Low Impact Development Case Study

Town *of* Franklin – *Best Development Practices Guidebook*

Highlight: *The Best Development Practices Guidebook was created to guide and improve the quality of development in Franklin and to allow for a range of "creative" design and construction practices in the areas of stormwater management, site planning, erosion control, and landscape design.*

Why Low Impact Development (LID)?

Franklin has numerous wetlands and water bodies and is at the headwaters of the Charles River, all of which are affected by polluted runoff. The town relies on local groundwater aquifers for its public water supply; with Franklin facing seasonal water shortages, groundwater recharge is an essential function. The U.S. Environmental Protection Agency (EPA) has recently promulgated the "Stormwater Phase II Requirements," which require communities like Franklin to manage polluted runoff effectively.

How Did the Town Apply LID Practices?

Due to the significance of these stormwater issues, town officials and department heads collaborated to establish a decision-making process to ensure minimum stormwater management standards for all development and redevelopment projects. As a result, Franklin completed a **Best Development Practices Guidebook** with assistance from Daylor Consulting Group. The Guidebook consists of LID guidelines for developers, designers, and project reviewers that describe the required and preferred design and construction practices relating to stormwater management, site planning, erosion control, and landscape design. The Guidebook codifies the practices as official town policy, thus taking some of the guesswork out of project design and review.

Recognizing that many best development practices are site-dependent, the Guidebook identifies a range of practices relevant to development and redevelopment projects on a variety of sites. The Guidebook is divided into five sections:

Section I is a *checklist* for designers, summarizing the best development practices that are required or recommended in the Guidebook. The applicant must submit the checklist cataloging the practices that are to be incorporated into the project, and the Planning Board and/or Zoning Board of Appeals and their technical consultants are then able to evaluate whether the application complies with the policies and furthers the goals of the town.

Section II discusses *best development practices* for stormwater management. The town encourages natural and vegetated stormwater management systems, such as swales, constructed wetlands, and bioretention cells (rain gardens). To further reduce runoff in large commercial and industrial developments, applicants are encouraged to use pervious paving surfaces and roof gardens on flat rooftops.

Section III identifies *construction practices* that are required to reduce erosion and sedimentation. The Guidebook mandates the submittal of a construction management plan that addresses soil stabilization, sediment retention, perimeter protection, construction scheduling, traffic area stabilization, and dust control. The town requires that clearing should be timed and treated properly to minimize bare ground and prevent residual sedimentation of adjacent lands and waters.

Section IV describes preferred *landscape design,* encouraging the preservation of natural vegetation and open space and the minimization of lawn area in favor of native vegetation. The Guidebook includes a list of encouraged and prohibited plant species that are appropriate to site conditions and are non-invasive, drought

tolerant, native, and habitat creating. The Guidebook also encourages the design of the landscape to maximize heating and cooling efficiency by shielding buildings from summer sun and winter winds.

Section V describes best *site planning practices* to minimize impervious surface, reduce alteration of natural vegetation and topography, and reduce development expenses. A four-step planning process is recommended to maximize the retention of critical natural features and create a more constructive development review procedure. The Guidebook promotes the identification and conservation of areas, such as wetlands, viewsheds, specimen trees, and historic sites first, and the drawing of building sites and lot lines after consideration of natural and visual features and site orientation.

What Was the Project Scope, Timeline, and Budget?

The planning and drafting of the Guidebook was completed in approximately eight to nine months. The town appropriated and spent $21,000 for professional services and for production of the document. Fifty hard copies were originally drafted, CDs were burned, and now the document is available at **http://www.franklin.ma.us/town/planning/HANDBOOK.PDF** for downloading and printing.

According to town officials, the Guidebook is to be a living document, to be amended as needed and referenced in the town's bylaws. The development of the Guidebook has been the precursor for drafting revisions to Franklin's Site Plan Review Bylaw, the Subdivision Rules and Regulations, and the Wetland Rules and Regulations.

What Are the Benefits?

The Guidebook is intended to improve the quality of development in Franklin and allow for a range of "creative" development practices. The guidance provides more predictability, efficiency, and rapid review due to the consistency of site design standards in the permitting process.

The Guidebook has produced some significant results. For example, approval of a 40B project included measures for non-structural techniques, such as rain gardens and swales to control stormwater, as well as other conservation measures such as critter crossings, bridged rather than altered wetlands, and a replication of wetlands greater than 1:1. In addition, two projects approved by the Conservation Commission have incorporated rain gardens into their design. So far, the degree of compliance from applicants has been very high and town officials are hoping for continued success. Officials attribute the effectiveness of the Guidebook to the straightforward, yet flexible options for reducing stormwater.

What Type of Operation and Maintenance (O&M) Is Required?

The requirements for operation and maintenance of the various LID techniques are most often conditioned through the permitting process. Developers submit applications with O&M plans included, and are therefore responsible for seeing that these conditions are met. So far, enforcement has not been an issue.

What Were the Obstacles or Lessons Learned?

According to Franklin officials, the most important element to the success of the Guidebook was the public participation process. Knowing that people are more likely to participate when they have a vested interest, the town organized a working group that included the various interest groups to hammer out the content of the Guidebook. Communication among local government officials and department heads was also a priority in gaining overall local support. Because Franklin took measures to provide substantial public input and enhance townwide support of the idea, issues were resolved early allowing for a relatively painless drafting and production process.

For more information, contact Rick Vacca, Town of Franklin Conservation Commission Agent

Production Notes

written by Betsy Rickards | *designed by* Arden Miller | *project manager* Andrea Cooper

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