

Site Selection

The “*Eubanks Road Park-and-Ride Expansion Feasibility Study*” initially focused on the existing site. During a public meeting, feasibility of using an alternative site was questioned and a review of alternative sites was interjected into the process. Subsequently, the Project Steering Committee, Chapel Hill Planning, and Economic Development provided a list of eleven alternative sites for the proposed expanded Park-and-Ride facility. The alternative site locations are shown in Figure 4-1: Potential Sites. Once identified elements in screening were established, corresponding data acquired, screened, and then tested for selection.

4.1 Site Descriptions

The following are brief descriptions of each of the sites. It is important to note that most of the sites are considerably larger than the size necessary for the proposed Park-and-Ride facility, so only a portion of any site would be affected.

Site A - Existing Site (The EDGE):

- Site A is located west of the Martin Luther King Jr. Boulevard along Eubanks Road and half a mile from the NC 86/I-40 Interchange.
- Site A is a triangular parcel.
- Site A is accessible from Eubanks Road.
- The existing Park-and-Ride parking lot is located on this site.
- Site A is 83 acres in size.
- The topography of the site is rolling with potential regulated streams along its north edge.
- The site is bordered by I-40 to the north, light-industrial and Town facilities to the west, Martin Luther King Jr. Boulevard to the east, the Chapel Watch Village Apartments and Northwoods residential neighborhoods to the south.

Site B - Landfill Site:

- Site B is located west of Millhouse Road along Eubanks Road and one mile from the NC 86/I-40 Interchange.
- Site B is a rectangular parcel
- Site B is accessible from Eubanks Road.
- Site B is occupied by the existing Orange County landfill.
- Site B is 132 acres in size.
- There are steep slopes and large elevation change on this site.
- Site B is bordered by undeveloped agricultural and forested land to the north and west, the railroad and Millhouse Road to the east, and the additional landfill uses to the south.

Site C - West of Millhouse:

- Site C is located west of the Millhouse Road and one a mile from the NC 86/I-40 Interchange.
- Site C is predominantly a rectangular parcel.
- Site C is accessible from Millhouse Road
- Site C is largely undeveloped fields and forested property with farmstead buildings present on the site
- Site C is 35 acres in size.
- The site has moderate slopes.
- The site is bordered by a undeveloped forested area to the west, a wood yard and forested area to the north, Millhouse Road, the railroad and Town Operation Center to the east, the landfill to the south.

Site D - East of Millhouse North, South of Public Works Site:

- Site D is located along Millhouse Road and is one mile from the NC 86/I-40 Interchange.
- Site D is a predominantly a rectangular parcel.
- Site D is accessible from Millhouse Road.
- Site D is occupied by a farm and materials storage areas.
- Site D is 38 acres in size.
- There are moderate slopes on the site.
- Site D is bordered by the railroad and Millhouse road to the west, Town Operations Center to the north, Site A to the east, and light industrial uses to the south.

Site E - Millhouse North, Public Works Site:

- Site E is located along Millhouse Road and is one mile from the NC 86/I-40 Interchange.
- Site E is a triangular parcel.
- Site E is accessible from Millhouse Road.
- Site E is occupied by forested areas, material storage, and vehicle storage.
- Site E is 70 acres in size.
- There are significant slopes on the site.
- Site E is bordered by the railroad to the west, I-40 to the north and east, and the Town Operations Center to the south.

Site F - West of Martin Luther King, Jr. Boulevard, North of I-40:

- Site F is located along Martin Luther King Jr. Boulevard and one quarter mile from the NC 86/I-40 Interchange.
- Site F is a triangular parcel.
- Site F is accessible from NC 86.
- Site F is undeveloped land.
- Site F is 18 acres in size.
- There are significant slopes on the site.
- Site F is bordered by I-40 to the south and west, a mobile home court to the north, and NC 86 to the east.

Site G - East of Martin Luther King, Jr. Boulevard, North of I-40, Duke University

Property:

- Site G is located along Martin Luther King Jr. Boulevard and one quarter mile from the NC 86/I-40 Interchange.
- Site G is a predominantly rectangular parcel.
- Site G is accessible from NC 86.
- Site G is part of the Duke Forest preserve and research forest.
- Site G is 118 acres in size.
- There are significant slopes on the site.
- Site G is bordered by undeveloped forested land on the north, east, and south. NC 86 borders the site to the west.

Site H - East of Martin Luther King, Jr. Boulevard, North of I-40, Johnston and Wilson

Property:

- Site H is located along Martin Luther King Jr. Boulevard and quarter mile from the NC 86/I-40 Interchange.
- Site G is an irregularly shaped parcel.
- Site H is accessible from Whitfield Road.
- Site H is largely forested and contains some abandoned dwellings.
- Site H is 40 acres in size.
- There are significant slopes on the site.
- Site H is bordered by NC 86 and site F to the west, Site G to the north, and Whitfield road to the south. Single family homes border the site to the east.

Site I - South of Eubanks:

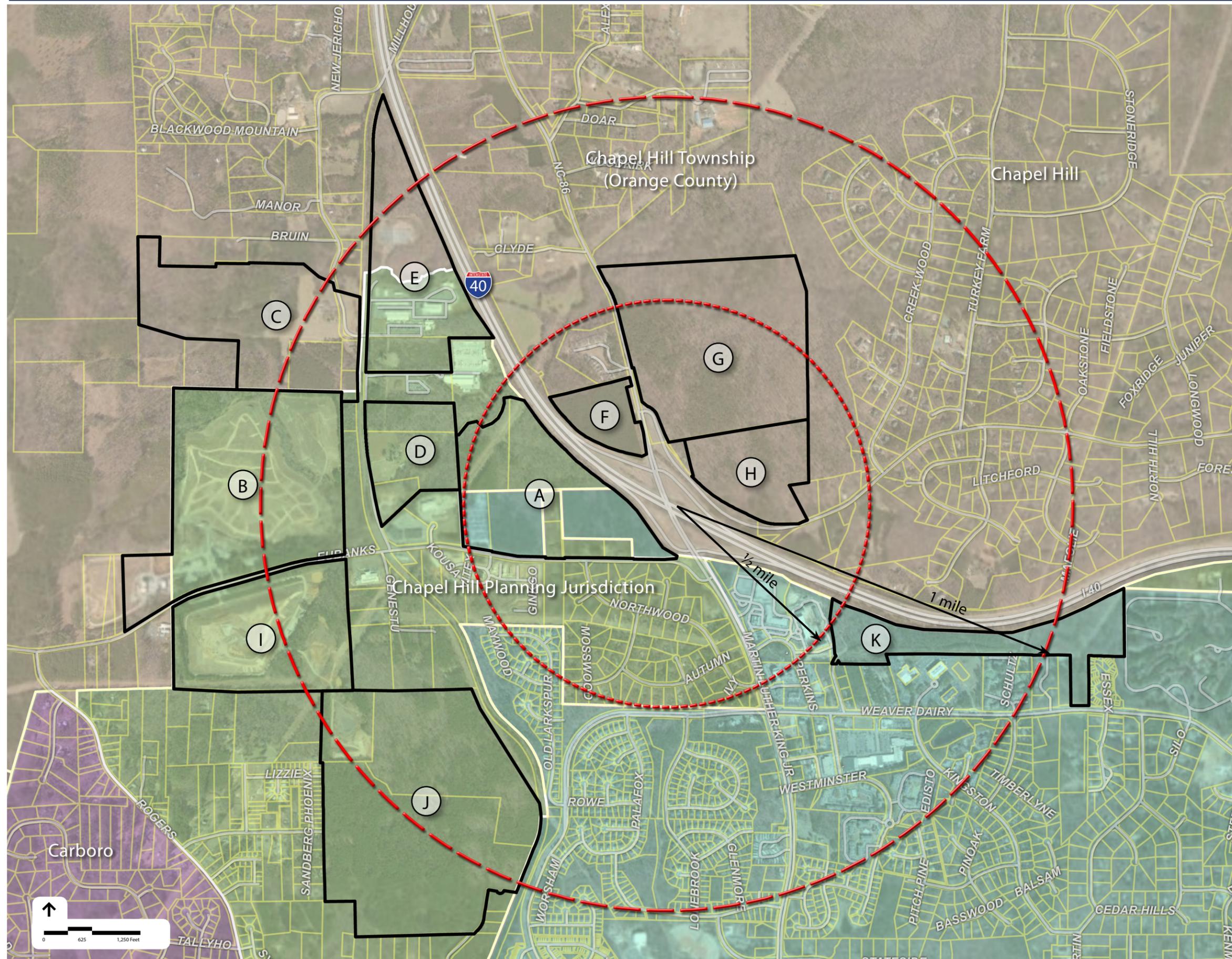
- Site I is located south of the landfill along Eubanks Road and one mile from the NC 86/I-40 Interchange.
- Site I is a predominately rectangular parcel.
- Site I is accessible from Eubanks Road
- Site I is occupied by landfill activities
- Site I is 80 acres in size.
- There are significant slopes on the site.
- Site I is bordered by an institutional facility to the west, Eubanks Road and Site B to the north, the humane shelter to the east, and undeveloped, forested land to the south.

Site J - Between Rogers and Weaver Dairy Road:

- Site J is located south of the landfill one mile from the NC 86/I-40 Interchange.
- Site J is a predominately rectangular parcel.
- Site J is not easily accessible, but could be reached from Eubanks or Weaver Dairy Road
- Site J is occupied by undeveloped, forested land.
- Site J is 182 acres in size.
- There are significant slopes on the site.
- Site J is bordered by the low-density residential development to the West, the Humane Shelter and Site I to the north, Weaver Dairy Road, the railroad and medium density housing to the east, and low density housing to the south.

Site K - South of I-40, along I- 40:

- Site K is located one mile from the NC 86/I-40 Interchange.
- Site K is a long, narrow, irregularly-shaped parcel.
- Site K is largely undeveloped with several utility corridors crossing the site.
- Site K is 45 acres in size.
- There are significant slopes on the site.
- Site K is bordered by I-40 to the north, commercial development to the west and south, and high-density residential development to the east.



-  Potential Site Location
-  Potential Site Boundary
-  Chapel Hill Township (Orange County)
-  Chapel Hill Planning Jurisdiction
-  Chapel Hill
-  Carboro
-  Carboro Transition Area 2

Eubanks Road Expansion Park-and-Ride Feasibility Study
Chapel Hill, North Carolina

Figure 4-1
Potential Sites

Chapel Hill, North Carolina

4.2 Evaluation Methodology

The Evaluation Methodology section describes the process, criteria and sources of information that were used in the evaluation of alternative sites for the proposed Park-and-Ride facility.

4.2.1 Evaluation Process

The process used in evaluating the proposed sites for the Park-and-Ride facility was a two-step screening process. The first screening was conducted using a matrix that weighted the full set of alternatives against a set of evaluation criteria that were developed specifically for this study. Each alternative was assigned a "+," "0," or "-" in each category, as summarized below:

"+" meant that the alternative **met** that criterion or was favorable in that area

"0" meant that the alternative was **neutral** with respect to that criterion

"-" meant that the alternative **did not meet** the criterion or was unfavorable in that area

This method did not assign a numerical value as the criteria carried varying degrees of importance. In the second stage, the project stakeholders qualitatively evaluated each site given the key parameters described below.

4.2.2 Evaluation Criteria

The following are brief definitions of the criteria that were used in evaluating and screening the alternative sites. The criteria are grouped into three categories: Transportation, Site/Location Considerations, and Environmental Considerations.

Transportation

The evaluation of the alternative sites with regards to transportation criteria was based on a review of the existing bus route; the existing roadway network; the locations of land uses. Sources of information for this effort included: information provided by Chapel Hill Transit, aerial photography, and available highway and topographic maps.

The following criteria related to Transportation were used to evaluate and screen the sites:

Access: How accessible is the proposed site? Is the site located on a main thoroughfare, or does it require travel on secondary/local roads for access? Does access require crossing of the railroad right-of-way? Are there any physical barriers to overcome for access? Is there need for roadway improvements? Is there need to improve traffic flow? Are there any critical intersections on the path between I-40 and the site? What is the distance from the NC 86/I-40 Interchange?

Connection to Existing Development: How far is existing development? Are residential neighborhoods within walking (1/4 mile) distance? Are there existing commercial land uses to serve riders?

Transit Service Plan: Is the proposed site currently serviced by a transit provider? If a transit provider were to expand or provide new service in the area, how suitable would the proposed site be for this intercity/regional service? How suitable would the proposed site be for local service?

Site Location Consideration

The evaluation of the alternatives with regards to site location criteria was based on observations of the aeriels and GIS information; and a review of Town zoning and land uses. Sources of information for this effort included aerial photography, the Orange County and Chapel Hill Zoning Ordinance, and available highway and topographic maps.

The following criteria related to Site/Location were used to evaluate and screen the site alternatives:

Availability of Land: Is the land for the proposed site available? Are there any obstacles to acquisition of the land?

Land Use/Zoning: Is the zoning designation favorable for development as a Park-and-Ride facility? Are the current land uses on and around the site compatible with the establishment of a Park-and-Ride facility?

Structured Parking: Is structured parking allowed per zoning? Are there possible variances to obtain permission for structured parking on site?

Ownership: How many parcels will be needed to create the proposed facility? Who owns the parcels? Will it be easy to obtain the parcels needed?

Potential for Economic Development: Is it close to population centers, businesses, and areas with pedestrian access? Is there need for economic development? Is redevelopment of the site consistent with other planning efforts in the Town?

Environmental Considerations

For the environmental screening, information was based on observations of the aeriels and GIS information and also desktop wetland and stream analysis. The following criteria related to environmental considerations were used to evaluate and screen the site alternatives:

Topography: What kind of difference in elevations can be observed on site? Will it require extensive earthwork to the prepare site?

Wetlands/Floodplains Constrains: Is the site located within the FEMA 100-year floodplain? Does the site contain wetlands? Is the site located within the established Water Resources Protection Zone?

Tree Coverage: Is it a wooded area? How extensive tree removal will be necessary?

Hazardous Materials: Does the site have any known above-ground storage tanks, auto salvage yards, remediation sites, or underground storage tanks?

Preliminary Ratings

The following is a brief summary of the rationale used in assigning the ratings for each criterion:

Access: Sites that had no critical intersections and were located adjacent to regional highway were given a “+” rating (Sites F, G, and H). Sites with one or more critical intersections were given a “-” rating (Sites A, B, C, D, E, I, J, and K).

Connection to Existing Development: Sites located near a clustering of community, residential and retail uses that would enhance a community transit were given a “+” rating (Sites A, G, H, I, J, and K). Sites located far from and clustering of such were given a “-” rating (Sites B, C, D, E, and F).

Transit Service Plan: Sites that are currently served by the current intercity bus operator in Chapel Hill were given a “+” rating (Site A). Sites not served by the present operator but located on or immediately adjacent to existing routes were given a “0” rating (Sites B, D, and I). Any site not served by the current operator and not located on existing route was given a “-” rating (Sites C, E, F, G, H, and J).

Availability of Land: Sites that had significant undeveloped portions were given a “+” rating (Sites A, B, E, G, I, and J). Site with a potential obstacle to acquisition such as current litigation were given a “-” rating (Site F). All other sites were given a “0” rating.

Zoning/Land Use: Sites were given a “+” rating if they were located within preferable zoning (Sites A, B, C, D, I, J and K). Sites located within rural buffer were given a “-” rating (Sites E, F, and G).

Structured Parking: Sites were given a “+” rating if the structured parking was allowed without variance (Sites A, B, C, D, I and J). Sites that will require variance or structured parking is not allowed were given a “-” (Sites E, F, G H, and K).

Ownership: Sites that were publicly owned were given a “+” rating (Sites B, D, E, I, and J). Sites that one private owner were given a “0” rating (Sites H and K). Sites that had fragmented ownership were given a “-” rating (Sites A, C, F, and G).

Potential for Economic Development: Sites with high potential were given a “+” rating (Sites A, G, I and J). Sites with medium potential were given a “0” rating (Sites E, H and K). Sites with low potential for economic development were given a “-” rating (Sites B, C, D and F).

Topography: Sites that were flat without large elevation changes were given a “+” rating (Site C). Sites that had workable slopes were given a “0” rating (Sites A, D, E, F, G, I, J and K). Sites with large elevation changes were given a “-” rating (Site B and H).

Wetlands/Floodplains Constrains: Site that had no possible wetlands was given a “+” rating (Site B). Sites that had possible wetlands were given a “-” rating (Sites A, C, D, E, F, G, H, I, J, and K).

Tree Coverage: Site without tree coverage received a “+” rating (Site B). Sites that are partially wooded received a “0” rating (Sites C, D, E, and I). The wooded sites were given a “-” rating (Sites A, F, G, H, J, and K).

Hazardous Materials: There was only one site with landfill that received a “-” rating (Site B). The rest of the sites received a “0” rating.

The results of this preliminary screening are summarized in Table 4-1.

Table 4-1: Site Evaluation Matrix

Alternative Sites	Evaluation Criteria											
	Transportation				Site/Location				Environmental			
	Access	Connection to Existing Development	Transit Service Plan	Availability of Land	Land Use/Zoning	Structured Parking	Ownership	Potential for Economic Development	Topography	Wetlands/Floodplain Constrains	Tree Coverage	Hazardous Materials
Site A	-	+	+	+	+	+	0	+	0	-	-	0
Site B	-	-	0	+	+	+	+	-	-	+	+	-
Site C	-	-	-	0	+	+	-	-	+	-	0	0
Site D	-	-	0	0	+	+	+	-	0	-	0	0
Site E	-	-	-	+	-	-	+	0	0	-	0	0
Site F	+	-	0	+	-	-	+	-	0	-	-	0
Site G	+	+	-	+	-	-	-	+	0	-	-	0
Site H	+	+	-	0	-	-	0	0	-	-	-	0
Site I	-	+	0	+	+	+	+	+	0	-	0	0
Site J	0	+	-	+	+	+	+	+	0	-	-	0
Site K	0	+	0	0	+	-	0	0	0	-	-	0

4.2.3 Stakeholder Assessment Summary

As described above, the initial evaluations were used to inform a discussion among stakeholders regarding the viability of each site to support a proposed Park-and-Ride facility. This discussion was structured so that participants could provide an independent view of each site and emphasize those criteria deemed most important by that participant for each site. This facilitated discussion resulted in stakeholder group consensus regarding sites determined to have high, moderate, or low potential to serve as potential locations for expanded Park-and-Ride. The key factors in this evaluation are summarized below.

- Site A – Existing Site (The EDGE): The ownership of Site A encompasses three property owners. It houses the existing Park-and-Ride surface parking lot. It is under Town of Chapel Hill jurisdiction. The zoning is appropriate for Park-and-Ride facility – MU-R-1 and MU-OI-1. The structured parking is allowed per zoning. Large portion of the site is wooded with possible wetlands along existing stream. The site has good connection to existing development but there is one critical intersection – Martin Luther King, Jr. Boulevard and Eubanks Road. Site A has high potential for transit-supportive economic development.
- Site B – Landfill Site: Site B is publicly owned site. It is under Town of Chapel Hill jurisdiction. The zoning is appropriate for Park-and-Ride facility – RT. The structured parking is allowed per zoning. There is no tree coverage and possible wetlands. The site has poor connection to existing development and there are two critical intersections: Martin Luther King, Jr. Boulevard and Eubanks Road, Millhouse Road and Eubanks Road. Site B has low potential for transit-supportive economic development.
- Site C – West of Millhouse: The ownership of Site C is fragmented between five property owners. It is under Town of Chapel Hill jurisdiction. The zoning is not approved for Park-and-Ride facility – RB. The structured parking is not allowed per zoning. Large portion of the site is wooded with possible wetlands along the edge of the site. The site has poor connection to existing development and there are two critical intersections: Martin Luther King, Jr. Boulevard and Eubanks Road, Millhouse Road and Eubanks Road. Site C has low potential for transit-supportive economic development.
- Site D – East of Millhouse North, South of Public Works Site: The ownership of Site D is fragmented between three property owners. It is under Orange County jurisdiction. The zoning is appropriate for Park-and-Ride facility – JPA. The structured parking is allowed per zoning. Portion of the site is wooded with possible wetlands in the middle of the site. The site has poor connection to existing development and there are two critical intersections: Martin Luther King, Jr. Boulevard and Eubanks Road, Millhouse Road and Eubanks Road. Site D has low potential for transit-supportive economic development.
- Site E – Millhouse North, Public Works Site: Site E is owned by Chapel Hill and under Town’s jurisdiction. It houses Town Operation Center. The zoning is not approved for Park-and-Ride facility – RB. The structured parking is not allowed per zoning. Large portion of the site is wooded with possible wetlands on the site. The site has poor connection to existing development and there are two critical intersections: Martin Luther King, Jr. Boulevard and Eubanks Road, Millhouse Road and Eubanks Road. Site E has low potential for transit-supportive economic development.

- Site F – West of Martin Luther King, Jr. Boulevard, North of I-40: Site F is privately owned and under Orange County jurisdiction. The zoning is not approved for Park-and-Ride facility – RB. The structured parking is not allowed per zoning. The site is wooded with possible wetlands on the site. The site has poor connection to existing development and no critical intersections. Site F has low potential for transit-supportive economic development.
- Site G – East of Martin Luther King, Jr. Boulevard, North of I-40, Duke University Property: Site G is privately owned and under Orange County jurisdiction. The zoning is not approved for Park-and-Ride facility – RB. The structured parking is not allowed per zoning. The site is wooded with possible wetlands on the site. The site has poor connection to existing development and no critical intersections. Site G has low potential for transit-supportive economic development.
- Site H – East of Martin Luther King, Jr. Boulevard, North of I-40, Johnston and Wilson Property: Site H is privately owned and under Orange County jurisdiction. The zoning is not approved for Park-and-Ride facility – RB. The structured parking is not allowed per zoning. The site is wooded with possible wetlands on the site. The site has good connection to existing development and no critical intersections. Site H has low potential for transit-supportive economic development.
- Site I – South of Eubanks: Site I is publicly owned and under Orange County jurisdiction. The zoning is appropriate for Park-and-Ride facility – RT. The structured parking is allowed per zoning. The site has no tree coverage with possible wetlands. The site has little connection to existing development but there are two critical intersections: Martin Luther King, Jr. Boulevard and Eubanks Road, Millhouse Road and Eubanks Road. Site I has low potential for transit-supportive economic development.
- Site J – Between Rogers and Weaver Dairy Road: Site J is publicly owned and under Chapel Hill jurisdiction. The zoning is appropriate for Park-and-Ride facility – RT. The structured parking is allowed per zoning. The site is wooded with possible wetlands. The site has good connection to existing development but there is at least one critical intersection. Site J has low potential for transit-supportive economic development.
- Site K – South of I-40, along I- 40: Site K is privately owned and under Chapel Hill jurisdiction. The zoning is not appropriate for Park-and-Ride facility – R-3 and MU-OI-1. The structured parking is not allowed per zoning. The site is wooded with possible wetlands. The site has good connection to existing development but there is at least one critical intersection. Site K has medium potential for transit-supportive economic development. The access to the site and its general shape were seen as unfavorable to Park-and-Ride implementation.

4.2.4 Site Feasibility Assessment and Ranking

Once the sites were screened as summarized in Table 4-1 and discussed in detail with the stakeholder group, the following qualitative evaluation of each site emerged. The sites were grouped into three categories: High Potential, Moderate Potential, and Low Potential. The High Potential sites were then considered in more detail as described following the table.

As shown in Table 4-2, two sites were identified as having high potential to serve as locations for the expanded Park-and-Ride. Each of these sites has unique advantages and challenges. Further evaluation of the viability of these sites to support Park-and-Ride expansion was conducted with project stakeholders to determine whether one of these sites is a preferred site for the Park-and-Ride. The advantages and disadvantages of each site emerging from this analysis are summarized below.

Site A

Advantages

- Consistent with Town of Chapel Hill Planning initiatives
- Likely to accommodate transit-supportive development
- Site owners have expressed interest in implementing the Park-and-Ride as part of a larger development program
- Large land area
- Does not require significant change to CHT route structure or expansion of service area

Challenges

- Potential limitations on site area due to mapped wetlands and waterways.
- Potential complications associated with joint Park-and-Ride and private development
- Relies on traffic access and places additional traffic burdens on the I-40 interchange and Eubanks Road intersections with NC 86/Martin Luther King Jr. Boulevard.

Site F

Advantages

- Immediately adjacent to the I-40 interchange
- Provides easy access and egress for Park-and-Ride users
- Does not require significant change to CHT route structure or expansion of service area

Challenges

- Uncertain willingness of property owner to participate
- Inconsistent with current land use policies and zoning
- Unlikely to accommodate transit supportive development
- Limited connections to adjacent land uses

Based on the factors listed above, Site A was determined to be the preferred site. Consistency with land use planning and long range transit planning, coupled with the potential for transit-supportive economic development were the over-riding factors leading to selection of Site A as the preferred site. However, Site F has key traffic impact and access advantages and could serve as an alternative site.

Table 4-2: Site Feasibility Assessment and Evaluation

Site	Evaluation	Key Factors
A	High Potential	<ul style="list-style-type: none"> • Adjacent to I-40 interchange • Location of the current Park-and-Ride • Consistent with Town-led planning efforts • Connects well to existing multifamily and single family neighborhoods • Site owners have expressed willingness to partner
B	Low Potential	<ul style="list-style-type: none"> • Far from the I-40/ interchange • Railroad crossing improvement required • Does not connect well to existing development • Unlikely to result in transit supportive development • Topographic and land re-use challenges.
C	Low Potential	<ul style="list-style-type: none"> • Far from the I-40/ interchange • Railroad crossing improvement required • Does not connect well to existing development • Unlikely to result in transit supportive development • Topographic and land re-use challenges • Encourages use of rural, Millhouse Road
D	Moderate Potential	<ul style="list-style-type: none"> • Far from the I-40/ interchange • Does not connect well to existing development • Some potential for transit supportive development • Adjacent to Chapel Hill Transit Operations Center and existing Park-and-Ride • Encourages use of rural, Millhouse Road
E	Moderate Potential	<ul style="list-style-type: none"> • Far from the I-40/ interchange • Does not connect well to existing development • Unlikely to result in transit supportive development • Adjacent to Chapel Hill Transit Operations Center and existing Park-and-Ride • Encourages use of rural, Millhouse Road • Additional access to I-40 unlikely due to regulatory and site constraints
F	High Potential	<ul style="list-style-type: none"> • Adjacent to I-40 interchange • Does not connect well to existing development • Unlikely to result in transit supportive development • Use is inconsistent with existing land use regulations
G	Low Potential	<ul style="list-style-type: none"> • Adjacent to I-40 interchange • Does not connect well to existing development • Unlikely to result in transit supportive development • Use is inconsistent with existing land use regulations • Duke Forest is unlikely to be available for redevelopment
H	Moderate Potential	<ul style="list-style-type: none"> • Adjacent to I-40 interchange • Low connections to existing development • Unlikely to result in transit supportive development • Use is inconsistent with existing land use regulations • Duke Forest is unlikely to be redeveloped
I	Low Potential	<ul style="list-style-type: none"> • Far from the I-40/ interchange. • Does not connect well to existing development • Unlikely to result in transit supportive development • Topographic and land re-use challenges
J	Low Potential	<ul style="list-style-type: none"> • Far from the I-40/ interchange • Site access is limited, railroad crossing improvement required • Does not connect well to existing development • Unlikely to result in transit supportive development • Topographic and land re-use challenges
K	Low Potential	<ul style="list-style-type: none"> • Far from the I-40/ interchange • Site access and visibility is limited • Parcel shape and utility constraints are not conducive to Park-and-Ride implementation • Unlikely to result in transit supportive development