

Planning and Urban Design Studio | Spring 2014
Downtown: Urban Design and Redevelopment

Highlands Borough
Monmouth County, New Jersey



Course: 34:970:510:06
Schedule: Mondays 1:10 to 3:50 PM
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Background

The Borough of Highlands, NJ is a 1.3 square miles community of about 5,000 year-round residents (pre-Sandy) and 3,146 housing units (2010 US Census) located just south and west of Sandy Hook. It is one of the oldest settled areas in New Jersey.

The town is bisected by New Jersey Route 36, a 4-lane arterial highway. There is a high-speed passenger ferry service to lower Manhattan, but no passenger rail service.

The western section of the Borough occupies a bluff overlooking Sandy Hook Bay and the Atlantic Ocean -- the Navesink Highlands. It includes residential, commercial and institutional uses, along with the 800-acre Hartshome Woods Park, a part of the Monmouth County Park System, and the Highlands US Army Air Defense facility.

The eastern section of town (below Route 36) faces Sandy Hook Bay and the Gateway National Recreation Area. This part of town -- which includes the working waterfront, the downtown commercial district on either side of Bay Avenue, and the adjoining residential neighborhoods -- was the victim of a 12- to 17-foot storm surge during Hurricane Sandy and was substantially destroyed.

The Borough's history and economy is intimately connected with the water. In 1900 clamming employed 1/3 of the Borough's workforce. Clamming is still the largest employer in town, and is a year-round activity except for the rare occasions when the Bay freezes.

Commercial clamming has expanded in the last 20 years as a result of cleaner water and the opening, in 1995 of the J.T. White depuration plant. The only such facility in New Jersey, this plant uses state-of-the-art ultraviolet light to treat hard-shell clams (cherrystones, little necks and chowders) in 48 hours, a process that would otherwise require up to 45 days of cleansing in clean waters. The plant processes 240 bushels of clams a day and employs about 100 workers. The plant operates on land leased from the Borough and is looking to expand. However, the lease is up in 2015 and competing visions for how the land should be used have been aired.

The Highlands waterfront is used for a variety of water-dependent uses: marinas, fishing, party boat rentals and the passenger ferry dock. The Borough also hosts an annual summer Clam Fest with games, carnival rides and a clam-shucking contest, as well as fishing tournaments.

The Borough's historic tradition as a maritime working class community and center of the oyster and clamming industries is potentially threatened by both real estate market forces and by the uncertainties unleashed by Hurricane Sandy, including the new regulatory requirements associated with the rebuilding process in terms of flood-proofing and elevating structures.

In many ways Highlands provides a rich case study of the multi-layered challenges that coastal communities must confront: changes in demographics and economic base that seemingly challenge the social character of the community, along with the daunting challenges posed by sea level rise and increasingly severe storm events that place at risk the community's physical setting and character¹.

The very severe impacts of Hurricane Sandy have heightened the need to find local solutions to mitigate future storm events. But there have been competing proposals and much confusion over what types of strategies are feasible, effective and desirable.

A possible approach is to impose a hard barrier between the Borough's downtown and the waterfront. The US Army Corps of Engineers (ACE) has been studying for years the feasibility of using several engineered devices to protect a section of the North Jersey shore, from Keyport to Highlands Bridge, and including downtown Highlands, from future storm surges.

<http://www.nan.usace.army.mil/Portals/37/docs/civilworks/projects/nj/coast/rar934.pdf>

The ACE project would build 8,000 linear feet of protection using bulkheads, floodwalls, dunes, and raised roads and surfaces. A \$1.5 million feasibility study is currently underway. The project does not yet have an appropriation for construction. The community supports it, although in the past concerns have been expressed regarding further restricting access to the Bay.

An alternative vision is to follow the model adopted in Galveston, Texas in the early part of the 20th century. This would involve raising the entire downtown area with fill, above the projected base flood elevation level. No serious feasibility or cost study of this scenario has been conducted, and it seems to have lost local political traction.

http://www.nytimes.com/2013/02/23/nyregion/highlands-nj-proposes-raising-the-borough-to-escape-hurricanes.html?pagewanted=all&_r=0

A third scenario is one where all the properties substantially affected by Hurricane Sandy (loss of 50% or more of their value) are rebuilt following the revised State of NJ requirements regarding minimum base elevations. FEMA has stipulated 12 feet as the Advisory Base Flood Elevation (ABFE) for downtown Highlands. Execution of the ACE shore protection project would not necessarily negate the need to elevate the structures, in FEMA's view.

Residential properties must elevate, in order to be eligible for flood insurance. Commercial properties must also elevate, or alternatively, "flood proof" the ground floors, but this can be very expensive. The alternative -- to virtually vacate ground floors -- also has severe cost implications.

¹ A 2009 PhD dissertation by Johnelle Lamarque at Rutgers University, [The Making of a Waterfront Suburb: An Ethnography of Coastal Gentrification in New Jersey](#), examines at length the changing nature of the community and the potential for its transformation from a maritime-oriented community to an upper-income "gentrified" commuter town.

A downtown substantially elevated above street level represents a very different experience and one that is fraught with questions. What type of community would this result in? Is this an acceptable streetscape experience? Can the commercial downtown survive under this scenario?

While these measures may place structures above the reach of future storm surges, will the public and the market turn its back on this scenario? Can the economic vitality of a downtown that depends on locals, tourists and visitors patronizing its establishments survive?

Impacts of Sandy

The entire downtown of Highlands Borough is in an AE flood zone (1% chance of flooding every year) and is extremely vulnerable to both the occasional impacts from severe weather events as well as to the long-term impacts of sea level rise. Approximately 1,250 of the 1,500 housing units in the downtown – along with many businesses – were damaged or totally destroyed.²

A very substantial portion of the buildings located in the downtown area, between Bay Avenue and Sandy Hook Bay, lost over 50% of their value.

This older downtown residential area is characterized by small, detached single-family homes, frequently on micro-lots of as little as 2,000 square feet. This pattern is a legacy of the Borough's early days, when simple cottages close to the water were used only during the Summer season. Many of those housing units are currently rentals. Overall, 41% of the Borough's housing stock is rental.

While some housing units in this area have been elevated and / or rebuilt, many others have not. It is unclear how many housing units are abandoned, severely damaged by the storm and the subsequent effects of mold and rot.

The Borough has contracted with Arcadis US, Inc to assist it in identifying abandoned properties damaged by Hurricane Sandy that must be demolished for public health reasons. This contract is on-going and it is anticipated that the properties in question will be identified by the end of 2013. If a property is identified as constituting a public health hazard, the Borough has the authority to demolish the structure and assess the property owner for the costs of demolition and debris removal.

The Borough has a unique opportunity to take advantage of the coming round of demolitions to develop and implement a strategy for scattered site redevelopment, without displacement. This might involve incentivizing the assembly of two or more micro-lots and their redevelopment with attached housing types currently not permitted under the zoning. It could also involve other types of changes. However, no such strategy exists at present.

² Highlands Recovery Plan, draft, November 2013, page 14

Planning Context

The Borough has invested in planning over the years. The 2004 Master Plan includes these optional Master Plan elements: Economic, Circulation, Conservation, Community Facilities, Utilities, Historic and Recycling, in addition to the mandatory Goals and Objectives, Land Use and Housing Plan Elements required by New Jersey laws. The Borough has also adopted a Stormwater Management Plan Element (2005), a Recreation and Open Space Plan Element (2008), a Master Plan Re-examination Report (2009) and a Land Use Plan Element update (2009). The Borough has also adopted a Design Manual for the Central Business District.

The entire downtown area was declared an “area in need of rehabilitation” years ago, but the Borough has never used the tools available through the NJ Redevelopment Law.

The Borough is pursuing Transit Village designation from the NJDOT for the area around the passenger ferry terminal. There are private-sector driven redevelopment plans underway for parcels in that area.

And yet the Borough’s planning and zoning documents can be viewed as functionally obsolete with respect to an informed response to the increased frequency and severity of extreme storm events, to the impacts of sea level rise and to the need for adaptation to the impacts of climate change in general. The Borough is currently focused on the immediate challenges posed by the rebuilding process in the wake of Sandy. But it is also struggling with the longer-term question of finding planning answers to its substantial challenges at a time when its financial and fiscal resources are stretched to the limit.

The most recent planning effort was conducted by FEMA during the Summer and early Fall of 2013. This community-based effort produced the recent Draft Recovery Plan for Highlands. The Recovery Plan lists a series of projects that the community has identified and ranked in order of priority.

The highest priority projects include (a) physical improvements to the Borough’s stormwater drainage system (repairing and replacing 48 check valves to prevent backflow of bay water into the streets at high tide; and automating two pump stations); (b) redirecting stormwater runoff originating in the higher areas south of Route 36; (c) repairing and upgrading the Borough’s sanitary sewer system, to limit inflow and infiltration; (d) implementing the ACE shore protection system; (e) recruiting a housing advocate / grant manager; and (f) the Bay Avenue Renaissance initiative, which is described as streetscape improvements and business recruitment for the downtown commercial core.

This last project is of particular interest to the studio, as our scope of work will focus on a broader and more ambitious analysis of the business district and will lead to recommendations that go well beyond the cosmetic and parking issues described in the Draft Recovery Plan.

Scope of Work for the Spring 2013 Studio

The low-lying sections of Highlands Borough are highly vulnerable to coastal flooding, and increasingly so. A substantial number of buildings, both residential and commercial, are vacant (and many abandoned) in the wake of Sandy. There is considerable uncertainty as to how the area may evolve. This creates a unique opportunity to consider bold interventions that can guide the area's transformation towards more sustainable and resilient development prototypes.

Both the downtown commercial corridor and the residential neighborhoods between Bay Avenue and the Bay are in play.

This planning studio is charged with developing a **Downtown Urban Design | Redevelopment Plan** for Highlands. The Borough needs a clearly articulated vision for the future of the downtown area. The Master Plan and zoning provisions need to be re-evaluated against the current realities and the significant changes that have taken place in the last 12 months. There is a need for simple, clear and concise guidance that spells out in easy-to-understand terms an appropriately-justified rationale and vision for the downtown, lays out a planning agenda, and identifies the highest priorities and critical steps needed to achieve them.

The core area of study for this studio is the "Valley to Vets" section, an 8-block area on either side of Bay Avenue -- the main downtown commercial corridor -- from Veterans Memorial Park to Valley Street.

However, the Bay Avenue core area must be considered in the context of the entire downtown area, and in particular the adjacent residential neighborhoods to the east. The future of Bay Avenue is closely tied to the future of these adjacent residential neighborhoods.

As such, the studio will begin by examining the entire low-lying area between Route 36 and the Bay. A macro-level planning and urban design analysis will focus on identifying areas of susceptibility to change, existing deficiencies and under-utilized assets. The goal is to develop a big-picture conceptual framework to provide context and justification for the more detailed proposals for the Valley to Vets corridor and potentially other locations.

Block sizes and configuration, along with parcel dimensions and patterns of land ownership will be carefully examined. Circulation patterns will be analyzed. Vacancies – to the extent that this information is available or forthcoming – will be mapped. Building conditions and property maintenance issues will be noted. The various zoning districts and designations will be scrutinized to see whether they are appropriately located and appropriately defined.

In addition to identifying potential other areas of intervention, this macro-level analysis will provide a context for the proposals to be developed for the core study area and will help create a basis for the proposed redevelopment program(s).

It is also anticipated that the studio will compile a series of case studies of quality redevelopment in towns with a comparable scale and demographics to better understand the fundamentals that drive redevelopment and the determinants of financial feasibility.

Consultation with selected developers and possibly other real estate experts with a tract record in this type of redevelopment will take place through interviews or guest lectures in the studio. The results of this analysis and reality checks will be incorporated into the various redevelopment scenarios.

The core study area will be subject to a more detailed analysis in terms of building types, parking, vacant parcels, and other relevant features. The urban design plan(s) will use three-dimensional representations of the various redevelopment scenarios, along with corresponding development programs (square feet by use or building type) and potential fiscal implications. The studio will identify needed public and private improvements, as well as changes to the Borough's regulatory documents.

There is no "silver bullet" that planning (or any other discipline) can offer to solve downtown Highlands' challenges. However we firmly believe that clear thinking and sound planning analysis can make a dramatic difference, for the better.

Should the Borough's planning and economic development efforts focus on attracting developers of new, market-rate downtown housing? Should they focus on new destination and specialty retail; transit-oriented development; artist housing; new residential addresses that capitalize on access to a revitalized and better-protected waterfront with new parks, open space and recreational activities; new information-age industries; more water dependent uses; heritage tourism?

The likely scenario is some combination of the above, along with something unforeseen.

Students will work individually, or in small groups, within a framework collectively defined. The final work product will be the result of our collective work. It is likely that more than one redevelopment scenario will be explored, for presentation to the Borough. For example, the urban design and redevelopment plan for the Valley to Vets corridor may have three scenarios of increasing density and scale.

The approach will also be to tailor, to the extent possible, the final scope of the studio's deliverables to each student's strengths, skills and interests. As such, we may have more polished and detailed deliverables in certain areas and less so in others. The final scope and list of deliverables will depend on both the results of the discovery process and on the individual preferences and capabilities expressed by the students.

The studio will apply appropriate metrics to document the issues, evaluate alternatives and calculate impacts. It is anticipated that GIS-based metrics will be used extensively.

Studio Intent

The intent of this studio is to provide a service to the host community. It is not the intent of this studio to perform academic exercises, no matter how interesting they may be, if they do not contribute materially to the final product. The fact-finding will be targeted and focused. We will not accumulate data unless there is a specific reason to do so.

Stakeholder Engagement

The studio will engage a variety of local officials, business owners, and stakeholders from Highlands and Monmouth County in discussions regarding the preferred redevelopment scenarios for the downtown. The range of stakeholders to be engaged is yet to be determined, and may include elected and appointed officials, local businesses and commercial property-owners, and non-profit organizations. Stakeholder meetings, in Highlands and in the studio are anticipated. An informal mid-course correction / evaluation meeting is anticipated, as is a more formal final presentation to the community.

Tentative Schedule³

January 27	Introductions studio objectives studio schedule assign documents for review assemble teams best practices / case study presentations
February 3	Travel to Highlands (weather permitting) field work stakeholder interviews
February 10	Debrief from site visit initial scoping initial assignments understand the Redevelopment criteria and process build the Sketch-Up model
February 17	Research analysis scoping building and street analysis
February 24	Research analysis scoping susceptibility to change analysis complete the Sketch-up Model
March 3	Visioning: alternative scenario(s) discussion
March 10	Define alternative scenario(s) discussion
March 17	Spring Break – No Class
March 24	Progress review Mid-course evaluation / correction
March 31	Deliverables plan production: block structure, street network
April 7	Deliverables plan production: land use, building types and building typologies
April 14	Deliverables plan production: public spaces, landscape plan and architectural design vocabulary
April 21	Deliverables plan production: development program(s); impacts
April 28	Deliverables plan production: development program(s); impacts
May 5	Last Class -- Draft final presentation – review and rehearsal
May ?	Final Presentation – Outside Review

³ A more detailed schedule will be distributed at the beginning of the studio.

Studio Deliverables

The anticipated deliverables will consist of a 30-minute presentation to the Highlands community – typically the Governing Body and / or the Planning Board -- as well as a written report summarizing the discovery process undertaken by the studio, the proposed recommendations and their justification. The deliverables will be polished, clear, compelling and justifiable.

Evaluation

Grades are based on overall attendance, level of participation and engagement, and individual contributions towards the deliverables. Depending upon individual circumstances and the size of the class, participation in the final presentation may also contribute to the final grade.

Academic Integrity Policy

All members of our community must be confident that each person's work has been responsibly and honorably acquired, developed, and presented. Any effort to gain advantage not given to all students is dishonest, whether or not the effort is successful. A violation of academic honesty is a breach of trust, and will result in penalties, including possible suspension or expulsion. When in doubt about plagiarism, paraphrasing, quoting, or collaboration, please consult the course instructor or go to: <http://academicintegrity.rutgers.edu/students.shtml>.

All sources of photos, websites and other references must be discreetly but legibly cited in all work including PPT presentations, reports and other written and / or graphic deliverables.

Readings

There are no required textbooks for this studio.

We will refer to a number of technical, background documents such as the 2004 Master Plan, 2006 Bayshore Region Strategic Plan, 2009 Master Plan Reexamination Report, 2013 Highlands Recovery Plan, and 2013/4 Strategic Revitalization Planning Report (if available), along with the Borough's Zoning Code and Land Development Regulations and other relevant Monmouth County and/or local planning or background documents.

These documents will all be posted on SAKAI and/or available at the studio. Other technical documents may be added to this list, as the work progresses. Students will be assigned to review these documents and summarize relevant sections for the benefit of the studio. Discussions of these and other readings will take place as appropriate.

We may also be reading relevant selections from some, or all, of the following publications:

Reid Ewing and Otto Clemente Measuring Urban Design Island Press 2013

Douglas Farr Sustainable Urbanism: Urban Design With Nature John Wiley & Sons, 2008.

Daniel Palazzo and Frederick Steiner Urban Ecological Design: A Process for Regenerative Places Island Press 2011

Galina Tachieva Sprawl Repair Manual Island Press 2010

Emily Talen City Rules – How Regulations Affect Urban Form Island Press, 2012

Students are expected to conduct research and read widely on topics relevant to the deliverables as the need may arise and as the studio progresses.