CITY-WIDE URBAN DESIGN GUIDELINES VOLUME 2

VAUGHAN



Contents

01: NEW URBAN DESIGN STANDARD DETAILS

SERIES 100

ULA 001 - PEDESTRIAN PAVING - UNIT PAVING

ULA 002 - HEAVY DUTY INTERLOCKING CONCRETE PAVING

ULA 003 - SOIL CELL TREE PIT IN CONCRETE PAVING

ULA 004 - SOIL CELL TREE PIT IN UNIT PAVING

ULA 005 - SOIL CELL TREE PIT TYPICAL LAYOUT

ULA 006 - URBAN BOULEVARD TREE DETAIL SECTION

ULA 007 - TREE PIT WITH SUSPENDED SLAB

ULA 008 - TREE PIT WITH SUSPENDED SLAB AND UNIT PAVING

ULA 009 - TREE PIT WITH SUSPENDED SLAB AND TYPICAL LAYOUT

ULA 010 - TREE PIT WITH SUSPENDED SLAB DETAIL

ULA 011 - TREES - BED WITH FLUSH CURB

ULA 012 - TREES - BED WITH CURB OR WALL

ULA 013 - TREES - BED ON STRUCTURAL SLAB

ULA 014 - TYPICAL TREE PLANTING

ULA 015 - TYPICAL SHRUB PLANTING

ULA 016 - FURNISHING - BENCH

ULA 017 - FURNISHING - BENCH

ULA 018 - FURNISHING – BENCH

ULA 019 - FURNISHING - BICYCLE RACK

ULA 020 - FURNISHING - WASTE RECEPTACLE

ULA 021 - FURNISHING - WASTE RECEPTACLE

ULA 022 - FURNISHING - WASTE RECEPTACLE

ULA 023 - FURNISHING - BOLLARD

02: URBAN DESIGN STANDARD DETAILS

SERIES 100 - PLANTING DETAILS

ULA 101 - DECIDUOUS TREE PLANTING DETAIL FOR TREES UNDER 90MM IN CALIPER ULA 102 - DECIDUOUS TREE PLANTING DETAIL FOR TREES OVER 90MM IN CALIPER ULA 103 - CONIFEROUS TREE PLANTING DETAIL FOR TREES 2500MM IN HEIGHT OR LESS ULA 104 - CONIFEROUS TREE PLANTING DETAIL FOR TREES OVER 2500MM IN HEIGHT ULA 105 - SHRUB PLANTING DETAIL ULA 106 - ANNUAL AND PERENNIAL PLANTING DETAIL ULA 107 - BARE ROOT TREE PLANTING DETAIL FOR TREES 30MM IN CALIPER OR LESS ULA 108 - DECIDUOUS TREE SPADE DETAIL FOR TREES UNDER 90MM IN CALIPER ULA 109 - DECIDUOUS TREE SPADE DETAIL FOR TREES OVER 90MM IN CALIPER ULA 110A - HEAVY DUTY TREE HOARDING PROTECTION DETAIL (PLYWOOD) ULA 110B - LIGHT DUTY TREE HOARDING PROTECTION DETAIL (SNOW FENCE) ULA 111 - SEDIMENT CONTROL CONSTRUCTION FENCING DETAIL

SERIES 200 - BOULEVARD DETAILS

ULA 201 - BOULEVARD TREE DETAIL PLAN VIEW ULA 202 - BOULEVARD TREE DETAIL SECTION ULA 203 - BOULEVARD TREE DETAIL GENERAL NOTES ULA 204 - BOULEVARD TREE DETAIL DRIVEWAY LAYOUT ULA 205 - BOULEVARD TREE DETAIL STREET/TRAFFIC SIGN LAYOUT ULA 206 - BOULEVARD TREE DETAIL STREET LIGHT POLE LAYOUT ULA 207 - BOULEVARD TREE DETAIL HYDRO TRANSFORMER LAYOUT ULA 208 - BOULEVARD TREE DETAIL FIRE HYDRANT & UTILITY PEDESTAL LAYOUT ULA 209 - PLANTING BED AND TREE TOPSOIL DETAIL GENERAL NOTES (1 OF 2) ULA 210 - PLANTING BED AND TREE TOPSOIL DETAIL GENERAL NOTES (2 OF 2) ULA 211 - TERRASEEDING DETAIL GENERAL NOTES (1 OF 2) ULA 212 - TERRASEEDING DETAIL GENERAL NOTES (2 OF 2)

SERIES 300 - HARDSCAPE DETAILS

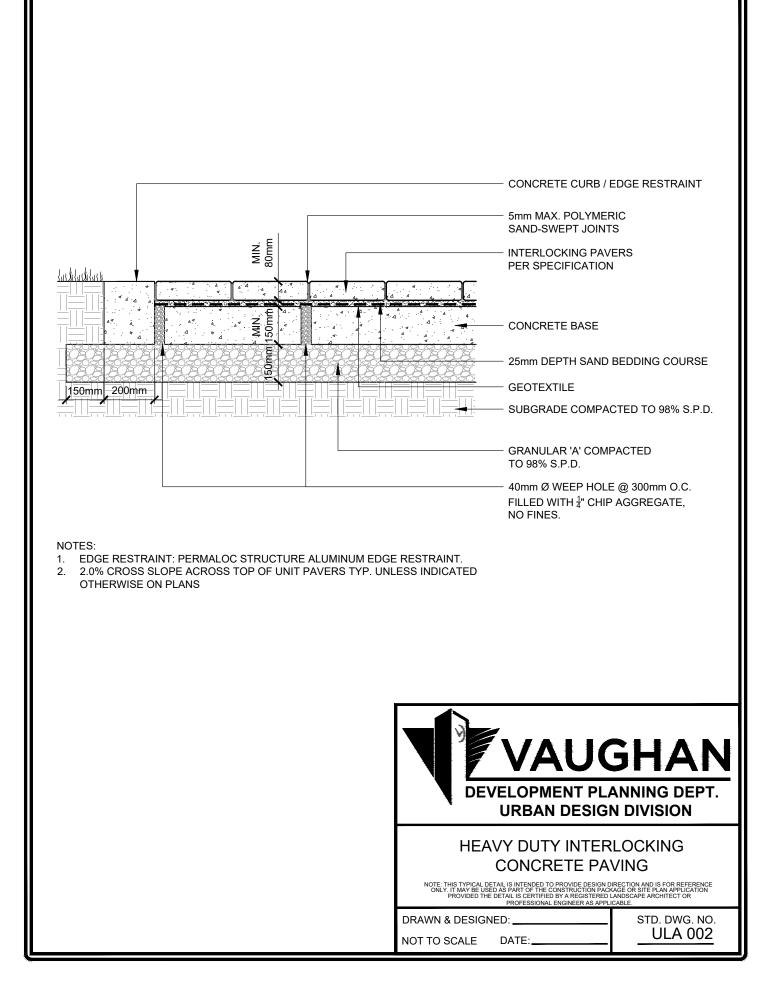
- ULA 301 POURED-IN-PLACE CONCRETE PAVING DETAIL
- ULA 302 PRECAST CONCRETE UNIT PAVING ON POURED-IN-PLACE CONCRETE BASE DETAIL
- ULA 303 ASPHALT PAVING (HEAVY-DUTY) DETAIL
- ULA 304 ASPHALT PAVING (LIGHT-DUTY) DETAIL
- ULA 305 LIMESTONE SCREENING PAVING DETAIL
- ULA 306 POURED-IN-PLACE CONCRETE CURB (RAISED AND FLUSH) DETAIL
- ULA 307 POURED-IN-PLACE CONCRETE CURB (TRAFFIC MEDIAN PLANTING BED) DETAIL
- ULA 308 CULVERT DETAIL
- ULA 309 ARMOUR STONE DETAIL
- ULA 310 ARMOUR STONE RETAINING WALL DETAIL
- ULA 311 ARMOUR STONE EDGER DETAIL

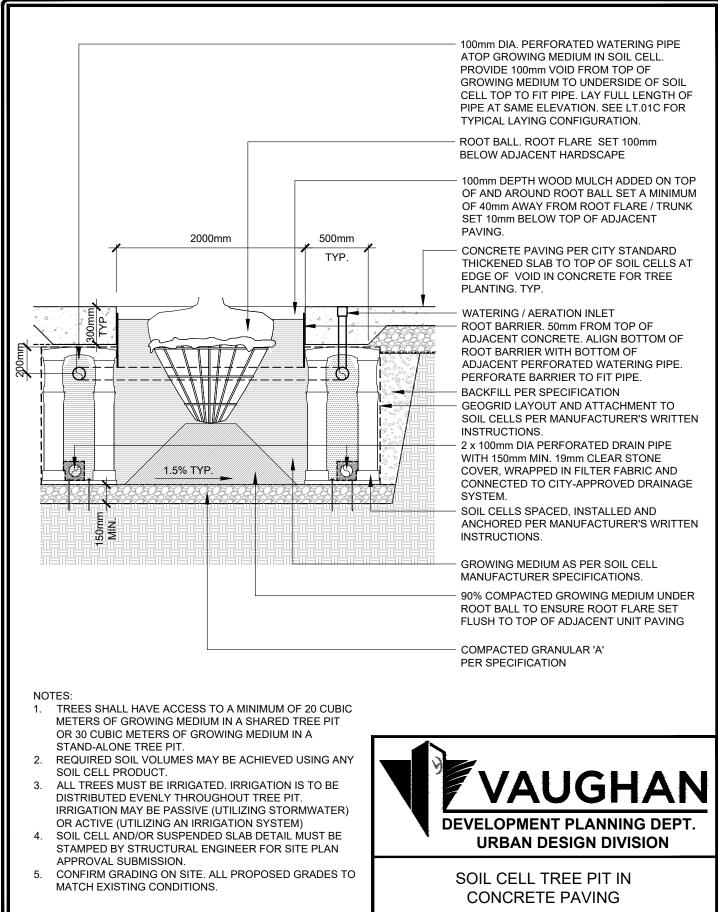
SERIES 400 - SITE FURNISHING DETAILS

- ULA 401 METAL BENCH (DECORATIVE) DETAIL
- ULA 402 METAL BENCH DETAIL
- ULA 403 METAL BENCH (DECORATIVE BACKLESS) DETAIL
- ULA 404 METAL LITTER RECEPTACLE (LARGE SIZE) DETAIL
- ULA 405 METAL LITTER RECEPTACLE (SMALL SIZE) DETAIL
- ULA 406 METAL LITTER RECEPTACLE (WITH LID & RECYCLING OPTIONS) DETAIL
- ULA 407 LOCKABLE AND REMOVABLE BOLLARD DETAIL
- ULA 408 LOCKABLE AND REMOVABLE BOLLARD (DECORATIVE) DETAIL
- ULA 409 BICYCLE RACK DETAIL
- ULA 409A BICYCLE RACK DETAIL WITH FOOTING
- ULA 410 IDENTITY SIGNAGE FOR WOODLOTS AND STORM PONDS ELEVATION DETAIL
- ULA 411 IDENTITY SIGNAGE FOR WOODLOTS AND STORM PONDS LAYOUT AND SECTION DETAILS
- ULA 412 ACCESS GATE DETAIL
- ULA 413 P GATE DETAIL

01: NEW URBAN DESIGN STANDARD DETAILS

EDGE CONDITION AT SOFTSCAPE	CONDITION AT CONCRETE	
NOTES: 1. THIS TYPICAL DETAIL IS INTENDED TO CONVEY INTENT REFERENCE ONLY. IT SHALL NOT BE USED AS PART OF DRAWING PACKAGE OR SITE PLAN APPLICATION. 2. EDGE RESTRAINT: PERMALOC STRUCTURE ALUMINUM 2.0% CROSS SLOPE ACROSS TOP OF UNIT PAVERS TYF OTHERWISE ON PLANS	F THE CONSTRUCTION I EDGE RESTRAINT.	FLUSH CONCRETE EDGER. TOP FLUSH WITH ADJACENT SURFACES. EDGE RESTRAINT 5mm MAX. POLYMERIC SAND-SWEPT JOINTS UNIT PAVERS PER SPECIFICATION TOP OF UNIT PAVING FLUSH WITH ADJACENT SURFACING 25mm DEPTH SAND BEDDING COUR GEOTEXTILE SUBGRADE COMPACTED TO 98% S. 40mm Ø WEEP HOLE @ 300mm O.C. FILLED WITH ¹ / ₄ " CHIP AGGREGATE, NO FINES. CONCRETE BASE GRANULAR 'A' COMPACTED TO 98% S.P.D.
	PEDESTRIAN PA	AUGGHAN ENT PLANNING DEPT. DESIGN DIVISION AVING - UNIT PAVING OPROVIDE DESIGN DIRECTION AND IG FOR REFERENCE CONSTRUCTION PACKAGE ON SITE PLAN APPLICATION D BY A REGISTERED LANDSCAPE ARCHITECT OR LENGINEER AS APPLICABLE. STD. DWG. NO. ULA 001





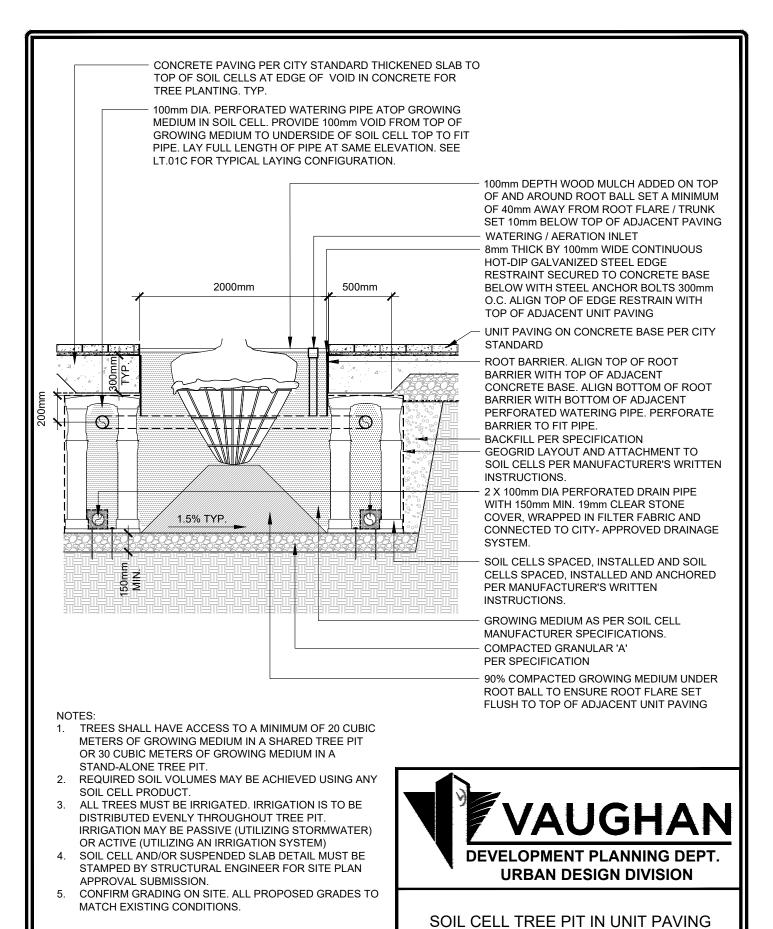
'HIS TYP/CAL DETAIL IS INTENDED TO PROVIDE DESIGN DIRECTION AND IS FOR REFERENCE IT MAY BE USED AS PART OF THE CONSTRUCTION PACKAGE OR SITE PLAN APPLICATION PROVIDED THE DETAIL IS CERTIFIED BY A REGISTERED LANDSCAPE ARCHITECT OR PROFESSIONAL ENGINEER AS APPLICABLE.

DATE:

DRAWN & DESIGNED:

NOT TO SCALE

STD. DWG. NO. ULA 003

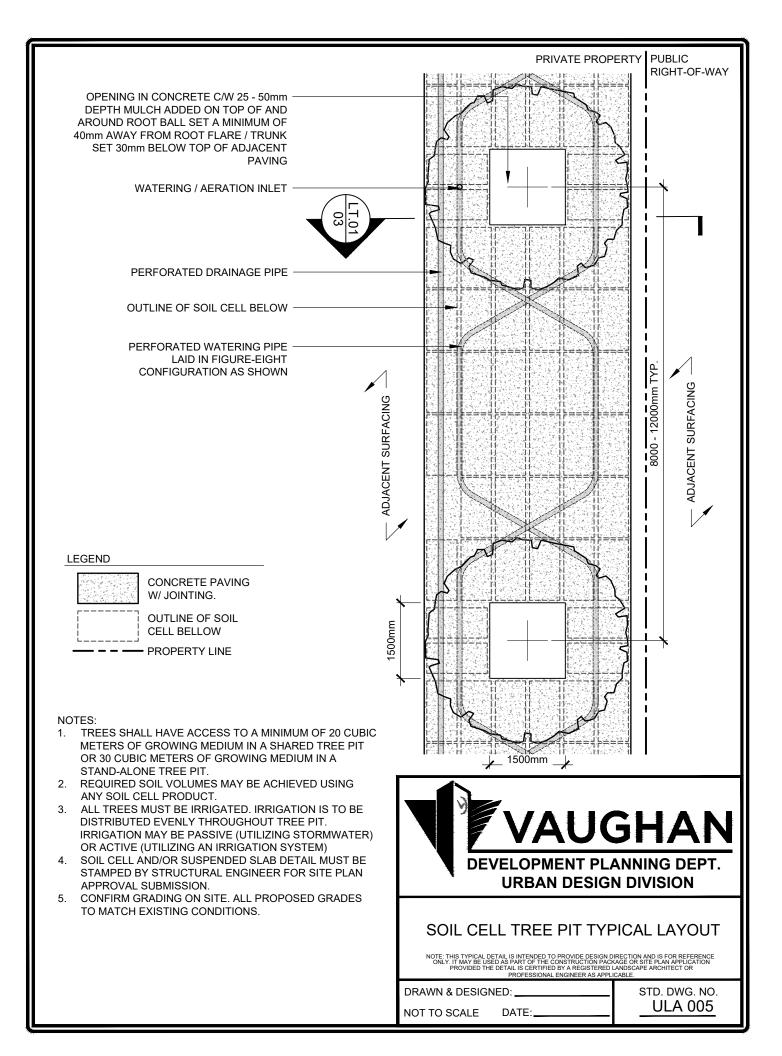


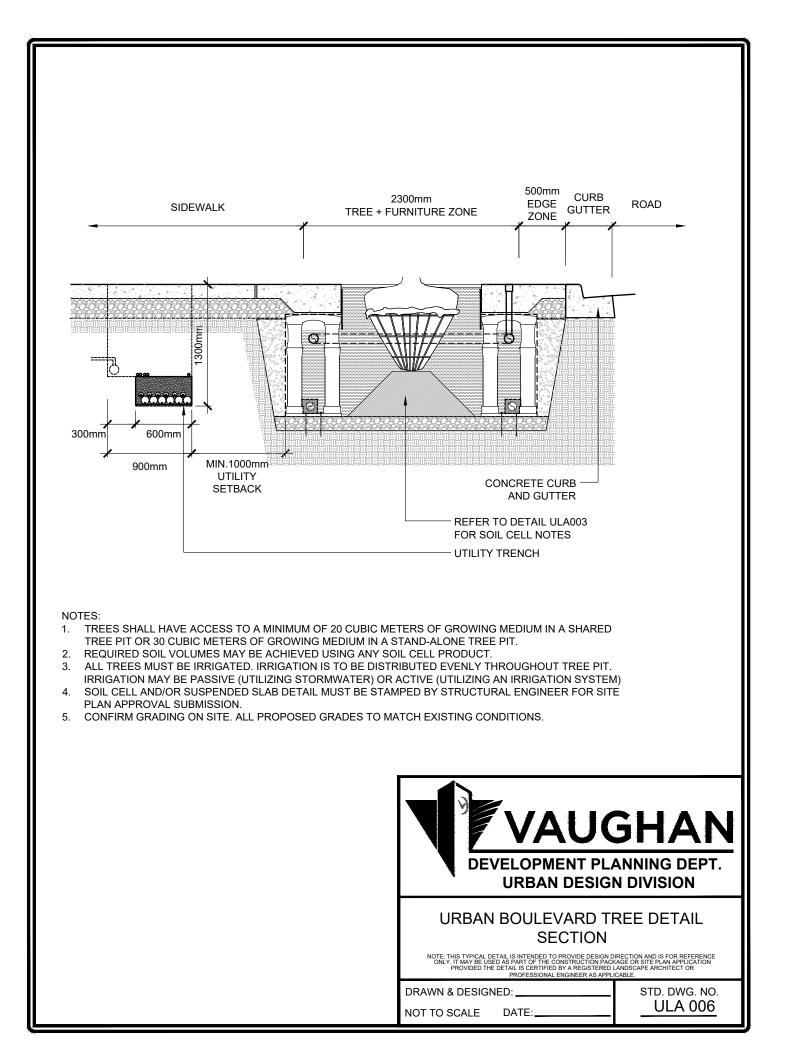
NOTE: THIS TYPICAL	DETAIL I	S INTENDED 1	TO PROVIDE	DESIGN D	IRECTION /	AND IS FOR	REFEREN	JCF

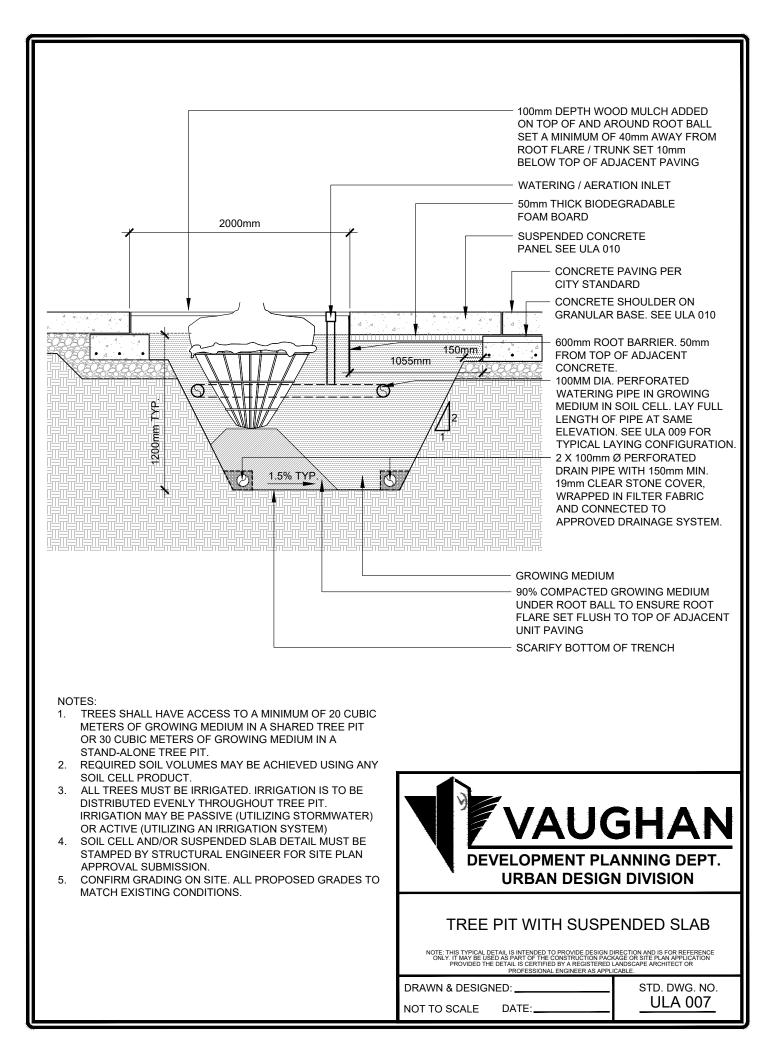
NOTE: THIS TYPICAL DETAIL IS INTENDED I O PROVIDE DESIGN UNECTION ANUS FOR REFERENCE ONLY. IT MAY BE USED AS PART OF THE CONSTRUCTION PACKAGE OR SITE PLAN APPLICATION PROVIDED THE DETAIL IS CERTIFIED BY A REGISTERED LANDSCAPE ARCHITECT OR PROFESSIONAL ENGINEER AS APPLICABLE.

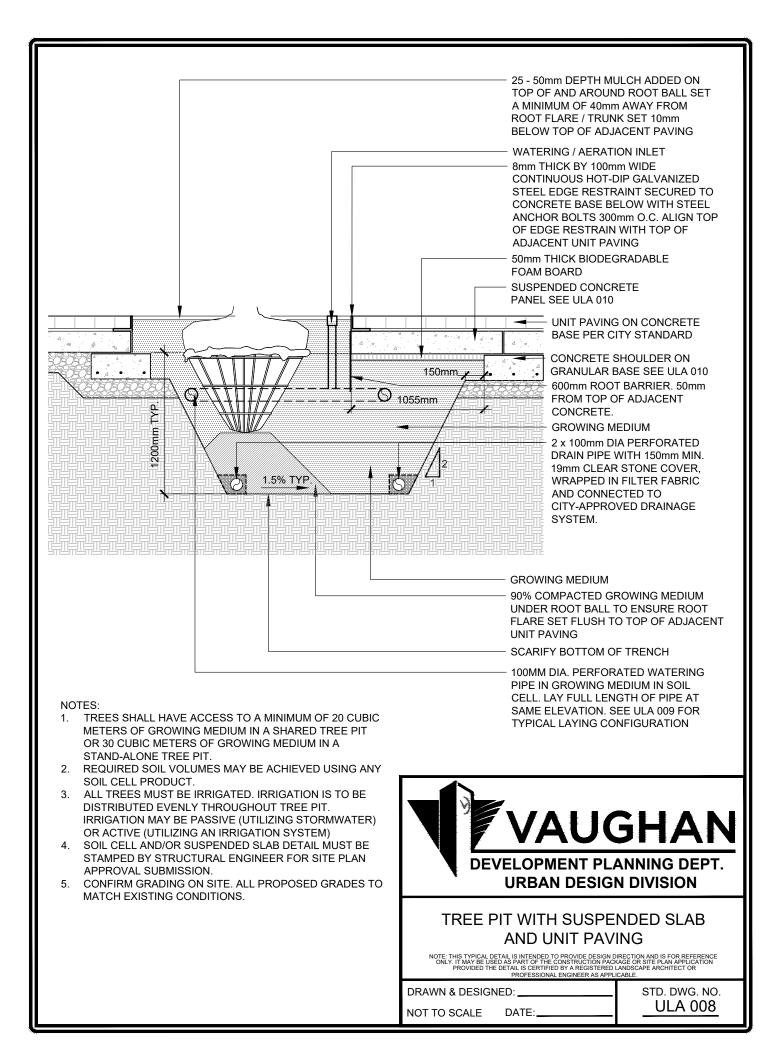
DRAWN & DESIGNED:

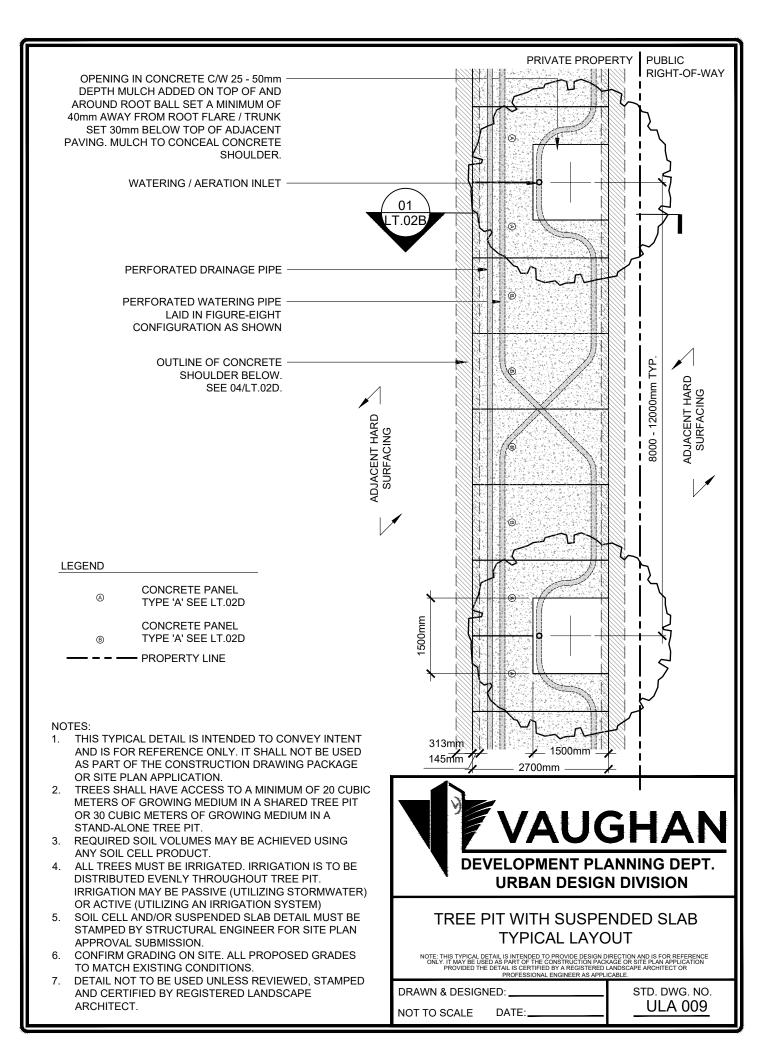
NOT TO SCALE DATE:

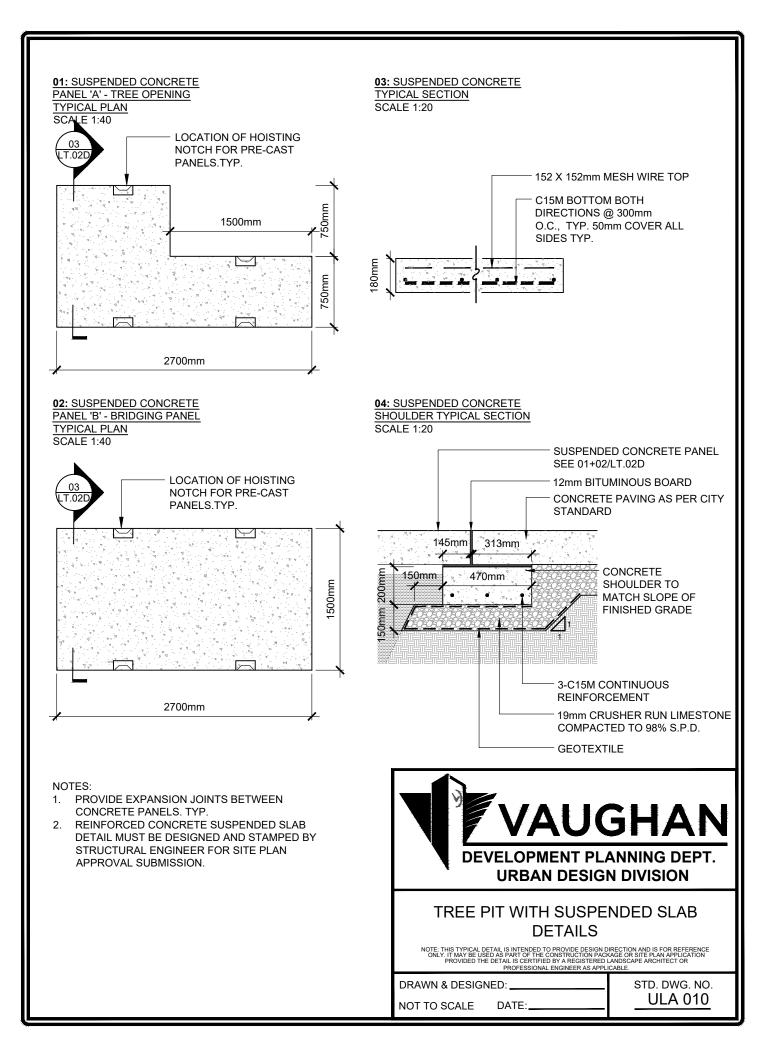


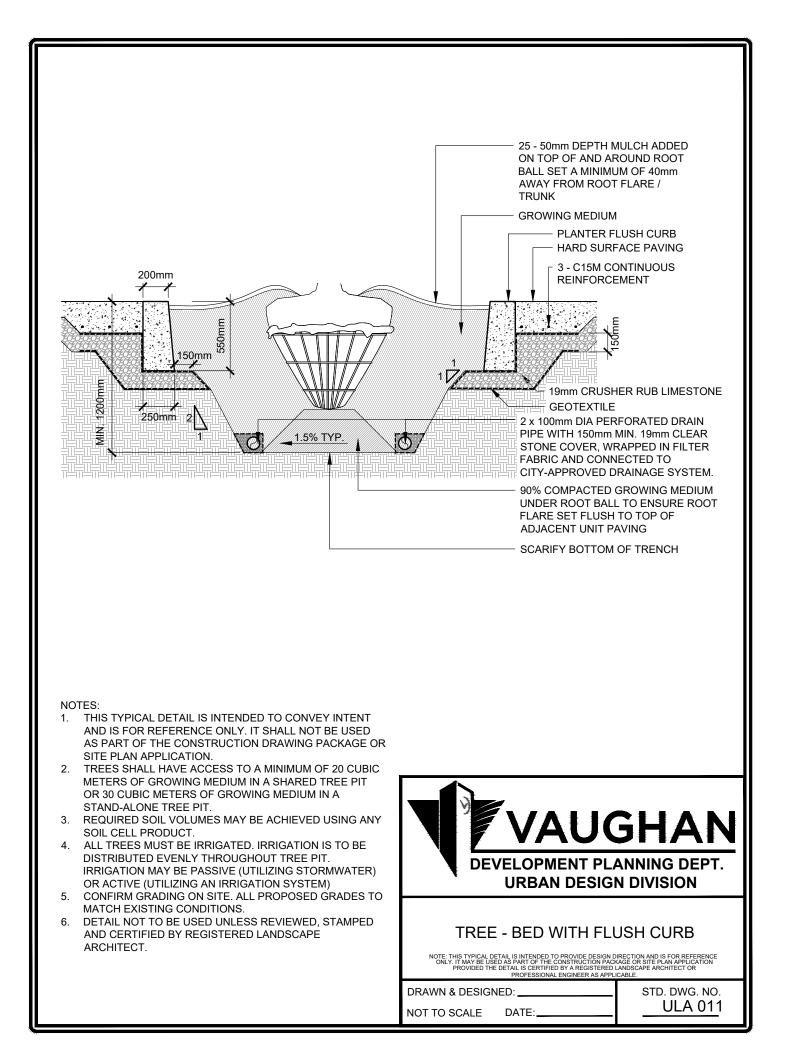


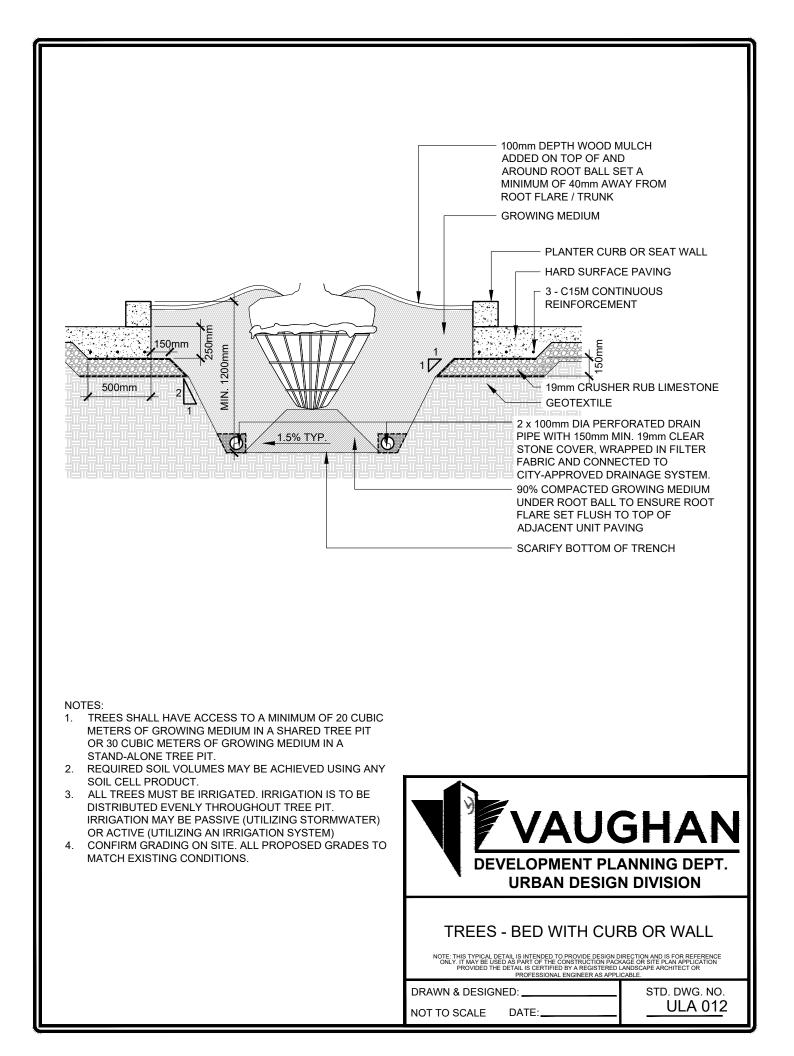


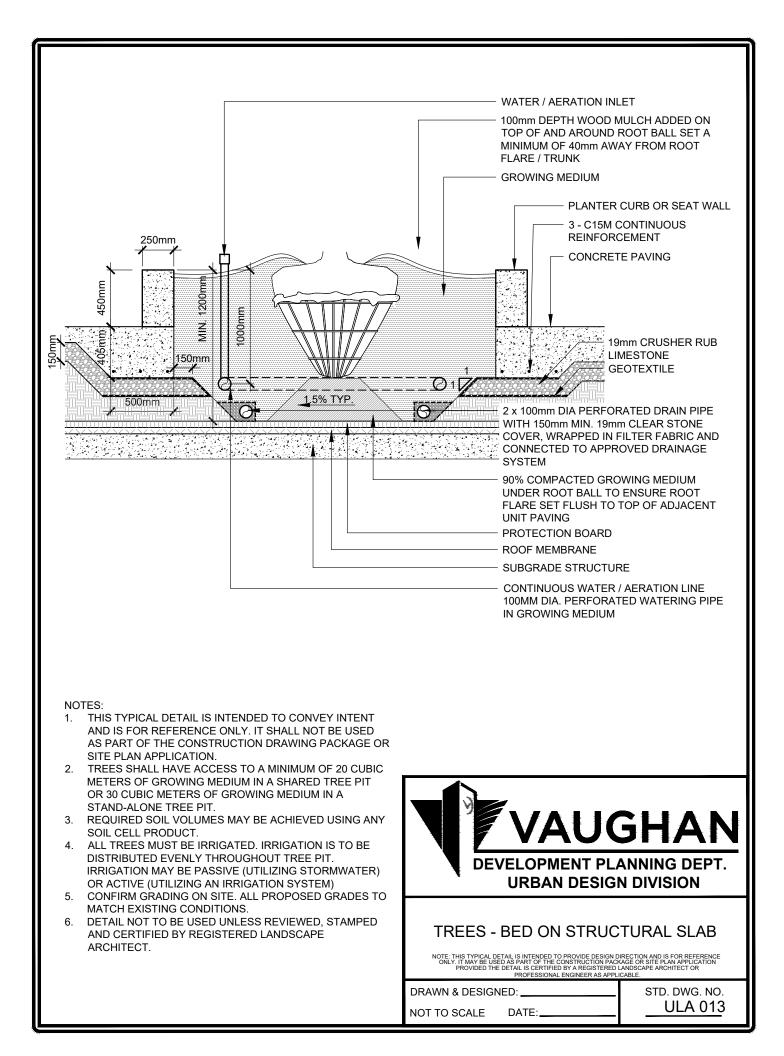


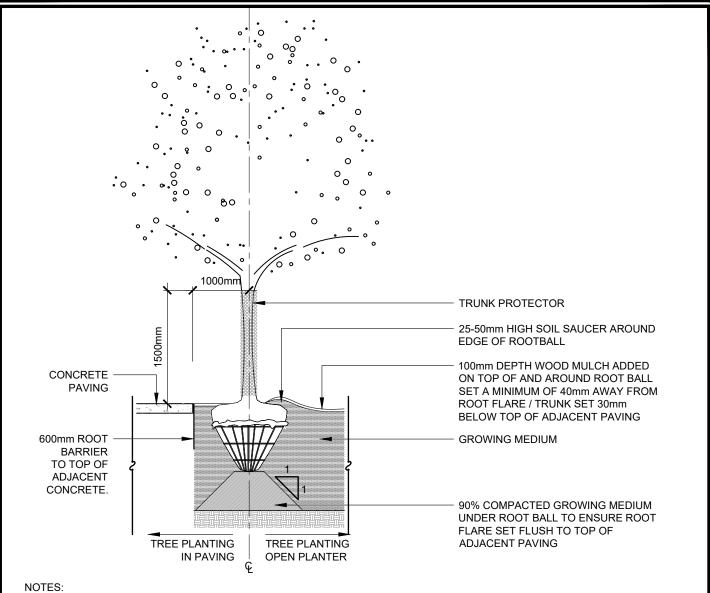








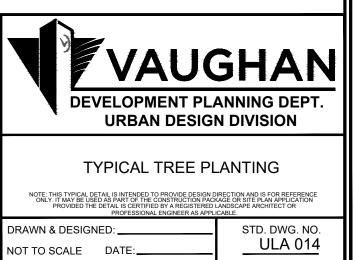


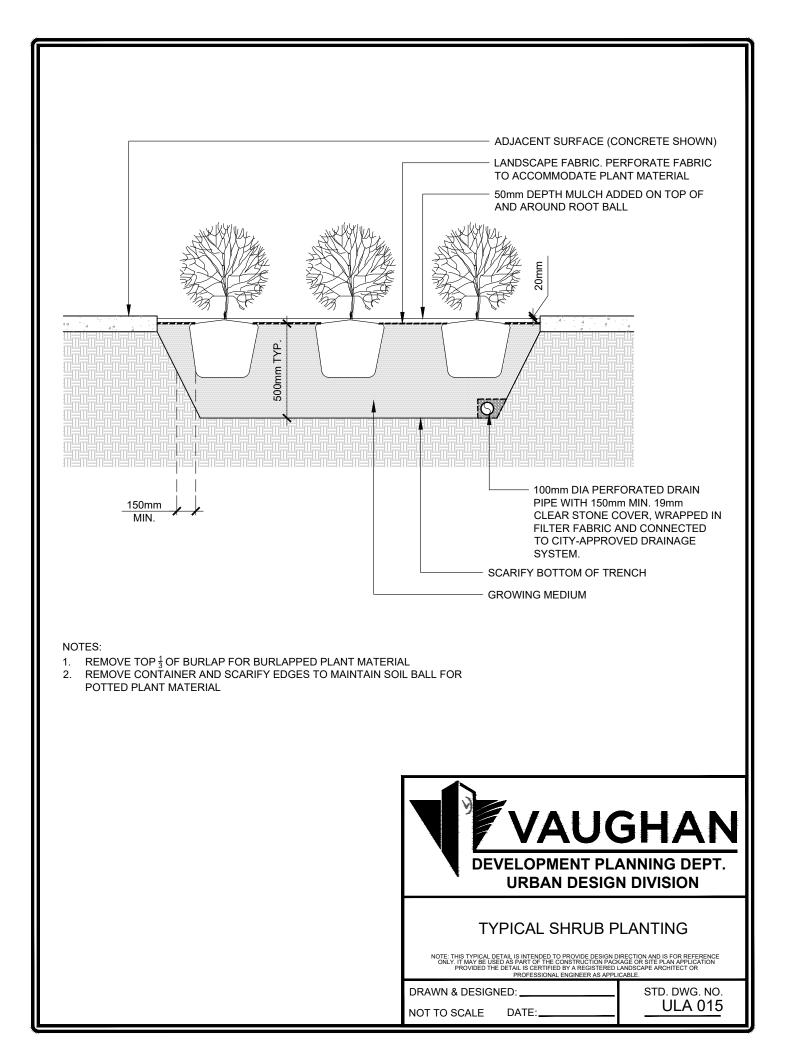


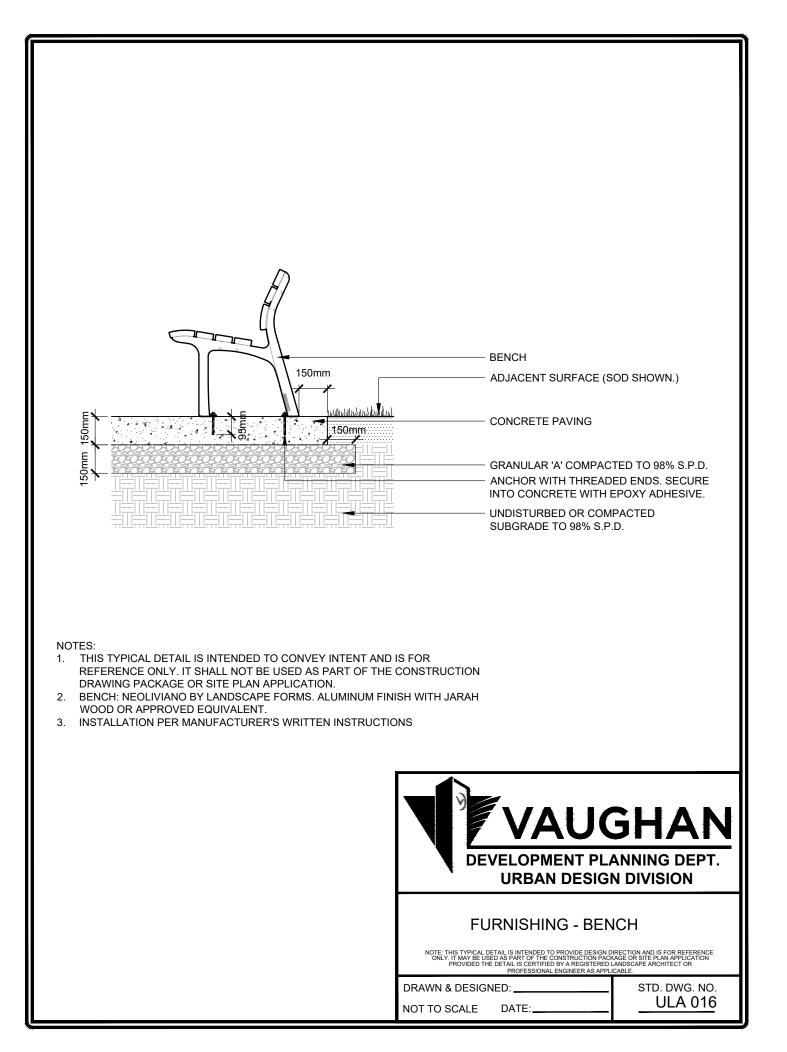
- 2TREES SHALL HAVE ACCESS TO A MINIMUM OF 20 CUBIC METERS OF GROWING MEDIUM IN A SHARED TREE PIT OR 30
- CUBIC METERS OF GROWING MEDIUM IN A STAND-ALONE TREE PIT.
- 2. REMOVE ALL DEBRIS AND CONTAMINATED SOIL FROM PLANTING SPACE PRIOR TO PLANTING
- DIG PLANTING HOLE TO THE DEPTH OF ROOT BALL SUCH THAT THE TRUNK FLARE IS FLUSH WITH PAVING ELEVATION
 TREE WILL BE POSITIONED WITH TRUNK FLARE SLIGHTLY ABOVE FINAL GRADE AND TOP ROOTS NEAR THE SURFACE. TOP OF ROOT BALL SHOULD NOT BE DISTURBED OR COVERED WITH SOIL.
- 5. GROWING MEDIUM SHOULD BE LIGHTLY TAMPED ONCE HALF THE PLANTING HOLE IS FILLED. ONCE ²/₃ OF DEPTH OF PLANTING PIT HAS BEEN BACKFILLED, FILL REMAINING SPACE WITH WATER. ONCE WATER HAS PENETRATED GROWING MEDIUM, FILL TO FINISH GRADE. SOAK GROWING MEDIUM TO ENSURE FULL CONTACT BETWEEN ROOT BALL AND GROWING MEDIUM.
- 6. PRUNE TO REMOVE DAMAGED BRANCHES, DO NOT REMOVE LEADER. REMOVE ANY CO-DOMINANT STEMS.
- 7. REMOVE NURSERY TRUNK WRAP FROM TRUNK AND INSPECT FOR DAMAGE
- 8. IN ALL TREE OPENINGS (3.5 sq. m. OR SMALLER), INSTALL TREE BARK PROTECTOR.
- 9. AVOID STAKING BALLED OR BURLAPPED TREES.

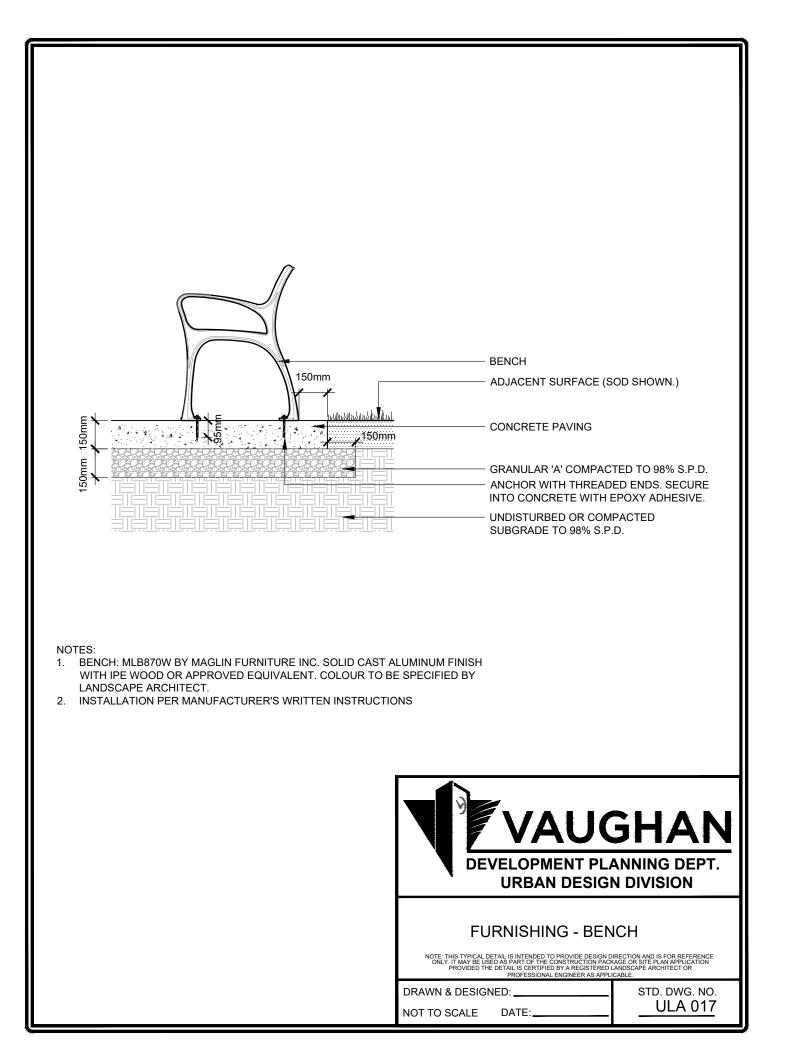
1.

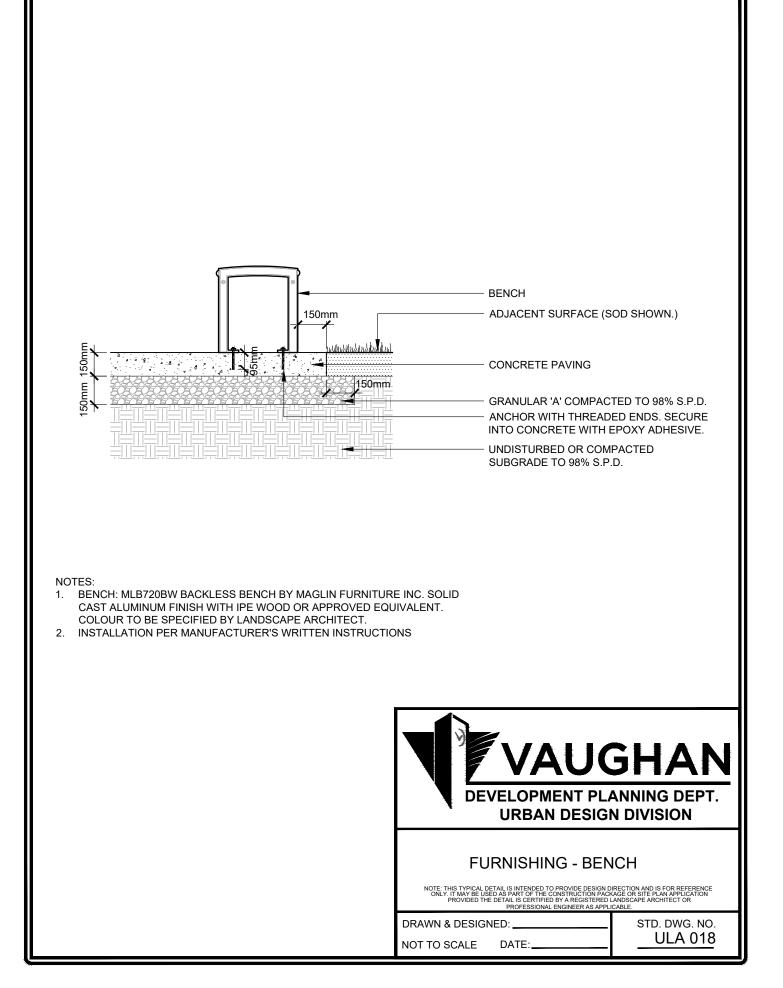
- 10. ALL TREES MUST BE IRRIGATED. IRRIGATION IS TO BE DISTRIBUTED EVENLY THROUGHOUT TREE PIT. IRRIGATION MAY BE PASSIVE (UTILIZING STORMWATER) OR ACTIVE (UTILIZING AN IRRIGATION SYSTEM)
- 11. CONFIRM GRADING ON SITE. ALL PROPOSED GRADES TO MATCH EXISTING CONDITIONS.

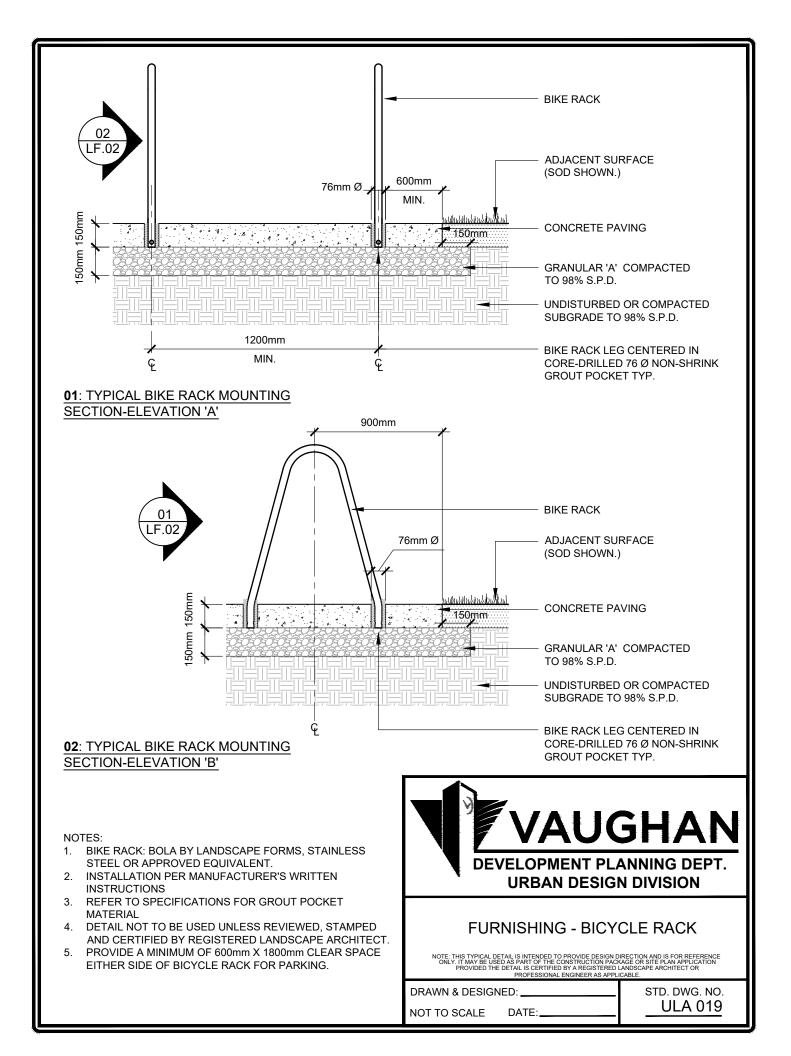


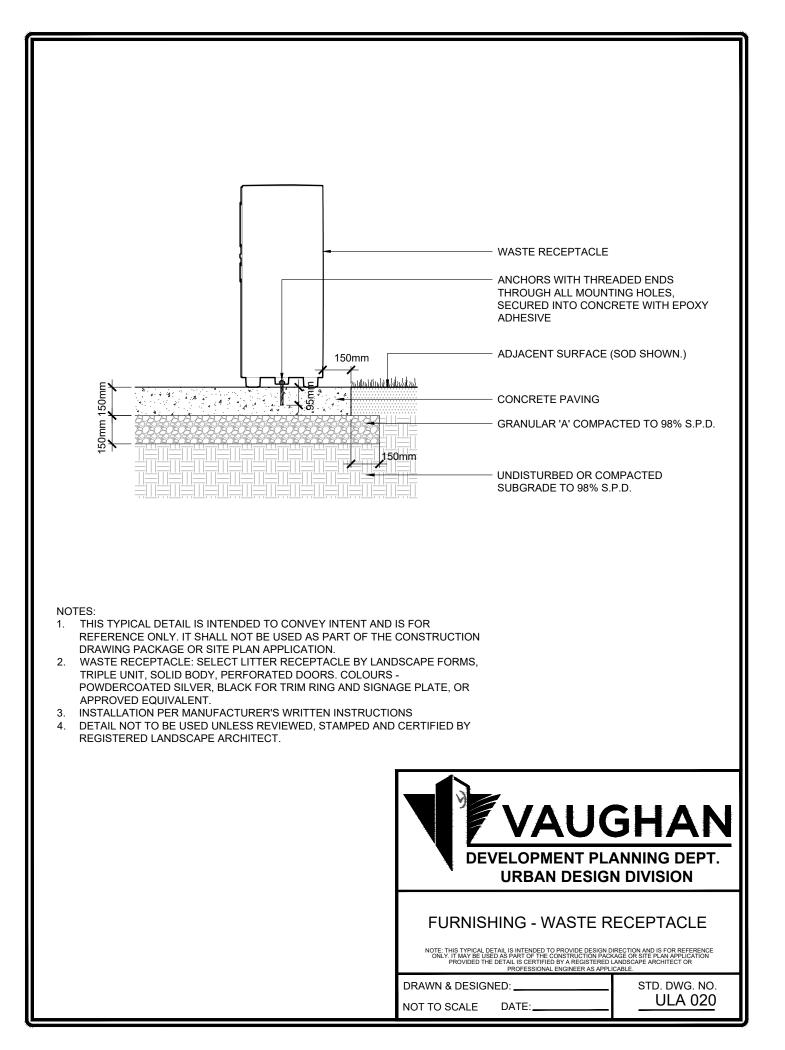


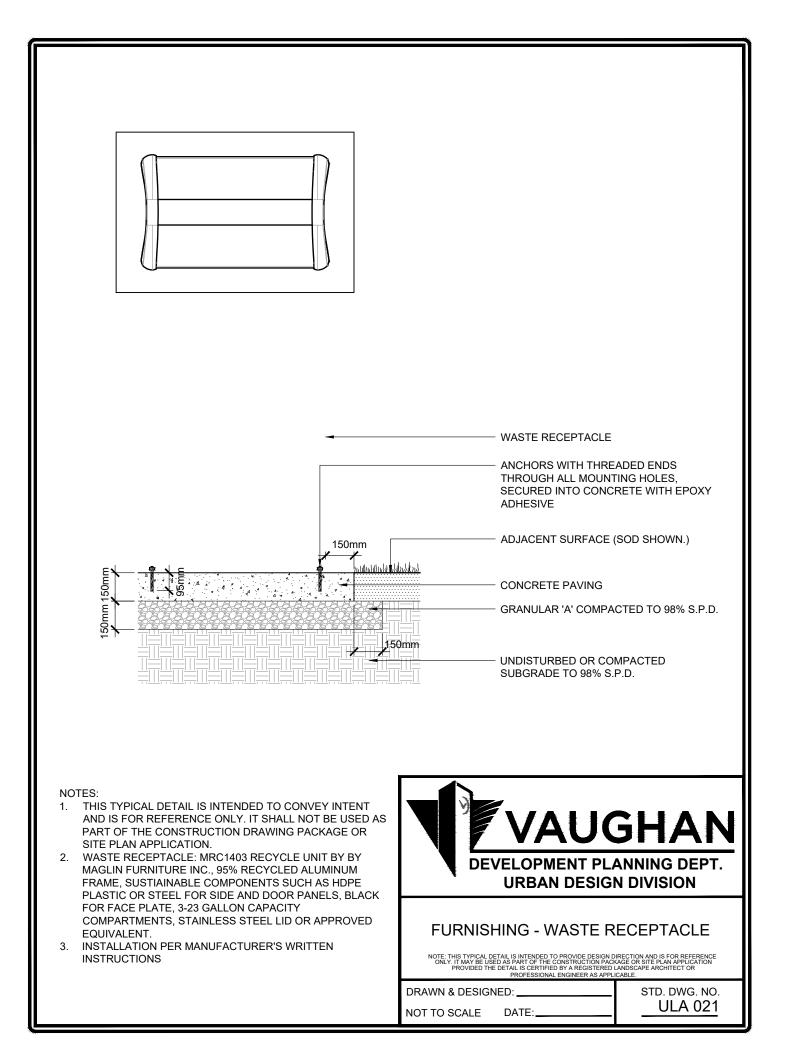


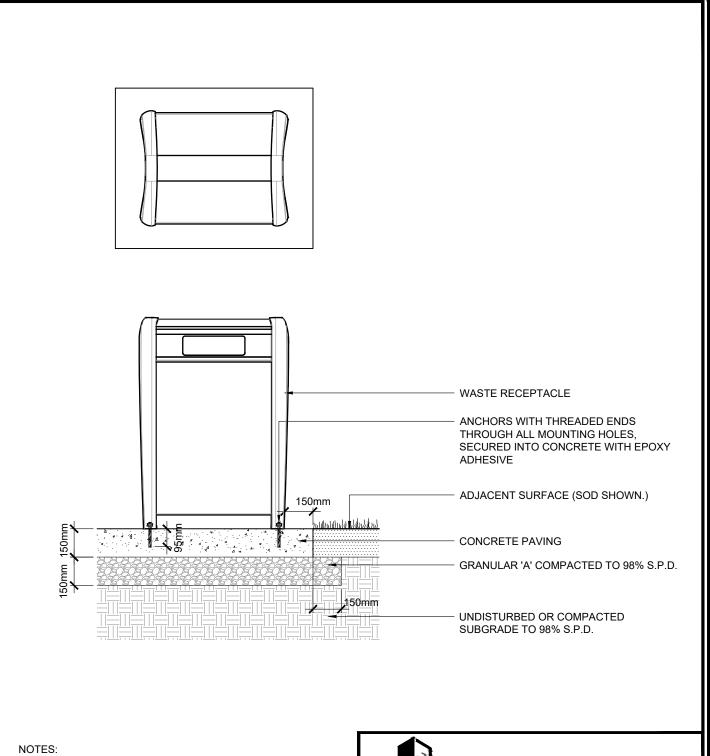






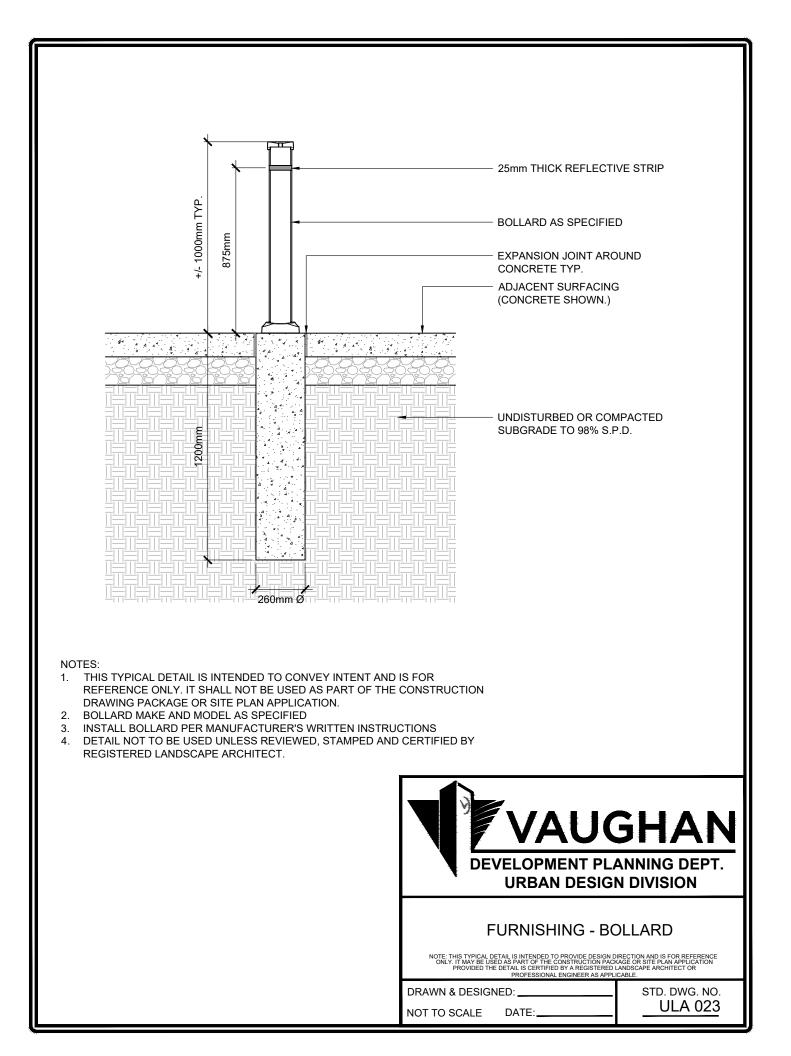




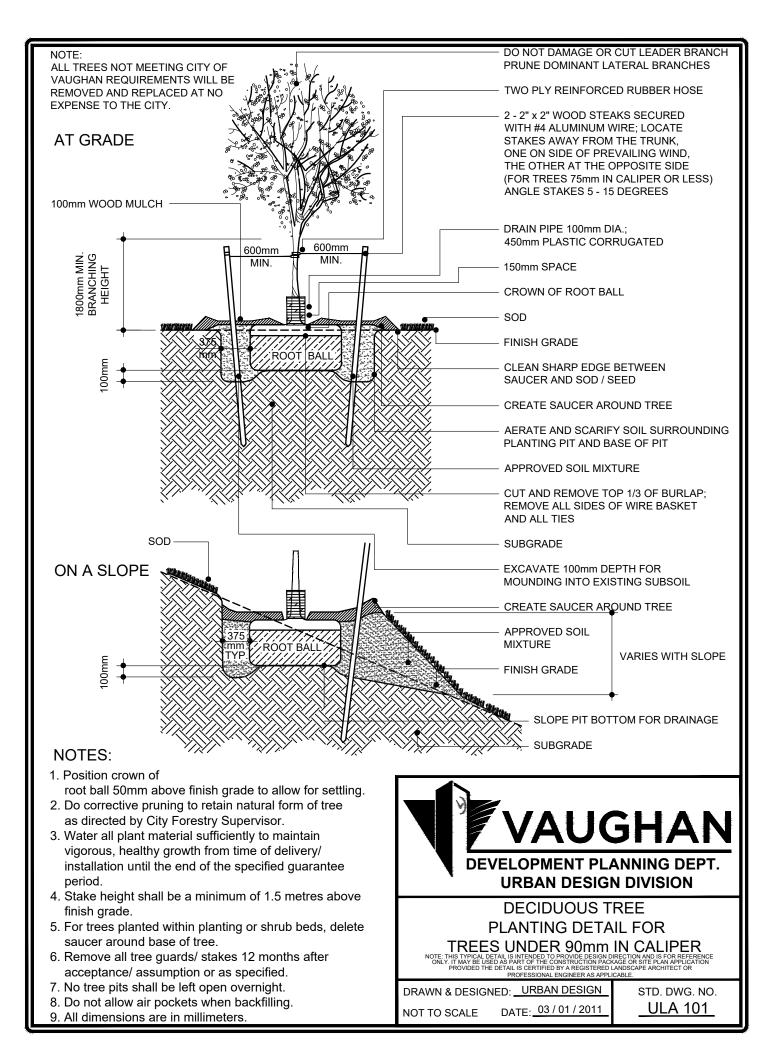


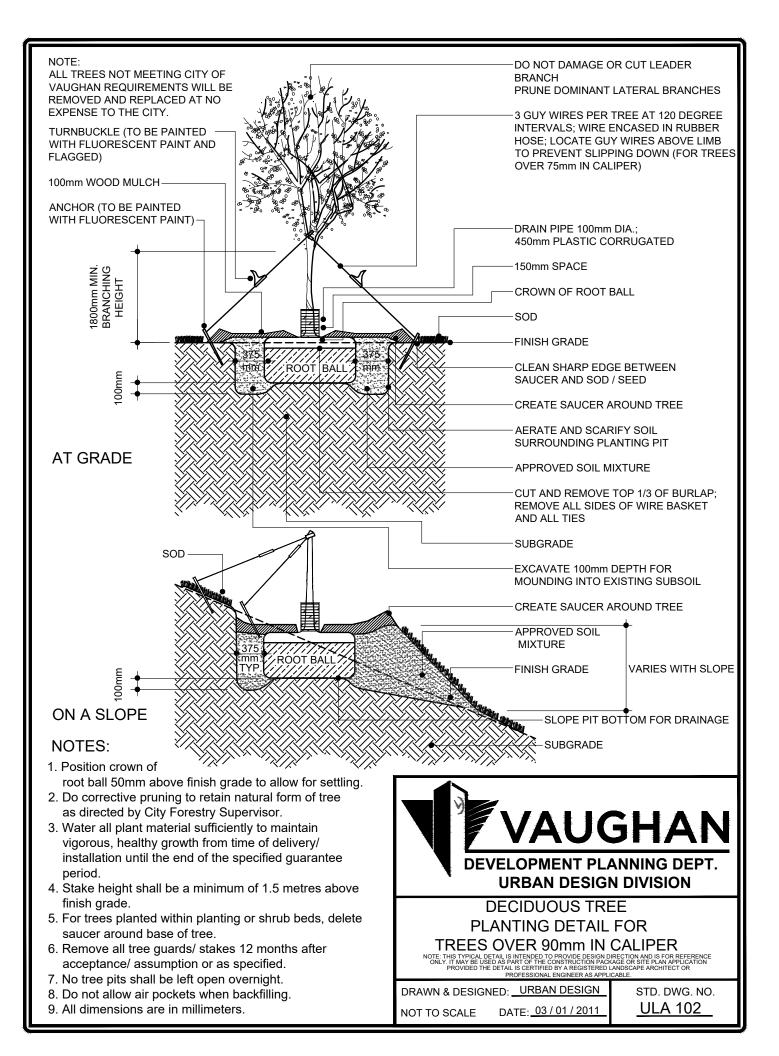
- THIS TYPICAL DETAIL IS INTENDED TO CONVEY INTENT AND IS FOR REFERENCE ONLY. IT SHALL NOT BE USED AS PART OF THE CONSTRUCTION DRAWING PACKAGE OR SITE PLAN APPLICATION.
- WASTE RECEPTACLE: MRC1400-32 RECYCLE UNIT BY BY MAGLIN FURNITURE INC., 95% RECYCLED ALUMINUM FRAME, SUSTIAINABLE COMPONENTS SUCH AS HDPE PLASTIC OR STEEL FOR SIDE AND DOOR PANELS, BLACK FOR FACE PLATE, A 32 GALLON CAPACITY COMPARTMENTS, STAINLESS STEEL LID OR APPROVED EQUIVALENT.
- 3. INSTALLATION PER MANUFACTURER'S WRITTEN INSTRUCTIONS

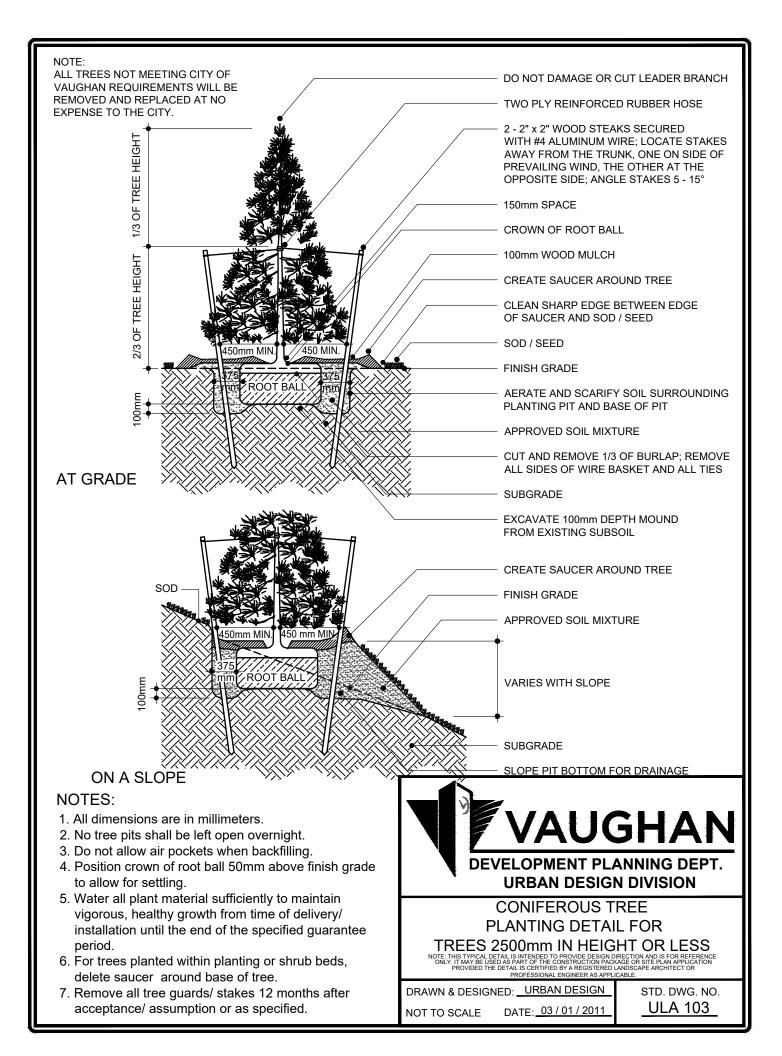


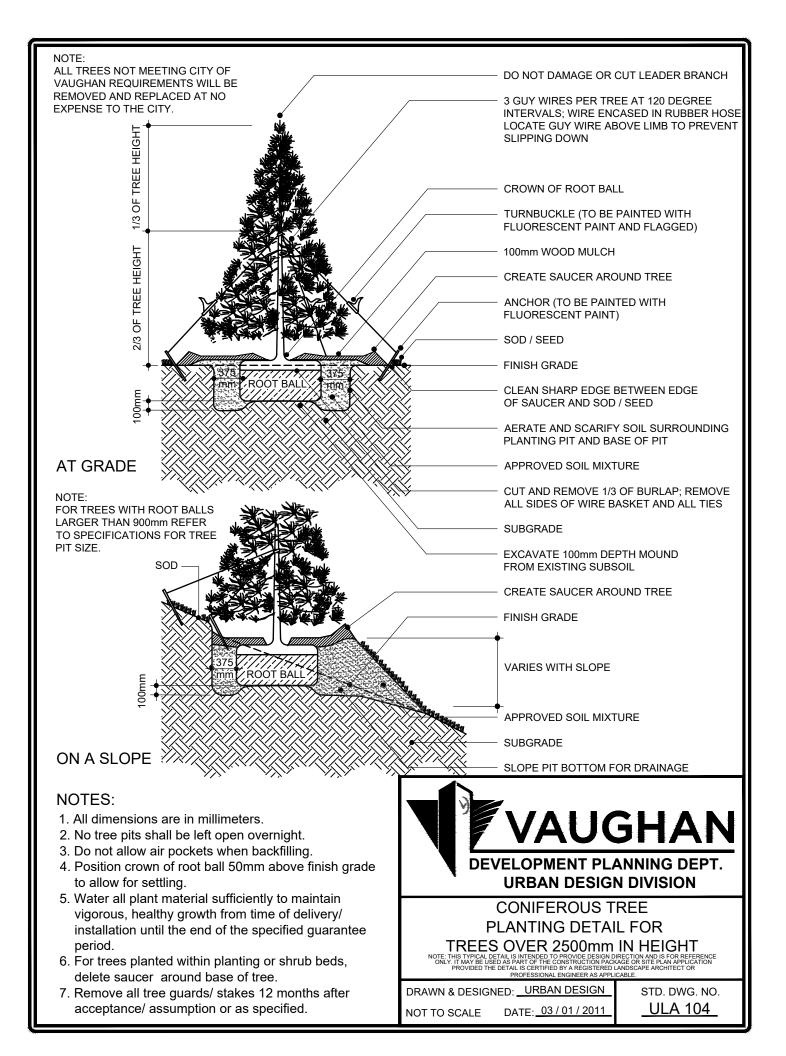


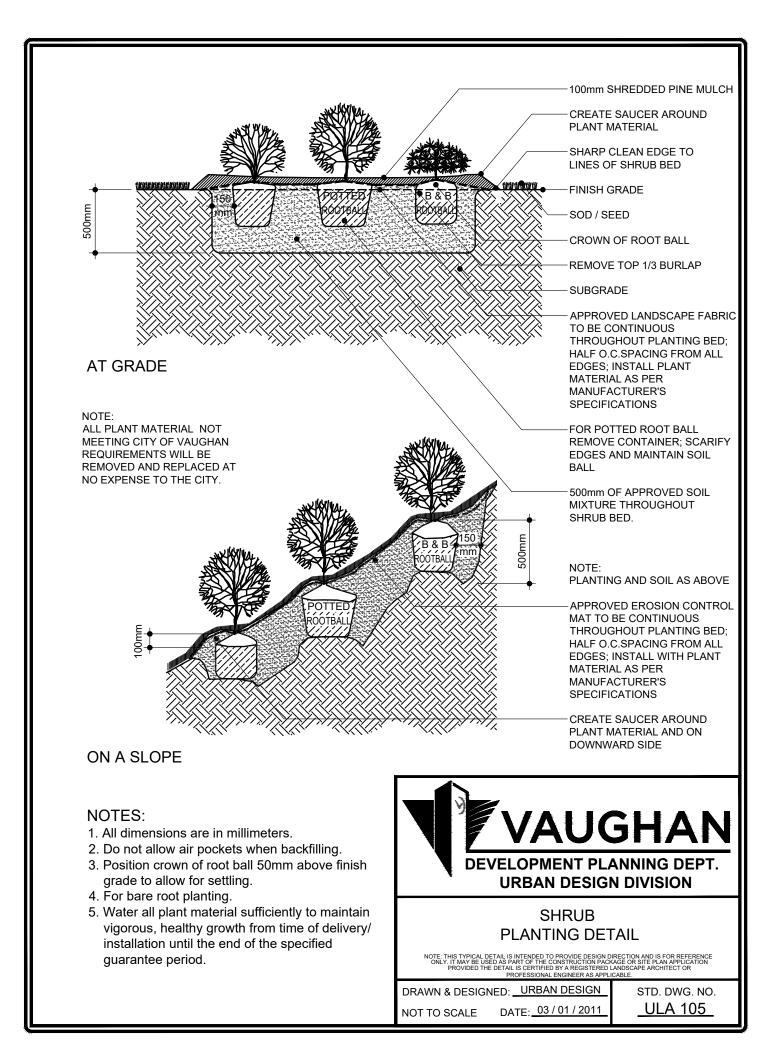
02: URBAN DESIGN STANDARD DETAILS

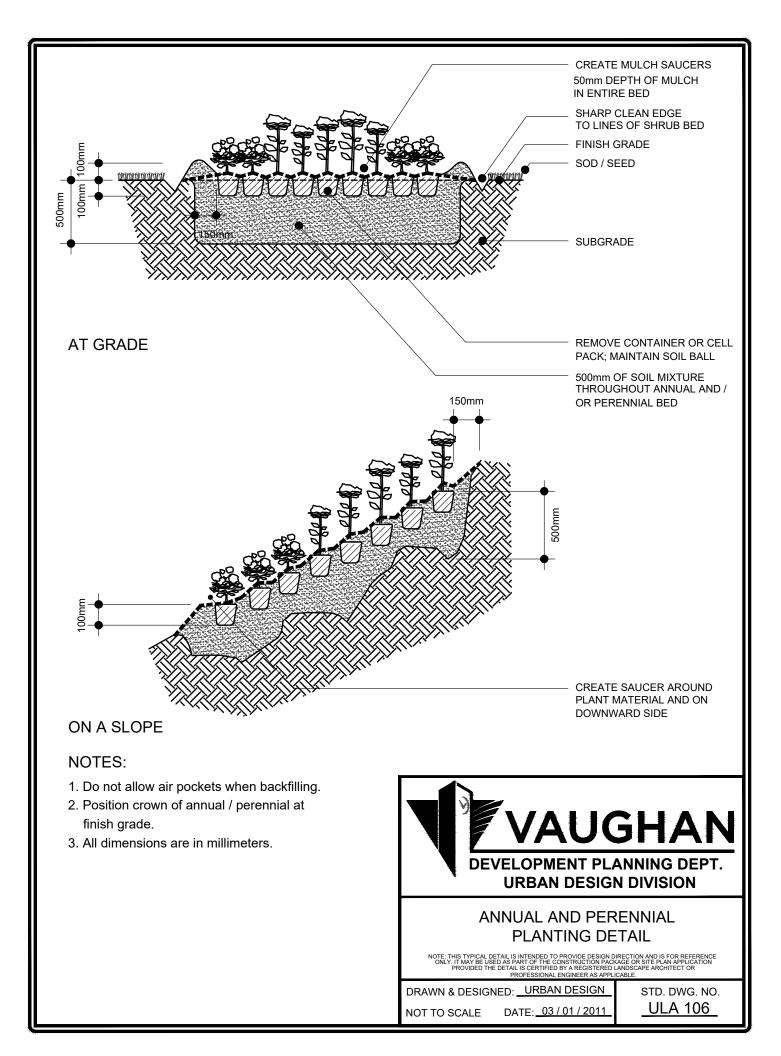


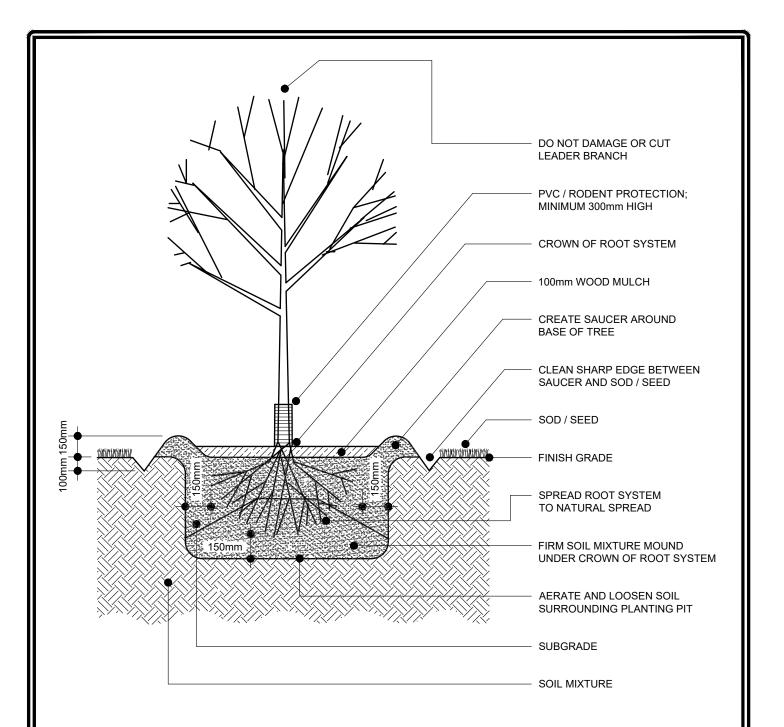






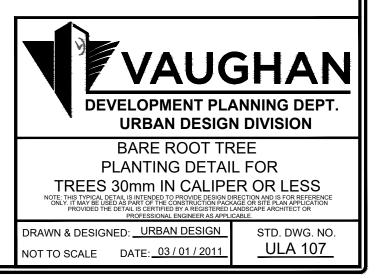


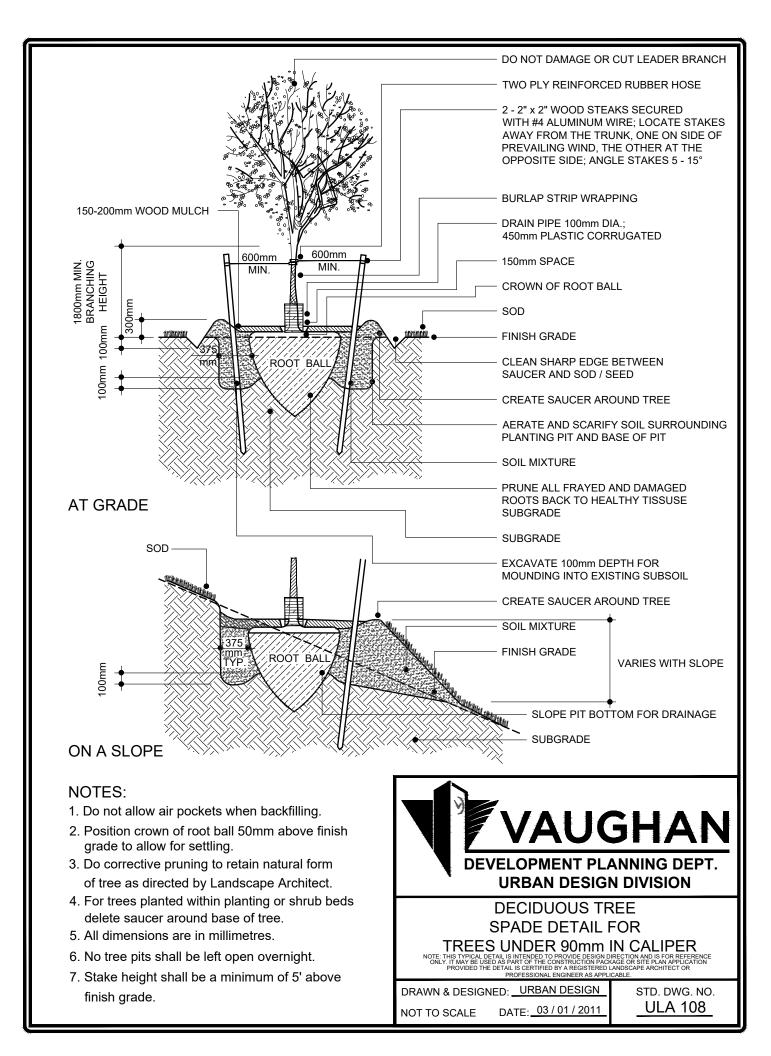


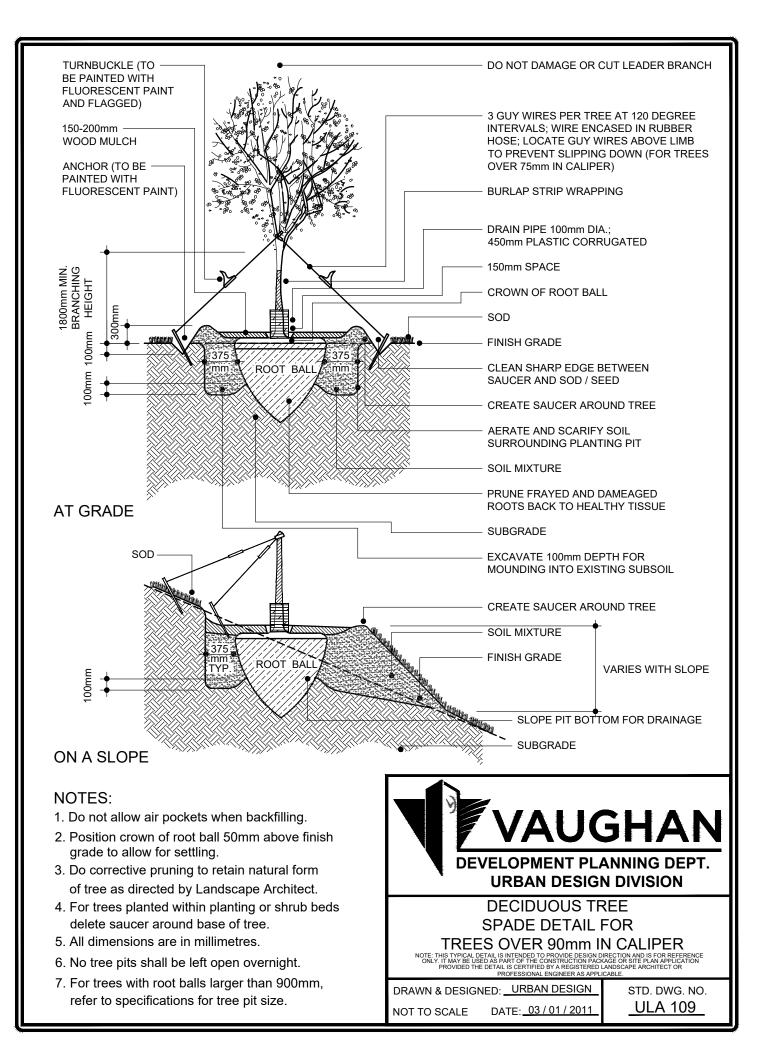


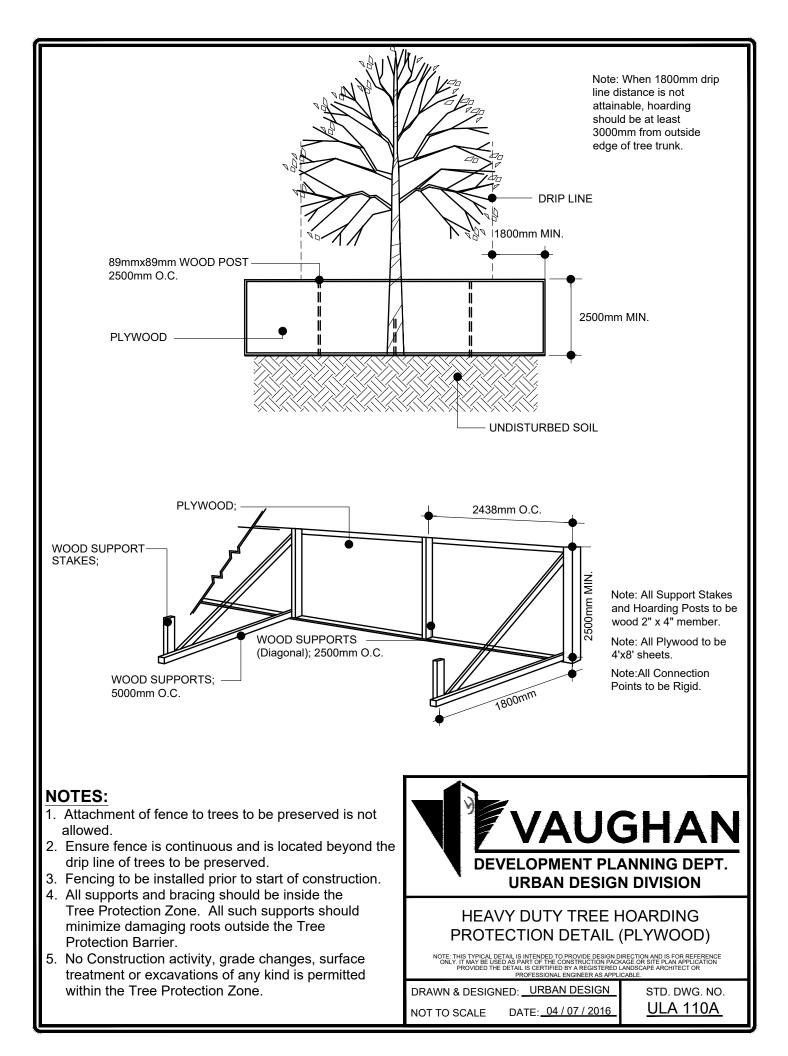
NOTES:

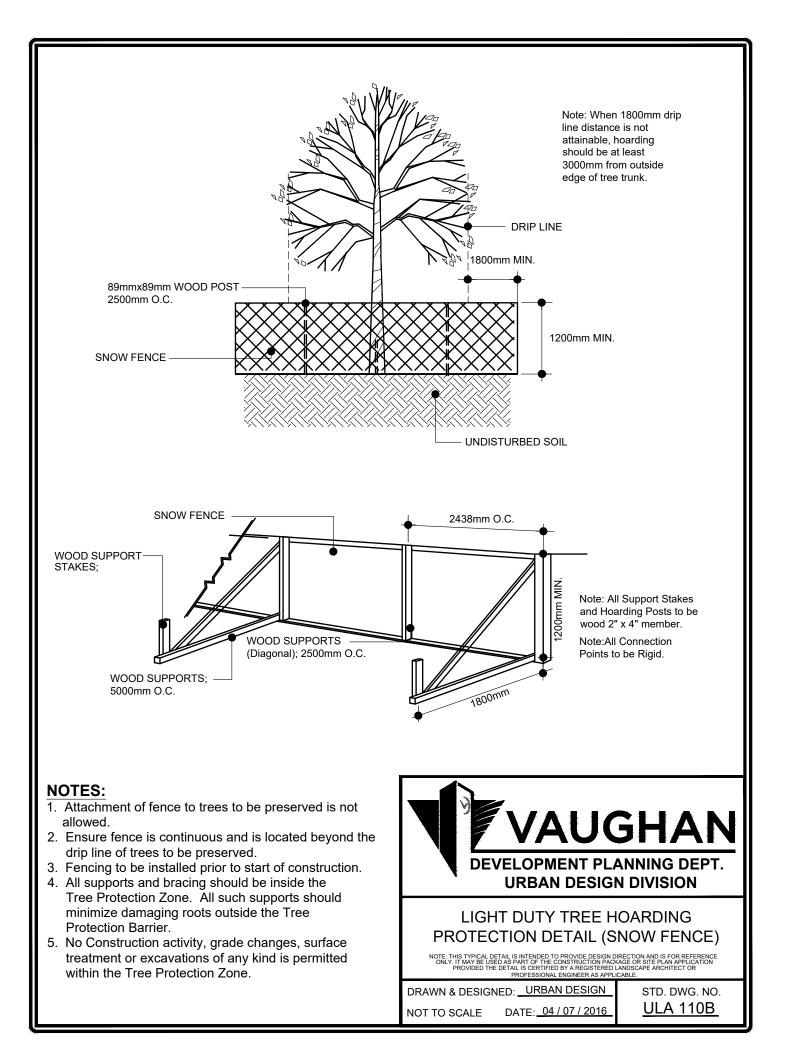
- 1. Do not allow air pockets when backfilling.
- 2. Do not damage root system when installing stakes.
- 3. Position crown of root system 100mm above finish grade.
- 4. Do corrective pruning to retain natural form of tree as directed by Landscape Architect.
- 5. For trees planted within planting or shrub beds, delete saucer around base of tree.
- 6. No tree pits shall be left open overnight.
- 7. If 1800mm or higher, add single tree stake.

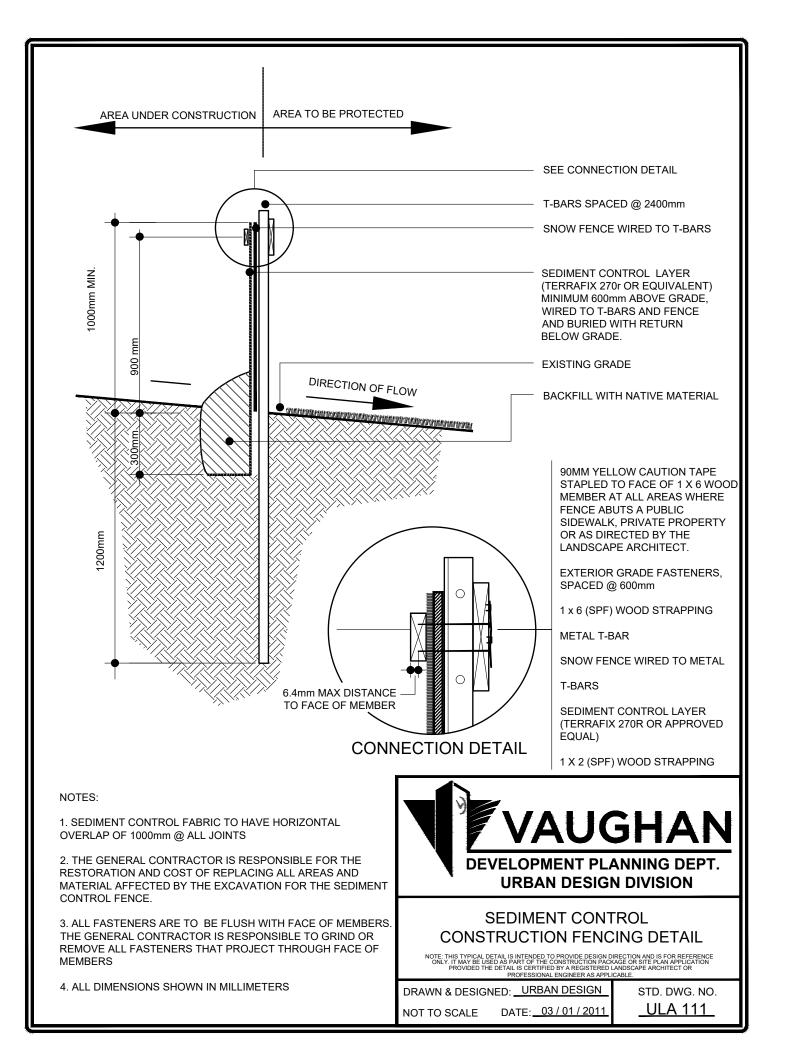


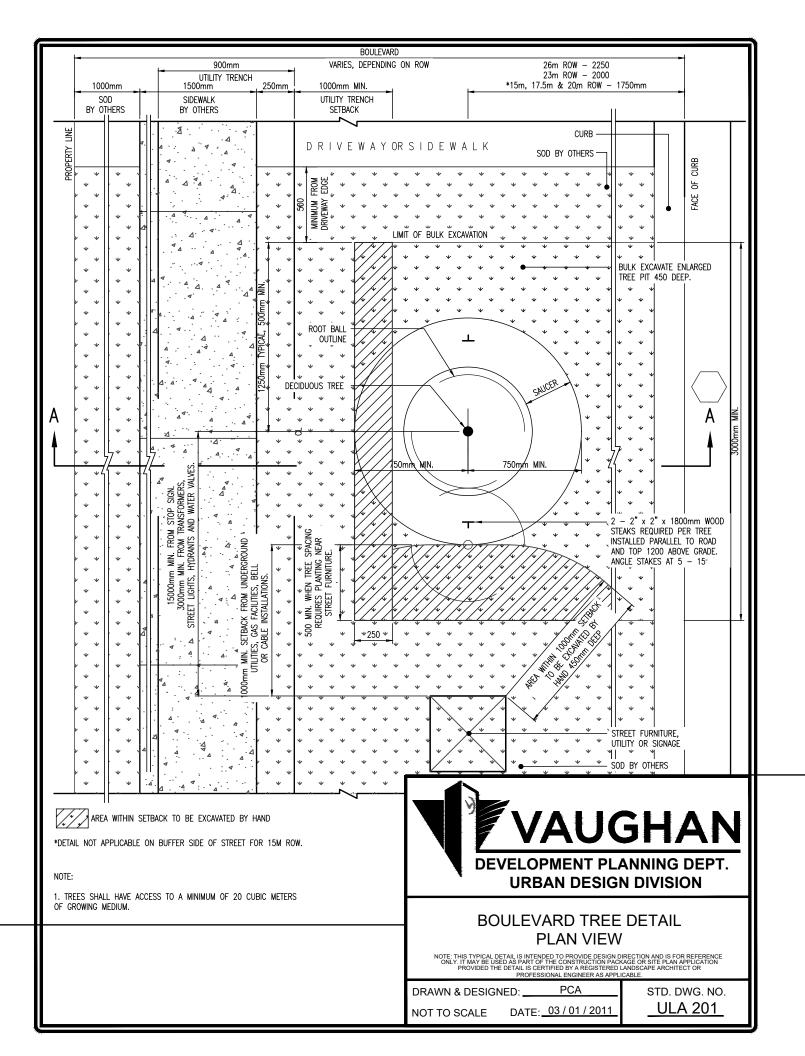


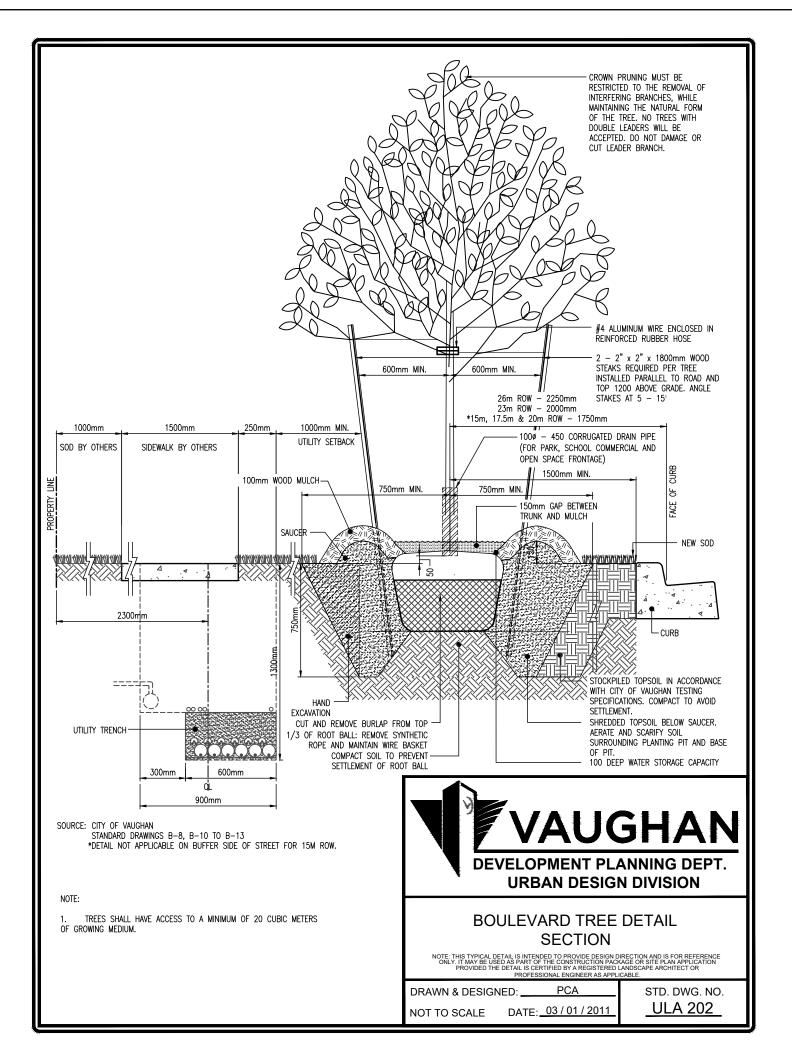












BOULEVARD PLANTING GENERAL NOTES

1. PRIOR TO THE INSTALLATION, A STAKEOUT OF BOULEVARD TREE LOCATIONS IS TO BE UNDERTAKEN BY THE OWNER, TO THE APPROVAL OF THE CITY. THE OWNER SHALL ENSURE ALL UNDERGROUND UTILITIES (EXISTING AND PROPOSED) ARE STAKED OUT PRIOR TO THE BOULEVARD TREE STAKEOUT. THE LANDSCAPE CONSULTANT AND THE CITY MAY, AT THEIR DISCRETION, REDISTRIBUTE TREE LOCATIONS, PRIOR TO PLANTING, IN ORDER TO MINIMIZE CONFLICTS WITH UTILITIES, DRIVEWAYS, AND INTERSECTION VISIBILITY. THE FOLLOWING DISTANCES ARE TO BE ENSURED IN THE LOCATION OF TREES WITHIN THE BOULEVARD:

- NOT LESS THAN 1.0 METRE FROM PEDESTRIAN SIDEWALKS, STREET CURBS, RESIDENTIAL / COMMERCIAL / INDUSTRIAL DRIVEWAYS, UNDERGROUND UTILITIES, UTILITY PEDESTALS, AND SANITARY / STORM / WATER CONNECTIONS. A 3.0 METRES SETBACK IS PREFERRED FROM ALL PAVING SURFACES WHENEVER POSSIBLE.
- NOT LESS THAN 3.0 METRES FROM HYDRO TRANSFORMERS, FIRE HYDRANTS, COMMUNITY MAILBOX PADS, AND WATER VALVES & CHAMBERS.
- NOT LESS THAN 5.0 METRES FROM LIGHT POLES (3.0 METRES FOR COLUMNAR TREE VARIETIES AND SMALLER ORNAMENTAL / FLOWERING TREE SPECIES).
- NOT LESS THAN 15.0 METRES FROM STOP SIGNS, SUBJECT TO THE APPROVAL OF THE CITY'S ENGINEERING DEPT.
- TREES ADJACENT TO INTERSECTIONS SHALL MAINTAIN AN APPROPRIATE SETBACK TO ENSURE THAT NO FUTURE CROWN GROWTH ENCROACHES WITHIN THE DAYLIGHT TRIANGLE.

2. PROVIDE SAMPLE OF SHREDDED BARK CHIP MULCH PRIOR TO CONSTRUCTION.

3. PROVIDE TOPSOIL TESTING RESULTS PRIOR TO CONSTRUCTION.

4. ORIENT TREES FOR BEST APPEARANCE.

5. NO TREE PITS SHALL BE LEFT OPEN OVERNIGHT.

6. ANY TREE REPLACED DURING THE MAINTENANCE PERIOD REQUIRE'S 2"X 2" WOODEN STAKES (6'-0") AS OPPOSED TO 'T' BARS.

7. ALL TREES NOT MEETING CITY OF VAUGHAN REQUIREMENTS WILL BE REMOVED AND REPLACED AT NO EXPENSE TO THE CITY.

8. ALL STAKES AND ACCESSORIES SHALL BE REMOVED PRIOR TO THE INSPECTION FOR SUBDIVISION MAINTENANCE.

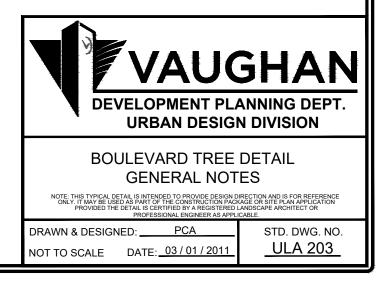
9. STRAIGHTEN ALL LEANING TREES PRIOR TO INSPECTION FOR SUBDIVISION MAINTENANCE.

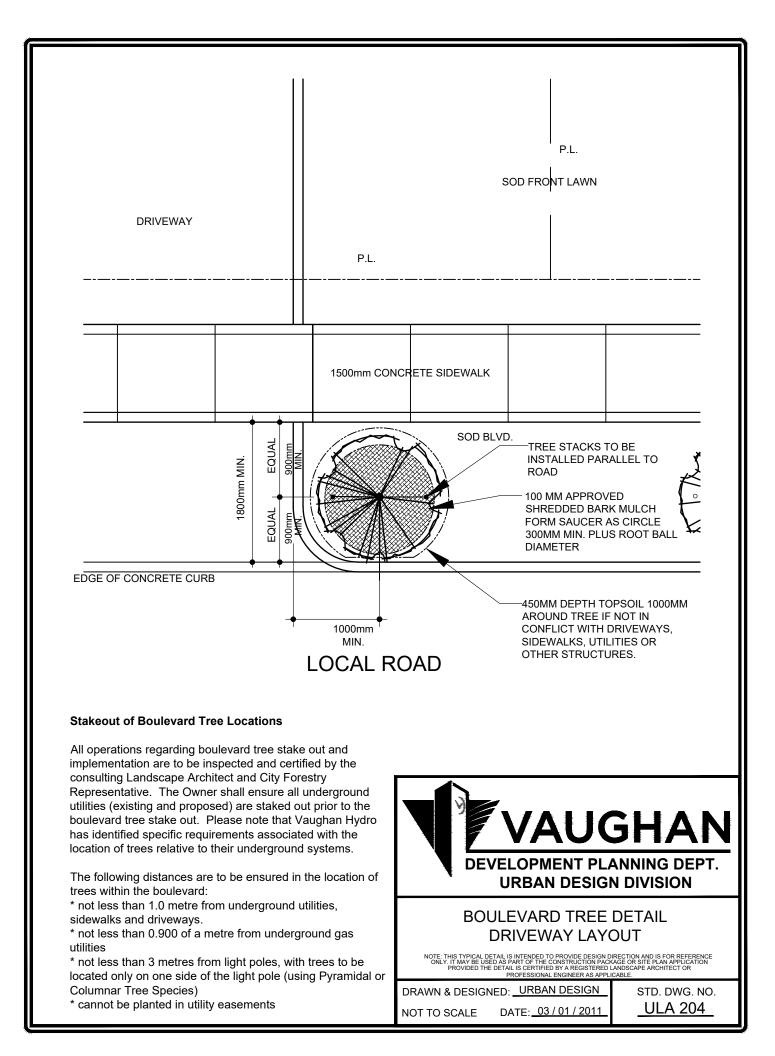
10. CORRECTIVE PRUNING SHALL BE COMPLETED PRIOR TO INSPECTION FOR SUBDIVISION MAINTENANCE IN ACCORDANCE OF INDUSTRY STANDARDS, INCLUDING THE REMOVAL OF:

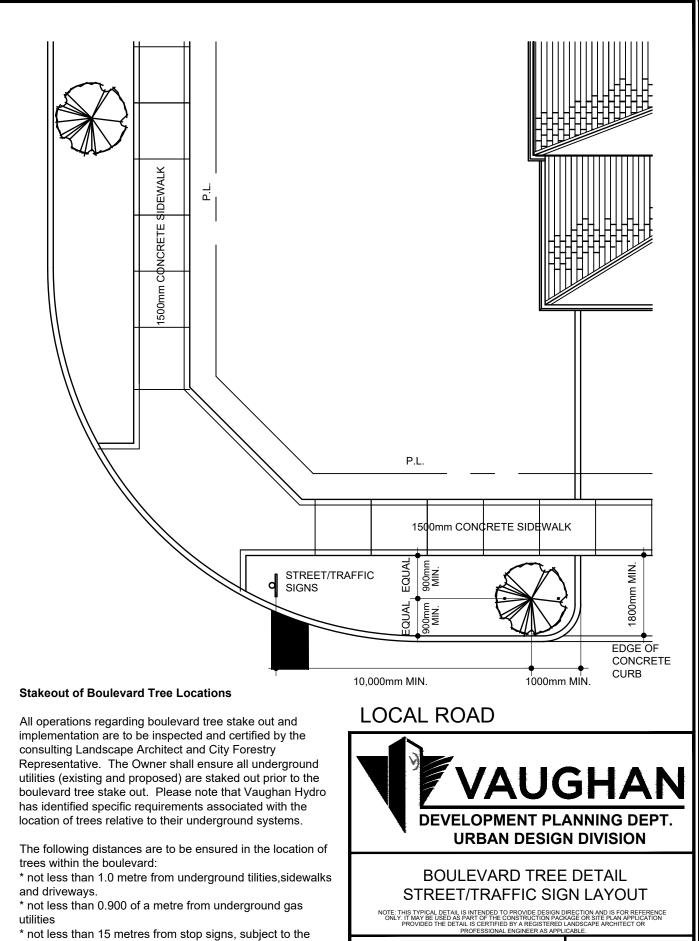
PRUNING TO INCLUDE THE REMOVAL OF:

- ONE WHORL OF BRANCHES FROM THE LOWER CROWN
- DEAD OR BROKEN BRANCHES
- TRUNK SUCKERS
- CO-DOMINANT LEADERS

11. TOP DRESS ANY SETTLEMENT AREA WITH TOPSOIL AND SOD PRIOR TO SUBDIVISION ASSUMPTION.



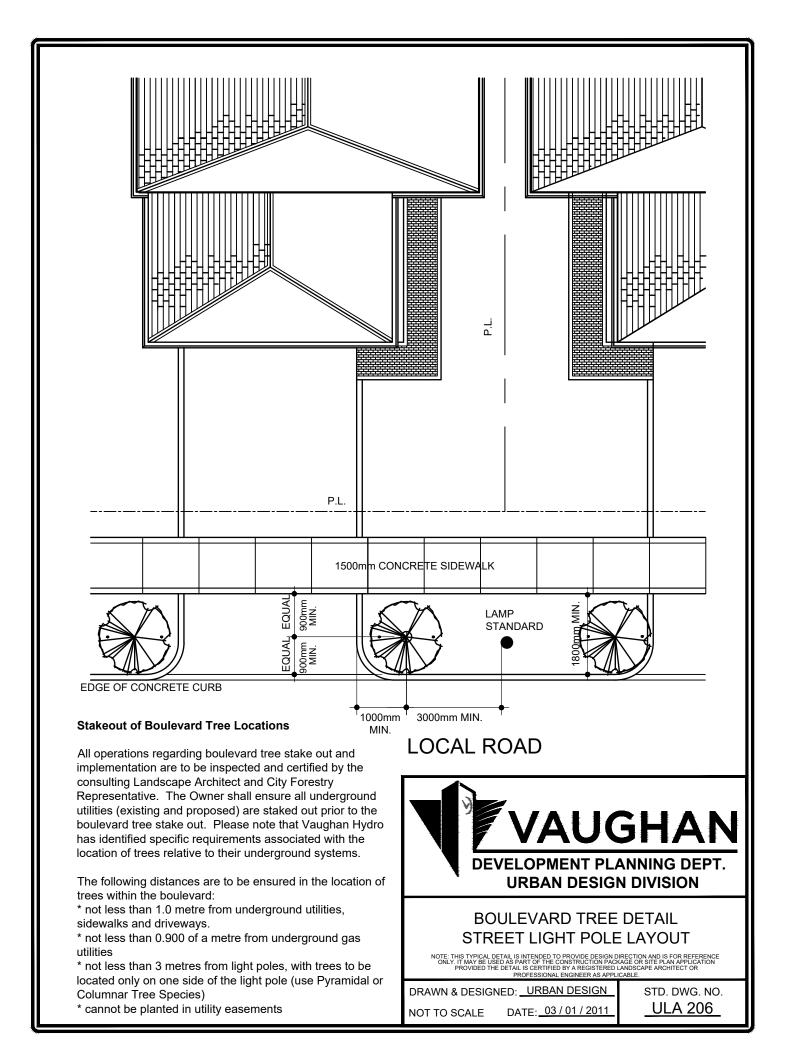


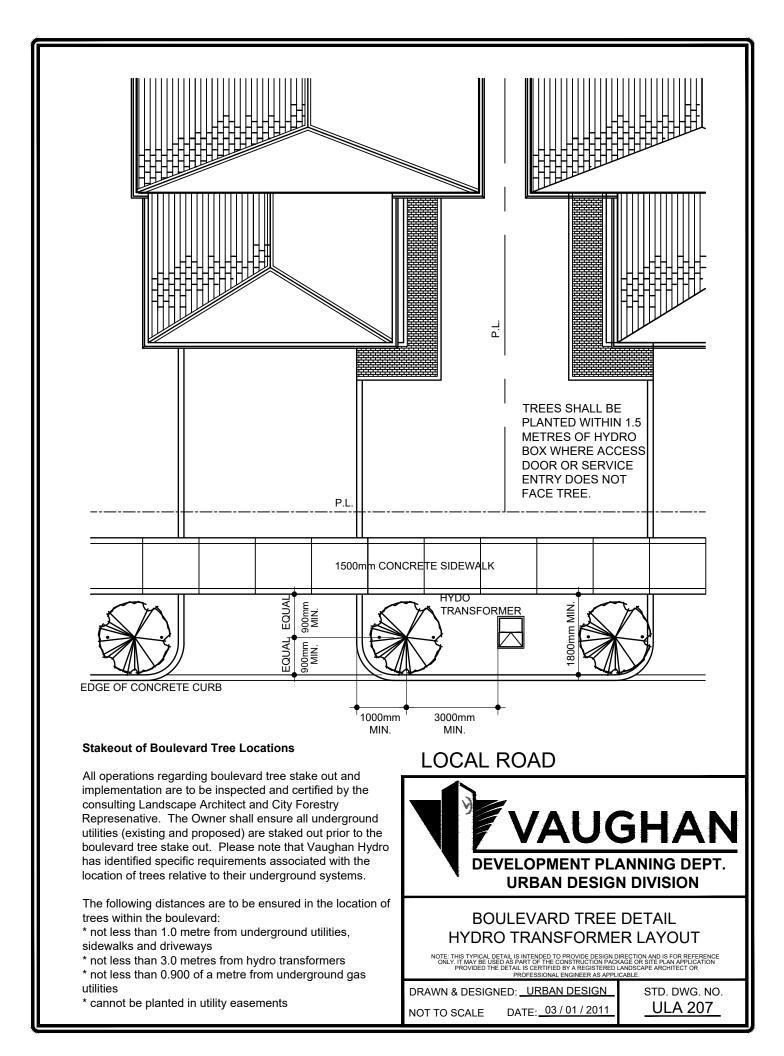


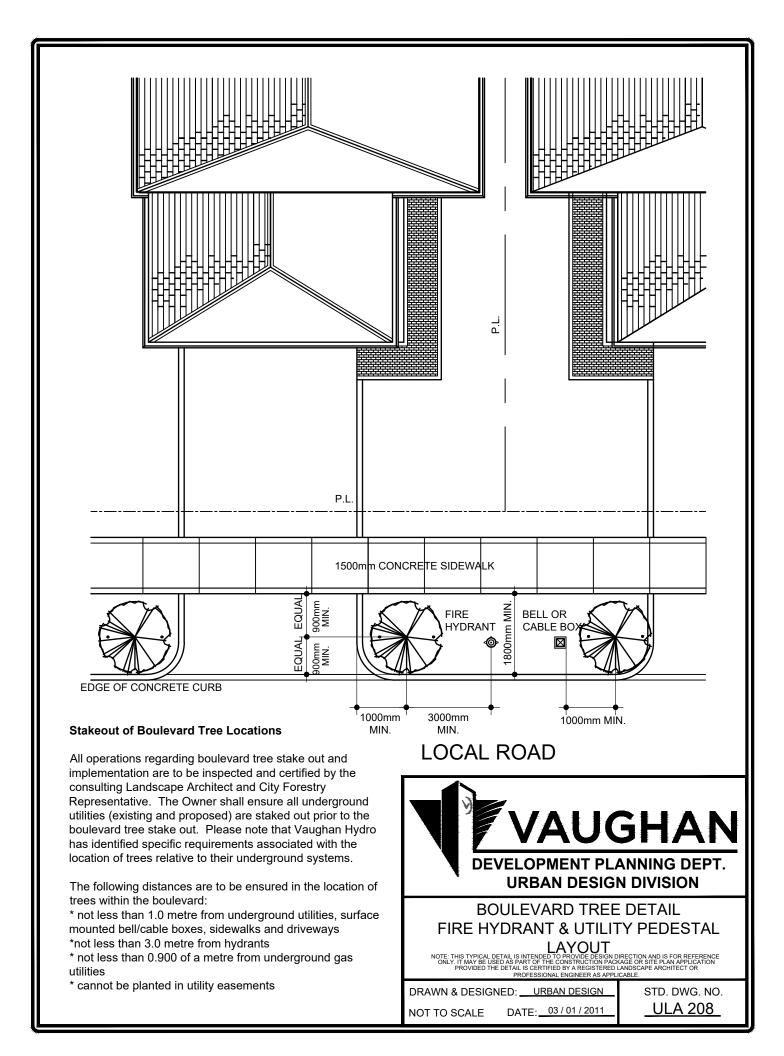
approval of the Engineering Department *cannot be planted in utility easements

DRAWN & DESIGNED: <u>URBAN DESIGN</u>ST NOT TO SCALE DATE: <u>03 / 01 / 2011</u>

STD. DWG. NO. ULA 205







PART 1 - SCOPE

TerraSeeding is the process involving the use of composted topsoil that is injected with seed into a pneumatic blower truck then subsequently blown onto areas designated for the establishment of turf.

PART 2 - MATERIALS

2.1 Seed:

1

2.2.2

Seed is to be Canada No.1 seed or higher quality

2.2 Seed Mix:

2.2.1

Type 'A' - Custom Meadow Mix:	
To be used in all stormpond and valley areas outside 5 year flood line.	
Big Blue Stem (Andropogon Gerardii)	25%
Little Blue Stem (Schizachyrum Scoparius)	25%
Fox Sedge (Carex Vulpinoidea)	15%
Canadian Wild Rye (Elymus Canadensis)	25%
Poverty Oat Grass (Danthonia Spicata)	10%
Application seed rate:	_
200kg / ha	
Supplied by:	
Ontario Seed Company // tel: 519-886-0557	
(or approved equal to be approved by Landscape Architect)	
Type 'B' - Custom Wet Meadow Mix:	
To be used in all stormpond and valley areas inside 5 year flood line.	
Joe Pye Weed (Eupatorium Malculatum)	10%
Canada Bluejoint (Calamagrostis Canadensis)	15%
Fox Sedge (Carex Vulpinoidea)	25%
Soft Rush (Juncus Effusus)	15%
Jointed Rush (Juncus Articulatus)	10%
Porcupine Sedge (Carex Hystericina)	15%
Blue Vervain (Verbena Hastata)	10%
Amplication good rates	

Application seed rate:

200kg / ha

Supplied by:

Ontario Seed Company // tel: 519-886-0557 (or approved equal to be approved by Landscape Architect)

2.3 Annual Nurse Crop Seed

Nurse crop seed shall be a cereal grain such as Fall Rye Grain or Winter Wheat Grain unless otherwise approved by the Contract Administrator.

2.4 Fertilizer

Fertilizer shall comply with the provisions of the Canada Fertilizers Act and Fertilizer Regulations. Fertilizer shall be supplied in original bags bearing the manufacturer's original label indicating mass and analysis. All fertilizer shall be in granular form, dry, free flowing and free from lumps and with an analysis as specified in Table 1 (Page 6)

.5 Composted Topsoil

Composted topsoil shall be pre-mixed and shall consist of a minimum 60% compost material. The composted topsoil may be amended by the addition of concrete sand and peat loam. Concrete sand shall be added to improve aeration and soil structure. Peat loam shall be added to adjust the pH of the compost and to make the composted topsoil lighter and easier to blow. Both amendments shall be added at the discretion of the Contractor to ensure that the composted topsoil meets the material specification and is suited for distribution by a pneumatic blower.

Once mixed, composted topsoil material shall consist of particles where 100% of the material is able to pass through a 25 mm sieve.

2.6 Compost

Compost shall be derived from well-composted green organic waste matter. All compost material shall meet the Ontario Ministry of the Environment's Interim Guidelines for the Production and Use of Aerobic Compost in Ontario definition for Type A compost and shall be supplied from composting sites certified to meet the Ontario Ministry of the Environment's Compost Regulation 101.

2.7 Concrete Sand

Concrete sand shall have a pH range from 7.7 to 8.0 with a mid-range of 7.8 and shall meet gradation requirements for concrete sand as described in OPSS.

2.8 Peat Loam

Peat loam shall consist of a minimum 50% organic matter and equal parts sand, silt and clay. Peat loam shall be suitable for horticultural purposes. Shredded particles shall not exceed 16 mm in size.

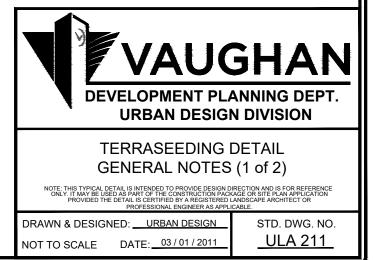
2.9 Water

Water shall be free of any contaminants or impurities that would adversely affect the germination and growth of vegetation.

PART 3 - EQUIPMENT

3.1 Pneumatic Blower Truck

The pneumatic blower truck shall be a custom manufactured, fully integrated, truck-mounted unit. The blower truck shall be equipped with a computer-calibrated seed injection system and shall be capable of uniformly applying composted topsoil and seed at a rate greater than 0.25 cubic meters of material per minute. The blower truck shall also be equipped with an application hose capable of extended 90 meters from the blower truck unit.



PART 4 - CONSTRUCTION

4.1 Operational Constraints

The composted topsoil and seeding operation shall not commence until a legible, valid Seed Analysis Certificate and a legible, valid signed declaration from the compost supplier have been provided to the Contract Administrator.

The composted topsoil and seeding operation shall not commence until the Contract Administrator has approved the surface preparation and the layout of permanent seed mixes.

The composted topsoil and seeding application and/or re-application shall not be carried out under adverse field conditions such as high wind, frozen soil or soil covered with snow, ice or in areas of standing water or a concentrated flow of water.

The Contractor shall maintain the site and control erosion until conditions permit application or re-application of seed and composted topsoil.

The surface to be seeded shall be prepared not more than 7 calendar days before the seeding operation.

No seeding or composted topsoil application shall come in contact with the foliage of any trees, shrubs, or other vegetation. No seed or composted topsoil application shall come in contact with waterbodies.

4.2 Surface Preparation for Composted Topsoil and Seeding

At the time of seeding, all surface areas designated for seeding shall be free of erosion and shall have a fine graded uniform surface. The surface shall be uniformly cultivated with agricultural implements to a minimum depth of 50 mm and shall not have surface stones greater than 50 mm in diameter, weeds or other unwanted vegetation. Soil to be loose, friable and suitable as a seed bed to germinate seed.

4.3 Layout

The location of the seed mix and composted topsoil shall be staked out on the ground surface in accordance with the contract drawings. Stakes shall be used to indicate the limits of the seed mix.

4.4 Composted Topsoil and Seeding

4.4.1 Application Rates for Composted Topsoil

Depending on slope gradation, depth of composted soil, seed shall be as follows:

0-5% slope: 10-15 mm. depth

5-10% slope: 15-20 mm. Depth

- 10-25% slope: (4:1) 20-25 mm. depth
- 25-35% slope: (3:1) 25-40 mm. depth
- 35-45% slope: 40-50 mm. depth

4.4.2 Composted Topsoil and Seed Application

Prior to the application of the composted topsoil and seeding, the Contractor shall ensure that the pneumatic blower has been properly calibrated to provide the specified amounts of seed and that the blower can adequately uniformly apply composted topsoil and seed at a rate greater than 0.25 cubic meters of material per minute.

Once the blower has been calibrated, the Contractor shall apply composted topsoil and seeding uniformly at specified depths to all areas identified for cover in the contract drawings or as directed by the Contract Administrator.

Composted topsoil and seed shall overlap the adjoining ground cover by 300 mm.

4.4.3 Clean-up

At the completion of the seeding and cover operation, materials applied to areas or objects other than those designated to grow grass shall be removed. Clean water shall be used to immediately wash seed or cover materials that have been applied to the foliage of trees, shrubs or other susceptible plant growth.

PART 5 - QUALITY ASSURANCE

5.1 Performance Measure

All composted topsoil and seeded areas will be inspected by the Contract Administrator to ensure compliance with this specification at thirty, sixty and ninety day periods following the composted topsoil and seeding operation.

At the thirty day inspection within the seeded earth area;

- the composted topsoil shall be visually intact and shall form a uniform cohesive mat;
- germination of the nurse crop shall be visually evident.

At the sixty day inspection within the seeded earth area;

- the nurse crop shall be evident at mature height in an evenly dispersed, uniform cover;
- germination of the specified, permanent seed species shall be visually evident in an evenly dispersed uniform cover;
- there shall not be any significant bare areas, both in terms of quantity and size;
- non-seeded, non-specified vegetation shall not exceed 20% of the seeded earth area.
- At the ninety day inspection within the seeded earth area;
- the permanent seed species shall be at an average height of 50mm in an evenly dispersed, uniform cover; representative of the specified, permanent seed mixes;
- there shall not be any significant bare areas, both in terms of quantity and size;
- non-seeded, non-specified vegetation shall not exceed 20% of the seeded earth area.

No inspections will be held during the winter dormant period or when site conditions prohibit a visual field inspection. The timing intervals between inspections will be suspended during the winter dormant period.

5.2 Failure to Meet Performance Measure

If the completed work does not meet the Performance Measure after the thirty-day inspection, the Contract Administrator shall document the failure areas, notify the Contractor of those areas, and re-inspect at the sixty day inspection.

If the completed work does not meet the Performance Measure after the sixty or ninety day inspection, the Contract Administrator shall notify the Contractor in writing and the Contractor shall re-apply the specified materials in accordance with this specification within 14 calendar days of receiving the notification.

The Contractor shall maintain the site and control erosion until conditions permit application or re-application of and composted topsoil seed.

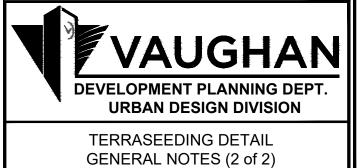
All replaced composted topsoil and seed shall be subject to the Quality Assurance section of this specification.

- 5.3 Measurement and Payment Procedures
- Measurement: Measurement shall be based on a lump sum basis.

Payment: Payment shall be based on the lump sum price in the tender.

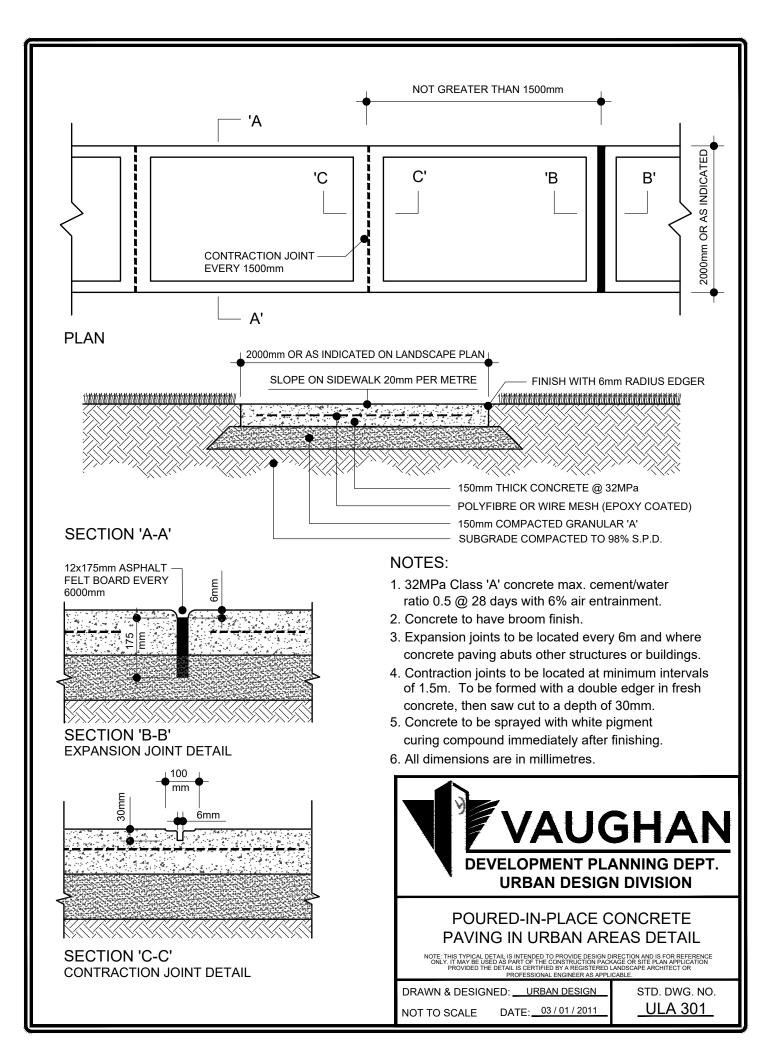
The tendered price shall constitute full compensation for furnishing and preparation of all materials and equipment as required to complete the work

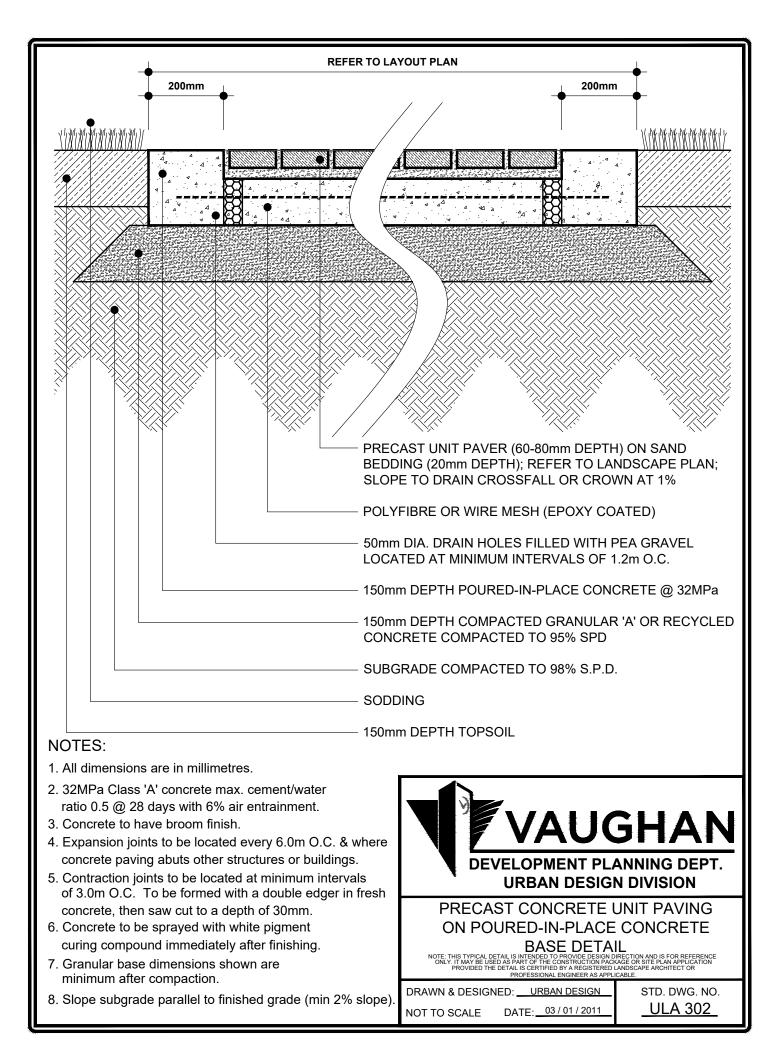
as specified in the Contract Drawings. In addition, the price is to include the cost of all labour as required to complete the above-noted work.

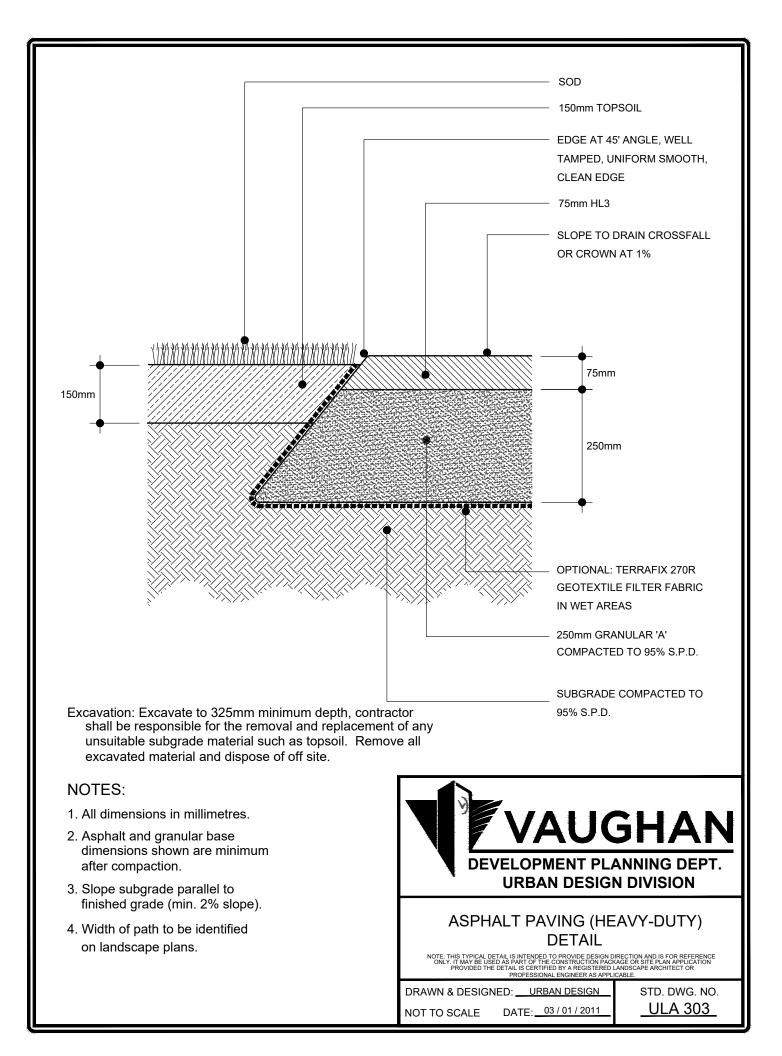


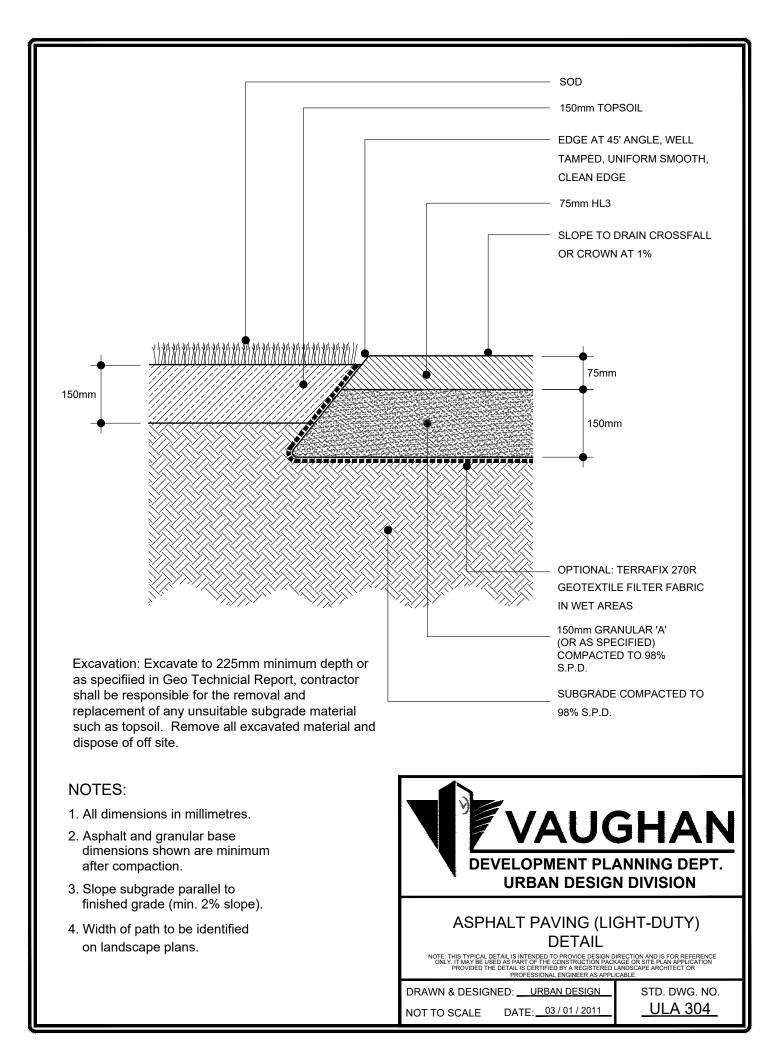
NOTE: THIS TYPICAL DETAIL IS INTENDED TO PROVIDE DESIGN DIRECTION AND IS FOR REFERENCE ONLY. IT MAY BE USED AS PART OF THE CONSTRUCTION PACKAGE OR SITE PLAN APPLICATION PROVIDED THE DETAIL IS CERTIFIED BY A REGISTERED LANDSCAPE ARCHITECT OR DEORESSIONLI ENCINCEM & ADDI L'ADIS.

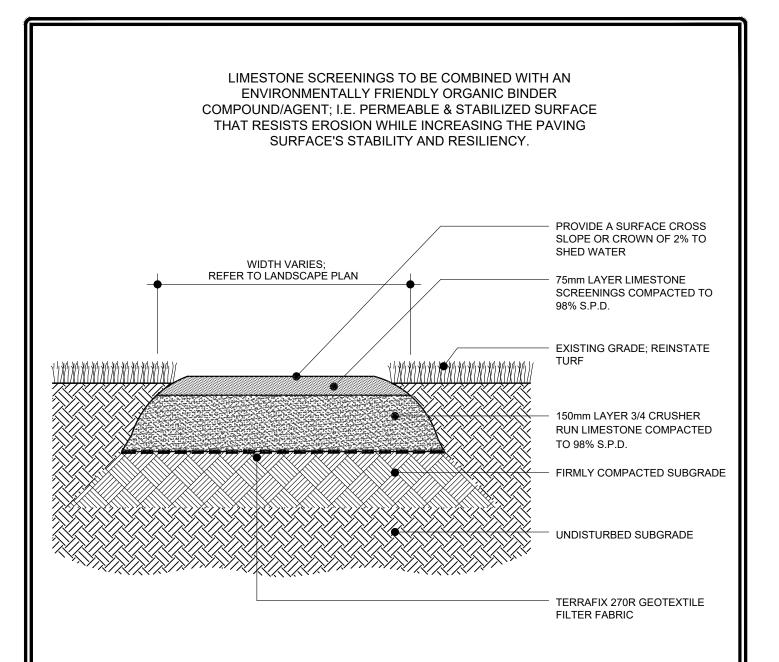
DRAWN & DESIGNED: <u>URBAN DESIGN</u> NOT TO SCALE DATE: <u>03 / 01 / 2011</u>







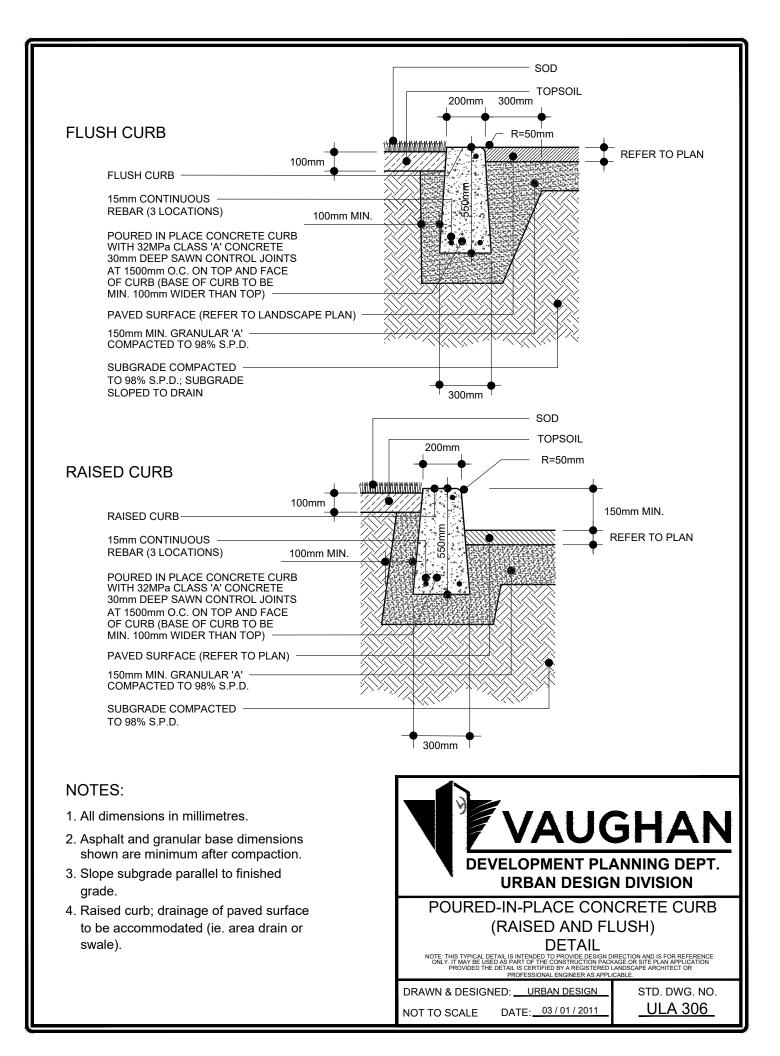


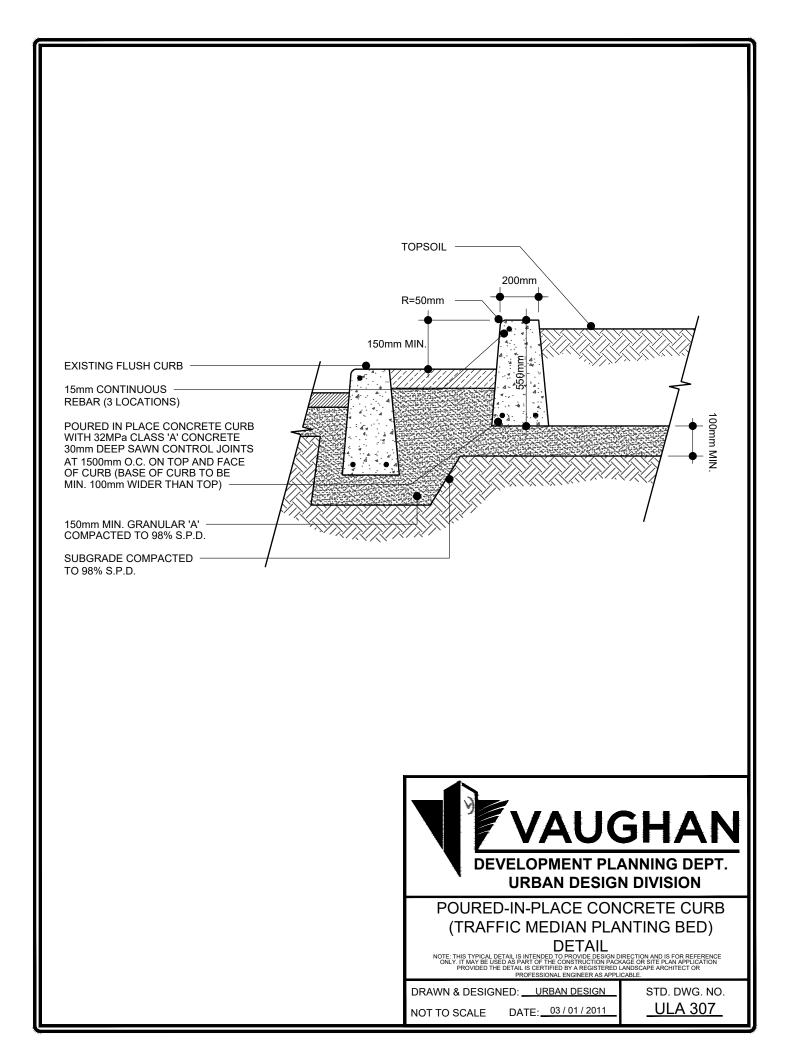


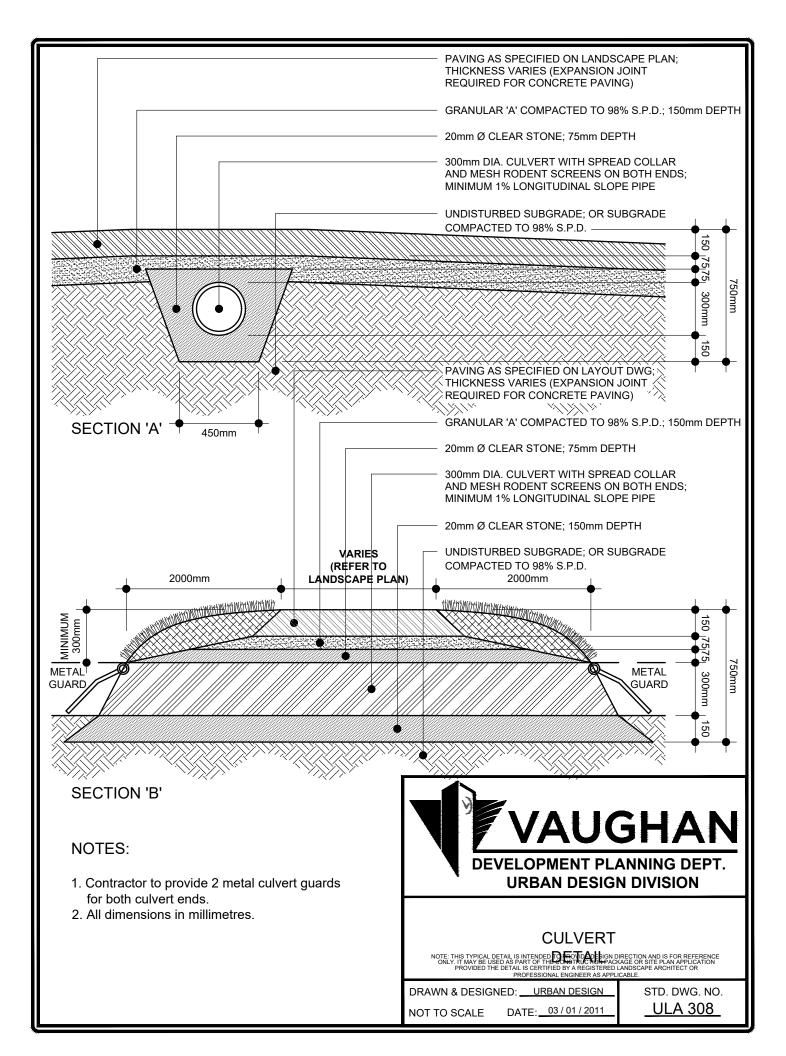
NOTES:

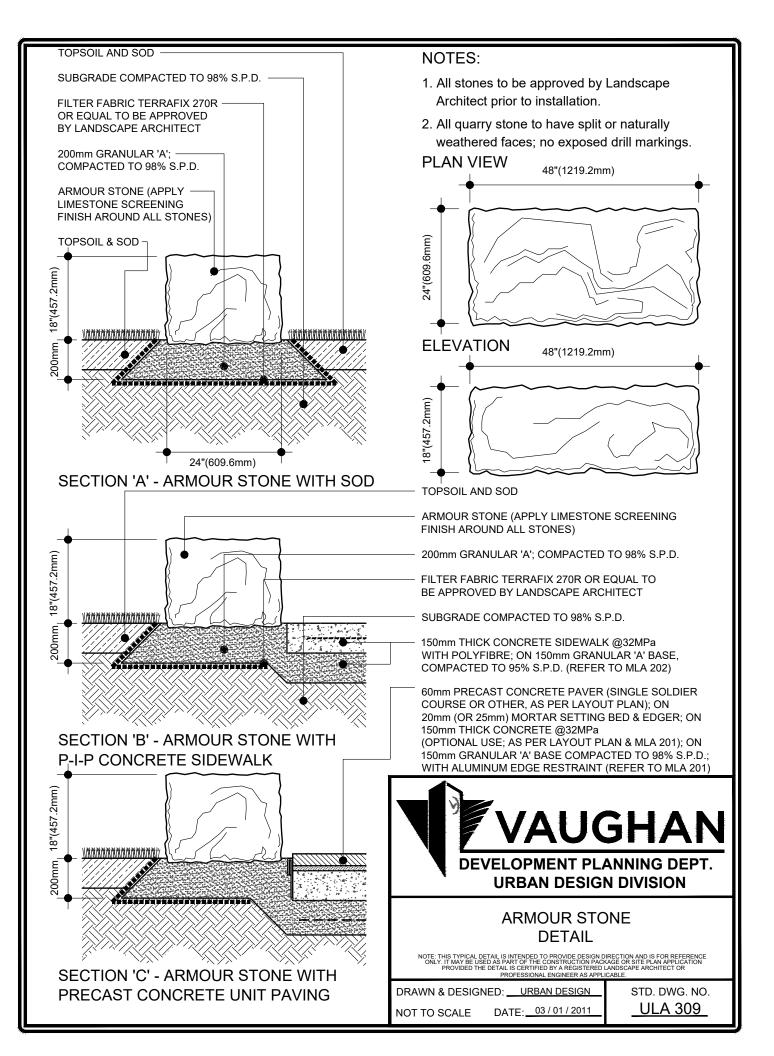
- 1. Restore all damage to existing sod. Sod laid at trail edge to be placed 25mm below the tread on level ground or on the downhill side of a cross slope. Sod laid on the uphill side of a cross slope to be level with the tread of the walkway to ensure positive drainage.
- 2. All dimensions in millimetres.
- 3. Refer to landscape plans for path width.

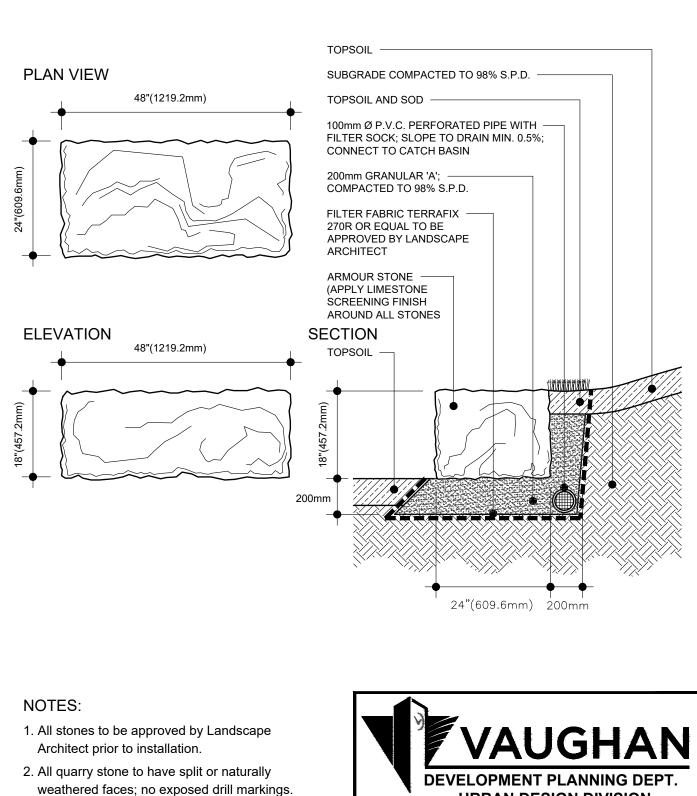










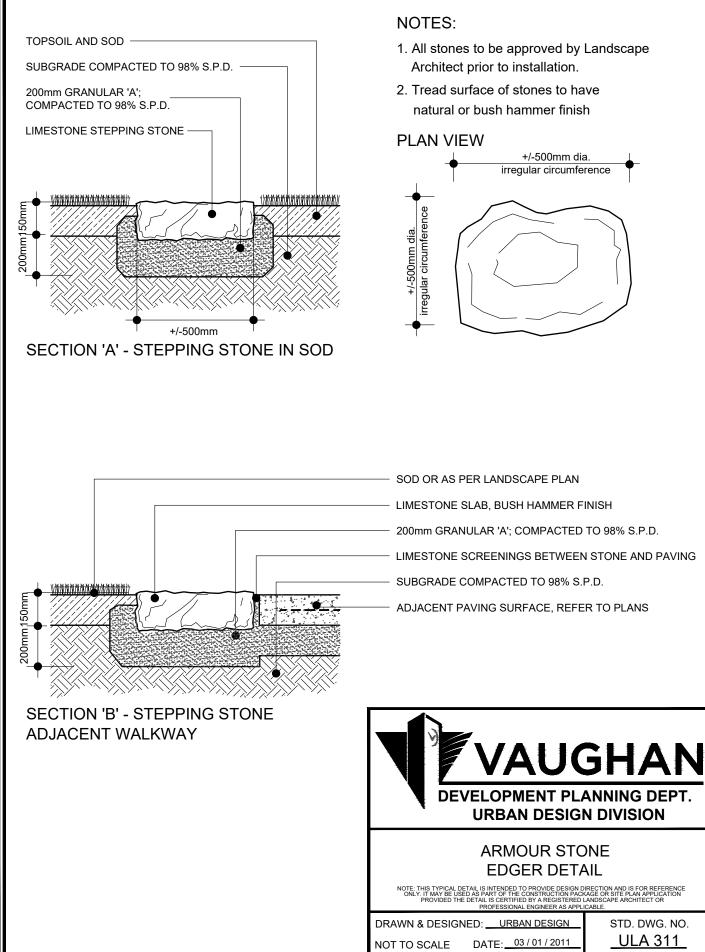


URBAN DESIGN DIVISION

ARMOUR STONE RETAINING WALL DETAIL

NOTE: THIS TYPICAL DETAIL IS INTENDED TO PROVIDE DESIGN DIRECTION AND IS FOR REFERENCE ONLY. IT MAY BE USED AS PART OF THE CONSTRUCTION PACKAGE OR SITE PLAN APPLICATION PROVIDED THE DETAIL IS CERTIFIED BY A REGISTERED LANDSCAPE ARCHITECT OR

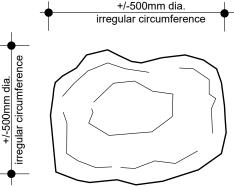
DRAWN & DESIGNED: <u>URBAN DESIGN</u> NOT TO SCALE DATE: <u>03 / 01 / 2011</u> STD. DWG. NO. ULA 310



STD. DWG. NO. **ULA 311**

RECTION AND IS FOR REFER AGE OR SITE PLAN APPLICAT

- 1. All stones to be approved by Landscape Architect prior to installation.
- 2. Tread surface of stones to have natural or bush hammer finish



- - LIMESTONE SLAB, BUSH HAMMER FINISH
 - 200mm GRANULAR 'A'; COMPACTED TO 98% S.P.D.
 - LIMESTONE SCREENINGS BETWEEN STONE AND PAVING
- SUBGRADE COMPACTED TO 98% S.P.D.
- ADJACENT PAVING SURFACE, REFER TO PLANS

