FROM THE GROUND UP
DEVELOPING THE DESIGN
THURSDAY, NOV 7 | 6:30-8:30PM
An Event By The

Urban Land Institute

Southeast Florida/Caribbean
Thank You to Our Host

NICHOLS BROSCH WURST WOLFE & ASSOCIATES, INC.
Architecture & Planning
Thank You to our Sponsors
The following sponsors make the ULI Young Leaders Group possible

Cymbal Development

MRED+U

STILES

Urban Land Institute
Southeast Florida/Caribbean
ULI is a nonprofit education & research organization dedicated to providing leadership in responsible land use and development and creating sustainable, thriving communities worldwide.

We have 43,000 members worldwide, from all sectors of land use – developers, designers, planners, engineers, attorneys, lenders, educators, builders, policymakers – everyone crucial to shaping the future of our communities.
Thank You

ULI is supported by the generosity of the following sponsors

[Logos of various sponsors]
Thank You

ULI is supported by the generosity of the following sponsors
Thank You

ULI is supported by the generosity of the following sponsors

13th Floor Investments
BBX Capital
Becker
Blanca Commercial Real Estate
CallisonRTKL
CBRE
Colliers International
DPZ Partners
EDENS
Fausto Commercial
Grant Thornton

Ingage Biz
Integra Realty Resources
JLL
KAST Construction
Mattoni Group
NBWW
Plaza Equity Partners
PNC Real Estate
SunTrust Bank
Terranova Corporation
Witkin Hults Design Group
Your Speakers

MARGINA DEMMEN
Associate
NBWW

BRUCE BROSCH
President
NBWW

DONALD WOLFE
Vice President
NBWW

KELSEY TRUJEQUE
Design Associate
Witkin Hults Design Group

CHI CHI TRUONG, PE
PM, Sustain. Coord, Marketing Dir.
Schwebke-Shiskin & Associates, Inc.

ALEJANDRO BOLIVAR
Commercial Broker
Cothrom Risk & Insurance Services
ULI’S YOUNG LEADERS PRESENT:

FROM THE GROUND UP

DEVELOPING THE DESIGN

THURSDAY, NOV 7 | 6:30-8:30PM
Recap Phase 1 - Getting Started on a Deal

What is a Developer?
Someone who creates, imagines, controls and orchestrates the process of acquiring a piece of property and making it available for a certain type of use.

Feasibility / Market Studies
Location, Surrounding Use, Market Opportunities, Cost...

Pro Formas
A very complicated spreadsheet that takes into account net operating income and development costs (hard costs and soft costs) to help you figure out your cap rate, and eventually your land value.

Higher Cap Rates = Riskier Projects
You have a property and a pro-forma...NOW WHAT?

Assemble an expert team of consultants

• Architects
• Interior Designers
• Surveyors
• Land Use Attorneys
• Civil Engineers
• Geotechnical Engineers
• Traffic Engineers
• Landscape Architects
• Structural Engineers
• MEP Engineers (Mechanical, Electrical, Plumbing)
• Life Safety Consultants
• Flood Proofing Consultants (Coastal Development)
• Other Consultants & Vendors
Considerations for Selecting an Architect

Architects plan, design, and review the construction of buildings.

Architects are the managing body of your design team.

Consider:

• design style
• expertise
• experience
• relationships
• other certifications (LEED, FGBC, etc.)
Contracts & Fee Structures

**AIA Contract Documents**
- Owner / Contractor
- Owner / Architect
- Architect / Consultant

**Fee Structure**
- Percentage of Construction Cost
- Fixed Fee
- Hourly Rate

**Additional Services**
Mitigating Risk

Contractual
- Don’t assume other consultants’ liabilities
- Limit your liability
- Waive consequential damages
- Establish a clear scope of services

Operational
- Biggest Exposure = Condo + High-End Residential
- Keep Proper Documentation (revisions, addendums, RFI, As Builts, etc.)
- Set expectations with Owner
  - No project will be perfect
  - Unforeseen conditions
  - Standard of Care
- Assemble the right team
What comes first - the Site or the Building?

Developer has a clear vision:
  • Architect/general contractor are first hires

Developer only has a general concept, or special circumstances...
  • Civil engineer might be your first hire to develop a conceptual site plan and establish design parameters
    - Stormwater (retention/discharge)
    - Pervious/Impervious ratios
    - Finished Floor Elevations
Site Due Diligence

Allow your civil/surveyor/land use attorney to perform their due diligence!

- Land use, platting, or re-zoning requirements
- Encumbrances, easement vacations, natural resources (trees, wetlands, species)
- Stormwater (retention, underground storage, trenches, wells), Finished floor elevations
- Soil - contamination, structural foundation capacity, roadway strength
- Environmental/Archeological sensitive & wellfield protection areas
- Concurrency (water, sewer, traffic, schools)
- Utility providers (water & sewer many not be the same agency)

*NOTE: if getting a budget beforehand, general contractors can give you $/SF for buildings typically, but it is very difficult to estimate the civil site construction costs
Site Due Diligence
First Steps - Feasibility

Initial studies can include site analysis, zoning analysis, and building program studies.

Critical Guidelines & Restrictions:

- *Required Setbacks from Property Lines*
- *Maximum Lot Coverage*
- *Floor Lot Ratio*
- *Maximum Height*
- *Maximum Density*
- *Other Requirements (parking, frontages, open space, etc.)*
Site & Zoning Analysis

Building Program

Hotel - 200 Guestrooms
Residential - 600 Apartments
+ Parking
+ Amenities
+ Ballroom
Site & Zoning Analysis

MIAMI 21
AS ADOPTED - JANUARY 2018
ILLUSTRATION 5.6 URBAN CORE TRANSACT ZONES (T6-89)

BUILDING DISPOSITION
LOT OCCUPATION

- Lot Area: 5,000 sq. ft. min.
- Lot Width: 120 ft. min.
- Lot Coverage: 85% max.
- Lot Depth: 180 ft. min.
- Adjacent Property: 15,000 sq. ft. min. for Residential Use 10,000 sq. ft. min. for Office & Commercial Use

- Floor Area Ratio (FAR): 1.5 (50% additional Public Benefit
- Parking at Front: 175% min. of FAR
- Open Space: 15% of lot min.
- Setback: 14 ft. from property line

BUILDING SETBACK
- Principal: 50 ft. min. (15 ft. min. above 1st Story)
- Secondary Front: 50 ft. min. (25 ft. min. above 1st Story)
- Side: 15 ft. min. (30 ft. min. above 1st Story)
- Rear: 15 ft. min. (30 ft. min. above 1st Story)

BUILDING CONFIGURATION
FRONTAGE
- Commercial: Permitted
- Retail: Permitted
- Terraces & Roofs: Permitted
- Parking: Permitted (1/400 and 1/450 sq. ft.)
- Storage: Permitted by Special Area Plan
- Gallery: Permitted by Special Area Plan

BUILDING HEIGHT
- Max. Height: 7 Stories
- Max. Height: 12 Stories
- Max. Story Height: Adjustable (subject to Community Zoning) Zones except T2
Site & Zoning Analysis
Massing Studies
Design Phases

<table>
<thead>
<tr>
<th>Phase</th>
<th>Key Players</th>
<th>Architect Fees</th>
<th>Civil Fees</th>
</tr>
</thead>
<tbody>
<tr>
<td>Schematic Design</td>
<td>Architects, Land Use Attorneys, Surveyors, Civil Engineers, Landscape Architects</td>
<td>15 %</td>
<td>15%</td>
</tr>
<tr>
<td>Design Development</td>
<td>Structural Engineers, MEP Engineers, Life Safety Consultants</td>
<td>20%</td>
<td>45%</td>
</tr>
<tr>
<td>Construction Documents</td>
<td></td>
<td>40%</td>
<td>5%</td>
</tr>
<tr>
<td>Bidding</td>
<td>General Contractors</td>
<td>5%</td>
<td>5%</td>
</tr>
<tr>
<td>Construction Administration</td>
<td></td>
<td>20%</td>
<td>30%</td>
</tr>
</tbody>
</table>
Schematic Design - Architecture

How the Building Looks
Site + Program
The “Fun” Part

Consultants Involved
Architect
Land Use Attorneys
Surveyors
Civil Engineers
Landscape Architects

Important Deliverables
Planning & Zoning Submittal
Urban Development Review Board
Schematic Design - Architecture
A Civil Engineer prepares the site for development, meeting all the programming requirements of the project.
Schematic Design - Civil Responsibilities

We move dirt & water...

Dirt
- Pavement design
- Erosion & sediment control
- Site grading & pedestrian access

Water
- Stormwater quantity & quality management
- Domestic potable water to serve the site
- Sanitary sewer infrastructure from the site

Other things
- Site access
- Emergency services (fire access, hydrants, staging areas)
- Pavement marking & signage
Schematic Design - Stormwater Design
Schematic Design - Stormwater Design
Landscape architecture combines **art** and **science**.

It is the profession that **designs**, **plans**, and **manages** our land.

Meets human needs by making wise use of our **environmental resources**.
Schematic Design - Landscape
Design Development - Architecture

How the Building Works
Selection of Systems

Consultants Involved
Architect
Civil Engineers
Landscape Architects
Structural Engineers
MEP Engineers
Life Safety Consultants

Important Deliverables
Design Development Package
Early Bidding / Pricing
Design Development - Landscape

**Critical Root Zone**

**Dripline**

- Roots extend out 2 to 3 times the dripline.

**DBH** = Diameter of trunk at 4.5 feet above ground

**25 feet**

**Critical Root Zone and Tree Protection Zone**

Extends out from the trunk to the dripline, or to a distance of 1.25 per inch DBH, whichever is greater.

If this tree's DBH is 20 inches then the critical root and tree protection zone is a 25 foot area (radius) around the tree's trunk.
### Trees Disposition Plan

<table>
<thead>
<tr>
<th>Parcel</th>
<th>Tree #</th>
<th>Common Name</th>
<th>Scientific Name</th>
<th>DBH (in)</th>
<th>Height (ft)</th>
<th>Spread (ft)</th>
<th>Radius* (square ft)</th>
<th>Boast Zone</th>
<th>Canopy</th>
<th>Probable roots</th>
<th>Spacing</th>
<th>Disposition</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>SF 10</td>
<td>1</td>
<td>Willow</td>
<td>Salix sp.</td>
<td>3</td>
<td>15</td>
<td>9</td>
<td>20</td>
<td>10</td>
<td>4</td>
<td>No</td>
<td>No</td>
<td>Remove</td>
<td>$300</td>
</tr>
<tr>
<td>SF 11</td>
<td>2</td>
<td>Willow</td>
<td>Salix sp.</td>
<td>3</td>
<td>15</td>
<td>9</td>
<td>20</td>
<td>10</td>
<td>4</td>
<td>No</td>
<td>No</td>
<td>Remove</td>
<td>$300</td>
</tr>
<tr>
<td>SF 12</td>
<td>3</td>
<td>Willow</td>
<td>Salix sp.</td>
<td>3</td>
<td>15</td>
<td>9</td>
<td>20</td>
<td>10</td>
<td>4</td>
<td>No</td>
<td>No</td>
<td>Remove</td>
<td>$300</td>
</tr>
<tr>
<td>SF 13</td>
<td>4</td>
<td>Willow</td>
<td>Salix sp.</td>
<td>3</td>
<td>15</td>
<td>9</td>
<td>20</td>
<td>10</td>
<td>4</td>
<td>No</td>
<td>No</td>
<td>Remove</td>
<td>$300</td>
</tr>
<tr>
<td>SF 14</td>
<td>5</td>
<td>Willow</td>
<td>Salix sp.</td>
<td>3</td>
<td>15</td>
<td>9</td>
<td>20</td>
<td>10</td>
<td>4</td>
<td>No</td>
<td>No</td>
<td>Remove</td>
<td>$300</td>
</tr>
<tr>
<td>SF 15</td>
<td>6</td>
<td>Willow</td>
<td>Salix sp.</td>
<td>3</td>
<td>15</td>
<td>9</td>
<td>20</td>
<td>10</td>
<td>4</td>
<td>No</td>
<td>No</td>
<td>Remove</td>
<td>$300</td>
</tr>
<tr>
<td>SF 16</td>
<td>7</td>
<td>Willow</td>
<td>Salix sp.</td>
<td>3</td>
<td>15</td>
<td>9</td>
<td>20</td>
<td>10</td>
<td>4</td>
<td>No</td>
<td>No</td>
<td>Remove</td>
<td>$300</td>
</tr>
<tr>
<td>SF 17</td>
<td>8</td>
<td>Willow</td>
<td>Salix sp.</td>
<td>3</td>
<td>15</td>
<td>9</td>
<td>20</td>
<td>10</td>
<td>4</td>
<td>No</td>
<td>No</td>
<td>Remove</td>
<td>$300</td>
</tr>
<tr>
<td>SF 18</td>
<td>9</td>
<td>Willow</td>
<td>Salix sp.</td>
<td>3</td>
<td>15</td>
<td>9</td>
<td>20</td>
<td>10</td>
<td>4</td>
<td>No</td>
<td>No</td>
<td>Remove</td>
<td>$300</td>
</tr>
<tr>
<td>SF 19</td>
<td>10</td>
<td>Willow</td>
<td>Salix sp.</td>
<td>3</td>
<td>15</td>
<td>9</td>
<td>20</td>
<td>10</td>
<td>4</td>
<td>No</td>
<td>No</td>
<td>Remove</td>
<td>$300</td>
</tr>
<tr>
<td>SF 20</td>
<td>11</td>
<td>Willow</td>
<td>Salix sp.</td>
<td>3</td>
<td>15</td>
<td>9</td>
<td>20</td>
<td>10</td>
<td>4</td>
<td>No</td>
<td>No</td>
<td>Remove</td>
<td>$300</td>
</tr>
</tbody>
</table>

---

### Tree Replacement Chart

- **Total calculated D.B.H. of shade trees to be removed:** 233
- **Replacement 2" D.B.H. trees required for shade trees:** 80
- **Total number of palms removed:** 0
- **Total replacement 4" D.B.H. trees REQUIRED:** 40
- **REQUIRED Tree Trust Fund Contribution:** $80,000
- **REQUIRED Tree Protection Bond:** $16,000
Design Development - Landscape

LANDSCAPE LEGEND
Information Required to be Permanently Affixed to Plan

<table>
<thead>
<tr>
<th>Transient Zone: T5-C</th>
<th>Net Lot Area</th>
<th>51 acres</th>
<th>21,966 s.f.</th>
</tr>
</thead>
</table>

OPEN SPACE

<table>
<thead>
<tr>
<th>REQUIRED</th>
<th>PROVIDED</th>
</tr>
</thead>
<tbody>
<tr>
<td>2,167 sq ft</td>
<td>9,086 sq ft</td>
</tr>
</tbody>
</table>

A. Square Foot of open space required, as indicated on site plan:
Net lot area = 21,966 sq ft x 10% = 2,196 sq ft

B. Square Foot of parking lot open space required by Article 8:
No. outside/ground-level parking spaces = 220

C. Total sq ft of landscaped open space required: A + B = 2,417 sq ft

LAWN AREA CALCULATION

A. 2,417 sq ft of landscaped open space required by Miami 21

B. Maximum lawn area [not permitted] = 20% x 2,417 sq ft = 484 sq ft

484 sq ft

489 sq ft

TREES

A. No. trees required per net lot acre:

Lane existing number of trees meeting minimum requirements

22 trees x .51 net lot acres = 11

B. % Palms Allowed:

No. trees provided x 20% = 11

C. % Natives Required:

No. trees provided x 30% = 3

D. % Drought tolerant and low maintenance:

Number of trees provided x 20% = 2

E. Street trees (minimum average spacing of 50 ft c.c.):

333 linear feet along street x .33 = 111

F. Street trees located directly beyond power lines (minimum average spacing of 25 ft c.c.):

N/A

G. Total Trees Required:

A + E + F = 22

Total Trees

22

23

SHRUBS

A. No. of shrubs required = No. trees required x 10

220 shrubs

284 shrubs

B. % of native shrubs required:

No. shrubs provided x 30% = 66 shrubs

C. % Drought tolerant and low maintenance required:

No. shrubs provided x 30% = 110 shrubs

SEE LANDSCAPE LIST

*Includes 2 existing trees to remain.
Outside Permitting Agencies

Once Programming is complete & agreed upon, release the Civil for all outside permitting
Civil permits normally take a minimum of 6 - 8 months before you are ready for a building permit
submittal (many approvals are tied to other processes)

**Paving & Drainage Permits**
- Environmental Resource Permit
- MDC Paving & Drainage (PW) Approval
- DERM Class II Outfall Connection Permit
- DERM Class VI Contaminated Drainage Permit
- DERM Stormwater Drainage Well Approval
- Fire Site Plan & Access Approval
- FDOT Drainage Connection Permit

**Water & Sewer**
- M-DWASD Permit
- Fire Department Water Supply Approval
- DERM Water Main Extension Approval
- FDOH Water Main Extension
- DERM Sanitary Main Extension
- DERM Sanitary Lift Station
- FDOT Utility Connection

**Traffic Permits**
- MDC Traffic Engineering Approval
- FDOT Driveway Access Permit
- FDOT Construction Agreement

**Other Permits**
- Municipal (PW) Right-of-Way Permit
- Municipal Engineering Permit
Permitting Approval Process

Example: Water Main Approval

1. Fire Site Approval
   - 2 Weeks

2. M-DWASD Permit
   - 12 Weeks

3. DERM Approval
   - 60 Days

4. Fire Approval
   - 30 Days

5. FDOH Approval
   - 30 Days
How the Building Gets Built
The more information, the better!

Consultants Involved
Civil Engineers
Structural Engineers
MEP Engineers
Life Safety Consultants
Other Vendors/Consultants
General Contractor (if no bidding)

Important Deliverables
Permit Set
Construction Documents for Complete Pricing
Construction Documents
Bidding

Selecting a General Contractor

Assist the client by answering questions or providing additional documentation

**Guaranteed Price** = provided by the contractor only and based on material costs, local labor costs, contingencies, and inflation.
Construction Administration

Ensuring Proper Execution

Architect performs periodic site visits

RFIs, Shop Drawings, Change Orders

Civil Engineering Inspectors review...
- Density Testing
- Installation Inspections
- Exfiltration & Lamping
- Pressure Testing
- Subgrade, Baserock, Pavement As-Built Review
- Agency Certifications
Next Steps in Development...

PHASE III:
APPROVALS + PERMITTING
SAVE THE DATE FOR

PHASE 3

APPROVALS + PERMITTING

TBD
FORT LAUDERDALE EVOLVES
CURATING THE FUTURE

Monday, March 9, 2020
The Ritz-Carlton Fort Lauderdale
Thank you to our host
Thank You

To learn more, visit us online at www.seflorida.uli.org