



Department of Parks

Bermuda Railway Trail

ANNEX F

Landscape Maintenance Specifications (for Limited Scope of Works)

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A. PRELIMINARIES

A.01. General Standards and Expectations

A.01.01. The Department of Parks as the Government Agency tasked with the maintenance and development of the Railway Trail as part of the Bermuda National Parks Act (1986), is committed to providing the trail as a comprehensive recreational, educational and amenity resource that will encourage both local and visiting users to enjoy Bermuda's diverse landscape and natural history features. This policy requires the outcome of this contract to sustain the physical assets of the trail and maximize user satisfaction by:-

- diligently and continuously maintaining all specified areas;
- facilitating trail use by the public at all times with minimal obstruction or inconvenience during hours of operation;
- preparing all areas to the standards described herein.

A.01.02 The whole of the work shall be carried out in a thoroughly professional manner in accordance with accepted and recognized horticultural standards and good working practice, with the intent of achieving a managed yet naturalized community of plants having high visual quality with minimal handling.

A.01.03 For the purposes of this contract the **Railway Trail property** includes all the land, buried and overhead utility services, fixed physical equipment, signage, plant material, natural and built structures of the Railway Trail as outlined in the attached Map Series and Detailed Schedule of Maintenance Locations.

A.01.04 For the purposes of this contract the **Railway Trail contract limit** is defined as a trail cross-sectional width not exceeding fifteen (15) feet, a cross-sectional height not exceeding ten (10) feet and includes all of the contained Railway Trail property and locations as noted in Section A.01.03.

A.01.05 The Railway Trail property shall not be used by the Contractor for any other purpose than specified. The Contractor should not knowingly permit any access or use by other persons than those prescribed and permitted by the Department of Parks.

A.01.06 The Contractor shall ensure that the Railway Trail property is protected against accidental or negligent damage that may be caused through undertaking the works specified herein. In this regard, the Contractor is advised that unmarked buried services and access chambers are located within the Railway Trail property and may be encountered in the course of executing these works. The Contractor shall be responsible for contacting the relevant utility services to determine locations of as-built services prior to any operations involving excavation. The Contractor shall maintain a record of all as-built drawings provided by relevant

utility services and provide a report of this data to the Department of Parks prior to contract completion.

- A.01.07 The Contractor shall have free access to the sites for the duration of the works. Access shall be only by agreed routes of public rights of ways.
- A.01.08 Notwithstanding the above, the Department of Parks may at times restrict or prohibit the Contractor access at specific times considered by the Department of Parks to be necessary or desirable. A minimum of ten working days' notice will be given in this instance. The Department of Parks shall not bear the cost of any such delay or denial of access; the Contractor shall be expected to alter their work routine accordingly.
- A.01.09 Public access must not be denied or impeded by contract activity unless previously approved by the Department of Parks.
- A.01.10 Every courtesy and assistance shall be given by the Contractors staff to members of the general public using the Railway Trail.
- A.01.11 Any damage caused by the Contractor in carrying out the works of this contract shall be immediately made safe and repaired to the satisfaction of the Department of Parks at the earliest convenient time, or as directed and at the sole cost of the Contractor.
- A.01.12 The Department reserves the right to direct staff, duly authorized volunteer workers or employ additional Contractors to carry out other aspects of Railway Trail work not under this contract. The contractor shall coordinate with the Department and its forces to achieve arrangements for concurrent work to the Railway Trail as required.

A.02 Management Of The Works

- A.02.01 The overall management of the Railway Trail detailed herein remains the prerogative of the Department of Parks. The Department of Parks reserves the right to prescribe the type and timing of all the work to be undertaken.
- A.02.02 The Contractor is responsible for planning, supplying, undertaking the specified tasks and monitoring the standard of work produced.
- A.02.03 The Contractor shall ensure that when work is in progress there is a nominated competent person authorized by the Contractor to receive instructions from the Department of Parks. The Contractor's representative shall be responsible for ensuring that works are progressed in according with and to the standards specified herein.

- A.02.04 The Contractor shall provide sufficient supervisory and managerial staff to fully control, organize and monitor all the activities undertaken by the Contractor's employees.
- A.02.05 Joint reviews by the Department of Parks and the Contractor shall be made at monthly intervals.
- A.02.06 Each task at any site shall be continuously progressed to completion without undue delay except for natural work breaks, unless programmed otherwise. Allied tasks shall be completed at the same time. (i.e. once an area of grass is mown, raking and removal of debris will be carried out in the same visit).
- A.02.07 Work shall only be undertaken between the hours of 7:00 a.m. and 5:00 p.m., Monday through Saturday. The Contractor is not permitted to carry out maintenance on Sundays or public holidays.
- A.02.08 The Contractor shall provide all the necessary labour for the completion of the works. The Contractor shall not permit unauthorized or inadequately trained individuals to be employed on any task or operate any machinery or equipment they have not been adequately trained to undertake and use.
- A.02.09 The Contractor is solely responsible for the good behaviour of operatives while they are employed on site. However, the Department of Parks may recommend exclusion from the contract for any reasonable cause.
- A.02.10 The Contractor shall prevent dust, vegetation, clippings and non-essential vehicular movements or other action, from creating a nuisance to the public.

A.03 Equipment and Machinery

- A.03.01 The Contractor is responsible for the selection, purchase and maintenance of all equipment and machinery needed to carry out the work detailed in this specification.
- A.03.02 Work equipment shall be in good working order before commencing work. Any defects shall be remedied before the equipment can be used on this contract.
- A.03.03 Work equipment shall only be used for the purpose for which it is designed and according to A.02.08.
- A.03.04 All safety features, covers, decals etc. shall be fitted and maintained as per manufacturer's specifications.

A.03.05 Work equipment may only be stored in places designated by the Department of Parks. Equipment shall not be left unattended on site without the express permission of the Department of Parks.

A.04 Disposal

A.04.01 The Contractor shall clear away all waste items in accordance with Section E of this specification. The Contractor shall ensure that contract areas are left clean and tidy at the completion of each work day.

A.05 Policy Compliance

A.05.01 The Contractor is required to comply with the laws of Bermuda and the policies of the Bermuda Government, inclusive of the following:-

- The Occupational Safety and Health Act 1986
- Commission for Unity and racial Equality Act 1994
- Employment Act 2001
- Bermuda National parks Act 1986 and its Regulations (1988)

A.05.02 The Department of Parks, acting as a good employer, reserves the right to monitor the Contractor's recruitment and management policies to ensure necessary compliance.

A.06 Health and Safety

A.06.01 The Contractor shall adopt working practices in accordance with the Occupational Safety and Health Act 1986.

A.06.02 The Contractor shall adopt working practices that safeguard the environment from pollution, noise and other hazards.

A.06.03 The Contractor will ensure, as far as reasonably practical, that members of the public using the Railway Trail are not put at risk by the works being undertaken by the Contractor.

A.06.04 The Contractor will ensure that all employees and sub-contractors operating machinery and equipment shall be issued with and wear the requisite personal protective equipment in accordance with the Occupational Safety & Health Act 1986, its Regulations (1988) and its Code of Practice (1999).

A.06.05 The Contractor will record every incident and occurrence that contravenes these policies and maintain an accident/injury log. All such incidents will be reported to the Department of Parks at the earliest convenience.

- A.06.06 The Contractor shall provide all necessary barriers, cones, signage and notices around works where public protection is deemed to be required. It shall be the Contractor's responsibility that its representatives use such precautions as required.
- A.06.07 All Government buildings and project worksites are designated as smoke and drug-free. Therefore smoking and /or drinking of any illegal substance is not permitted on these premises.

A.07 Communication and Documentation

- A.07.01 The Contractor will have an adequate telephone and email facility in an agreed administrative location which will be used in connection with this contract. The Contractor's representative on site will also have a mobile phone contact during working hours and for after-hour emergency contact use.
- A.07.02 The Contractor shall complete and submit the following documentation and reports on a monthly basis (due by the 5th working day of each month for the previous months work):-
- Job sheet with work completed each month.
 - Damage reports to structures, gates, fences etc.
 - Accident reports for Contractors staff and third party incidents
 - Technical reports for chemical/fertilizer applications etc.
- A.07.03 The Contractor shall report all incidences of damage to the Railway Trail as described in the schedule of works either through vandalism, natural occurrences or wear and tear to the Department of Parks at the earliest convenience.

A.08 Publicity and Public Awareness

- A.08.01 The Department of Parks requires the Contractor to maintain a high public profile and promote the Department policy of providing a safe, high quality amenity, educational and recreational resource.
- A.08.02 The Contractor shall have the right to ask members of the public to move or detour so that work can be progressed to completion but must take into account known use patterns and avoid times of maximum use.

B. GRASS MAINTENANCE

B.01 Grass Maintenance - General

- B.01.01 For the purpose of this specification grassed areas are as located in the Appendix “Schedule of Maintenance Locations” and defined as all groundcover areas encountered in the Railway Trail with a minimum 50% coverage of one or more of the following grass species:-
- St. Augustine grass
 - Bermudagrass
 - Zoysia grass
- B.01.02 Cutting and treatment regimes shall be appropriate to the type of grass area being treated.
- B.01.03 All litter, stones and other debris shall be collected and removed prior to cutting or treatment being undertaken.
- B.01.04 The Contractor shall use appropriate equipment and machinery driven or operated at the appropriate speed for each task.
- B.01.05 The Contractor shall ensure that operating equipment does not damage the physical / visual properties of grass.
- B.01.06 Once mowing or treatment has started on a site, it shall be completed in one operation.
- B.01.07 The Contractor shall lawfully dispose of waste items outlined in Section B.01.03 in accordance with Section E on completion of a task, or at the end of each working day,
- B.01.08 Every care shall be taken when mowing around isolated trees in grass areas. Where overhanging branches prevent machinery access, grass shall be cut by other appropriate means.
- B.01.09 Damage to trees and other vegetation by mechanical or other means shall be avoided at all times.

B.02 Grass Cutting

- B.02.01 St Augustine and Bermudagrass species shall not be cut below a minimum height of 2.5”.
- B.02.02 Zoysia grass shall not be cut below a minimum height of ¾”.

- B.02.03 Grass species shall not be allowed to exceed 6” in height at any time. Mowing operations shall be scheduled accordingly throughout the contract period.
- B.02.04 Grass should be cut to a consistent height over the entire areas. There shall be no tufts above or scalped areas within the grass levels.
- B.02.05 When inclement weather conditions delay normal cutting schedules the Contractor is required to resume the work as soon as possible and is required to catch up with work not completed to the specified standards.
- B.02.06 When weather conditions inhibit grass growth the Department of Parks may instruct the Contractor to vary the minimum height of the cut.
- B.02.07 When weather conditions inhibit grass growth the Department of Parks may instruct the Contractor to vary the minimum height of the cut.
- B.02.08 The Contractor shall remove listed invasive plants outlined in Appendix “Schedule of Invasive Plants” encountered in grass areas per Section C.04.

B.03 Trimming/Edging

- B.03.01 Trimming edges of grass areas shall be carried out in conjunction with mowing using an appropriate line trimmer.
- B.03.02 No damage shall take place to trees, vegetation or physical structures during above trimming operations.

C PRUNING

C.01 Pruning - General

- C.01.01 For the purpose of this specification pruning is defined as the careful removal and lawful disposal of plant parts entering the **Railway Trail contract limit** in a manner that:-
 - creates a safety hazard or otherwise negatively obstructs pedestrian movement;
 - results in the introduction of dead, damaged, unhealthy or unsightly plant growth
- C.01.02 Pruning shall occur as required for each trail section during the contract period to prevent physical obstruction to pedestrian movement within the contract

limit, preserve natural views and protect environmental plant health. The **Railway Trail contract limit** is as described in Section A.01.04.

- C.01.03 Pruning methods and timing shall be appropriate to species being pruned.
- C.01.04 Pruning techniques shall be in accordance with accepted horticultural standards and best practice in order to achieve a managed yet naturalized community of plants, while using the lowest required level of maintenance.
- C.01.05 The Contractor shall use the appropriate tools and equipment for each task. Tools shall be sharp and in good working order.
- C.01.06 Care shall be taken to ensure tools and equipment are regularly cleaned to prevent the transmission of pests and diseases.
- C.01.07 The Contractor shall ensure that damage to adjacent limbs or other vegetation is avoided at all times.
- C.01.08 The Contractor shall remove all work related debris immediately on the completion of a task, or at the end of the working day.

C.02 Pruning – Individual Plants

- C.02.01 The Contractor shall prune vegetation contained within the contract limits of the Railway Trail.
- C.02.02 Limbs shall be pruned back to sound, living stems.
- C.02.03 Care shall be taken at all times to avoid damage to the branch “collar” and to maintain pruning angles in accordance with good horticultural practice. No unsightly stumps shall be left.
- C.02.04 Dead, damaged or diseased limbs shall be removed when pruning individual species.
- C.02.05 Care shall be taken at all times to maintain balanced, well-shaped plants at the completion of all pruning operations.

C.03 Pruning Hedges

- C.03.01 For the purposes of this specification hedges shall be defined as densely growing groupings of the same or similar species.
- C.03.02 Small leaf hedge species shall be pruned with mechanical or manual shears or as described in C.01.06 above.

- C.03.03 Small leaf hedge species shall be pruned to provide a consistent finish to top and sides, leaving an even foliage cover.
- C.03.04 Large leaf hedge species (i.e. hibiscus, oleander, match-me-if-you-can etc.) shall be pruned with hand shears or loppers removing equal proportions of mature growth and new growth and thinning the crown equally to provide an even finish.
- C.03.05 Hedges shall be pruned to achieve a slightly tapered edge, being thicker at the bottom than at the top.

D **PLANT REMOVAL**

D.01 **Plant Removal – General Requirements**

- D.01.01 For the purposes of this contract the Contractor will remove only those plants outlined in the Appendix “Schedule of Invasive Plants”. Tree and Shrub removal in this contract is limited to saplings or plants under 4’ overall height and capable of removal by hand tools.
- D.01.02 Removal of scheduled invasive plants includes juvenile plants, whole root systems, seeds and all regenerative plant parts.
- D.01.03 The Department of Parks may specify other species or specimens for removal by the Contractor limited to the size as described above.
- D.01.04 All plant removal operations shall avoid damage or disturbance to adjacent plantings, structures etc. The Contractor shall make good to correct adjacent areas negatively impacted by contracted works.
- D.01.05 Invasive plants outlined in Appendix “Schedule of Invasive Plants” and located within contract areas of the Railway Trail shall be eradicated by manual removal alone or by treatment with a systemic herbicide (per Section D.02) coupled with manual removal.
- D.01.06 The Contractor shall always take care to select the appropriate removal method so as to avoid damaging adjacent plantings or structures, increasing environmental & safety risks as well as to prevent regeneration of listed invasive plant species.

D.02 **Chemical Plant Control**

- D.02.01 When chemical control of invasive plant species is required, stumps shall be treated with an herbicide proven to be effective in controlling the targeted

invasive plant. The Contractor shall submit written herbicide product information for review and approval by the Department of Parks prior to field use.

D.02.02 Care shall be taken at all times to avoid drift and risk to adjacent plantings, wild life and trail users.

D.02.03 Appropriate caution signage shall be placed on the trail to advise the public of all chemical control operations. Adequate care shall be taken at all times to ensure members of the public are made aware of applications and are able to take necessary precautions to avoid risk of contamination.

D.02.04 Applications of spray, liquid or granular herbicide shall be made only during appropriate weather conditions as per manufacturer’s instructions and good working practice to avoid damage to non-target plants, to maximize effectiveness and to minimize drift and waste.

D.02.05 Care shall be taken at all times to ensure minimal personal and third party injury when carrying out above chemical control operations.

E WASTE MANAGEMENT

E.01 Waste Management – General Requirements

E.01.01 For the purposes of this contract, waste shall be defined as one of the following categories of items encountered within the contract limits that negatively impact visual and environmental quality of the Railway Trail:

- Horticultural waste – green and brown plant debris
- Animal waste – dog and horse waste encountered within the contract limit;
- General domestic waste – items of paper, plastic, glass, aluminum etc.
- Recyclable waste - items of tin, aluminum or glass
- Bulky waste – either accidentally or illegally deposited

E.01.02 All above mentioned items should be lawfully removed by the Contractor to the appropriate dumping facility as required by the Ministry of Works and Engineering Waste Management Section.

D.02 Horticultural Waste Management

D.02.01 The Contractor shall manage the removal of invasive horticultural waste to prevent re-establishment within the Railway Trail.

- D.02.02 Woody horticultural waste not listed in Appendix “Schedule of Invasive Plants” may be chipped on site and spread evenly in adjacent hedges, wooded areas, or as otherwise directed by the Department of Parks.
- D.02.03 All non-invasive horticultural waste that cannot be re-purposed and used on site shall be lawfully removed to the Marsh Folly Waste Management site. Invasive horticultural waste as listed in Appendix “Schedule of Invasive Plants” shall be lawfully removed as required by the Waste Management Section of the Ministry of Public Works.
- D.02.03 All grass clippings shall be evenly spread over grassed areas in accordance with best industry practice as the work proceeds.

D.03 Animal Waste Management

- D.03.01 All animal waste encountered in the course of contract execution shall be bagged and disposed in designated bins located on the Railway Trail or otherwise lawfully disposed off-site. The Contractor shall report all instances of inappropriately placed animal waste to the Department of Parks for review and direction.
- D.03.02 For the purposes of this contract, the Contractor shall allow 10 hours per month for the collection and disposal of animal waste encountered in the course of contract execution.

D.04 General Domestic Waste Management

- D.04.01 All small sized domestic waste encountered in the course of contract execution shall be bagged prior to commencing work in any particular area.
- D.04.02 The Contractor shall remove all bagged litter from site at the completion of each task or at the end of each working day.

D.05 Recyclable Waste Management

- D.05.01 All recyclable waste encountered in the course of contract execution shall be disposed in designated recycling bins located on the Railway Trail or otherwise lawfully disposed off-site.

D.06 Bulky Waste Management

- D.06.01 All illegally dumped or abandoned bulky items impacting the execution of this contract should be immediately reported to the Department of Parks for review and direction.