

[Editor's Note: This Memorandum has been excerpted (July 11, 2018) to focus on the "MBTA" Section, which will be the subject of a 7/25/18 Public Meeting at 6:30pm, Roslindale Community Center]

The Horsley Witten Group, Inc. (HW) is providing this memorandum to summarize the design elements of the draft 25% conceptual plan for the Roslindale Gateway Path in Roslindale, MA. The draft 25% conceptual plan incorporates revisions to the 10% design concept based on the following:

- Detailed review of surveyed topography and proposed grading;
- Recommendations suggested by project partners and stakeholders at the project kickoff meeting;
- Information provided by the City of Boston regarding the South Street and Bussey Street intersection: and
- Input from the Arnold Arboretum regarding potential impacts to vegetation and trees.

The draft 25% conceptual plan as well as additional relevant information is provided as attachments to this memorandum as noted herein.

Background

This project is a continuation of design work completed by HW for the Arboretum Park Conservancy and WalkUP Roslindale for a multi-use path that connects residents and commuters from the Forest Hills Massachusetts Bay Transportation Authority (MBTA) station to the Roslindale Village MBTA commuter rail station (HW, 2016; HW, 2017). The purpose of this project is to: merge the two previous path designs into one continuous path; advance design and alignment of the path; and examine connectivity and wayfinding for both cyclists and pedestrians. Also included in this project is a limited survey of a portion of the Arnold Arboretum (an approximately 30-ft wide segment along the proposed path) which was completed on November 9, 2017. The survey work included site topography, existing pathways, drainage infrastructure, utilities, walls and other key natural and man-made features.

Summary of Existing Conditions

A locus map showing the overall project area is provided in **Attachment A, Figure A.1**. There are three major sections within the Roslindale Gateway Path that have been defined through previous projects:

- <u>Section 1</u>: MBTA This section extends from the northeastern edge of the existing platform at the Roslindale Village MBTA commuter rail station to the existing stone wall that abuts the Arnold Arboretum property. This parcel is currently owned by the MBTA.
- <u>Section 2</u>: Peters Hill This section is within the Arnold Arboretum Peters Hill area, located east of the MBTA property and west of South Street. This section ends at the Poplar Gate.
- <u>Section 3</u>: Blackwell Path Extension This section is between Poplar Gate and the Blackwell Footpath at Bussey Brook Meadow Gate. A portion of this path is adjacent to the Bussey Brook Meadow.

Each section abuts the MBTA railroad bed to the South and is defined by unique physical characteristics which are summarized briefly below. A more detailed description will be provided in the final report.

Section 1: MBTA

The MBTA parcel is wooded with flat topography (<5% slope) near the tracks and a steep hillside (>20% slope) to the north and east. Based on National Resource Conservation Service (NRCS) data, soils in this area are primarily in hydrologic soil group (HSG) B and have a moderate infiltration capacity. During the survey, depressed wet areas were identified, along with several large diameter trees (> 24") of various species. A stone wall, which extends to Arborough Road, defines the eastern boundary of this parcel

Summary of Concept

The draft 25% conceptual plan for the Roslindale Gateway Path provides a new 10-foot wide accessible pathway with 2-foot wide shoulders on either side, connecting the Roslindale Village Commuter Rail Station to the Blackwell Footpath. This path design includes the use of the existing Peters Hill Road and connection to Poplar Gate and crosses the road at the intersection of Bussey Street and South Street. There are three new primary gateways onto the path. Secondary gateways and paths provide additional connections for residents in adjacent neighborhoods and visitors to the Arnold Arboretum. The draft plan is provided in **Attachment B** and is summarized below. The path alignments and profiles are provided in **Attachment C**. A zoom-in of the section of the alignment where the multi-use path meets Peters Hill Road is provided in **Attachment D** to highlight the impacts to poplar trees (*Populus*). Additional information on materials is provided in the last section of this memorandum with supplemental precedent images provided in **Attachment E**.

Section 1: MBTA

Gateways and Path Alignment

A proposed primary gateway entrance to the Roslindale Gateway Path is located where the existing platform abuts the MBTA parcel and the commuter rail right-of-way. The path alignment follows the shallow slope of the existing grade and gently meanders around existing large diameter trees, helping to reduce speed. From the commuter rail platform, the path is relatively straight to allow users to maintain sight lines. The path follows grade, except where slopes are greater than 20% at the connection to the Arnold Arboretum property. In this portion, a boardwalk is recommended to maintain accessibility and continue the gently curving path without disturbing a large area with earthwork and tree removal. Stormwater management features, such as bioretention areas, are recommended to manage runoff from the surrounding area as well as the path.

A secondary gateway is proposed at the stone wall along the MBTA and Arnold Arboretum property line. This gateway reuses the existing stone wall by creating a gap for the pathway to cut through the wall, similar to the entrance into Arnold Arboretum at Arborough Road. This gateway marks the entrance into Arnold Arboretum and the change of the landscape from wooded to open meadow.

Potential Impacts to Landscape

This alignment reduces disturbance to existing vegetation and habitat and is in keeping with the goals of the Urban Wilds Initiative, a potential opportunity suggested by the stakeholders. It also encourages management of overgrown understory and cleanup of debris and trash that has accumulated in the area. As shown, the alignment will impact most trees in the vicinity with calipers below 12" in diameter, but several of the larger diameter trees (> 18") should not be impacted.

Site Amenities

Wayfinding signage is recommended at the gateway to orient path users and to identify the entrance into Arnold Arboretum. Path lighting is not recommended in this section, which corresponds with the Arnold Arboretum's policy on lighting within their property. However, ingrade textured surface materials or reflective materials (on or along the path or on the boardwalk) can be used as indicators to key path changes (e.g., approaching the boardwalk).

Materials

The recommended path material in this section is stabilized soil, which provides a more natural appearance in this heavily wooded area. The boardwalk decking material and railings are recommended to be of Ipe wood with helical piles providing support. This gateway is recommended to have two "shoulder-height" stone columns flanking the entrance with signage naming the entrance, similar in appearance and height to the Bussey Street and Peters Hill gates. These would visually indicate that it is an entrance to Arnold Arboretum while maintaining sight lines from the MBTA commuter rail station down the path and vice versa.

Review of Materials

<u>Stabilized Soil</u> Stabilized soil with an organic binder is the preferred material for the majority of the path segments. Stabilized soil is recommended for the following characteristics:

- has a natural appearance;
- has smaller aggregate sizes;
- is more firm than dense graded stone;
- uses an organic binder that allows the soil to perform similar to an asphalt path without the use of chemicals; and
- can be installed on slopes up to 8%.

Maintenance of stabilized soil pathways is comparable to other pathway surfaces and generally less than with dense graded stone. Typical maintenance would be small repairs that involve rewetting and re-compacting of the stabilized soil, or adding small amounts of new material. These repairs are typically less intensive than repairs to asphalt surfacing.

Dense Graded Stone

Dense graded stone is preferred for the Blackwell Path Extension up to the Bussey Brook Meadow Gate Path to provide continuity to the existing Blackwell Path. Also, the proposed shallow slopes will discourage rutting and erosion, so a more stabilized material is not needed. Further, there is proven functionality of the Blackwell Path as a natural-looking multi-use path in this area.

Boardwalk

Sections of boardwalk will be built from Ipe wood planking which is a very strong, high density hardwood. The wood is rot-resistant and long-lasting, aging to a silver grey color.

Ramps

A ramp for accessibility is proposed to enhance access at the formalized existing gateway by the South Street underpass. A tilted or cut rough thermal finish granite stone to match the existing stone wall is proposed. An additional set of stairs and ramp may be required at the Arboretum Road underpass, which could be of a concrete or granite material.

Surface Markings

In-grade textured surfacing, pavement markings and reflectors are speed reducing measures and wayfinding options that can help orient both multi-use path users and other visitors to the Arnold Arboretum. Subtle, visual measures as well as textured surfacing highlight the route and areas where the path intersects with others.

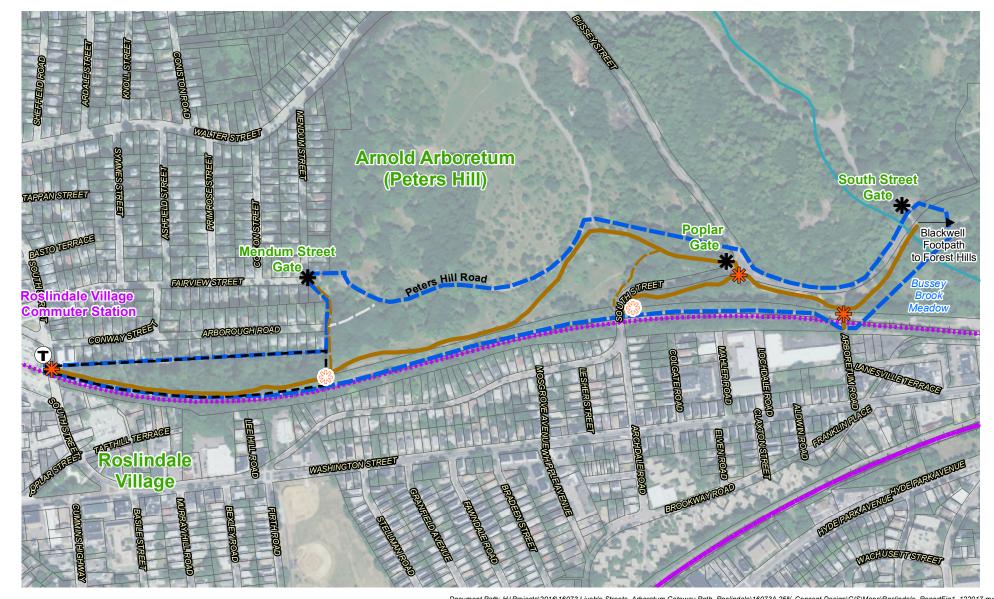
Gateways

Primary gateways would use the same materials and design of existing gateways into the Arnold Arboretum. Secondary gateways would either be openings in stone walls or steps and ramps up over existing walls. Primary gateways would clearly be entrances into the Arnold Arboretum with the same aesthetic as the existing gateways while secondary gateways would provide clear access through or over walls as the visual boundary of the Arnold Arboretum.

Examples of these materials are shown in **Attachment E**.



Locus Map



Document Path: H:\Projects\2016\16073 Livable Streets_Arboretum Gateway Path, Roslindale\16073A 25% Concept Design\GIS\Maps\Roslindale_ReportFig1_122017.m

Legend



Project Area



MBTA Property (Approx.)



MBTA Commuter Rail Line



MBTA Commuter Rail Station



Proposed Primary Path



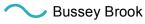
Future Secondary Path



Existing Mulch Path



Parcels





Proposed Primary Gateway



Proposed Secondary Gateway



Existing Primary Gateway

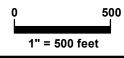
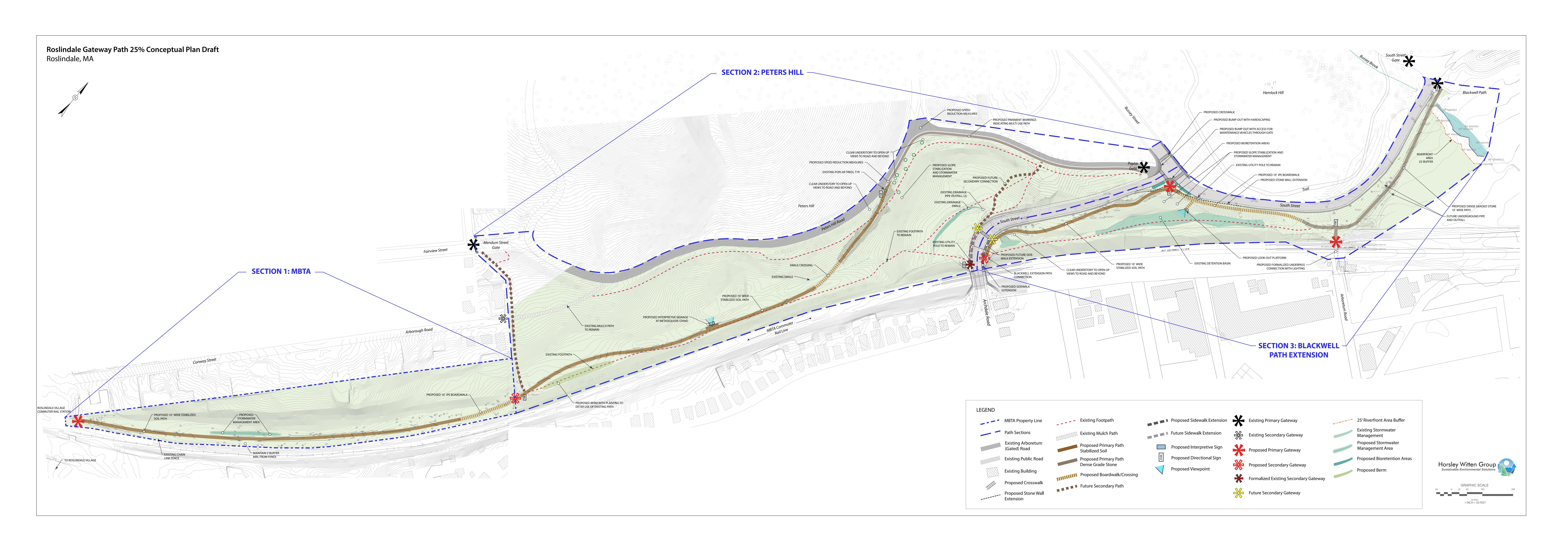




Figure A.1 Roslindale Gateway Path

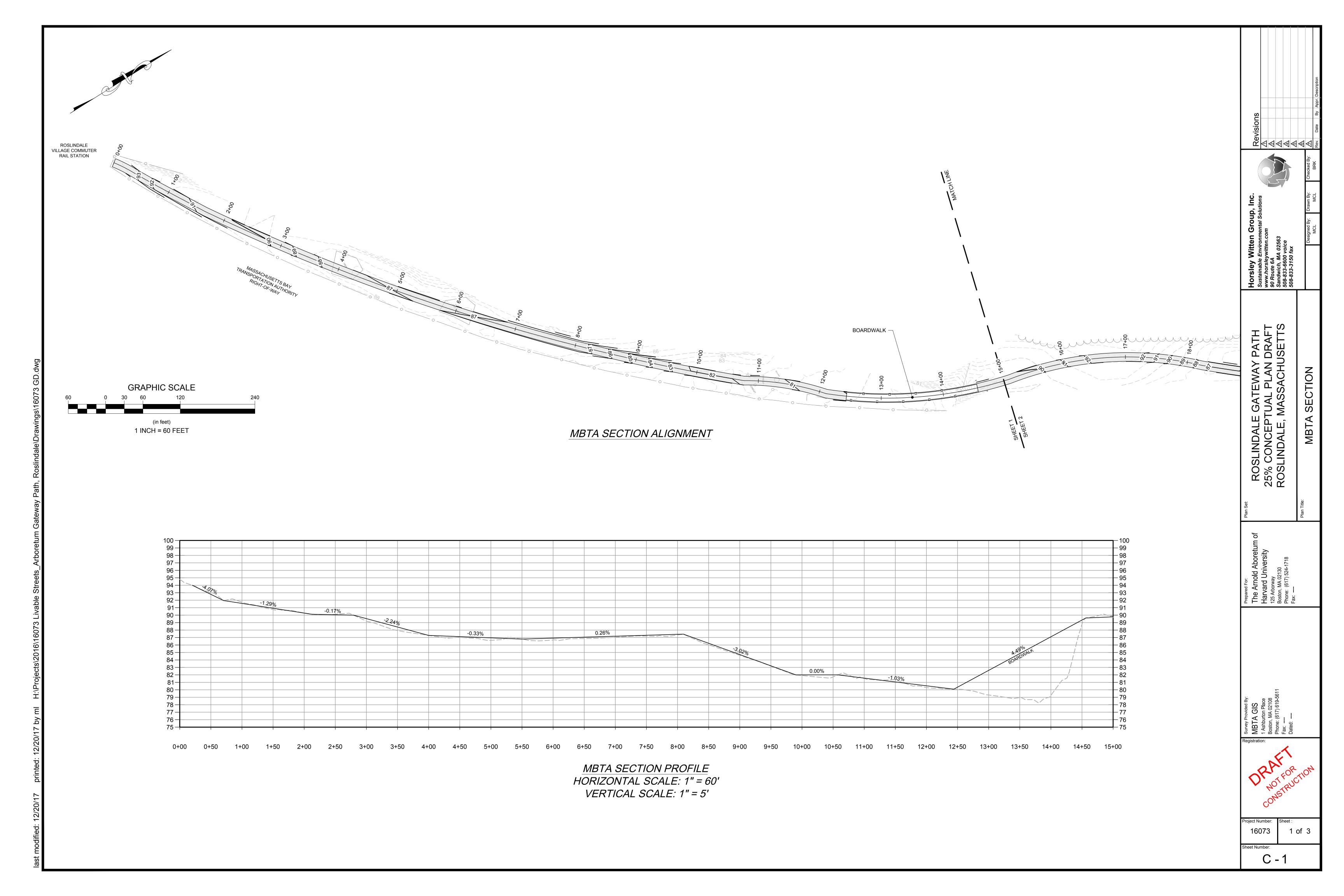


25% Conceptual Design Plan Draft





Path Alignments and Profiles





Material Examples

Attachment E: Material Examples



Figure E.1: Stabilized soil driveway at historic house



Figure E.2: Dense grade stone at Blackwell Path



Figure E.3: Alewife Wetland Ipe Boardwalk



Figure E.4: Example of Bike Ramp. This photo shows typical stair profile, not the granite material. (Pinterest photo, Russell Baxley, Swamp Rabbit Trail)



Figure E. 5: In-grade textured surfacing, in this case cobble rumble strips



Figure E.6: Bike/Ped lane pavement markings



Figure E.7: Bussey Brook Meadow Gate, precedent for new primary gateways



Figure E.8: Arborough Road opening in stone wall, precedent for new secondary gateways