



**Civiltech Engineering, Inc.**

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# Central Business District Streetscape Improvements

Village of Glen Ellyn

March 2020



# Exposed Aggregate | Pros / Cons

## Pros

- Textures and colors are highly customizable
- Low installation cost relative to brick pavers (\$14 / SF)



# Exposed Aggregate | Pros / Cons

## Cons

- Colors and textures are very hard to recreate for future repairs
- Requires highly skilled labor to install correctly, and only one chance to get right
- Concrete slabs will crack, so scoring pattern must become a part of the design
- Extremely susceptible to damage from salt/deicing agents – requires regular sealing
- Minimal aesthetic value and benefit compared to more historic material options
- Village experienced long lead time when obtaining aggregates for Fall 2019 mock-ups



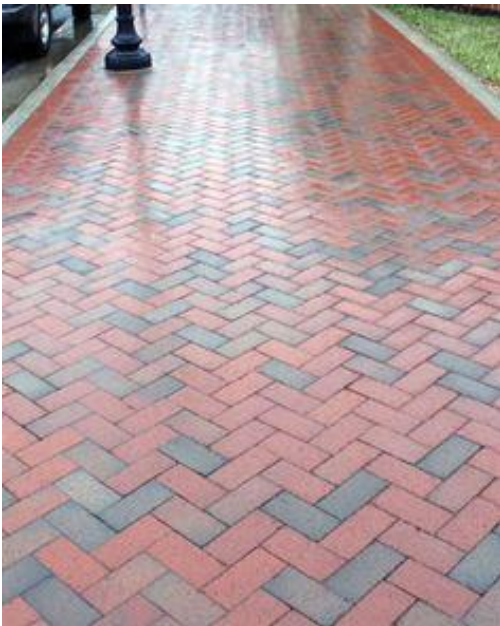
# Fired Clay Brick Paving | Pros and Cons

## Pros

- Historic material with rich colors and textures
- Classic look that never goes out of style
- Extremely durable and low maintenance
- Fired clay brick does not fade over time
- Pavers can be re-set after repairs

## Cons

- High installation costs/skills compared to cast-in-place pavement
- Limited sizes/shapes and colors
- Robust detailing and reinforcement needed to ensure a durable and stable installation



# Fired Clay Brick Paving | Patterns

- Patterns can be complex or simple
- Patterns can influence the movement of people or guide the eye



# Fired Clay Brick Paving | Patterns

Brick patterns from historic Glen Ellyn historical buildings



McCallister Wallace Dept. Store  
on Crescent



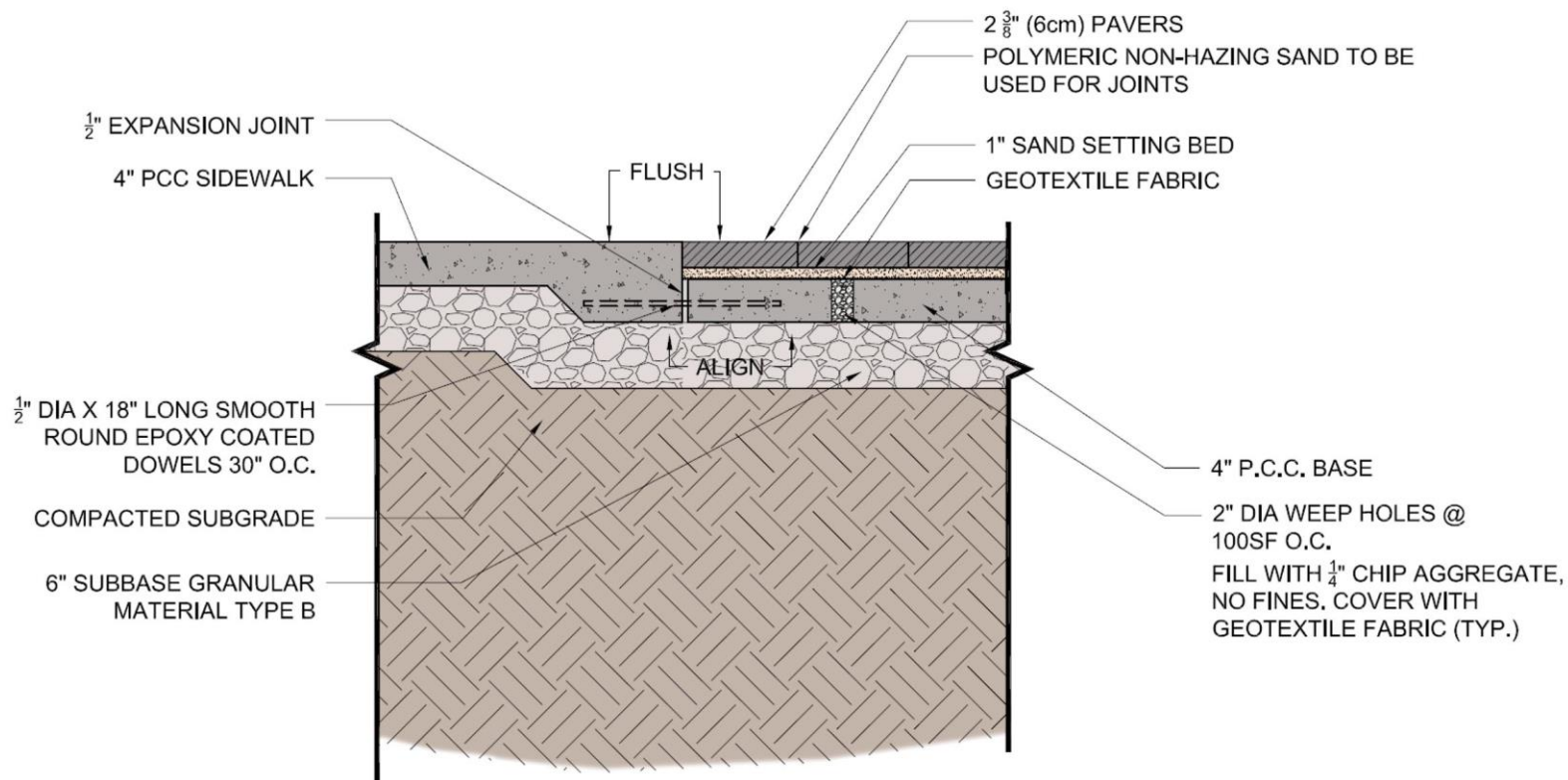
Civic Center



411 / 413 N. Main St.

# Fired Clay Brick Paving | Construction Methods

- Concrete slab base with weep holes provides stability and drainage
- Adjacent pavements have thickened edges to accommodate dowels to prevent differential settlement
- Pavers must be surrounded by concrete to keep paver field stable



# Clay Fired Brick Paving | Maintenance / Costs

- \$24 / SF construction cost (on a concrete slab)
- Will not fade
- Does not need to be sealed
- Snow removal requires rubber tipped plows or skids (for truck mounted equipment)
- Maintenance over time
  - Power washing
  - Spot repairs to cracked pavers
  - Joint sand replacement
  - Service life can last for generations



River St, Batavia during construction

# Clay Fired Brick Paving | Finish



Beveled



Tumbled

# Clay Fired Brick Paving | Finish

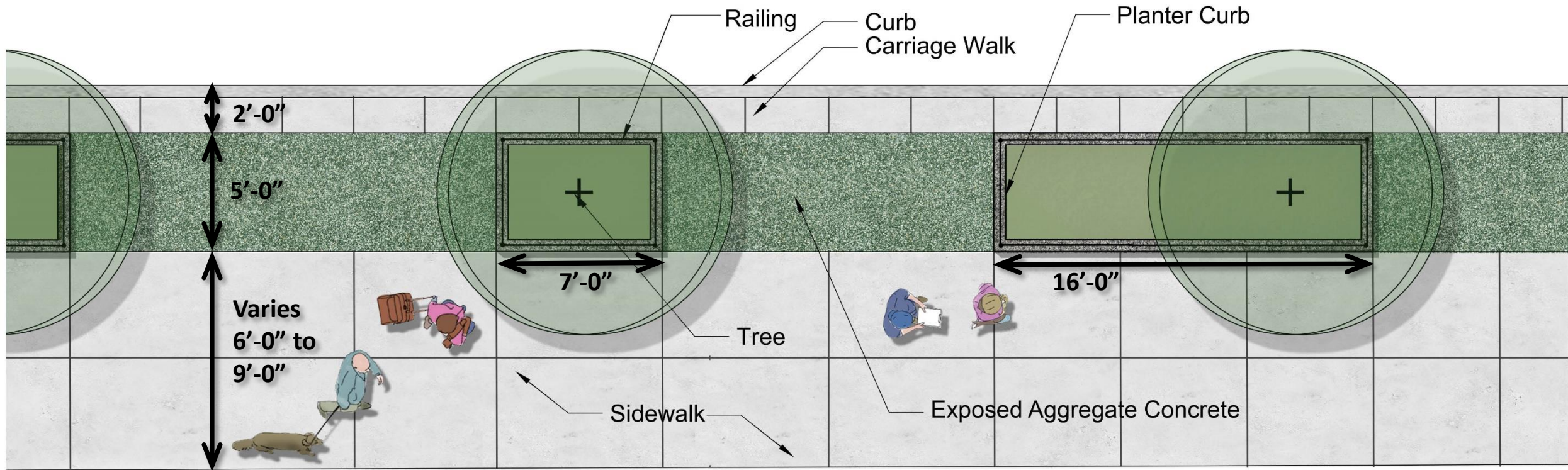


Beveled



Tumbled

# Exposed Aggregate | Plan View

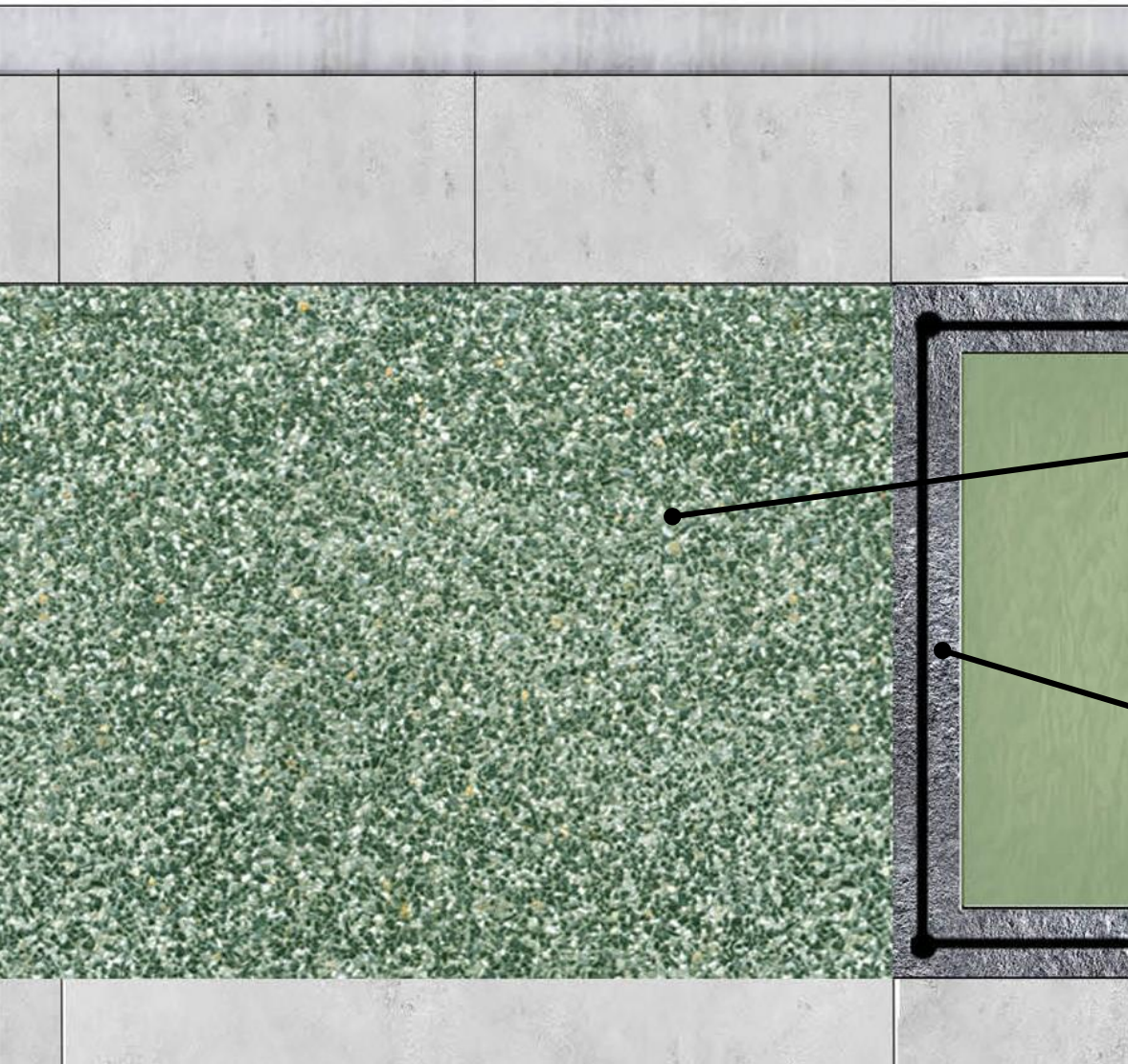


**Exposed Aggregate:** Spruce Green

**6" w. x 6" ht. Planter Curbs:**  
Mesabi Black Split face finish granite



# Exposed Aggregate | Plan Enlargement



**Exposed Aggregate:** Spruce Green



**6" w. x 6" ht. Planter Curbs:**  
Mesabi Black Split face finish granite  
With Railing

# Exposed Aggregate | Perspective

**Exposed Aggregate:**  
Spruce Green

**6" w. x 6" ht. Planter Curbs:**  
Mesabi Black split faced finish granite

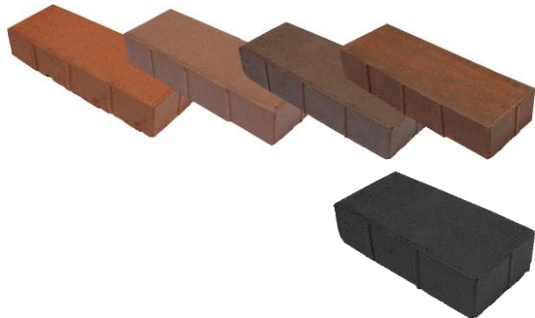
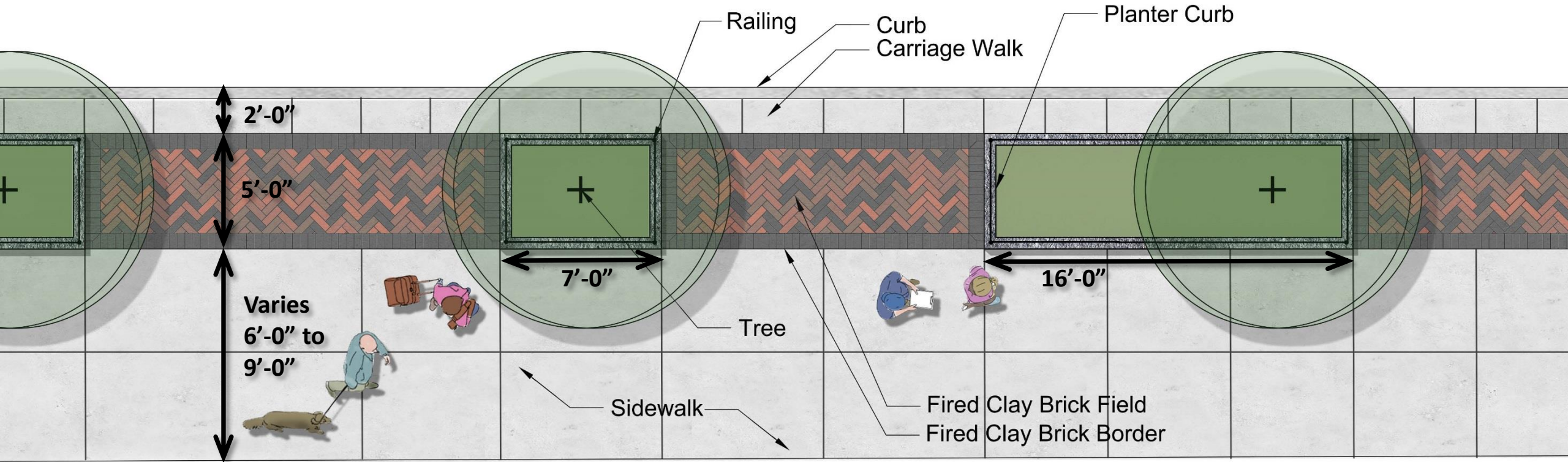
# Exposed Aggregate | Perspective



**Exposed Aggregate:**  
Spruce Green

**6" w. x 6" ht. Planter Curbs:**  
Cast-in-place concrete

# Fired Clay Brick | Option A - Plan View



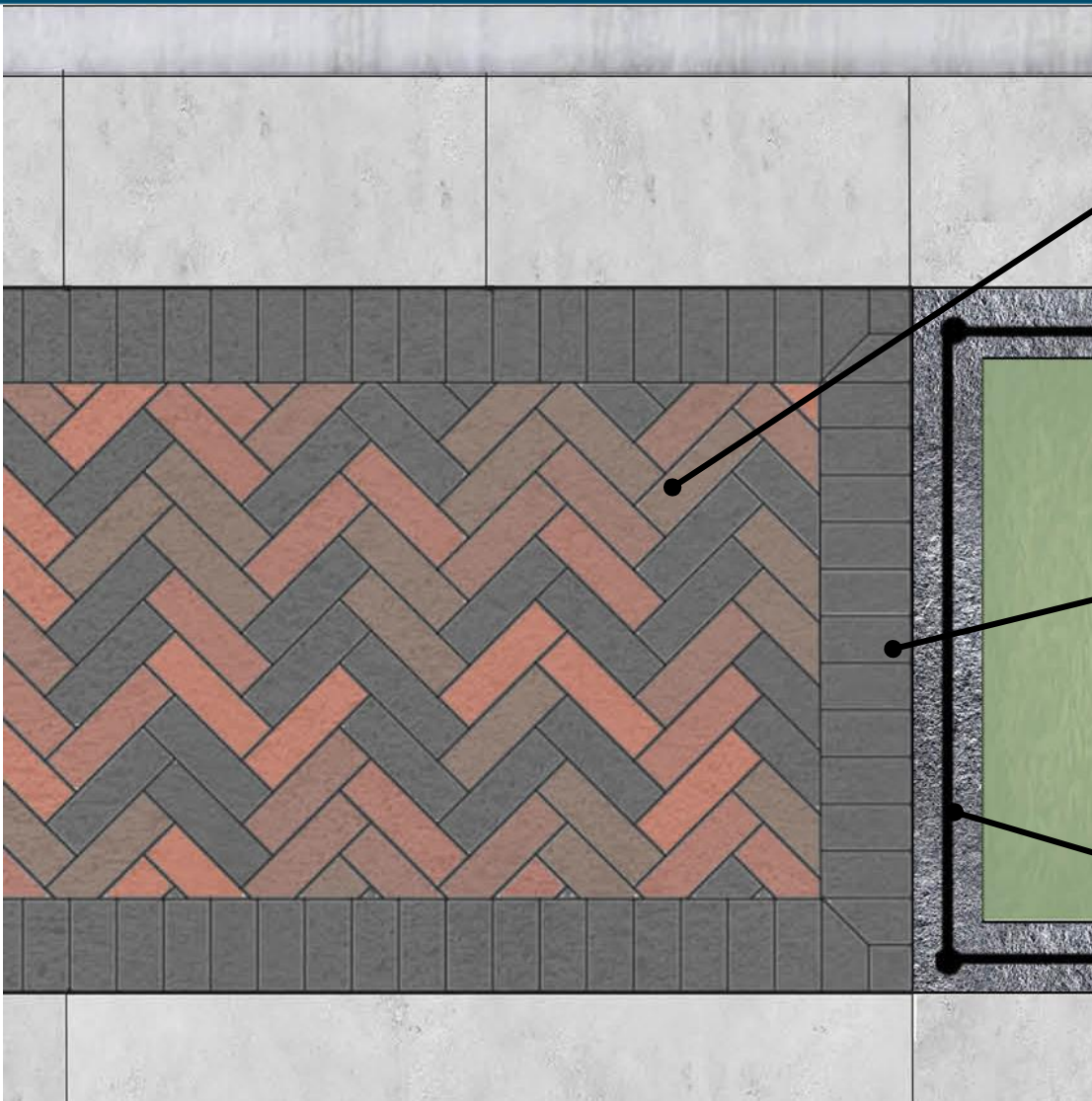
**4"x12" Herringbone Field:** Blend of 32 Antique, 33 Dark Antique, 34 Mulberry, 36 Sunset Red and 63 Charcoal

**4"x8" Soldier Course Border:**  
63 Charcoal



**6" w. x 6" ht. Planter Curbs:**  
Mesabi Black Thermal finish granite

# Fired Clay Brick | Option A - Plan Enlargement



**4"x12" Herringbone Field:** Blend of 32 Antique, 33 Dark Antique, 34 Mulberry, 36 Sunset Red and 63 Charcoal



**4"x8" Soldier Course Border:**  
63 Charcoal



**6" w. x 6" ht. Planter Curbs:**  
Mesabi Black Thermal finish granite

# Fired Clay Brick | Option A - Perspective



**4"x12" Herringbone Field:** Blend of 32 Antique, 33 Dark Antique, 34 Mulberry, 36 Sunset Red and 63 Charcoal

**4"x8" Soldier Course Border:** 63 Charcoal

**6" w. x 6" ht. Planter Curbs:** Mesabi Black Thermal finish granite

# Fired Clay Brick | Option A - Perspective



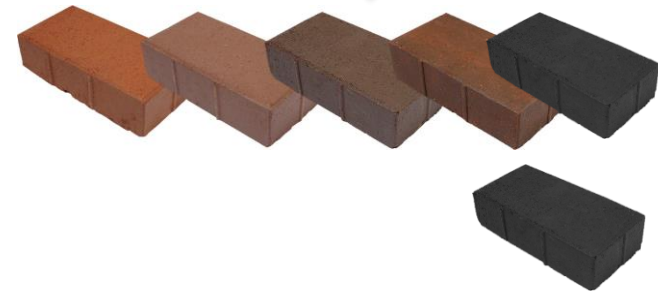
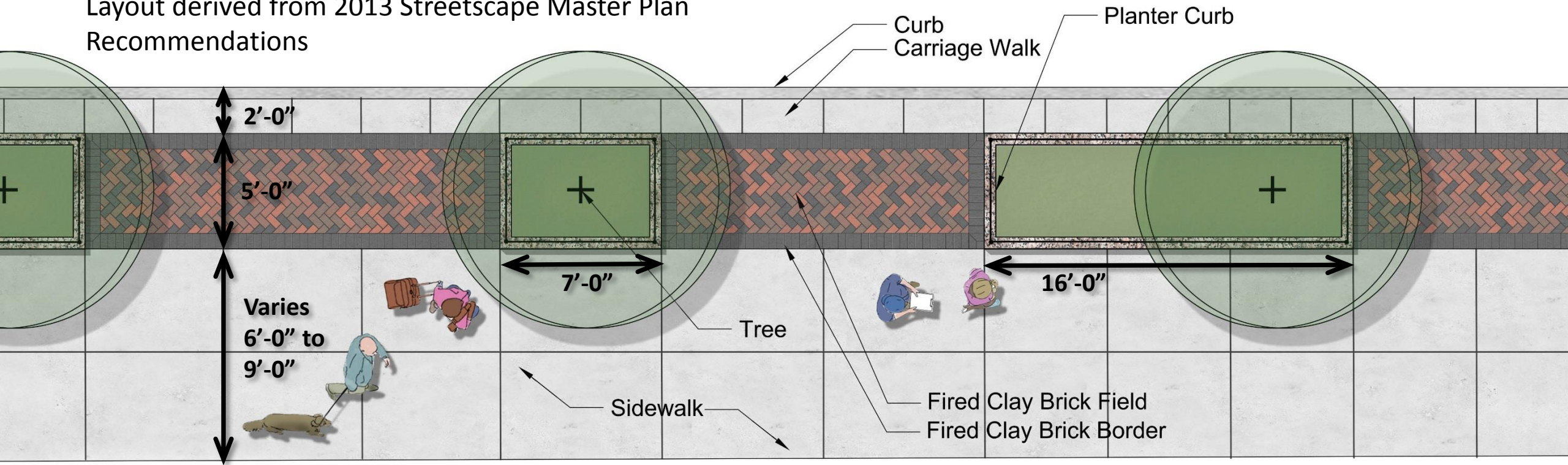
**4"x12" Herringbone Field:** Blend of 32 Antique, 33 Dark Antique, 34 Mulberry, 36 Sunset Red and 63 Charcoal

**4"x8" Soldier Course Border:** 63 Charcoal

**6" w. x 6" ht. Planter Curbs:** Cast-in-place concrete

# Fired Clay Brick | Option B - Plan View

Layout derived from 2013 Streetscape Master Plan Recommendations



**4"x8" Herringbone Field:** Blend of 32 Antique, 33 Dark Antique, 34 Mulberry, 36 Sunset Red and 63 Charcoal

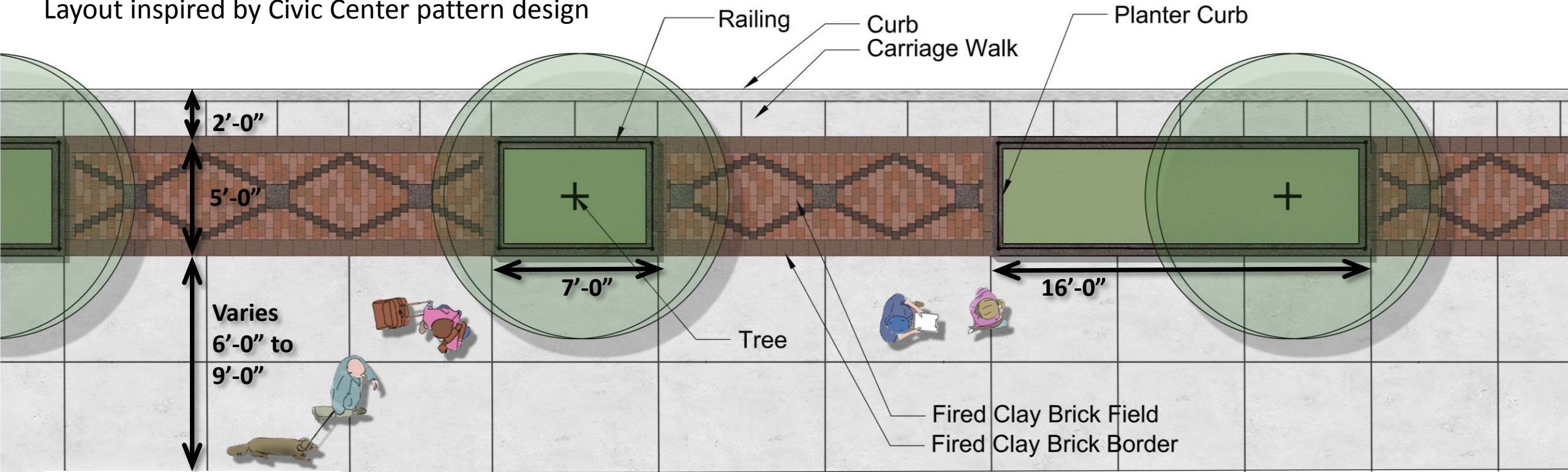
**4"x8" Sailor Course Border:**  
63 Charcoal



**6" w. x 6" ht. Planter Curbs:**  
Sunset Red Granite with Thermal Finish

# Fired Clay Brick | Option C – Plan View

## Layout inspired by Civic Center pattern design



**4"x8" Running Bond Field:** Blend of 42 Cinnamon, 43 Tangerine and 44 Mahogany

**4"x4" Diamond Accent:** 34 Mulberry

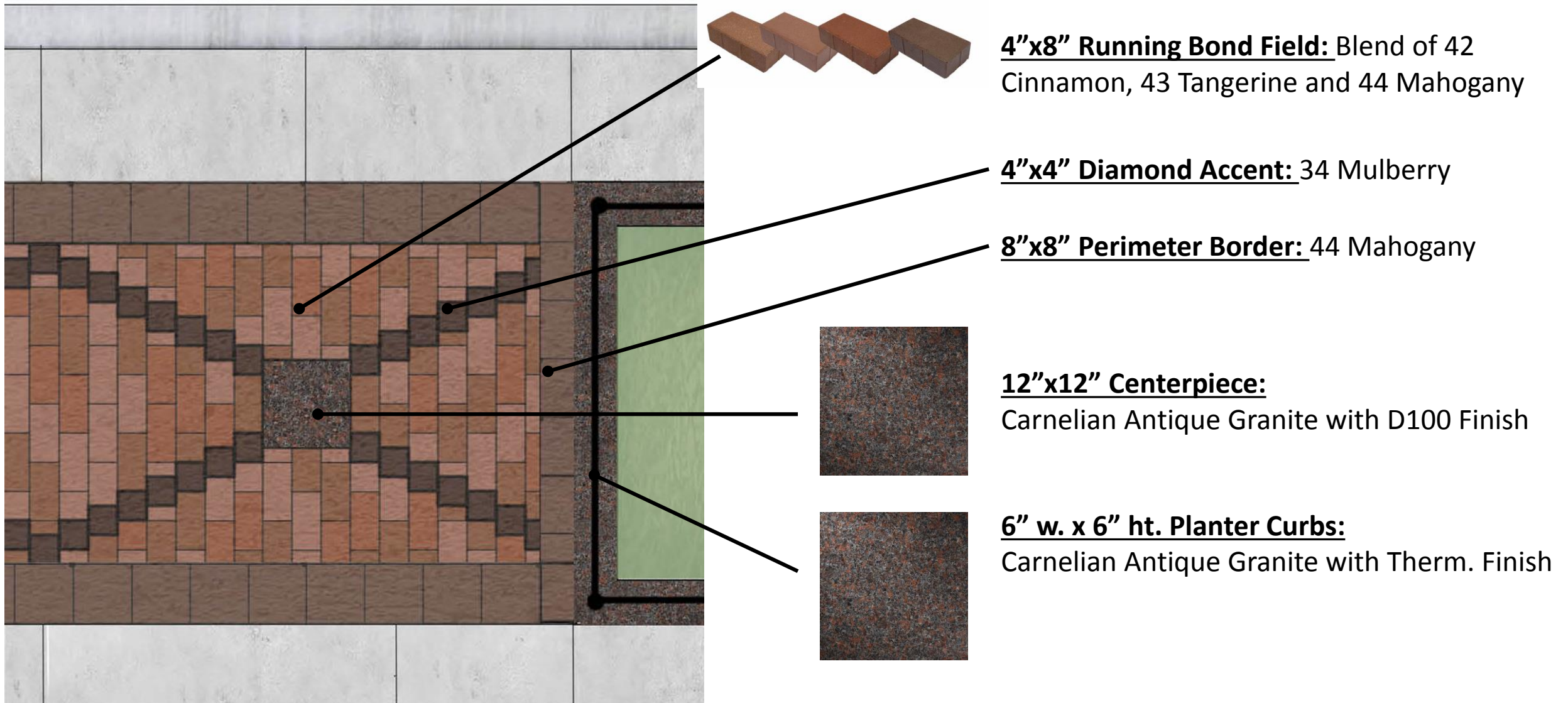
**8"x8" Perimeter Border:** 44 Mahogany



**12"x12" Centerpiece:**  
Carnelian Antique Granite  
with D100 Finish

**6" w. x 6" ht. Planter Curbs:**  
Carnelian Antique Granite with Therm. Finish

# Fired Clay Brick | Option C – Plan Enlargement



# Fired Clay Brick | Option C – Perspective

**4"x8" Running Bond Field:** Blend of 42 Cinnamon, 43 Tangerine and 44 Mahogany

**4"x4" Diamond Accent:** 34 Mulberry

**8"x8" Perimeter Border:** 44 Mahogany

**12"x12" Centerpiece:**  
Carnelian Antique Granite with D100 Finish

**6" w. x 6" ht. Planter Curbs:**  
Carnelian Antique Granite with Therm. Finish

# Fired Clay Brick | Option C – Perspective



**4"x8" Running Bond Field:** Blend of 42 Cinnamon, 43 Tangerine and 44 Mahogany

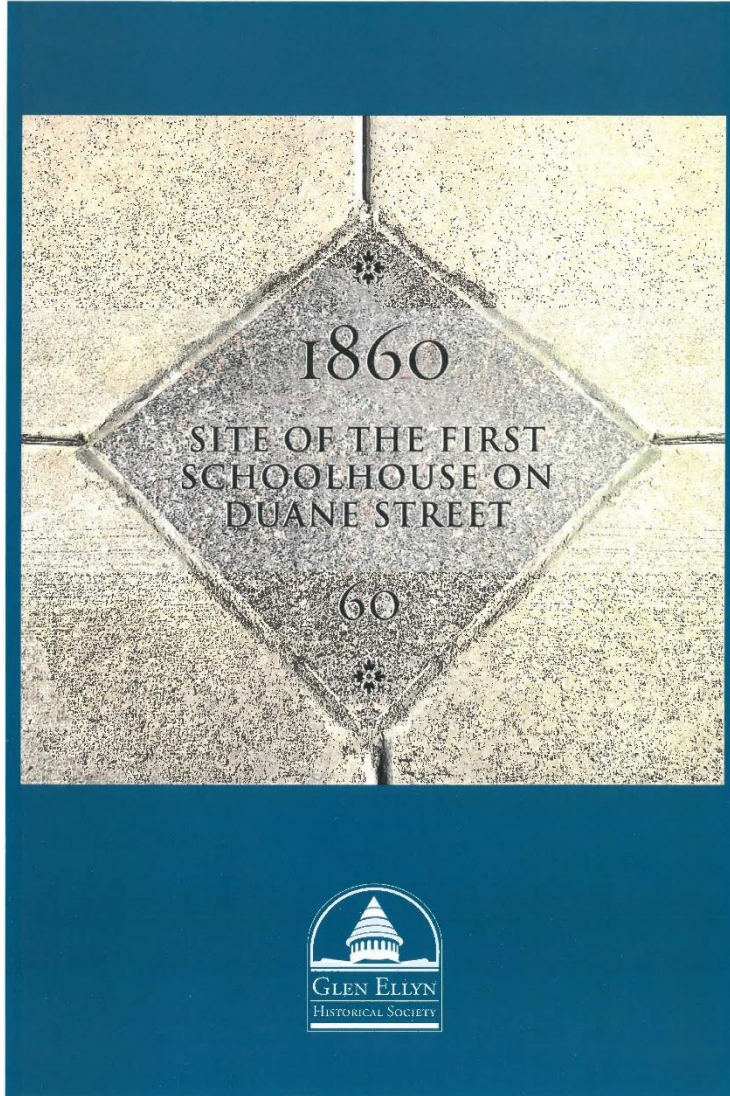
**4"x4" Diamond Accent:** 34 Mulberry

**8"x8" Perimeter Border:** 44 Mahogany

**12"x12" Centerpiece:**  
Carnelian Antique Granite with D100 Finish

**6" w. x 6" ht. Planter Curbs:**  
Cast-in-place concrete

# Historic Plaques



# Planting Curb and Railing Design



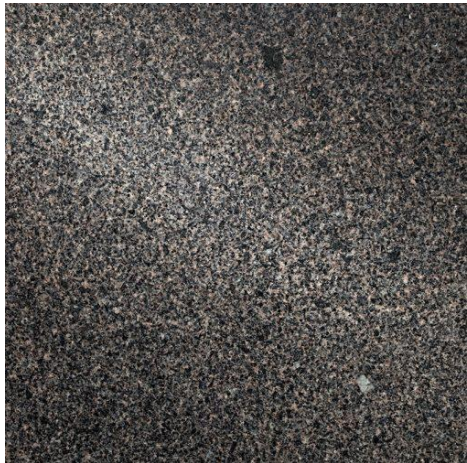
Granite planter curb - Batavia



Granite planter curb with custom railing - Chicago

# Planter Curb Material: Granite Finish Options

- Surface treatments can dramatically change the texture of stone, which can greatly affect color
- Polished surfaces are more susceptible to damage



Polished



Diamond 100



Diamond 10



Thermal



Split

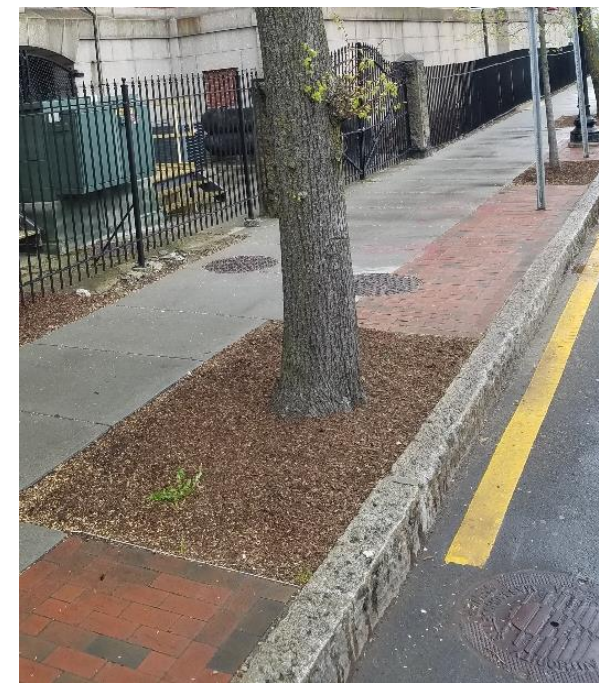
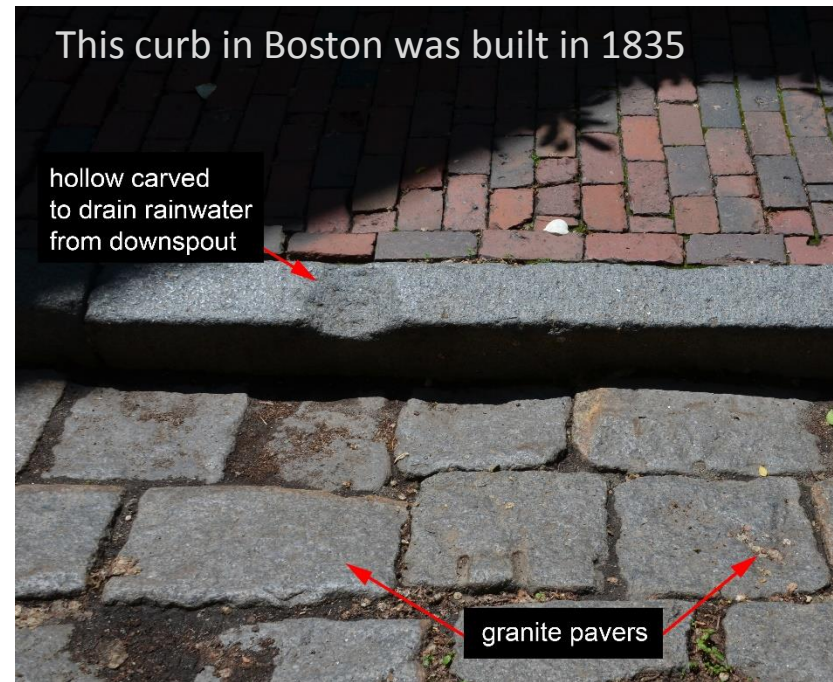
# Planter Curb Material | Granite

## Pros

- Durable – granite curbs in Washington DC and Boston have been in use for generations
- Classic, elegant aesthetic that communicates a feeling of permanence
- Very low maintenance

## Cons

- Expensive material - \$70/LF for a 6" curb



# Planter Curb Material | Cast-in-place Concrete

## Pros

- Low cost - \$25/LF for a 6" curb
- Simple and functional
- Can look very nice if installed correctly
- No maintenance



## Cons

- Quality is dependent on installer's experience
- Minimal aesthetic value
- Cracking can be hard to control
- Corners can be damaged and chipped



# Planter Curb Railings

## Pros

- Customizable designs provide opportunity for unique features
- Protects trees and plants from foot traffic and pets
- Provides visual cues to prevent pedestrians from tripping over curbs



## Cons

- Expense - \$40 to \$70 per linear foot
- Metal will need occasional maintenance and touch-up to prevent corrosion



# Additional Options Beyond Planter Curbs

- Below: Examples of Paver Grates used with Suspended Pavement systems
- Detailing would be needed to limit stormwater runoff into openings
  - Spring flushing with irrigation system to remove salt
  - Infiltration from roadway could be included – with shut off system to prevent infiltration in winter.



Wheaton, IL



Navy Pier, Chicago



Madison, WI

# CBD Streetscape Materials | Discussion

- Public Engagement / Decision Making Process
  - Recap of Material Selection Process to date
  - Historic Architecture in Glen Ellyn
  - Precedent Streetscapes
  - **Material Option: Exposed Aggregate**
  - **Material Option: Fired Clay Brick Paving**
  - **Recommendations / Q&A**
- Decorative Pavement Options: Plans and Renderings
  - Crosswalk Material Options
  - Planter Curb Materials and Railing Design
  - Alternative Options to Planter Curbs
- Raised Seat Wall Concepts
  - Street Furniture Options
  - Placemaking Features
  - Flex Street Concept and Ideas
  - Large Caliper Tree Information
  - Tree Soil Space – Suspended Pavement Design

