



PLACES2040
LEADERSHIP AWARDS PROGRAM

SEPTEMBER 2020

GROWING RESPONSIBLY

LIME SPRING SQUARE

LEN BRADLEY
RGS Associates
lbradley@rgsassociates.com

www.rgsassociates.com



The 98-acre development features 25 retail, commercial, warehousing, and medical office uses surrounding the 11.5 acres of restored floodplain.

Offering a unique approach to post construction stormwater management, a floodplain restoration was implemented to meet the regulatory requirements. Beyond the inherent habitat and thermal improvements, the construction of 4,750 linear feet of stream channel restoration removed 38,500 tons of legacy sediment, created 8.5 acres of additional wetlands, and provides pollutant reductions. From an economic standpoint, the utilization of the floodplain restoration resulted in an additional 8.5 acres of developable area; a gross value created of nearly \$1.9 million.

This project is a Public-Private Partnership between the Township and the developer which meets regulatory requirements and Chesapeake Bay watershed goals.



PROOF POSITIVE

Lime Spring Square is proof-positive that smart growth, ecological, planning, and development goals are not competing interests but complimenting drivers for success.

With a construction budget of \$125 million, the 642,000 sf mixed use project balances economic development with ecological benefits for the community.

Offering a unique approach to post construction stormwater management, a floodplain restoration was implemented as the primary BMP (in lieu of conventional infiltration or detention facilities) to meet the regulatory requirements. This approach includes the removal of sediment to reconnect the stream channel with the floodplain, the creation of large areas of interconnected wetland habitats, and the rehabilitation of groundwater interchange.

The benefits of a floodplain restoration include peak runoff rate reduction, enhanced groundwater recharge, suspended sediment reduction, and nitrogen and phosphorus load reductions, as well as significant ecological and aesthetic improvements.

Construction of 4,750 linear feet of stream channel restoration began in the spring of 2017 and was substantially completed in late fall of 2017.



Rendering of the site with traditional SWMFs and not floodplain restoration.



Site with floodplain restoration, showing additional developable land.

A PLANNING PERSPECTIVE

Beyond the inherent habitat and thermal improvements, the project removed 38,500 tons of legacy sediment, created 8.5 acres of additional wetlands, and provides pollutant reductions of approximately 5,773 lbs/yr of Nitrogen, 254 lbs/yr of Phosphorous, and 400 tons/yr of Sediment. These yearly load reductions meet the township's obligations for their MS4 permit without the use of tax payer monies.

Reaching the project's development goals for density and efficiency required a regional approach to stormwater management and collaboration with federal, state, and local permitting agencies. This project embodies the strategy of forming public-private partnerships to meet long term stormwater management goals within the Chesapeake Bay watershed.

Enabling a project of this type and scope required proper planning from a municipal and county level. A large amount of watershed level assessments and field evaluations were necessary to determine the viability of such a project.

This parcel, located within the urban growth boundary, was aptly zoned for this type of mixed-use commercial/industrial development. Positioned along a PennDOT State Route, roadway and regional transportation needs were met for a development of this expanse. Public utilities were readily available to serve the proposed development with adequate capacity and infrastructure.

Beyond the normal planning criteria of a project of this scale, stormwater and floodplain management took significant priorities in the land planning and entitlement process.



By integrating these components into the site design through the planning process, instead of an afterthought during land development entitlement, the municipality became a project partner with the developer to meet these mutually beneficial attained goals.

THE PROMISE OF FLOODPLAIN RESTORATION

The benefits of utilizing floodplain restoration as the primary BMP for commercial, industrial, and residential developments cannot be overstated. While the primary goal is restoration, the secondary benefit is stormwater management requirements for a development can be met within a previously unutilized portion of a site. Areas of the project site which would be traditionally

reserved for stormwater management facilities can be utilized, not only for parking, but potentially increased building footprint. This increased development footprint provides for greater long-term financial potential for the project.

Beyond the developer's economic incentive, floodplain restoration projects can also provide public benefits without taxpayer monies. Municipalities are burdened with their obligations under the MS4 permit. Meeting these requirements often results in large expensive projects for the municipalities.

Floodplain restoration projects can meet these obligations without depleting municipal reserve funds. Additionally, state agencies under similar EPA mandates and consent decrees have documented these stormwater credits for federal compliance and planning.



Repeating Success

Smart development begins with proper planning and assessment of the potential regional significance of parcels of land. Lime Spring Square highlights the success of the County and Municipal planning efforts which can be duplicated throughout the County.

This is where regulators, planners, and community-based watershed alliance members can take an active role in facilitating these changes. The identification of viable stream reaches and their potential watershed benefits are key factors in successful planning. Once these stream corridors are identified, it becomes incumbent on whatever regional planning entity that exists to reevaluate the zoning and development potential of the parcels adjacent to or encompassing the floodplains. The historic approach to floodplain encumbered parcels has been to limit their development with lower density zoning, however in order to incentivize private developers to fund these regional beneficial projects, increased zonings densities may need to be explored.





