



## PRELIMINARY CONSTRUCTION APPROACH

125 E Rosemary Street – New Rosemary Parking Deck

6/4/2020

**CLIENT:**



**GRUBB PROPERTIES**

*People who care. Places that matter.*

**TENANT:**



**Town of Chapel Hill**

**DESIGNER:**

**Perkins&Will**

**CONTRACTOR:**



**SAMET  
CORPORATION**

### 1. PROJECT SUMMARY

The proposed project includes demolition of the existing 3-story parking deck at 125 E Rosemary Street Rosemary Street and construction of a new 6-2/3 level 1,100+ space precast parking deck. The new parking deck is envisioned to include a ground level 'Porch' facing Rosemary Street and vehicular entrances at Level P3 at the western end of the Rosemary Street elevation and Level P2 on the east elevation. A 30' wide storm and sanitary sewer easement is proposed along the eastern property boundary to contain re-alignment of existing storm and sanitary sewer lines that currently cross the property. Level P1 is currently planned as nearly entirely below grade. Additional deck entrances and office occupancy types within the deck structure are being contemplated at the time of this preliminary approach. This preliminary construction approach will be updated as the design phase of the project progresses.

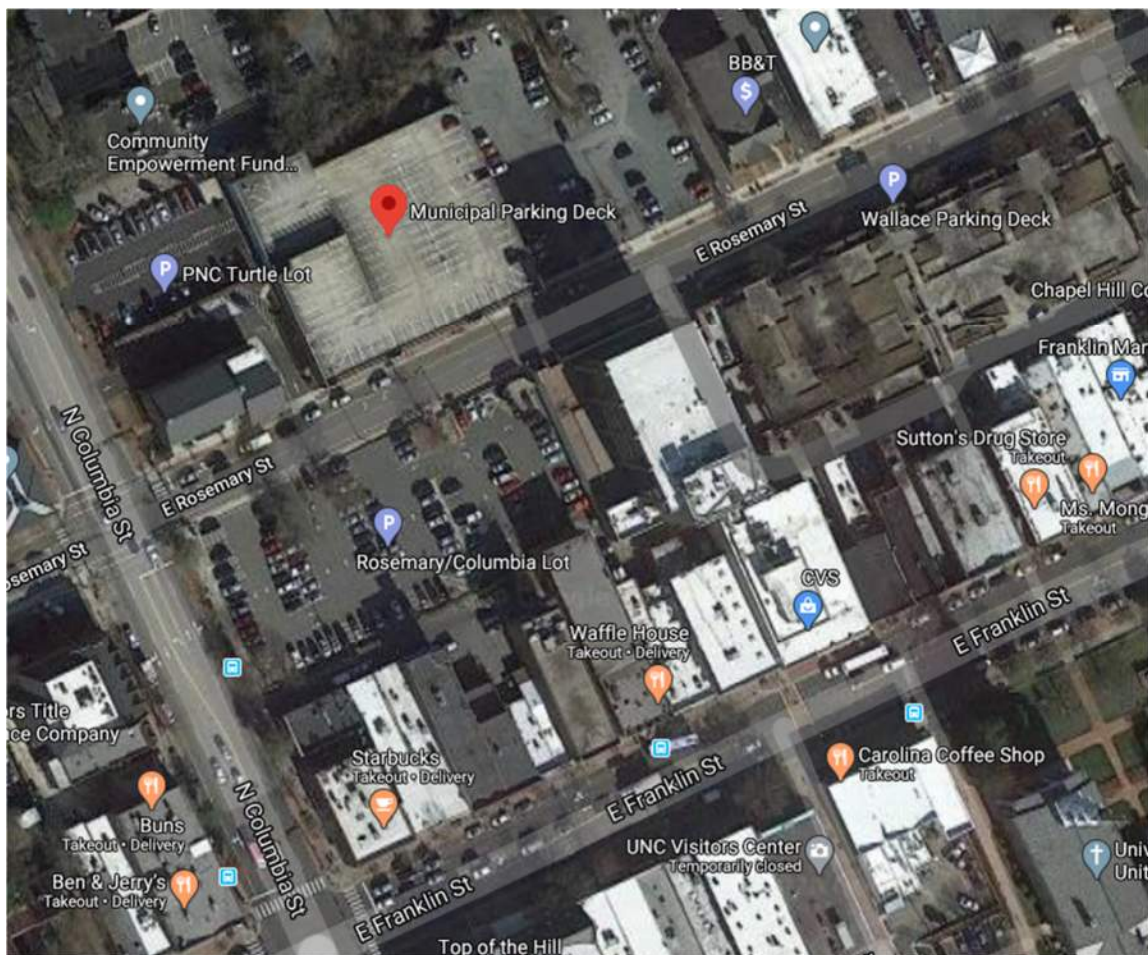


Figure 1 – Location & Surrounding Area

## 2. PROJECT CONSTRAINTS & LOGISTICS

The proposed new Rosemary parking deck is bound on both the west and east sides by bank properties. Across Rosemary Street is the 136 E Rosemary Street office building, and public parking lot #2. To the north of the property is a mix of office (Northwest) and residential uses.



*Figure 2 – Existing Deck and Surrounding Properties*

The demolition and construction activities associated with the new parking deck will require closure of the existing shoulder and a portion of E. Rosemary Street. The adjacent project at 136 E. Rosemary Street is anticipated to be concurrent to the parking deck project and will also require shoulder closure in the existing "Loading Zone". We propose to channelize traffic through these two adjacent construction sites using water filled barriers with fencing.

The section of E. Rosemary Street between these two projects is proposed to be modified to delete the middle left turn lane and re-stripe as two-way traffic with approximately 21' between the water filled barriers, providing clear lanes of 10' width minimum each. The existing lane widths in this area of E Rosemary Street vary, but are as narrow as 10' wide currently. Access to existing driveways for BB&T, PNC, Lot #2, NCNB Alley and the Wallace Deck would remain active. While

the preference based on safety would be to close both sidewalks through the middle of this block, a covered sidewalk could be utilized along the north side of E. Rosemary Street if it is determined that pedestrian access must be maintained. The crosswalks at the existing signalized intersections at Columbia Street and Henderson Street would be recommended for use to access the northern sidewalk along E. Rosemary Street.

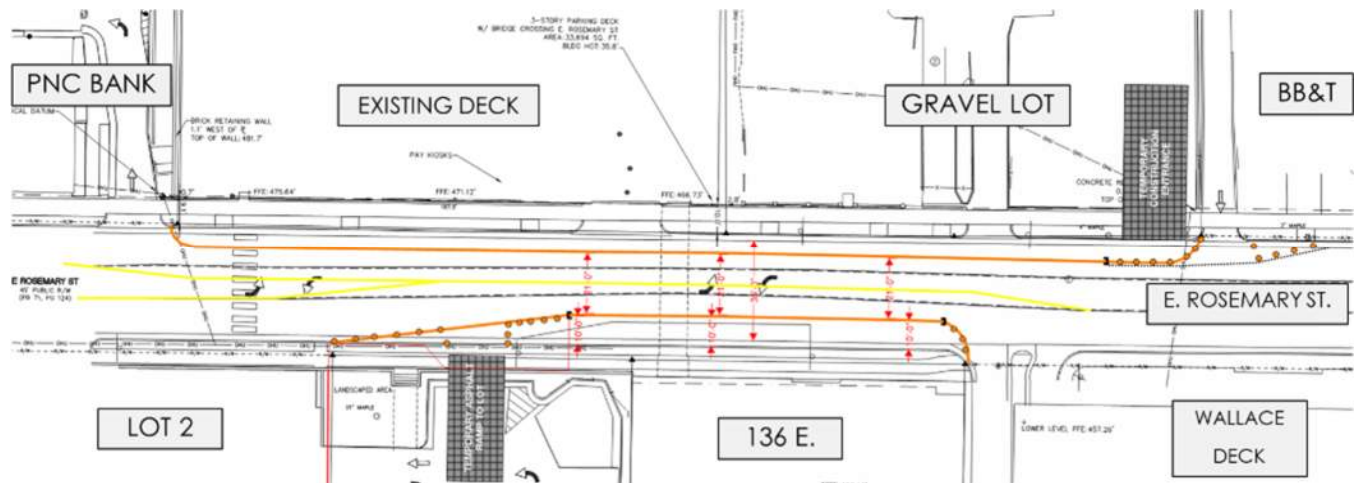


Figure 3 – Preliminary Traffic Management

There is a planned temporary laydown area in the lower section of Lot #2 to accommodate shared construction laydown for the new Rosemary Deck and the 136 E Rosemary / 137 E Franklin project.

**3. PROJECT SCHEDULE**

The current project schedule anticipates start of demolition of the existing parking deck in mid-September 2020 and an approximate project duration of one year with completion in September 2021.

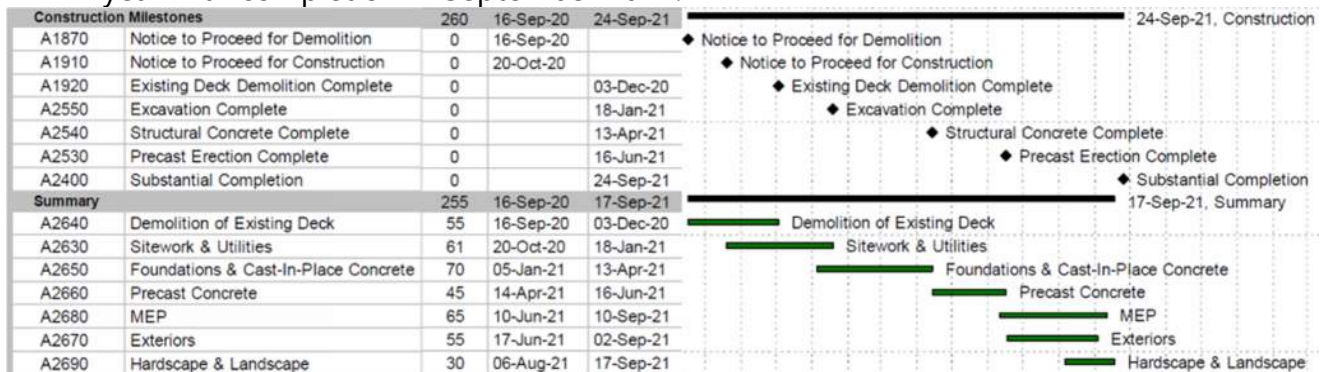


Figure 4 – Preliminary Milestone & Summary Schedule

#### **4. DEMOLITION APPROACH & PUBLIC PROTECTION**

The demolition of the existing parking deck can be executed in one of two primary methods, dis-assembly or demolition and crushing. There are trade-offs to both methods that need to be analyzed with project stakeholders prior to final selection of a method. The perimeter protection during demolition would be the same for both methods. The two methods are compared below:

##### **DIS-ASSEMBLY METHOD:**

- Piece by piece removal by crane
- Hauling offsite for crushing
- Potentially fewer trucks, but larger
- Reduced dust potential
- Site is cleared faster
- Higher Cost



##### **DEMOLITION / CRUSHING METHOD:**

- Crushing/shearing of members in place
- Onsite concrete crushing
- Smaller trucks, higher quantity
- Higher dust potential, misting required
- Demolition duration is longer
- Lower cost



Due to the construction materials used in the existing parking deck, over 98% by weight of the parking deck is expected to be recycled and diverted from landfills.

#### **5. NEW CONSTRUCTION APPROACH**

Once parking deck demolition is underway, we plan to construct the new storm and sanitary lines at the eastern end of the site that will enable the existing lines that cross the site to be removed. Removal of the storm and sanitary lines will be required during the earthwork excavation stage prior to reaching P1 level. During the new sewer installation there will need to be a temporary closure of E. Rosemary Street for the section of line to be installed down the middle of the street. This will require close coordination and scheduling with the Town of Chapel Hill and adjacent businesses.



*Figure 5 – Storm and Sanitary Lines (Existing is Dashed, New is Solid)*

The excavation depths required for Level P1 will require a range of soil removal between of approximately 2' of depth at the north elevation up to 24' of depth at the Southwest Corner of the site. Excavation of this depth will require foundation shoring systems to retain the earth until permanent concrete foundation walls are complete. At the east end of Level P1 there will be a temporary ramp during construction to move equipment in and out of the parking deck footprint.

The superstructure of the parking deck is currently planned as precast concrete including shear walls, columns, beams, and double-tees. The erection of the precast will start at the western end of the deck and will work eastward. The parking deck will be assembled from bottom to top in each bay using a crawler crane. Precast concrete members will be delivered using an entrance at the east end of the site, and the crane will unload the members and swing them into their

designated place in the deck structure. Traffic flaggers will be located at the construction entrance to assist trucks entering and exiting the site.



*Figure 6 – Example of Crane within parking deck footprint placing a double-tee.*

Following precast erection the architectural features will be applied to the exterior, stair towers and elevators completed, and plumbing, fire sprinkler, mechanical, electrical, and fire alarm systems installed. Site hardscapes and landscaping will follow exterior architectural feature installation.

**6. EXISTING CONDITIONS PHOTOS**



*Photo 1 – Existing 3-Story Parking Deck*



*Photo 2 –Western elevation of existing parking deck*







*Photo 3 – Eastern elevation of existing parking deck*



*Photo 4 –Northern elevation of existing parking deck*





*Photo 5 – View of existing gravel parking lot, looking north.*



*Photo 6 – View of Rosemary Street and south elevation of existing deck.*

