



**.1 General Requirements**

- .1 Deconstruction shall be specified in lieu of reference to demolition as standard practice. Deconstruction shall conform with the requirements of Section 1.3 – Construction Waste Management with respect to sorting all materials for recycling, and tracking all waste and recyclable quantities and disposal facilities.
- .2 The University Sustainability Action Plan specifies a minimum 75% construction demolition waste diversion rate.

**.2 Preparatory Work by Others**

- .1 FMGT is responsible to arrange for the coordination and execution of NIC work. This normally includes:
  - .1 Removal of salvaged materials that are not part of Construction Contract.
  - .2 Removal (temporary) of obstructing street furniture, outdoor signs, lamp post sign blades, bollards etc, including access to the site and site-related signage etc.

**.3 Hazardous Materials**

- .1 The typical University procedure is to remove all hazardous materials prior to the start of a Project.
- .2 Should materials resembling spray or trowel applied asbestos, or other existing previously unidentified hazardous material, be encountered in course of deconstruction, Contractor shall stop work, take preventative measures, and notify Consultant and Project Officer immediately. Do not proceed until written instructions have been received.

**.1 General**

- .1 All work shall conform to the latest edition of the BC Landscape Standard, issued by the British Columbia Society of Landscape Architects (BCLSA), unless approved by the Owner otherwise.
- .2 Preserve and enhance the overall character of the campus through the elements of landscape. Use continuity and consistency as design principles to create a coherent relationship between buildings and structures that may be quite different in their architectural expression.
  - .1 Consider trees as the most important elements to define the functional and visual character of spaces.
  - .2 Douglas fir is the primary planting material, followed by other evergreens such as cedar, sequoia and arbutus (broadleaf), as well as the deciduous oak, maple and dogwood. Shrubs shall be of a wider variety.
- .3 The established policy of the University stipulates that existing trees shall be retained wherever possible. Where tree removals over 100mm diameter are necessary, the University strives to provide 3 new trees on campus to replace every 1 tree removed.
- .4 In areas of brush and small trees under 100mm in diameter, the area to be cleared will be marked out by the University. Where existing trees over 100mm in diameter interfere with construction, the University will clearly mark the individual trees which are to be removed if required as part of the Work.

**.2 Plantings**

- .1 The University quadrangle is strongly defined by formal planting, walkways and the surrounding architecture. Trees in this space are primarily Pin Oak, Garry Oak and Douglas Fir. All future formal planting within the quadrangle shall be consistent with the existing.
- .2 Maintain the informal planting and natural plant material growth outside the quadrangle.
- .3 Plant materials shall be selected with the acknowledgement that UVic practices Integrated Pest Management. Discuss plant combination to be applied in specific location with FMGR.
- .4 Areas of the site to be "reforested" - i.e., areas where planting will recover the quality of native growth - will primarily be Douglas Fir, Western Red Cedar, Big Leaf Maple and Dogwood.
- .5 Transition areas between forest and developed areas shall be provided with plant materials compatible to both areas.
- .6 Areas closer to buildings (domesticated areas) shall use trees such as Pacific Crabapples, Red Oaks, Pin Oak, Garry Oak and Maples.
- .7 In special circumstances, other specimen materials may be required by the botanical studies program for educational purposes, as directed by FMGT in co-ordination with FMGR and the Biology Department.
- .6 Shrubs shall be chosen to define space, complement buildings, control circulation and provide wind screening. In developed areas, ground cover shall be primarily lawn, supplemented by other materials with proven performance suitability on campus. Shrubs and ground cover are elements of space continuity; however, the extent of their use shall be evaluated in relation to the cost of maintenance required for the first two years of plant establishing.
- .7 Annuals provide desirable bright colour, but should be used only in contained areas where irrigation is available, and maintenance and replacement are not problematical (ie. courtyards).
- .8 Mulching (fertile mulch) of planting beds is required. Hog fuel type of Bark mulch is prohibited. Consult FMGR.
- .9 UVic prefers the short-term use of irrigation to establish plants (maximum 2 growing seasons) Low water, drought tolerant planting is encouraged.

**.3 Planting Warranty**



- .1 One full year labour and planting.
- .2 Materials warranty to be provided for all landscape work.

#### .4 Irrigation

- .1 Irrigation is required in all contained planting areas.
- .2 Drip irrigation shall not to be used except in special circumstances as determined by FMGR.
- .5 Polyvinyl pipe sizes: Class 200 pipe is preferred as a minimum in all applications; Class 160 may be used in special circumstances, with FMGR approval.
- .6 Reinstatement following construction:
  - .1 All irrigation systems impacted by construction to be reinstated by contractor.
  - .2 Systems to be tested and verified by FMGT Grounds.
  - .3 Equipment Standards:
    - .1 Lawn sprinkler heads: Hunter I20 heads
    - .2 Shrub beds: Hunter PGJ-00 Heads on 3'-0" risers (gray male male) supported by metal posts.
    - .3 All heads use flexy approximately 2'-0" from pipe to head.

#### .5 Landscape Materials

- .1 Soil Additives
  - .1 Manure: Well-rotted mushroom manure, to requirements of BC Landscape standard.
  - .2 Sand: Hard, granular sharp sand to CSA A82 SO-M1976, well-washed and free of impurities.
  - .3 Peatmoss: Horticultural grade, to the BC Landscape standard.
  - .4 Wood Residuals: Content of sawdust (such as fir or hemlock) shall not cause a C to N ratio higher than 40:1. Cedar or redwood sawdust shall not be present in the soil mix.
  - .5 Dolomite Lime: Horticultural commercial grade, finely and uniformly ground, containing not less than 20% by weight.
  - .6 Compost: Well-rotted vegetable matter, free of impurities and chemicals.
- .2 Fertilizers
  - .1 Standard commercial brands, meeting requirements of Canada Fertilizer Act, packed in waterproof containers with weight, analysis and manufacturer's name clearly marked. Granular, pelleted, or pill form, dry and free-flowing. Applied fertilizers must not contain a Phosphorus % in excess of 1% of total weight of overall applied fertilizer.
- .3 Planting Soil
  - .1 Shall be substantially free from roots, sticks, building materials, wood chips, pollutants, crab grass, noxious weeds or seeds/parts thereof.
    - .1 Maximum requirements of dolomite lime to require pH: 220kg/100sq.m (100lbs/1000sf)
    - .2 Salinity: maximum saturation extract conductivity 3.0 millihos/cm at 25°C.
    - .3 Total Nitrogen: 0.2-0.4% by weight.
    - .4 Available Phosphorus: 50-70ppm.
    - .5 Available Potassium: 50-100ppm.
    - .6 Cation Exchange Capacity: 30-50meq.
    - .7 Carbon to Nitrogen Ratio: maximum 40:1.
    - .8 Allowable pH: lawns 6.0-6.5; planting areas 5.0-6.0.
    - .9 Texture:



- .1 Dry weight organic content (compost) 30-50%
- .2 Particle size glasses: rock and gravel (2mm) 0-3%.
- .3 Sand (0.05 & 2mm) 30-35%.
- .4 Silt & Clay (0.05mm) 15-20%.
- .5 Clay (0.002mm) 0-10%.

**.4 Bark Mulch**

- .1 Dark brown in colour, 25mm and smaller, Douglas fir or Hemlock, free of chunks and all foreign and harmful material.

**.5 Landscape Reinstatement**

**.1 Soil Preparation and Placement**

- .1 Supply, prepare and place planting medium where indicated on drawings and as affected by the work.
- .2 Prior to placement, do not move or work soil or additives when they are excessively wet, frozen, extremely dry or in any manner which will adversely affect soil structure.
- .3 Protect soil, additives and fertilizers against extreme wetting and against contamination by weeds and insects.
- .4 Deliver and store fertilizers and chemical ingredients in the original manufacturer's containers.
- .5 Place a minimum 50mm layer of bark mulch in all planting beds.
- .6 Thoroughly mix soil with additives to produce planting medium.
- .7 Scarify compacted sub-grades to a minimum depth of 100mm (4") prior to placing planting soil.
- .8 Place planting soil to depth of 225mm for groundcover areas, 450mm for shrubs and gardens.
- .9 Individual plants shall have shrub pit 300mm wider and 150mm deeper than root-ball.
- .10 Crown or slope for positive surface drainage.
- .11 Do not compact, but finish the surface smooth, uniform and firm against deep footprints.
- .12 Protect planted areas with 1220mm high temporary fencing.

**.2 Grass**

- .1 Reinstatement topsoil as per FMGT Standard mix (see "typical soil preparation and placement notes above).
- .2 Roll out topsoil to compact prior to sodding.
- .3 Replant using sod.
- .4 Apply Quickstart fertilizer.



## **.1 Paving and Surfacing Materials**

- .1 Typical paving materials for pedestrian and traffic surfaces (walkways, plazas, stairs, ramps, etc):
  - .1 Concrete:
    - .1 Exposed Aggregate (10mm nominal size)
    - .2 Broom Finish (preferable for wheelchair access areas)
    - .3 Smooth troweled finish not acceptable
  - .2 Concrete Pavers:
    - .1 Nominal sizes, permeable installation
  - .3 Asphalt
    - .1 Roadways
    - .2 Parking Areas
    - .3 Pathways
  - .4 Gravel
    - .1 Service Roads
    - .2 Paths/Trails
    - .3 Garden Areas (crushed rock or limestone, consult FMGR)
- .2 Minimize the surface area of paved and impermeable surfaces:
  - .1 Use permeable paving wherever possible.
  - .2 EcoGrid and other similar systems shall only be used where directed by FMGT.

## **.2 Exterior Walkways and Concrete Work**

- .1 All walkways shall be minimum 1200 mm wide, and sized to suit the intensity of traffic, prominence of location, etc.
- .2 Concrete Sidewalks
  - .1 Provide mock-up area to review aggregate exposure above concrete.
  - .2 Control Joints: space at 3000mm, or match existing pattern.
  - .3 Flyash: use in concrete mixture; maximum 20% of cementitious content.
  - .4 Concrete slab thickness:
    - .1 Sidewalks and Walkways: minimum 100 mm thick.
    - .2 Vehicular Traffic Sidewalks: minimum 150 mm thick.
- .3 Concrete Base for Light Standards
  - .1 provide base upstand, either as a trapezoid extension of the sidewalk (preferred) or independent, to prevent light pole damage from landscape equipment.

## **.3 Drainage of Pedestrian Paved Areas**

- .1 Walkways 1,200mm wide and level lengthwise shall have a continuous cross fall slope of 2%. Walkways in excess of 1,200mm wide should be crowned.
- .2 Large Paved Areas shall be sloped to drains, minimum 1% to maximum 2% fall. Where falls are 2%, provide sufficient number of drains to prevent "dishing".
- .3 Provide positive slopes away from entrances and exits, not less than 4%, to adequate storm drains, gratings or landscape. Do not extend the 4% slope for more than 2m horizontally.

## **.4 Fire and Service Vehicle Accessibility**



- .1 Review with the Fire Departments - Municipal Fire Chiefs of both Saanich and Oak Bay, in the early planning stages and obtain their agreement to the following:
  - .1 Design and location of fire access roads, fire hydrants, annunciator panels, etc.
    - .1 Design fire access roads as "loop" (no dead-ends). "Y"s may be considered, subject to above agreement.

**.5 Service Vehicle Accessibility and Service Areas**

- .1 Road Access: Provide road access for service, shipping/ receiving and waste removal to all major buildings.
- .2 Loading Platforms: To be provided only where requested by Users, to satisfy a particular demand. Where required, design shall consider all appropriate WBC requirements regarding steps and guardrails.
- .3 Waste Receptacle Containment: Building and site design shall provide adequate operational space for waste containers (refer to Section 2.5 – Site Furnishings for typical Waste Receptacle Specifications). Minimum requirements for most buildings include:
  - .1 Concrete Pad
    - .1 Ground Level (not on a loading dock)
    - .2 Confirm dimensions with FMGR-WRC
    - .3 Where exterior wet waste containers (bagged food disposal, animal and biological wastes, etc.) are required, they shall be located near the service entry of the building, in the same vicinity but separated from other waste containers.
  - .2 Access
    - .1 Direct in-line service access to front-load waste containers shall be at least 1.5 times the length of an industry standard front-load compactor truck.
    - .2 Access and operation of typical waste collection vehicles are usually accommodated by the fire truck access standards for lane widths, turning radii and load bearing capability, OR:
      - .1 Minimum access width of 3.65m to any front-loads waste container enclosures.
      - .2 Minimum vertical clearance above waste containers of 4.25m.
    - .3 A ramp or ground level access (no steps) from the building to the service area is required to allow recycling totes to be wheeled easily to designated outside pickup area.

**.6 Parking**

- .1 The number and capacity of parking lots within Ring Road shall not be increased.
- .2 Where possible and without compromising adequate visual clearance for safety, parking lots shall be visually screened from the principal roads and buildings by one or a combination of planting, or depressing the lot below existing grade. Mounding shall only be used in consultation with FMGR.



**.1 Bike Racks**

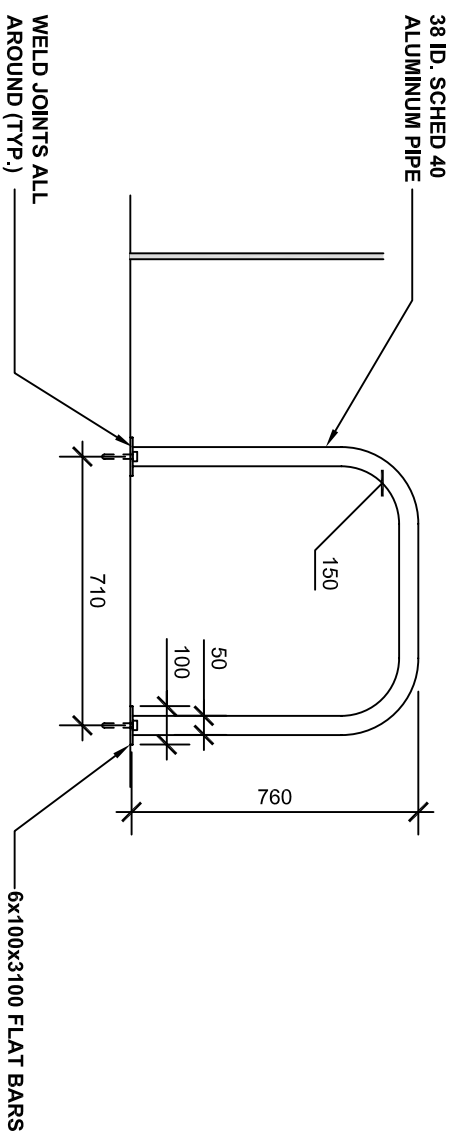
- .1 The University uses three types of manufactured bike racks. Refer to drawings immediately following this section.
  - .1 Type A – typical unrestricted placement
  - .2 Type B, with wheel stop – placement at 500mm against a wall or structure
  - .3 Type C, with wheel stop – placement at 275mm against a wall or structure.

**.2 Bike and Motorcycle Canopy**

- .1 UVic has developed standardized bicycle and motorcycle canopy structures. The number of bays and bay width may vary to suit site conditions. When necessary for site design, request canopy drawings from Project Officer.

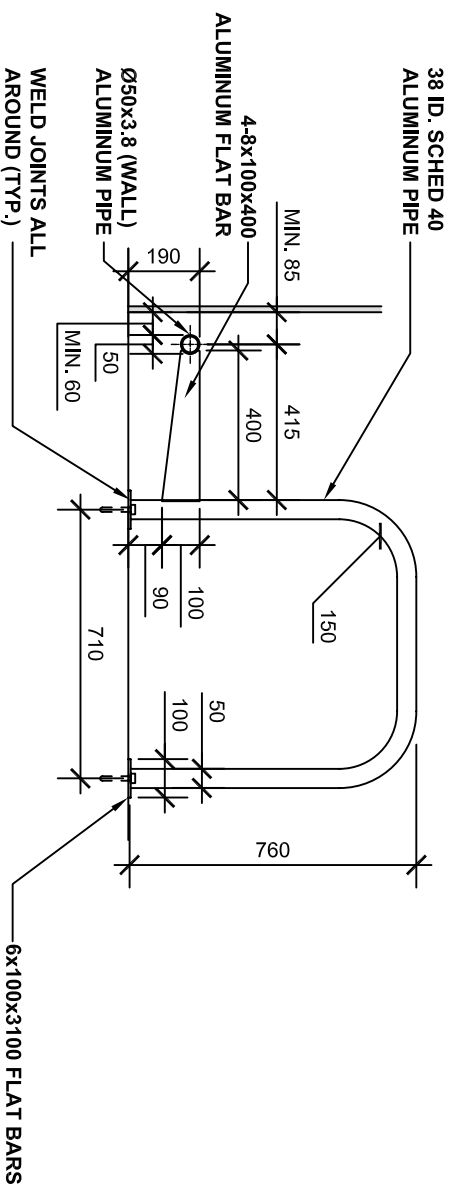
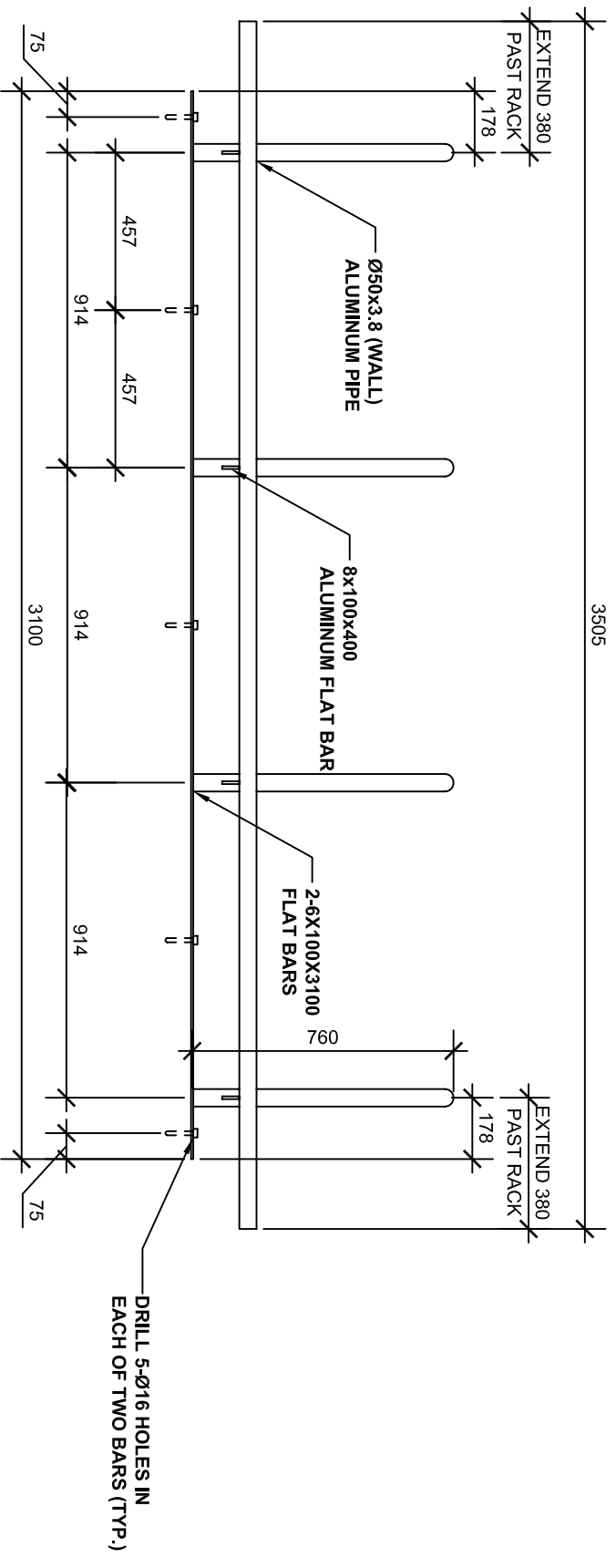
**.3 Waste Receptacles**

- .1 Typical waste receptacles:
  - .1 Waste receptacles: 610x610x710mm high, exposed aggregate concrete containers, from Mackays Precast.
  - .2 Waste receptacles for buildings: Schaefer GMT Cart, from Rollins Machinery – 2 sizes:
    - .1 Grey 360L – 610 x 890 x 1010mm high,
    - .2 Blue or Brown 240L – 585 x 740 x 1070mm high.
- .2 Waste Receptacle Enclosures
  - .1 Provide screening such that waste bins are visible only from the direction of service vehicle approach.



1 OF 1





Notes:  
BEAD BLAST ENTIRE UNIT  
UPON COMPLETION

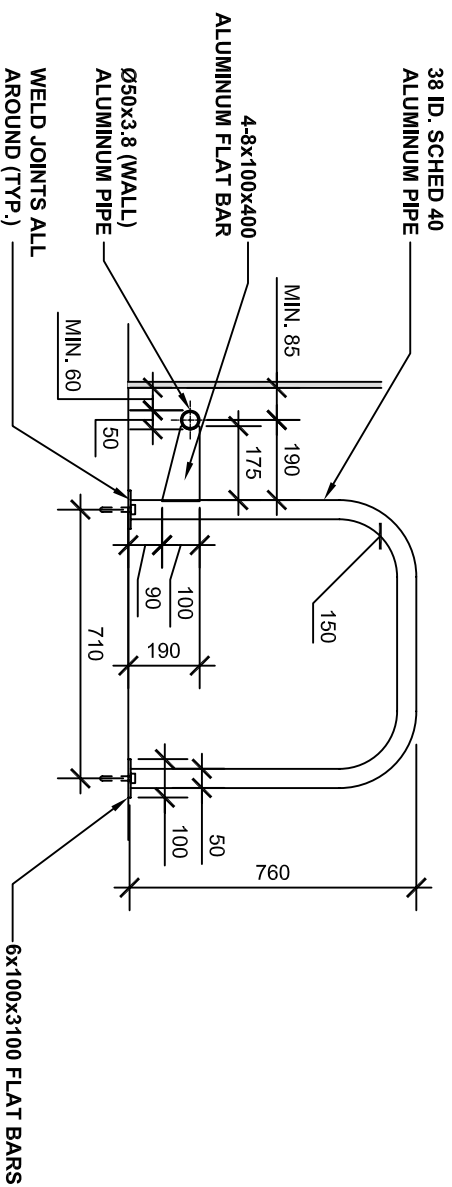


University  
of Victoria

Facilities Management

Title:  
UVC STANDARDS  
MANUFACTURED EXTERIOR  
SPECIALTIES  
BIKE RACK-TYPE B

Date: JULY 25, 2008  
Scale: 1:20  
Drawn By: FMGT  
Project Number:  
Drawing No. 1 OF 1



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