

Four Mile Run Restoration Master Plan (2006)

Design Guidance

Designs should embrace modern technology and materials. Designers should consider arches, suspension, asymmetry and verticality as potential themes. These elements should be designed to complement each other and the remaining built components throughout the corridor. Materials should be chosen from a predetermined family of materials. The quality of detail should be of a similar standard throughout the corridor. Materials for consideration include glass, steel, steel cable and architectural mesh.

Lighting

Lighting in the Four Mile Run corridor serves a dual purpose – security and aesthetics.

Feature Lighting:

- Bridge entrances, informal crossings, plazas, potential gathering places

Uplighting:

- Underside of bridges. To be considered an integral part of bridge design.

Public Art

Art of a public or private nature will add character and meaning to a variety of spaces along the corridor, from high-profile public plazas to the undersides and tops of bridges and throughout the network of trails. Art installations should appeal to a variety of ages and cover a spectrum of styles, from playful to contemplative to educational. Art that addresses that history and ecology of the area or in some way has a relationship to a particular place, would be especially appropriate. In addition, art created by local talent can inspire community pride and foster a sense of ownership. Both Alexandria and Arlington have existing public art approval processes in place.

Recommendations for Bridge Design

- Enhance bicycle and pedestrian facilities
- Embrace modern technology and materials
- Animate the public realm with aesthetic improvements
- Incorporate art into bridge design
- Improve lighting for security and aesthetics in compliance with “Dark Sky” standards
- Transform West Glebe Road Bridge to be car-free

Four Mile Run Design Guidelines (2009)

Design Language

The design language developed for Four Mile Run evolved by blending two distinct but compatible design aesthetics. The first, “Infrastructure Re-use,” borrows form, material and an overall aesthetic from the existing utilitarian structures, such as the transmission towers or flood control structures, and elevates these elements to a central design theme that has both function and recognizable visual quality. The second, “Modern-Rustic,” develops an intentionally modern design aesthetic for Four Mile Run, but incorporates materials with less refined qualities. This aesthetic is visually compatible with the natural features and ecological systems that exist in the stream corridor. The basis for each of these ideas is described separately and summarized jointly as a composite design language.

Infrastructure Re-Use

Infrastructure Re-use acknowledges that existing transportation, utility and flood control structures are beneficial components of an urban community and that their presence in the stream corridor is inevitable. The Master Plan makes strong recommendations to minimize the impact of these structures. In some cases elimination is proposed, however this may be prohibitive due to cost or timing. This design language establishes an aesthetic that celebrates acknowledgement and re-use of infrastructure. The existing transmission towers, bridges, flood control walls, Water Pollution Control Plant and power stations were principally designed for function, however they offer conditions that may provide an opportunity for public art. The electrical transmission towers that dominate the stream corridor can also be interpreted as a unifying element and a visual clue to the location of the stream. As sculptural forms, their repeating tapered profile creates striking silhouettes against the sky. The scale and continuity of the floodwalls and levees define the edges of the stream corridor, and their tectonic character establishes a strong situational framework. The various bridges provide promontories for dramatic views from above, and create intriguing urban spaces below, while connecting surrounding neighborhoods to the stream. Common among these elements are their bold shapes, grand scale and repetition of form. Detailing is minimized to only the most essential connections, fittings and structural conditions. In some cases, such as the bridge embankments at the George Washington Memorial Parkway, minimal use of stone cladding has a dramatic positive impact on the perception of structure. Generally, the materials incorporated into these utilitarian structures are practical and typically require minimal maintenance. Some examples include:

- Galvanized steel
- Cast-in-place concrete
- Precast concrete components
- Unpainted masonry units
- Glazed ceramic
- Stone cladding

New architectural and built elements for Four Mile Run that complement these characteristics would be straightforward and practical in design. Their forms should consist of strong geometric shapes on a scale consistent with the large open space of the stream corridor. Materials should be selected to minimize the need for maintenance and replacement. Detailing should be focused at points of connection or where required for some essential function. Architectural enrichment should be limited to those locations.

Summary of Considerations for Infrastructure Re-use:

Positive Characteristics

- Design elements that complement the existing structures will improve visual harmony and unity
- Minimizing maintenance also minimizes cost and impact on natural resources
- Incorporation of existing elements will reduce the overall cost of construction

Negative Characteristics

- Current public perception of the existing infrastructure is negative
- The natural qualities of the stream corridor are dominated by the infrastructure components

Modern-Rustic

The Modern-Rustic design language reflects a contemporary design aesthetic using unrefined materials. Detailing is minimal, forms are simple and lines are regulated but imprecise. Materials are close to their natural state with little or no refinement. Where possible, surfaces are unpainted and allowed to weather with limited maintenance. Materials that are recycled or that can be recycled, are incorporated when possible. Some examples of materials that meet these qualifications include:

- Weathering steel
- Galvanized steel
- Copper or bronze
- Rebar or rolled steel (where rust won't stain other surfaces)
- Brushed finish stainless steel
- Natural cleft finish field stone
- Stone cobble recycled from gabions
- Local stone and gravel
- Recycled (plastic) lumber
- Cast-in-place concrete
- Concrete salvaged from on-site demolition
- Asphalt (with nearly all recycled content)
- Glass (recycled where possible)
- Recycled rubber surfacing
- Vegetated roof and walls

The use of materials and finishes that do not require frequent maintenance or repair is a priority. The rustic character will permit a high degree of weathering and wear before elements appear neglected. For example, weathering steel quickly oxidizes and forms a protective patina. The finish is intentionally mottled and uneven so that discoloration that may develop over time will not seem out of character. Similarly, cast-in-place concrete structures can have a rough-hewn appearance depending on formwork and finish applied. The irregularities that appear in the surface of the concrete are desirable in the rustic vernacular. Weathering and wear will mark and stain the surfaces and will not appear unintended over time. Incorporating recycled components, such as concrete from the deconstruction of bridges within the stream corridor, is an excellent way to reduce energy required to transport and dispose of demolished materials. Designers should ensure that these re-used materials are safe, but imperfections and irregularities in these elements could complement the rustic character. Other recycled materials such as steel, stone, plastic, asphalt, rubber and glass contain slight irregularities that can be integrated into the rustic design language. The built elements within Four Mile Run should complement

the natural elements. Materials that have a dull or weathered finish and details that intentionally incorporate irregularities harmonize well in a natural setting. The modern-rustic design language balances the clean forms of modern design with natural imperfections found in the environment.

Summary of Considerations for Modern Rustic:

Positive Characteristics

- Bold architectural components are possible
- Built elements harmonize with landscape character
- Less maintenance required to keep intended appearance
- Many opportunities for incorporating recycled and reused materials

Negative Characteristics

- Unrefined character of modern rustic will challenge perceptions of a sleek, “modern” look.

Infrastructure Re-use and Modern Rustic: A Composite Approach

Design Language for the Four Mile Run Stream Corridor This combined solution integrates the approach to design of architectural and other built elements of existing public infrastructure with the visual and environmental sensitivity recommended by the modern-rustic elements.

The benefits of this composite approach include:

- Harmonizing new elements with existing structures and natural landscape elements
- Creating a distinctive sense of place within the existing framework
- Enabling the design language to evolve with technological advancement
- Allowing for natural weathering and wear without sacrificing intended appearance
- Emphasizing minimal maintenance and impact on resources
- Maximizing the use of recycled materials
- The design language is most apparent when applied to architectural components, site furnishings or other built elements; however, the idea of integrating low maintenance, sustainable materials that harmonize with the existing elements can be applied to all areas of design

Recommendations for Bridge Design

As existing bridges are modified or as new bridges are developed, the design of each bridge should be considered in relation to all of the bridges. The Master Plan envisions that “bridges will be of a consistent design theme that will identify them as a distinctive collection of bridges unique to Four Mile Run.” (Master Plan, 61) There should be variation among the bridges that makes each one unique, but among them there should be unifying elements. The design of the bridges and the unifying elements that connect them should be considered as a large-scale public art project. The following general guidelines apply to the design of bridges:

- Bridges must meet all applicable current building codes and requirements, including ADA.
- Bridges must meet all state and local transportation requirements.
- Bridge design must be integrated with hydrology models to ensure no negative impact on flood control.
- Bridges should span the channel to minimize impact on the stream.

- Bridges should be unique, custom-designed structures; however, pre-engineered components may be considered.
- Design of bridges should respond to the adjacent streetscape character.
- Bridge design should be compatible with the overall design language or be developed through the public art process.

Symbolic Importance of Bridges

Bridges spanning the channel will become the symbolic and physical link between Alexandria and Arlington. These structures will also symbolize Four Mile Run itself and the role it plays in the lives of those who pass over and through it. However, the function of the bridges within the corridor is more than just a way to traverse the stream corridor. The views they afford and spaces they create make bridges unique in the way they influence perceptions of Four Mile Run. When designing new bridges or modifying existing bridges, designers should exploit the opportunities for creating special public spaces above and below the bridge structure.