



500 PACIFIC HIGHWAY ST LEONARDS
NEW HOPE VIMG / URBAN

LANDSCAPE DEVELOPMENT APPLICATION
AUGUST 2016

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12 STEPS TO GREAT PUBLIC SPACE

- 1/ Protection from traffic
- 2/ Protection from crime
- 3/ Protection from the elements
- 4/ A place to walk
- 5/ A place to stop and stand
- 6/ A place to sit
- 7/ Things to see
- 8/ Opportunities for conversations
- 9/ Opportunities for play
- 10/ Human-scale
- 11/ Opportunities to enjoy good weather
- 12/ Aesthetic quality

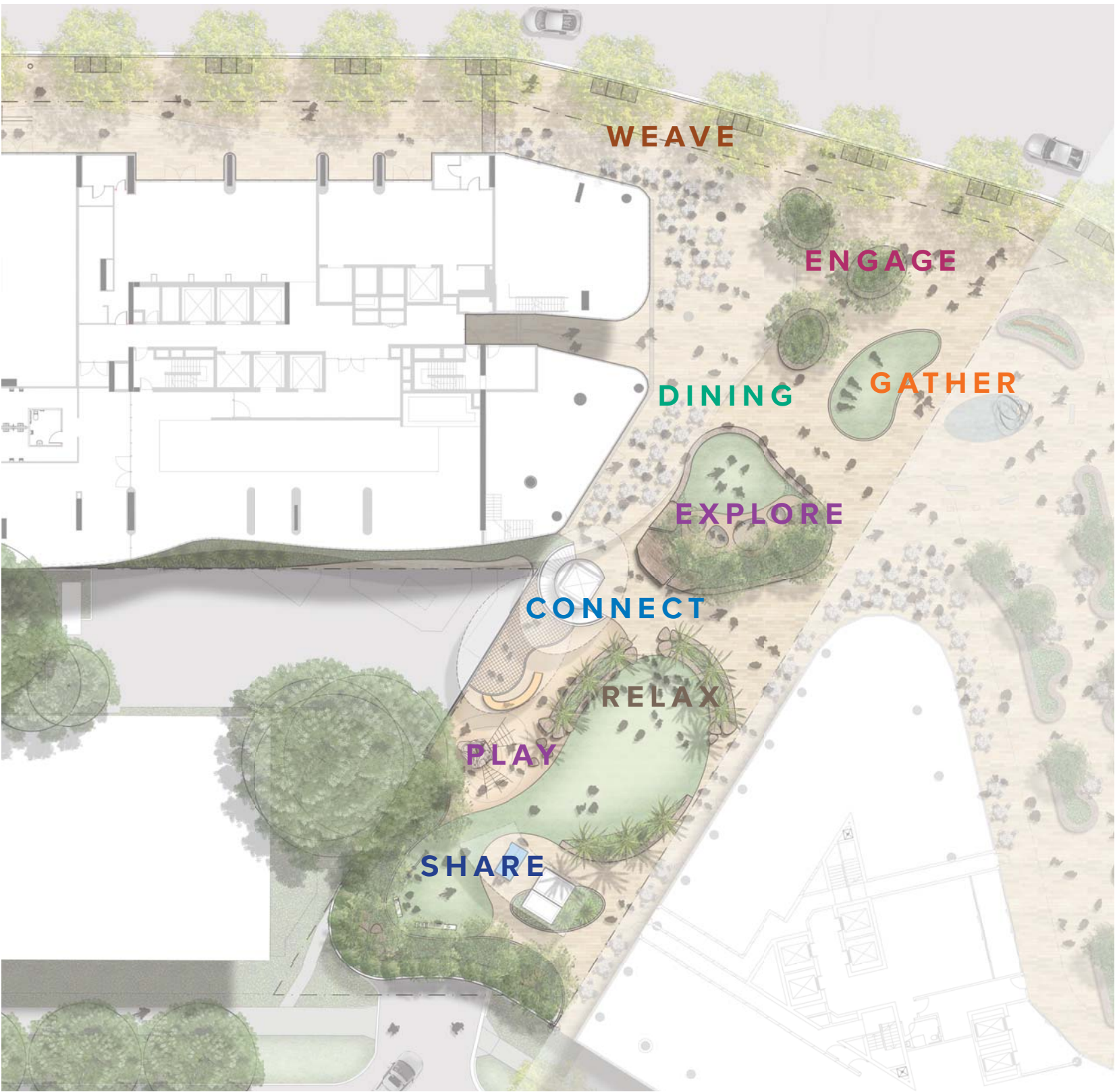
- JAN GEHL + LARS GEMZOE



KEY PUBLIC REALM PRINCIPLES

- / Activation - all day / all year
- / Adaptable / flexible space
- / Pedestrian scale - fine grain detail
- / Amenity for residents and visitors
- / Strong connections between spaces
- / Maximise solar access
- / Develop positive identity
- / Safe and accessible
- / Robust materiality
- / Greater social interaction & fun

OPEN SPACE PROGRAMME



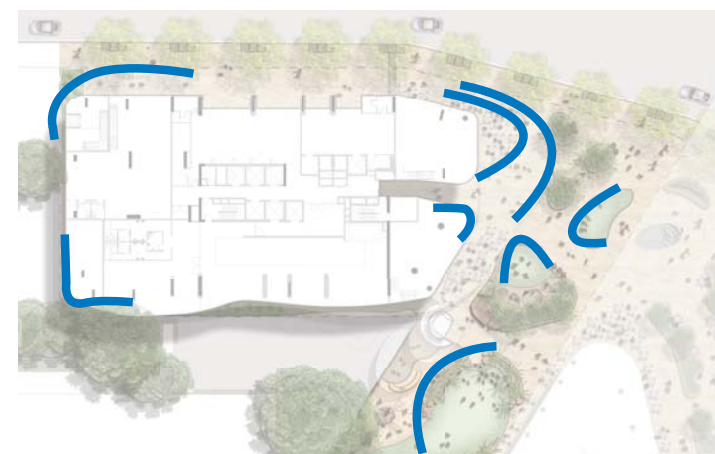
URBAN FORM



ST LEONARDS

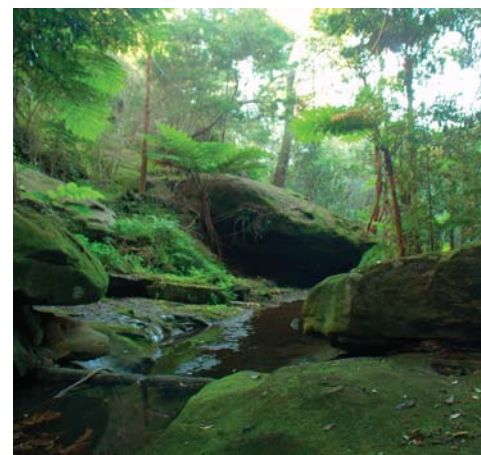
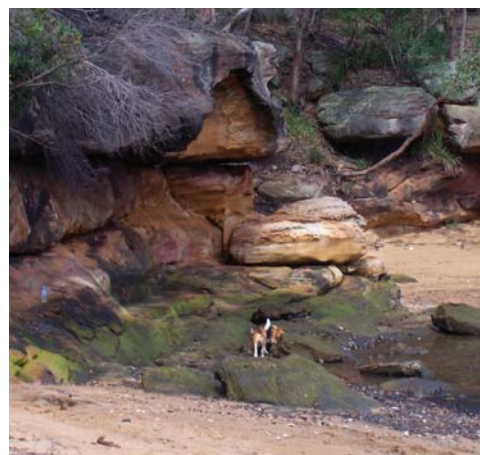
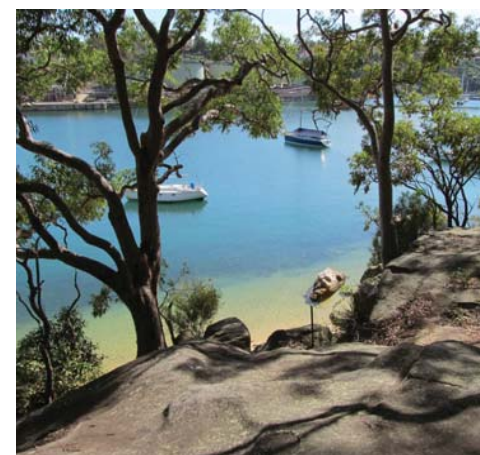
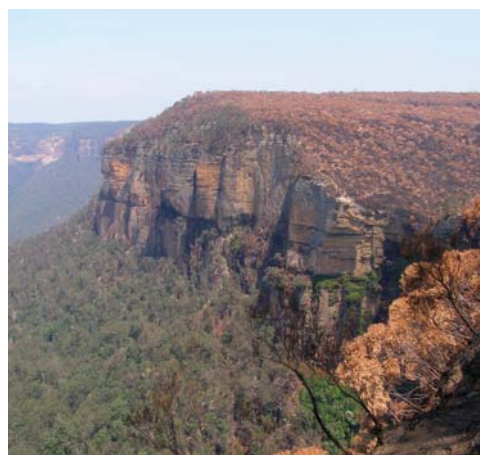


CROWS NEST CORNER



FRIEDLANDER PLACE

MATERIAL + TEXTURE



An urban space in a harbourside city...the geology of the Sydney Basin is incredibly unique. From the heights of the development there is connection to both the Great Escarpment and the Water. Geological processes have created the forms, textures and patterns seen at the local harbour, river and creek landscapes. We intend to draw upon the rich tapestry of the Sydney Basin in the design of the spaces and detailed elements that give this location character. The layercake geology, irregular rock formations and sandstone erosion inform the pavements and planters with their language. A contextual design response that brings together the escarpment and the harbourside setting.



SOCIAL PROGRAMME



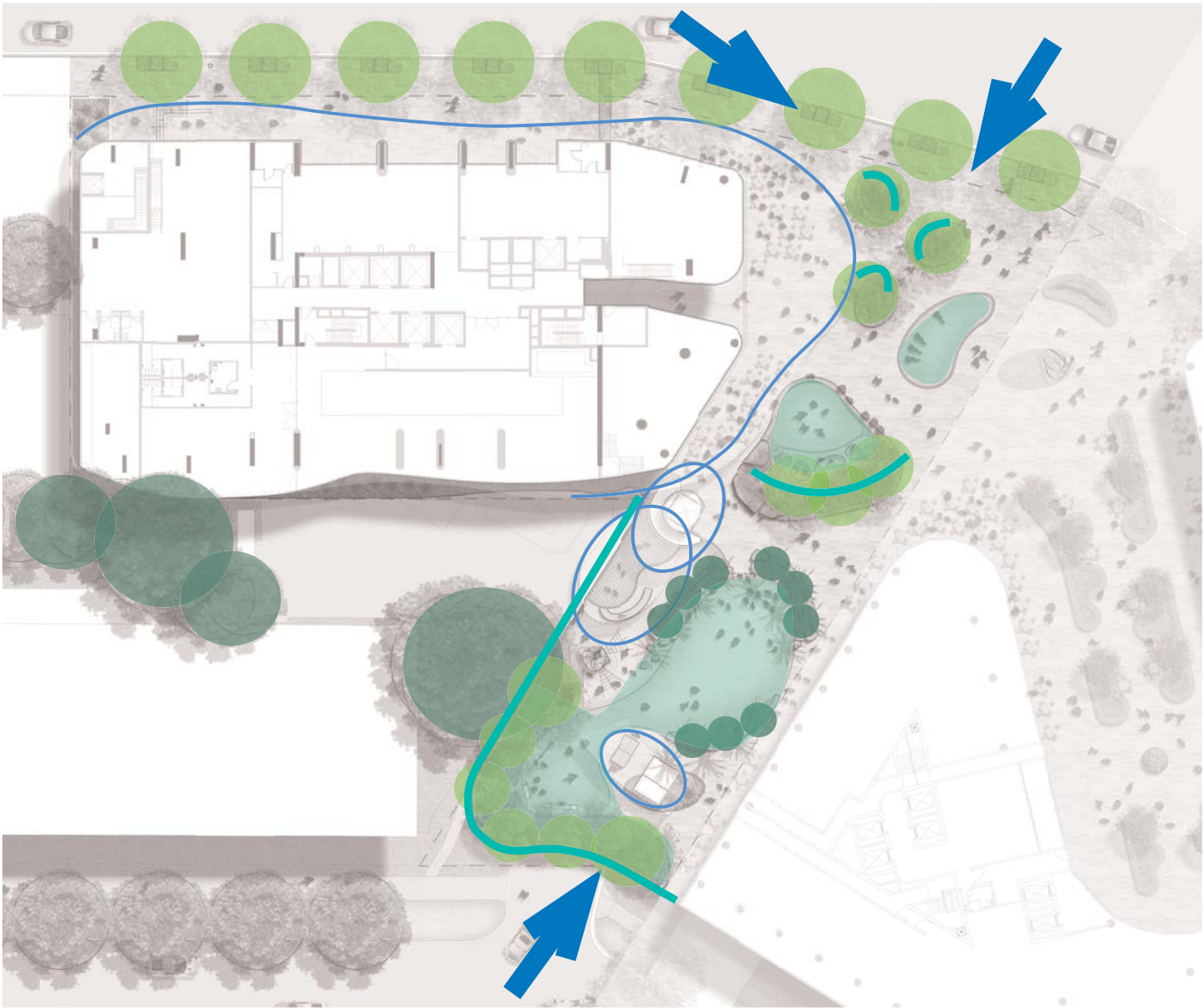
CIRCULATION KEY

- primary flows
- secondary movements
- exploration / play

GATHERING KEY

- dining
- seating
- passive / relaxation

LANDSCAPE STRATEGY



MICROCLIMATE KEY

- weatherproof / covered
- wind effects
- windbreak

PLANTING KEY

- existing trees retained / transplanted
- proposed new trees
- turf and planting (non paved area)



LEGEND

- 01 Open interface with Pacific Highway creates maximum visual connection and street presence for Friedlander Place
- 02 Raised planters with mature tree planting and seating edges
- 03 Continuation of streetscape planting and public domain treatment
- 04 Accessible water play / reflection pool and art (by others)
- 05 Raised turf terrace with seating edges + native tree planting in elevated garden bed
- 06 Adventure / nature play space
- 07 Public art opportunities
- 08 Forecourt plaza to adjacent residential development
- 09 Active cafe and retail frontages
- 10 Flexible artificial turf space
- 11 Ping pong table
- 12 Outdoor fitness equipment
- 13 Children's play structure and activity zone
- 14 Steps and lift access to Christie St laneway connection and Nicholson St
- 15 Christie St laneway and easement
- 16 Existing mature trees retained
- 17 Existing palms to be transplanted to perimeter of turf area



0 4 8 12 16 20M
SCALE 1:200 @ A1



DESIGN PRINCIPLES

The Pacific Highway address to Friedlander Place has been envisioned as a generous open plaza which opens the site up to the street interface, establishing an iconic site identity and inviting passers by to mingle with local residents within a dynamic public space. A series of seating, planting, and turfed elements provide opportunities for passive and active recreation to complement the open plaza experience and potential water feature which links Friedlander Place through to the adjacent development.

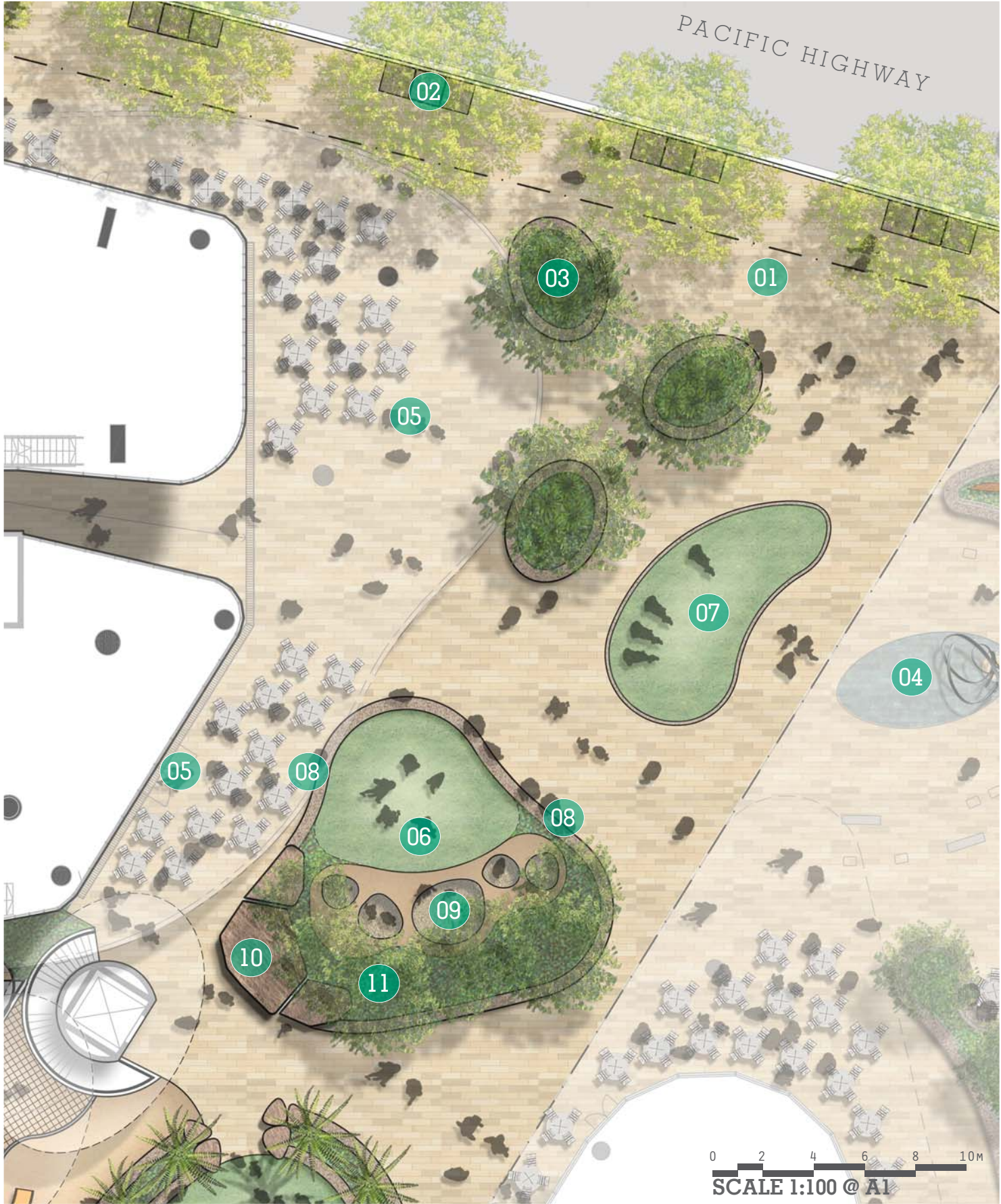
PLAZA ACTIVATION

use:	daily
hours of use:	8am - 7pm
main uses:	play, relaxation
adaptability:	medium (with water off and movable seats
ownership:	public
dependency:	none
fixed features:	planters, water feature, sculpture
furniture:	movable seats, signage
surface:	paving, water, turf
lighting:	accent, feature, safety, street

KEY PLAN

LEGEND

01/ Open plaza interface to Pacific Highway with feature paving	07/ Turfed embankment
02/ Proposed street trees	08/ Sandstone seating edge
03/ Feature seating / planters	09/ Nature themed adventure play
04/ Potential Public Art Element Integrated with Water Play to adjacent site	10/ Carved feature rock edge
05/ Cafe leasable space	11/ Native Feature Trees for Windbreak and Shade
06/ Raised turf island	



DESIGN PRINCIPLES

The terraces introduce a variety of active and passive programming into Friedlander Place, with open spaces where residents and visitors can relax and nooks create new opportunities for play and discovery. Play elements will be complemented with outdoor exercise to appeal to all ages. The level change between Friedlander Place and Christie Street will be addressed with the provision of a lift and stairs. Existing palms will be transplanted to provide immediate impact to the space.

TERRACE ACTIVATION

use:	daily with weekend / evening events
hours of use:	7am - 10pm
main uses:	relaxing, playing, exercising
adaptability:	high with programming
ownership:	public with lease
dependency:	activation via programming
fixed features:	play structure, rock features, seat edges
furniture:	tables + chairs, ping pong tables, gym
surface:	paving, artificial turf, softfall
lighting:	awning, shop front, catenary

KEY PLAN



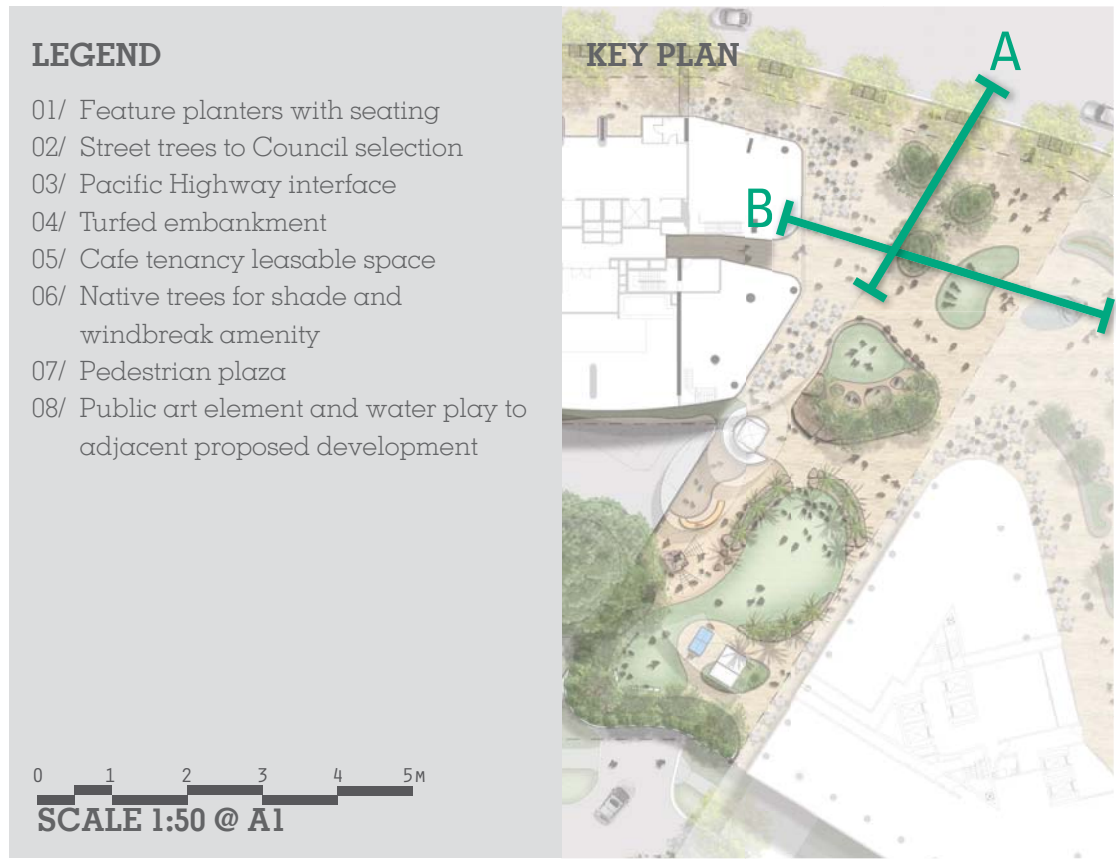
LEGEND

- | | |
|--|--|
| 01/ Outdoor exercise / gym area | planter surrounds |
| 02/ Lift + stair access | 09/ Climbing play structure |
| 03/ Transplanted palm trees | 10/ Pedestrian thoroughfare with feature paving |
| 04/ Circulation space against adjacent property facade | 11/ Softfall play space with nature themed play elements |
| 05/ Christie St laneway connection to be maintained | 12/ Planter with trees |
| 06/ Ping pong table | 13/ Glass balustrade / wind screen to podium perimeter |
| 07/ Artificial turf space | |
| 08/ Sandstone seating walls / | |

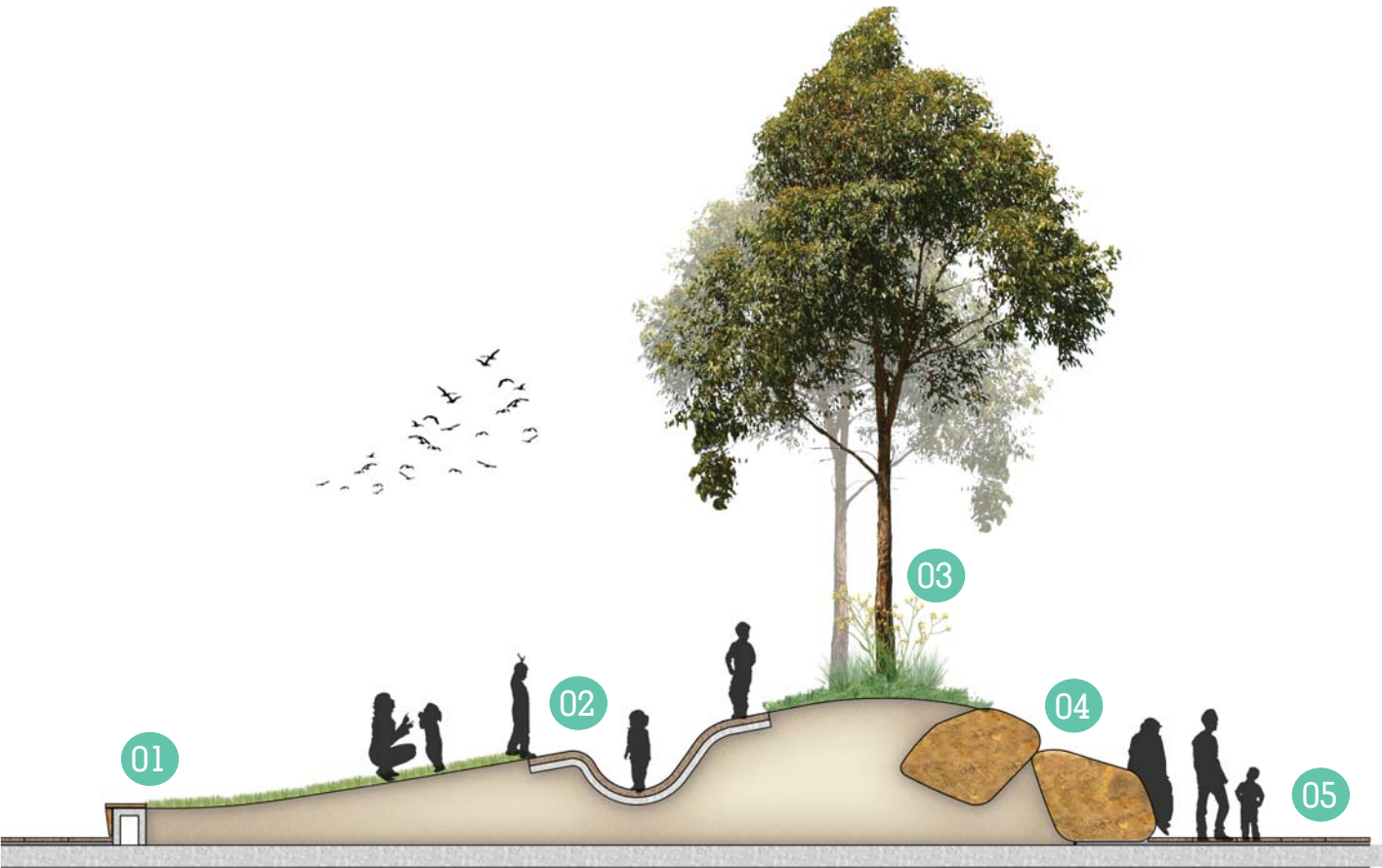




SECTION A - 1:50 @ A1



SECTION B - 1:50 @ A1



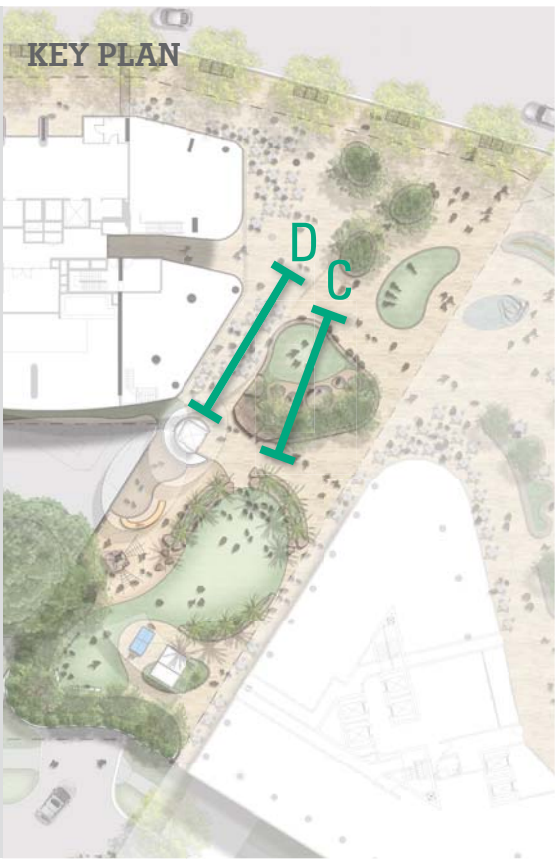
SECTION C - 1:50 @ A1

LEGEND

- 01/ Raised turf island with sandstone seating edge, integrated strip lighting to base
- 02/ Nature themed adventure play
- 03/ Native tree planting in garden bed for shade and windbreak amenity, min 1000mm soil depth for trees
- 04/ Carved feature rock edge
- 05/ Pedestrian thoroughfare with feature paving treatment

0 1 2 3 4 5M
SCALE 1:50 @ A1

KEY PLAN



ELEVATION D - 1:50 @ A1



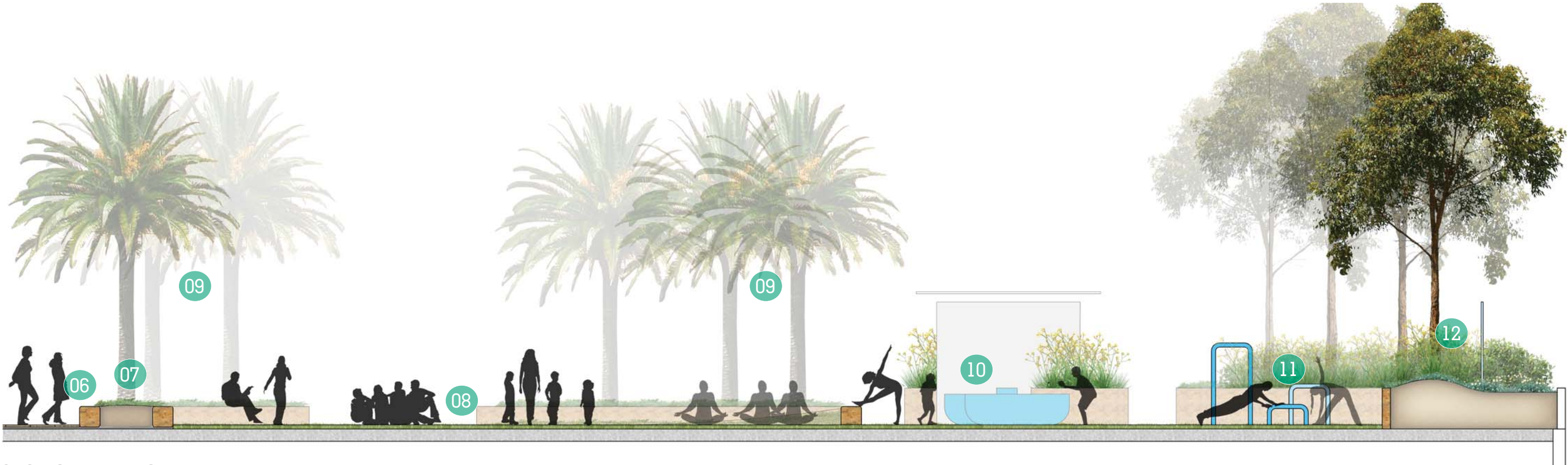
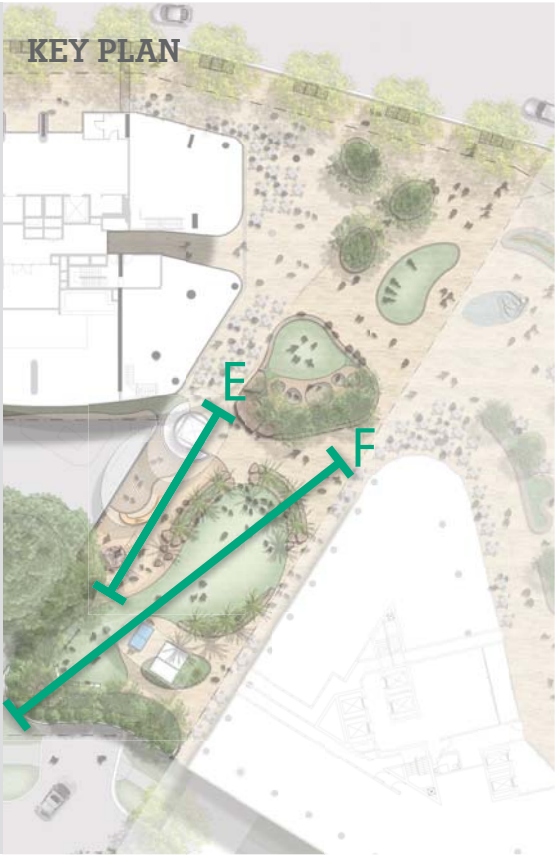
ELEVATION E - 1:50 @ A1

LEGEND

- 01/ Lift + stair access to lower ground
- 02/ Roof canopies
- 03/ Fully contained multi-level climbing net structure with integrated slide and contoured sofffall paving below
- 04/ Nature-themed play elements
- 05/ Balustrade windbreak to edge
- 06/ Sandstone seating wall
- 07/ Low planting to maintain sightlines
- 08/ Artificial turf space
- 09/ Transplanted palm trees
- 10/ Ping pong table
- 11/ Outdoor exercise / gym space
- 12/ Raised planter with native buffer planting, and min 2.0 metre high glass screen for wind protection

0 1 2 3 4 5M
SCALE 1:50 @ A1

KEY PLAN



SECTION F - 1:50 @ A1

SEATING + WALLS



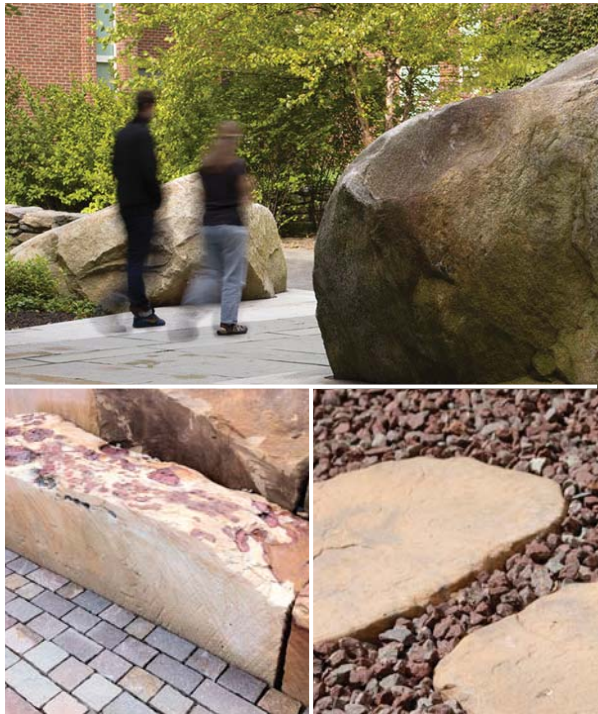
DESCRIPTION

A range of seating elements are to be detailed to contribute to the public domain urban environment.

A combination of formed concrete, hardwood timber, and sandstone cladding will be utilised on seating walls to provide robust, durable and attractive settings.

Supplementary bench seating is to be installed to the main plaza space. The UAP 'Environ Bench A' 1 and 3 seaters are to be used subject to Council approval.

ROCK FEATURES



DESCRIPTION

A suite of sandstone elements is proposed throughout the site to reinforce the connection to the Lane Cove bushland and coastal fringe.

Large sandstone feature boulders are proposed in addition to terrace block walls, and large natural split sandstone slabs are proposed as seating and adventure play elements. These natural rock features will complement the sandstone seating walls and provide a striking contrast to the refined paving palette.

Sandstone stepping stones are also proposed to provide additional connections through garden beds and adventure play spaces.

PLAY



DESCRIPTION

In addition to the range of adventure play opportunities afforded by the sandstone rock features and nooks throughout the site, formal play equipment is also proposed to provide a range of challenges for different age groups.

POPP ping pong tables and a custom designed, fully contained climbing structure, integrated with the southern podium boundary are to be installed subject to Council approval.

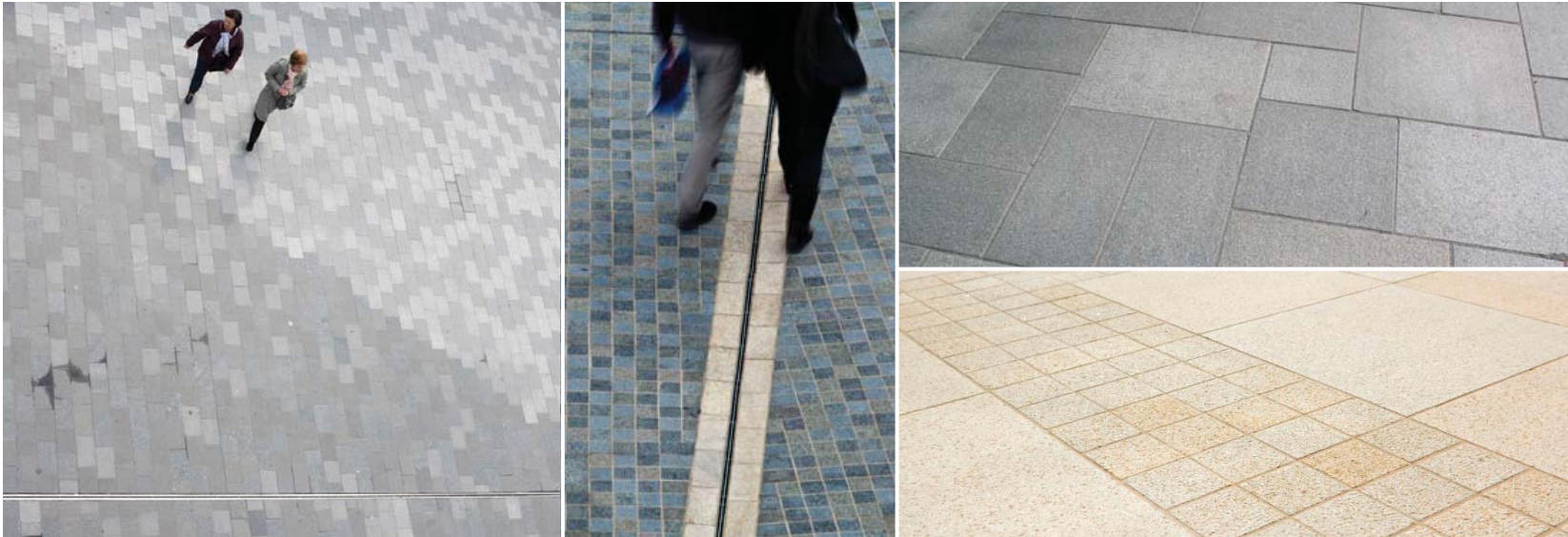
LIGHTING



DESCRIPTION

The approach to the lighting for the public domain is one of both function and feature. Along with providing a safe and secure environment for pedestrians, there is opportunity within the lighting scheme to create a rich and varied public realm beyond daylight hours. Lighting levels to be determined by AS1158.3.1:1999 - Pedestrian area lighting, and is to be approved by Council.

PAVING



DESCRIPTION

A restrained but visually appealing paving palette is proposed.

Large format granite pavers are to make up the majority of the pavement, with interest at feature pedestrian zones and around key seating elements with variations in format, finish and colour.

The final detailing of proposed paving layouts / pattern is to be undertaken in future stages of the process for approval by Council. All drawings included in this public domain document are preliminary for concept intent.



500 PACIFIC HIGHWAY PLANT SCHEDULE

CODE	BOTANIC NAME	COMMON NAME	MATURE SIZE (h x w) (m)	PROPOSED POT SIZE	QUANTITY
GROUND SCHEDULE					
TREES					
Cm	Corymbia maculata	Spotted Gum	20 x 10	800L	7
Eh	Eucalyptus haemastoma	Scribbly Gum	15 x 10	400L	9
Pa	Platanus acerifolia	Plane Tree	20 x 10	400L	9
SHRUBS & ACCENTS					
ABR	Anigozanthos 'Big Red'	Big Red Kangaroo Paw	0.75 x 0.75	25L	21
CLJ	Callistemon 'Little John'	Little John	1 x 1	25L	13
WJG	Westringia 'Jervis Gem'	Coastal Rosemary	1.5 x 1	45L	21
FERNS & SHADE TOLERANT PLANTS					
Aa	Adiantum aethiopicum	Maidenhair Fern	0.5 x 0.5	10L	72
Ae	Aspidistra elatior	Cast Iron Plant	0.5 x 1	45L	75
PSS	Pittosporum 'Silver Sheen'	Pittosporum	3 x 2	75L	33
PX	Philodendron 'Xanadu'	Xanadu	1 x 1	10L	80
GROUNDCOVERS					
DLR	Dianella revoluta 'Little Rev'	Dwarf Flax Lily	0.3 x 0.3	150mm	269
HM	Hardenbergia 'Meema'	Meema	0.25 x spreading	150mm	108
LI	Liriope 'Isabella'	Liriope	0.4 x 0.5	10L	148
Mp	Myoporum parvifolium	Creeping Boobialla	0.15 x spreading	150mm	308
LEVEL 2 SCHEDULE					
SHRUBS & ACCENTS					
	Evergreen Shrub Planting		2.0m mature height	45L	201
LEVEL 3 SCHEDULE					
SHRUBS & ACCENTS					
	Evergreen Shrub Planting		2.0m mature height	45L	127
LEVEL 4 SCHEDULE					
SHRUBS & ACCENTS					
	Evergreen Shrub Planting		2.0m mature height	45L	138
LEVEL 5 SCHEDULE					
SHRUBS & ACCENTS					
	Evergreen Shrub Planting		2.0m mature height	45L	25

THE LANDMARK ST LEONARDS - MATERIALS SCHEDULE						
CODE	TYPE	DETAIL	LOCATION	PRODUCT INFORMATION	MATERIAL	CONSTRUCTION NOTES
PAVING & SURFACES						
P1	Stone Unit Paving		Ground level plaza	Equal to Eco Outdoor granite	large format stone paver, min 40mm depth, exfoliated finish, butt jointed	Refer Landscape detail & specification
P2	Stone Unit Paving		Ground level plaza	Equal to Eco Outdoor granite	stone sett, min 40mm depth, exfoliated finish, butt jointed	Refer Landscape detail & specification
P3	Unit Paving - Public Domain		Pacific Highway public domain	Equal to Eco Outdoor granite	large format stone paver, min 40mm depth, exfoliated finish, butt jointed	Refer Landscape detail & specification
P4	Insitu Concrete Paving		Nicholson Street public domain	Concrete	insitu concrete paving to engineers specification, 100mm depth	Refer Landscape detail & specification
P5	Artificial Turf		Ground level plaza	Equal to Urban Turf Solutions	Luxury Green artificial turf	Refer Landscape detail & specification
P6	Softfall Paving		Ground level plaza play space	Equal to A1 rubber EPDM softfall	colour TBC	Refer Landscape detail & specification
P7	Rock Steppers		Ground level plaza play space	Equal to Gosford Quarries	natural sandstone rocks	Refer Landscape detail & specification
TREE PITTS						
TP1	Tree Pit Type 1		Pacific Highway public domain	Equal to Eco Outdoor granite	stone sett, min 40mm depth, exfoliated finish, butt jointed	Refer Landscape detail & specification
WALLS						
W1	Plaza Seating Wall		Ground level plaza	Equal to Eco Outdoor sandstone + hardwood timber	Concrete seating wall with sandstone facing + timber battens	Refer Landscape detail & specification
W2	Formed Concrete Planter Wall		Ground level plaza	Equal to Eco Outdoor sandstone	Insitu concrete + sawn sandstone facing and capping	Refer Landscape detail & specification
W3	Sandstone Block Wall		Ground level plaza	Equal to Gosford Quarries	A grade sandstone blocks 1000x500x500mm	Refer Landscape detail & specification
W4	Feature Seating Wall		Ground level plaza	Equal to Eco Outdoor sandstone	Concrete seating wall with sandstone facing and capping	Refer Landscape detail & specification
ROCKS						
R1	Sandstone Feature Rocks		Ground level plaza	Equal to Gosford Quarries	Sandstone rocks 1000-2000mm diameter	Refer Landscape detail & specification
EDGE						
E1	Sandstone Edge		Ground level plaza	Equal to Eco Outdoor sandstone	150x150mm sandstone edging block	Refer Landscape detail & specification
E2	Steel Edge		Ground level plaza	Galvanised steel to contractors specification	Galvanised steel	Refer Landscape detail & specification
STEPS						
ST1	Concrete Steps with Stone Cladding		Refer landscape plans	Equal to Eco Outdoor granite, contrast nosing	Concrete with stone cladding to match unit paving	Refer Landscape detail & specification
FENCES, HANDRAILS, & BALUSTRADES						
H1	Handrail		Refer landscape plans	TBC	Stainless steel	Refer Landscape detail & specification
B1	Balustrade		Refer landscape plans	To Architects selection	Glass	Refer Landscape detail & specification
PLAY + FITNESS EQUIPMENT						
	Nature Play		Ground level plaza	Integrated play surface	Off form concrete + softfall	Refer Landscape detail & specification
	Adventure Play		Ground level plaza	Equal to Playscapes 'Adventurescapes'	Rock play element to manufacturers specification	Refer Landscape detail & specification
	Interactive Play		Ground level plaza	Equal to Playscapes 'OptiGear'	Sensory play panels to manufacturers specification	
	Climbing Play Structure with Slide		Ground level plaza	Custom climbing structure with integrated slide	Powdercoated steel frame + safety netting	Refer Landscape detail & specification
	Ping Pong Table		Ground level plaza	Equal to POPP 'Flagship' ping pong table	2740x1525x760mm, subsurface fixed, colour TBC	Refer Landscape specification
	Outdoor Fitness		Ground level plaza	Equal to Playscapes 'Parallel Pull Up' combo	Outdoor exercise equipment to manufacturers specification	
LIGHTING						
L1	Uplight - Trees		Refer landscape plans	Equal to iGuzzini 'Light Up'		To electrical engineers specification
L2	Uplight - Feature Landscape Elements		Refer landscape plans	Equal to iGuzzini 'Lun Up'		To electrical engineers specification
L3	Strip Lighting		To steps and seating walls, refer landscape plans	Equal to iGuzzini 'Underscore InOut'		To electrical engineers specification
L4	Post Top Light		To pedestrian thoroughfare, refer landscape plans	Equal to iGuzzini 'La Venaria'		To electrical engineers specification

500 PACIFIC HIGHWAY

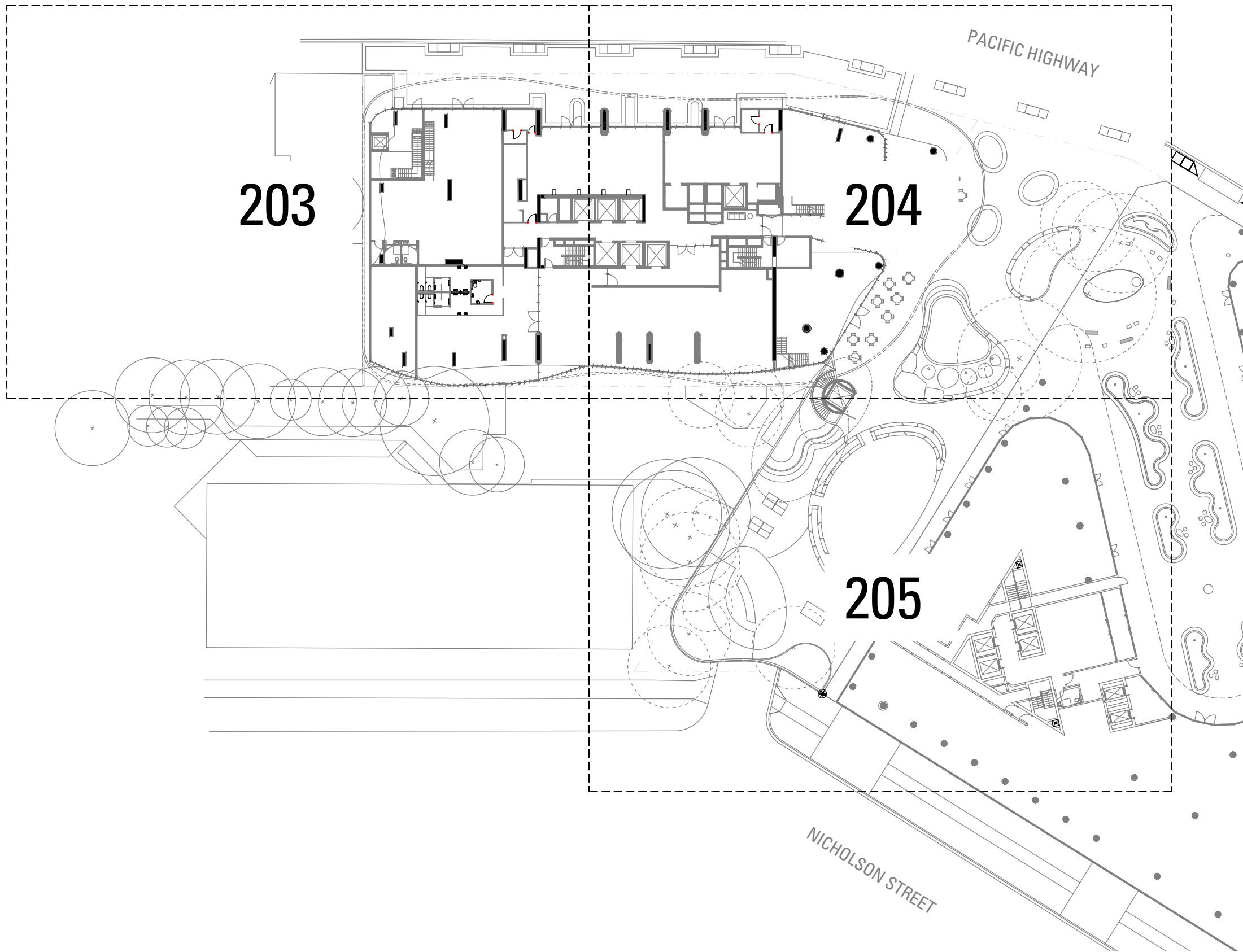
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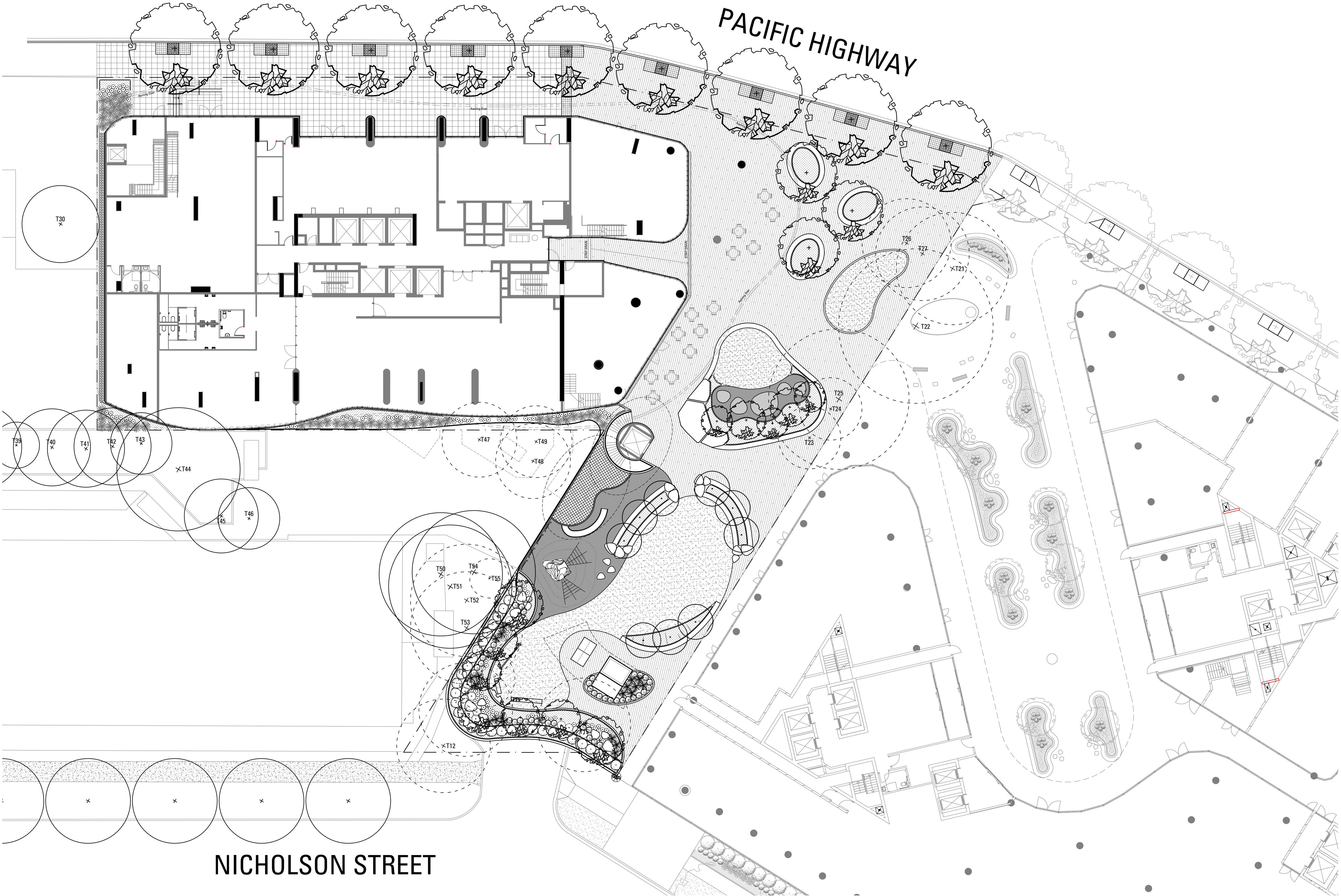
DRAWING SCHEDULE - ADDENDUM

DRAWING NO.	DRAWING TITLE
201	LANDSCAPE MASTERPLAN
202	LANDSCAPE PLAN - NICHOLSON LANE
203	LANDSCAPE PLAN - GROUND
204	LANDSCAPE PLAN - GROUND
205	LANDSCAPE PLAN - GROUND
206	LANDSCAPE PLAN - LEVEL 2
207	LANDSCAPE PLAN - LEVEL 3
208	LANDSCAPE PLAN - LEVEL 4
209	LANDSCAPE PLAN - LEVEL 5
210	LANDSCAPE DETAILS - PAVING
211	LANDSCAPE DETAILS - WALLS
212	LANDSCAPE DETAILS - PLANTING
213	LANDSCAPE SPECIFICATION

KEY PLAN

Scale: 1:500 @ A1

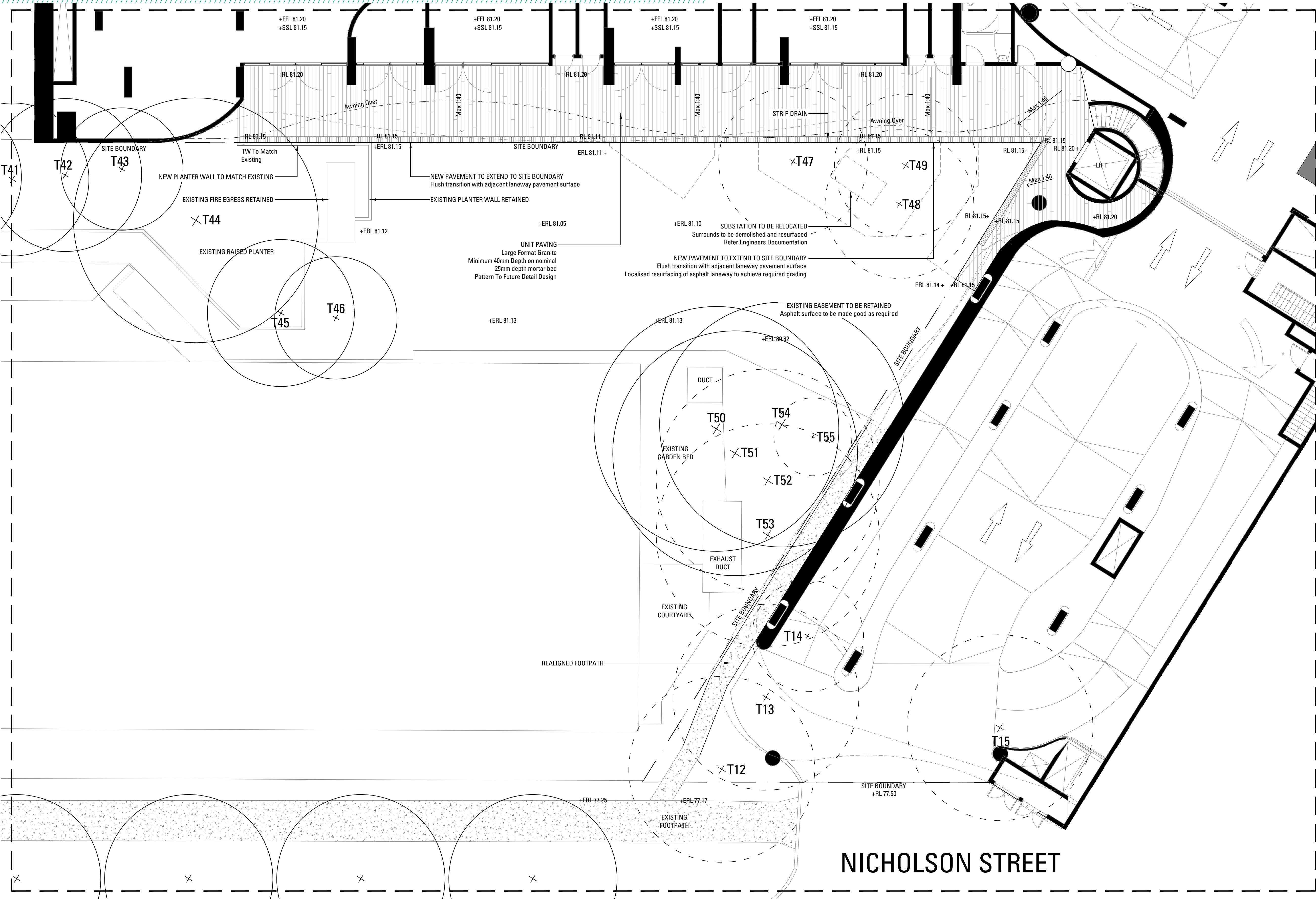




HARDWORKS LEGEND

- SOFTWARES LEGEND**

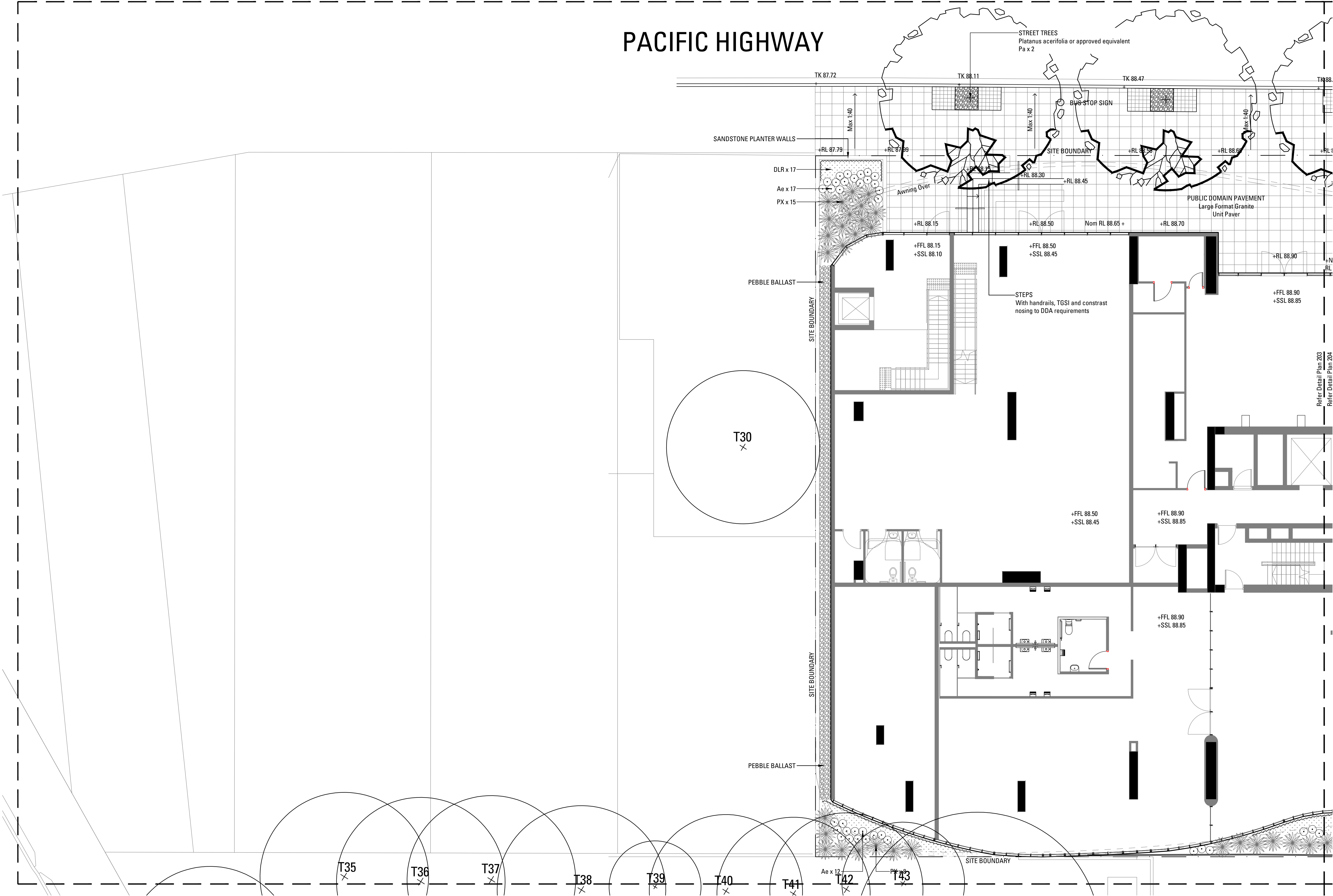
 -  EXISTING TREES TO BE RETAINED
 -  EXISTING TREES TO BE REMOVED
 -  FEATURE TREE PLANTING
 -  SHRUB AND ACCENT PLANTING
 -  GROUNDCOVER PLANTING
 -  TURF



- LEGEND**
- HARDWORKS LEGEND**
- STONE UNIT PAVING
 - PUBLIC DOMAIN UNIT PAVING
 - CONCRETE PAVING
 - ARTIFICIAL TURF PAVING
 - COLOURED SOFTFALL PAVING
 - STEPPING STONES
 - SANDSTONE PLANTER WALL
 - SEATING WALL
 - SANDSTONE FEATURE ROCK
 - STEEL EDGING
Refer Landscape Specification
- SOFTWORKS LEGEND**
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 - TURF
- GRADING**
- RL REDUCED LEVEL
 - FFL FINISHED FLOOR LEVEL
 - TS/BS TOP / BOTTOM OF STEP
 - S STEP HEIGHT
 - TW/BW TOP / BOTTOM OF WALL
 - TP TOP OF STORMWATER PIT
 - TOS TOP OF SEAT
 - TR/BR TOP / BOTTOM OF RAMP

1:100 @ A1 0 1 2 3 4 5m





LEGEND

HARDWORKS LEGEND

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SOFTWORKS LEGEND

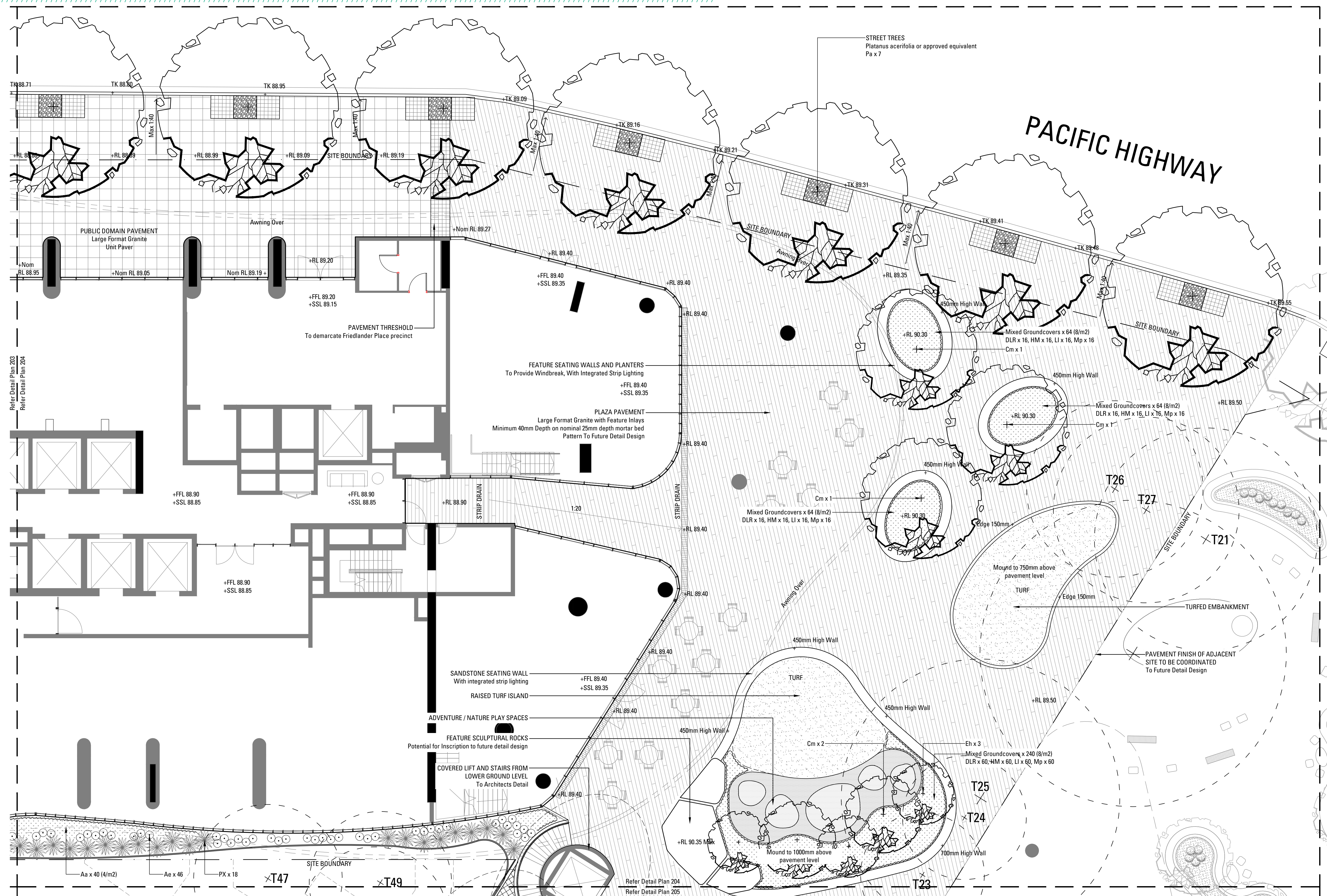
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1:100 @ A1 0 1 2 3 4 5m





LEGEND

HARDWORKS LEGEND

- | | |
|---|-------------------------------|
|  | STONE UNIT PAVING |
|  | PUBLIC DOMAIN UNIT PAVING |
|  | CONCRETE PAVING |
|  | ARTIFICIAL TURF PAVING |
|  | COLOURED SOFTFALL PAVING |
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|  | SANDSTONE PLANTER WALL |
|  | SEATING WALL |
|  | SANDSTONE FEATURE ROCK |
|  | STEEL EDGING |
| | Refer Landscape Specification |

SOFTWARES LEGEND

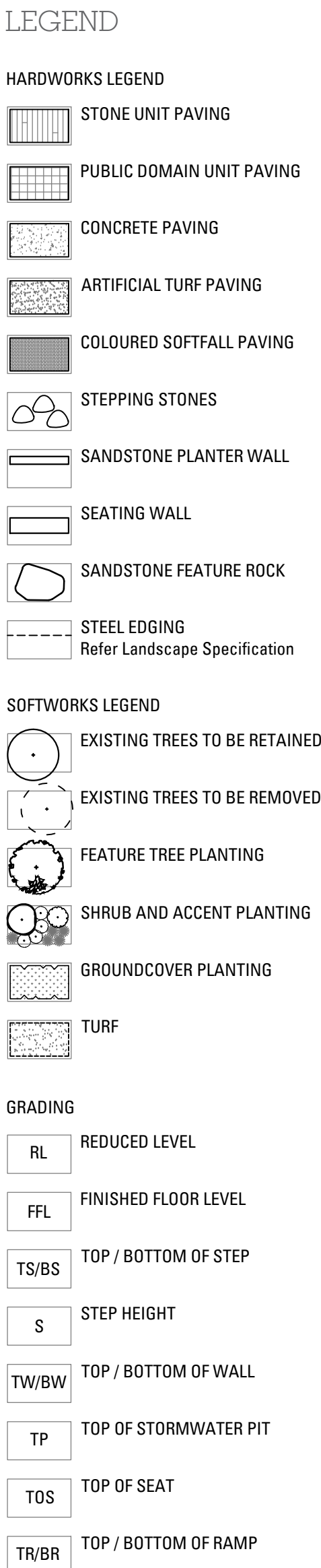
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GRADING

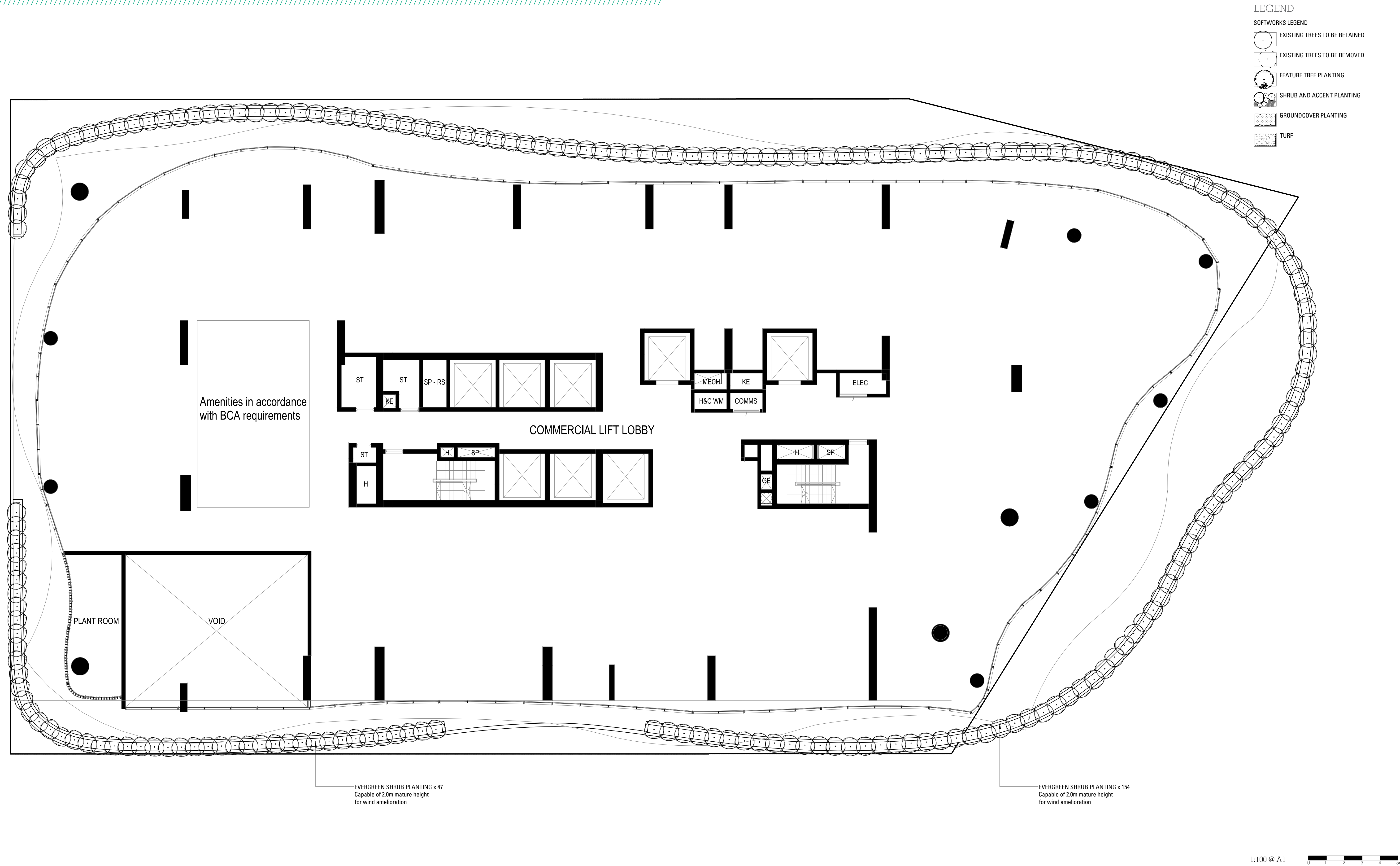
- | | |
|-------|-----------------------|
| RL | REDUCED LEVEL |
| FFL | FINISHED FLOOR LEVEL |
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| S | STEP HEIGHT |
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| TP | TOP OF STORMWATER PIT |
| TOS | TOP OF SEAT |
| TR/BR | TOP / BOTTOM OF RAMP |

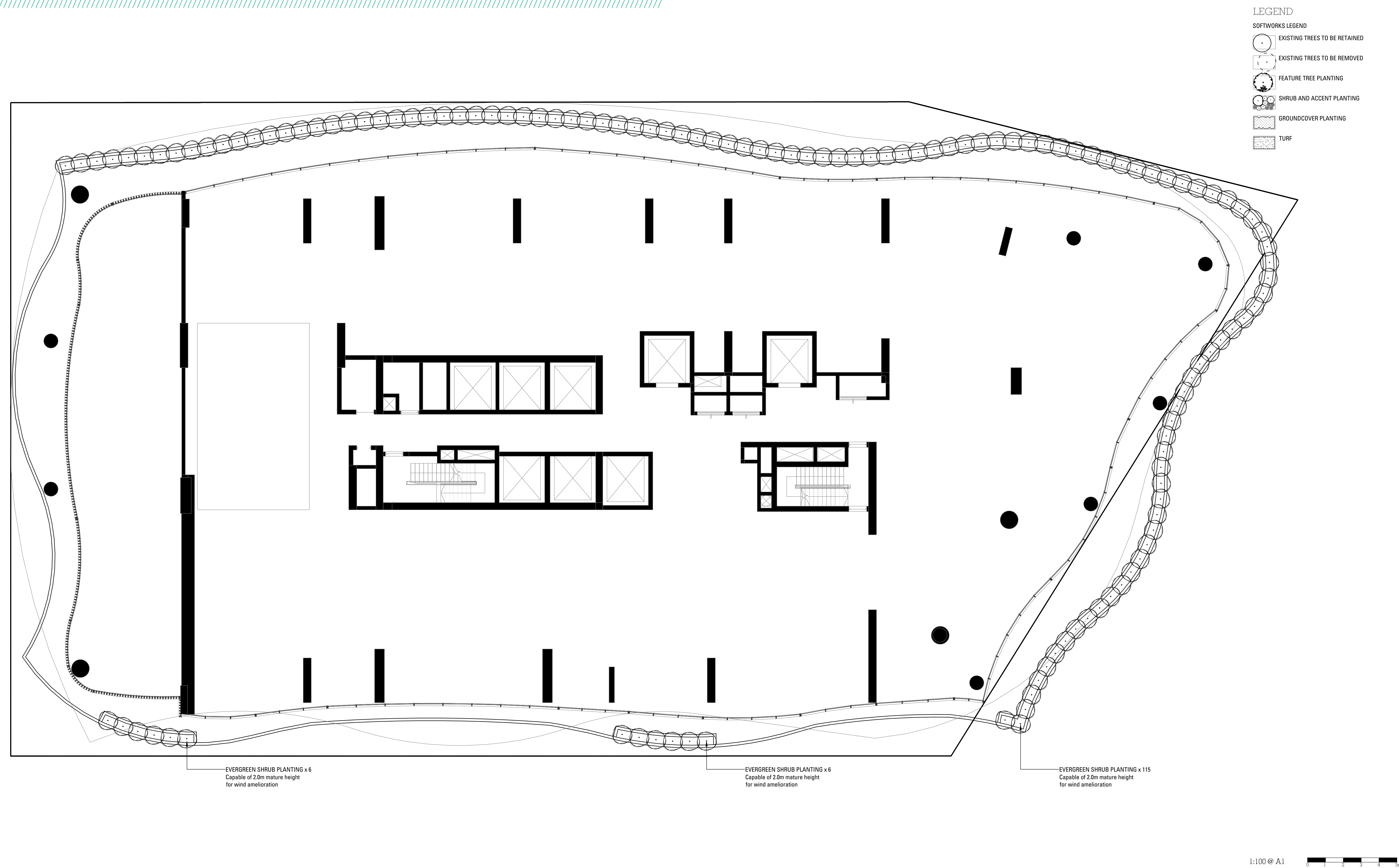
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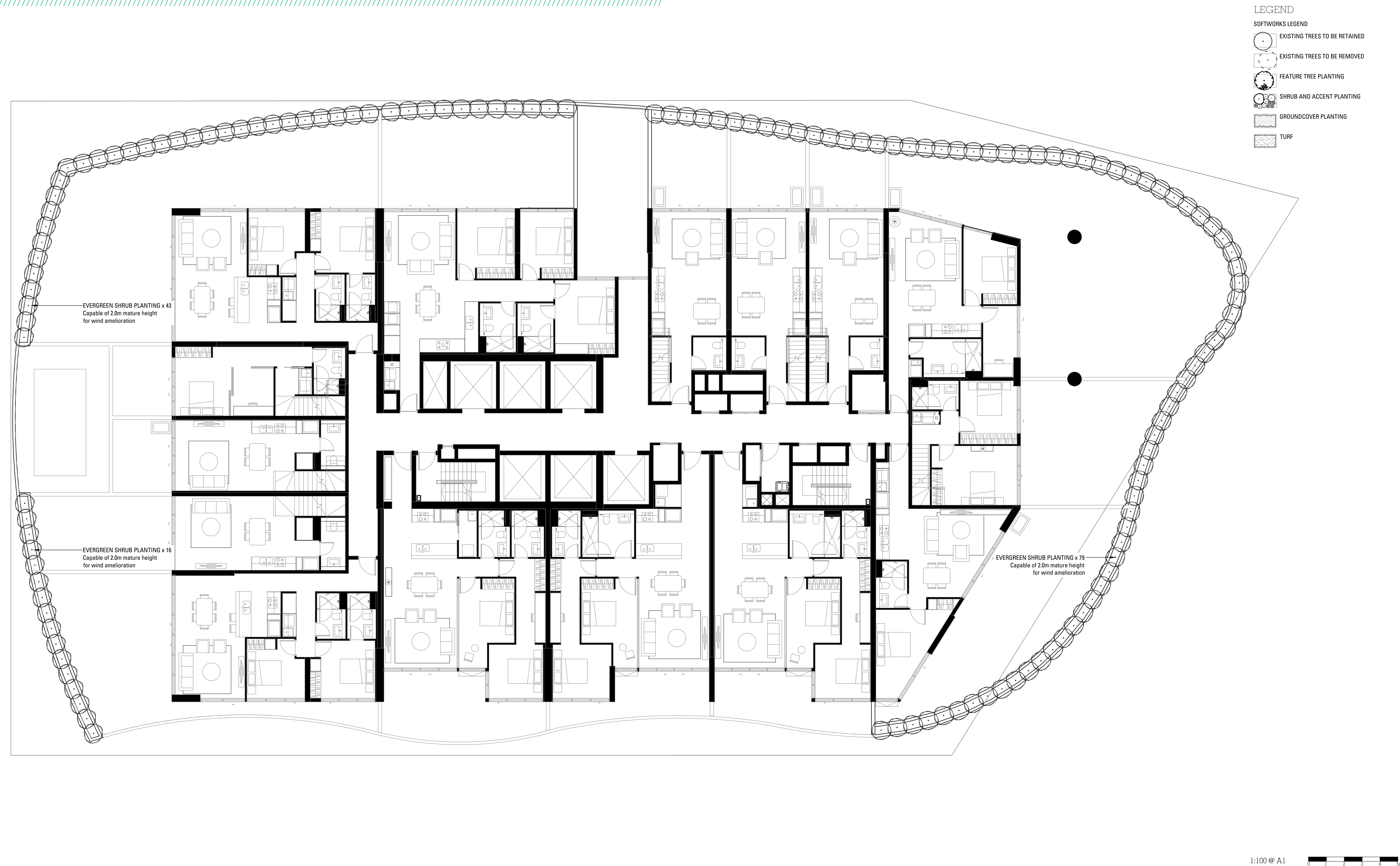




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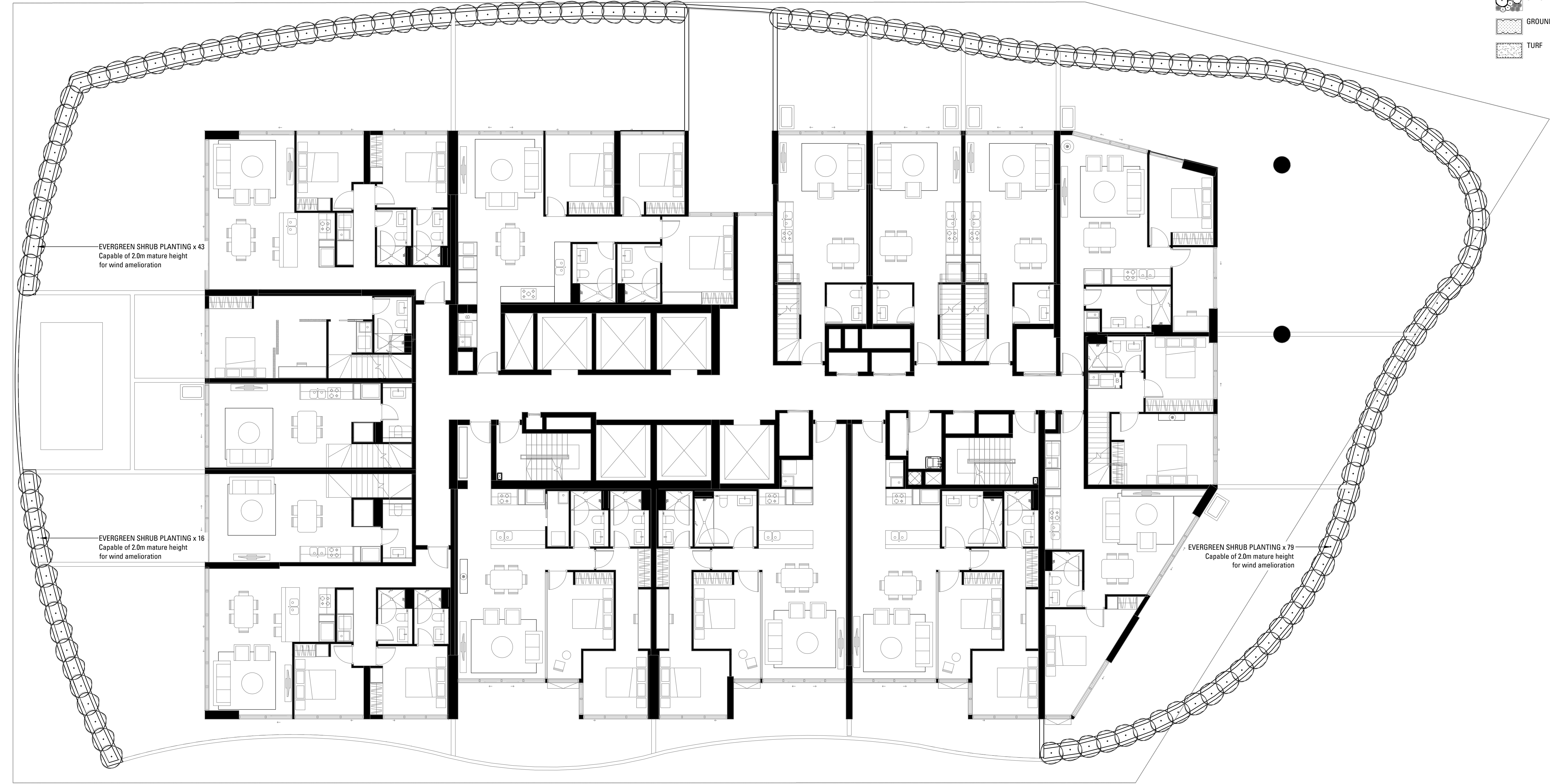




LEGEND

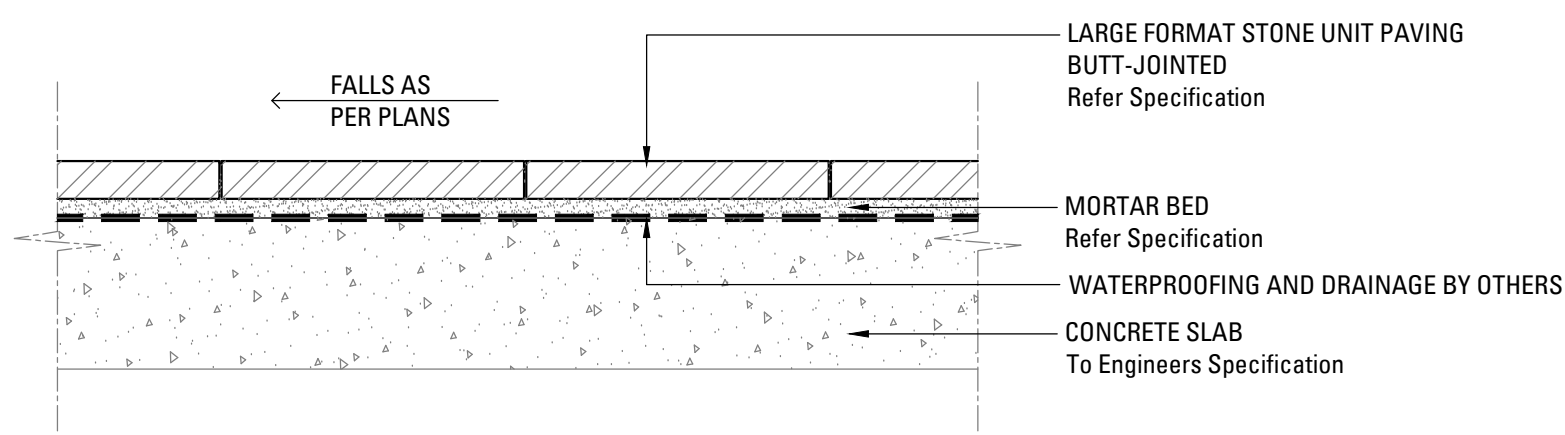
SOFTWORKS LEGEND

- EXISTING TREES TO BE RETAINED
- EXISTING TREES TO BE REMOVED
- FEATURE TREE PLANTING
- SHRUB AND ACCENT PLANTING
- GROUND COVER PLANTING
- TURF

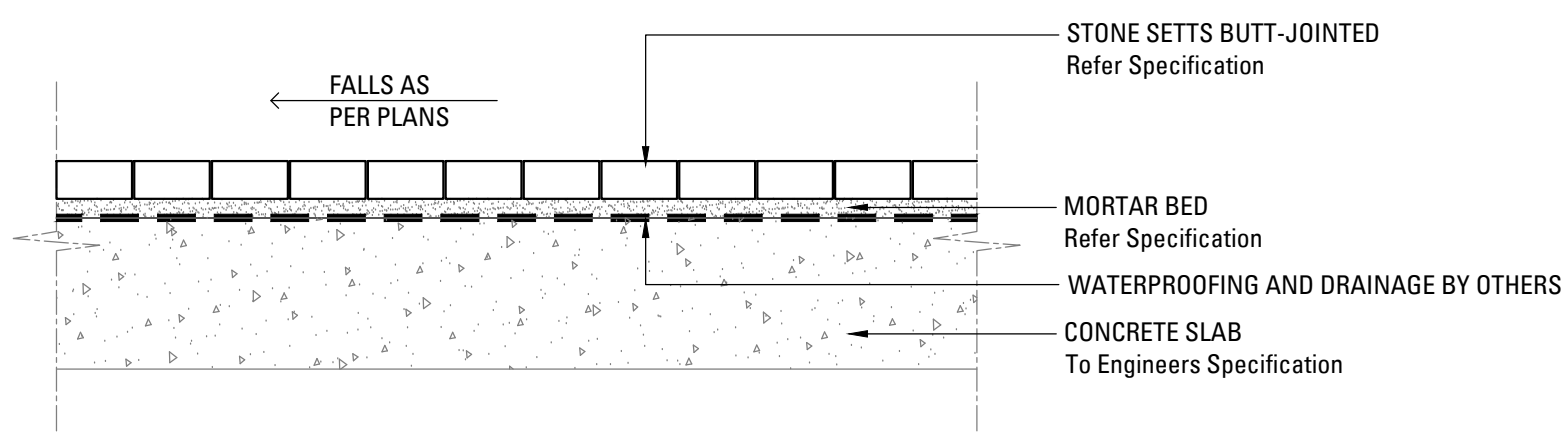


1:100 @ A1

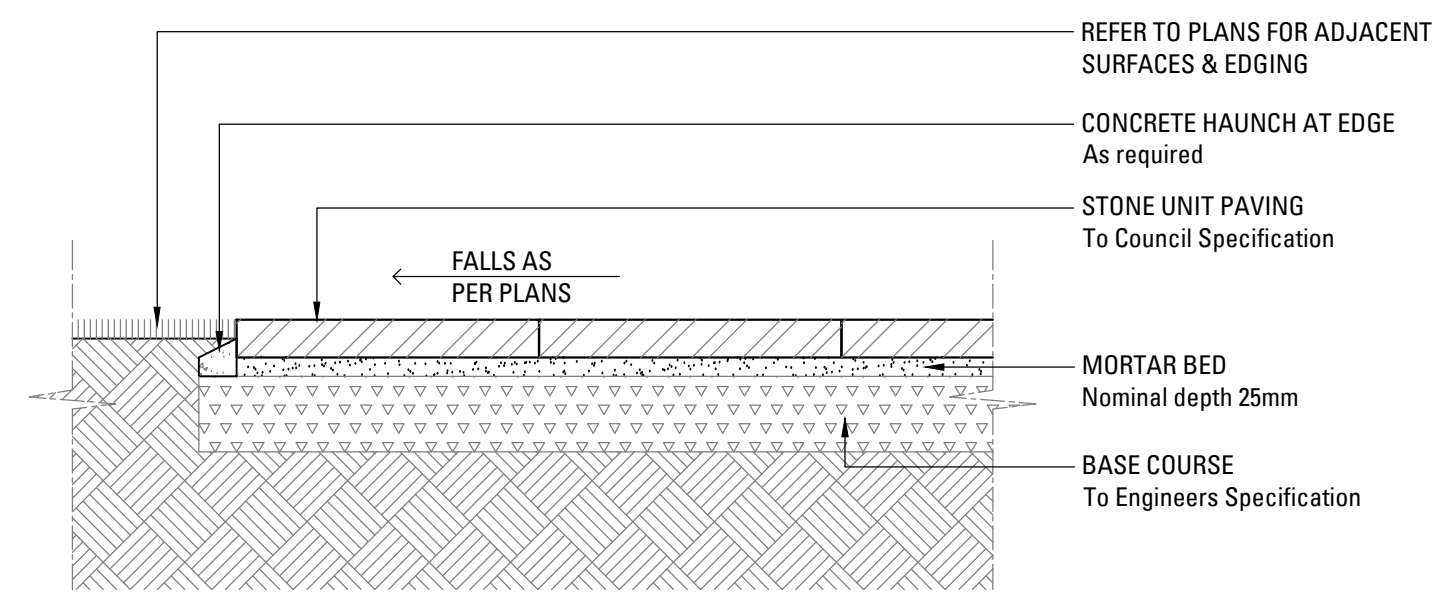




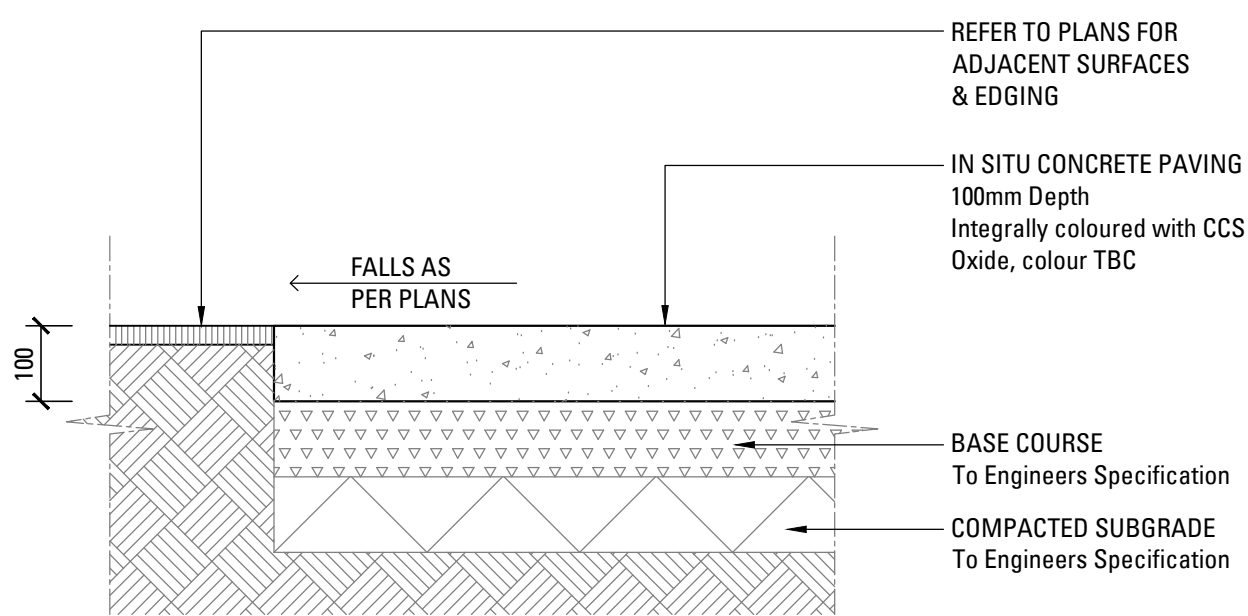
01 PAVING TYPE P1 - UNIT PAVERS ON SLAB (GROUND LEVEL PLAZA)
SCALE 1:10



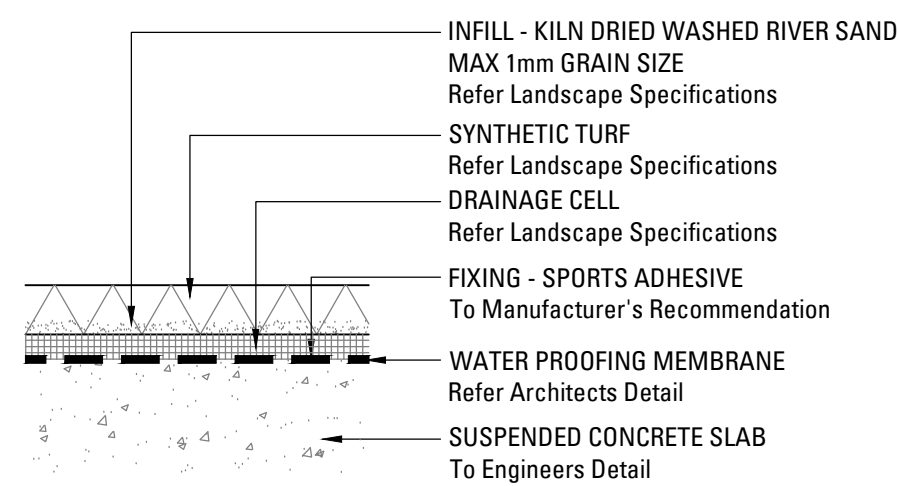
02 PAVING TYPE P2 - SETTS ON SLAB (GROUND LEVEL PLAZA)
SCALE 1:10



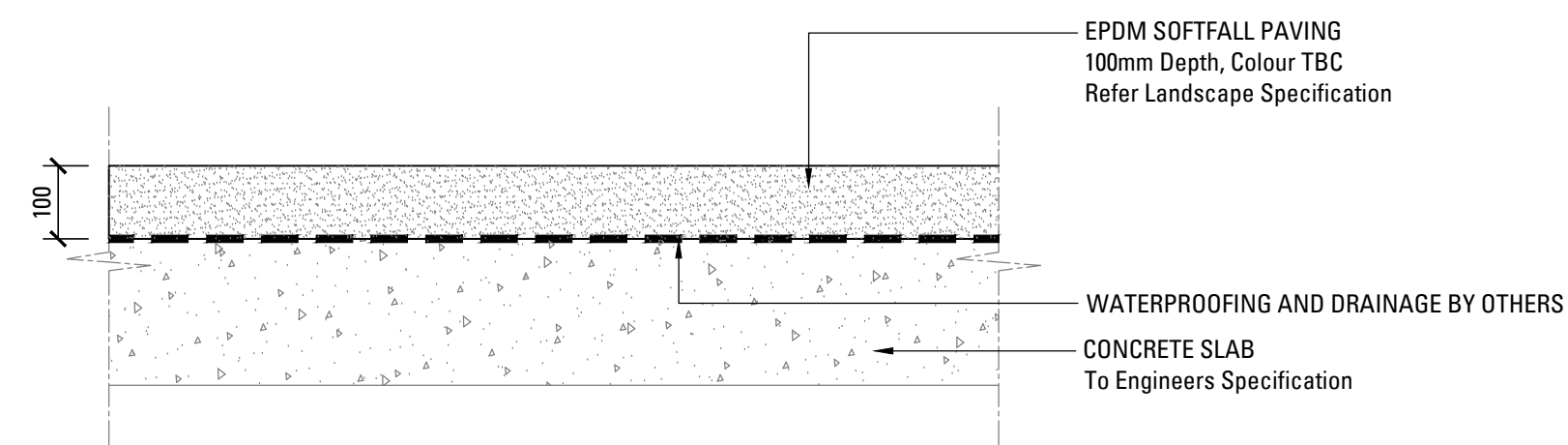
03 PAVING TYPE P3 - UNIT PAVING ON GRADE - PUBLIC DOMAIN
SCALE 1:10



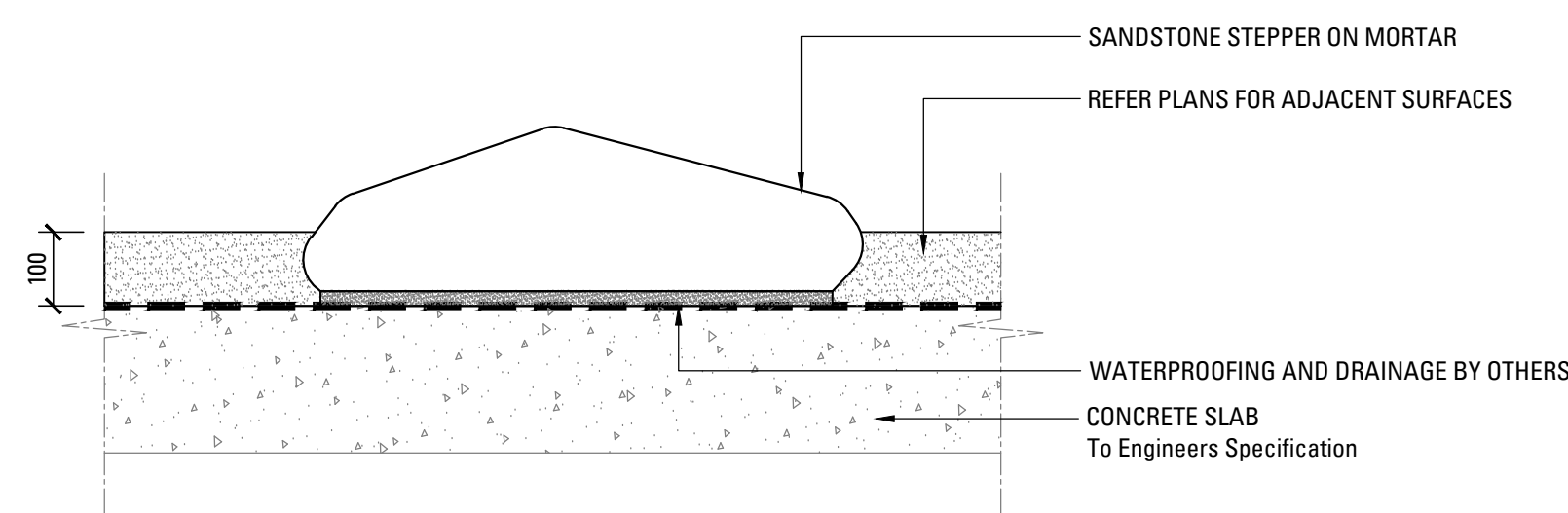
04 PAVING TYPE P4 - IN SITU CONCRETE PAVING (NICHOLSON STREET PUBLIC DOMAIN)
SCALE 1:10



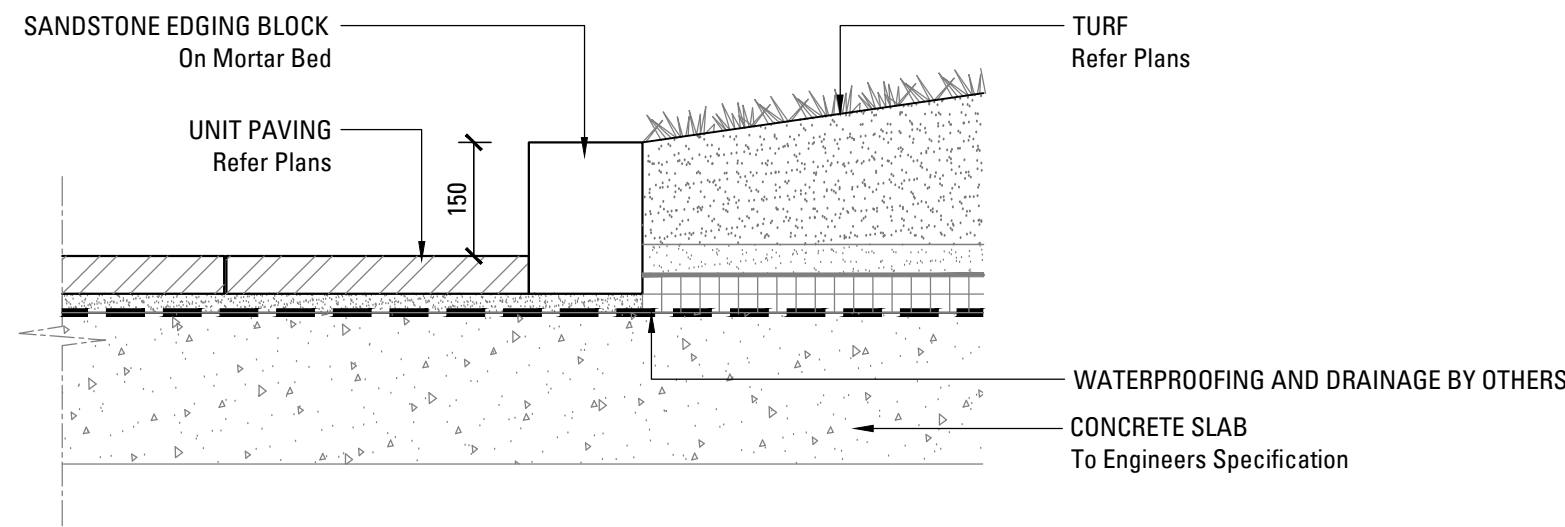
05 PAVING TYPE P5 - ARTIFICIAL TURF PAVING
SCALE 1:10



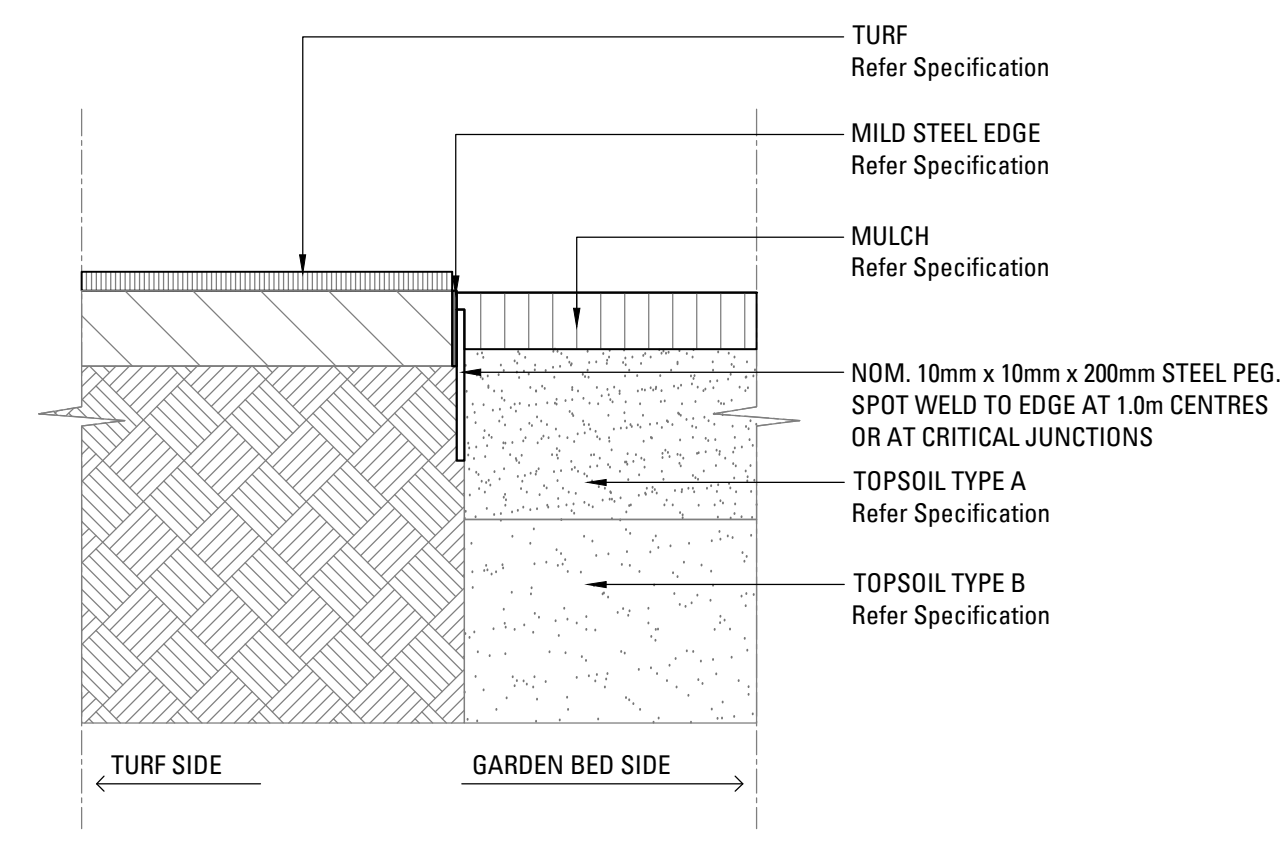
06 PAVING TYPE P6 - SOFTFALL PAVING ON SLAB
SCALE 1:10



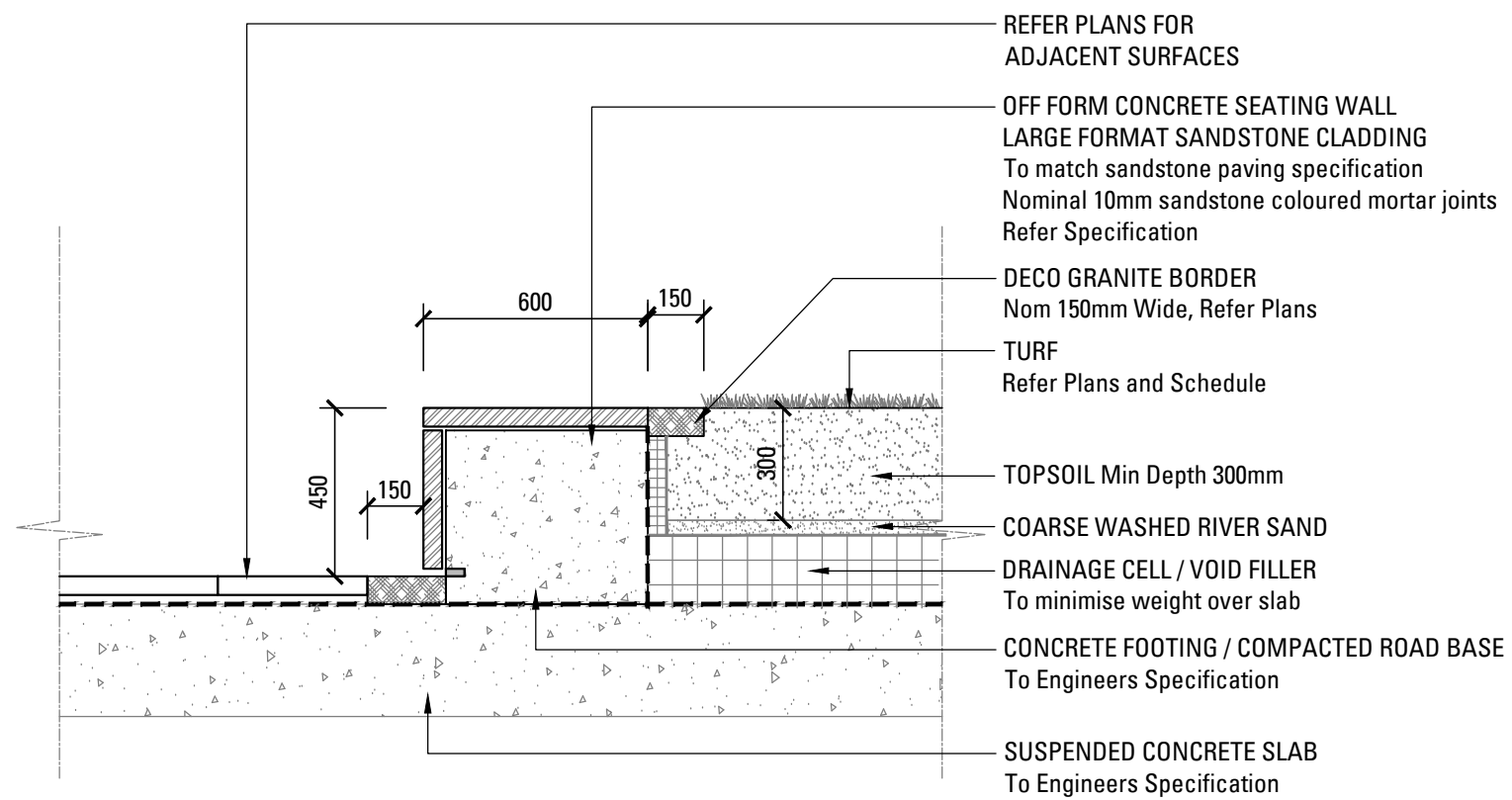
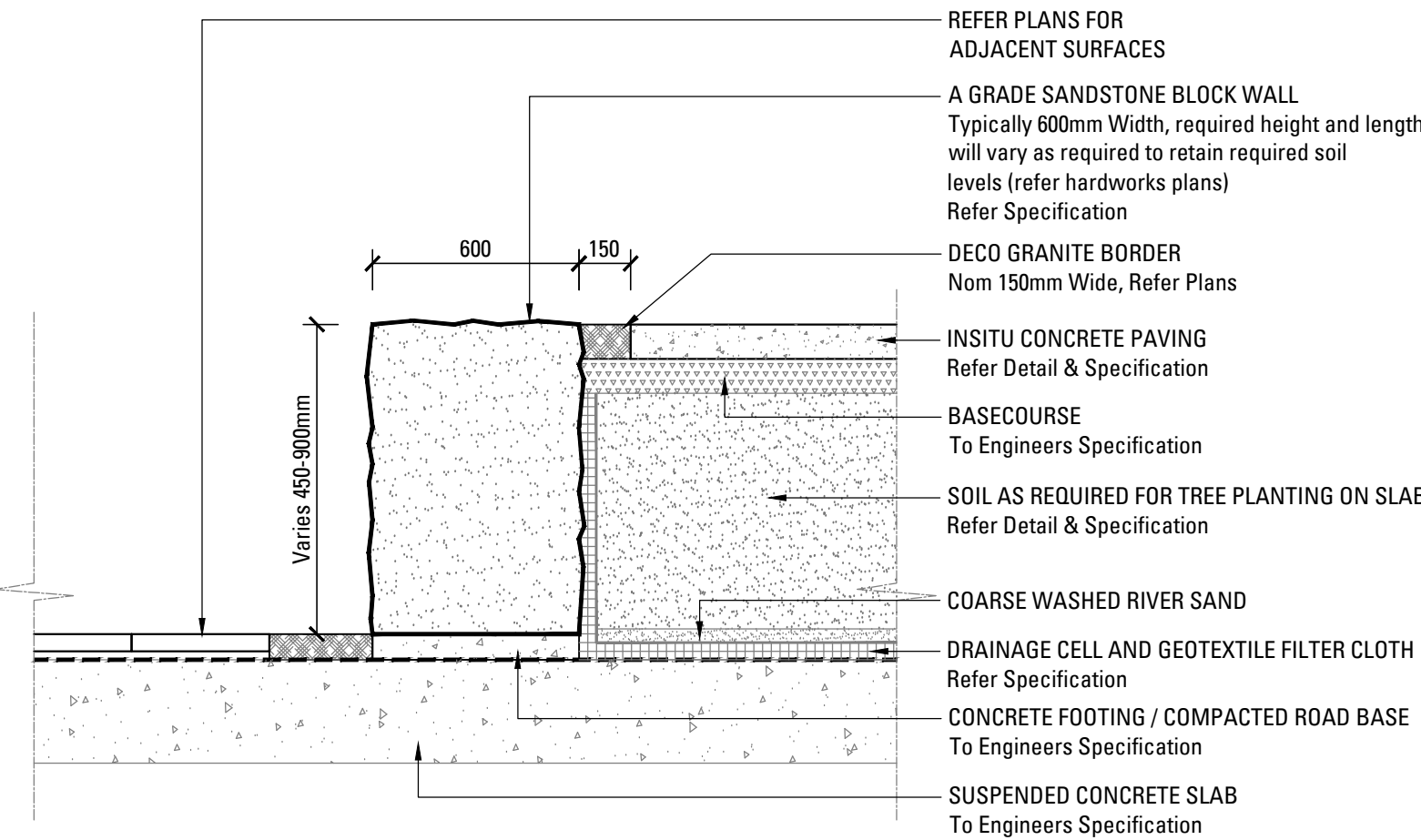
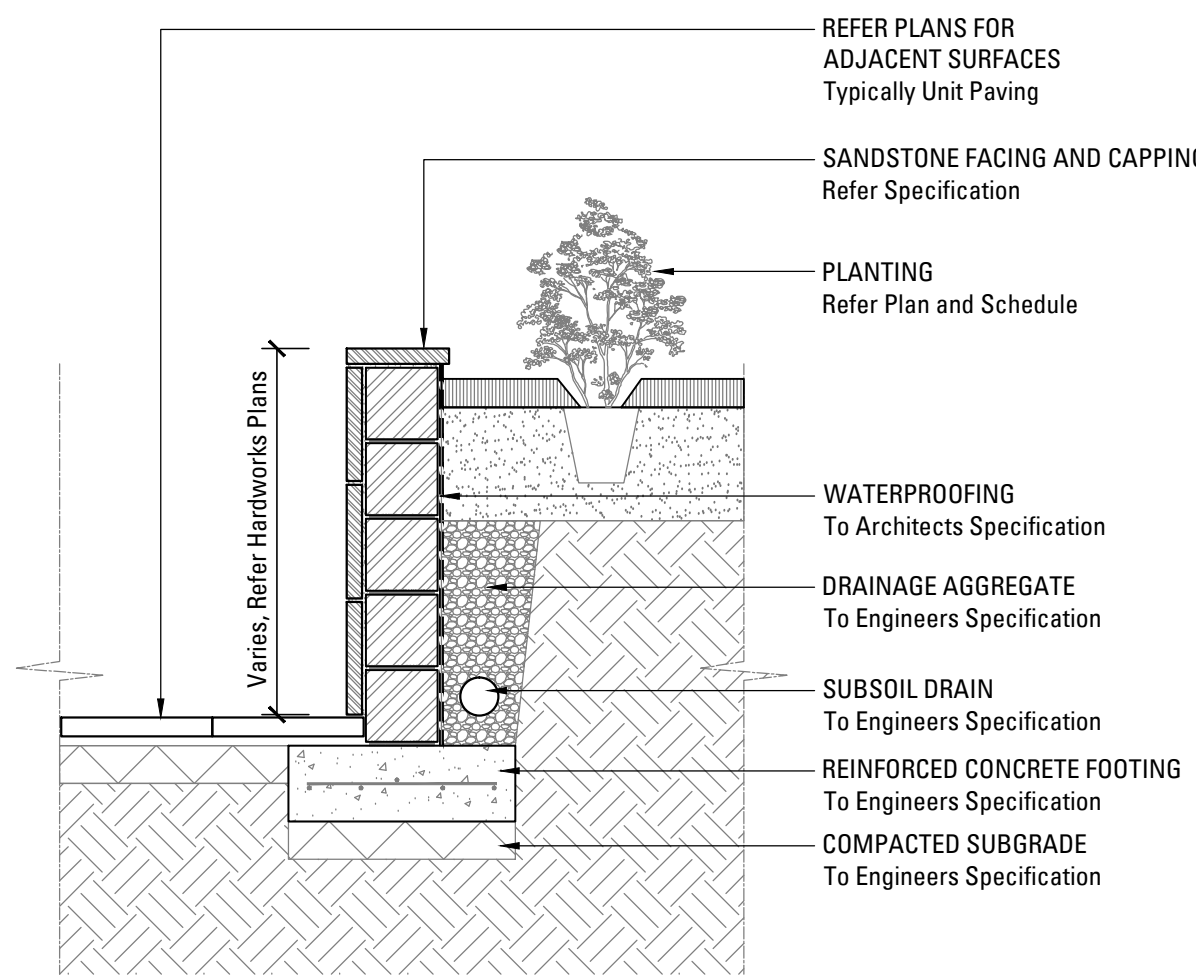
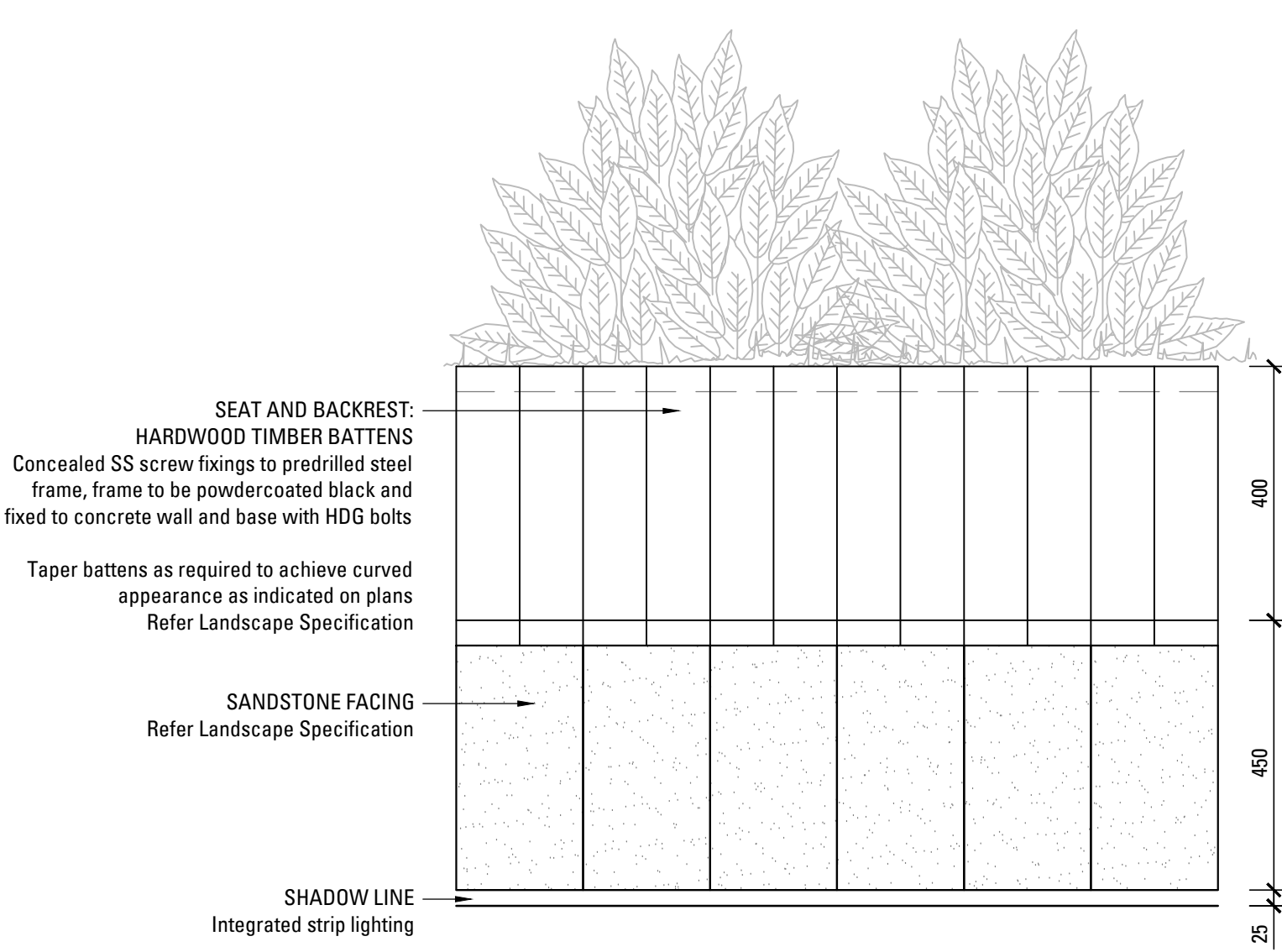
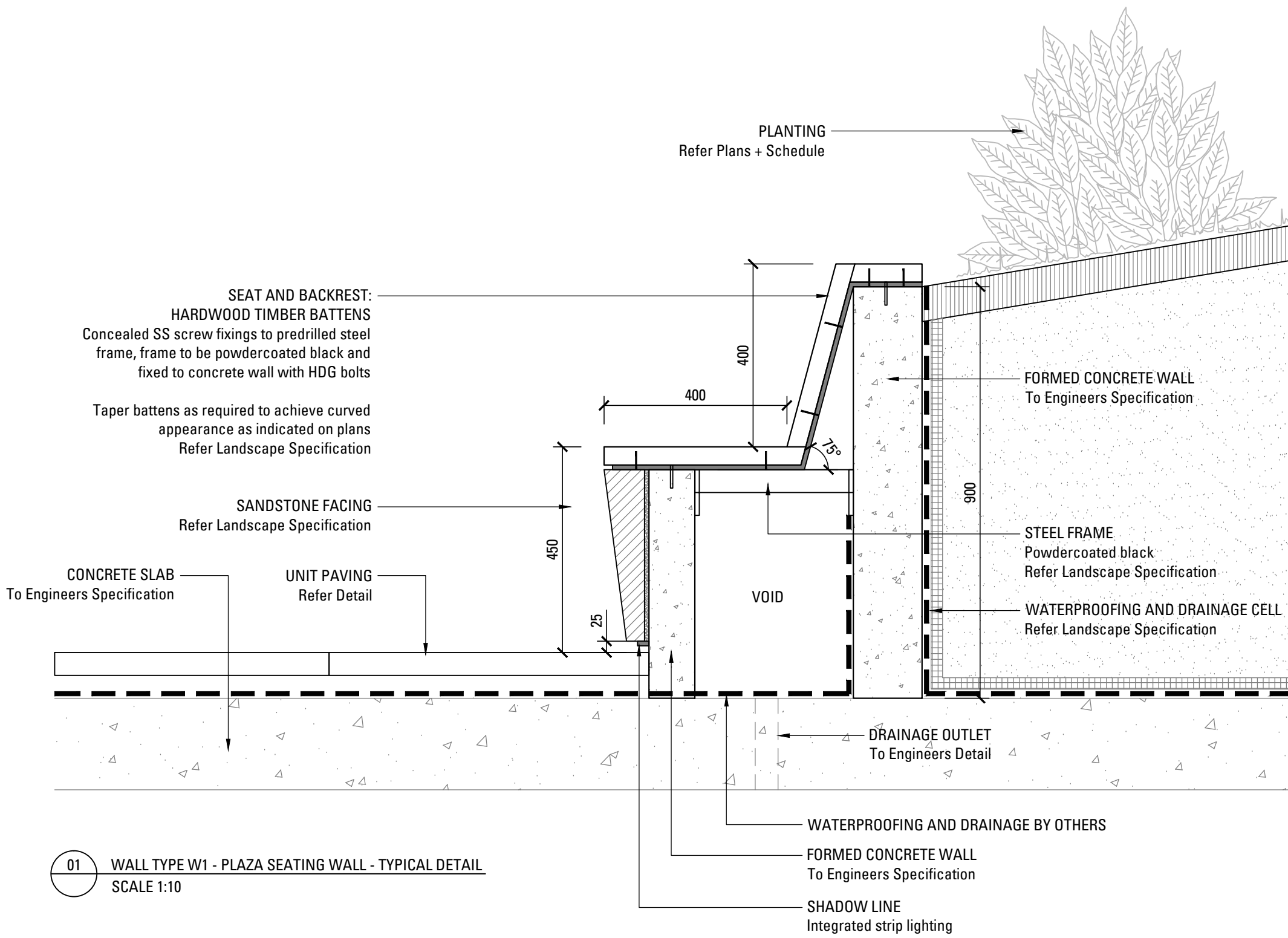
07 PAVING TYPE P7 - ROCK STEPPERS
SCALE 1:10

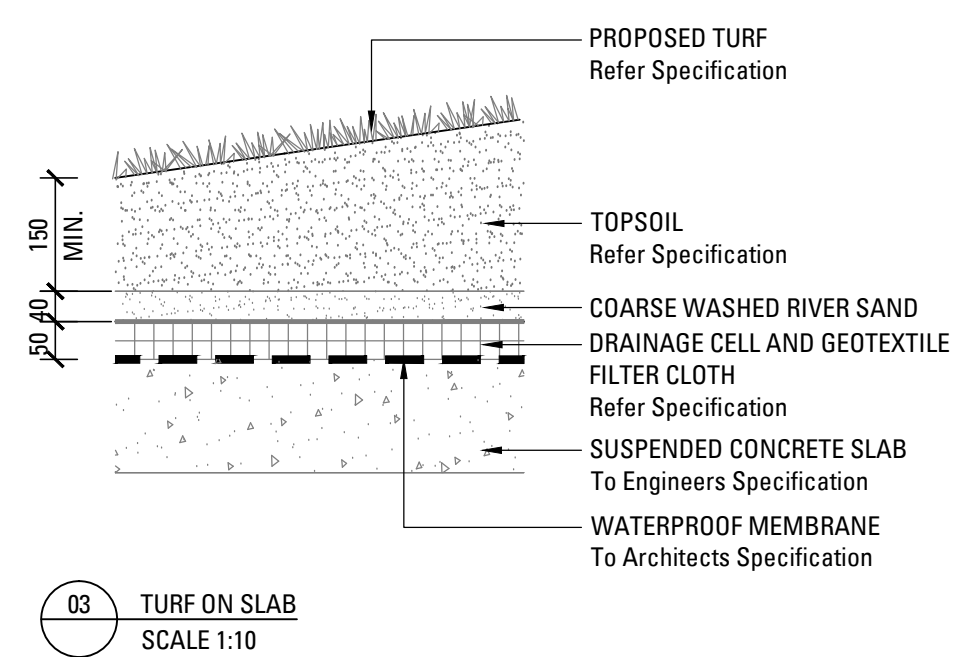
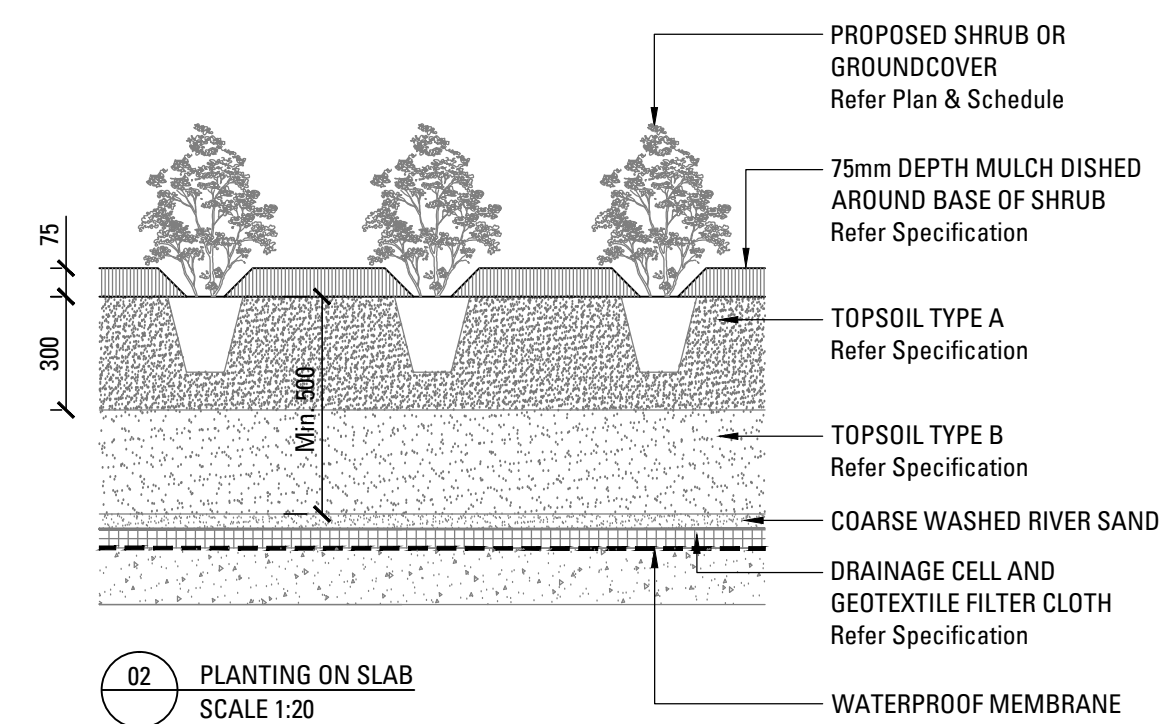
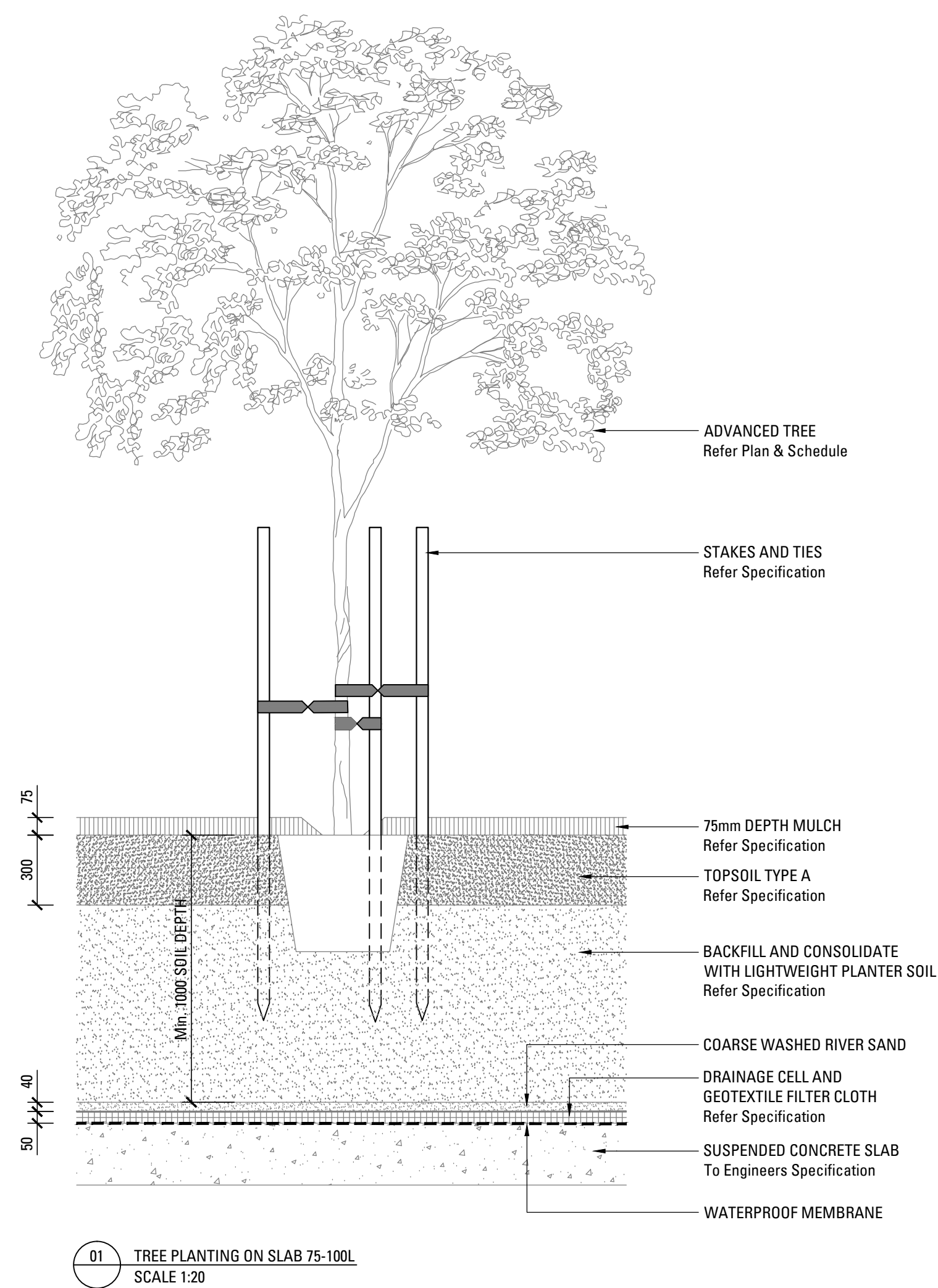


08 EDGE TYPE E1 - TYPICAL SANDSTONE EDGE
SCALE 1:10



09 EDGE TYPE E2 - TYPICAL MILD STEEL EDGE
SCALE 1:10





LANDSCAPE SPECIFICATION NOTES

SERVICES
BEFORE LANDSCAPE WORK IS COMMENCED THE LANDSCAPE CONTRACTOR IS TO ESTABLISH THE POSITION OF ALL SERVICE LINES AND ENSURE TREE PLANTING IS CARRIED OUT AT LEAST 3 METRES AWAY FROM THESE SERVICES. SERVICE LIDS, VENTS AND HYDRANTS SHALL BE LEFT EXPOSED AND NOT COVERED BY ANY LANDSCAPE FINISHES (TURFING, PAVING, GARDEN BEDS ETC.) FINISH ADJOINING SURFACES FLUSH WITH PIT LIDS.

ABORIST MANAGEMENT OF TREE PROTECTION
A QUALIFIED AND APPROVED ABORIST IS TO BE CONTRACTED TO UNDERTAKE OR MANAGE THE INSTALLATION OF PROTECTIVE FENCING, AND TO UNDERTAKE SUCH MEASURES AS HE DEEMS APPROPRIATE TO PRESERVE THE SUBJECT TREES TO BE RETAINED. THE ABORIST IS TO BE RETAINED FOR THE ENTIRE CONTRACT PERIOD TO UNDERTAKE ONGOING MANAGEMENT AND REVIEW OF THE TREES.

DRAINAGE CELL AND FILTER FABRIC
FOR ON-SLAB AREAS INSTALL AN APPROVED 'DRAINAGE CELL' PRODUCT TO COMPREHENSIVELY COVER THE BOTTOM OF ALL PLANTERS. OVER DRAINAGE CELL TO ON-SLAB AREAS, A POLYFELT GEOTEXTILE LINING (AS SUPPLIED BY 'POLYFELT TS' OR APPROVED EQUIVALENT) IS TO BE INSTALLED TO COVER THE BOTTOM OF ALL PLANTERS, TURNED UP 300MM AND TAPED TO THE PLANTER SIDES TO ENSURE SOIL MIX DOES NOT ESCAPE INTO DRAINAGE OUTLETS/HOLES. INSTALL MIN. 50MM COARSE RIVER SAND OVER ALL GEOTEXTILE LINING PRIOR TO INSTALLATION OF SOIL MIX.

PLANTING MIXTURE
SHALL BE HOMOGENOUS BLEND OF SOIL AND ADDITIVES IN THE FOLLOWING PROPORTIONS:
EXISTING SITE SOIL IF SUITABLE OR
IMPORTED TOPSOIL 50%
COMPOST 30%
D/W SAND 20%
SOIL TESTING OF EXISTING SITE SOIL IS TO BE UNDERTAKEN TO ASSESS SUITABILITY OF USE AS PLANTING TOPSOIL AND COMPLIANCE WITH AUSTRALIAN STANDARDS.

MULCH APPLICATION
PLACE MULCH TO THE REQUIRED DEPTH, (REFER TO DRAWINGS) CLEAR OF PLANT STEMS, AND RAKE TO AN EVEN SURFACE FINISHING 25MM BELOW ADJOINING LEVELS. ENSURE MULCH IS WATERED IN AND TAMPED DOWN DURING INSTALLATION.

MULCH TYPE
PINE BARK: FROM MATURE TREES, GRADED IN SIZE FROM 15MM TO 30MM, FREE FROM WOOD SLIVERS. DARK BROWN IN COLOUR AND TEXTURE.

COMPOST
SHALL BE WELL ROTTED VEGETATIVE MATERIAL OR ANIMAL MANURE, OR OTHER APPROVED MATERIAL, FREE FROM HARMFUL CHEMICALS, GRASS AND WEED GROWTH AND WITH NEUTRAL PH. PROVIDE A CERTIFICATE OF PROOF OF PH UPON REQUEST.

PLANT MATERIAL
ALL PLANTS SUPPLIED ARE TO CONFORM WITH THOSE SPECIES LISTED IN THE PLANT SCHEDULE ON THE DRAWINGS. GENERALLY PLANTS SHALL BE VIGOROUS, WELL ESTABLISHED, HARDENED OFF, OF GOOD FORM CONSISTENT WITH SPECIES OR VARIETY, NOT SOFT OR FORCED, FREE FROM DISEASE OR INSECT PESTS WITH LARGE HEALTHY ROOT SYSTEMS AND NO EVIDENCE OF HAVING BEEN RESTRICTED OR DAMAGED. TREES SHALL HAVE A LEADING SHOOT. IMMEDIATELY REJECT DRIED OUT, DAMAGED OR UNHEALTHY PLANT MATERIAL BEFORE PLANTING. ALL STOCK IS TO BE CONTAINER GROWN FOR A MINIMUM OF SIX (6) MONTHS PRIOR TO DELIVERY TO SITE

FERTILISER MASS PLANTING AREAS:
FERTILISER SHALL BE 'NUTRICOTE' OR APPROVED EQUIVALENT IN GRANULE FORM INTENDED FOR SLOW RELEASE OF PLANT NUTRIENTS OVER A PERIOD OF APPROXIMATELY NINE MONTHS. THOROUGHLY MIX FERTILISER WITH PLANTING MIXTURE AT THE RECOMMENDED RATE, PRIOR TO INSTALLING PLANTS.

TURF
SHALL BE SIR WALTER BUFFALO. SHIRLEYS NO. 17 OR APPROVED EQUAL LAWN FOOD SHALL BE THOROUGHLY MIXED INTO THE TOPSOIL PRIOR TO PLACING TURF.

TREES IN GRASS AND SUPER ADVANCED TREES:
PELLETS SHALL BE IN THE FORM INTENDED TO UNIFORMLY RELEASE PLANT FOOD ELEMENTS FOR A PERIOD OF APPROXIMATELY NINE MONTHS EQUAL TO SHIRLEYS KOKEI PELLETS. ANALYSIS 6.3:1.8:2.9. KOKEI PELLETS SHALL BE PLACED AT THE TIME OF PLANTING TO THE BASE OF THE PLANT, 50MM MINIMUM FROM THE ROOT BALL AT A RATE OF TWO PELLETS PER 300MM OF TOP GROWTH TO A MAXIMUM OF 8 PELLETS PER TREE.

STAKING AND TYING
STAKES SHALL BE STRAIGHT HARDWOOD, FREE FROM KNOTS AND TWISTS, POINTED AT ONE END AND

SIZED ACCORDING TO SIZE OF PLANTS TO BE STAKED.
A. 5-15 LITRE SIZE PLANT 1X(1200X25X25MM)
B. 35-75 LITRE SIZE PLANT 2X(1500X38X38MM)
C. 100-GREATER THAN 200LITRE 3X(1800X50X50MM)
TIES SHALL BE 50MM WIDE HESSIAN WEBBING OR APPROVED EQUIVALENT NAILED OR STAPLED TO STAKE. DRIVE STAKES A MINIMUM ONE THIRD OF THEIR LENGTH, AVOIDING DAMAGE TO THE ROOT SYSTEM, ON THE WINDWARD SIDE OF THE PLANT.

IRRIGATION SYSTEM
SUPPLY AN AUTOMATIC WATERING SYSTEM USING 'TORO IRRIGATION SYSTEM' OR SIMILAR APPROVED, WITH MICRO-JET SPRINKLER HEADS AND LOW DENSITY, RUBBER MODIFIED POLYPROPYLENE RETICULATION, TO INCLUDE FILTERS, BENDS JUNCTIONS, ENDS AND OTHER ANCILLARY EQUIPMENT. THE LANDSCAPER SHALL NOMINATE HIS SOURCE OF SUPPLY FOR THE WATERING SYSTEM AND OBTAIN APPROVAL FROM THE SUPERINTENDENT BEFORE PLACING ORDERS FOR EQUIPMENT OR SUPPLY.

A SCHEMATIC PLAN OF THE PROPOSED IRRIGATION SYSTEM IS TO BE PREPARED BY THE CONTRACTOR, SHOWING SOLENOIDS, PIPE DIAMETERS, AND ALL NOZZLE AND TRICKLE ATTACHMENT TYPES (INCLUDING SPRAY/HEAD ANGLE), FOR REVIEW BY THE SUPERINTENDENT PRIOR TO INSTALLATION

THE CONTRACTOR IS TO LIASE WITH THE HYDRAULIC ENGINEER AND COUNCIL AS NECESSARY, TO ENSURE THE THE IRRIGATION SYSTEM CONFORMS WITH ALL THE COUNCIL AND WATER BOARD CODES AND REQUIREMENTS.

PROVIDE AN AUTOMATIC CONTROLLER THAT PROVIDES FOR TWO WEEK SCHEDULING AND HOURLY MULTI-CYCLE OPERATION. THE CONTROLLER SHALL MANUAL OVERRIDE. PROGRAMMING SHALL BE UNDERTAKEN BY THE CONTRACTOR WHO SHALL ADVISE ON THE OPERATION OF THE SYSTEM.

PROVISION OF SECURE HOUSING FOR THE AUTOMATIC IRRIGATION CONTROLLER TO BE LOCATED IN ASSOCIATION WITH THE LANDSCAPE CONTRACTOR AND LOCATION CONFIRMED BY THE SUPERINTENDENT. WIRING TO CONNECT REMOTE SOLENOID LOCATIONS IS TO BE PROVIDED. THE CONTROLLER SHALL BE LOCATED IN A DRY PLACE, PROTECTED FROM THE WEATHER, AND ALL CABLE CONNECTIONS SHALL BE MADE WITH WATERPROOF CONNECTORS.

WATER SUPPLY POINTS TO BE SUPPLIED BY BUILDER.

IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO ENSURE AND GUARANTEE SATISFACTORY OPERATION OF THE IRRIGATION SYSTEM.

AFTER THE SYSTEM HAS BEEN INSTALLED TO THE SATISFACTION OF THE SUPERINTENDENT, THE INSTALLATION SHALL BE TESTED UNDER KNOWN WORKING CONDITIONS. ACCEPTANCE OF THE INSTALLED PLANT AND EQUIPMENT SHALL BE SUBJECT TO THESE BEING SATISFACTORY.

TREATED PINE TIMBER EDGING
TIMBER EDGE: 100 X 25MM CCA TREATED RADIATA PINE TIMBER STAKES: 50 X 50 X 500MM CCA TREATED RADIATA PINE-SHARPENED AT ONE END. INSTALL IN LOCATIONS SHOWN ON THE DRAWINGS FLUSH TO FINISHED SURFACE LEVELS.

TURF
TURF ALL LANDSCAPE AREAS AS SHOWN ON THE LANDSCAPE DRAWINGS. TURF IS TO HAVE AN EVEN THICKNESS OF NOT LESS THAN 25MM. OBTAIN TURF FROM AN APPROVED GROWER. FURNISH A WARRANTY FROM THE GROWER THAT THE TURF IS FREE FROM WEEDS AND OTHER FOREIGN MATTER. DELIVER TURF TO THE SITE WITHIN 24 HOURS OF BEING CUT, AND LAY IT WITHIN 24 HOURS OF BEING DELIVERED.

TO PREPARE GRADED AREAS TO RECEIVE TURF, EXCAVATE THE AREA AND CULTIVATE SO AS TO ALLOW FOR IMPORTING OF 100MM OF TURF UNDERLAY SOIL. REMOVE ALL STONES OVER 50MM Ø AND REMOVE ALL WEEDS AND FOREIGN MATTER. SPREAD SOIL MIX A.B.S TO A DEPTH OF 100MM AND GRADE TO APPROPRIATE LEVELS TO ACHIEVE GENERAL EVEN GRADES TO DRAINAGE OUTLETS INSTALLED BY OTHERS.

LAY THE TURF ALONG THE LAND CONTOURS WITH STAGGERED, CLOSE BUTTED JOINTS, SO THAT THE FINISHED TURF SURFACE IS FLUSH WITH ADJACENT FINISHED SURFACES OF PAVING AND THE LIKE. AS SOON AS PRACTICABLE AFTER LAYING, ROLL THE TURF WITH A ROLLER WEIGHING NOT MORE THAN 90KG PER METRE OF WIDTH FOR SANDY OR LIGHT SOILS.

WATER AS NECESSARY TO KEEP THE SOIL MOIST TO A DEPTH OF 100MM. PROTECT NEWLY TURFED AREAS AGAINST TRAFFIC UNTIL GRASS IS ESTABLISHED. FERTILISE TWO WEEKS AFTER LAYING FERTILISE A.B.S

'TOP DRESS' THE TURF WHEN IT IS ESTABLISHED TO A DEPTH OF 10MM WITH COARSE WASHED RIVER SAND. RUB THE DRESSING WELL INTO THE JOINTS AND CORRECT ANY UNEVENNESS IN THE TURF SURFACES.

LANDSCAPE MAINTENANCE PROGRAM

MAINTENANCE SHALL MEAN THE CARE AND MAINTENANCE OF THE LANDSCAPE WORKS BY ACCEPTED HORTICULTURAL PRACTICE AS RECTIFYING ANY DEFECTS THAT BECOME APPARENT IN THE LANDSCAPE WORKS UNDER NORMAL USE. THIS SHALL INCLUDE, BUT SHALL NOT BE LIMITED TO, WATERING, MOWING, FERTILISING, RESEEDING, RETURFING, WEEDING, PEST AND DISEASE CONTROL, STAKING AND TYING, REPLANTING, CULTIVATION, PRUNING, AERATING, RENOVATING, TOP DRESSING, MAINTAINING THE SITE IN A NEAT AND TIDY CONDITION AS FOLLOWS:-

GENERAL
THE LANDSCAPE CONTRACTOR SHALL MAINTAIN THE LANDSCAPE WORKS FOR THE TERM OF THE MAINTENANCE (OR PLANT ESTABLISHMENT) PERIOD TO THE SATISFACTION OF THE COUNCIL. THE LANDSCAPE CONTRACTOR SHALL ATTEND TO THE SITE ON A WEEKLY BASIS. THE MAINTENANCE PERIOD SHALL COMMENCE AT PRACTICAL COMPLETION AND CONTINUE FOR A PERIOD OF TWENTY SIX (26) WEEKS.

WATERING
GRASS, TREES AND GARDEN AREAS SHALL BE WATERED REGULARLY SO AS TO ENSURE CONTINUOUS HEALTHY GROWTH.

RUBBISH REMOVAL
DURING THE TERM OF THE MAINTENANCE PERIOD THE LANDSCAPE CONTRACTOR SHALL REMOVE RUBBISH THAT MAY OCCUR AND REOCCUR THROUGHOUT THE MAINTENANCE PERIOD. THIS WORK SHALL BE CARRIED OUT REGULARLY SO THAT AT WEEKLY INTERVALS THE AREA MAY BE OBSERVED IN A COMPLETELY CLEAN AND TIDY CONDITION.

REPLACEMENTS
THE LANDSCAPE CONTRACTOR SHALL REPLACE ALL PLANTS THAT ARE MISSING, UNHEALTHY OR DEAD AT THE LANDSCAPE CONTRACTOR'S COST. REPLACEMENTS SHALL BE OF THE SAME SIZE, QUALITY AND SPECIES AS THE PLANT THAT HAS FAILED UNLESS OTHERWISE DIRECTED BY THE LANDSCAPE ARCHITECT. REPLACEMENTS SHALL BE MADE ON A CONTINUING BASIS NOT EXCEEDING TWO (2) WEEKS AFTER THE PLANT HAS DIED OR IS SEEN TO BE MISSING.

STAKES AND TIES
THE LANDSCAPE CONTRACTOR SHALL REPLACE OR ADJUST PLANT STAKES, AND TREE GUARDS AS NECESSARY OR AS DIRECTED BY THE LANDSCAPE ARCHITECT. REMOVE STAKES AND TIES AT THE END OF THE MAINTENANCE PERIOD IF SO DIRECTED.

PRUNING
TREES AND SHRUBS SHALL BE PRUNED AS DIRECTED BY THE LANDSCAPE ARCHITECT. PRUNING WILL BE DIRECTED AT THE MAINTENANCE OF THE DENSE FOLIAGE OR MISCELLANEOUS PRUNING AND BENEFICIAL TO THE CONDITION OF THE PLANTS. ANY DAMAGED GROWTH SHALL BE PRUNED. ALL PRUNED MATERIAL SHALL BE REMOVED FROM THE SITE.

MULCHED SURFACES
ALL MULCHED SURFACES SHALL BE MAINTAINED IN A CLEAN AND TIDY CONDITION AND BE REINSTATED IF NECESSARY TO ENSURE THAT A DEPTH OF 75MM IS MAINTAINED. ENSURE MULCH IS KEPT CLEAR OF PLANT STEMS AT ALL TIMES.

PEST AND DISEASED CONTROL
THE LANDSCAPE CONTRACTOR SHALL SPRAY AGAINST INSECT AND FUNGUS INFESTATION WITH ALL SPRAYING TO BE CARRIED OUT IN ACCORDANCE WITH THE MANUFACTURER'S DIRECTIONS. REPORT ALL INSTANCES OF PESTS AND DISEASES (IMMEDIATELY THAT THEY ARE DETECTED) TO THE LANDSCAPE ARCHITECT.

GRASS AND TURF AREAS
THE LANDSCAPE CONTRACTOR SHALL MAINTAIN ALL GRASS AND TURF AREAS BY WATERING, WEEDING, DRESSING, ROLLING, MOWING, TRIMMING OR OTHER OPERATIONS AS NECESSARY. SEED AND TURF SPECIES SHALL BE THE SAME AS THE ORIGINAL SPECIFIED MIXTURE. GRASS AND TURF AREAS SHALL BE SPRAYED WITH APPROVED SELECTIVE HERBICIDE AGAINST BROAD LEAFED WEEDS AS REQUIRED BY THE LANDSCAPE ARCHITECT AND IN ACCORDANCE WITH THE MANUFACTURER'S DIRECTIONS. GRASS AND TURF AREAS SHALL BE FERTILISED ONCE A YEAR IN AUTUMN WITH 'DYNAMIC LIFTER' FOR LAWNS AT A RATE OF 20KG PER 100M2. FERTILISER SHALL BE WATERED IN IMMEDIATELY AFTER APPLICATION. IRREGULARITIES IN THE GRASS AND TURF SHALL BE WATERED IN IMMEDIATELY AFTER APPLICATION. GRASS AND TURF AREAS SHALL BE KEPT MOWN TO MAINTAIN A HEALTHY AND VIGOROUS SWARD. MOWING HEIGHT: 30-50MM.

WEED ERADICATION
ERADICATE WEEDS BY ENVIRONMENTALLY ACCEPTABLE METHODS USING A NON-RESIDUAL GLYPHOSATE HERBICIDE (EG. 'ROUNDUP') IN ANY OF ITS REGISTERED FORMULAE, AT THE RECOMMENDED MAXIMUM RATE. REGULARLY REMOVE BY HAND, WEED GROWTH THAT MAY OCCUR OR RECUR THROUGHOUT GRASSED, PLANTED AND MULCHED AREAS. REMOVE WEED GROWTH FROM AN AREA 750MM DIAMETER AROUND THE BASE OF TREES IN GRASSED AREAS. CONTINUE ERADICATION THROUGHOUT THE COURSE OF THE WORKS AND DURING THE MAINTENANCE PERIOD.

SOIL SUBSIDENCE
ANY SOIL SUBSIDENCE OR EROSION WHICH MAY OCCUR AFTER THE SOIL FILLING AND PREPARATION OPERATIONS SHALL BE MADE GOOD BY THE LANDSCAPE CONTRACTOR AT NO COST TO THE CLIENT.

PUBLIC IMPACTS
MAINTENANCE WORKS TO THE FRIEDLANDER PLACE PUBLIC DOMAIN AND ADJACENT LANDSCAPE AREAS IS NOMINALLY TO OCCUR DURING OFF-PEAK HOURS OF PUBLIC USAGE TO MINIMISE DISTURBANCE.