Solid as a Rock: Residential Jewels along Lake Michigan

Presentation Number: 87765

A Tour of fabulous residences along Chicago’s Lake Michigan showcasing exquisite landscape with hardscapes designed to complement each unique architectural style. Elements presenting for discussion include: hardscape design and materials, construction challenges, quarry sourcing and collaboration, bluff retention, storm water management, planting design and maintenance requirements.

Learning Objectives
1. Natural stone construction techniques, applications and specification for hardscape intensive landscapes
2. Understanding site and architecturally specific planting design; including maintenance and irrigation applications for long term success in the residential garden
3. Solutions for storm water management in water-burdened municipalities
4. Design challenges for historical sites with contemporary stone and hardscape materials
5. Bluff retention design and professional collaboration; foundation, engineered stone and soils

Field Session Co-Leaders:
Field Session Leader: Deirdre E. Toner, ASLA, DT Design, detoner@live.com
Field Session Co-Leader: Amy Olson, ASLA, PLA, Olson Landscape Architecture, aolson@olsonlandarch.com
Field Session Presenter:
Daniel G. Wood, LEED GA, Lurvey’s Landscape Supply, dwood@lurvey.com

I. Calling the Bluff, Lake Forest, Illinois

Designed and Presented by Nancy Lyons Hannick, PLA. ASLA. NLH Landscape Architects Landscape.
Situated on Lake Michigan with a 55 degree 60 ft. high bluff, NLH Landscape Architects presents a landmark case study for using new techniques for erosion control and slope stabilization of a fragile ecosystem in the
context of a historically significant landscape ultimately recapturing 400 ft. of lakefront property. New terraces punctuate the bluff and provide resting points along the way. Lannon stone stairs and pathways ease the many transitions between the terraces. The rotunda terrace features a blue chip gravel and bluestone surface with a formal planting bed that can be viewed from many levels. The planting design weaves together ideas from the English garden tradition with principles from the great Italian lake villas and the naturalistic prairie aesthetic of O.C. Simonds.

Design Intent: Unusual client requirements in design, construction challenges, planting design style.

Major issues:
1. Save house from falling into the Lake
2. Design a series of terraces, retaining walls and a stair and ramp system to provide outdoor living spaces and access from the main living level of the house down to the beach and boat house in an easy transition
3. Save the Oak tree in the cloister garden – A story here!
4. Coordinate with his engineering team and bring on additional consultants as needed to achieve the goals
5. Coordinate with the coastal engineering team on the design of the beach

Key Points: steep slope retention, waste water management and planting design for bluff

Hardscape Discussion: All pieces of stone were produced from shop drawings and were numbered. All slope steps provide a 14” tread and 6” rise, along with, ample landings for a gracious migration, while being able to view the slope experience.

Materials
- Driveway curbing, Reclaimed granite cobbles 5x5x10
- Driveway paving, Carnelian granite cobbles 4x4x4 and 4”x4”x8”, snapped sides and thermal top,
- Front walkway and stoop, Bluestone, blue thermal, dimensional paving and treads with a rock faced edge treatment
- Upper terraces, patios and walkways, Bluestone, blue thermal, dimensional paving and treads with a rock faced edge treatment, Bluestone chips, Eden Dimensional Flagstone paving, Rock faced wall coping and curbing. Planters, Haddonstone.
- Slope walkways, steps and wall coping, Eden dimensional flagstone, rock faced steps, rock faced wall coping.
- Slope Retention walls, Creta stone, concrete wall stone units. a network of over 1-1/2 miles of drain tile and a deeply augured wicking system to relieve the hydraulic pressure on the bluff
- Lower terrace fountain, seating features, balustrades and railing coping, Custom Indiana limestone.
- Shoreline rip rap-Granite.

II. Historical Gem, Lake Forest, Illinois

Designed by Peter Schaudt, FASLA, Hoerr Schaudt Landscape Architects.
Presented by Mike Ciccarelli, PLA, LEED AP.
This charming, English country style home was designed in the early 20th century by H.T. (Harrie) Lindeberg and is nestled quietly into enchanting woodland. The garden’s focal point is a placid lap pool, where a classical fountain and masonry walls establish a serene sense of enclosure. Adjoining the pool court, a foursquare cutting garden and organic vegetable garden are bordered by a tool house at the ravine’s edge. The garden’s structure dissolves into a natural wood that blends with the surrounding neighborhood.

For more on the architecture of H.T. Lindeberg, see Domestic Architecture of H.T. Lindeberg, (Acanthus Press Reprint Series. 20th Century, Landmarks in Design, V. 6)

Key Points: historic renovation and unique design & construction challenges w/ Design Review Boards, planting design, horticultural selections, maintenance challenges and client requirements for site

Hardscape Discussion: The house architect designed in a way so that his structures felt like they had a hat on them, and built to look old. This theme was extended throughout the garden rooms, walls and columns, by matching the homes materials and proportion. All spaces were laid out on strong axis’s from the structure and to each other.

Specialty Limestone and its use in the landscape, working with quarries directly

Materials:
- Matching wall veneer: Eden 2”-6” splitface, Eden Windsor 2”-6” seamface and clay face brick for the masonry walls
- Wall and fountain copings: Eden natural bedface, thickness varied depending on application, and with rock faced exposed edges
- Eden splitface with pitched exposed edges on the face on the base course on the fountain.
- Variegated Indiana Limestone Pool deck and full bull nose pool coping
- Eden irregular flagstone pathways and treads in the Potager and Cutting garden
- Eden flagstone, 2”-6” splitface and Windsor veneer and perhaps some Eden cut dry wall, for the garden walls
- Motor court edging, Eden 2”-6” splitface veneer
- Wisconsin Flint gravel for the driveway
- Garden room, Eden dimensional Flagstone
- Garden patio, Bluestone, blue irregular flagstone
- Woodland Steppers, Eden irregular flagstone
- Garden room fountain (Indiana Limestone, Cast with Mexican pebbles inside

III. Bluestone Beauty, Lake Forest, Illinois.

Designed and Presented by John Mariani, PLA, ASLA, Mariani Landscape.

Key Points:
1. The planting design is a "hybrid" of traditional and naturalistic--very traditional as it relates back to the house. And then transitions into a much more naturalistic design using native plants further away from the house. Two different maintenance techniques and levels of expertise are required due to use of
ornamentals in the formal landscape areas surrounding the home and the native plants in the naturalistic areas.

2. The New York bluestone flat work is 2" thick with "chiseled" edge finish to provide an antique appearance to give character and age to the hardscape. Granite Pavers were used as curbing and a decorative border in the motor court.

3. Storm water is allowed to travel down a usually-dry creek bed and into a pond off site.

Hardscape Discussion: The driveway was unable to be circular so they had to detail the motor court entry in way to accommodate vehicles in the tight area, but not have it be a large expanse of asphalt. The Rear Terrace can function for a large scale event or work as separate rooms for more intimate connections at a larger gathering. The rear garden steps are a play on Ha-Ha walls and visually disappear from the home.

Materials
- Driveway and curbing, reclaimed granite cobbles 5x5x10
- Front Entry walls and columns, match the house veneer and Indiana limestone coping with a radius edge treatment.
- Front and side walkways, Bluestone, full color natural cleft dimensional paving
- Pool deck, pool and spa, Bluestone, full color natural cleft dimensional paving, Bluestone, blue natural cleft coping with a thermal bull nose edge treatment.
- Rear terraces, Bluestone, full color natural cleft dimensional paving
- Rear Terrace walls, veneer to match the home and Indiana Limestone wall coping with a radius edge treatment
- Rear terrace stairs, Bluestone, full color natural cleft with a rock faced edge treatment, risers, to match the house veneer
- Rear garden walls and coping, veneer and coping stone to match the house veneer
- Rear garden steps and risers, Pennsylvania fieldstone
- House and garden walls veneer:
  1. South Bay Quartzite, Ashlar Cut
  2. South Bay Quartzite, Squares and Rectangles cut
  3. Canyon Yellow Granite, Squares and Rectangles cut
  4. Juperana Granite, Squares and Rectangles cut
  5. Hampton Granite, in brown and beige tones, Squares and Rectangles cut

IV. Tudor Terrific, Wilmette, Illinois.

Designed by Mike Blackwell, Eric Braun, ASLA, and Adam Strtewagen, The Chalet- Landscape Division. This English Tudor residence features a one-of-a-kind landscape design with surprises around every turn. The front features a formal style landscape with boxwood hedges, flowering shrubs on standard and bluestone walkways. Once you enter the backyard, however, you are immersed in a backyard oasis with many features including extensive perennial gardens, rose garden, swimming pool, poolside cabana and outdoor living space for entertaining, Valders dimensioned stone pool patio, bluestone patios and stone seatwalls, vegetable garden, a birch grove, woodland pathway and much more. These beautiful hardscape and softscape features create dazzling year-round interest throughout the property.
Key Points: design challenges in backyard tennis court removal, site drainage issues, perennial gardens, planting design, plant selection per site requirements, and maintenance.

Hardscape Discussion: Nicely themed areas with similar and complimentary materials to create a rhythm throughout the site which unified the spaces and elements.

Materials
- Driveway existing Holland stone concrete pavers, Manufacturer unknown
- Front Walkway and stoop, Bluestone, blue natural cleft dimensional paving and Thermal Blue Bluestone treads with a thermal edge treatment
- Side walkways, Bluestone, blue natural cleft dimensional paving
- Rear Pool, deck and patio, Eden dimensional flagstone, Valders Dove white full bull nose coping sandblast surface treatment, Bluestone, blue thermal banding.
- Pergola columns and walls, Eden splitface veneer 2”-6” and Eden 2” coping with rock faced exposed edges
- Various garden pathways, Bluestone chips, Eden dimensional and irregular flagstone, Mexican pebbles, Bluestone, blue irregular flagstone
- Garden patio, Bluestone, blue natural cleft dimensional paving.
- Garden Patio Seat Wall, Eden splitface veneer 2”-6” and Eden 2” coping with rock faced exposed edges


The design intent was to focus on the grandeur of the lakefront while creating purposeful outdoor living spaces. One special client request was that guests would be drawn to travel all of the way down to the beach level (and not just stop at the comfort of the upper terraces). Another client request was that ample greenspace would be incorporated into the hardscape, terraces and structures.

1. Key Points: One big challenge was managing site access for manpower and materials; in essence we were removing the sloped bluff and replacing it with structures. The other notable challenge was the intensified weather of the Lake Michigan shoreline during the construction process—the whole project was very complicated to design and construct. Landscape maintenance crew visits the site on a weekly basis. The strong winds off of the lake tend to affect plant choices for the seasonal planters. In general, the weather can be surprisingly abusive. Seven catch basins and a series of linear pavement drains collect all rainwater that falls on the site. This stormwater is conveyed down to a diffuser system at the beach level before being returned to the lake. The snow melt system eliminates the need for any wintertime snow or ice control efforts.

2. Stormwater Management: All storm water from house and landscape flows to Lake through a designed drainage system = annual municipal $ credit to homeowner. North turf border at the beach
level lawn becomes storm surge path to beach where water is collected in extra-large underground diffuser with gravel to boulder filters, then onto lake down terraced curve.

3. 278 Caliper Inches of Tree replacement was incorporated into design of the landscape

4. Pavilion terrace, driveway, all stoops, walkway route to the spa and the circular stairway and the cabana are designed w/ underground glycol based snow melt system or floor heating

5. AC Unit placement in landscape - Created sunken French Terrace off LR with vault beneath for ac units.

6. Design Intent: Create extensive family living spaces with focus on 90’ deep beachfront to the shoreline. The pool and hardscape was designed to drop out of view toward the lake. The roofline of the outdoor kitchen/pavilion was designed to minimize obstructing the views toward the lake. TF of the house to the waterline is a 39’ transition. Pre-existing tableland became the upper terrace and the balance of the structures were incorporated into the steeper slope. The terraced pavements accomplish a 28’ grade change. Smart Home works in original design, IE: All lights are programmable by the Crestron system or motion/body heat sensitive

7. Areas of the upper bluestone terrace are built over 28’ of compacted gravel. The herb garden, pool, pavilion, mezzanine, and the cabana level living spaces are built over substantial foundations. Outdoor Kitchens- Kalamazoo Gourmet. Created columns in design to incorporate sanitary venting and electrical.

8. Stone: Color transitions: Upper terrace--Dry set bluestone, ashlar, Pool deck and pavilion level--Lilac Bluestone mortar set over concrete and/or dry set over structural foam and gravel. All drawn/engineered to incl. pool deck water grates; Herringbone, dry set over gravel. Beach level -- Natural beach tones—Stained concrete and Krukowski Carmel Cream for step nosing

9. Landscape Design created then worked w/ structural engineer to create building plans to code. Carlson designed and coordinated installation of all finishes with input from architect and interior designer. Soil borings were taken prior to design. During construction all bearing soils and concrete pours were tested. Design or construction modifications were coordinated with the structural engineer for absolute post-construction comfort level.

10. Vanishing Edge Pool- Tank & pump system designed for vanishing edge trough water to be stored and circulated when the vanishing edge is not in use. The storage tank is located below the floor of the pool equipment room. The pool is left full for winter, the water temperature is dropped to 60 degrees. This preserves the mosaic tile at the vanishing edge from stress of winter covers. This also cuts back on the overall annual cost of pool maintenance by eliminating the seasonal opening and closing costs for an outdoor pool.

11. Beach Cabana: French Barn design intent w/ client ability to keep conveniences at beach level and to prevent excess travel to home.: Distressed concrete floor, master Ice Maker, wave runner garage, Changing room w/ lockers, laundry, outdoor and indoor showers, 80” TV, Dbl. roller screened porch and turf lawn transition to beach boulder retaining wall. The beach level lawn is installed over reinforcing grid. The Cabana and all interior floors are pitched & the walls are finished with Distressed Wood porcelain plank tiles for ease of hose-out if needed.

12. #78 sub-contractor companies contracted and managed by Carlson w/ #7 being professional alliance subs of structural engineer, etc...

13. Hardscape Discussion: Replaced the failing bluff with an engineered site and received extraordinary approval to do so and transitioned the site to the lake.

Materials

- Driveway, Belgard paving, Mega Lafitt 3PC Cotswald Mist and Unilock Brussels rectangle bluestone banding.
• Front Entry and stoop, Bluestone, full color thermal dimensional paving and blue thermal treads with a rock faced edge treatment. Wing Walls, Valders grey dimensional rock faced veneer and Indiana Limestone coping with a chamfered edge treatment.
• Rear Stoops, Bluestone, lilac thermal dimensional paving and treads with a rock faced edge treatment, Valders grey dimensional rock faced veneer.
• Pool Deck, Bluestone, lilac thermal dimensional paving.
• Pool and Spa coping, Bluestone, lilac thermal with a thermal full bull nose edge treatment.
• Pool terrace walls, Valders grey dimensional rock faced veneer and Indiana Limestone coping with a chamfered edge treatment.
• Outdoor Kitchen and seating area, Valders grey dimensional rock faced veneer and Indiana Limestone coping with a sawn and eased edge treatment. Countertops, cast concrete dyed and polished and tile backsplash veneer.
• Steps between terraces, lilac thermal treads with a rock faced edge treatment.
• Lower terrace and columns, Bluestone, lilac thermal dimensional paving, Valders grey dimensional rock faced veneer and Indiana Limestone coping with a chamfered edge treatment.
• Circular staircase, poured in place concrete treads.
• Beach terrace, stamped concrete paving, walls, Valders grey dimensional rock faced veneer and Indiana Limestone coping with a chamfered edge treatment. Treads, Carmel thermal treads with a rock faced edge treatment.
• Other elements, Rip rap boulders, gun metal granite
<table>
<thead>
<tr>
<th>Time Period</th>
<th>Minutes</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>7:30-7:45 am</td>
<td>15</td>
<td>Bus Loading at McCormick Place. Depart after 15 min bus loading</td>
</tr>
<tr>
<td>7:45am – 8:45 am</td>
<td>60</td>
<td>Travel to #1</td>
</tr>
<tr>
<td>8:45-9:30 am</td>
<td>45</td>
<td>Site Tour &amp; presentation #1 ‘Calling the Bluff’</td>
</tr>
<tr>
<td>9:30-9:45 am</td>
<td>15</td>
<td>Walk to site #2</td>
</tr>
<tr>
<td>9:45-10:30 am</td>
<td>45</td>
<td>Site Tour &amp; presentation #2 ‘Historical Gem’</td>
</tr>
<tr>
<td>10:30-10:55 am</td>
<td>15</td>
<td>Bus Loading and Travel to #3</td>
</tr>
<tr>
<td>10:55-11:40 am</td>
<td>45</td>
<td>Site Tour &amp; presentation #3 ‘Bluestone Beauty’</td>
</tr>
<tr>
<td>11:40 am-12:10 pm</td>
<td>30</td>
<td>Bus Loading and Travel to Chalet Garden Center</td>
</tr>
<tr>
<td>12:10-12:45 pm</td>
<td>35</td>
<td>Box Lunch and walk within Chalet Garden Center, Bathrooms available</td>
</tr>
<tr>
<td>12:45-12:55 pm</td>
<td>10</td>
<td>Travel to Site #4</td>
</tr>
<tr>
<td>12:55-1:20 pm</td>
<td>25</td>
<td>Site Tour &amp; presentation #4 ‘Tudor Terrific’</td>
</tr>
<tr>
<td>1:20-1:45 pm</td>
<td>60</td>
<td>Bus Loading and Travel to #5</td>
</tr>
<tr>
<td>1:45-2:30</td>
<td>45</td>
<td>Site Tour &amp; presentation #5 ‘Jewel in the Crown’</td>
</tr>
<tr>
<td>2:30-3:30 pm</td>
<td>60</td>
<td>Bus Loading and Travel to McCormick Place</td>
</tr>
<tr>
<td></td>
<td>8</td>
<td>Total Hours</td>
</tr>
</tbody>
</table>

1. Sources
http://www.lurveys.com/landscape-stone
http://www.hoerrschaudt.com/residential/
http://www.chaletnursery.com/project-gallery.cfm/type/Landscape%20Portfolio