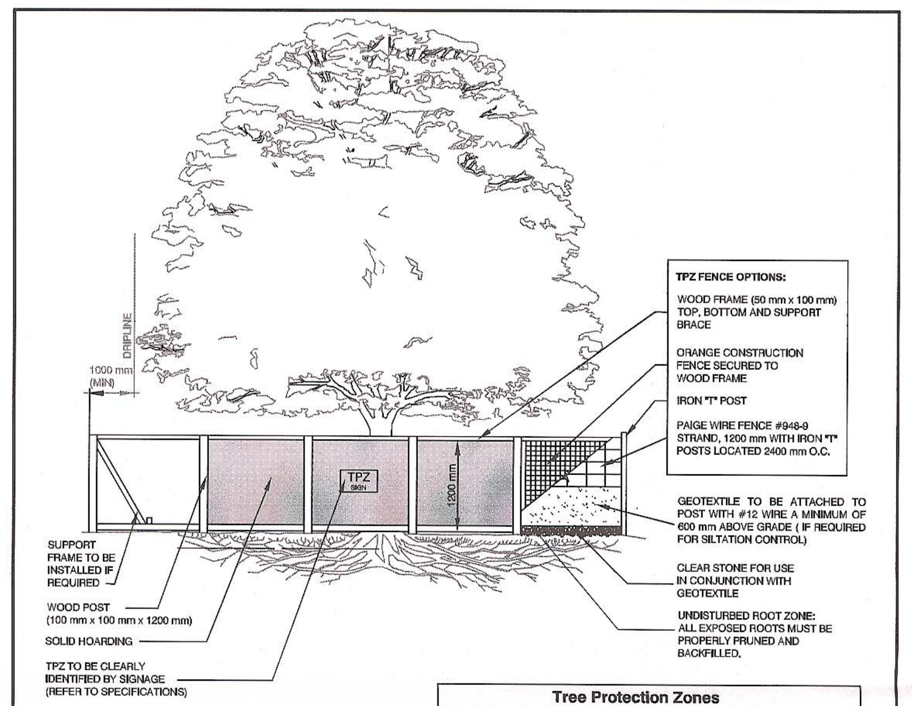


TREE PROTECTION BARRIER NOTES:

1. HOARDING TYPE SHOULD BE DETERMINED IN CONSULTATION WITH THE CITY.
2. ALL TREE PROTECTION HOARDING SHALL BE IN PLACE AND MUST BE INSPECTED AND APPROVED BY THE CITY PRIOR TO ANY CONSTRUCTION ACTIVITIES.
3. ALL ARBORICULTURE WORK SUCH AS PRUNING OF BRANCHES AND ROOTS SHALL BE CONDUCTED BY A CERTIFIED ARBORIST.
4. CONSTRUCTION ACTIVITIES, GRADE CHANGES, AND STORAGE OF EQUIPMENT AND MATERIALS ARE NOT ALLOWED WITHIN THE TREE PROTECTION ZONE.
5. THIS DRAWING TO BE USED IN CONJUNCTION WITH "CITY OF GUELPH TREE TECHNICAL MANUAL".

Tree Protection Zones

Diameter of Trunk Centimetres at 1.4 m above grade (DBH)	Minimum Tree Protection Zone (TPZ) Distance from trunk, measured in metres[1]	Potential Rooting Area (PRA) for all trees and TPZ for trees in NHS, parks, open spaces and other significant natural heritage areas.[1,2]
<10	1.2	2.4
10-29	1.8	3.6
30-40	2.4	4.8
41-50	3.0	6.0
51-60	3.6	7.2
61-70	4.2	8.4
71-80	4.8	9.6
81-90	5.4	10.8
91-100	6.0	12.0
>100	6 cm per 1 cm DBH	12 cm per 1 cm DBH

Notes:
1- Or dripline plus 1 metre, whichever is greater.
2- Works in PRA are subject to specifications outlined in Subsection 4.4.4. of "City of Guelph Tree Technical Manual".

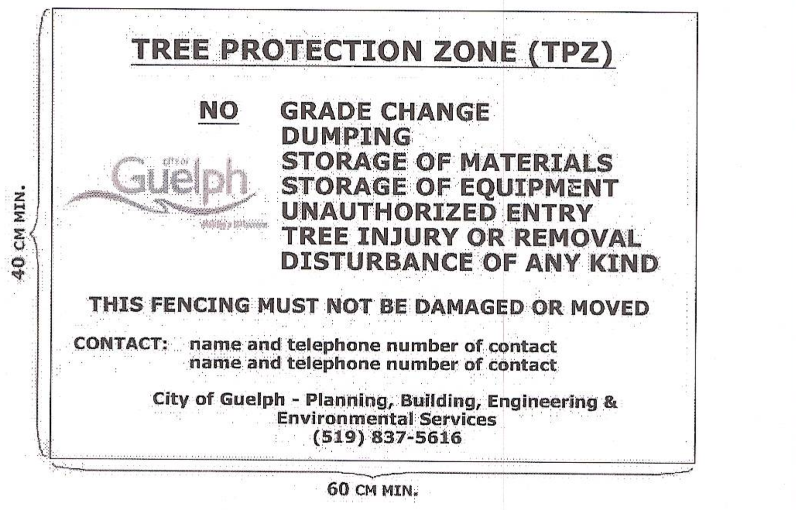
CITY OF GUELPH STANDARD DRAWING

TREE PROTECTION ZONE FENCE DETAIL

DATE DRAWN: JAN/11 | REV. No.: | DESCRIPTION: | REV. DATE: | REV. BY.: G.F./ C.M.C. | APPROVED BY: | CITY ENGINEER | ENGINEERING | **SD - 90a**

1 Tree Protection Detail
N.T.S

Schedule A: Tree Protection Zone (TPZ) Information Signage



Sign Design, Installation and Maintenance: TPZ information signs shall be constructed from metal, corrugated plastic, Gatorboard or wood, and shall be installed in an appropriate manner such that it will be able to withstand inclement weather conditions. Signage shall be maintained in good condition and in the original location throughout the duration of site development works. Signage shall be clearly legible, with black text on a white background being the preferred design.

Sign Content: The TPZ information sign shall, at minimum, provide a list of activities prohibited within the TPZ. Such activities shall include, but not be limited to: grade change, dumping, storage of equipment and materials, unauthorized entry by personnel, tree injury or removal, or other disturbance of any kind. The signage shall also note that TPZ fencing shall not be damaged or removed. The signage shall also provide the contact information for the City of Guelph Planning, Building, Engineering and Environmental Services Department. A City of Guelph corporate logo shall be displayed on the TPZ information sign.

Sign Placement: TPZ information signs shall be affixed no more than 20 m apart on each side of tree protection fencing, at a height of no less than 100 cm.

Sign Size: TPZ information signs shall be a minimum of 40 cm × 60 cm in size

CITY OF GUELPH STANDARD DRAWING

TREE PROTECTION ZONE INFORMATION SIGNAGE DETAIL

DATE DRAWN: JAN/11 | REV. No.: | DESCRIPTION: | REV. DATE: | REV. BY.: G.F./ C.M.C. | APPROVED BY: | CITY ENGINEER | ENGINEERING | **SD - 90c**

2 Tree Protection Zone Information Signage Detail
N.T.S

UTILITIES:
- OBTAIN WRITTEN CONFIRMATION OF UTILITY LOCATES PRIOR TO COMMENCEMENT OF DIGGING.

PLANTING AREA:
- SCARIFY COMPACTED SUBGRADE TO 500MM DEEP IN AREA 5X ROOTBALL DIAMETER
- DIG PIT 300MM WIDER AROUND ROOTBALL PERIMETER.

PLANTING DEPTH:
- POSITION ROOT COLLAR:
  - IN WET SOILS: 75-100MM HIGHER THAN SURROUNDING GRADE
  - IN REGULAR SOILS: 50MM HIGHER THAN SURROUNDING GRADE.

EXCAVATION:
- EXCAVATE TO SAME DEPTH AS ROOTBALL
- REMOVE CONTAMINATING MATERIALS (OIL, DEBRIS, HERBICIDES).

ROOTBALL, BURLAP, TWINE:
- CUT AND REMOVE ALL WIRE, ROPE, BURLAP, AND TWINE FROM TRUNK AND TOP 1/3 OF ROOTBALL.

SOIL PREPARATION, BACKFILLING AND CULTIVATION:
- IF EXISTING SOIL IS POOR ENOUGH TO INHIBIT PLANT GROWTH, IMPORT SOIL OF A STRUCTURE AND TEXTURE SIMILAR TO EXISTING
- ADD BONE MEAL
- ADD FERTILIZERS AS REQUIRED
- ADD:
  - IN HEAVY CLAY SOIL: 30% WASHED GRAVEL OR WASHED COARSE SAND; 20% DECOMPOSED ORGANIC MATTER (LEAF COMPOST)
  - IN SANDY LOAM: 20% DECOMPOSED ORGANIC MATTER
  - IN WELL DRAINED SANDY OR GRAVELLY SOIL: 20% SANDY LOAM; 20% DECOMPOSED ORGANIC MATTER.
- AMEND SOIL TO 200MM DEEP WITH ADDITIVES AND MIX THOROUGHLY AND UNIFORMLY OVER ENTIRE PLANTING AREA
- TAMP AND WATER WHILE BACKFILLING TO ELIMINATE AIR POCKETS.

SAUCER:
- CONSTRUCT TOPSOIL SAUCER 900MM DIAMETER AND 75MM DEEP AROUND BASE OF TREE.

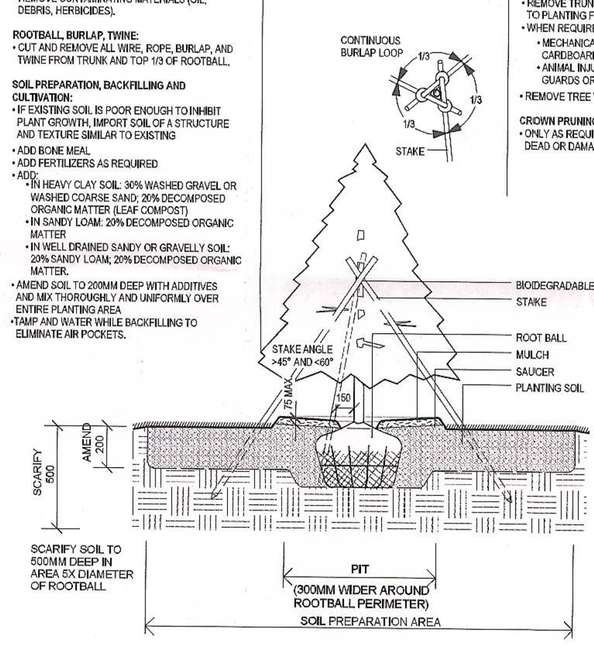
WATERING:
- ENSURE TREES ARE THOROUGHLY WATERED AT PLANTING AS REQUIRED.

MULCHING:
- MULCH WITH SHREDDED BARK OR COMPOSTED HARDWOOD CHIPS TO MAXIMUM DEPTH OF 75MM OVER AREA OF ROOTBALL. KEEP MULCH 150MM AWAY FROM TRUNK.

STAKING AND GUYING:
- STAKE OR GUY TREES IMMEDIATELY AFTER PLANTING
- USE AT LEAST 3 WOODEN STAKES
- DRIVE STAKES AT ANGLE NO LESS THAN 45° AND NO MORE THAN 60°, SPACED IN THIRDS OF A CIRCLE
- USE METAL T-BARS ON PUBLIC BOULEVARDS WHERE REQUIRED
- USE GUY WIRES WITH TURNBUCKLES FOR LARGE TREES OR FOR TREES ON TOP OF UNDERGROUND STRUCTURES
- USE BIODEGRADABLE TIE MATERIALS SUCH AS FOLDED BURLAP
- TIE BURLAP TO ALL STAKES AND TREE TRUNK IN CONTINUOUS LOOPING
- POSITION STAKES AND TIES TO PREVENT TREE DAMAGE

TRUNK PROTECTION:
- REMOVE TRUNK WRAPPING IN PLACE PRIOR TO PLANTING FOR TRUNK INSPECTION.
- WHEN REQUIRED TO PREVENT:
  - MECHANICAL INJURY: USE PLASTIC OR CARDBOARD COLLARS OR BURLAP STRIPS
  - ANIMAL INJURY: USE SPIRAL TREE GUARDS OR SCREEN COLLARS
- REMOVE TREE WRAP AFTER ONE SEASON.

CROWN PRUNING:
- ONLY AS REQUIRED, CAREFULLY REMOVE DEAD OR DAMAGED BRANCHES.



3 Coniferous Tree Planting
N.T.S

UTILITIES:
- OBTAIN WRITTEN CONFIRMATION OF UTILITY LOCATES PRIOR TO COMMENCEMENT OF DIGGING.

PLANTING AREA:
- SCARIFY COMPACTED SUBGRADE TO 500MM DEEP IN AREA 5X ROOTBALL DIAMETER
- DIG PIT 300MM WIDER AROUND ROOTBALL PERIMETER.

PLANTING DEPTH:
- POSITION ROOT COLLAR:
  - IN WET SOILS: 75-100MM HIGHER THAN SURROUNDING GRADE
  - IN REGULAR SOILS: 50MM HIGHER THAN SURROUNDING GRADE.

EXCAVATION:
- EXCAVATE TO SAME DEPTH AS ROOTBALL
- REMOVE CONTAMINATING MATERIALS (OIL, DEBRIS, HERBICIDES).

ROOTBALL, BURLAP, TWINE:
- CUT AND REMOVE ALL WIRE, ROPE, BURLAP, AND TWINE FROM STEM AND TOP 1/3 OF ROOTBALL.

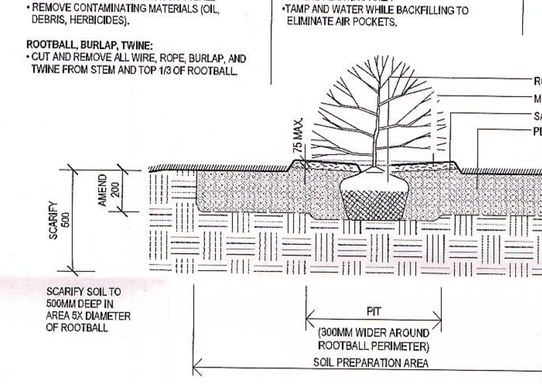
SOIL PREPARATION, BACKFILLING AND CULTIVATION:
- IF EXISTING SOIL IS POOR ENOUGH TO INHIBIT PLANT GROWTH, IMPORT SOIL OF A STRUCTURE AND TEXTURE SIMILAR TO EXISTING
- ADD BONE MEAL
- ADD FERTILIZERS AS REQUIRED
- ADD:
  - IN HEAVY CLAY SOIL: 30% WASHED GRAVEL OR WASHED COARSE SAND; 20% DECOMPOSED ORGANIC MATTER (LEAF COMPOST)
  - IN SANDY LOAM: 20% DECOMPOSED ORGANIC MATTER
  - IN WELL DRAINED SANDY OR GRAVELLY SOIL: 20% SANDY LOAM; 20% DECOMPOSED ORGANIC MATTER.
- AMEND SOIL TO 200MM DEEP WITH ADDITIVES AND MIX THOROUGHLY AND UNIFORMLY OVER ENTIRE PLANTING AREA
- TAMP AND WATER WHILE BACKFILLING TO ELIMINATE AIR POCKETS.

SAUCER:
- CONSTRUCT TOPSOIL SAUCER 75MM DEEP AROUND SHRUB OR BED.

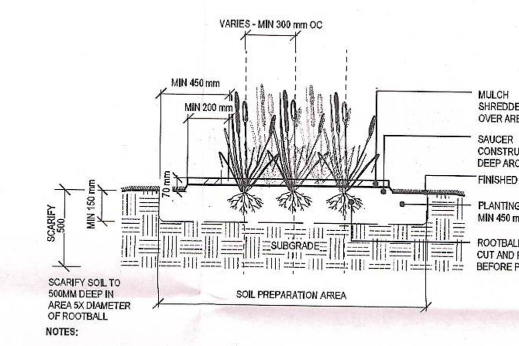
WATERING:
- ENSURESHRUBS ARE THOROUGHLY WATERED AT PLANTING AS REQUIRED.

MULCHING:
- MULCH WITH SHREDDED BARK OR COMPOSTED HARDWOOD CHIPS TO MAXIMUM DEPTH OF 75MM OVER AREA OF ROOTBALL.

CROWN PRUNING:
- ONLY AS REQUIRED, CAREFULLY REMOVE DEAD OR DAMAGED BRANCHES.

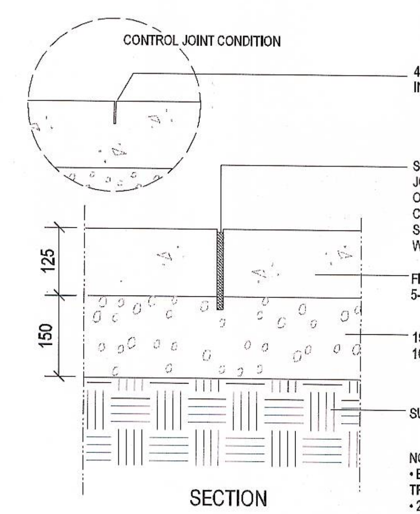


4 Shrub Planting
N.T.S



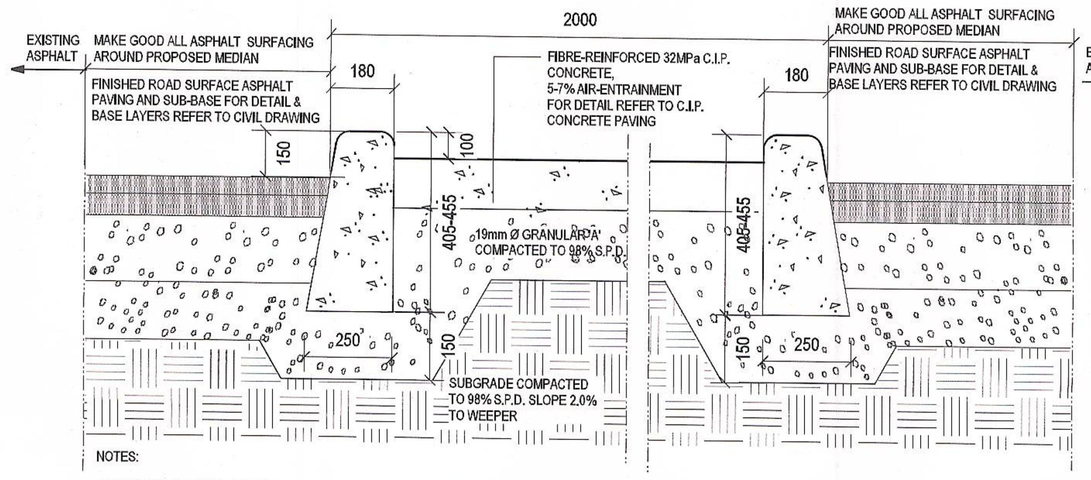
NOTES:
- AMEND SOIL TO 150MM DEEP WITH ADDITIVES AND MIX THOROUGHLY AND UNIFORMLY OVER ENTIRE PLANTING AREA TAMP AND WATER WHILE BACKFILLING TO ELIMINATE AIR POCKETS.
- PLANT PERENNIALS AND GRASSES IN ZIG-ZAG ORDER UNLESS NOTEDOTHERWISE WITH EQUAL GEOMETRIC SPACING (MIN 300 mm) FOR EACH SPECIES

5 Ornamental grasses / Perennial Planting
N.T.S

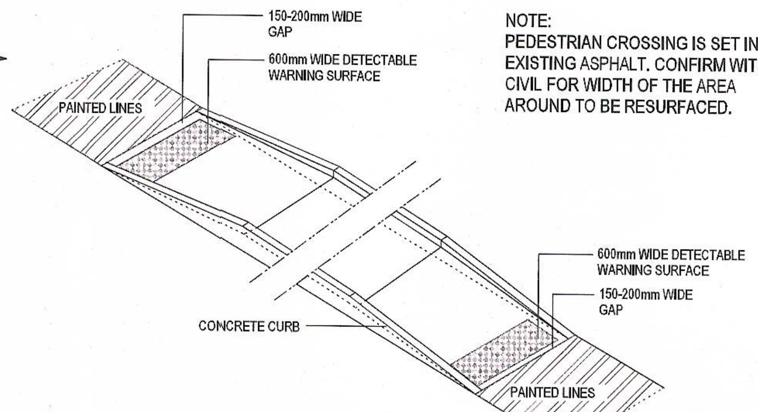


NOTES:
- BROOM FINISH EDGE TO EDGE - NO TROWL EDGES
- 2% CROSS SLOPE ON SIDEWALKS
- CONCRETE TO BE SPRAYED WITH WHITE PIGMENT CURING COMPOUND

6 C.I.P. Concrete Paving - Pedestrian
N.T.S



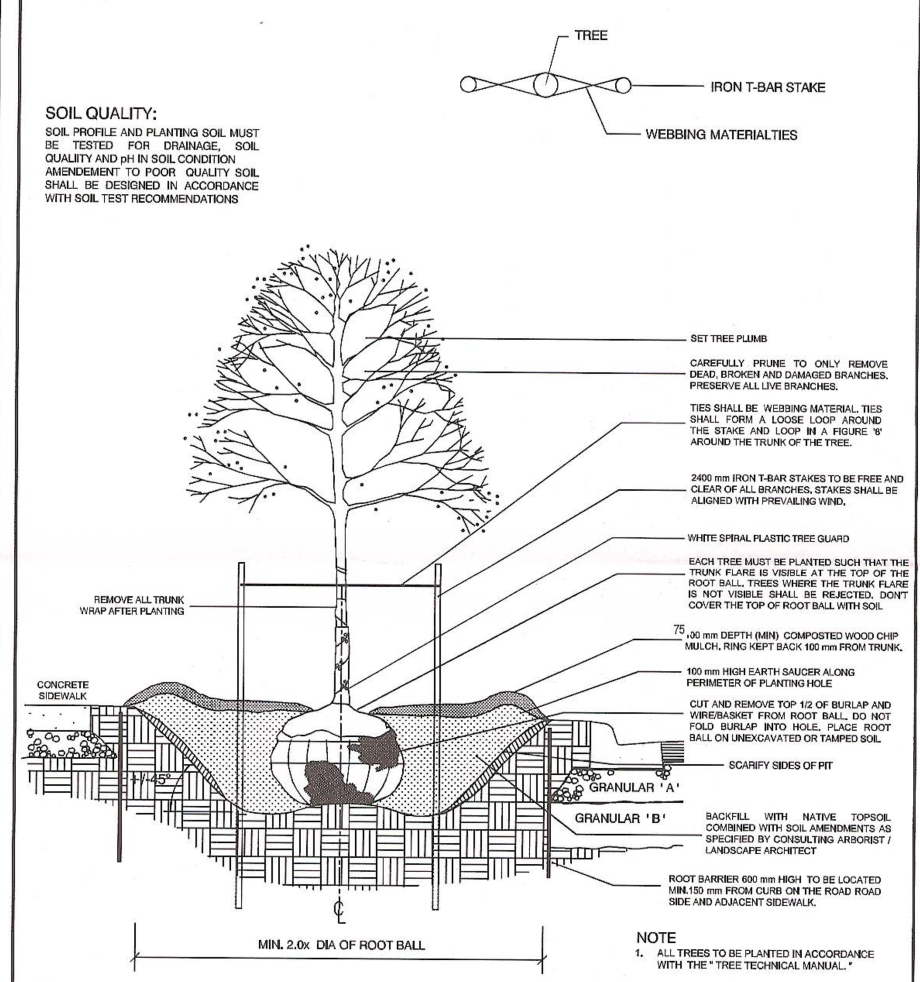
NOTES:
- REFER TO LAYOUT PLAN FOR AREAS OF COMBINED FLASH CURB , ASPHALT DROP-OFF AREA AND SIDEWALK.
- FINISH: LIGHT BROOM FINISH
- CONCRETE TO BE SPRAYED WITH WHITE PIGMENT CURING COMPOUND



NOTE:
PEDESTRIAN CROSSING IS SET IN EXISTING ASPHALT. CONFIRM WITH CIVIL FOR WIDTH OF THE AREA AROUND TO BE RESURFACED.

7 Pedestrian crossing at Parking area
N.T.S

SOIL QUALITY:
SOIL PROFILE AND PLANTING SOIL MUST BE TESTED FOR DRAINAGE, SOIL QUALIITY AND pH IN SOIL CONDITION AMENDEMENT TO POOR QUALITY SOIL SHALL BE DESIGNED IN ACCORDANCE WITH SOIL TEST RECOMMENDATIONS



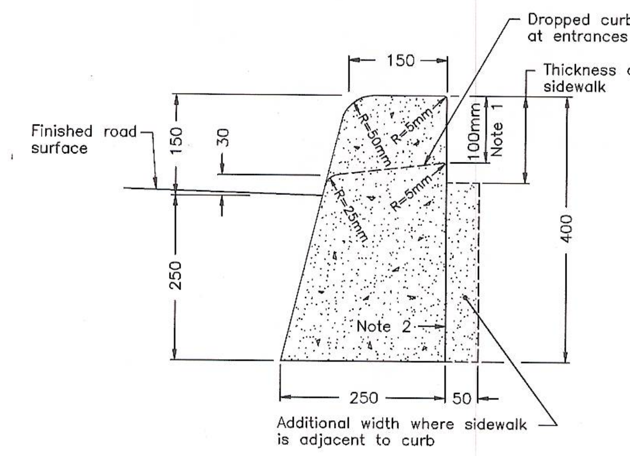
NOTE
1. ALL TREES TO BE PLANTED IN ACCORDANCE WITH THE " TREE TECHNICAL MANUAL. "

CITY OF GUELPH STANDARD DRAWING

TREE PLANTING ON PUBLIC BOULEVARD

DATE DRAWN: FEB/11 | REV. No.: | DESCRIPTION: | REV. DATE: | REV. BY.: G.F./ C.M.C. | APPROVED BY: | CITY ENGINEER | ENGINEERING | **SD - 90b**

8 Deciduous Tree Or Large Single Shrub Planting
N.T.S



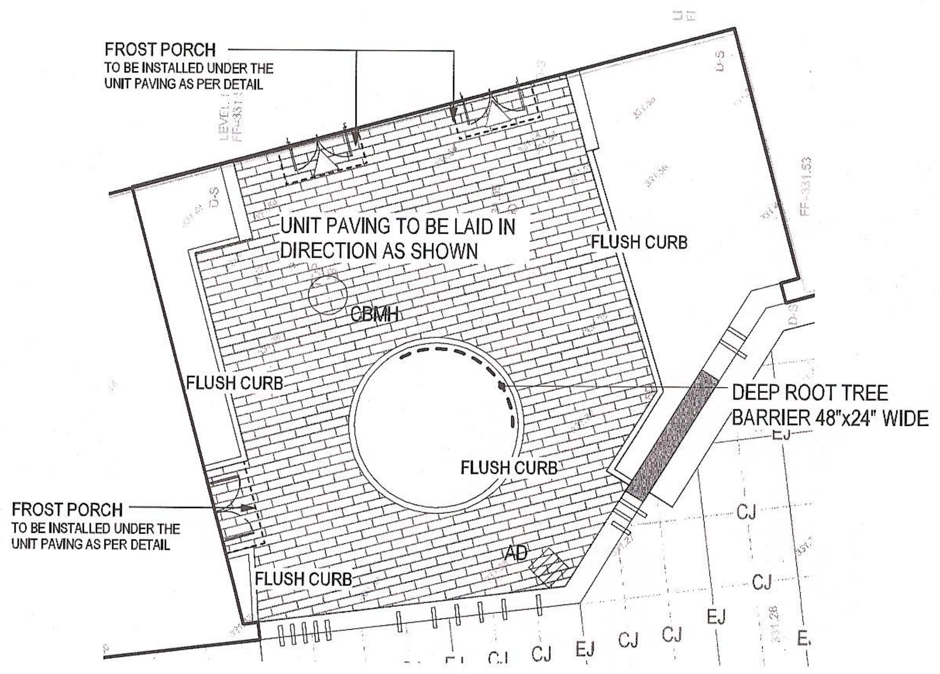
NOTES:
1 Where sidewalk is continuously adjacent, reduce the dropped curb at entrances to 75mm.
2 For slipforming procedure, a 5% batter is acceptable.
A Treatment at entrances shall conform with OPSD–351.010.
B Outlet treatment shall conform with OPSD–610 Series.
C The length of transition from one curb type to another shall be 3.0m, except in conjunction with guide rail, it shall conform to OPSD–900 Series.
D All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING | April 1999 | Rev

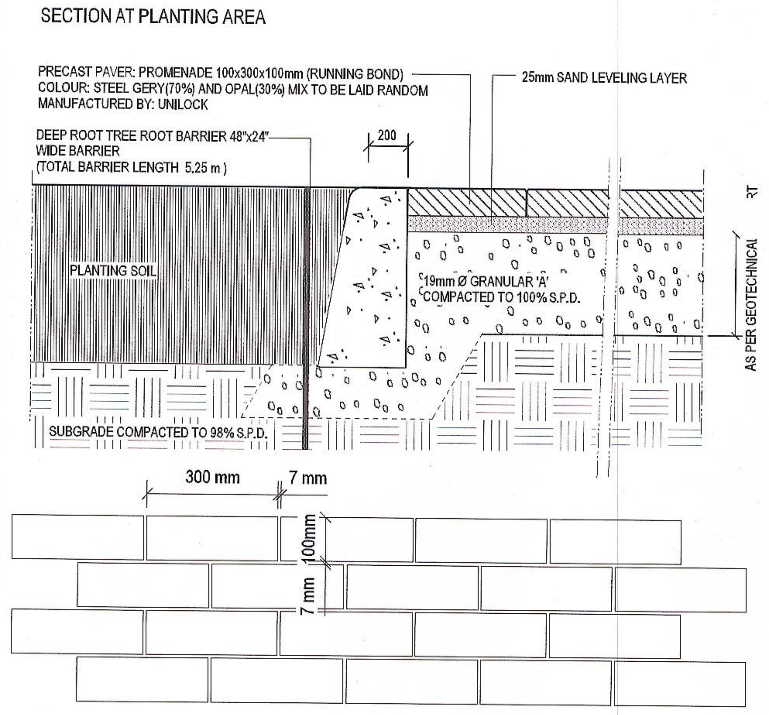
CONCRETE BARRIER CURB

OPSD – 600.110

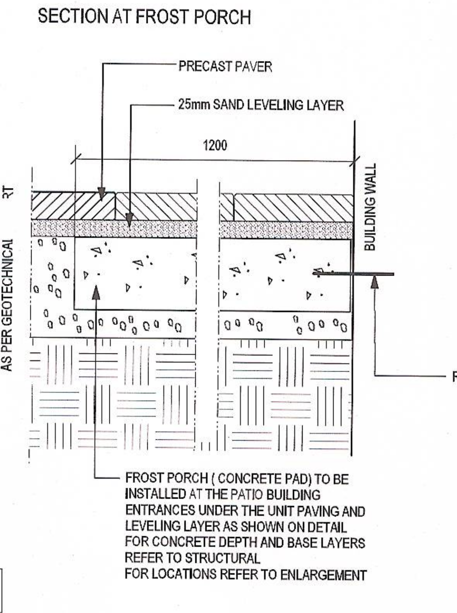
9 C.I.P. Concrete curb
N.T.S



SECTION AT PLANTING AREA



SECTION AT FROST PORCH



NOTE:
- MECHANICALLY TAMP PAVERS UNTIL FLUSH WITH EACH OTHER AND SECURELY INTACT. FILL JOINTS WITH SAND

10 Unit Paving
N.T.S

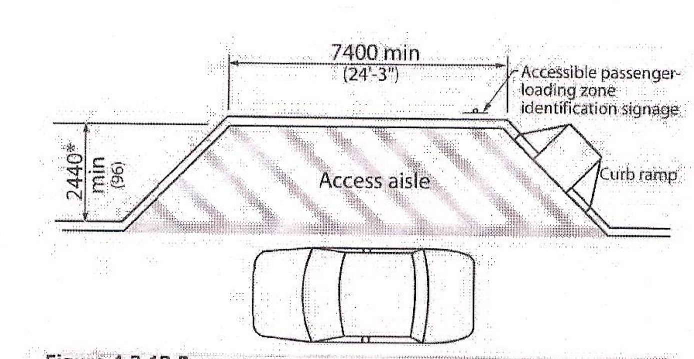


Figure 4.3.13.2
Passenger Loading Zone

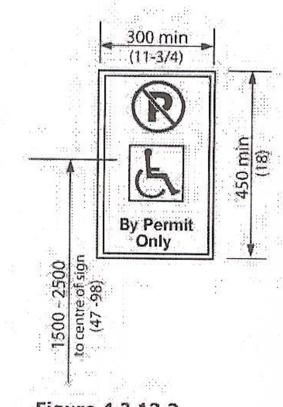


Figure 4.3.12.3
Parking Sign

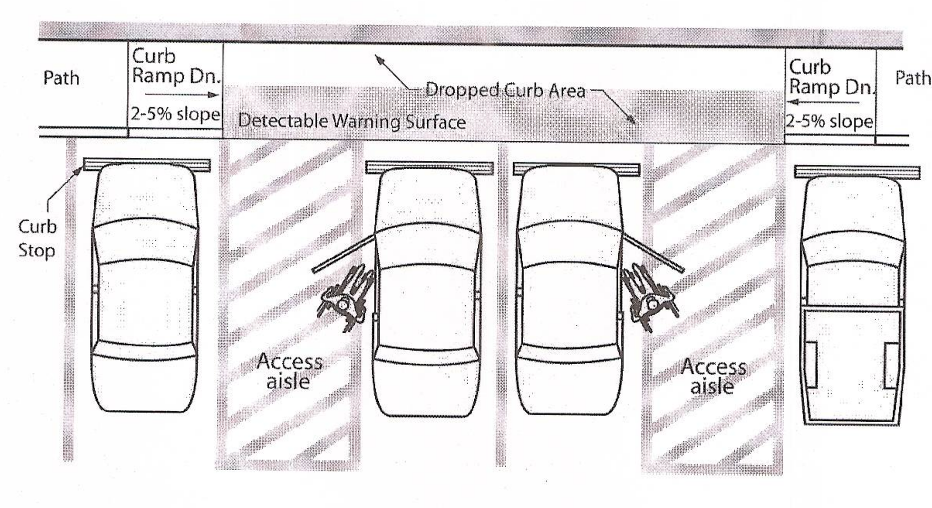


Figure 4.3.12.4
Multiple Parking Spaces at Dropped Curb Area

All textured surfaces used as *detectable warning surfaces* shall be cane-detectable and clearly differentiated from the surrounding ground or floor surfaces. (Refer also to 4.4.15).

Detectable warning surfaces at *curb ramps, depressed curbs*, exit stairs, exterior stairs and elevated platforms shall be composed of flat-topped domes or cones that
- are 4-5 mm (0.16 - 0.20 in.) high;
- have top and bottom dimensions as shown in Table 4.4.8; and
- are arranged in a regular pattern with spacing as shown in Table 4.4.8.

Detectable warning surfaces shall have high tonal contrast with adjacent surfaces, being either light on dark or dark on light.

Detectable warning surfaces at stairs shall extend the full width of the stair for a depth of 610 mm (24 in.) commencing one tread depth back from the stair. (Refer also to 4.1.11)

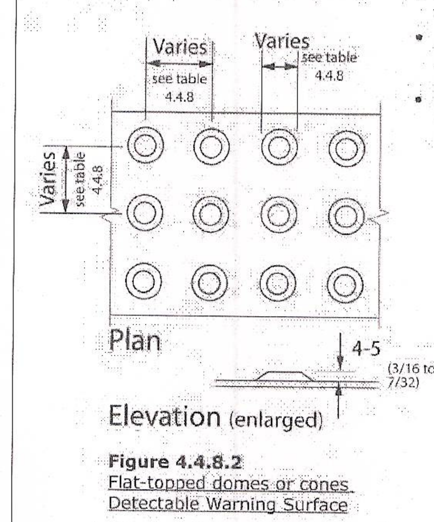


Figure 4.4.8.2
Flat-topped domes or cones Detectable Warning Surface

Top diameter of flat-topped domes or cones	Spacing
12 (0.5)	42 - 61 (1.7 - 2.4)
15 (0.6)	45 - 63 (1.8 - 2.5)
18 (0.7)	48 - 65 (1.9 - 2.6)
20 (0.8)	50 - 68 (2.0 - 2.7)
25 (1.0)	55 - 70 (2.2 - 2.8)
Bottom diameter of flat-topped domes or cones 10 +- greater than the top diameter.	

Table 4.4.8
Size and spacing of flat-topped domes or cones

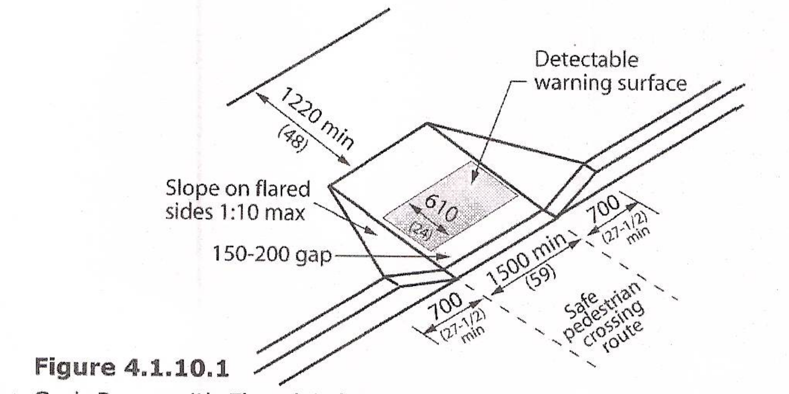


Figure 4.1.10.1
Curb Ramp with Flared Sides

DETECTABLE WARNING SURFACE:
MODEL:
NEENAH FOUNDRY DETECTABLE WARNING PLATES

SUPPLIED BY:
CROZIER ENTERPRISES OR APPROVED EQUAL.
MATERIAL:
CAST IRON PLATES CONNECTED TOGETHER AND SET INTO CONCRETE
REFER TO MANUFACTURER SPECIFICATION
PLATE SIZES
12"X12", 24"X24" and 24"X30"

CURB STOP:
MATERIAL:
PRECAST CONC. CURB / BUMPER. CENTURY GROUP
(PSI CONC. 28 DAYS - 6'x9" STANDARD)

11 Loading zone, Parking, Detectible Warning Surface and Curb Ramp
As per City of Guelph 2015 Facility Accessible Design Manual

Key to Detail Location
NO. — Detail Number
NO. — Drawing Number

Contractors must check and verify all dimensions on the job and report any discrepancies to the Architect before proceeding with the work.

All prints and specifications are the property of the Architect and must be returned at the completion of the work.

Drawings should not be scaled.

No	Date	Revision/issued
1	JULY 3, 2015	Issued For Spa
2	AUG.13, 2015	Revised as per City Comments
3	SEP, 4. 2015	Issued for 50% Review
4	SEP, 17. 2015	Re-Issued for SPA
5	NOV, 13. 2015	Re-Issued for SPA
6	DEC, 4. 2015	Issued for Building Permit
7	JAN, 14. 2016	Issued for Review
8	JAN, 21. 2016	Issued for Tender
9	FEB, 03. 2016	Issued for Addendum #1
10	FEB, 09. 2016	Issued for Addendum #2
11	MAR, 21. 2016	Re-Issued for SPA

CITY OF GUELPH
APPROVED FOR DEVELOPMENT
Subject to revisions and conditions indicated hereon in accordance with Section 41 of The Planning Act, R.S.O. 1990 cP 13 as amended.
MAR 3 1 2016
General Manager, Planning, Urban Design and Building Services — Date

consultants

architect	CS&P ARCHITECTS INC. 2345 Yonge St., Suite 200 Toronto, ON. M4P 2E5 Phone: 416-482-5002 Fax: 416-482-5040
structural engineer	LEA CONSULTING LTD 625 Cochrane Drive, 9th Floor Markham, ON, L3R 9R9 Phone: 905-470-0015 Fax: 905-470-0030
mechanical & electrical engineer	SMITH + ANDERSEN 4211 Yonge St, North York, ON, M2P 2A9 Phone: 416-487-8151 Fax: 416-487-9104
civil engineer	MTE CONSULTANT INC. 1016 Sutton Drive, Unit A, Burlington, Ontario, L7L 6B8 Phone: 905-639-2552 Fax: 905-639-7727
landscape architect	PMA LANDSCAPE ARCHITECTS LTD. 359 Keele St, Toronto, Ontario, M6P 2K6 Phone: 416-239-9818 Fax: 416-239-1310
aquatic consultant	DEI & ASSOCIATES INC. 40 Durward Place, Waterloo, ON, N2L 4E4 Phone: 519-725-3555 Fax: 519-725-2515
commissioning agent	ECOVERT 207 Marshall St, Waterloo, ON, N2J 2T8 Phone: 519-588-0766 Fax: 519-489-1499
radon mitigation	SPL CONSULTANTS LIMITED 180 Shearson Crescent, Unit 1 & 2 Cambridge, ON, N1T 1P4 Phone: 519-740-0065 x288 Fax: 519-740-0045

N

ONTARIO ASSOCIATION OF LANDSCAPE ARCHITECTS — JAMES MELVIN — OALA — MEMBER

PMA Landscape Architects
RECEIVED MAR 22 2016 PBEE

VICTORIA ROAD RECREATIONAL CENTRE
THE CITY OF GUELPH

151 VICTORIA ROAD NORTH
GUELPH, ONTARIO, N1E 5H4

LANDSCAPE DETAILS

scale:	As shown
date:	JULY 2015
drawn:	MG
checked by:	LM
project number:	15015
drawing number:	LP-5

SPA FILE NO.: SP15C039