Houston Street Project

SHoP Architects
New York City

The Houston Street Project poses a far greater challenge to information management than its relatively small size seems to imply. This high-end residential development, located in an up-and-coming New York neighborhood, negotiates an incredibly complex set of rules and relationships, such as irregular site geometry, proximity to MTA tunnels, and special district codes, where the use of masonry was required. Masonry implies a monolithic treatment of the facade, yet panelization, due to cost, demands that fabrication dictates the design. The model, then, required us to know the location of every brick on the facade, for not a one could overhang any of its adjacent neighbors by more than 3/4" at any given point.

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Panel:
- Min. depth of concrete behind brick = 5"
- 2 bearing connections + min. of (4) tie-backs per panel
- Panels to be connected back to columns for Min. movement - cannot bear on slab
- 3/4" expansion joint between all panels

Installation:
- Panel weight: 3000 - 5000 lbs.
- Number of picks to enclose building

Brick:
- Modular half brick - dry pressed
- Flemish bond
- Dims: 7-5/8", 2-1/4", 3-7/8"
- Coursing to be continuous across panels in two axes
- 3/4" maximum overlap from brick to brick

Code:
- Placement of property line within panel geometry
- Max. protrusion % (10 % per 100 sf of surface)

Building and site:
- Irregular site
- High value of residential sf
- Economies of scale - Max variation with typical panel
- Eccentric panels only at corner conditions
- Floor to floor dim: 10’-6”
- Column spacing: 9’-6” 3/4
- Optimum window opening: 1/2 panel + finish

Transport:
- Truck bed dimensions
- Delivery stress tolerances
- Bowing tendencies

Typical Flemish Bond layout in elevation
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The efficiency in the system arises out of the idea that by milling 1 and 1/3 of a full panel, every single panel in the building can then be made from this master mold. This milled mold is used to create the negative rubber form liners, and so can be reused hundreds of times. This mold is also the most expensive part of the process, so through careful planning of the geometry, we achieve the greatest amount of differentiation with the least amount of customization. As it is pointed out on this diagram the only eccentric panels are the corner spandrel pieces.