



2015

Highway 211 Corridor Study



PREPARED BY:

Village of Pinehurst Planning and
Inspections Department

ADOPTED:

Acknowledgements

The Development of the Highway 211 Corridor Study was a collaborative process that involved numerous stakeholders, including the Highway 211 Study Group, the Village of Pinehurst Planning and Zoning Board, the Pinehurst Village Council and the Pinehurst Planning and Inspections Department.

Pinehurst Village Council

Nancy Roy Fiorillo, Mayor

John Cashion, Mayor Pro-Tem

John Strickland, Treasurer

Clark Campbell

Claire Phillips

Highway 211 Corridor Study Group

Leo Santowasso

Myles Larsen

Jay Snyder

Planning and Zoning Board

Fred Engelfried, Chairman

Jay Snyder, Vice-Chair

Richard Ashton

Carol Henry

Myles Larsen

Leo Santowasso

Betty Sapp

Joel Shriberg

Village of Pinehurst Staff

Kevin B. Reed, Director of Planning and Inspections

Bruce Gould, Principal Planner

Chad Hall, Senior Planner

Table of Contents

1.	Executive Summary	Pg. 3
2.	Mission Statement	Pg. 4
3.	Introduction	Pg. 4-5
4.	Existing Conditions	Pg. 6
4.1	Natural Environment	Pg. 6-8
4.2	Land Uses	Pg. 9
4.3	Zoning	Pg. 9-10
4.4	Transportation	Pg. 11-12
4.5	Utilities	Pg. 12
5.	Opportunities and Constraints	Pg. 12
5.1	Mobility	Pg. 12-13
5.2	Safety	Pg. 13
5.3	Aesthetics	Pg. 13-14
6.	Recommendations	Pg. 14-17
7.	Conclusions	Pg. 17

1. Executive Summary

The completion of the NC Highway 211 widening project has resulted in improved mobility along the corridor. This will have several outcomes including the increased potential for development along the corridor. This study focused on the corridor from the traffic circle westward to just west of the Pinewild gate. The total distance of the study area is slightly less than five miles. The mission established early on in the planning process was to:

Study a section of NC Highway 211 to develop a collaborative and comprehensive approach that addresses mobility, safety and aesthetics along the corridor.

This statement served to guide the team working on the development of the study throughout the planning process. The opportunities and constraints of the study focused on three areas: mobility, safety and constraints which were identified early in the mission statement.

The study resulted in ten recommendations which opportunities and constraints that are addressed by each recommendation. These are:

1. The Village, in concert with NCDOT, should implement regulations to limit access. (mobility, safety and aesthetics)
2. The Village should review the speed limit. (mobility and safety)
3. The Village should review its signage regulations. (safety and aesthetics)
4. The Village should review its landscaping standards for new residential and commercial development along the corridor. (aesthetics)
5. The Village should work with NCDOT to enhance landscaping within the public ROW. (safety and aesthetics)
6. The Village should review its zoning along the corridor. (mobility, safety and aesthetics)
7. The Village should review its lighting standards for new residential and commercial development along the corridor. (mobility, safety and aesthetics)
8. The Village should review its architectural design standards for new development along the corridor. (aesthetics)
9. The Village and NCDOT should review street lighting standards along the corridor to ensure attractive and consistent lighting is erected. (safety and athletics)
10. The Village should review its development regulations to ensure that appropriate pedestrian and bicycle facilities are constructed along the corridor. (mobility and aesthetics)

Several areas of concern and opportunities are reoccurring throughout this study. These include enhancing the long term functionality of the new constructed Superstreet, providing for as safe as possible facility and the need to upgrade the visual attractiveness of the corridor.

2. Mission Statement

Study a section of NC Highway 211 to develop a collaborative and comprehensive approach that addresses mobility, safety and aesthetics along the corridor. The words of this mission statement guided the stakeholders throughout this planning effort.

3. Introduction

The Highway 211 Corridor Study was undertaken by the Village of Pinehurst in an effort to guide future planning and improvements along Hwy. 211 within its jurisdiction.

Pinehurst maintains jurisdiction on both sides (north and south) of Hwy. 211 from the traffic circle at the intersection with Hwy. 15/501 and Hwy. 2 westward to the intersection with Hwy. 5. From this point Pinehurst has jurisdiction on only the south side of Hwy. 211 to the western extent of the study area, approximately .23 miles (1,200 ft.) west of the main (west) Pinewild gate. The total length of the corridor within the Pinehurst jurisdiction is a little less than 5 miles.



Map of the Highway 211 area of Study

Highway 211 is the major vehicular gateway when entering the Village from the west. Upon the recently completed improvements made by the NC Department of Transportation (NCDOT) to this corridor, Hwy. 211 has been converted to a four-lane divided Superstreet within the entire jurisdiction of Pinehurst.

The Superstreet concept refers to a reconfiguration of a traditional intersection. The primary Superstreet concept functions by redirecting through and left turning traffic from the side street approach to turn right, proceed to the nearby U-turn and then return to its original course. When designed correctly, this is actually a simple and safe solution to the problems caused by congestion. Safety is also improved through the use of a Superstreet by reducing the number of conflict points and side collisions. Another benefit of a Superstreet is reduced wait time at a signalized intersection. Traffic will be redirected to turn right and proceed to the U-turn instead of waiting for the green signal. This improves the flow of traffic.

- The minor cross-street traffic is prohibited from going straight through or left at a divided highway intersection.
- Minor cross street traffic must turn right, but can then access a U-turn to proceed in the desired direction.

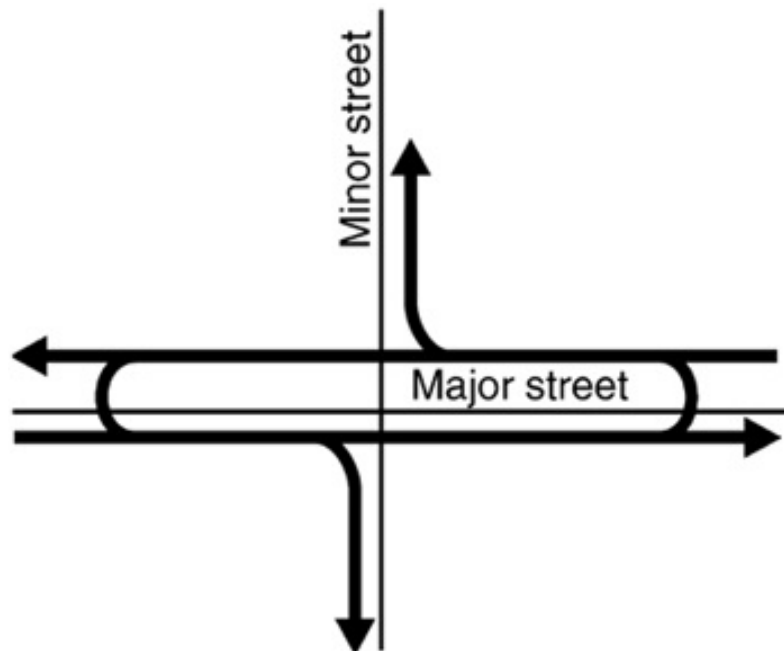


Illustration of a Superstreet intersection

Because of anticipated growth (both now and in the future) along the corridor and the opportunities for Pinehurst to manage development through their planning powers (i.e., implementing access spacing guidelines and landscape standards), this study was prepared to assist the village in guiding local land use, economic development, access management, and right of way improvement decisions that support and complement the long term aesthetics and functionality of the Hwy. 211 corridor.

4. Existing Conditions

This section is intended to give an overview of the existing conditions along the Hwy. 211 corridor within the jurisdiction of Pinehurst as it relates to the natural environment, land uses, zoning, transportation and utilities.

4.1 Natural Environment

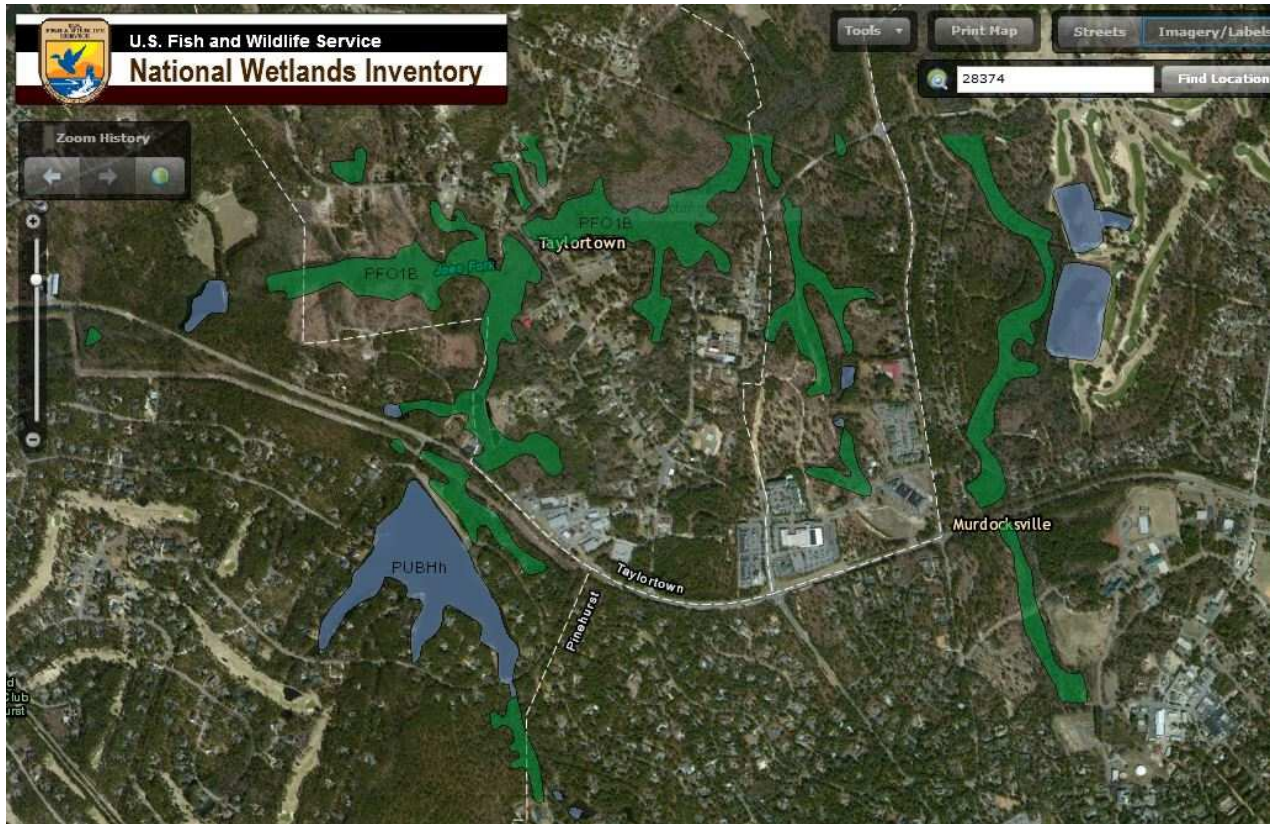
This section of Hwy. 211 is relatively flat and straight. However, when the realignment of Hwy. 211 was completed it did raise and lower the grade of the highway in areas creating several steep embankments, both positive and negative, along this stretch of roadway.

Water Bodies

This section of the highway passes over three streams, including Joes Fork, which is the main tributary to Nicks Creek, the public drinking supply for the Town of Carthage. This stream passes under the roadway between the west and east gate to Pinewild. A second creek is an unknown tributary to Nicks Creek and passes under the roadway just to the east of the east Pinewild gate as it exits the spillway of Lake Pinewild. The third stream, known as Board Branch, crosses the corridor just to the east of the intersection with McKenzie Rd. in the vicinity of Village Acres and Rassie Wicker Park.

Wetlands

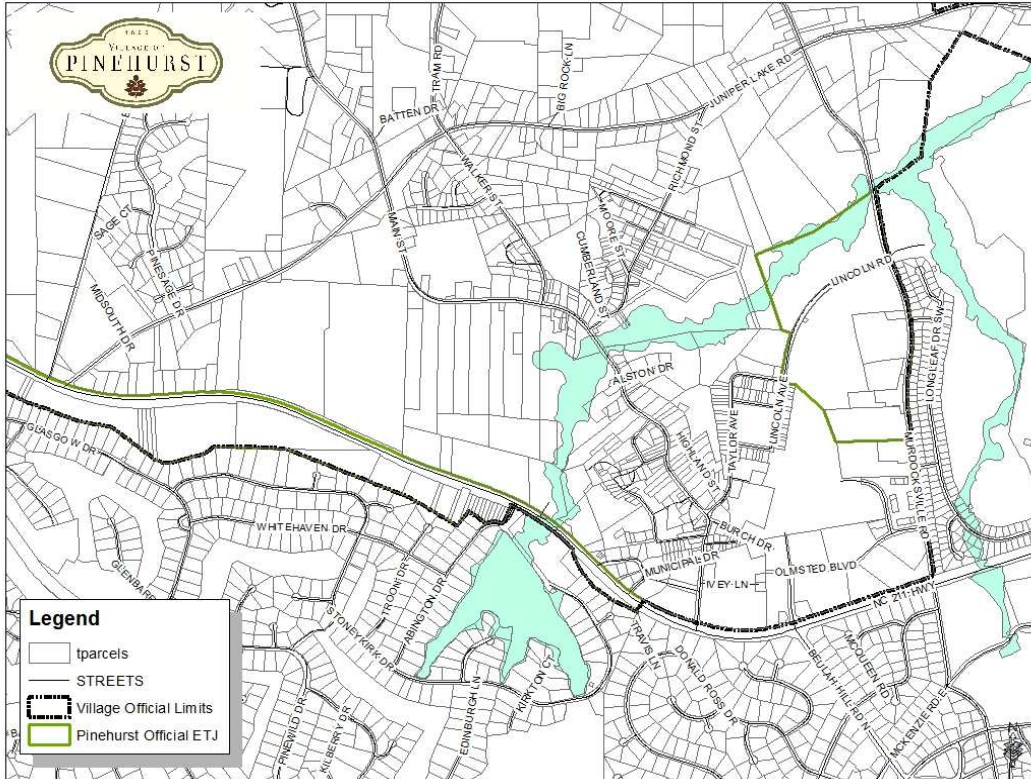
According to the National Wetlands Inventory, a large amount of wetlands exist just to the north of Lake Pinewild (this is in the area of the unknown tributary) that may create some impediments to development in that area. Also, a smaller area of wetlands is identified to the west along Joes Fork. Wetlands also exist along Board Branch. The accuracy of the National Wetlands Inventory should be field verified but it is a good reference for actual field conditions.



Map of wetlands in Pinehurst Jurisdiction/US Fish and Wildlife

Floodplain

The unknown tributary flowing out of Lake Pinewild contains a moderate amount of regulated floodplain, as does Board Branch. The section of Joes Fork does not include mapped floodplain. However, development in this immediate vicinity of this stream or further bridging or piping of this stream for crossings may require a floodplain study to ensure that upstream flooding does not occur.



Map of Floodplain within Pinehurst Jurisdiction

Watershed

All of the properties within the Pinehurst Jurisdiction that have frontage along Hwy. 211 are within the Nick’s Creek WS III Watershed Protection area except for the stretch of road between Page Rd. and the traffic circle. This will have some development implications, such as stream buffers, the use of Best Management Practices (BMP’s) to handle stormwater and possibly some limitations on the amount of impervious surface that may be allowed on a project by project basis.

It should be noted that the Village currently has approximately 485 acres of Intensity Allocation to give in the WS III watershed. This would allow developments to exceed the 24% impervious surface or one unit per acre restrictions and allow up to 70% impervious surface.

Endangered Species

There are no known endangered species that would be impacted along the corridor except for the Red Cockaded Woodpecker clusters in the vicinity of the Hospital.

Hazardous Materials

There are no known hazardous materials within this area. However, the Aberdeen Carolina and Western Railroad (ACWR) has a rail corridor running parallel to and south of Hwy. 211 and does haul hazardous materials.

4.2 Land Uses

The area on the north side of Hwy. 211 from the traffic circle to Memorial Dr. are used for medical offices, banks, professional offices and the FirstHealth of the Carolinas Moore Regional Hospital Campus. Between Memorial Dr. and Murdocksville Rd., the land usage is single family residential.

On the south side of the roadway between the traffic circle and Dundee Rd., the properties consist of single-family homes. West from Dundee Rd is the Sacred Heart Church, park lands, a nursing home, another church and park lands until you reach McKenzie Rd. The areas to the west of McKenzie Rd. along the south side of Hwy. 211 are used for single-family residential purposes and are part of the Donald Ross area of Pinehurst. Further west are lands owned by Pinewild Properties Association and the Pinewild Developers that are used for open space, the homeowners association maintenance facility and the spillway for Pinewild Lake and the secondary (east) entrance for the Pinewild neighborhood.

West of the secondary entrance drive to Pinewild are vacant properties that are part of the Pinewild Commercial Subdivision. It should be noted that many of these tracts have been recombined over the past 5 or so years from the original layout of deep 50' wide lots and have been placed under sole ownership.

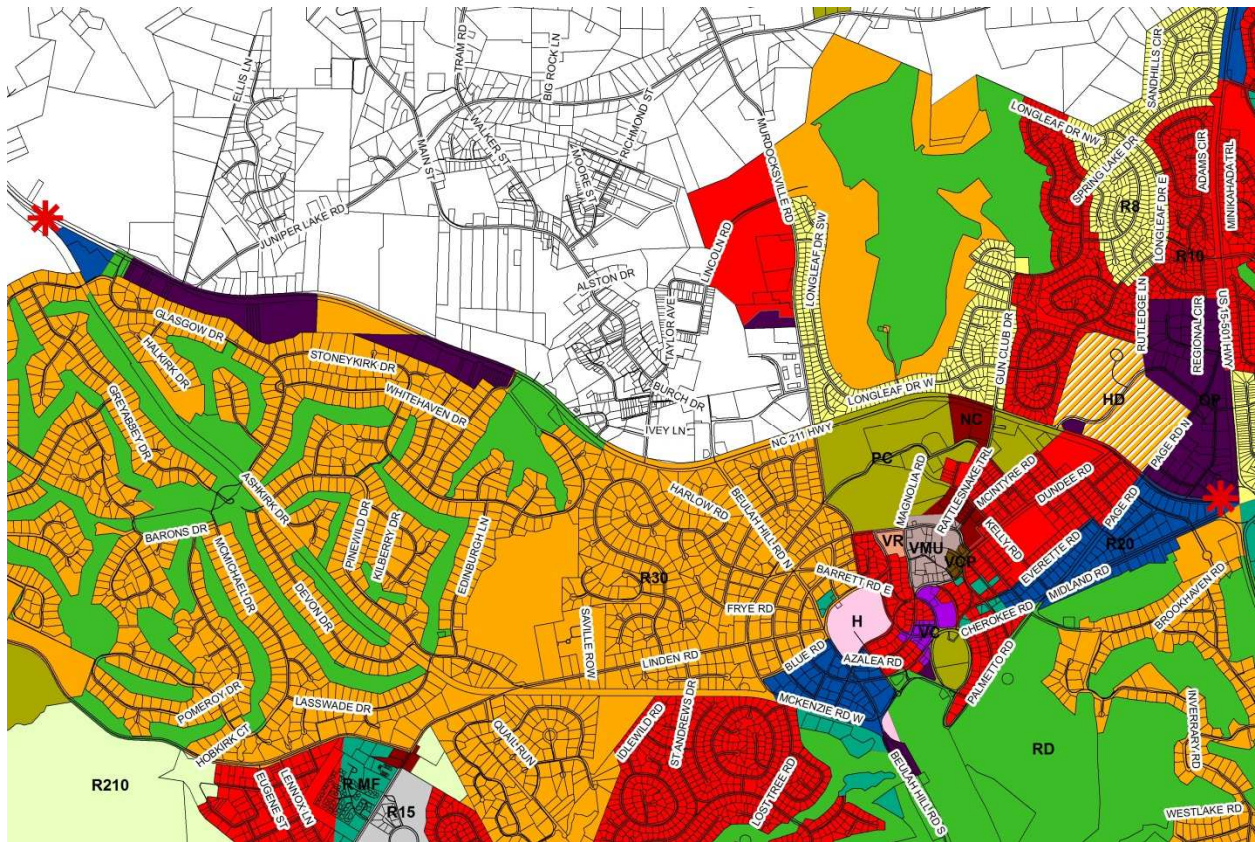
West of the main (west) gate to Pinewild are several tracts owned by the developer of Pinewild that are also vacant.

Progress Energy has a major transmission line running parallel to and south of the highway that could have implications on future aesthetics and development.

4.3 Zoning

Starting at the traffic circle and heading west along Hwy. 211 on the north side of the corridor is zoned Office and Professional (OP) until you get to Page Rd at which time the zoning changes to Hospital Development (HD). After the intersection with Memorial Dr., the zoning changes to R-10 (single-family residential) before again changing to R-8 (single-family residential) just before Gun Club Dr. The zoning on the north side of the roadway remains R-8 until reaching the jurisdictional boundary at Murdocksville Rd.

On the south side of the corridor beginning at the traffic circle and heading west, the properties up until Page Rd. are zoned R-20 (single-family residential). After the intersection with Page Rd. the property changes to R-10 zoning. After the Sacred Heart Catholic Church, the zoning changes to Public Conservation (PC) until reaching Rattlesnake Trail. At that point the zoning changes to Neighborhood Commercial (NC). Upon reaching Rassic Wicker Park, the zoning changes again to PC. After the intersection with McKenzie Rd., the single family lots within the Donald Ross area are zoned R-30 (single-family residential). Further west, the lots owned by the Homeowners Association and the developer of Pinewild are zoned Recreation Development (RD). The Pinewild Commercial lots are zoned Office and Professional (OP) and the parcels to the west of the main gate are zoned R-20 (single-family residential), although the property owner has shown an interest in developing these lots for some sort of convenience retail/service use.



Zoning Map for Pinehurst

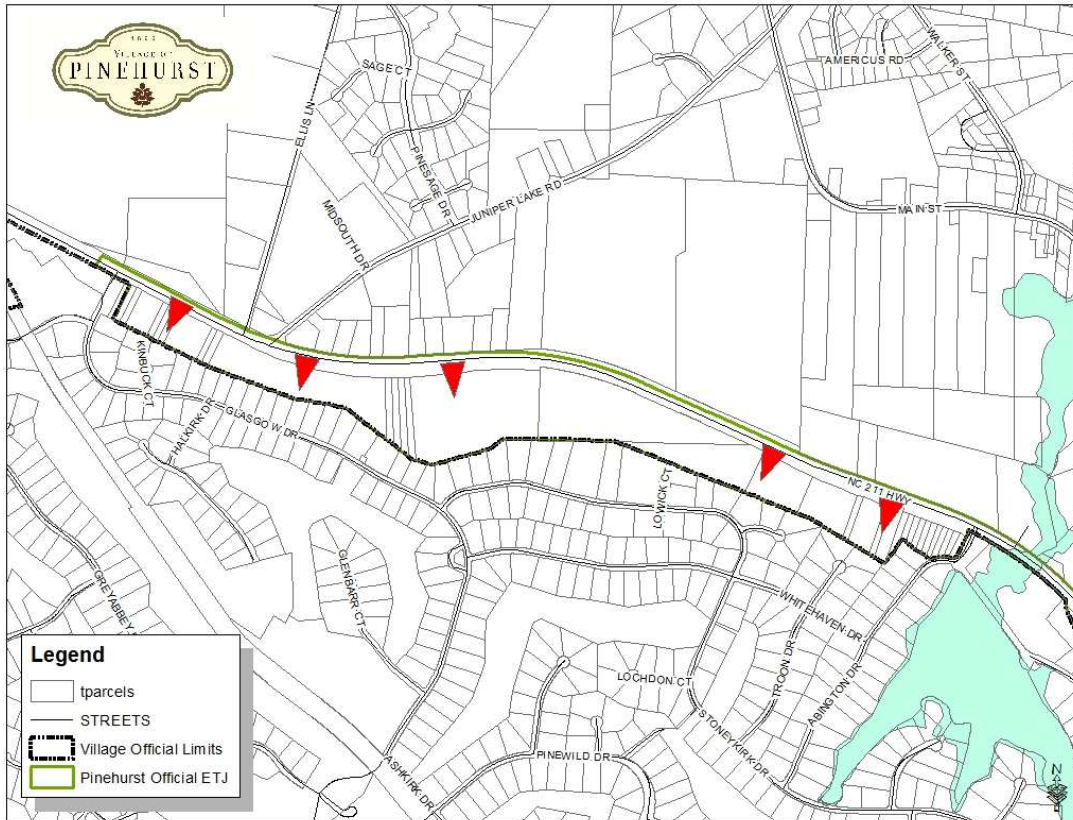
4.4 Transportation

Heading west from the traffic circle is Moore Regional Hospital, the largest employer in the County and several signalized intersections that service the hospital campus and surrounding office areas. These intersections include Page Rd. and Memorial Dr. The next major intersection is Rattlesnake Trail/Gun Club Rd. This intersection is signalized and services the Village Acres area and is also a gateway into the village center. Traveling further west is another signalized intersection for McKenzie Rd/Murdocksville Rd. Further along this corridor is the intersection with Hwy. 5/Central Park Ave. This intersection connects Pinehurst with Aberdeen at US 1 via Hwy. 5 south and also the shopping areas located in Olmsted Village.

Sidewalks exist on both sides of the corridor from Page Rd. to Hwy 5.

After crossing Hwy. 5 there are no intersections or cross streets except for the above mentioned entrances to the Pinewild Development within this area of Hwy. 211, as most of the properties are precluded from having access to Hwy. 211 or are undeveloped.

When the Pinewild commercial lots were subdivided, controlled access points were determined to reduce the number of driveways allowed. These included 3 access points from Hwy. 211 contained within the western pod of lots and 2 access points within the eastern pod. As part of the reconfiguration of Hwy. 211, NCDOT is now saying that only one access point would be allowed for each of the pods.



Map Depicting Access Points to the Pinewild Commercial Lots

4.5 Utilities

Public water is available along Hwy 211 to serve future development along this corridor. Public sewer is also available in the immediate area but appears to require some line extensions and/or easement acquisition west of the Donald Ross area. It has also been problematic in the past to determine if individuals can connect to the sewer lines in Pinewild as Moore County has never taken ownership of these lines. It is important to note that the Village of Pinehurst requires all development within 300' of public water and sewer to connect to that system.

5. Opportunities and Constraints

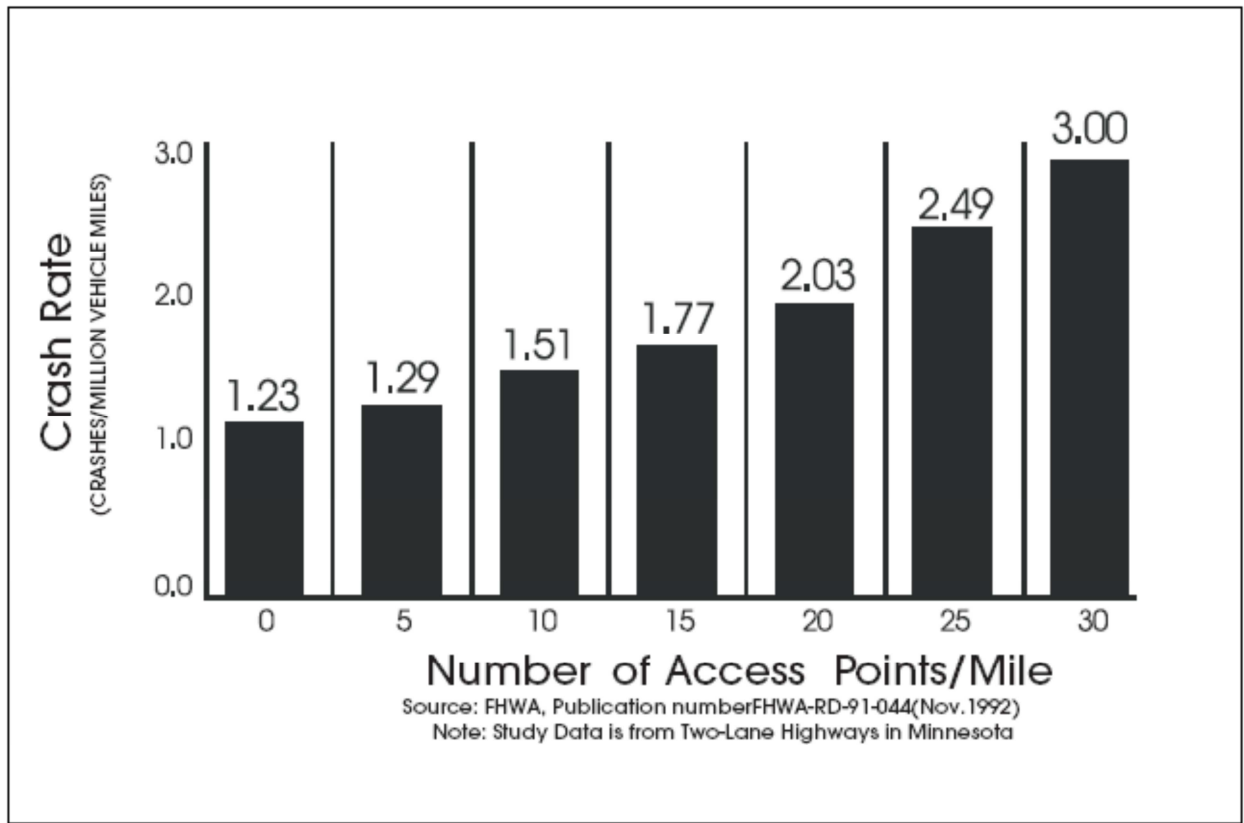
5.1 Mobility

The anticipated growth to the west of Pinehurst will increase demand for upgraded transportation infrastructure. NCDOT just completed the widening of this corridor from the traffic circle to Hwy. 73 at an estimated cost of \$31 million. With the large amount of capital expended by the tax payers of the State of North Carolina on this road improvement project it is paramount that the functionality of this corridor be extended well into the future as it is unlikely that any further improvements will be done to the roadway to create additional capacity.

As urbanization occurs along the corridor, particularly in and to the west of Pinehurst's jurisdiction, Hwy. 211 will need to carry much more traffic. In addition to causing congestion on Hwy. 211, increases in traffic volumes throughout the study area are anticipated to encourage regional traffic to use secondary state roads and local streets, thereby increasing congestion and decreasing safety in other locations. Thus, for a variety of performance and quality of life reasons there is a need to examine improvements on Hwy. 211 that would allow greater volumes of traffic to flow through the area.

5.2 Safety

Public safety is a high priority for all agencies responsible for maintaining and improving public transportation facilities. It is vital that future land use decisions and regulatory requirements try to mitigate any adverse impacts to public safety. This could include but not be limited to the placement of vegetation and structures, signage, minimizing access points and increased connectivity between uses.



5.3 Aesthetics

Due to the fact that Hwy. 211 is the western gateway to the Village of Pinehurst, an emphasis must be given to the aesthetics of the corridor to ensure it respects the context of the area and minimizes the impact to the natural and built environments. An emphasis should be focused on not only how the facility moves traffic but also on the visual appearance of the corridor.

When new development occurs, it should be appropriate for the Village and visually appealing. Items of concern should be landscaping, lighting, intersection treatments and signage.



6. Recommendations

1. *The Village of Pinehurst in concert with NCDOT, should implement regulations to limit access. Poor access management results in inefficient use of the roadway. It directly affects the livability and economic vitality of commercial areas in particular, ultimately*

discouraging potential customers from entering the area and accessing businesses. A corridor with poor access management lengthens commute times, creates unsafe conditions, reduces fuel efficiency, and increases vehicle emissions.

Without access management, the function and character of major roadway corridors can deteriorate rapidly and adjacent properties can suffer from declining property values and high turnover.

Some examples of access management treatments include:

- Improved On-Site Traffic Circulation
- Limiting the number of driveways
- Driveway Placement/Relocation/consolidations
- Cross Access Requirements
- Shared Parking

(mobility, safety and aesthetics)

2. *The Village of Pinehurst should review the speed limit.* As new development occurs and additional vehicle trips impact the corridor, the Village of Pinehurst should consult with NCDOT to make sure that the posted speed limit is appropriate. Additionally, if speeding is determined to be a safety issue, the Village and the NC Highway Patrol should be notified that increased enforcement is needed.

(mobility and safety)

3. *The Village of Pinehurst should review its signage regulations.* NCDOT has indicated that the speed limit along Hwy. 211 will remain 55 mph in the study area. With this being the case, the existing sign regulations may need to be adjusted to make sure development signage is legible at that speed.

(safety and aesthetics)



4. *The Village of Pinehurst should review its landscaping standards for new residential and commercial developments along the corridor.* New development along the corridor will have a visual impact. Having appropriate landscaping standards will mitigate negative visual impacts of the development and also mitigate traffic noise.
(aesthetics)
5. *The Village of Pinehurst should work with NCDOT to enhance landscaping along the public ROW.* Enhancing the landscaping in the right-of-way in an appropriate and safe manner will improve the attractiveness of the ROW and the adjacent properties. In doing so the village should leverage any capital it has to expend on the landscaping versus what NCDOT funds may be available for landscape enhancements.
(safety and aesthetics)
6. *The Village of Pinehurst should review its zoning within the corridor.* The relationship between land usage and transportation are not exclusive of one another because they both need to meet the challenges associated with growth in the area.
(mobility, safety and aesthetics)
7. *The Village of Pinehurst should review its lighting standards for new residential and commercial development along the corridor.* New development along the corridor will have a visual impact. Having appropriate lighting incorporated into new development will help mitigate negative visual impacts of the development.
(mobility, safety and aesthetics)
8. *The Village of Pinehurst should review its architectural design standards for new development along the corridor.* New development along the corridor will have a visual

impact. Having appropriate architecture and design incorporated into new buildings will help mitigate negative visual impacts of the development.
(aesthetics)

9. *The Village of Pinehurst and NCDOT should review street lighting standards along the corridor to ensure attractive and consistent lighting is erected. As development occurs along the corridor it will be necessary to ensure that facility is appropriately and attractively lit. Since this is a gateway to the Village, any traffic lights should also be compatible with the look of the Village.*
(safety and aesthetics)

10. *The Village of Pinehurst should review its development regulations to ensure that appropriate pedestrian and bicycle facilities are constructed along the corridor. As development occurs along the corridor, pedestrian and bike facilities should be included to allow alternate means of travel and exercise. These would include linking residential areas to commercial nodes and each other.*
(mobility and aesthetics)

7. Conclusions

Several areas of concern and opportunities are reoccurring throughout this study. These include enhancing the long term functionality of the new constructed Superstreet, providing for as safe as possible facility and the need to upgrade the visual attractiveness of the corridor. In many scenarios these areas have an impact on one another. So, before any implementation of one or more of these items occur, it needs to be weighed against any negative consequences that may occur to another area of concern. With the newly aligned roadway, this is the optimal time to create the vision for the corridor and implement practices to ensure an attractive and viable facility well into the future. Additionally, this corridor is a major gateway into the Village and future development and the context in which it occurs should respect that.

Pinehurst does not preside in a vacuum and actions by Pinehurst along this corridor will have an impact on the surrounding areas and region. Vice versa, actions that occur outside of Pinehurst have an impact on areas inside Pinehurst. Therefore, the Village should seek collaboration and build partnerships with other area jurisdictions, NCDOT and public utilities when considering public and private development to ensure the long term functionality of the roadway, proper development, encourage economic opportunities and to create an attractive corridor.