearia axillaris	Coastal Daisy Bush	14 cm	110
Sccr	Scaevola crassifolia	Thick-leaved fanflower	14 cm	110

Plant Mix 4

Key	Botanic Name	Common Name	Pot	Quantity
Bame	Banksia menziesii	Banksia	Tube	19
Legl	Lepidosperma gladiatum	Coast Sword Sedge	14 cm	19
Lolo	Lomandra longifolia	Spiny-Headed Mat-Rush	14 cm	12
Mesy	Melaleuca fulgens	Coastal Honey Myrtle	14 cm	19

PLANT AND TREE NUMBERS IN SCHEDULE ARE TO BE USED AS GUIDE ONLY. TENDERERS TO REFER LABELS ON PLANS FOR NUMBERS. PLANT NUMBERS AND SPECIES ARE SUBJECT TO AVAILABILITY.

Tree Schedule

Sym.	Key	Botanic Name	Pot	Spacing	Quantity
Agfl	Agfl	Agonis flexuosa	Transplant	AS SHOWN	6
Arhe	Arhe	Araucaria heterophylla	Transplant	AS SHOWN	2
Bagr	Bagr	Banksia grandis	100L	AS SHOWN	4
Cuan	Cuan	Cupaniopsis anacardioides	Transplant	AS SHOWN	1
Eude	Eude	Eucalyptus decipiens	100 Litre	AS SHOWN	1
Eule	Eule	Eucalyptus leucoxylon rosea	200L	AS SHOWN	12
Euvi	Euvi	Eucalyptus victrix	200 Litre	AS SHOWN	2
Mela	Mela	Melaleuca lanceolata	200 Litre	AS SHOWN	2
Xapr	Xapr	Xanthorrhoea preissii	Transplant	AS SHOWN	2

PLANT AND TREE NUMBERS IN SCHEDULE ARE TO BE USED AS GUIDE ONLY. TENDERERS TO REFER LABELS ON PLANS FOR NUMBERS. PLANT NUMBERS AND SPECIES ARE SUBJECT TO AVAILABILITY.

LEGEND

- EXTENT OF WORKS
- PROPOSED PLANTING MIX 1 (1/970)
- PROPOSED PLANTING MIX 2 (1/970)
- PROPOSED PLANTING MIX 3 (1/970)
- PROPOSED PLANTING MIX 4 (1/970)
- MULCH ONLY
- TURF (2/970)
- EXISTING CONSERVATION FENCING
- PROPOSED TREES

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PROJECT
CATALINA
TAMALA PARK
STAGE OR PHASE
FORESHORE STAGE 2

DRAWING TITLE
PLANTING PLAN

CLIENT
TAMALA PARK REGIONAL COUNCIL

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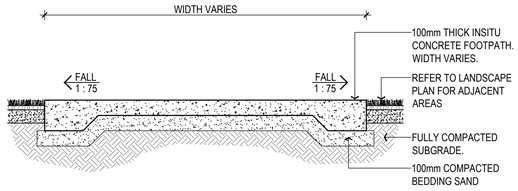
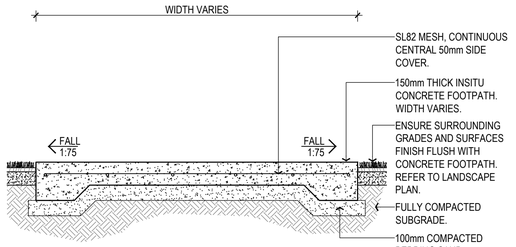


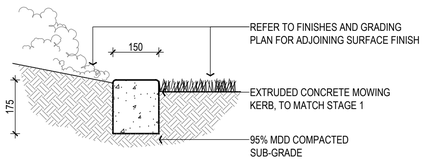
NOTES

1. FOUNDATION TO BE COMPACTED TO 95% MDD.
2. ALL CONCRETE FOOTPATH CONSTRUCTION TO BE A MIN 32MPa, 20mm AGGREGATE AND MAX SLUMP OF 80-100mm.
3. BEDDING - SAND (100mm MINIMUM).
4. EXPANSION JOINT EVERY 5.0M AS. SEE DETAIL 4/900
5. CONTRACTION JOINT EVERY 2.5M. SEE DETAIL 5/900
6. SURFACE TO BE BROOM FINISH, NON-SLIP, WITH SMOOTH EDGE APPROX 75mm WIDE AT EDGES AND JOINTS.
7. LONGITUDINAL GRADE SHOULD NOT EXCEED 1 IN 20.
8. WHERE LONGITUDINAL GRADE IS GREATER THAN 1 IN 14, LANDINGS WILL BE PROVIDED EVERY 6m.
9. VERTICAL CLEARANCES ALONG PATHS SHOULD BE A MINIMUM OF 2m.
10. WHERE STREET FURNITURE (POLES, BENCHES, RUBBISH BINS, POSTS, ETC) ARE LOCATED IN PATH, A MIN UNOBSTRUCTED WIDTH OF 1.2m MUST BE MAINTAINED.

1/900 INSITU CONCRETE FOOTPATH - TYPICAL
SECTION — SCALE 1:20

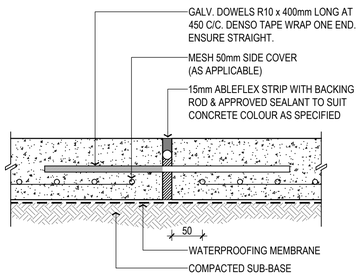


2/900 REINFORCED CONCRETE PATH FOR MAINTENANCE VEHICLE ACCESS
SECTION — SCALE 1:20

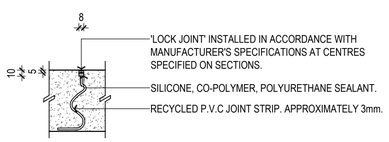


NOTES:
1. ALL CONCRETE TO BE 32MPa @ 28 DAYS
2. CONTRACTION JOINTS: RULED / STAMPED AT 2.0M INTERVALS
3. EXPANSION JOINTS: 6.0M INTERVALS TO LINE UP WITH FOOTPATH JOINTS.

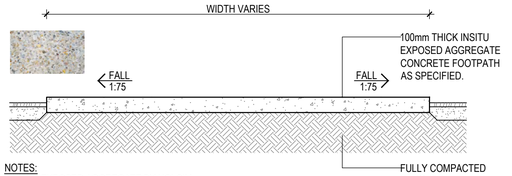
3/900 MOWING KERB
SECTION — SCALE 1:10



4/900 EXPANSION JOINT
SECTION — SCALE 1:5



5/900 TYPICAL CONTRACTION JOINT
SECTION — SCALE 1:5



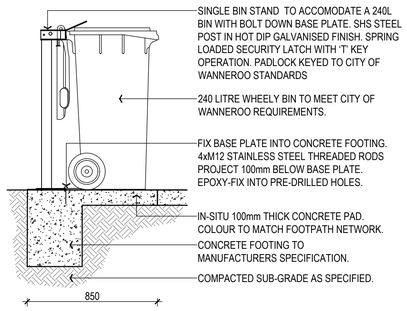
NOTES:
FINISH - EXPOSED AGGREGATE BY HOLCIM
COLOUR & EXPOSURE - MAGNOLIA EXPOSED

6/900 EXPOSED AGGREGATE CONCRETE HARDSTAND - TYPICAL
SECTION — SCALE 1:20



PRODUCT NAME	BOLLARD REMOVABLE 140mm KEY LOCK WITH SLEEVE
PRODUCT SUPPLIER	SAFETY XPRESS
PRODUCT CODE	BOLRKL140
PRODUCT FINISH	AS PER MANUFACTURER'S SPECIFICATIONS
PRODUCT COLOUR	AS PER MANUFACTURER'S SPECIFICATIONS
PRODUCT FIXING	AS PER MANUFACTURER'S SPECIFICATIONS

7/900 REMOVABLE BOLLARD
IMAGE REFERENCE



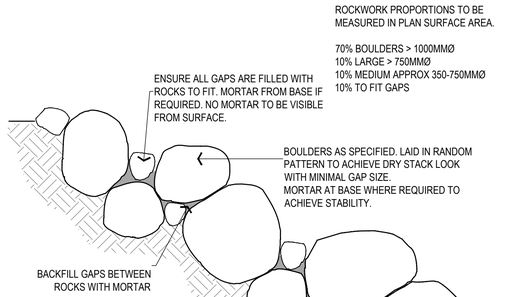
8/900 240L WHEELED BIN & STAND DETAIL
SECTION — SCALE 1:20



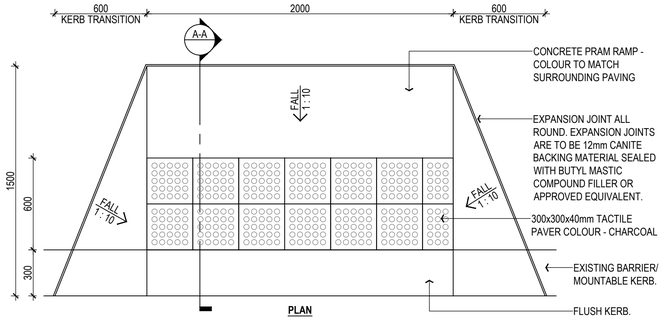
PRODUCT NAME	STREET FURNITURE AUSTRALIA PARK DDA SEAT
PRODUCT SUPPLIER	STREET FURNITURE AUSTRALIA
PRODUCT CODE	PS7-DDA, 2.5M
PRODUCT FINISH	BATTEN - COMPOSITE TIMBER FRAME - POWDERCOATED DULUX MONUMENT
PRODUCT FIXING	SURFACE FIXED AS PER MANUFACTURER'S SPECIFICATION

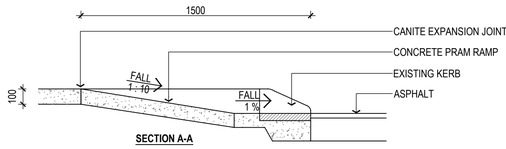
ALL ABOVE AS PER MANUFACTURER SELECTION OPTIONS

9/900 DDA PARK SEAT
IMAGE REFERENCE — NTS



10/900 LIMESTONE BOULDER RETAINING
SECTION — SCALE 1:20





11/900 CONCRETE PRAM RAMP
PLAN & SECTION — SCALE 1:20

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REV	DATE	BY	ISSUE OR AMENDMENT
1	27.09.24	DM	ISSUE AS CONSTRUCTED
C	20.05.24	JL	ISSUE FOR CONSTRUCTION
B	27.03.24	JL	REVISED FOR APPROVAL
A	08.01.24	JL	ISSUE FOR APPROVAL
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PROJECT
CATALINA
-
STAGE OR PHASE
FORESHORE STAGE 2
-
DRAWING TITLE
HARDSCAPE DETAILS
-
CLIENT
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SCALE	AS SHOWN		
DRAWING NUMBER	CAT-64-900	REV	1

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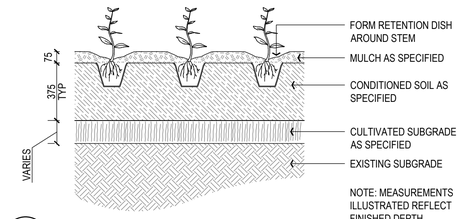
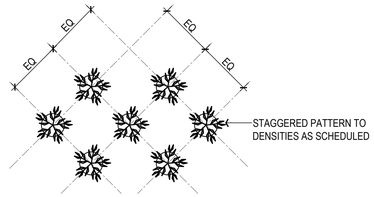
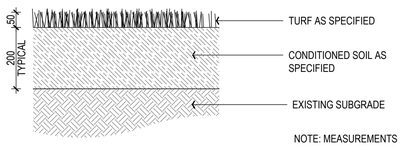


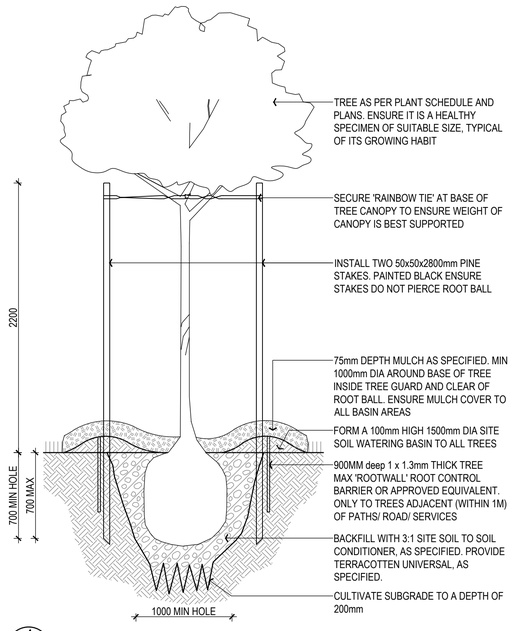
1 970 TUBESTOCK - 200mm POT PLANTING
SECTION SCALE 1:20



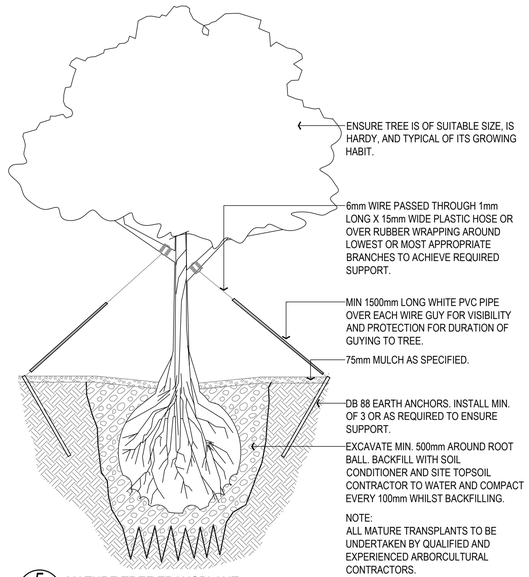
2 970 TYPICAL STAGGERED PLANTING PATTERN
PLAN SCALE 1:20



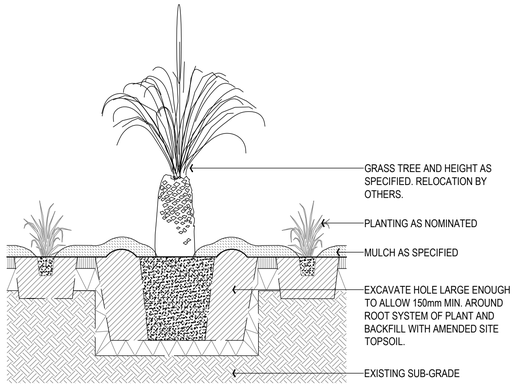
3 970 ROLL-ON TURF AREAS
SECTION SCALE 1:10



4 970 TYPICAL 400 & 500 LITRE TREE PLANTING
SECTION SCALE 1:25



5 970 MATURE TREE TRANSPLANT
SECTION SCALE 1:50



6 970 XANTHORRHOEA TRANSPLANT
SECTION SCALE 1:20

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1	26.09.24	DM	ISSUE AS CONSTRUCTED
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A	08.01.24	JL	ISSUE FOR APPROVAL
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PROJECT
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STAGE OR PHASE
FORESHORE STAGE 2
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SCALE	AS SHOWN		
DRAWING NUMBER	CAT-64-970	REV	1

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GENERAL NOTES

1. These drawings are to be read in conjunction with all architectural and other consultants' drawings and specifications and with such other written instructions as may be issued. Any discrepancies shall be referred to the superintendent for clarification before proceeding with work.
2. All dimensions are in millimetres and those relevant to setting out (excludes finishes) and offsite work shall be verified by the contractor before construction and fabrication are commenced. The engineer's drawings shall not be scaled.
3. All levels and grid co-ordinates are in metres.
4. During construction the contractor shall be responsible for maintaining the structure in a stable condition and no part shall be over stressed under construction activities.
5. Workmanship and materials shall be in accordance with the current edition of the relevant SAA codes and the by-laws and ordinances of the relevant building authority, except where varied by the contract documents.

DESIGN CRITERIA

1. Dead, live, wind and earthquake loads to AS1170.
2. Design Wind Speed
   Region A
   Terrain Category 2.5
   Regional Gust Wind Speed = 45m/sec (ULTIMATE LIMIT STATE)
   Regional Gust Wind Speed = 37m/sec (SERVICE LIMIT STATE)
3. Earthquake
   kp = 1.0
   Hazard Factor Z = 0.09 (Perth)
4. Foundations
   Foundations designed for Class 'S' site with minimum 150kPa allowable bearing pressure.
5. Live Loads

Decking:	3kPa to AS1170.1
Balustrade:	C3 to AS1170.1
Roof construction load:	0.25kPa to AS1170.1
Retaining Wall Surcharge:	3kPa to AS1170.1

BUILDER NOTE - COMPLIANCE INSPECTIONS

1. As part of the building licence for this project, the builder may be required to have the structural engineer certify the completed structure has been built in accordance with the approved drawings & /or with any subsequent written instructions.
2. If WA Structural Consulting are to provide this certification, the builder must arrange for WA Structural Consulting to inspect each of the structural items at appropriate stages. These items and stages include, but are not limited to the following:,
   2.1. Concrete reinforcement, prior to pouring of concrete in:
      2.1.1. Footing Excavations
      2.1.2. Slabs on ground
      2.1.3. Suspended slabs and beams
      2.1.4. Concrete columns and walls
      2.1.5. Retaining walls
   2.2. Structural steelwork prior to any cladding being fixed.
   2.3. Concrete wall panel connections.
3. The builder must provide appropriate evidence that the specified concrete has been supplied for each concrete element.
4. The builder must provide evidence that the required levels of foundation compaction have been achieved.
5. Where a geotechnical engineer has made specific recommendations, evidence that these have been achieved must be provided.
6. Unless fees for our inspections and certifications have been previously negotiated with WA Structural Consulting by others, these fees will be the builder's responsibility. It is required that the builder negotiate these fees with the engineer at a tender stage.
7. If the builder requires the fabrication drawings to be checked & certified by the project engineer, the costs associated with this will be the builder's responsibility, unless these fees have been previously negotiated with WA Structural Consulting by others. This must be confirmed by the builder.

CONCRETE AND REINFORCEMENT

1. All concrete works shall be in accordance with AS3600.
   Concrete specification shall be U.N.O.:

Location	F'C (MPA)	MAX.AGG SIZE (mm)	SLUMP (mm)
Footings	25	20	65
Slab on Ground	25	20	65
In Situ Retaining Walls	32	20	60
Precast	32	20	80
Cavity Fill	15	10	100

   Cover to Reinforcement shall be:

Location	Bottom (mm)	Top (mm)	Sides (mm)
Footing	70	50	50
Slab on Ground	50	40	50
In Situ Retaining Walls	32	20	60
Precast	50	40	40
Cavity Fill	50	50	20 U.N.O

2. Reinforcement shall be supported on approved plastic or plastic tipped wire chairs and hold rigidly in position as follows:
   a. Bars up to N12 and fabric - 800mm centres
   b. Bars N16 and larger - 1200mm centres
   * Welding reinforcement is not permitted unless approved by engineer.
3. Construction joints shall be scabbled, cleaned and coated with a cement/water slurry immediately prior to placing concrete.
4. Concrete shall be compacted using mechanical vibrators.
5. Concrete shall be cured for a minimum of 7 days by flooding, keeping continuously moist, the application of an approved curing compound or by other means approved by the engineer.
6. No holes or chases other than those shown on the drawings shall be made unless approved by engineer. Pipework passing through footing beams shall be to the approval of the engineer and shall be wrapped with a compressible material of minimum 6mm thickness.
7. Formwork and stripping times shall comply with AS3610. Remove formwork only when concrete has attained its design (f 'c) strength unless otherwise instructed by the structural engineer.
8. Control, expansion and contraction joints shall be constructed as detailed. Saw cut joints shall be made within 12 hours of concrete placement.
9. All mesh to conform with AS1304.
10. Reinforcement shall be in accordance with the following standards:

R	Indicates plain reinforcing bar R250N to AS/NZS4671
L	Indicates plain or deformed wire R500L or D500L to AS/NZS4671
RL	Indicates deformed rectangular mesh D500L to AS/NZS4671
SL	Indicates deformed square mesh D500L to AS/NZS4671
N	Indicates deformed bars D500N to AS/NZS4671
S	Indicates deformed bars D250N to AS/NZS4671
TM	Suffix indicates trench mesh using deformed bars D500L to AS/NZS4671

11. All galvanized items which are cast into concrete are to be passivated in a 0.2% sodium dichromate solution or equivalent.
12. All formwork shall be rigidly constructed of approved material. Formwork and supports shall be designed to withstand all possible load combinations during construction.

BAR DIAMETER (LARGEST)	LAP
12	600
16	800
20	1000
24	1200
28	1400
32	1600

Note: To be used U.N.O

14. Chemset Anchors U.N.O to be M16 HCR 8.8 rods with HILTI-HIT-HY-200 Adheisive minimum 150mm embedment. Installed in accordance with Manufacturers Specification and Installation Procedure.

FOUNDATIONS

1. Design is based on an allowable bearing pressure of 150kPa. It is the builder's responsibility to confirm the foundation type prior to commencing construction. Should the foundation type or bearing capacity not satisfy the above criteria the builder shall immediately contact engineer prior to construction proceeding.
2. Builder to grub out and remove all organic material and debris from the building platform.
3. Any soft areas shall be dug out and replaced with approved non-plastic fill.
4. All site preparation works shall be in accordance with site specific Geotechnical report and requirements.
5. Ensure a minimum of 8 blows per 300mm is achieved with a calibrated Perth Sand Penetrometer in accordance with AS1289.6.3.3
6. The building platform is to be shaped to ensure it drains to its perimeter and that such drainage is taken away from the platform area.
7. Footings at the lowest level must be the first footings constructed.
8. Located plumbing lines over top of footings and step footings.

MASONRY

1. All blockwork and brickwork shall be in accordance with AS3700
2. Concrete blocks shall be in accordance with AS2733
3. Reinforcement and concrete core filling shall comply with the notes on "concrete and reinforcement".
4. Mortar shall be classification M3 or M4 within 1km of open water or other severe corrosive environments. All mortar mix to AS3700.
5. Masonry units shall have a minimum compressive strength of 15MPa.
6. As follows:
   a. Bond beam reinforcement shall be continuous at intersecting walls and bars anchored and lapped to develop full tensile stress.
   b. Support reinforced brick lintels for 14 days minimum.
7. Cleanout blocks shall be provided at the base of all cores to be concrete filled. Alternatively the builder shall open such cores for cleaning by an approved method.
8. All cores to be concrete filled shall be cleaned out by hosing prior to final setting or mortar at all lifts or by rodding prior to concrete filling.
9. Retaining walls shall be fully core filled. Backfill to retaining walls shall not be carried out until 14 days after core filling.
10. Provide 10mm stack bonded control joints where shown. Control joint to consist of flexible masonry anchors every 3rd course. Brunswick type MFA 3/3. Apply flexible sealant over backing rod.
11. Cross walls shall be fully bonded for the full height of intersecting wall.
12. Horizontal chasing is not permitted without written approval from the engineer.
13. Lap wires 500mm at splices and around corners and COG 500mm into intersecting walls. 20mm cover to all wires.
14. All wires in external face of external leaf to be galvanised to AS/NZS4680.
15. Masonry ties are to be provided at no more than 600mm spacing in each direction, and max 300mm from top of wall, side of control joint or perimeter of opening.
16. Ties to be grade 316 stainless steel in corrosive environments.
17. Masonry abutting concrete footings to typically be isolated with 10mm Ableflex expansion foam or similar approved product UNO.

STRUCTURAL STEEL

1. All steelwork shall be in accordance with:
   AS4100 steel structures
   AS4600 cold formed steel structures
2. Fabricator to check all dimensions before cutting materials or manufacturing. fabrication to AS4100 UON. These drawing are to be read in conjunction with the project architectural and other consultants' drawings.
3. Unless noted otherwise all steel shall be:
   a. AS3678 grade 250 hot rolled plates
   b. AS3679.1 grade 300 hot rolled UB, PFC, TFC, TFB, EA, UA and FLATS
   c. AS3679.2 grade 300 WB and WC
   d. AS1163 grade 250 for circular hollow sections Ø165mm and less
   e. AS1163 grade 350 for circular hollow sections larger than Ø165mm and rectangular hollow sections.
   f. AS1397 500MPa for 1.2mm thick purlins and girts
   g. 450MPa for 1.6mm thick purlins and girts
   h. 450MPa for 1.0 thick CF Channels
   i. 450MPa for 1.6mm thick CF Channels
4. Galvanising shall be hot dipped to AS/NZS 4680
5. Bolts shall be galvanised and of sufficient length to exclude the thread from the shear plane. A suitable washer shall be used under all nuts, when tensioning is specified high strength bolts shall be fully tensioned with load indicating washers to the requirements of AS4100.
6. Bolt legend 4.6/S commercial grade 4.6 bolts snug tightened 8.8/S high strength grade 8.8 bolts snug tightened. 8.8/TB high strength grade 8.8 bolts tensioned bearing connection. 8.8/TF high strength grade 8.8 bolts tensioned friction connection.
7. Unless otherwise specified the following shall apply -
   a. Cleats, brackets, stiffeners etc. to be 10mm thick, ex-standard square edge flats U.N.O.
   b. Welding to be carried out in accordance with AS/NZS 1554. 1:1995 welding consumables to be E48XX or W50X U.N.O. all welds to be 6MM CFW SP category U.N.O CPBW to be SP category U.N.O.
   c. Inspection to be carried to AS/NZS 1554.1:1995. All GP/SP welds to be 100% visually scanned. SP welds allow for 25% visual examination U.N.O.
   d. 6mm end plates to all hollow sections (seal weld).
   e. Bolts to be G 8.8/S
   f. Bolt hole clearance 2mm
   g. Hold down bolt clearance 4mm
   h. Grout - a space for 40mm of 2:1 sand: cement mortar of damp earth consistency under all base plates.
   i. Connections - minimum of 2-M16 8.8/S bolts
   j. Bracing intersects on centrelines and centre of gravity for angles.
8. Fabricator shall allow for all cleats and other fixings required by the supervisor.
9. All column base plates shall be set on 20mm min. of 1:2 cement and sand grout.
10. Seal all open ends of pipes or RHS members. Grind off all visible welds and brand marks to neat appearance where specified.
11. See below:
   a. The contractor shall remain responsible at all times for providing all necessary temporary bracing and other supports during erection, to stabilise the partially constructed building.
   b. Particular attention must be paid to the buckling stability of beams and columns prior to the connection of purlins, girts, fly braces and other bracing elements.
   c. It is the responsibility of the builder to obtain proper technical advice wherever necessary to ensure the partially completed structure is safe from collapse.
12. Treatment:
   All steel connection plate and bolts to be hot dip galvanize (600 g/sqm)
   Holding down bolts - hot dip galvanize (600 g/sqm)
13. Bitumen paint all steelwork for 50mm above ground level / top of footing and 100mm into footing depth with Taubmans Interzone or equivalent

STRUCTURAL TIMBER

1. Structural timber shall comply with AS1720 timber structure code.
2. All timber to be seasoned F14, class 2, strength group SD5, joint group JD2 and treated with creosote to hazard class H4 unless noted otherwise.
3. All timber work to be in accordance with :
   - AS1684 - SAA timber framing code.
   - AS1720 - SAA timber structures code.
4. All timber and steel connections to be in accordance with AS1720.
5. Ensure no knots or gum veins in timber used.
6. Coat all timber in contact with ground with bitumen paint or similar approved.
7. All structural details to be confirmed, checked and site measured by builder prior to construction. Report any discrepancies to structural engineer.
8. Treatment :
   - H1 - Interior use, above ground.
   - H2 - Interior use, above ground, subject to termites.
   - H3 - Exterior use, above ground, subject to periodic wetting.
   - H4 - Exterior use, in ground, subject to severe wetting.
   - H5 - Exterior use, in ground, with or in fresh water.
   - H6 - Exposed to marine water.
9. Required bending stress:
   - MGP10 fb = 16 MPa
   - MGP12 fb = 28 MPa
   - F14 fb = 36 MPa
   - GL17 fb = 40 MPa
   - LVL13 fb = 48 MPa
   - LVL15 fb = 59 MPa
   - LVL18 fb = 72 MPa
10. All bolted timber connections to be re-tightened at end of project prior to completion, ensure no splitting of timber occurs.
11. All proprietary systems (floor/wall/roofing) to be installed in strict accordance with manufacturer's specifications and details.
12. Bush Poles :
   - All timber to AS1720.
   - Minimum F11 grade CCA / H4 treated seasoned softwood. S6 strength group.
   - Free from decay, shakes & fractures,resin pockets and surface damage.
   - Heartwood not to exceed 50% of the diameter at each end or be within 35mm from the surface.
13. Bitumen paint all timber posts/columns for 50mm above ground level / top of footing and 100mm into footing depth with Taubmans Interzone or equivalent

LIMESTONE RETAINING WALL SPECIFICATION NOTES

1. Width 'b' at any height to be no less than half of retained height 'h'. step wall to suit
2. Walls to be built on compacted sand, compact ground under footing to resist 7 blows per 300mm of a standard 16mm dia penetrometer over a depth of 600mm.
3. These walls are applicable to well drained sandy soil conditions only.
4. Walls resisting clay soil pressures and/or hydrostatic pressures to be referred to the engineer.
5. All reconstituted limestone to be first grade quality & free from soft pockets.
6. Rubble shall not be used to fill voids.
7. Reconstituted limestone to have a dry density of at least 1600 kg/m3 and a crushing strength of at least 5mpa.
8. Mortar shall be classification M3 or M4 within 1km of open water or other severe corrosive environments. All mortar mix to AS3700. All mortar joints to be 20mm thick and fully mortared.
9. All topsoil, vegetation and deleterious matter shall be removed from the foundation area.
10. Vertical thickness of wall to be adequately bonded by building in header blocks - refer cross section
11. No backfilling until 7 days after walls have been built.
12. All backfilling shall be carried out using material which shall generally be sandy in nature and free from large pieces of rock to the extent that the
    material can be compacted using a vibrating plate compactor to meet the requirements of the specification.
13. Backfill shall not be dumped behind wall in a manner which will cause shock loading on the wall
14. Backfill shall be clean sand compacted in shallow (300) layers using light compacting equipment
15. In all cases the backfill material shall be selected such that once compacted, the standard of compaction can be measured using a standard perth penetrometer.
16. Compaction of the backfill material to the front and back of the wall to be compacted 95% modified max dry density.
17. Prior to practical completion the contractor shall provide written certification from a practising structural engineer that the wall construction & backfill compaction has been carried out in accordance with this drawing and the specification.
18. Construction Joints (CJ) shall be constructed within the retaining wall where noted below:
(i) at max. 10m centres along wall face
(ii) where the angle between faces of two walls exceeds 180 degrees, in which case the CJ is to be located on one side of the change in direction, at a distance away from the direction change equal to the base width of the wall.
19. Construction joints shall be 15mm wide and filled with expanded polyethylene (100mm deep) covered with a 25mm deep mastic of colour to match wall mortar. joints are to extend through wall and any fences, but need not extend through base course of limestone wall.
20. Select blocks to ensure intact faces only visible in facework.

ALUMINIUM

1. All Aluminium shall be in accordance with AS1664.
2. All Aluminium welding shall comply with AS1664.
3. Unless noted otherwise, all aluminium to be:
   - Plates: Grade 5083 H116/h321 or 5083 H112 Aluminium
   - SHS/RHS/CHS: Grade 6060-t5 aluminium
   - Fixings: grade 316 stainless steel
   - Welds: 5mm continuous fillet, category sp, filler allow to be grade 5186,5356 or 5556 aluminium
4. All fixings into Aluminium members to be stainless steel (SS316) or equivalent capacity aluminium fixings.
5. Provide nylon washers and packers for all and any connections between steel and aluminium.
6. Adequate protective coatings are to be applied to aluminum cast into concrete.

PRECAST CONCRETE

1. All precast units shown are for service conditions only. The contractor is responsible for all casting,lifting, transportation and propping requirements and must satisfy himself that they have been constructed to meet the design criteria noted. Any queries regarding precast concrete units shall be flagged during the tender process. If in doubt, ask.
2. Contractor to obtain Engineer's Design Certification for all elements of precast concrete work as required to the relevant Australian Standards (Lifting, bracing, propping as required).
3. Panels are to be securely propped until designed connections have been installed and are sufficiently restraining panels.
4. U.N.O all chemical anchors fixed into concrete panels to be galvanised HILTI-HAS-E-F rods with HILTI-HIT-HY-200 adhesive.
5. All grout used for panels shall be non shrink high strength grout to achieve min 40mpa compressive strength typ.
6. Precast concrete strength is for final position. Contractor to confirm required lifting strength in accordance with lifting engineers requirements. Shall be no less than 15 MPA.

HDPE DECKING AND BOARDS

1. All HDPE battens and other HDPE members to be supplied and installed in strict accordance with manufacturers specification.

PRELIMINARY
NOT FOR CONSTRUCTION
INFORMATION ONLY

STANDARD NOTES

1. **SET OUT & DIMENSIONS.** THE CONTRACTOR SHALL SET OUT ALL PATHS, WALLS, HARD SURFACES AND ELEMENTS EITHER ON OR OFFSITE PRIOR TO CONSTRUCTION AND SHALL OBTAIN THE SUPERINTENDENTS SET OUT APPROVAL PRIOR TO WORKS COMMENCING. WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER SCALE. CHECK ALL DRAWING SCALES IN CONJUNCTION WITH DRAWING SIZE.
2. **SERVICES & SITE ASSETS.** THE CONTRACTOR SHALL INVESTIGATE THE NATURE AND LOCATION OF ALL EXISTING SERVICES AND RETAINED SITE ASSETS AFFECTED BY THEIR WORKS. FAILURE TO TAKE DUE CARE SHALL NOT LIMIT THE CONTRACTORS LIABILITIES.
3. **REFERENCE.** THE CONTRACTOR SHALL REFER TO ALL CONTRACT DOCUMENTS, THE SPECIFICATION AND DRAWINGS PRIOR TO AND DURING THE WORKS.
4. **DISCREPANCIES.** NOTIFY SUPERINTENDENT OF ANY SUSPECTED OR KNOWN DISCREPANCIES OR ERRORS PRIOR TO THE ORDERING OF AFFECTED MATERIALS AND OR CONSTRUCTION OF AFFECTED WORKS.
5. **RELEVANT STANDARDS.** THE CONTRACTOR SHALL UNDERTAKE ALL PRICING AND WORKS IN ACCORDANCE WITH CURRENT INDUSTRY BEST PRACTICE AND ALL RELEVANT AUSTRALIAN STANDARDS.
6. **SERVICE LOCATOR.** THE CONTRACTOR SHALL UNDERTAKE A DIAL BEFORE YOU DIG PROCESS PRIOR TO COMMENCING WORKS ON SITE. THE CONTRACTOR SHALL ENGAGE A SERVICE LOCATOR TO MAP THE SPECIFIC LOCATIONS AND DEPTH OF ALL SERVICES AND ADVISE ALL RELEVANT STAFF AND SUBCONTRACTORS IN WRITING PRIOR TO COMMENCING WORKS ON SITE.

1	27.09.24	DM	ISSUE AS CONSTRUCTED
B	20.05.24	JL	ISSUE FOR CONSTRUCTION
A	08.01.24	JL	ISSUE FOR APPROVAL
REV	DDMMYY	ID	DESCRIPTION
REV	DATE	BY	ISSUE OR AMENDMENT

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Integrated Science & Design
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PROJECT
CATALINA
-
STAGE OR PHASE
FORESHORE STAGE 2
-
DRAWING TITLE
NOTES
-
CLIENT
TAMALA PARK REGIONAL COUNCIL

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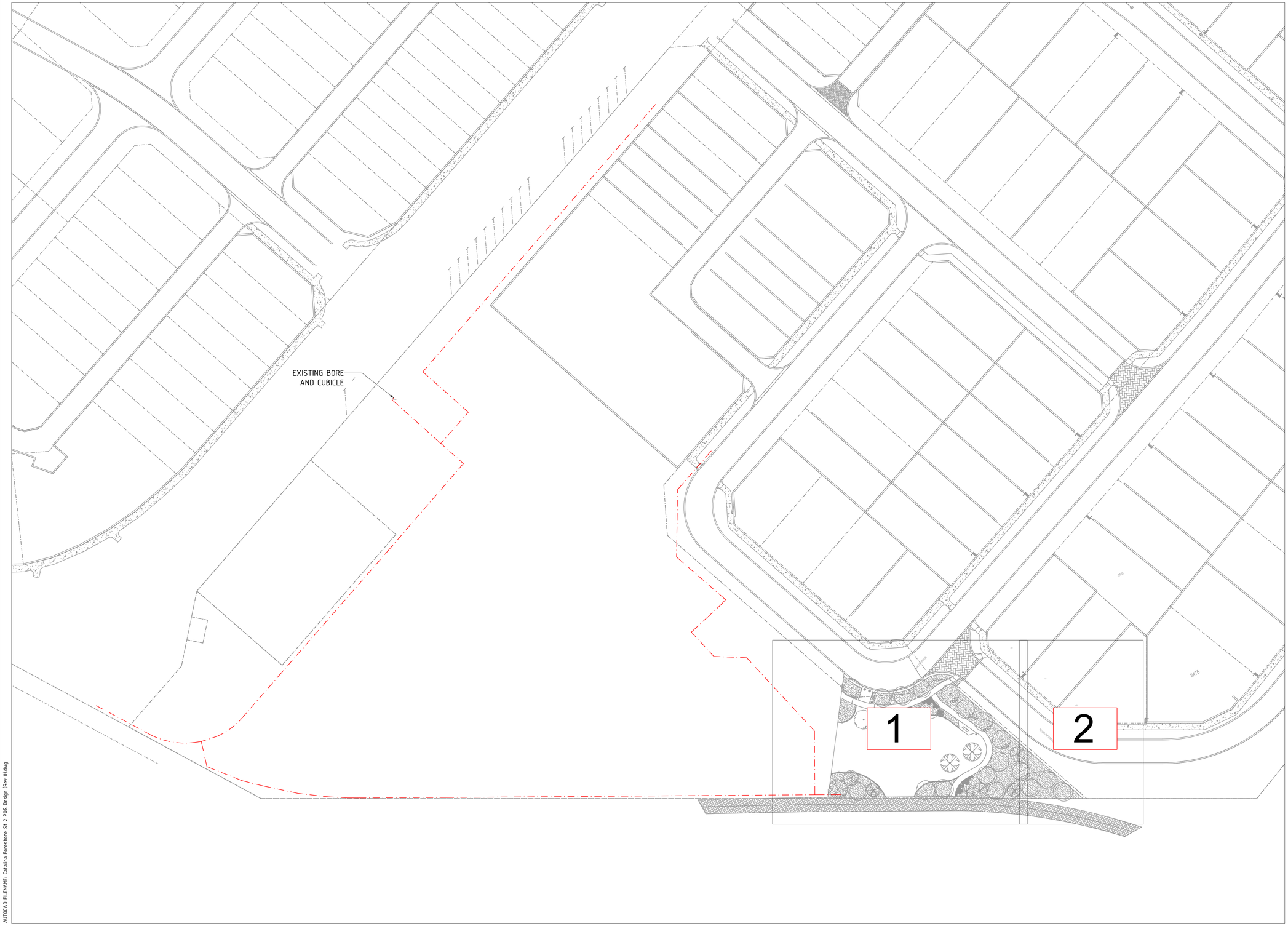
DESIGNED BY	JL	PRELIM DESIGN REVIEWED BY	ZF
DRAWN BY	JL	PRELIM DWG REVIEWED BY	ZF
DATE INITIALLY DRAWN	08.01.24		
SCALE	AS SHOWN		
DRAWING NUMBER	CAT-64-980	REV	1

REF U:\CURRENT PROJECTS\CATALINA, TAMALA PARK(CL) DRAWINGS\(JOB CODE) AUTOCAD\(JOB CODE) LANDSCAPE\STAGE 31 POS\CAT58 CATALINA STAGE 31 DET.DWG



AUTOCAD FILENAME: Catalina Foreshore S1 2 POS Design (Rev 0).dwg

REV	DATE	DESCRIPTION	DWN	CKD
A	14/02/2024	ISSUED FOR APPROVAL	P.K	J.S
0	12/04/2024	ISSUED FOR CONSTRUCTION	R.V	J.S

REV	DATE	DESCRIPTION	DWN	CKD

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NewGround DESIGN SERVICES

SCALE :	1 :NTS @ A1 SHEET
DESIGNER :	P. KULKARNI
DRAWN BY :	P. KULKARNI
APPROVED BY :	J. STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

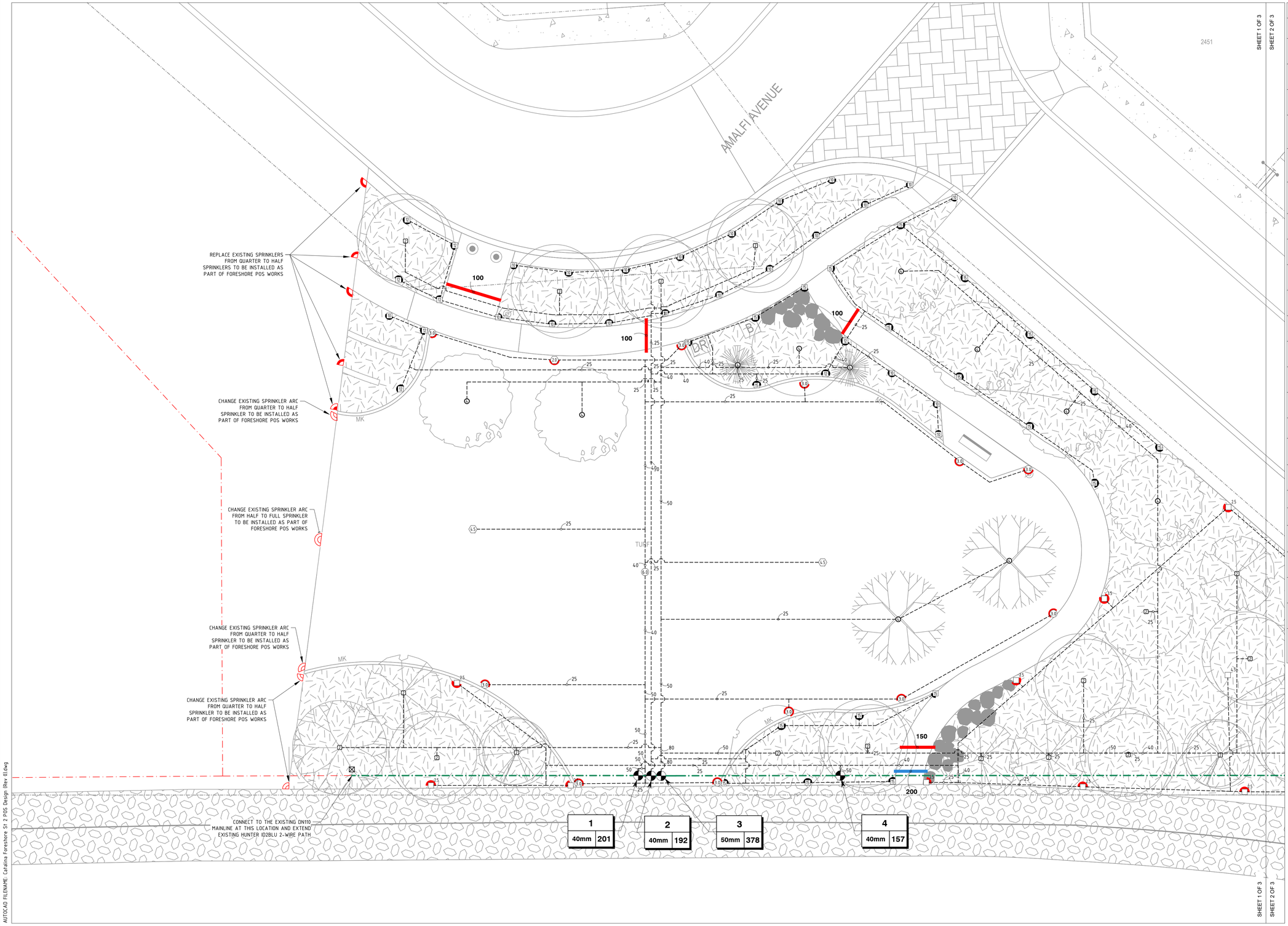
CLIENT :

EMERGE ASSOCIATES

PROJECT :

CATALINA
FORESHORE STAGE 2 POS
IRRIGATION WORKS - SHEET KEY

DATE :	DESIGN NO. :	SHEET NO. :
14/02/2024	18716-00	COVER PAGE



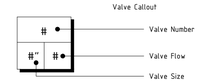
AUTOCAD FILENAME: Catalina Foreshore ST 2 POS Design (Rev 0).dwg

IRRIGATION SCHEDULE

SYMBOL	DESCRIPTION	kPa
10 Q, 10 T, 10 H, 10 TT, 10 TQ, 10 F	TORO 570Z-12P 10 Series MPR NOZZLE ON 15mm x 300mm POLY ARTIC RISER	200
12 Q, 12 T, 12 H, 12 TT, 12 TQ, 12 F	TORO 570Z-12P 12 Series MPR NOZZLE ON 15mm x 300mm POLY ARTIC RISER	200
15 Q, 15 T, 15 H, 15 TT, 15 TQ, 15 F	TORO 570Z-12P 15 Series MPR NOZZLE ON 15mm x 300mm POLY ARTIC RISER	200
2	2 x TORO FB-50 PC FLOOD BUBBLERS ON A TORO 570Z-06P WITH BLUE FLEX	250
4	4 x TORO FB-200 PC FLOOD BUBBLERS ON A TORO 570Z-06P WITH BLUE FLEX	250

SYMBOL	DESCRIPTION	kPa	l/m	Rad (m)
2.0	HUNTER I-20-06-LA-SS 2.0 LA NOZZLE & 20mm X 300mm ARTICULATED RISER	350	8	7.65
3.5	HUNTER I-20-06-LA-SS 3.5 LA NOZZLE & 20mm X 300mm ARTICULATED RISER	350	13.3	9.63
4.5	HUNTER I-20-06-LA-SS 4.5 LA NOZZLE & 20mm X 300mm ARTICULATED RISER	350	16.6	9.63
3.0	HUNTER I-20-06-SS 3.0 STD. NOZZLE & 20mm X 300mm ARTICULATED RISER	350	12.3	10.71
6.0	HUNTER I-20-06-SS 6.0 STD. NOZZLE & 20mm X 300mm ARTICULATED RISER	350	24.5	11.79
2.5	HUNTER I-20-12-LA 2.5 LA NOZZLE & 20mm X 300mm ARTICULATED RISER	350	10.6	9.09
3.5	HUNTER I-20-12-LA 3.5 LA NOZZLE & 20mm X 300mm ARTICULATED RISER	350	13.3	9.63
4.5	HUNTER I-20-12-LA 4.5 LA NOZZLE & 20mm X 300mm ARTICULATED RISER	350	16.6	9.63

SYMBOL	DESCRIPTION
	BERMAD 200 SERIES SOLENOID CONTROL VALVE WITH HUNTER ICD-100 DECODER (SIZE AS SHOWN)
	50mm MAINLINE FLUSHING VALVE
	LIGHTENING SURGE PROTECTION
	P2 CABLE PIT
	Irrigation Lateral Line: PN9 uPVC SWJ LATERAL PIPEWORK (SIZE AS SHOWN)
	DN110 PE100 PN12.5 BLUE STRIPE MAINLINE PIPEWORK IN INTERNAL SECTIONS OF PARKS
	EXISTING DN110 PE100 PN 12.5 MAINLINE PIPEWORK
	Pipe Sleeve: PN9 uPVC SLEEVE BY LANDSCAPE CONTRACTOR (SIZES AS SHOWN)
	DN200 PN10 PE100 POLY SLEEVE INSTALLED BY IRRIGATION CONTRACTOR IN COORDINATION WITH THE CIVIL AND LANDSCAPING CONTRACTORS



CERTIFIED IRRIGATION DESIGNER IRRIGATION AUSTRALIA LIGHTS LANDSCAPE/TURF CONSTRUCTION

0 1 2 3 4 5m
SCALE 1:100 ON A1

REV	DATE	DESCRIPTION	DWN	CKD
A	14/02/2024	ISSUED FOR APPROVAL	P.K	J.S
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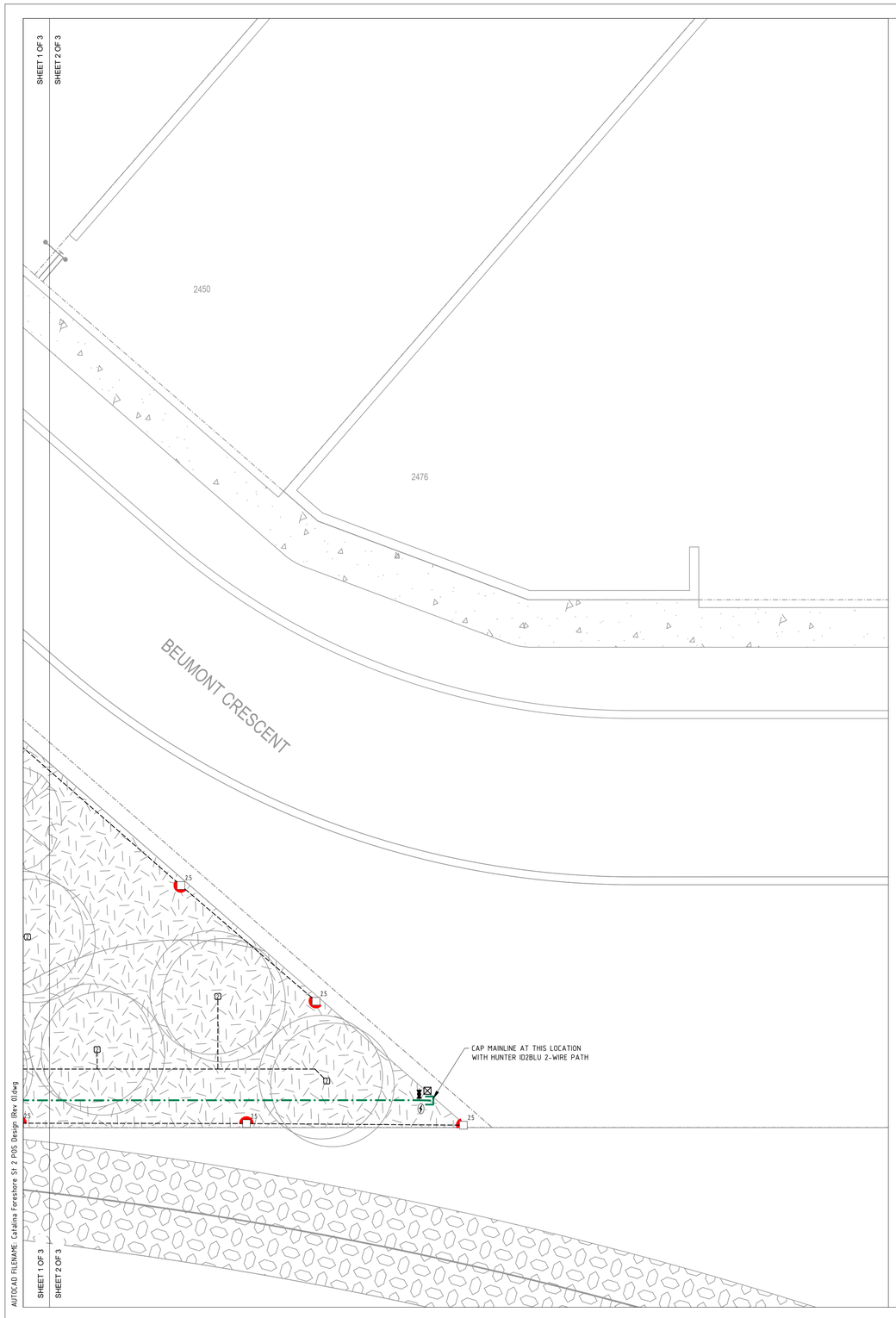
SCALE :	1 :100 @ A1 SHEET
DESIGNER :	P. KULKARNI
DRAWN BY :	P. KULKARNI
APPROVED BY :	J. STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT :
EMERGE ASSOCIATES

PROJECT :
CATALINA
FORESHORE STAGE 2 POS
IRRIGATION WORKS

DATE :	DESIGN NO. :	SHEET NO. :
14/02/2024	18716-01	1 OF 3



AUTOCAD FILENAME: Catalina Foreshore S1 2 POS Design (Rev 0).dwg

VALVE SCHEDULE

NUMBER	TYPE	FLOW (l/min)	PRECIP (mm/hr)	APP'N (mm/week)	ST'N TIME (min)
1	Turf Rotor	201	13	40	37
2	Shrub Spray	191.73	32	40	15
3	Bubbler	378.4	-	40	15
4	Shrub Rotor	157.1	13	40	37

NOTE:

1. THESE WORKS ARE TO BE INSTALLED TO MEET THE CITY OF WANNEROO IRRIGATION SPECIFICATIONS (JAN 2024 VERSION 1.0).
2. MAINLINE AND LATERAL PIPES ARE TO BE INSTALLED TO A MINIMUM DEPTH OF 350mm AND BE INSTALLED TO A MAXIMUM DEPTH OF 450mm.
3. THE CONTRACTOR TO UNDERTAKE FLOW (PRESSURE) ADJUSTMENT OF ALL SOLENOID VALVES IN ACCORDANCE WITH THE NOMINAL OPERATING PRESSURE OF THE SPRINKLERS ATTACHED TO THE PARTICULAR SOLENOID VALVE.
4. CABLE PITS TO BEEN LOCATED AT EVERY BEND IN THE MAINLINE AND EVERY 100m IN STRAIGHT RUNS.
5. ALL HUNTER ID2BLU 2-WIRE PATHS TO BE INSTALLED IN 40MD GREY CONDUIT.
6. ANY SPRINKLERS INSTALLED WITHIN TURF AREAS ON ROAD VERGES ARE TO BE INSTALLED WITH SQUARE CONCRETE SURROUNDS.
7. THE IRRIGATION SUB CONTRACTOR SHALL SUPPLY A 13mm X 1200mm GROUND ROD FOR SURGE PROTECTION AND HOUSED WITHIN A VALVE BOX AS BELOW:-
   - AT THE END OF EACH COMMUNICATION CABLE RUN.
   - AT SPACING NOT EXCEEDING 250 METRES ALONG COMMUNICATION RUNS, OR AT EVERY 8TH DECODER.
   - OR AS PER MANUFACTURERS SPECIFICATIONS.
8. EXISTING CONTROLLER IS HUNTER ACC-99-D INSTALLED AS A PART OF FORESHORE POS WORKS.

IRRIGATION SCHEDULE

SYMBOL	DESCRIPTION	kPa
10 Q, 10 T, 10 H, 10 TT, 10 TQ, 10 F	TORO 570Z-12P 10 Series MPR NOZZLE ON 15mm x 300mm POLY ARTIC RISER	200
12 Q, 12 T, 12 H, 12 TT, 12 TQ, 12 F	TORO 570Z-12P 12 Series MPR NOZZLE ON 15mm x 300mm POLY ARTIC RISER	200
15 Q, 15 T, 15 H, 15 TT, 15 TQ, 15 F	TORO 570Z-12P 15 Series MPR NOZZLE ON 15mm x 300mm POLY ARTIC RISER	200
2	2 x TORO FB-50 PC FLOOD BUBBLERS ON A TORO 570Z-06P WITH BLUE FLEX	250
4	4 x TORO FB-200 PC FLOOD BUBBLERS ON A TORO 570Z-06P WITH BLUE FLEX	250

SYMBOL	DESCRIPTION	kPa	l/m	Rad (m)
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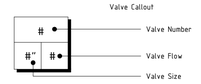
3.5	HUNTER I-20-06-LA-SS 3.5 LA NOZZLE & 20mm X 300mm ARTICULATED RISER	350	13.3	9.63
4.5	HUNTER I-20-06-LA-SS 4.5 LA NOZZLE & 20mm X 300mm ARTICULATED RISER	350	16.6	9.63
3.0	HUNTER I-20-06-SS 3.0 STD. NOZZLE & 20mm X 300mm ARTICULATED RISER	350	12.3	10.71
6.0	HUNTER I-20-06-SS 6.0 STD. NOZZLE & 20mm X 300mm ARTICULATED RISER	350	24.5	11.79
2.5	HUNTER I-20-12-LA 2.5 LA NOZZLE & 20mm X 300mm ARTICULATED RISER	350	10.6	9.09
3.5	HUNTER I-20-12-LA 3.5 LA NOZZLE & 20mm X 300mm ARTICULATED RISER	350	13.3	9.63
4.5	HUNTER I-20-12-LA 4.5 LA NOZZLE & 20mm X 300mm ARTICULATED RISER	350	16.6	9.63

SYMBOL	DESCRIPTION
	BERMAD 200 SERIES SOLENOID CONTROL VALVE WITH HUNTER ICD-100 DECODER (SIZE AS SHOWN)
	50mm MAINLINE FLUSHING VALVE
	LIGHTENING SURGE PROTECTION
	P2 CABLE PIT
	Irrigation Lateral Line: PN9 uPVC SWJ LATERAL PIPEWORK (SIZE AS SHOWN)
	DN110 PE100 PN12.5 BLUE STRIPE MAINLINE PIPEWORK IN INTERNAL SECTIONS OF PARKS
	EXISTING DN110 PE100 PN 12.5 MAINLINE PIPEWORK
	Pipe Sleeve: PN9 uPVC SLEEVE BY LANDSCAPE CONTRACTOR (SIZES AS SHOWN)
	DN200 PN10 PE100 POLY SLEEVE INSTALLED BY IRRIGATION CONTRACTOR IN COORDINATION WITH THE CIVIL AND LANDSCAPING CONTRACTORS



0 1 2 3 4 5m

SCALE 1:100 ON A1

REV	DATE	DESCRIPTION	DWN	CKD
A	14/02/2024	ISSUED FOR APPROVAL	P.K	J.S
0	12/04/2024	ISSUED FOR CONSTRUCTION	R.V	J.S

REV	DATE	DESCRIPTION	DWN	CKD

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SCALE :	1 :100 @ A1 SHEET
DESIGNER :	P. KULKARNI
DRAWN BY :	P. KULKARNI
APPROVED BY :	J. STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT :

EMERGE ASSOCIATES

PROJECT :

CATALINA
FORESHORE STAGE 2 POS
IRRIGATION WORKS

DATE :	DESIGN NO. :	SHEET NO. :
14/02/2024	18716-02	2 OF 3

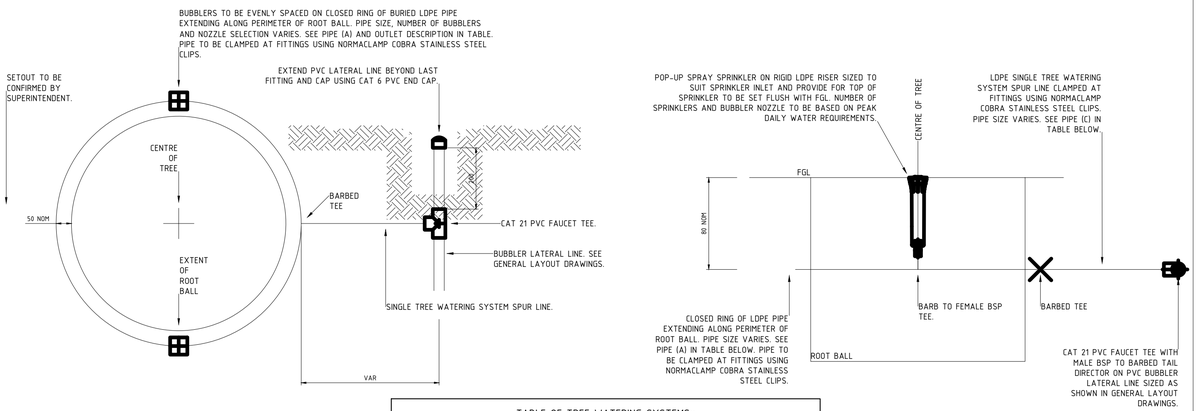
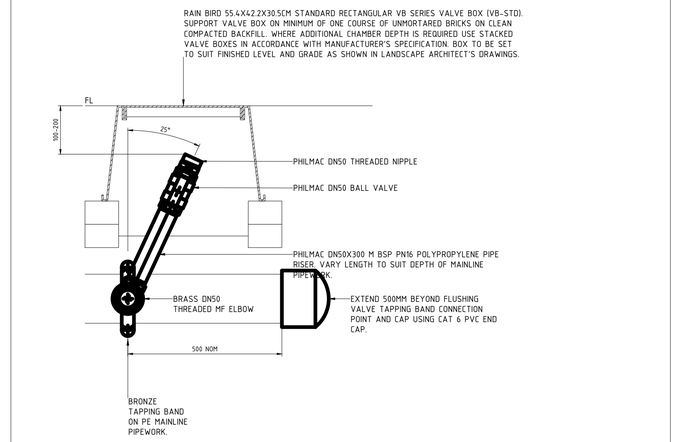


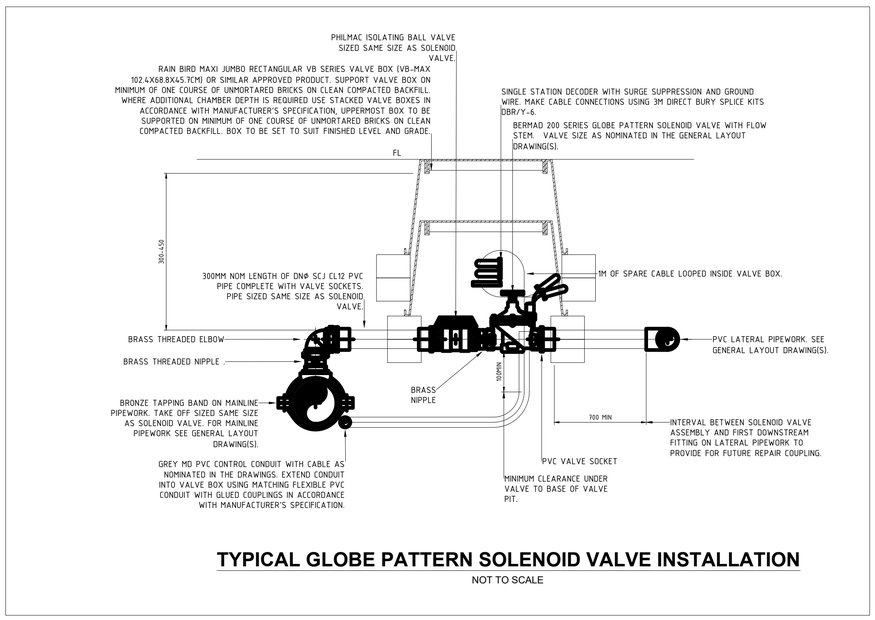
TABLE OF TREE WATERING SYSTEMS†						
SYSTEM	PLANT STOCK‡	SYSTEM FLOW(L/MIN)	20MIN VOL (L)¥	PIPE (A)	PIPE (B)	PIPE (C)
–	–	0–6	–	DN19	–	DN19
–	–	6–15	–	DN19	–	DN25
–	–	15–30	–	DN25	–	DN25

† SYSTEM DESIGN BASED ON THE PEAK DAILY WATER REQUIREMENTS SUPPLIED BY NURSERY INDUSTRY SOURCES AND OTHERS
‡ BAG STOCK SIZE (L) AND/OR NOMINAL DIAMETER OF TRANSPLANT ROOT BALL (M).
¥ VOLUME PROVIDED BY A 20MIN RUN TIME. RUN TIME TO BE ADJUSTED IN ACCORDANCE WITH PLANT WATER REQUIREMENTS AND CLIMATIC CONDITIONS.

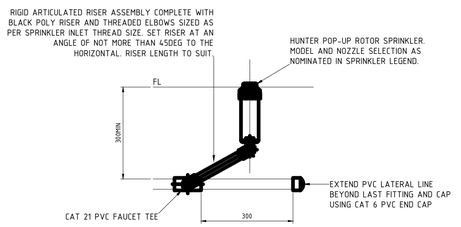
TREE WATERING SYSTEMS
NOT TO SCALE



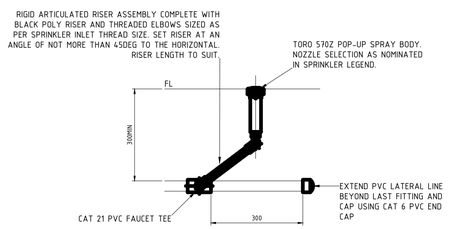
TYPICAL FLUSHING (BALL) VALVE INSTALLATION ON MAINLINE PIPEWORK
NOT TO SCALE



TYPICAL GLOBE PATTERN SOLENOID VALVE INSTALLATION
NOT TO SCALE



TYPICAL POP-UP ROTOR SPRINKLER INSTALLATION ON PVC PIPEWORK
NOT TO SCALE



TYPICAL POP-UP SPRAY SPRINKLER INSTALLATION ON PVC PIPEWORK
NOT TO SCALE

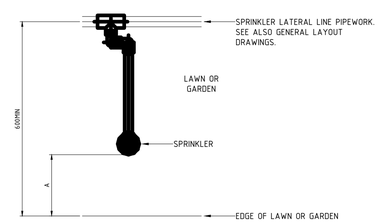


TABLE OF SPRINKLER OFFSETS		
EDGE TYPE	DIMENSION A	
	SPRAY†	ROTOR†
BACK OF KERB OR EDGE OF PAVEMENT.	100	300
GARDEN WALL WITH NO MOWING STRIP.	200	200
BUILDING FACADE WITH NO MOWING STRIP.	600	600

† SPRINKLER TYPE. SEE GENERAL LAYOUT DRAWINGS.

SPRINKLER AND LATERAL PIPE OFFSETS FROM LAWN AND GARDEN EDGES
NOT TO SCALE

AUTOCAD FILENAME: Catalina Foreshore S1 2 POS Design (Rev 0).dwg

REV	DATE	DESCRIPTION	DWN	CKD
A	14/02/2024	ISSUED FOR APPROVAL	P.K	J.S
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REV	DATE	DESCRIPTION	DWN	CKD

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FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT :
EMERGE ASSOCIATES

PROJECT :
CATALINA
FORESHORE STAGE 2 POS
IRRIGATION WORKS - TYPICAL DETAILS

DATE :	DESIGN NO. :	SHEET NO. :
14/02/2024	18716-03	3 OF 3

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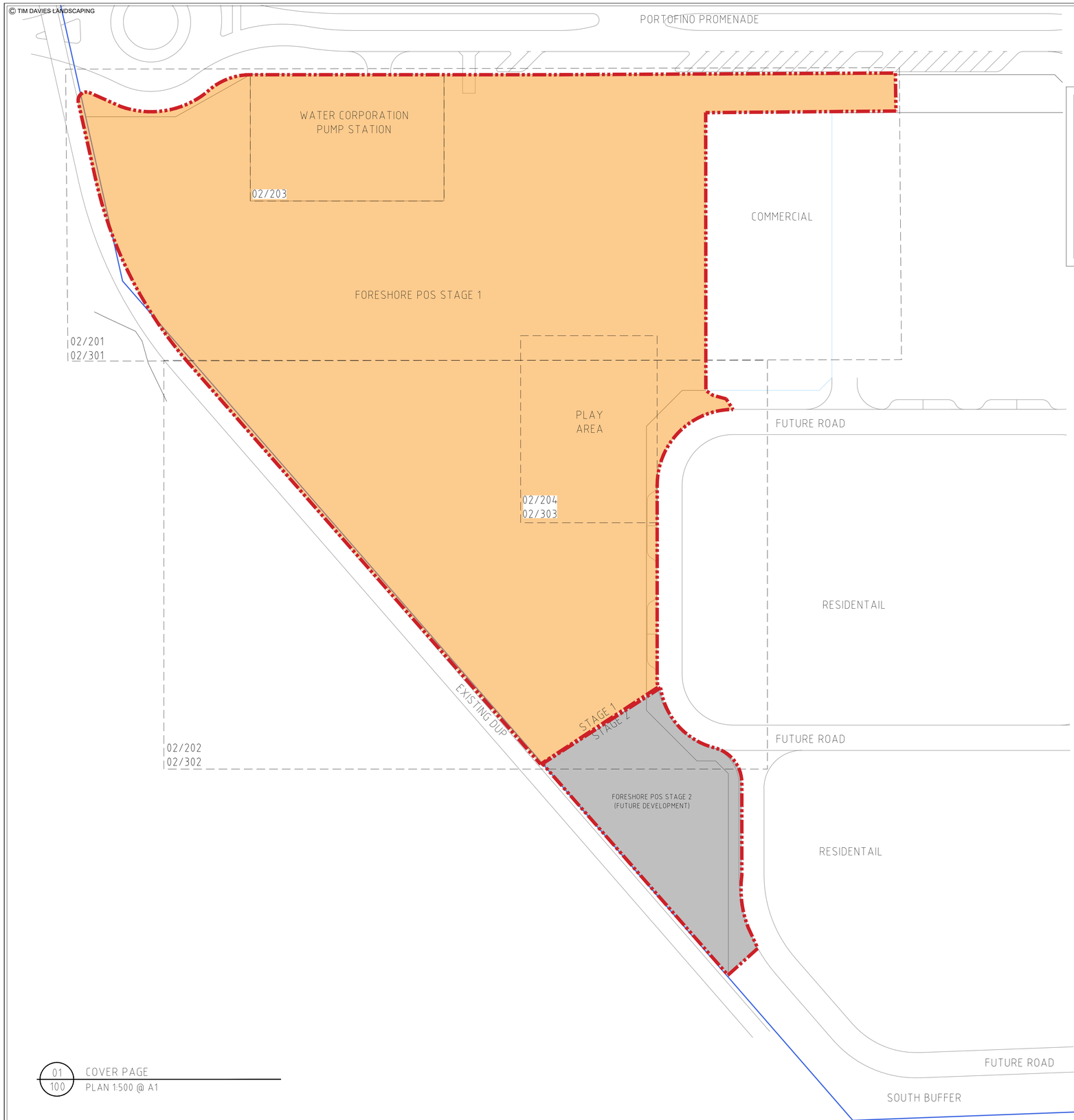

CATALINA BEACH
FORESHORE POS – STAGE 1

DRAWING NUMBER	DRAWING NAME	SCALE	REVISION
LS -101	COVER PAGE	1:500	2
LS -201	HARDSCAPE PLAN 1	1:250	2
LS -202	HARDSCAPE PLAN 2	1:250	2
LS -203	HARDSCAPE PLAN - PUMP STATION	1:100	2
LS -204	HARDSCAPE PLAN - PLAY AREA	1:100	2
LS -301	SOFTSCAPE PLAN 1	1:250	2
LS -302	SOFTSCAPE PLAN 2	1:250	2
LS -303	SOFTSCAPE PLAN - PLAY AREA	1:100	2
LS -501	DETAILS 1	AS SHOWN	2
LS -502	DETAILS 2	AS SHOWN	2
LS -503	DETAILS 3	AS SHOWN	2
LS -504	DETAILS 4	AS SHOWN	2
LS -505	DETAILS 5	AS SHOWN	2
LS -506	DETAILS 6	AS SHOWN	2
LS -507	DETAILS 7	AS SHOWN	NOT USED
LS -508	DETAILS 8	AS SHOWN	2
LS -509	DETAILS 9	AS SHOWN	2
LS -510	DETAILS 10	AS SHOWN	2
LS -511	DETAILS 11	AS SHOWN	2
LS -600	NOTES AND SCHEDULES	AS SHOWN	2

01/100 COVER PAGE
PLAN 1:500 @ A1

0 10 20 50m

CATALINA ESTATE
CATALINA BEACH, FORESHORE POS

REVISION	DESCRIPTION	BY	DATE
0	ISSUE FOR CONSTRUCTION	AF	22.09.23
1	RE-ISSUE FOR CONSTRUCTION	AF	15.10.23
2	RE-ISSUE FOR CONSTRUCTION	VW	15.02.24

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DESIGNED	AF	DRAWING TITLE	COVER PAGE
DRAWN	AF/JZ		
APPROVED	ST	DRAWING No.	12606-CB-FP-101
SCALE	1:500@A1		REVISION 2

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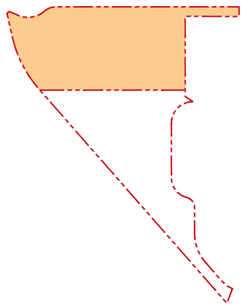


01 / 201 KEY PLAN
NTS @ A1

FOR PRODUCT AND MATERIAL SELECTION SEE SPECIFICATION NOTES ON FP-600

LEGEND

- EXTENT OF POS WORKS
- POS LOT BOUNDARY
- SEWER EASEMENT

EARTHWORKS
- 23.00 EXISTING CONTOURS / CIVIL CONTOURS
- 23.00 PROPOSED POS CONTOURS (BULK EARTHWORKS BY CIVIL)
- MOUNDING BY LANDSCAPE CONTRACTOR
- 1:20 TYPICAL GRADE
- FL 22.50 FINISH SURFACE LEVEL
- TOW27.000 TOP OF WALL LEVEL

STORMWATER CATCHMENT
- 20.00 1 YEAR EVENT
- 20.60 20% AEP EVENT
- 21.20 1% AEP EVENT

SURFACE FINISHES - EXISTING
- EXISTING CONCRETE PAVEMENT / CONCRETE BY CIVIL
- EXISTING TRAFFICABLE CONCRETE PAVEMENT / CONCRETE BY CIVIL
- EXISTING PLANTING (PORTOFINO PROMENADE EXTENSION WORKS)

SURFACE FINISHES - PROPOSED

GRC	GREY CONCRETE	01-05-07 / 501
TGRC	TRAFFICABLE GREY CONCRETE	04 / 501
AG1	AGGREGATE CONCRETE	01-05-07 / 501
TAG1	TRAFFICABLE AGGREGATE CONCRETE	04 / 501
AG2	AGGREGATE CONCRETE	01-05-07 / 501
TAG2	TRAFFICABLE AGGREGATE CONCRETE	04 / 501
SP1	STONE PAVER 01	08 / 501
SP2	STONE PAVER 02	09 / 501
	IRRIGATED PLANTING REFER TO SOFTSCAPE PLAN	
	IRRIGATED TURF	
	MULCH ONLY	
	COMPOSITE DECKING	03-08 / 503
	BALUSTRADE TO DECKING	01-02 / 503
	BOULDER EDGING/ROCK PITCHING	04-06 / 508

FURNITURE & SITE FEATURES

	TREE MARKER REFER TO SOFTSCAPE PLAN
	TREE GRATE Rev0 - REMOVED 01-03 / 505
	BENCH SEAT 09 / 502
	BAR STOOL AND TABLE
	SHELTER - COMMERCIAL AREA 05-08 / 508
	PLAYGROUND SHELTER 01-04 / 506
	PICNIC SETTING
BBQ	BBQ EQUIPMENT
	ANGLE STEEL SCREEN Rev0 - REMOVED 04-08 / 505
	RAISED TIMBER STEPS 200-450mm VARIOUS HEIGHT 01 / 508
	BOLLARD FIXED 11 / 501
	BOLLARD REMOVABLE 10 / 501
	EXISTING BOLLARD TO BE REMOVED
	BIKE RACK 12 / 501
	BIN 13 / 501
	DRINKING FOUNTAIN
	FLOOD LEVEL MARKERS TO CoW SPEC
	CoW PARK SIGN 06 / 503
	BIKE REPAIR STATION

WALLS AND EDGING

M1	MOWING KERB TYPE 01 06 / 501
M2	MOWING KERB TYPE 02 11 / 511
	CONCRETE WALL TYPE 01 01-04 / 502
	CONCRETE WALL TYPE 02 07-04 / 502, 08-07 / 502
	CONCRETE WALL TYPE 03 10 / 502
	LIMESTONE RETAINING WALL 12 / 508, 10 / 511
	HIT UP WALL Rev0 - REMOVED 02-03 / 507
	BOULDER AND ROCK EMBANKMENT Ø500-800mm VARIOUS HEIGHT 04-04-08 / 508
	SALVAGED TIMBER EDGING 04 / 509
	STEEL SHEET PILES WITH STEEL FRAME OPENINGS 01-03 / 509
	LOG EDGING VARIOUS HEIGHT 150mm MIN. 02-03 / 508

PLAY AREA

PLAY EQUIPMENT
- FLYING FOX WITH FALL ZONE
- BASKET SWING AND ASSOCIATED FALL ZONE
- 2.2m HEIGHT SLIDE AND ASSOCIATED FALL ZONE 08 / 508
- CAROUSEL AND ASSOCIATED FALL ZONE
- WATER PLAY EQUIPMENT
- COMBINATION UNIT AND ASSOCIATED FALL ZONE

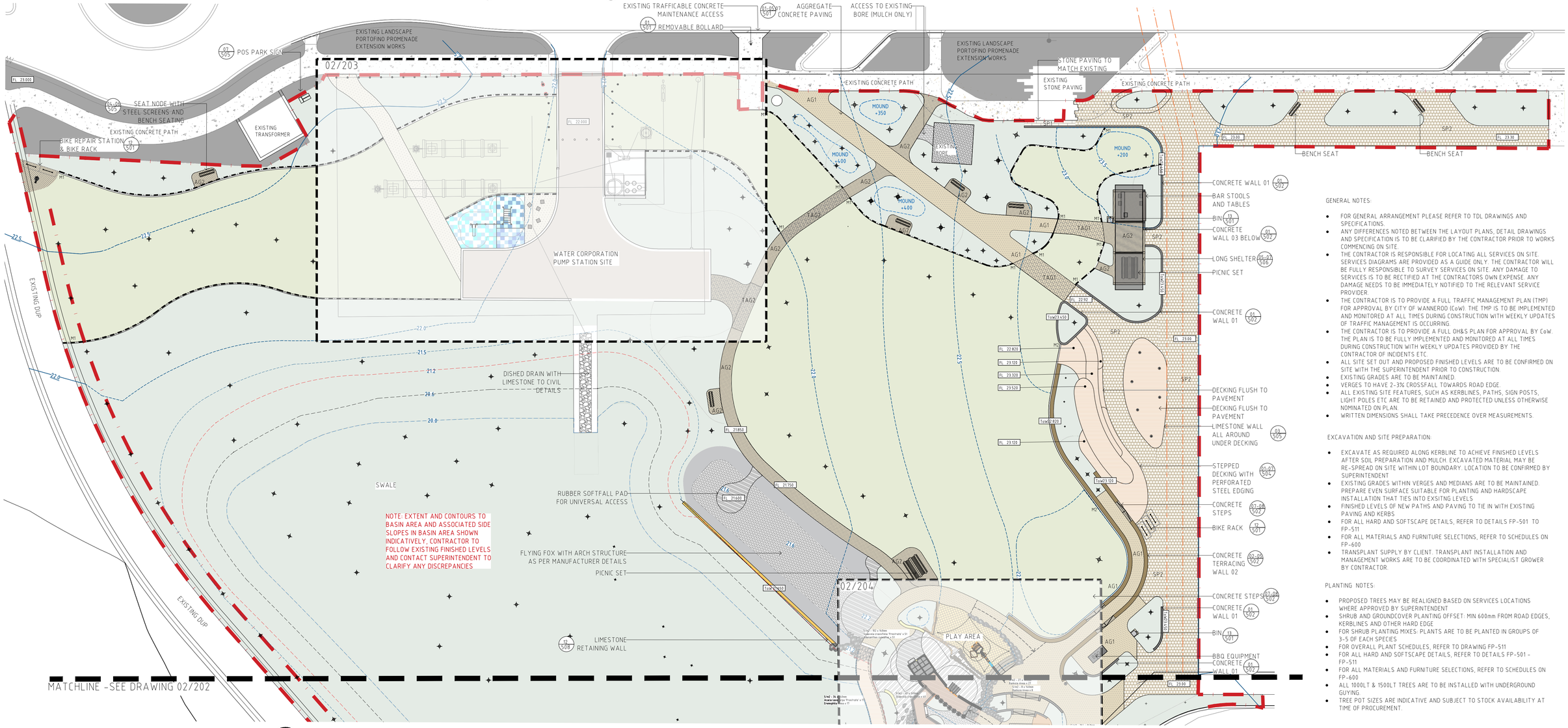
SURFACE FINISHES
- PLAYGROUND SURFACING - MULCH SOFTFALL 05-04 / 508
- PLAYGROUND SURFACING - SAND 05-07 / 508
- PLAYGROUND SURFACING - RUBBER SOFTFALL 07-08 / 508
- FREE STANDING BRICK WALL Rev0 - REMOVED 09-11 / 508
- COLOURED CONCRETE STEPS & WALL 04 03-06 / 502

PUMP STATION

SURFACE FINISHES
- PUMP STATION BOUNDARY
- PLAY MATTA SEE SPEC FOR COLOUR SELECTION
- ASPHALT - EXISTING

FITNESS EQUIPMENT
- OVERHEAD LADDER AND ASSOCIATED FALL ZONE
- SIT UP BENCH AND ASSOCIATED FALL ZONE
- PUSH UP BARS AND ASSOCIATED FALL ZONE
- SEATING CUBES

NOTE: SEE SPECIFICATION ON LS600 FOR COLOURS AND MATERIALS.



02 / 201 HARDSCAPE PLAN 1
PLAN 1:250 @ A1

0 1 2 4 6 10 20 25m

GENERAL NOTES:

- FOR GENERAL ARRANGEMENT PLEASE REFER TO TDL DRAWINGS AND SPECIFICATIONS.
- ANY DIFFERENCES NOTED BETWEEN THE LAYOUT PLANS, DETAIL DRAWINGS AND SPECIFICATION IS TO BE CLARIFIED BY THE CONTRACTOR PRIOR TO WORKS COMMENCING ON SITE.
- THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL SERVICES ON SITE. SERVICES DIAGRAMS ARE PROVIDED AS A GUIDE ONLY. THE CONTRACTOR WILL BE FULLY RESPONSIBLE TO SURVEY SERVICES ON SITE. ANY DAMAGE TO SERVICES IS TO BE RECTIFIED AT THE CONTRACTORS OWN EXPENSE. ANY DAMAGE NEEDS TO BE IMMEDIATELY NOTIFIED TO THE RELEVANT SERVICE PROVIDER.
- THE CONTRACTOR IS TO PROVIDE A FULL TRAFFIC MANAGEMENT PLAN (TMP) FOR APPROVAL BY CITY OF WANNEROO (CoW). THE TMP IS TO BE IMPLEMENTED AND MONITORED AT ALL TIMES DURING CONSTRUCTION WITH WEEKLY UPDATES OF TRAFFIC MANAGEMENT IS OCCURRING.
- THE CONTRACTOR IS TO PROVIDE A FULL OH&S PLAN FOR APPROVAL BY CoW. THE PLAN IS TO BE FULLY IMPLEMENTED AND MONITORED AT ALL TIMES DURING CONSTRUCTION WITH WEEKLY UPDATES PROVIDED BY THE CONTRACTOR OF INCIDENTS ETC.
- ALL SITE SET OUT AND PROPOSED FINISHED LEVELS ARE TO BE CONFIRMED ON SITE WITH THE SUPERINTENDENT PRIOR TO CONSTRUCTION.
- EXISTING GRADES ARE TO BE MAINTAINED.
- VERGES TO HAVE 2-3% CROSSFALL TOWARDS ROAD EDGE.
- ALL EXISTING SITE FEATURES, SUCH AS KERBLINES, PATHS, SIGN POSTS, LIGHT POLES ETC ARE TO BE RETAINED AND PROTECTED UNLESS OTHERWISE NOMINATED ON PLAN.
- WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER MEASUREMENTS.

EXCAVATION AND SITE PREPARATION:

- EXCAVATE AS REQUIRED ALONG KERBLINE TO ACHIEVE FINISHED LEVELS AFTER SOIL PREPARATION AND MULCH. EXCAVATED MATERIAL MAY BE RE-SPREAD ON SITE WITHIN LOT BOUNDARY. LOCATION TO BE CONFIRMED BY SUPERINTENDENT
- EXISTING GRADES WITHIN VERGES AND MEDIANS ARE TO BE MAINTAINED. PREPARE EVEN SURFACE SUITABLE FOR PLANTING AND HARDSCAPE INSTALLATION THAT TIES INTO EXSITNG LEVELS
- FINISHED LEVELS OF NEW PATHS AND PAVING TO TIE IN WITH EXISTING PAVING AND KERBS
- FOR ALL HARD AND SOFTSCAPE DETAILS, REFER TO DETAILS FP-501 TO FP-511
- FOR ALL MATERIALS AND FURNITURE SELECTIONS, REFER TO SCHEDULES ON FP-600
- TRANSPLANT SUPPLY BY CLIENT. TRANSPLANT INSTALLATION AND MANAGEMENT WORKS ARE TO BE COORDINATED WITH SPECIALIST GROWER BY CONTRACTOR.

PLANTING NOTES:

- PROPOSED TREES MAY BE REALIGNED BASED ON SERVICES LOCATIONS WHERE APPROVED BY SUPERINTENDENT
- SHRUB AND GROUNDCOVER PLANTING OFFSET: MIN 600mm FROM ROAD EDGES, KERBLINES AND OTHER HARD EDGE
- FOR SHRUB PLANTING MIXES: PLANTS ARE TO BE PLANTED IN GROUPS OF 3-5 OF EACH SPECIES
- FOR OVERALL PLANT SCHEDULES, REFER TO DRAWING FP-511
- FOR ALL HARD AND SOFTSCAPE DETAILS, REFER TO DETAILS FP-501 - FP-511
- FOR ALL MATERIALS AND FURNITURE SELECTIONS, REFER TO SCHEDULES ON FP-600
- ALL 1000LT & 1500LT TREES ARE TO BE INSTALLED WITH UNDERGROUND GUYING
- TREE POT SIZES ARE INDICATIVE AND SUBJECT TO STOCK AVAILABILITY AT TIME OF PROCUREMENT.

CATALINA ESTATE
CATALINA BEACH, FORESHORE POS

REVISION	DESCRIPTION	BY	DATE
0	ISSUE FOR CONSTRUCTION	AF	22.09.23
1	RE-ISSUE FOR CONSTRUCTION	AF	13.10.23
2	RE-ISSUE FOR CONSTRUCTION	VW	15.02.24

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CLIENT	SATTERLEY PROPERTY GROUP & TPRC		
DESIGNED	AF	DRAWING TITLE	HARDSCAPE PLAN 1
DRAWN	AF/JZ		
APPROVED	ST	DRAWING No.	12606-CB-FP-201
SCALE	1:250@A1		REVISION 2

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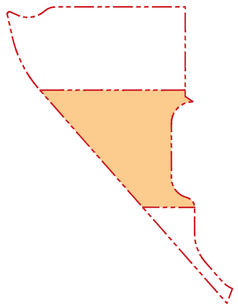


01/202 KEY PLAN
NTS @ A1

FOR PRODUCT AND MATERIAL SELECTION SEE SPECIFICATION NOTES ON FP-600

LEGEND

- EXTENT OF POS WORKS
- POS LOT BOUNDARY
- SEWER EASEMENT

EARTHWORKS
- 23.00 EXISTING CONTOURS / CIVIL CONTOURS
- 23.00 PROPOSED POS CONTOURS (BULK EARTHWORKS BY CIVIL)
- MOUNDING BY LANDSCAPE CONTRACTOR
- 1:20 TYPICAL GRADE
- FL22.550 FINISH SURFACE LEVEL
- TOW27.000 TOP OF WALL LEVEL

STORMWATER CATCHMENT
- 20.00 1 YEAR EVENT
- 20.60 20% AEP EVENT
- 21.20 1% AEP EVENT

SURFACE FINISHES - EXISTING
- EXISTING CONCRETE PAVEMENT / CONCRETE BY CIVIL
- EXISTING TRAFFICABLE CONCRETE PAVEMENT / CONCRETE BY CIVIL
- EXISTING PLANTING (PORTOFINO PROMENADE EXTENSION WORKS)

SURFACE FINISHES - PROPOSED

GRC	GREY CONCRETE	01-05.07 501
TGRC	TRAFFICABLE GREY CONCRETE	04 501
AG1	AGGREGATE CONCRETE	01-05.07 501
TAG1	TRAFFICABLE AGGREGATE CONCRETE	04 501
AG2	AGGREGATE CONCRETE	01-05.07 501
TAG2	TRAFFICABLE AGGREGATE CONCRETE	04 501
SP1	STONE PAVER 01	08 501
SP2	STONE PAVER 02	09 501
	IRRIGATED PLANTING REFER TO SOFTSCAPE PLAN	
	IRRIGATED TURF	
	MULCH ONLY	
	COMPOSITE DECKING	03-08 503
	BALUSTRADE TO DECKING	01-02 503
	BOULDER EDGING/ROCK PITCHING	04-08 508

FURNITURE & SITE FEATURES

	TREE MARKER REFER TO SOFTSCAPE PLAN
Rev0 - REMOVED	TREE GRATE 01-03 505
	BENCH SEAT 06 502
	BAR STOOL AND TABLE
	SHELTER - COMMERCIAL AREA 05-08 506
	PLAYGROUND SHELTER 01-04 506
	PICNIC SETTING
BBQ	BBQ EQUIPMENT
Rev0 - REMOVED	ANGLE STEEL SCREEN 04-08 505
	RAISED TIMBER STEPS 200-450mm VARIOUS HEIGHT 01 508
	BOLLARD FIXED 11 501
	BOLLARD REMOVABLE 10 501
	EXISTING BOLLARD TO BE REMOVED
	BIKE RACK 12 501
	BIN 13 501
	DRINKING FOUNTAIN
	FLOOD LEVEL MARKERS TO CoW SPEC
	CoW PARK SIGN 05 503
	BIKE REPAIR STATION

WALLS AND EDGING

M1	MOWING KERB TYPE 01 06 501
M2	MOWING KERB TYPE 02 11 511
	CONCRETE WALL TYPE 01 01-02 502
	CONCRETE WALL TYPE 02 02-04 502, 06-07 502
	CONCRETE WALL TYPE 03 10 502
	LIMESTONE RETAINING WALL 12 508, 10 511
Rev0 - REMOVED	HIT-UP WALL 02-03 507
	BOULDER AND ROCK EMBANKMENT Ø500-800mm VARIOUS HEIGHT 04-08 508
	SALVAGED TIMBER EDGING 04 509
	STEEL SHEET PILES WITH STEEL FRAME OPENINGS 01-03 509
	LOG EDGING VARIOUS HEIGHT 150mm MIN 02-03 508

PLAY AREA

PLAY EQUIPMENT
- FLYING FOX WITH FALL ZONE
- BASKET SWING AND ASSOCIATED FALL ZONE
- 2.2m HEIGHT SLIDE AND ASSOCIATED FALL ZONE 08 508
- CAROUSEL AND ASSOCIATED FALL ZONE
- WATER PLAY EQUIPMENT
- COMBINATION UNIT AND ASSOCIATED FALL ZONE

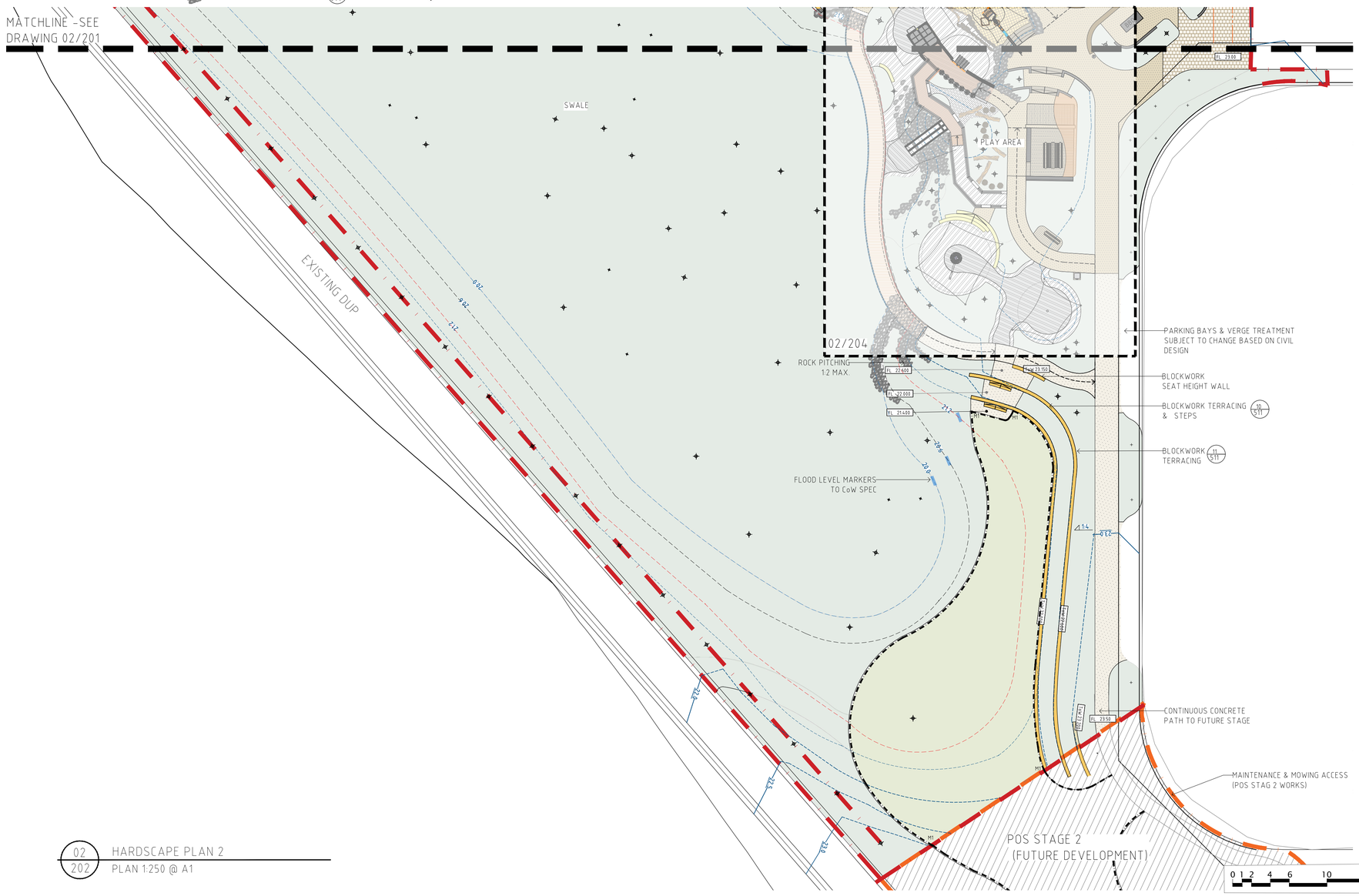
SURFACE FINISHES
- PLAYGROUND SURFACING - MULCH SOFTFALL 05-04 508
- PLAYGROUND SURFACING - SAND 05-07 508
- PLAYGROUND SURFACING - RUBBER SOFTFALL 07-08 508
- FREE STANDING BRICK WALL Rev0 - REMOVED 09-11 508
- COLOURED CONCRETE STEPS & WALL 04 03.06 502

PUMP STATION

SURFACE FINISHES
- PUMP STATION BOUNDARY
- PLAY MATTA SEE SPEC FOR COLOUR SELECTION
- ASPHALT - EXISTING

FITNESS EQUIPMENT
- OVERHEAD LADDER AND ASSOCIATED FALL ZONE
- SIT UP BENCH AND ASSOCIATED FALL ZONE
- PUSH UP BARS AND ASSOCIATED FALL ZONE
- SEATING CUBES

NOTE: SEE SPECIFICATION ON LS600 FOR COLOURS AND MATERIALS.



02/202 HARDSCAPE PLAN 2
PLAN 1:250 @ A1

GENERAL NOTES:

- FOR GENERAL ARRANGEMENT PLEASE REFER TO TDL DRAWINGS AND SPECIFICATIONS.
- ANY DIFFERENCES NOTED BETWEEN THE LAYOUT PLANS, DETAIL DRAWINGS AND SPECIFICATION IS TO BE CLARIFIED BY THE CONTRACTOR PRIOR TO WORKS COMMENCING ON SITE.
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- FINISHED LEVELS OF NEW PATHS AND PAVING TO TIE IN WITH EXISTING PAVING AND KERBS
- FOR ALL HARD AND SOFTSCAPE DETAILS, REFER TO DETAILS FP-501 TO FP-511
- FOR ALL MATERIALS AND FURNITURE SELECTIONS, REFER TO SCHEDULES ON FP-600
- TRANSPLANT SUPPLY BY CLIENT. TRANSPLANT INSTALLATION AND MANAGEMENT WORKS ARE TO BE COORDINATED WITH SPECIALIST GROWER BY CONTRACTOR.

PLANTING NOTES:

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- FOR OVERALL PLANT SCHEDULES, REFER TO DRAWING FP-511
- FOR ALL HARD AND SOFTSCAPE DETAILS, REFER TO DETAILS FP-501 - FP-511
- FOR ALL MATERIALS AND FURNITURE SELECTIONS, REFER TO SCHEDULES ON FP-600
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CATALINA BEACH, FORESHORE POS

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1	RE-ISSUE FOR CONSTRUCTION	AF	13.10.23
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CLIENT	SATTERLEY PROPERTY GROUP & TPRC		
DESIGNED	AF	DRAWING TITLE	HARDSCAPE PLAN 2
DRAWN	AF/IZ		
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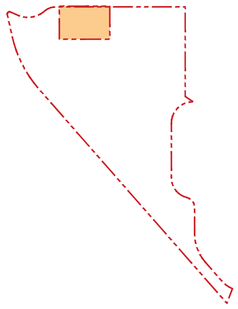


01/203 KEY PLAN
NTS @ A1

FOR PRODUCT AND MATERIAL SELECTION SEE SPECIFICATION NOTES ON FP-600

LEGEND

- EXTENT OF POS WORKS
- POS LOT BOUNDARY
- SEWER EASEMENT

EARTHWORKS
- 23.00 EXISTING CONTOURS / CIVIL CONTOURS
- 23.00 PROPOSED POS CONTOURS (BULK EARTHWORKS BY CIVIL)
- MOUNDING BY LANDSCAPE CONTRACTOR
- 1:20 TYPICAL GRADE
- FL22.50 FINISH SURFACE LEVEL
- TOW27.000 TOP OF WALL LEVEL

STORMWATER CATCHMENT
- 20.00 1 YEAR EVENT
- 20.60 20% AEP EVENT
- 21.20 1% AEP EVENT

SURFACE FINISHES - EXISTING
- EXISTING CONCRETE PAVEMENT / CONCRETE BY CIVIL
- EXISTING TRAFFICABLE CONCRETE PAVEMENT / CONCRETE BY CIVIL
- EXISTING PLANTING (PORTOFINO PROMENADE EXTENSION WORKS)

SURFACE FINISHES - PROPOSED

GRC	GREY CONCRETE	01-05-07 501
TGRC	TRAFFICABLE GREY CONCRETE	04 501
AG1	AGGREGATE CONCRETE	01-05-07 501
TAG1	TRAFFICABLE AGGREGATE CONCRETE	04 501
AG2	AGGREGATE CONCRETE	01-05-07 501
TAG2	TRAFFICABLE AGGREGATE CONCRETE	04 501
SP1	STONE PAVER 01	08 501
SP2	STONE PAVER 02	09 501
	IRRIGATED PLANTING REFER TO SOFTSCAPE PLAN	
	IRRIGATED TURF	
	MULCH ONLY	
	COMPOSITE DECKING	03-08 503
	BALUSTRADE TO DECKING	01-02 503
	BOULDER EDGING/ROCK PITCHING	04-08 508

FURNITURE & SITE FEATURES

TREE MARKER REFER TO SOFTSCAPE PLAN

TREE GRATE	Rev0 - REMOVED 01-03 505
BENCH SEAT	09 502
BAR STOOL AND TABLE	
SHELTER - COMMERCIAL AREA	05-08 506
PLAYGROUND SHELTER	01-04 506
PICNIC SETTING	
BBQ EQUIPMENT	
ANGLE STEEL SCREEN	Rev0 - REMOVED 04-08 505
RAISED TIMBER STEPS 200-450mm VARIOUS HEIGHT	01 508
BOLLARD FIXED	11 501
BOLLARD REMOVABLE	10 501
EXISTING BOLLARD TO BE REMOVED	
BIKE RACK	12 501
BIN	13 501
DRINKING FOUNTAIN	
FLOOD LEVEL MARKERS TO CoW SPEC	
CoW PARK SIGN	05 503
BIKE REPAIR STATION	

WALLS AND EDGING

M1 MOWING KERB TYPE 01	06 501
M2 MOWING KERB TYPE 02	11 511
CONCRETE WALL TYPE 01	01-02 502
CONCRETE WALL TYPE 02	02-04 502, 06-07 502
CONCRETE WALL TYPE 03	10 502
LIMESTONE RETAINING WALL	12 508, 10 511
HIT-UP WALL Rev0 - REMOVED	02-04 507
BOULDER AND ROCK EMBANKMENT Φ500-800mm VARIOUS HEIGHT	05-08 508
SALVAGED TIMBER EDGING	04 509
STEEL SHEET PILES WITH STEEL FRAME OPENINGS	01-03 509
LOG EDGING VARIOUS HEIGHT 150mm MIN.	02-03 508

PLAY AREA

PLAY EQUIPMENT
- FLYING FOX WITH FALL ZONE
- BASKET SWING AND ASSOCIATED FALL ZONE
- 2.2m HEIGHT SLIDE AND ASSOCIATED FALL ZONE 08 508
- CAROUSEL AND ASSOCIATED FALL ZONE
- WATER PLAY EQUIPMENT
- COMBINATION UNIT AND ASSOCIATED FALL ZONE

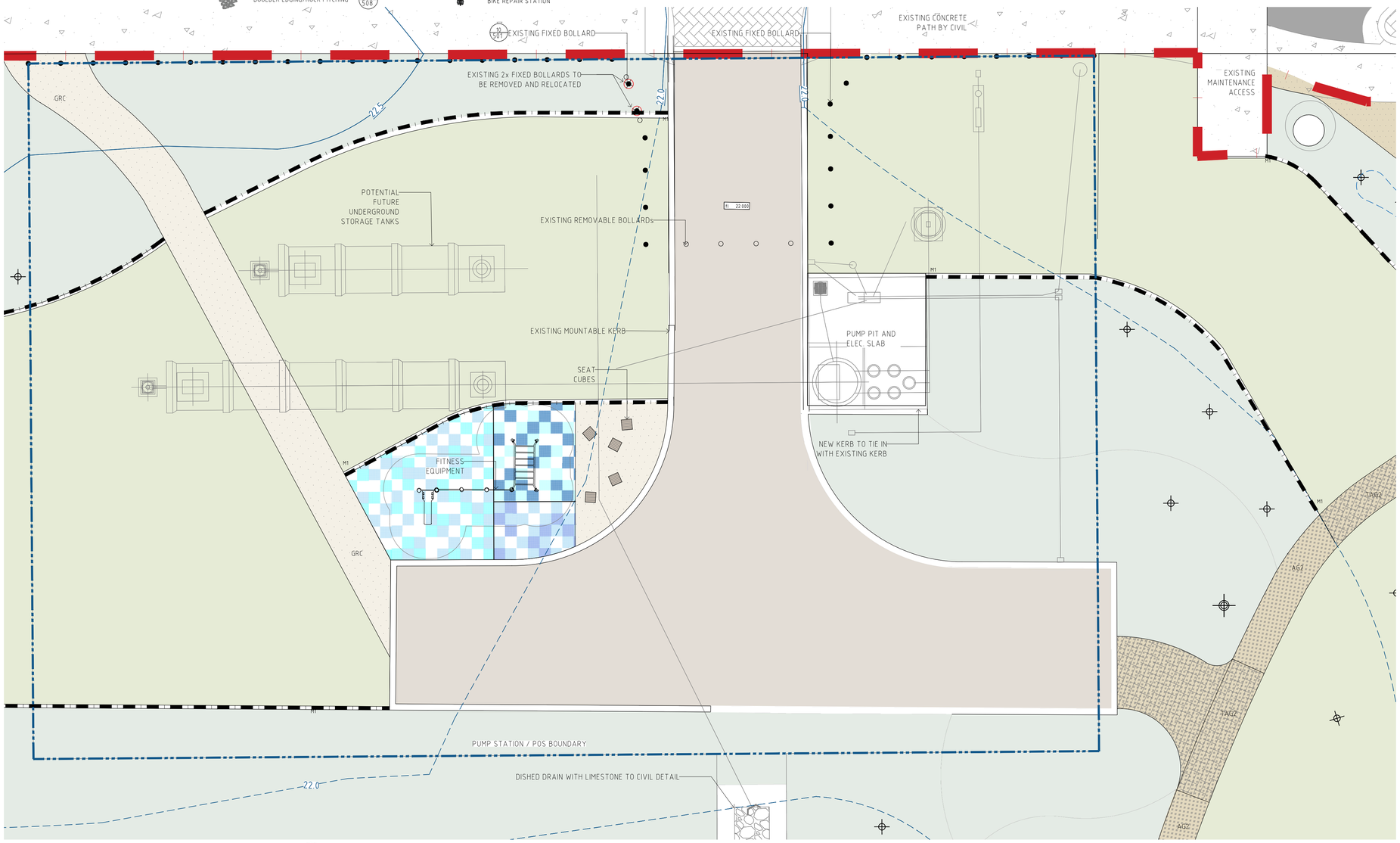
SURFACE FINISHES
- PLAYGROUND SURFACING - MULCH SOFTFALL 05-04 508
- PLAYGROUND SURFACING - SAND 06-07 508
- PLAYGROUND SURFACING - RUBBER SOFTFALL 07-08 508
- FREE STANDING BRICK WALL Rev0 - REMOVED 09-11 508
- COLOURED CONCRETE STEPS & WALL 04 03-06 502

PUMP STATION

SURFACE FINISHES
- PUMP STATION BOUNDARY
- PLAY MATTA SEE SPEC FOR COLOUR SELECTION
- ASPHALT - EXISTING

FITNESS EQUIPMENT
- OVERHEAD LADDER AND ASSOCIATED FALL ZONE
- SIT UP BENCH AND ASSOCIATED FALL ZONE
- PUSH UP BARS AND ASSOCIATED FALL ZONE
- SEATING CUBES

NOTE: SEE SPECIFICATION ON LS600 FOR COLOURS AND MATERIALS.



02/203 HARDSCAPE PLAN - PUMP STATION
PLAN 1:100 @ A1

0 1 2 4 6 10m

GENERAL NOTES:

- FOR GENERAL ARRANGEMENT PLEASE REFER TO TDL DRAWINGS AND SPECIFICATIONS.
- ANY DIFFERENCES NOTED BETWEEN THE LAYOUT PLANS, DETAIL DRAWINGS AND SPECIFICATION IS TO BE CLARIFIED BY THE CONTRACTOR PRIOR TO WORKS COMMENCING ON SITE.
- THE CONTRACTOR IS RESPONSIBLE FOR LOCATING ALL SERVICES ON SITE. SERVICES DIAGRAMS ARE PROVIDED AS A GUIDE ONLY. THE CONTRACTOR WILL BE FULLY RESPONSIBLE TO SURVEY SERVICES ON SITE. ANY DAMAGE TO SERVICES IS TO BE RECTIFIED AT THE CONTRACTORS OWN EXPENSE. ANY DAMAGE NEEDS TO BE IMMEDIATELY NOTIFIED TO THE RELEVANT SERVICE PROVIDER.
- THE CONTRACTOR IS TO PROVIDE A FULL TRAFFIC MANAGEMENT PLAN (TMP) FOR APPROVAL BY CITY OF WANNEROO (CoW). THE TMP IS TO BE IMPLEMENTED AND MONITORED AT ALL TIMES DURING CONSTRUCTION WITH WEEKLY UPDATES OF TRAFFIC MANAGEMENT IS OCCURRING.
- THE CONTRACTOR IS TO PROVIDE A FULL OH&S PLAN FOR APPROVAL BY CoW. THE PLAN IS TO BE FULLY IMPLEMENTED AND MONITORED AT ALL TIMES DURING CONSTRUCTION WITH WEEKLY UPDATES PROVIDED BY THE CONTRACTOR OF INCIDENTS ETC.
- ALL SITE SET OUT AND PROPOSED FINISHED LEVELS ARE TO BE CONFIRMED ON SITE WITH THE SUPERINTENDENT PRIOR TO CONSTRUCTION.
- EXISTING GRADES ARE TO BE MAINTAINED.
- VERGES TO HAVE 2-3% CROSSFALL TOWARDS ROAD EDGE.
- ALL EXISTING SITE FEATURES, SUCH AS KERBLINES, PATHS, SIGN POSTS, LIGHT POLES ETC ARE TO BE RETAINED AND PROTECTED UNLESS OTHERWISE NOMINATED ON PLAN.
- WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER MEASUREMENTS.

EXCAVATION AND SITE PREPARATION:

- EXCAVATE AS REQUIRED ALONG KERBLINE TO ACHIEVE FINISHED LEVELS AFTER SOIL PREPARATION AND MULCH. EXCAVATED MATERIAL MAY BE RE-SPREAD ON SITE WITHIN LOT BOUNDARY. LOCATION TO BE CONFIRMED BY SUPERINTENDENT.
- EXISTING GRADES WITHIN VERGES AND MEDIANS ARE TO BE MAINTAINED. PREPARE EVEN SURFACE SUITABLE FOR PLANTING AND HARDSCAPE INSTALLATION THAT TIES INTO EXSITNG LEVELS
- FINISHED LEVELS OF NEW PATHS AND PAVING TO TIE IN WITH EXISTING PAVING AND KERBS
- FOR ALL HARD AND SOFTSCAPE DETAILS, REFER TO DETAILS FP-501 TO FP-511
- FOR ALL MATERIALS AND FURNITURE SELECTIONS, REFER TO SCHEDULES ON FP-600
- TRANSPLANT SUPPLY BY CLIENT. TRANSPLANT INSTALLATION AND MANAGEMENT WORKS ARE TO BE COORDINATED WITH SPECIALIST GROWER BY CONTRACTOR.

PLANTING NOTES:

- PROPOSED TREES MAY BE REALIGNED BASED ON SERVICES LOCATIONS WHERE APPROVED BY SUPERINTENDENT.
- SHRUB AND GROUNDCOVER PLANTING OFFSET: MIN 600mm FROM ROAD EDGES, KERBLINES AND OTHER HARD EDGE.
- FOR SHRUB PLANTING MIXES: PLANTS ARE TO BE PLANTED IN GROUPS OF 3-5 OF EACH SPECIES.
- FOR OVERALL PLANT SCHEDULES, REFER TO DRAWING FP-511
- FOR ALL HARD AND SOFTSCAPE DETAILS, REFER TO DETAILS FP-501 - FP-511
- FOR ALL MATERIALS AND FURNITURE SELECTIONS, REFER TO SCHEDULES ON FP-600
- ALL 1000LT & 1500LT TREES ARE TO BE INSTALLED WITH UNDERGROUND GUYING.
- TREE POT SIZES ARE INDICATIVE AND SUBJECT TO STOCK AVAILABILITY AT TIME OF PROCUREMENT.

FITNESS EQUIPMENT AND FURNITURE SELECTIONS:

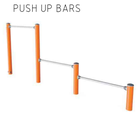
OVERHEAD LADDER



SIT UP BENCH



PUSH UP BARS



SEAT CUBES



CATALINA ESTATE
CATALINA BEACH, FORESHORE POS

REVISION	DESCRIPTION	BY	DATE
0	ISSUE FOR CONSTRUCTION	AF	22.09.23
1	RE-ISSUE FOR CONSTRUCTION	AF	13.10.23
2	RE-ISSUE FOR CONSTRUCTION	VW	15.02.24

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CLIENT	SATTERLEY PROPERTY GROUP & TPRC		
DESIGNED	AF	DRAWING TITLE	HARDSCAPE PLAN - PUMP STATION
DRAWN	AF/JZ		
APPROVED	ST	DRAWING NO.	12606-CB-FP-203
SCALE	1:100@A1		REVISION 2

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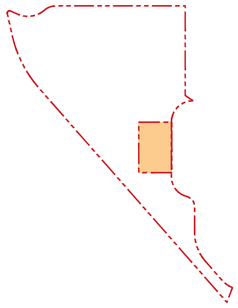

01 / 204 KEY PLAN
NTS @ A1

GENERAL NOTES:

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- ANY DIFFERENCES NOTED BETWEEN THE LAYOUT PLANS, DETAIL DRAWINGS AND SPECIFICATION IS TO BE CLARIFIED BY THE CONTRACTOR PRIOR TO WORKS COMMENCING ON SITE.
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- WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER MEASUREMENTS.

PLANTING NOTES:

- PROPOSED TREES MAY BE REALIGNED BASED ON SERVICES LOCATIONS WHERE APPROVED BY SUPERINTENDENT
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- FOR OVERALL PLANT SCHEDULES, REFER TO DRAWING FP-511
- FOR ALL HARD AND SOFTSCAPE DETAILS, REFER TO DETAILS FP-501 - FP-511
- FOR ALL MATERIALS AND FURNITURE SELECTIONS, REFER TO SCHEDULES ON FP-600
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- TREE POT SIZES ARE INDICATIVE AND SUBJECT TO STOCK AVAILABILITY AT TIME OF PROCUREMENT.

FOR PRODUCT AND MATERIAL SELECTION SEE SPECIFICATION NOTES ON FP-600

LEGEND

EXTENT OF POS WORKS
POS LOT BOUNDARY
SEWER EASEMENT

EARTHWORKS
23.00 EXISTING CONTOURS / CIVIL CONTOURS
23.00 PROPOSED POS CONTOURS (BULK EARTHWORKS BY CIVIL)
MOUNDING BY LANDSCAPE CONTRACTOR
1:20 TYPICAL GRADE
FL22.50 FINISH SURFACE LEVEL
TosW7.000 TOP OF WALL LEVEL

STORMWATER CATCHMENT
20.00 1 YEAR EVENT
20.60 20% AEP EVENT
21.20 1% AEP EVENT

SURFACE FINISHES - EXISTING
EXISTING CONCRETE PAVEMENT / CONCRETE BY CIVIL
EXISTING TRAFFICABLE CONCRETE PAVEMENT / CONCRETE BY CIVIL
EXISTING PLANTING (PORTOFINO PROMENADE EXTENSION WORKS)

SURFACE FINISHES - PROPOSED
GRC — GREY CONCRETE — 01-05-07 / 501
TGRC — TRAFFICABLE GREY CONCRETE — 04 / 501
AG1 — AGGREGATE CONCRETE — 01-05-07 / 501
TAG1 — TRAFFICABLE AGGREGATE CONCRETE — 04 / 501
AG2 — AGGREGATE CONCRETE — 01-05-07 / 501
TAG2 — TRAFFICABLE AGGREGATE CONCRETE — 04 / 501
SP1 — STONE PAVER 01 — 08 / 501
SP2 — STONE PAVER 02 — 09 / 501
IRRIGATED PLANTING REFER TO SOFTSCAPE PLAN
IRRIGATED TURF
MULCH ONLY
COMPOSITE DECKING — 03-08 / 503
BALUSTRADE TO DECKING — 01-02 / 503
BOULDER EDGING/ROCK PITCHING — 04-08 / 508

WALLS AND EDGING
M1 MOWING KERB TYPE 01 — 04 / 501
M2 MOWING KERB TYPE 02 — 11 / 511
CONCRETE WALL TYPE 01 — 01-04 / 502
CONCRETE WALL TYPE 02 — 02-04 / 502, 06-07 / 502
CONCRETE WALL TYPE 03 — 10 / 502
LIMESTONE RETAINING WALL — 12 / 508, 10 / 511
HIT-UP WALL — Rev0 - REMOVED — 07-03 / 507
BOULDER AND ROCK EMBANKMENT ø500-800mm VARIOUS HEIGHT — 04-08 / 508
SALVAGED TIMBER EDGING — 04 / 509
STEEL SHEET PILES WITH STEEL FRAME OPENINGS — 01-03 / 509
LOG EDGING VARIOUS HEIGHT 150mm MIN. — 01-03 / 508

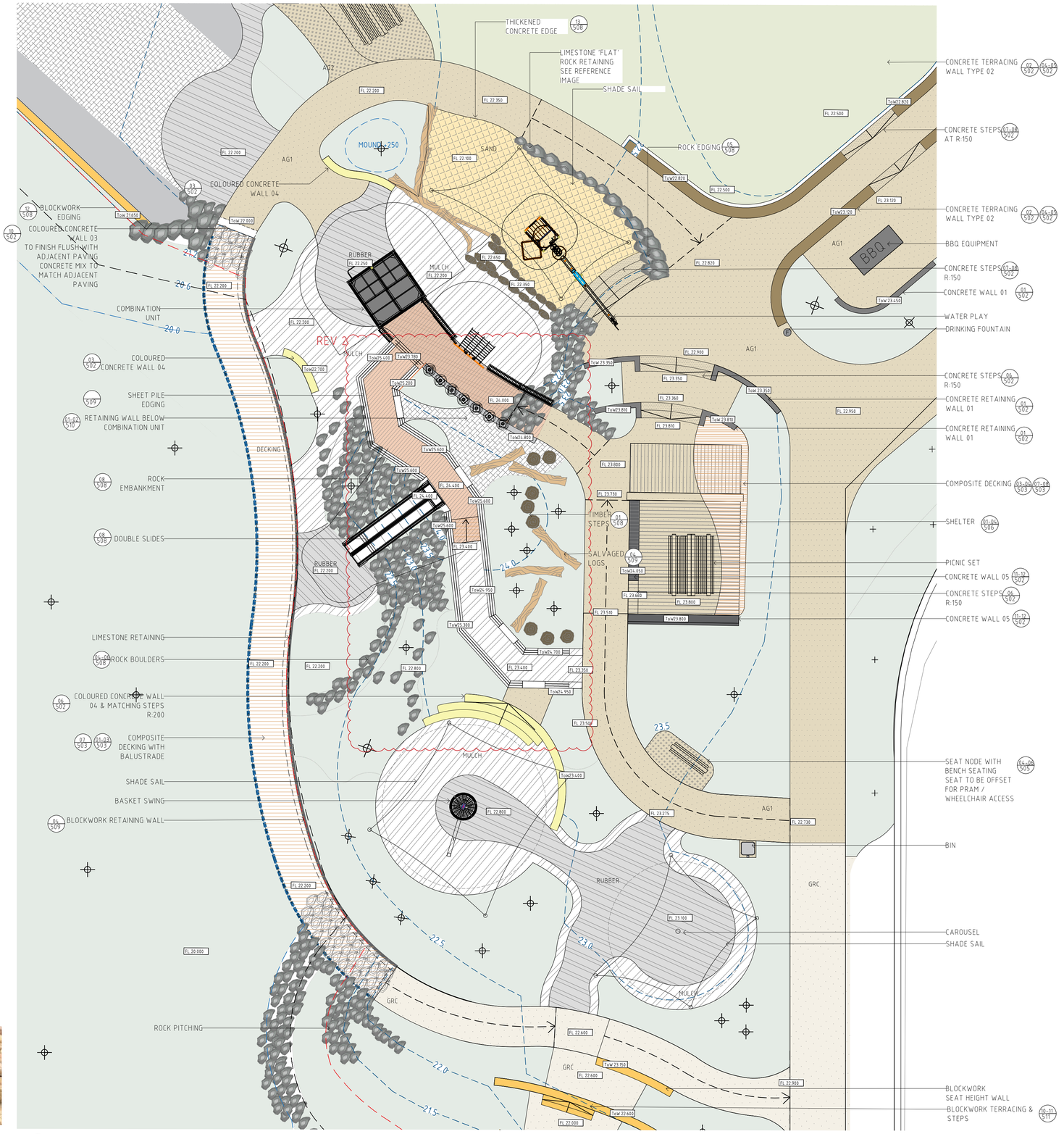
FURNITURE & SITE FEATURES
TREE MARKER REFER TO SOFTSCAPE PLAN
TREE GRATE — Rev0 - REMOVED — 01-03 / 505
BENCH SEAT — 09 / 502
BAR STOOL AND TABLE
SHELTER - COMMERCIAL AREA — 05-06 / 506
PLAYGROUND SHELTER — 01-04 / 506
PICNIC SETTING
BBQ EQUIPMENT
ANGLE STEEL SCREED — Rev0 - REMOVED — 04-08 / 505
RAISED TIMBER STEPS 200-450mm VARIOUS HEIGHT — 01 / 508
BOLLARD FIXED — 11 / 501
BOLLARD REMOVABLE — 10 / 501
EXISTING BOLLARD TO BE REMOVED
BIKE RACK — 17 / 501
BIN — 18 / 501
DRINKING FOUNTAIN
FLOOD LEVEL MARKERS TO CoW SPEC
CoW PARK SIGN — 04 / 503
BIKE REPAIR STATION

PLAY AREA
PLAY EQUIPMENT
FLYING FOX WITH FALL ZONE
BASKET SWING AND ASSOCIATED FALL ZONE
2.2m HEIGHT SLIDE AND ASSOCIATED FALL ZONE — 08 / 508
CAROUSEL AND ASSOCIATED FALL ZONE
WATER PLAY EQUIPMENT
COMBINATION UNIT AND ASSOCIATED FALL ZONE

SURFACE FINISHES
PLAYGROUND SURFACING - MULCH SOFTFALL — 05-06 / 508
PLAYGROUND SURFACING - SAND — 05-07 / 508
PLAYGROUND SURFACING - RUBBER SOFTFALL — 07-08 / 508
FREE-STANDING BRICK WALL — Rev0 - REMOVED — 09-11 / 508
COLOURED CONCRETE STEPS & WALL 04 — 03-04 / 502

REFERENCE PHOTO - LIMESTONE 'FLAT' ROCK RETAINING





02 / 204 HARDSCAPE PLAN - PLAYGROUND
PLAN 1:100 @ A1

0 1 2 4 6 10m

CATALINA ESTATE
CATALINA BEACH, FORESHORE POS

REVISION	DESCRIPTION	BY	DATE
0	ISSUE FOR CONSTRUCTION	AF	22.09.23
1	RE-ISSUE FOR CONSTRUCTION	AF	13.10.23
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CLIENT	SATTERLEY PROPERTY GROUP & TPRC
DESIGNED	AF
DRAWN	AF/IZ
APPROVED	ST
SCALE	1:100@A1
DRAWING TITLE	HARDSCAPE PLAN - PLAYGROUND
DRAWING NO.	12606-CB-FP-204
REVISION	2

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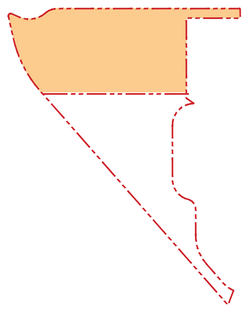

01
301
KEY PLAN
NTS @ A1

FOR PRODUCT AND MATERIAL SELECTION SEE SPECIFICATION NOTES ON FP-600

LEGEND

- EXTENT OF POS WORKS
- POS LOT BOUNDARY
- SEWER EASEMENT

STORMWATER CATCHMENT
- 20.00 1 YEAR EVENT
- 20.60 20% AEP EVENT
- 21.20 1% AEP EVENT

SOFTSCAPE FINISHES
- IRRIGATED TURF — KIKUYU — 04 510
- HIGH SHRUBS - IRRIGATED — REFER TO PLANT PLAN AND SCHEDULE
- MEDIUM SHRUBS - IRRIGATED — REFER TO PLANT PLAN AND SCHEDULE — 01 02 510
- LOW SHRUBS AND GROUNDCOVERS - IRRIGATED — REFER TO PLANT PLAN AND SCHEDULE
- VEGETATED SWALE/BASIN - NON-IRRIGATED — TUBESTOCKING MULCH — REFER TO PLANT PLAN AND SCHEDULE — 02 510

TREES

TRANSPLANTS
- ERYTHRINA INDICA
- CASUARINA EQUISETIFOLIA
- METROSIDEROS EXCELSA
- TIPUANA TIPU

POS
- ARAUCARIA COLUMNARIS 200l
- ERYTHRINA INDICA 500L
- AGONIS FLEXUOSA 200L
- CUPANIOPSIS ANACARDIOIDES 500L
- OLEA EUROPAEA 200L
- EUCALYPTUS VICTRIX 200L
- EUCALYPTUS MACROCARPA 45L
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BASIN - MAX 15% CANOPY COVER AT MATURITY
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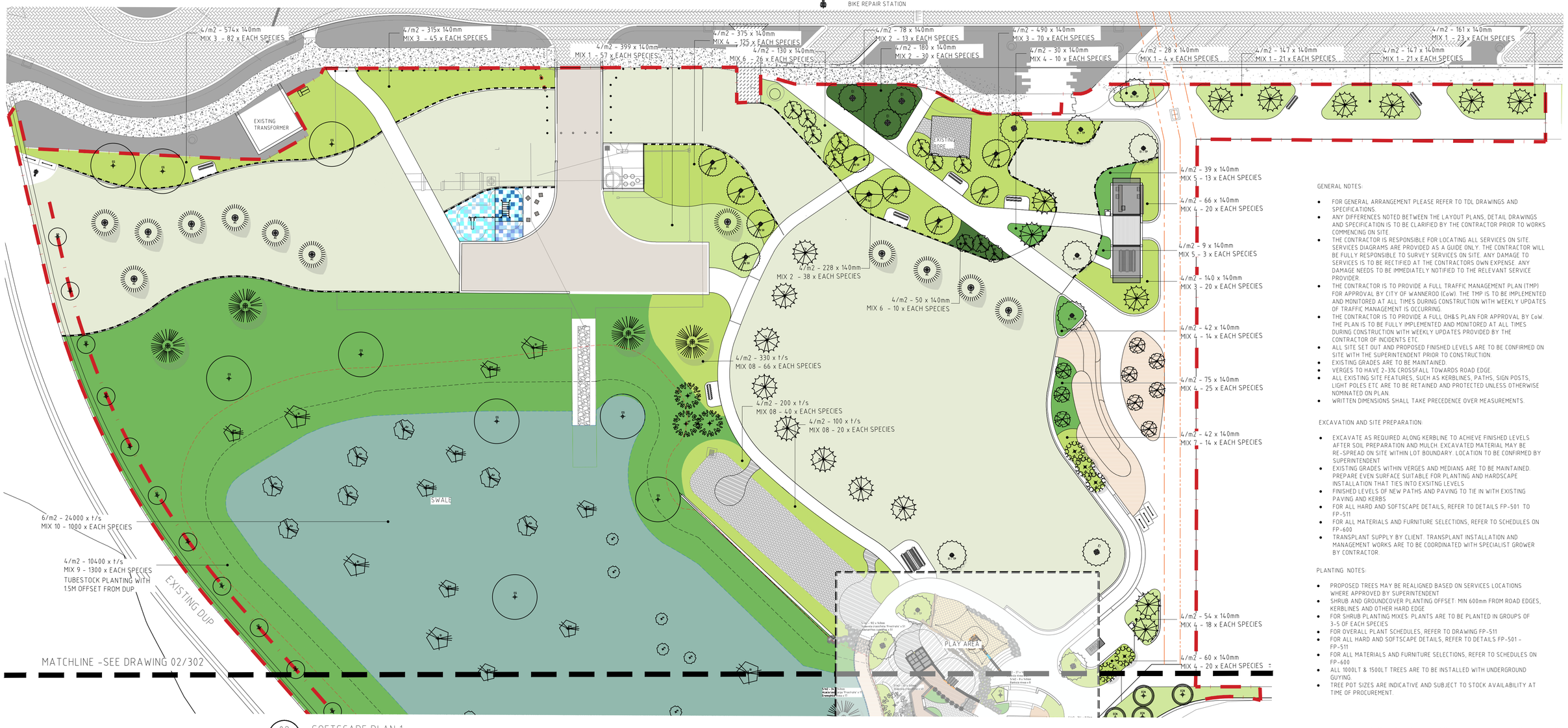
- BANKSIA MENZIESII 45L
- BANKSIA ILICIFOLIA 45L
- BANKSIA PRIONOTES 45L
- BANKSIA SESSILIS 45L

FURNITURE & SITE FEATURES
- TREE MARKER — REFER TO SOFTSCAPE PLAN
- TREE GRATE — Rev0 - REMOVED — 01-03 505
- BENCH SEAT — 03 502
- BAR STOOL AND TABLE
- SHELTER - COMMERCIAL AREA — 05-08 506
- PLAYGROUND SHELTER — 01-04 506
- PICNIC SETTING
- BBQ EQUIPMENT
- ANGLE STEEL SCREEN — Rev0 - REMOVED — 04-06 505
- RAISED TIMBER STEPS — 200-450mm VARIOUS HEIGHT — 01 508
- BOLLARD FIXED — 11 501
- BOLLARD REMOVABLE — 10 501
- EXISTING BOLLARD TO BE REMOVED
- BIKE RACK — 12 501
- BIN — 13 501
- DRINKING FOUNTAIN
- FLOOD LEVEL MARKERS TO CoW SPEC
- CoW PARK SIGN — 04 503
- BIKE REPAIR STATION

PLAY AREA

PLAY EQUIPMENT
- FLYING FOX WITH FALL ZONE
- BASKET SWING AND ASSOCIATED FALL ZONE
- 2.2m HEIGHT SLIDE AND ASSOCIATED FALL ZONE — 08 508
- CAROUSEL AND ASSOCIATED FALL ZONE
- WATER PLAY EQUIPMENT
- COMBINATION UNIT AND ASSOCIATED FALL ZONE

SURFACE FINISHES
- PLAYGROUND SURFACING - MULCH SOFTFALL — 05-06 508
- PLAYGROUND SURFACING - SAND — 05-07 508
- PLAYGROUND SURFACING - RUBBER SOFTFALL — 07-08 508
- FREE STANDING BRICK WALL — Rev0 - REMOVED — 09-11 508
- COLOURED CONCRETE STEPS & WALL 04 — 03 04 502



02
301
SOFTSCAPE PLAN 1
PLAN 1:250 @ A1

GENERAL NOTES:
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0 1 2 4 6 10 20 25m

CATALINA ESTATE
CATALINA BEACH, FORESHORE POS

REVISION	DESCRIPTION	BY	DATE
0	ISSUE FOR CONSTRUCTION	AF	22.09.23
1	RE-ISSUE FOR CONSTRUCTION	AF	13.10.23
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CLIENT	SATTERLEY PROPERTY GROUP & TPRC		
DESIGNED	AF	DRAWING TITLE	SOFTSCAPE PLAN 1
DRAWN	AF/NL		
APPROVED	ST	DRAWING No.	12606-CB-FP-301
SCALE	1:250@A1		REVISION 2

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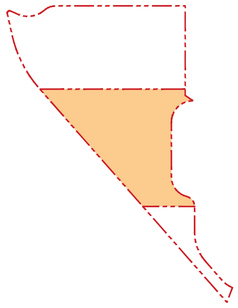

01/302 KEY PLAN
NTS @ A1

FOR PRODUCT AND MATERIAL SELECTION SEE SPECIFICATION NOTES ON FP-600

LEGEND

- EXTENT OF POS WORKS
- POS LOT BOUNDARY
- SEWER EASEMENT

STORMWATER CATCHMENT
- 20.00 1 YEAR EVENT
- 20.60 20% AEP EVENT
- 21.20 1% AEP EVENT

SOFTSCAPE FINISHES
- IRRIGATED TURF — KIKUYU — 04/510
- HIGH SHRUBS - IRRIGATED — REFER TO PLANT PLAN AND SCHEDULE
- MEDIUM SHRUBS - IRRIGATED — REFER TO PLANT PLAN AND SCHEDULE — 01.03/510
- LOW SHRUBS AND GROUNDCOVERS - IRRIGATED — REFER TO PLANT PLAN AND SCHEDULE
- VEGETATED SWALE/BASIN - NON-IRRIGATED — TUBESTOCKING MULCH — REFER TO PLANT PLAN AND SCHEDULE — 02/510

TREES

TRANSPLANTS
- ERYTHRINA INDICA
- CASUARINA EQUISETIFOLIA
- METROSIDEROS EXCELSA
- TIPUANA TIPU

POS
- ARAUCARIA COLUMNARIS 200l
- ERYTHRINA INDICA 500L
- AGONIS FLEXUOSA 200L
- CUPANIOPSIS ANACARDIOIDES 500L
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- BANKSIA PRIONOTES 45L
- BANKSIA SESSILIS 45L

FURNITURE & SITE FEATURES

TREE MARKER
REFER TO SOFTSCAPE PLAN
- TREE GRATE — Rev0 - REMOVED — 01-03/505
- BENCH SEAT — 03/502
- BAR STOOL AND TABLE
- SHELTER - COMMERCIAL AREA — 05-08/506
- PLAYGROUND SHELTER — 01-04/506
- PICNIC SETTING
- BBQ EQUIPMENT
- ANGLE STEEL SCREEN — Rev0 - REMOVED — 04-06/505
- RAISED TIMBER STEPS — 200-450mm VARIOUS HEIGHT — 01/508
- BOLLARD FIXED — 11/501
- BOLLARD REMOVABLE — 10/501
- EXISTING BOLLARD TO BE REMOVED
- BIKE RACK — 12/501
- BIN — 13/501
- DRINKING FOUNTAIN
- FLOOD LEVEL MARKERS TO CoW SPEC
- CoW PARK SIGN — 04/503
- BIKE REPAIR STATION

PLAY AREA

PLAY EQUIPMENT
- FLYING FOX — WITH FALL ZONE
- BASKET SWING — AND ASSOCIATED FALL ZONE
- 2.2m HEIGHT SLIDE — AND ASSOCIATED FALL ZONE — 08/508
- CAROUSEL — AND ASSOCIATED FALL ZONE
- WATER PLAY EQUIPMENT
- COMBINATION UNIT — AND ASSOCIATED FALL ZONE

SURFACE FINISHES
- PLAYGROUND SURFACING - MULCH SOFTFALL — 05-06/508
- PLAYGROUND SURFACING - SAND — 05-07/508
- PLAYGROUND SURFACING - RUBBER SOFTFALL — 07-08/508
- FREE STANDING BRICK WALL — Rev0 - REMOVED — 09-11/508
- COLOURED CONCRETE STEPS & WALL 04 — 03.04/502



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- EXISTING GRADES ARE TO BE MAINTAINED.
- VERGES TO HAVE 2-3% CROSSFALL TOWARDS ROAD EDGE.
- ALL EXISTING SITE FEATURES, SUCH AS KERBLINES, PATHS, SIGN POSTS, LIGHT POLES ETC ARE TO BE RETAINED AND PROTECTED UNLESS OTHERWISE NOMINATED ON PLAN.
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- FOR ALL MATERIALS AND FURNITURE SELECTIONS, REFER TO SCHEDULES ON FP-600
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- FOR SHRUB PLANTING MIXES: PLANTS ARE TO BE PLANTED IN GROUPS OF 3-5 OF EACH SPECIES
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- TREE POT SIZES ARE INDICATIVE AND SUBJECT TO STOCK AVAILABILITY AT TIME OF PROCUREMENT.

02/302 SOFTSCAPE PLAN 2
PLAN 1:250 @ A1

CATALINA ESTATE
CATALINA BEACH, FORESHORE POS

REVISION	DESCRIPTION	BY	DATE
0	ISSUE FOR CONSTRUCTION	AF	22.09.23
1	RE-ISSUE FOR CONSTRUCTION	AF	15.10.23
2	RE-ISSUE FOR CONSTRUCTION	VW	15.02.24

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enq@tdl.com.au

CLIENT	SATTERLEY PROPERTY GROUP & TPRC		
DESIGNED	AF	DRAWING TITLE	SOFTSCAPE PLAN 2
DRAWN	AF/NL		
APPROVED	ST	DRAWING No.	12606-CB-FP-302
SCALE	1:250@A1		REVISION 2

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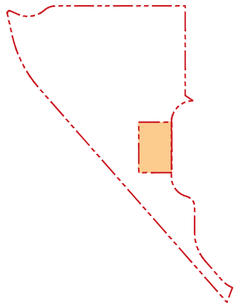

01/304 KEY PLAN
NTS @ A1

FOR PRODUCT AND MATERIAL SELECTION SEE SPECIFICATION NOTES ON FP-600

LEGEND

EXTENT OF POS WORKS

POS LOT BOUNDARY

SEWER EASEMENT

STORMWATER CATCHMENT

20.00 1 YEAR EVENT
20.60 20% AEP EVENT
21.20 1% AEP EVENT

SOFTSCAPE FINISHES

IRRIGATED TURF — KIKUYU — 04/510
HIGH SHRUBS - IRRIGATED — REFER TO PLANT PLAN AND SCHEDULE
MEDIUM SHRUBS - IRRIGATED — REFER TO PLANT PLAN AND SCHEDULE — 01,03/510
LOW SHRUBS AND GROUNDCOVERS - IRRIGATED — REFER TO PLANT PLAN AND SCHEDULE
VEGETATED SWALE/BASIN - NON-IRRIGATED — TUBESTOCKING MULCH — REFER TO PLANT PLAN AND SCHEDULE — 02/510

TREES

TRANSPLANTS

ERYTHRINA INDICA
CASUARINA EQUISETIFOLIA
METROSIDEROS EXCELSA
TIPUANA TIPU

POS

ARAUCARIA COLUMNARIS	200l
ERYTHRINA INDICA	500L
AGONIS FLEXUOSA	200L
CUPANIOPSIS ANACARDIOIDES	500L
OLEA EUROPAEA	200L
EUCALYPTUS VICTRIX	200L
EUCALYPTUS MACROCARPA	45L
EUCALYPTUS CLADOCALYX NANA	200L
LAGERSTROEMIA INDICA	500L
MACADAMIA INTEGRIFOLIA	500L

BASIN - MAX 15% CANOPY COVER AT MATURITY

EUCALYPTUS GOMPHOCEPHALA 100L
EUCALYPTUS DECIPIENS 100L
BANKSIA MENZIESII 45L
BANKSIA ILICIFOLIA 45L
BANKSIA PRIONOTES 45L
BANKSIA SESSILIS 45L

FURNITURE & SITE FEATURES

TREE MARKER — REFER TO SOFTSCAPE PLAN
TREE GRATE — 01-03/505
BENCH SEAT — 09/502
BAR STOOL AND TABLE
SHELTER - COMMERCIAL AREA — 05-08/506
PLAYGROUND SHELTER — 01-04/506
PICNIC SETTING
BBQ EQUIPMENT
ANGLE STEEL SCREEN — Rev0 - REMOVED — 04-06/505
RAISED TIMBER STEPS — 200-450mm VARIOUS HEIGHT — 01/508
BOLLARD FIXED — 11/501
BOLLARD REMOVABLE — 10/501
EXISTING BOLLARD TO BE REMOVED
BIKE RACK — 12/501
BIN — 13/501
DRINKING FOUNTAIN
FLOOD LEVEL MARKERS TO CoW SPEC
CoW PARK SIGN — 04/503
BIKE REPAIR STATION

PLAY AREA

PLAY EQUIPMENT
FLYING FOX — WITH FALL ZONE
BASKET SWING — AND ASSOCIATED FALL ZONE
2.2m HEIGHT SLIDE — AND ASSOCIATED FALL ZONE — 08/508
CAROUSEL — AND ASSOCIATED FALL ZONE
WATER PLAY EQUIPMENT
COMBINATION UNIT — AND ASSOCIATED FALL ZONE

SURFACE FINISHES

PLAYGROUND SURFACING - MULCH SOFTFALL — 05-04/508
PLAYGROUND SURFACING - SAND — 05-07/508
PLAYGROUND SURFACING - RUBBER SOFTFALL — 07-08/508
FREE STANDING BRICK WALL — Rev0 - REMOVED — 09-11/508
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02/304 SOFTSCAPE PLAN - PLAYGROUND
PLAN 1:100 @ A1

0 1 2 4 6 10m

CATALINA ESTATE
CATALINA BEACH, FORESHORE POS

REVISION	DESCRIPTION	BY	DATE
0	ISSUE FOR CONSTRUCTION	AF	22.09.23
1	RE-ISSUE FOR CONSTRUCTION	AF	13.10.23
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CLIENT	SATTERLEY PROPERTY GROUP & TPRC
DESIGNED	AF
DRAWN	AF/NL
APPROVED	ST
SCALE	1:100@A1
DRAWING TITLE	SOFTSCAPE PLAN - PLAYGROUND
DRAWING No.	12606-CB-FP-303
REVISION	2

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CATALINA BEACH - STAGE 29

CITY OF WANNEROO
APPROVAL CONDITIONS

APPROVED SUBJECT TO STRICT ADHERENCE TO THE
- ENDORSEMENTS THEREON
- CONDITIONS IN THE CITY OF WANNEROO APPROVAL LETTER
- CONDITIONS LAID DOWN IN THE WAPC SUBDIVISION APPROVAL
WAPC NO.161907 & 160855

CITY OF WANNEROO

LETTER OF APPROVAL DATED 08/12/2022
TRIM NO AD429281

LAND DEVELOPMENT NO 2022.170.1

CITY OF WANNEROO
QUALITY CONTROL

LAND DEVELOPMENT OFFICER: CT
ASSETS PARKS TRIM NO. 22/439537
ASSETS CONSERVATION TRIM NO. 22/446760
ASSETS IRRIGATION TRIM NO. 22/446757
COMMUNITY FACILITIES TRIM NO. N/A

REVISED



CITY OF WANNEROO
PLAN APPROVAL

Mark Jumeaux

SENIOR LANDSCAPE
& CONSERVATION DEVELOPMENT OFFICER

DWG	DWG NAME	SCALE @ A1	REV
LS -101	COVER PAGE	1:1000	B
LS -201	PLANTING PLAN	1:250	B
LS -301	DETAILS AND PLANTING SCHEDULE	AS SHOWN	B

01/101 KEY PLAN
PLAN 1:1000 @ A1

0 10 20 40 60 100m

CATALINA ESTATE
CATALINA BEACH STAGE29

REVISION	DESCRIPTION	BY	DATE
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B	ISSUE FOR APPROVAL	IZ	09.11.22

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APPROVED	GD
SCALE	1:1000@A1
DRAWING TITLE	COVER PAGE
DRAWING No.	12606-CB-S29-101
REVISION	B

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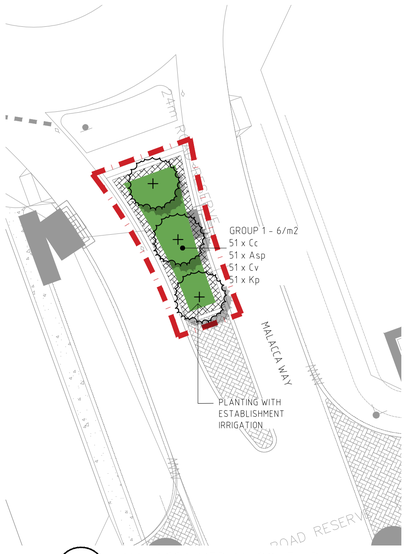
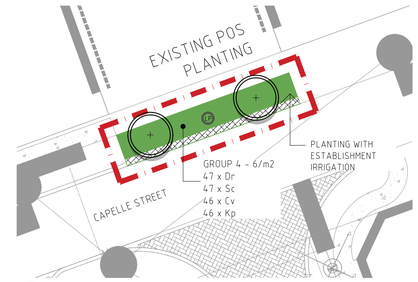
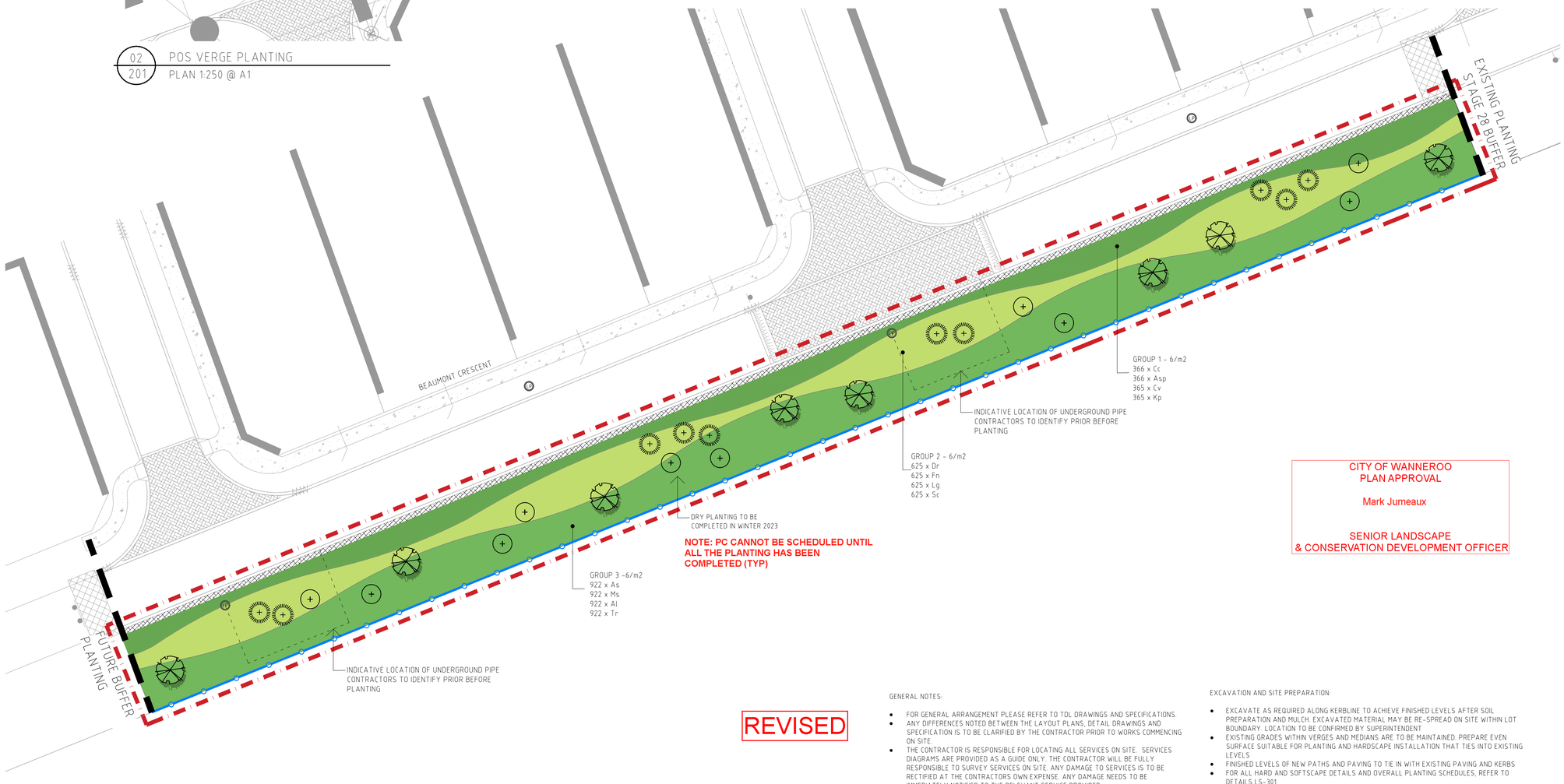


01/201 MALACCA MEDIAN SOUTH PLANTING
PLAN 1:250 @ A1



02/201 POS VERGE PLANTING
PLAN 1:250 @ A1



03/201 BUFFER PLANTING
PLAN 1:250 @ A1

LEGEND

EXTENT OF LANDSCAPE WORKS

TREES

TREES - MALACCA MEDIAN SOUTH (01/02 301)

(EI) ERYTHRINA INDICA
400L

TREES - POS VERGE

(ME) METROSIDEROS EXCELSA
300L

TREES - BUFFER

(EG) EUCALYPTUS GOMPHOCEPHALA
45L

(MQ) MELALEUCA QUINQUENERVIA
45L

(BP) BANKSIA PRIONOTES
45L

FURNITURE & SITE FEATURES

LIGHT POLE BY OTHERS

BOUNDARY FENCE (05 301)

SURFACE FINISHES

MULCH MAINTENANCE STRIP 600mm
REFER TO PLAN

PLANTING BED
REFER TO PLANT SCHEDULE (03-04 301)

CITY OF WANNEROO
PLAN APPROVAL

Mark Jumeaux

SENIOR LANDSCAPE
& CONSERVATION DEVELOPMENT OFFICER

REVISED

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- FOR ALL HARD AND SOFTSCAPE DETAILS, REFER TO DETAILS LS-301
- TREE STOCK SIZE SUBJECT TO AVAILABILITY AT TIME OF PROCUREMENT AND TO BE WITHIN THE RANGE OF 90-400L STOCK
- TREES NOMINATED ON PLAN AND/OR LOCATED WITHIN 1.5M OF HARD EDGE/PAVING/KERBLINE ARE TO BE INSTALLED WITH 6M LONG 800MM DEEP ROOT CONTROL BARRIER POSITIONED AGAINST THE HARD EDGE WITH TOP OF RCB TO BE 50MM BELOW TOP OF MULCH

0 1 2 4 6 10 20 25m

CATALINA ESTATE
CATALINA BEACH STAGE29

REVISION	DESCRIPTION	BY	DATE
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CLIENT	SATTERLEY PROPERTY GROUP & TPRC
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DRAWN	AF/NL
APPROVED	GD
SCALE	1:250@A1
DRAWING TITLE	PLANTING PLAN
DRAWING No.	12606-CB-S29-201
REVISION	B

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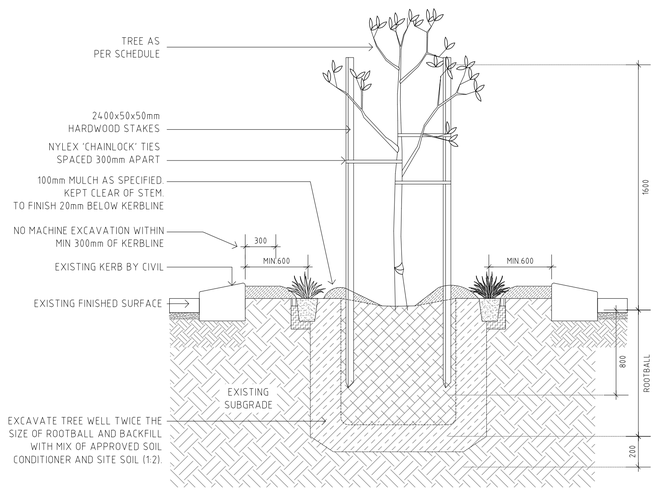
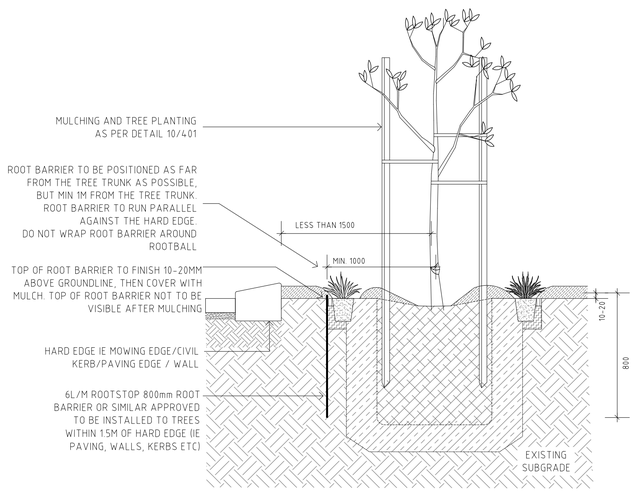
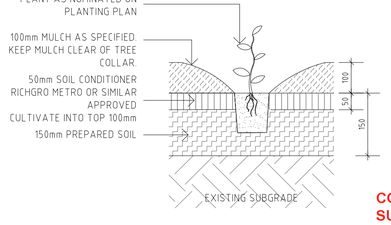
STAKING AND GUYING
>500LT AND TRANSPLANTS: UNDERGROUND GUYING
200-500LT TREE STOCK: 3 X 2400x50x50mm HARDWOOD STAKES
45-150LT TREE STOCK: 2 X 1800x50x50mm HARDWOOD STAKES



01 / 301 — 45-500L TREE PLANTING
TYPICAL DETAIL 1:20 @ A1



02 / 301 — LINEAR ROOT CONTROL BARRIER
TYPICAL DETAIL 1:20 @ A1

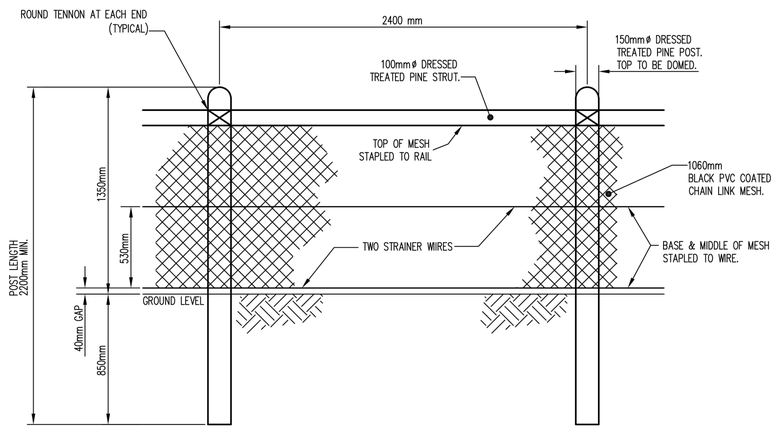


CONOSTYLIS & FICINIA SPECIES ARE NOT SUPPORTED. SUBSTITUTE FOR SPINIFEX LONGIFOLIUS, CONOSTYLIS ACULEATA OR BANKSIA SESSILIS (TYP)

ERYTHRINA'S ARE TO BE FULLY ESTABLISHED PRIOR TO HANDOVER (TYP)

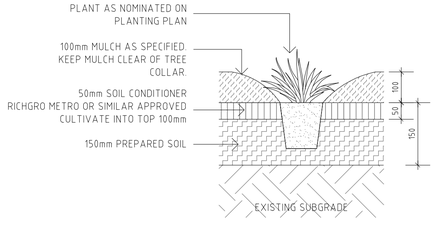
03 / 301 — T/S SHRUB PLANTING
TYPICAL DETAIL 1:10 @ A1

CONSERVATION PINE RAIL FENCING
AS PER CITY OF WANNEROO STANDARD DETAIL TD 01-7-1



BOUNDARY FENCING TO BE INSTALLED AS PER CITY OF WANNEROO INFRASTRUCTURE STANDARD DRAWING TS01-7-1

05 / 301 — BOUNDARY FENCE
TYPICAL DETAIL 1:20 @ A1



04 / 301 — 140mm SHRUB PLANTING
TYPICAL DETAIL 1:10 @ A1

FERTILISER SCHEDULE AT INSTALLATION (REFER TO SPEC):		
LANGLEY TROFORTE 21-1-6 FERTILISER TABLETS OR SIMILAR APPROVED	NATIVE TREE STOCK	8 TABLETS PER TREE
BAYLEYS NATIVE PLANT FOOD FERTILISER GRANULES OR SIMILAR APPROVED	SHRUBS AND GROUNDCOVERS	15g PER T/S 20g PER 130/140mm STOCK

MULCH SCHEDULE	
BUFFER	SITE MULCH FROM FORESHORE WORKS
MALACCA MEDIAN SOUTH	PINE BARK
POS VERGE	PINE BARK

REVISED

CITY OF WANNEROO
PLAN APPROVAL

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- ALL SITE SET OUT AND PROPOSED FINISHED LEVELS ARE TO BE CONFIRMED ON SITE WITH THE SUPERINTENDENT PRIOR TO CONSTRUCTION.
- EXISTING GRADES ARE TO BE MAINTAINED.
- VERGES TO HAVE 2-3% CROSSFALL TOWARDS ROAD EDGE.
- ALL EXISTING SITE FEATURES, SUCH AS KERBLINES, PATHS, SIGN POSTS, LIGHT POLES ETC ARE TO BE RETAINED AND PROTECTED UNLESS OTHERWISE NOMINATED ON PLAN.
- WRITTEN DIMENSIONS SHALL TAKE PRECEDENCE OVER MEASUREMENTS.

PLANTING NOTES:

- SHRUB AND GROUNDCOVER PLANTING OFFSET: MIN 600mm/1m FROM ROAD EDGES, KERBLINES AND OTHER HARD EDGE
- FOR SHRUB PLANTING MIXES: PLANTS ARE TO BE PLANTED IN GROUPS OF 3-5-7 OF EACH SPECIES
- FOR OVERALL PLANT SCHEDULES, REFER TO DRAWING LS-301
- FOR ALL HARD AND SOFTSCAPE DETAILS, REFER TO DETAILS LS-301
- TREE STOCK SIZE SUBJECT TO AVAILABILITY AT TIME OF PROCUREMENT AND TO BE WITHIN THE RANGE OF 90-400L STOCK
- TREES NOMINATED ON PLAN AND/OR LOCATED WITHIN 1.5M OF HARD EDGE/PAVING/KERBLINE ARE TO BE INSTALLED WITH 6M LONG 800MM DEEP ROOT CONTROL BARRIER POSITIONED AGAINST THE HARD EDGE WITH TOP OF RCB TO BE 50MM BELOW TOP OF MULCH

Species Selection- Malacca Median South					
Key	Species	Common Name	Plant per m2	Size	Qty
Trees					
El	Erythrina indica	Coral Tree	As shown	400L	3
Shrubs and groundcovers					
Asp	Acacia saligna 'Prostrate'	Dwarf Wattle	6/m2	140mm	51
~~Cc~~	~~Conostylis candicans~~	~~Cotton Heads~~	6/m2	140mm	51
Cv	Carpobrotus virescens	Pigface	6/m2	140mm	51
Kp	Kennedia prostrata	Running Postman	6/m2	140mm	51

Species Selection- POS Verge					
Key	Species	Common Name	Plant per m2	Size	Qty
Trees					
ME	Metrosideros excelsa	NZ Christmas Tree	As shown	300L	2
Shrubs and groundcovers					
Cv	Carpobrotus virescens	Pigface	6/m2	140mm	46
Dr	Dianella revoluta	Blue Flax Lily	6/m2	140mm	47
Kp	Kennedia prostrata	Running Postman	6/m2	140mm	46
Sc	Scaevola crassifolia	Fanflower	6/m2	140mm	47

Species Selection - Buffer					
Key	Species	Common Name	Plant per m2	Size	Qty
Trees					
BP	Banksia prionotes	Acorn Banksia	As shown	45L	10
EG	Eucalyptus gomphocephala	Tuart	As shown	45L	8
MV	Melaleuca quinquenervia	Broad-Leaved Paperbark	As shown	45L	10
Shrubs and groundcovers					
Al	Acacia lasiocarpa	Glow Wattle	6/m2	t/s	922
Asp	Acacia saligna 'Prostrate'	Dwarf Wattle	6/m2	t/s	366
As	Acacia saligna	Orange Wattle	6/m2	t/s	922
~~Sc~~	~~Conostylis sandiesns~~	~~Cotton Heads~~	~~6/m2~~	t/s	366
Cv	Carpobrotus virescens	Pigface	6/m2	t/s	366
Dr	Dianella revoluta	Blue Flax Lily	6/m2	t/s	625
~~Fn~~	~~Ficinia nodosa~~	~~Knobby Club Rush~~	~~6/m2~~	t/s	625
Kp	Kennedia prostrata	Running Postman	6/m2	t/s	366
Lg	Lepidosperma gladiatum	Coast Sword Sedge	6/m2	t/s	625
Ms	Melaleuca systena	Coastal Honey myrtle	6/m2	t/s	922
Sc	Scaevola crassifolia	Fanflower	6/m2	t/s	625
Tr	Templetonia retusa	Cockies Tongue	6/m2	t/s	922

06 / 301 — OVERALL PLANT SCHEDULE

CATALINA ESTATE
CATALINA BEACH STAGE29

REVISION	DESCRIPTION	BY	DATE
A	ISSUE FOR APPROVAL	AF/NL	27.04.22
B	ISSUE FOR APPROVAL	GD	09.11.22

TIM DAVIES LANDSCAPING
Shere pitcher road, osborne park
western australia 6017
telephone +61 8 9441 0200
facsimile +61 8 9441 0201
enq@tdl.com.au

CLIENT	SATTERLEY PROPERTY GROUP & TPRC		
DESIGNED	AF	DRAWING TITLE	DETAILS & PLANTING SCHEDULE
DRAWN	AF/NL		
APPROVED	GD	DRAWING No.	12606-CB-S29-301
SCALE	AS SHOWN		REVISION B

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CATALINA BEACH - STAGE 29

SUPERSEDED



CITY OF WANNEROO
PLAN APPROVAL

Mark Jumeaux

SENIOR LANDSCAPE
& CONSERVATION DEVELOPMENT OFFICER

DWG	DWG NAME	SCALE @ A1	REV
LS -101	COVER PAGE	1:1000	A
LS -201	PLANTING PLAN	1:250	A
LS -301	DETAILS AND PLANTING SCHEDULE	AS SHOWN	A

01/101 KEY PLAN
PLAN 1:1000 @ A1

0 10 20 40 60 100m

CATALINA ESTATE
CATALINA BEACH STAGE29

REVISION	DESCRIPTION	BY	DATE
A	ISSUE FOR APPROVAL	AF/NL	27.04.22

TIM DAVIES LANDSCAPING
three g/three court osborne park
western australia 6017
telephone +61 8 9441 0200
facsimile +61 8 9441 0201
mail@tdl.com.au

CLIENT	SATTERLEY PROPERTY GROUP & TPRC
DESIGNED	AF
DRAWN	AF/NL
APPROVED	GD
SCALE	1:1000@A1
DRAWING TITLE	COVER PAGE
DRAWING No.	12606-CB-S29-101
REVISION	A

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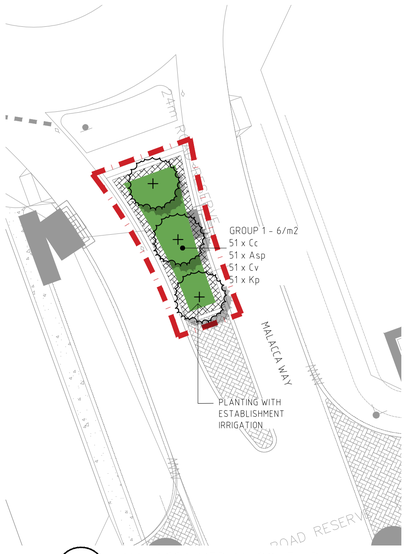
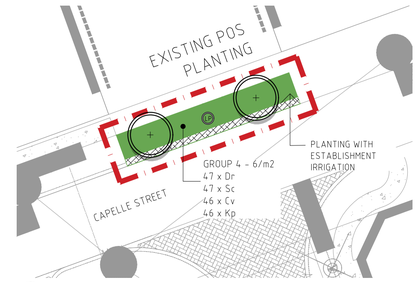
SUPERSEDED



01/201 MALACCA MEDIAN SOUTH PLANTING
PLAN 1:250 @ A1



02/201 POS VERGE PLANTING
PLAN 1:250 @ A1



03/201 BUFFER PLANTING
PLAN 1:250 @ A1

LEGEND

EXTENT OF LANDSCAPE WORKS

TREES

TREES - MALACCA MEDIAN SOUTH (01/02 301)

ERYTHRINA INDICA
400L

TREES - POS VERGE

METROSIDEROS EXCELSA
300L

TREES - BUFFER

CORYMBIA MACULATA
45L

MELALEUCA QUINQUENERVIA
45L

AGONIS FLEXUOSA
45L

FURNITURE & SITE FEATURES

LIGHT POLE BY OTHERS

BOUNDARY FENCE (05 301)

SURFACE FINISHES

MULCH MAINTENANCE STRIP 600mm
REFER TO PLAN

PLANTING BED
REFER TO PLANT SCHEDULE (03-04 301)

CITY OF WANNEROO
PLAN APPROVAL

Mark Jumeaux

SENIOR LANDSCAPE
& CONSERVATION DEVELOPMENT OFFICER

GENERAL NOTES:

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EXCAVATION AND SITE PREPARATION:

- EXCAVATE AS REQUIRED ALONG KERBLINE TO ACHIEVE FINISHED LEVELS AFTER SOIL PREPARATION AND MULCH. EXCAVATED MATERIAL MAY BE RE-SPREAD ON SITE WITHIN LOT BOUNDARY. LOCATION TO BE CONFIRMED BY SUPERINTENDENT
- EXISTING GRADES WITHIN VERGES AND MEDIANS ARE TO BE MAINTAINED. PREPARE EVEN SURFACE SUITABLE FOR PLANTING AND HARDSCAPE INSTALLATION THAT TIES INTO EXISTING LEVELS
- FINISHED LEVELS OF NEW PATHS AND PAVING TO TIE IN WITH EXISTING PAVING AND KERBS
- FOR ALL HARD AND SOFTSCAPE DETAILS AND OVERALL PLANTING SCHEDULES, REFER TO DETAILS LS-301

PLANTING NOTES:

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0 1 2 4 6 10 20 25m

CATALINA ESTATE
CATALINA BEACH STAGE29

REVISION	DESCRIPTION	BY	DATE
A	ISSUE FOR APPROVAL	AF/NL	27.04.22

TIM DAVIES LANDSCAPING
three githo court osborne park
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CLIENT	SATTERLEY PROPERTY GROUP & TPRC
DESIGNED	AF
DRAWN	AF/NL
APPROVED	GD
SCALE	1:250@A1
DRAWING TITLE	PLANTING PLAN
DRAWING No.	12606-CB-S29-201
REVISION	A

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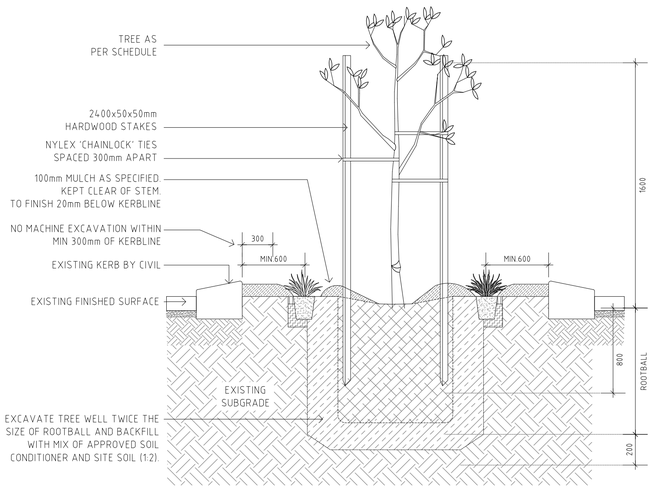
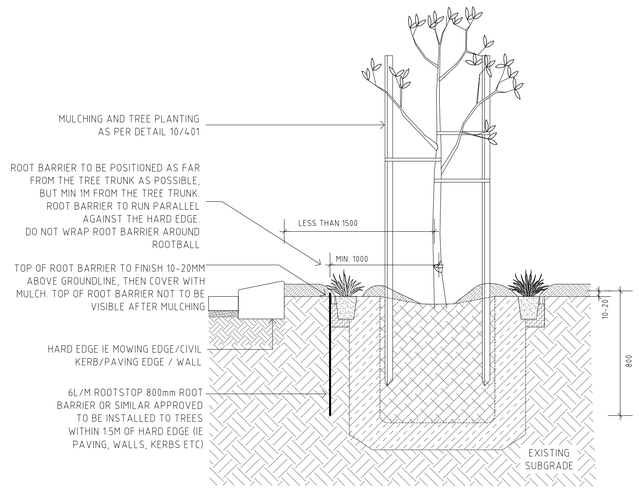
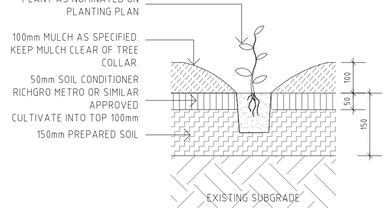
STAKING AND GUYING
>500LT AND TRANSPLANTS: UNDERGROUND GUYING
200-500LT TREE STOCK: 3 X 2400x50x50mm HARDWOOD STAKES
45-150LT TREE STOCK: 2 X 1800x50x50mm HARDWOOD STAKES



01 / 301 — 45-500L TREE PLANTING
TYPICAL DETAIL 1:20 @ A1

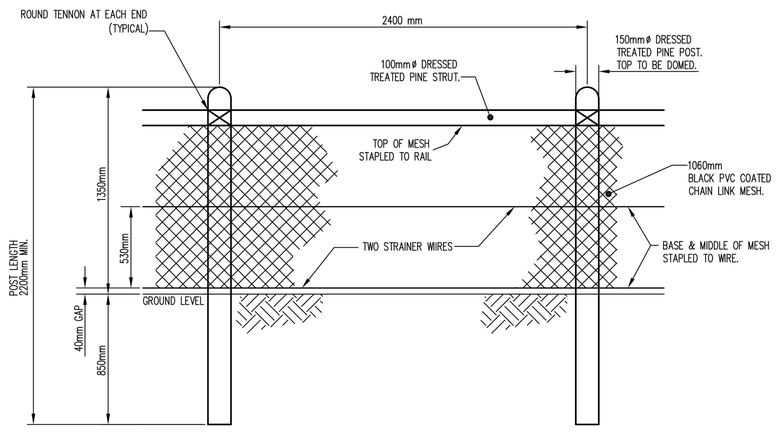


02 / 301 — LINEAR ROOT CONTROL BARRIER
TYPICAL DETAIL 1:20 @ A1

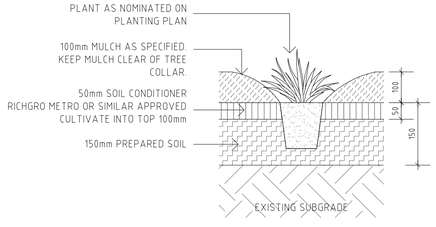


03 / 301 — T/S SHRUB PLANTING
TYPICAL DETAIL 1:10 @ A1

CONSERVATION PINE RAIL FENCING
AS PER CITY OF WANNEROO STANDARD DETAIL TD 01-7-1



05 / 301 — BOUNDARY FENCE
TYPICAL DETAIL 1:20 @ A1



04 / 301 — 140mm SHRUB PLANTING
TYPICAL DETAIL 1:10 @ A1

FERTILISER SCHEDULE AT INSTALLATION (REFER TO SPEC):		
LANGLEY TROFORTE 21-1-6 FERTILISER TABLETS OR SIMILAR APPROVED	NATIVE TREE STOCK	8 TABLETS PER TREE
BAYLEYS NATIVE PLANT FOOD FERTILISER GRANULES OR SIMILAR APPROVED	SHRUBS AND GROUNDCOVERS	15g PER T/S 20g PER 130/140mm STOCK

MULCH SCHEDULE	
BUFFER	SITE MULCH FROM FORESHORE WORKS
MALACCA MEDIAN SOUTH	PINE BARK
POS VERGE	PINE BARK

SUPERSEDED

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Species Selection- Malacca Median South					
Key	Species	Common Name	Plant per m2	Size	Qty
Trees					
EI	Erythrina indica	Coral Tree	As shown	400L	3
Shrubs and groundcovers					
Asp	Acacia saligna 'Prostrate'	Dwarf Wattle	6/m2	140mm	51
Cc	Conostylis candicans	Cotton Heads	6/m2	140mm	51
Cv	Carpobrotus virescens	Pigface	6/m2	140mm	51
Kp	Kennedia prostrata	Running Postman	6/m2	140mm	51

Species Selection- POS Verge					
Key	Species	Common Name	Plant per m2	Size	Qty
Trees					
ME	Metrosideros excelsa	NZ Christmas Tree	As shown	300L	2
Shrubs and groundcovers					
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Dr	Dianella revoluta	Blue Flax Lily	6/m2	140mm	47
Kp	Kennedia prostrata	Running Postman	6/m2	140mm	46
Sc	Scaevola crassifolia	Fanflower	6/m2	140mm	47

Species Selection - Buffer					
Key	Species	Common Name	Plant per m2	Size	Qty
Trees					
AF	Agonis flexuosa	WA Peppermint	As shown	45L	10
CM	Corymbia maculata	Spotted Gum	As shown	45L	8
MV	Melaleuca quinquenervia	Broad-Leaved Paperbark	As shown	45L	10
Shrubs and groundcovers					
Al	Acacia lasiocarpa	Glow Wattle	6/m2	t/s	922
Asp	Acacia saligna 'Prostrate'	Dwarf Wattle	6/m2	t/s	366
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06 / 301 — OVERALL PLANT SCHEDULE

CATALINA ESTATE
CATALINA BEACH STAGE29

REVISION	DESCRIPTION	BY	DATE
A	ISSUE FOR APPROVAL	AF/NL	27.04.22

TIM DAVIES LANDSCAPING
Level 4, 431 Roberts Road, Subiaco, Western Australia 6008
Telephone +61 8 9441 0200
Facsimile +61 8 9441 0201
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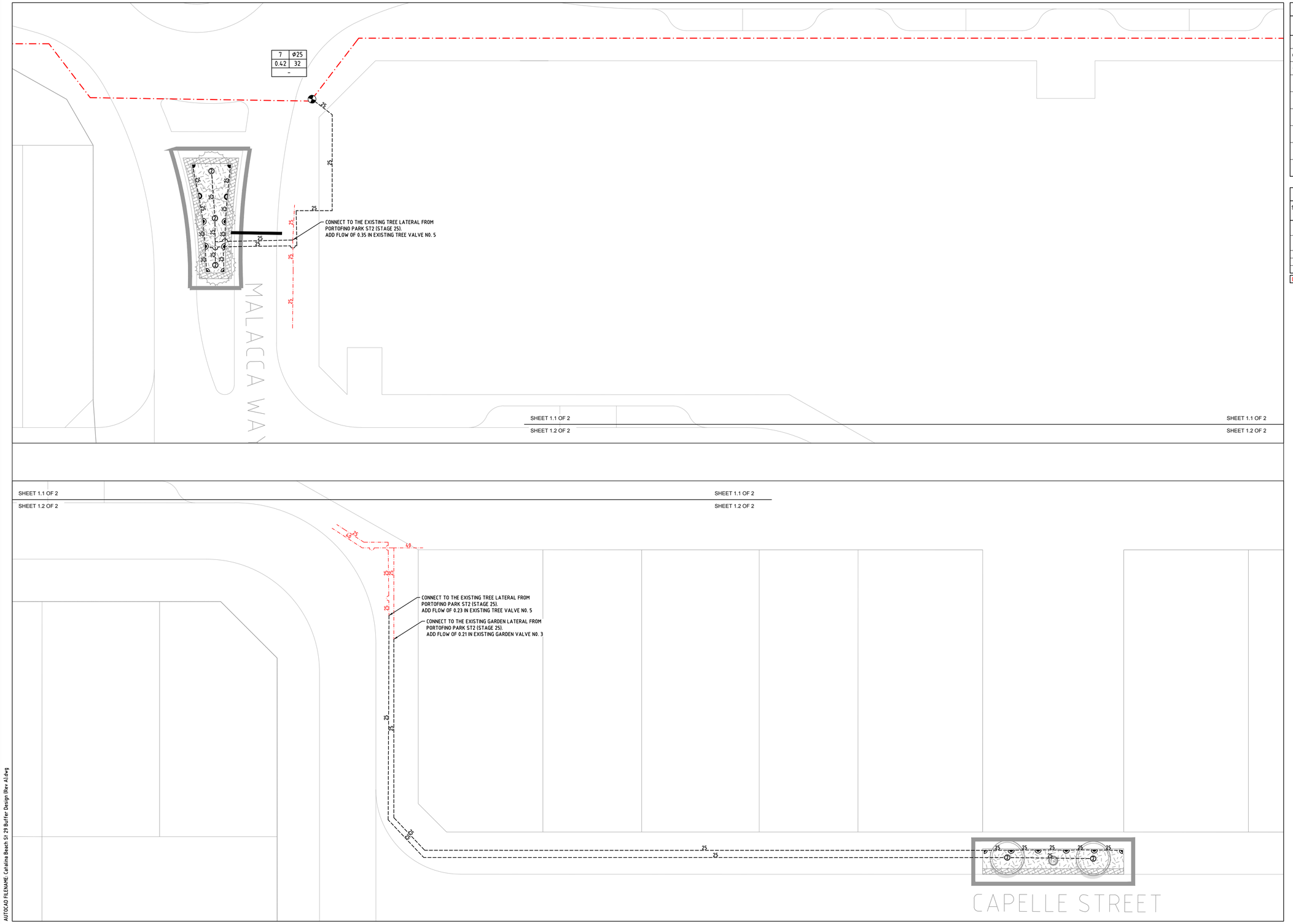
APPROVED	GD	DRAWING No.	12606-CB-S29-301
SCALE	AS SHOWN		REVISION A



LEGEND:

"SPRINKLERS"

SYMBOL	BRAND NAME	MODEL DESCRIPTION	NOZZ. NO.	PRESS. (kPa)	FLOW (LPM)	RADIUS (m)
	TORO	570Z-12P	15	250	2.84-11.36	4.6
	TORO	570Z-12P	12	250	1.82-7.27	3.7
	TORO	570Z-12P	10	250	1.25-5.04	3.0
300 L / 400 L	2 - TORO FLOOD BUBBLER MODEL FB-100-PC ON A TORO 570Z-6P WITH BLUE FLEX 7.06 LPM @ 250 kPa					
	BERMAD 200 SERIES DATA VALVE (SIZE AS SHOWN)					
	EXISTING DN100 mPVC RRJ CLASS 12 MAINLINE					
25	EXISTING uPVC CLASS 9 SWJ LATERAL PIPE (SIZE AS SHOWN)					
25	uPVC CLASS 9 SWJ LATERAL PIPE (SIZE AS SHOWN)					
	EXISTING SLEEVE					

STATION DATA							VALVE DATA		
ST'N NO.	FLOW (L/s)	PR. (kPa)	PR'N (mm/hr)	APP'N (mm/week)	ST'N TIME (min)	AREA TYPE	VAL. NO.	FLOW (L/s)	DECODER NO.
1	9.11	350	16	40	30	TURF	1	4.23	–
							2	4.88	–
2	8.64	250	32	40	15	GARDEN	3	8.22	–
							7	0.42	
3	7.53	350	12	40	40	GARDEN	4	7.53	–
4	7.69	250	–	–	15	TREES	5	7.69	–
5	3.57	350	8	25	37	SWALE	6	3.57	–

DAILY RUN TIME: 2 HRS & 17 MIN WEEKLY RUN TIME: 11 HRS & 25 MIN

VALVE LABEL LEGEND

VALVE NO	2	ø50	VALVE SIZE
FLOW (LPS)	3.29	32	PRECIPITATION RATE
	–		DECODER NUMBER

NOTE:
1. LATERAL PIPES ARE TO BE INSTALLED TO A MINIMUM DEPTH OF 350mm.
2. THE CONTRACTOR TO UNDERTAKE FLOW (PRESSURE) ADJUSTMENT OF ALL SOLENOID VALVES IN ACCORDANCE WITH THE NOMINAL OPERATING PRESSURE OF THE SPRINKLERS ATTACHED TO THE PARTICULAR SOLENOID VALVE.
3. THIS DESIGN IS BASED ON THE ASSUMPTION THAT THESE AREAS AND PORTOFINO PARK ST2 (STAGE 25) ARE TO BE INSTALLED SIMULTANEOUSLY.

CITY OF WANNEROO
PLAN APPROVAL
Mark Jumeaux

SENIOR LANDSCAPE
& CONSERVATION DEVELOPMENT
OFFICER

0 2 4 6 8 10m
SCALE 1:200 ON A1

AUTOCAD FILENAME: Catalina Beach S1 29 Buffer Design (Rev A1.dwg

REV	DATE	DESCRIPTION	DWN	CKD
A	29/09/2022	ISSUED FOR APPROVAL	P.K	J.S

REV	DATE	DESCRIPTION	DWN	CKD

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NewGround DESIGN SERVICES

SCALE :	1 : 200 @ A1 SHEET
DESIGNER :	P. KULKARNI
DRAWN BY :	P. KULKARNI
APPROVED BY :	J. STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT : TDL

PROJECT : CATALINA BEACH
STAGE 29 - BUFFER
IRRIGATION WORKS

DATE :	DESIGN NO. :	SHEET NO. :
29/09/2022	18464-01	1 OF 2

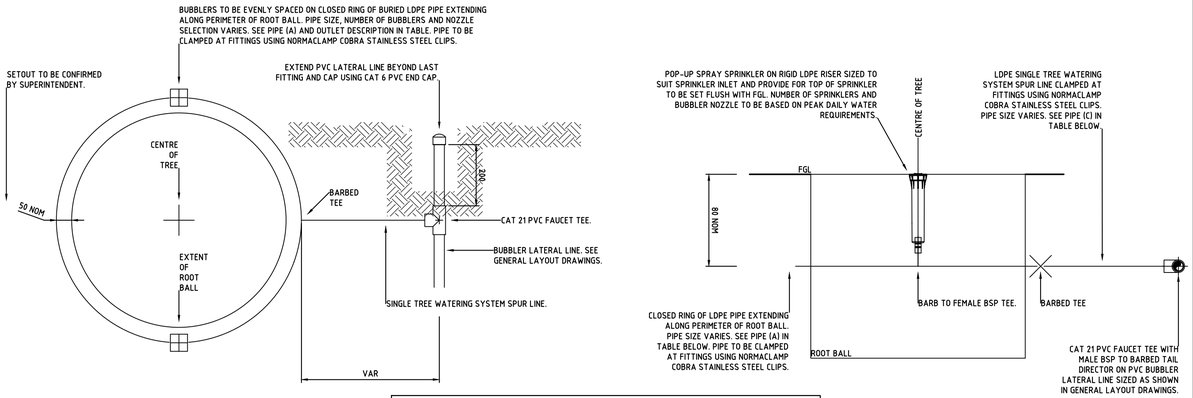
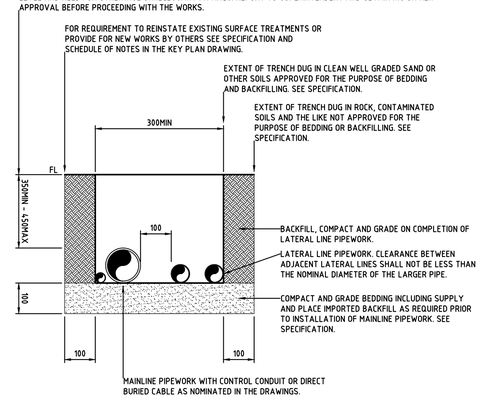


TABLE OF TREE WATERING SYSTEMS†						
SYSTEM	PLANT STOCK‡	SYSTEM FLOW(L/MIN)	20MIN VOL (L)¥	PIPE (A)	PIPE (B)	PIPE (C)
–	–	0-6	–	DN19	–	DN19
–	–	6-15	–	DN19	–	DN25
–	–	15-30	–	DN25	–	DN25

† SYSTEM DESIGN BASED ON THE PEAK DAILY WATER REQUIREMENTS SUPPLIED BY NURSERY INDUSTRY SOURCES AND OTHERS.
‡ BAG STOCK SIZE (L) AND/OR NOMINAL DIAMETER OF TRANSPLANT ROOT BALL (M).
¥ VOLUME PROVIDED BY A 20MIN RUN TIME. RUN TIME TO BE ADJUSTED IN ACCORDANCE WITH PLANT WATER REQUIREMENTS AND CLIMATIC CONDITIONS.

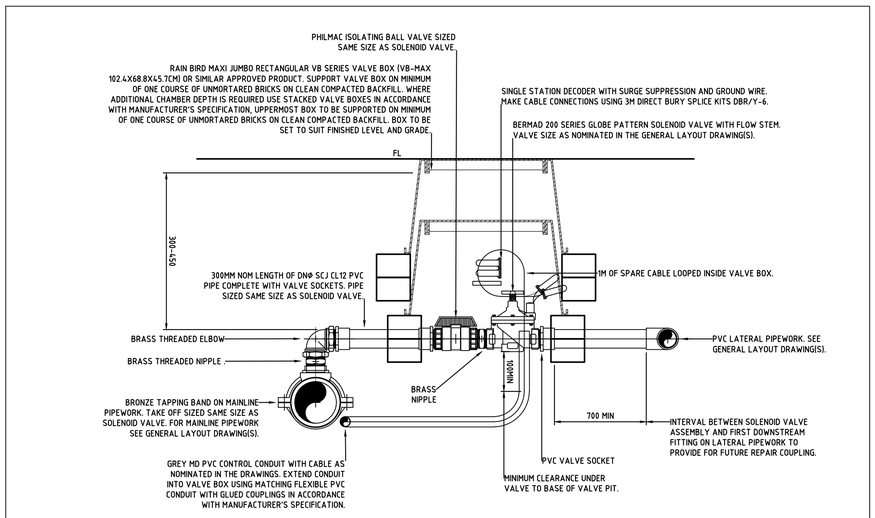
TREE WATERING SYSTEMS
NOT TO SCALE

ACCOUNT FOR ALL REQUIRED COVERS AND CLEARANCES NOMINATED IN THE DRAWINGS INCLUDING THOSE ASSOCIATED WITH VALVE SPINDLES AND THE LIKE AND INVESTIGATE ALL SITE IMPROVEMENTS AND OTHER SERVICES INFRASTRUCTURE WHEN DETERMINING DEPTH OF MAINLINE PIPEWORK. PLAN AHEAD TO AVOID ABRUPT CHANGES OF PIPEWORK LINE AND LEVEL AND NEED FOR OTHERWISE UNNECESSARY FITTINGS. REPORT TO SUPERINTENDENT AND OBTAIN HIS OR HER APPROVAL BEFORE PROCEEDING WITH THE WORKS.

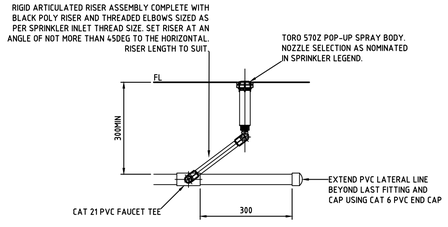


TYPICAL ARRANGEMENT OF MULTIPLE PIPES IN A COMMON TRENCH
NOT TO SCALE

CITY OF WANNEROO
PLAN APPROVAL
Mark Jumeaux
SENIOR LANDSCAPE & CONSERVATION DEVELOPMENT OFFICER



TYPICAL GLOBE PATTERN SOLENOID VALVE INSTALLATION
NOT TO SCALE



TYPICAL POP-UP SPRAY SPRINKLER INSTALLATION ON PVC PIPEWORK
NOT TO SCALE

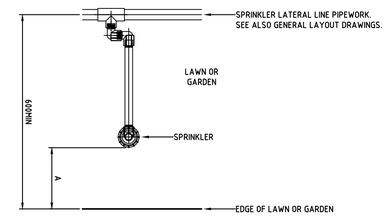


TABLE OF SPRINKLER OFFSETS			
EDGE TYPE	DIMENSION A		
	SPRAY†	ROTOR†	
BACK OF KERB OR EDGE OF PAVEMENT.	100	300	
GARDEN WALL WITH NO MOWING STRIP.	200	200	
BUILDING FACADE WITH NO MOWING STRIP.	600	600	

† SPRINKLER TYPE. SEE GENERAL LAYOUT DRAWINGS.

SPRINKLER AND LATERAL PIPE OFFSETS FROM LAWN AND GARDEN EDGES
NOT TO SCALE

AUTOCAD FILENAME: Catalina Beach S1 29 Buffer Design Rev A1.dwg

REV	DATE	DESCRIPTION	DWN	CKD
A	29/09/2022	ISSUED FOR APPROVAL	P.K	J.S

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NewGround DESIGN SERVICES

SCALE :	1 : NTS @ A1 SHEET
DESIGNER :	P. KULKARNI
DRAWN BY :	P. KULKARNI
APPROVED BY :	J. STRAUSS
FLOW (LPS) :	
PRESSURE (KPA) :	

CLIENT : TDL

PROJECT : CATALINA BEACH STAGE 29 - BUFFER TYPICAL DETAILS

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