



TOWNSHIP OF

MARLBORO

Pedestrian

Access

Plan

December 2009

Prepared by
Heyer, Gruel & Associates

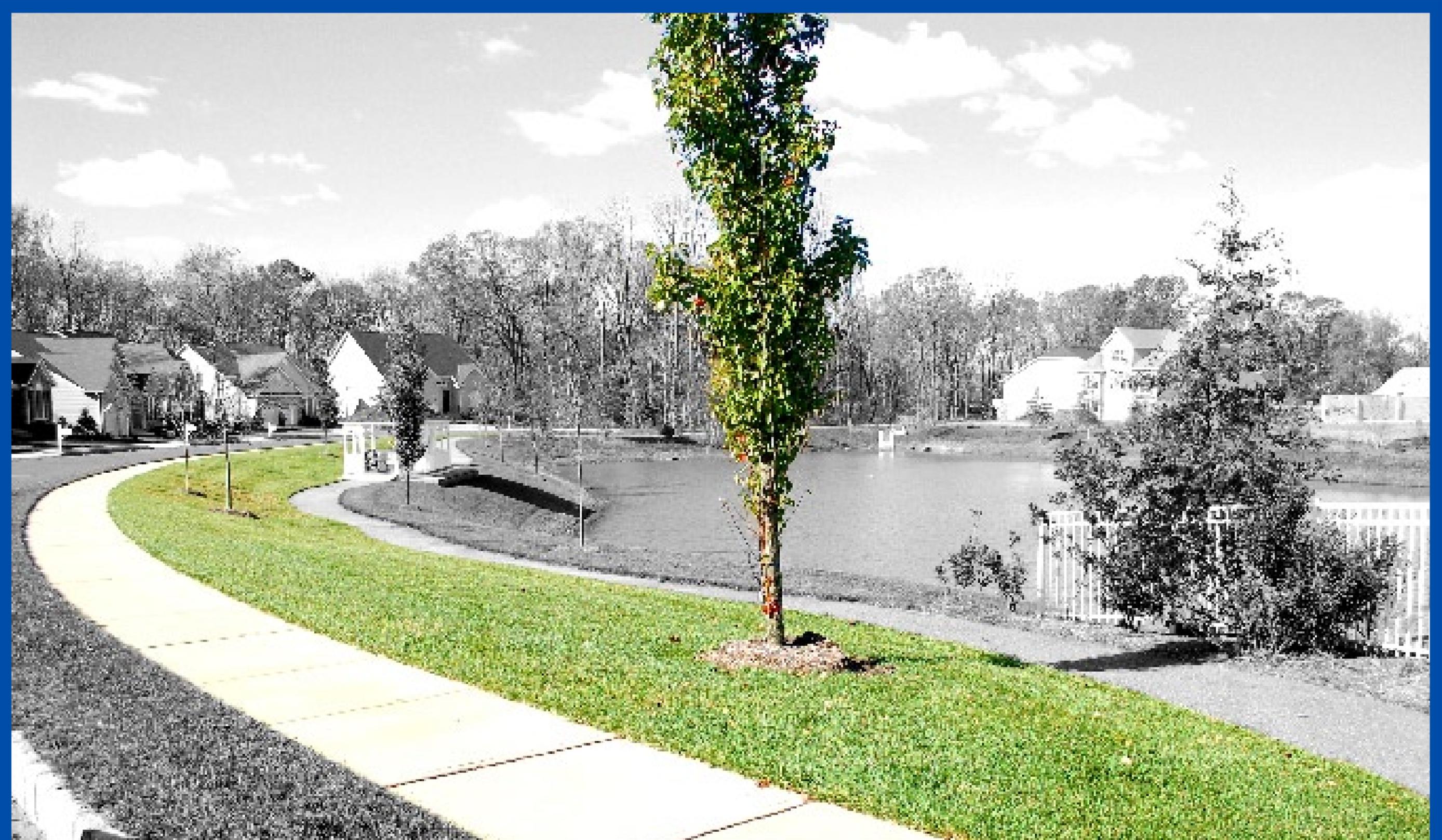


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As discussions about sustainability and reducing greenhouse gas emissions continue to permeate our society, citizens and governments are beginning to recognize the important role of bicycling and walking including the environmental, social, and physical benefits. Given safe, convenient conditions, a ten-minute bike commute or a walk for a quick errand becomes a preferred option over a 30-minute car commute on traffic-clogged streets or a car trip with a frustrating search for a parking spot.

Heyer Gruel and Associates recently completed a Community Visioning Process for the Township of Marlboro in which common themes of smart growth, increased access to public transportation and linkages to walkways and bikeways were discussed often among the residents. The citizens of Marlboro noted a lack of safe sidewalks, specifically along major routes. They felt the introduction of sidewalks to Marlboro's roadways could make them more walkable and pedestrian-friendly. As a response to these comments, Mayor Jonathan Hornik asked HGA to complete a Pedestrian Planning Study. The purpose of this study is to increase the safety of pedestrian crossings and to establish sidewalk continuity throughout the Township of Marlboro. Based on the results of the study HGA has prepared this Pedestrian Access Plan to assess the functionality of existing facilities, identify deficiencies, and propose actions to improve connectivity.

Marlboro Township is a classic "sprawl" suburb that experienced rapid development without a comprehensive plan to guide its growth properly. As a Sustainable Jersey registered municipality, Marlboro is committed to sustainable planning and growth. The Township is 30.6 square miles in area and located in the northern part of Monmouth County, bordering on Middlesex County. Its neighboring municipalities are Old Bridge Township, Matawan Borough, Aberdeen Township, Holmdel Township, Colts Neck Township, Freehold Township, and Manalapan Township. There are 15.5 miles of State roads, 15.9 miles of County roads and 205.4 miles of local roads in the Township. The main highways servicing the Township are State Route 18, which bisects the Township, US Highway Route 9 in the western portion of the Township, and State Highway Route 79 in the eastern part of the Township. County Route 520, Newman Springs Road, is a designated Monmouth County Scenic Roadway.

During the Community Visioning Process the citizens of Marlboro recommended that sidewalks should be constructed to create connections between existing residential developments and recreational facilities, community facilities, and commercial establishments. These linkages would benefit both pedestrians and bicyclists. It was also recommended that pedestrian connections between adjacent commercial uses on Route 9 and residential developments located to the rear of these uses be established. High priority pedestrian connections were identified in the Western Monmouth Development Plan as south of the intersection of Union Hill Road and Route 9 and along Route 79 from Route 520 to Route 18.

- Identify chief pedestrian destinations (current and future); select focus areas for pedestrian analysis.
- Conduct an inventory of existing pedestrian conditions and deficiencies
- Create maps showing identified pedestrian deficiencies and recommended improvements.
- Develop a set of recommended improvements to address the deficiencies identified
- Identify potential funding sources.

This study focuses on the issues identified previously as well as areas identified by the U.S. Department of Transportation as important sidewalk locations such as:

- Schools
- Transit stops
- Parks/sports areas
- Shopping districts
- Recreational corridors
- Public buildings



SCHOOLS



The Marlboro Township School District provides transportation to and from school for the entire student population. The district's fleet, consisting of 86 school buses and vans, makes over 430 trips per day, transporting students to and from school. The transportation department services eight schools and employs 76 bus drivers and 18 bus attendants. Although most if not all children take buses to school rather than walk, it is still important to provide safe routes for those that do choose to walk. The schools also double as recreation facilities that are accessible during off school hours as well.

Marlboro Early Learning Center

The nearest sidewalks are 700' away in the nearby residential subdivision area. There is also a short section of sidewalk on the northwest corner of Spring Valley Road and Tennent Road. Due to the age of children attending this facility it is unlikely that sidewalks would be necessary to access the school.

Asher Holmes Elementary School & Robertsville Elementary School

There are three crosswalks at the intersection of Union Hill Road and Tennent Road, however there are no sidewalks leading to these crosswalks. The nearest sidewalks are at the intersection of Angelique Court and Tennent Road, 1,500 feet from the entrance to Robertsville Elementary. The property bounded by the intersections on Tennent Road at Union Hill Road and Angelique Court is a pre-school owned by the Board of Education of Marlboro. The entrance to Robertsville Elementary is approximately 830 feet from the main entrance on Tennent Road, with only 5 residences along that drive. Asher Holmes Elementary is approximately 730 feet from Union Hill Road with 23 homes within 1000 feet.

Marlboro Elementary School

This area of the Township has excellent sidewalk coverage. The school property is surrounded by residential properties, most with sidewalks on both sides of the street. (See Municipal Complex for proposed crosswalks and sidewalk additions)

Frank J. Dugan Elementary School

The school building is over 875 feet from the entrance onto Topanemus Road. There are no sidewalks on either side of Topanemus Road in the

vicinity of the school. The school is adjacent to a Jewish Youth Center and surrounded by residential properties with sidewalks on both sides of the street. There does not appear to be any linkages between the school and the residential properties. The Township should look into purchasing an access easement to create connections between the residential areas and the school and Jewish Youth Center. There is a large parcel of vacant land owned by the Township that could be used to create walkways to the school from the adjacent cul-de-sacs.

Marlboro Middle School

Route 520 has sidewalks along the western side of the road adjacent to the school property. The residential properties surrounding the school have sidewalk access from Route 520 however the rear of the properties surround the school. The property lines show a 20' wide connection to Truman Drive however there does not appear to be a path. There are no other visible connections to the school other than from Route 520.

Marlboro Memorial Middle School

The school is surrounded by residentially zoned properties. The land immediately to the east and west of the school is currently undeveloped. There are no sidewalks leading up to the entrance on Nolan Road. There is a second access drive leading to an unnamed cul-de-sac that appears to have a planned connection to Thornton Avenue and currently exits onto Lloyd Road. If future residential development is planned for this area, sidewalks and/or pathways should be included to connect to the school. Sidewalks should be added on the south side of Nolan Road with a crosswalk at the schools entrance. This sidewalk addition on Nolan Road will also aid in connecting the residential properties and school to nearby Nolan Road Park as well.

Freehold Regional - Marlboro High School

The High School is located on Route 79 and has access to the NJ Transit bus lines. The property features an excellent sidewalk network including along the property boundary with crosswalks. No sidewalk additions are needed in this area however there are no crosswalks across Route 79 to connect to the adjacent residential properties. The future development of the proposed Village Center does present an opportunity to create pathways connecting the residential properties to the east and the Village Center to the school and it's fields.



There are five NJ Transit bus lines that travel through the Township of Marlboro, NYPA 131,135,139, Newark/Jersey City 64 and 67. Their routes are along U.S. Highway 9 and State Route 79. There are currently four park and ride lots in Marlboro mostly concentrated along Route 9.

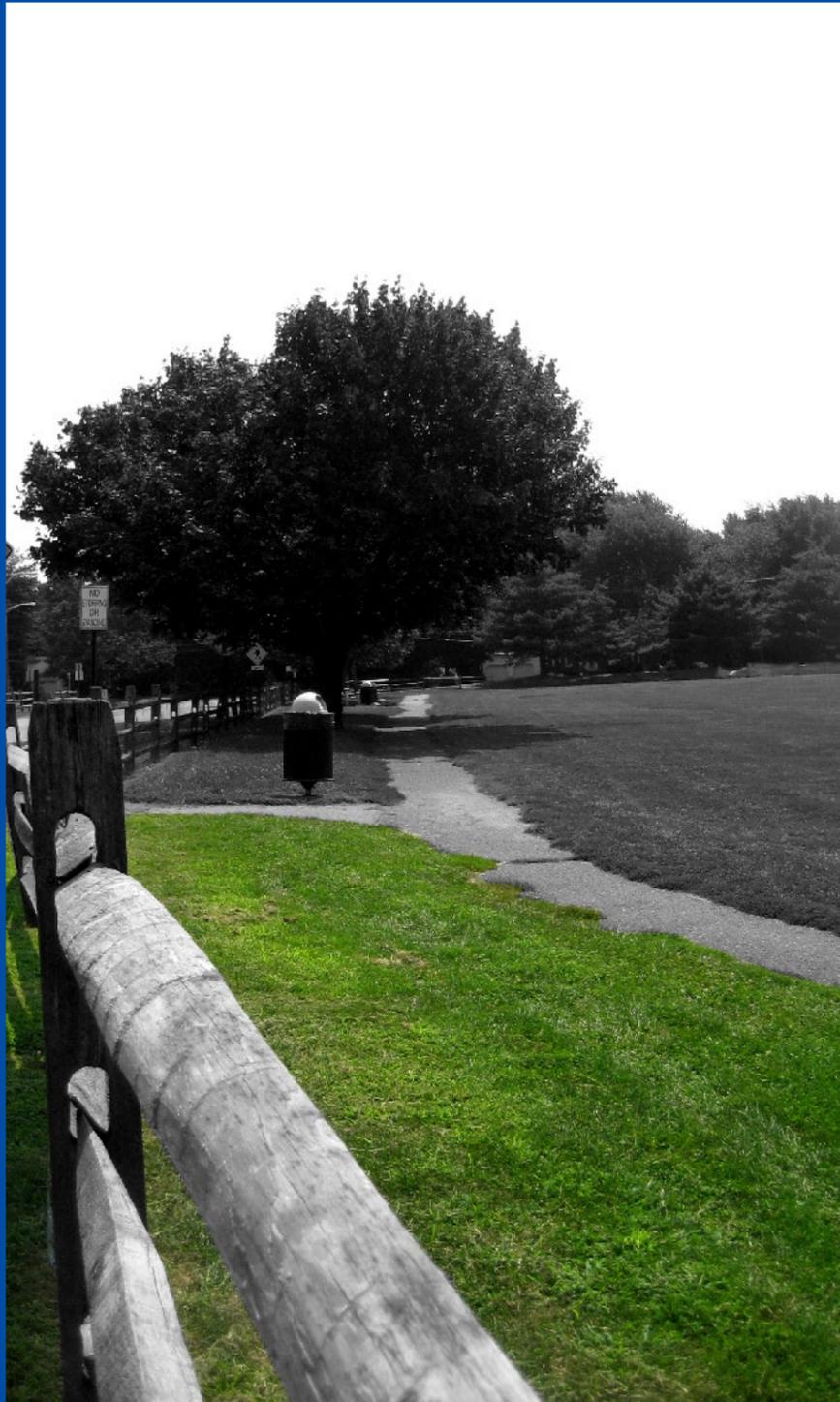
Route 9 serves as both a commercial/retail corridor and a major transit corridor. For such an important corridor there are little to no sidewalks to serve the pedestrians that use these facilities. According to a study completed for the Route 9/Western Monmouth Development plan, people are often seen walking along the roadway or through the adjacent parking lots. Along the 2.3 mile stretch of Route 9 through Marlboro there is currently only 1,224 linear feet of sidewalk on the north bound side and 1,607 linear feet not on the south bound side, not including ramps.

Route 79 runs north to south bisecting the Township, connecting Matawan Borough to Freehold Township. According to 2006 NJTPA data, peak traffic volumes range from 1,000 vehicles to over 3,000 vehicles. In 2007, Monmouth County adopted a Route 79 Transportation Study in which the following recommendations were made to alleviate the transportation-related problems that occur along this corridor, to implement the growth management concepts, and preserve the character of the surrounding land uses in the Township:

- Center-Based Developments - Examine concepts/locations, increase walkability on connecting roadways, provide access to infrastructure, concentrate growth and Center Development, and increase access to alternate forms of transportation at Center Developments.
- Pedestrian & Bicycle Facility Expansions - Provide sidewalk extension areas, crossing improvements along certain portions of Route 79, Henry Hudson Trail expansion, trail-roadway study, alternate bicycle area, and increased bicycle signage.
- Increase Transit service and Connection with Corridor - Provide potential park/ride and bus locations, train station shuttle service, and accommodate Henry Hudson Trail as a commuter outlet along certain portions of Route 79.



PARKS/SPORTS AREAS



The Recreation Commission maintains several parks and facilities for public use throughout the Township. The recreation facilities and parks shown on the maps in Appendix A include County parkland as well as ball fields, tot lots, tennis courts. Existing facilities are as follows:

[Marlboro Country Park - Gordons Corner Road - Municipal Swim Club](#)

The park has eight lighted tennis courts, two handball walls, a tot lot, basketball courts, and two ball fields. The entrance is approximately 1,500 feet from Gordons Corner Road. There is an existing sidewalk partially along the entrance road, Masepe Trail. The park is surrounded by Route 18 to the east and residential properties on the other three sides. There is currently no direct access from these residences to the park.

A system of trails should be created on the Township owned property that connects the cul-de-sacs to the recreation areas. Two cul-de-sacs, Diane Drive and Prince William Road, end at the Townships property with no homes to obstruct access. There is an existing 20' strip of property owned by the Township that could be used to connect the trail to Georgian Bay Drive.

[Hawkins Road Park - Hawkins Road off Union Hill Road](#)

The park has two tennis courts, basketball courts, a tot lot, a sitting area, and an open field. There is an excellent existing pathway system within the park, to the parking lot along Hawkins Road and connecting it to the residences on Millay Road and Markham Drive.

[Falsion Park - Falsion Lane](#)

This 4.4 acre park has a tennis court and tot lot. There is an existing trail on the site with two entrances to the path from Petra Drive. There are sidewalks on the residential properties across from the park but none along the perimeter of the park itself.

[Wicker Place Park - off Texas Road](#)

This one acre park located at the end of Wicker Place has a Basketball court, tot lot, and sitting area. There are existing sidewalks along Wicker Place on the side of the park. No additional sidewalks are necessary to access the park safely at this time.

[Marlin Estates Park - East Francis Ave](#)

The only entrance to this park is located at the end of East Francis Avenue. The available facilities include a Basketball court, two tennis courts, softball field, and tot lot. There are no sidewalks on the roads leading up to the park, Hamilton Avenue and East Francis Avenue.

Sidewalks should be added to these roads as well as the areas necessary to bridge the gap to the existing sidewalks on nearby Burr Avenue and West Francis Avenue. There is also an opportunity to create a trail connecting the end of the cul-de-sac of West Francis Road to the park entrance on East Francis Avenue using Township owned property.

[Nolan Road Park - Corner of Lloyd and Nolan Roads](#)

This park surrounded by low density residential properties has a Basketball court, two tennis courts, a softball field, and a tot lot. There are no sidewalks along Nolan Road between the park entrance and the intersection with Lloyd Road. The park is located across from a children's' psychiatric center.

Sidewalks should be added along Lloyd Road to the park entrance lot as well as crosswalks on Lloyd Road and Nolan Road to encourage safe pedestrian access from the nearby residential properties. There is also an opportunity to create a pathway from the ball field to an abandoned right of way that could be used to connect Ramsgate Drive to Roosevelt Avenue using Township owned land.

[Municipal Complex - Wyncrest Road](#)

The Complex offers athletic Fields, a tot lot, shuffle board courts, walking paths, and a shelter building. There are walkways within the complex fenced area but none along Wyncrest Road. This walk can only be accessed at one point along Wyncrest Road, near the intersection of School Road. There is no crosswalk that connects the sidewalk on School Road across Wyncrest to the entrance to the complex.

Crosswalks should be added at this intersection and sidewalks added partially along the southeast corner of the intersection on the synagogue property corner to access the crosswalks. Sidewalks should also be added along Wyncrest Road and Township Drive along with crosswalks at the intersection to emphasize the entrance to the Complex and encourage pedestrian safety.

Recreation Way Park - at Community Center

The park includes a hockey rink, lighted basketball courts, and a tot lot. There are sidewalks within the parking lot area towards the Community Center however the sidewalks do not continue along Recreation Way to its intersections with Taylor Mills Road. There is one crosswalk from the parking lot to the Community Center Entrance. There is also a system of paths connecting the park facilities to the parking lot and each other.

Sidewalks should be added along at least one side of Recreation Way and along Taylor Mills Road to connect the two entrances and offer a safe path to the facilities from the residential neighborhood across Taylor Mills Road. Crosswalks should also be added at the intersections of Recreation Way and Taylor Mills Road for safe crossings of Taylor Mills Road and to bring attention to the entrance to this park facility.

Union Hill Recreation Complex - Union Hill Road

The complex is located near the intersection of Route 9 and Union Hill Road. The facilities available include two lighted softball fields, a tot lot and walking paths. There are existing sidewalks on Union Hill Road and along the entrance drive that connect to the walking paths in the complex. There appear to be existing unimproved paths from Pin Oak Road to the walking paths as well as to the adjacent commercial properties. It is recommended that these paths be cleared and improved to encourage pedestrian activity and create a safe connection for residents.

Vanderburg Sports Complex - Vanderburg Road

The complex is located at the eastern edge of the Township bordering Colts Neck Township. There are soccer fields and an aquatic center. There are no sidewalks on Vanderburg Road or Boundary Road leading up to the park entrances. There does appear to be a naturally worn path leading to a bridge crossing Big Brook connecting it to the nearby residential properties on Ablemarle Drive. This path should be made permanent and signs added. Sidewalks along the roads are not necessary as the path offers a direct and shorter connection from the residences to the fields.

Big Brook Park - Monmouth County Park

Big Brook Park is located south of Route 520 and east of the Henry Hudson Trail. This 379 acre County Park was once part of the Marlboro State Hospital facility. The Park is adjacent to the YMCA Camp Arrowhead Reserve. It was acquired by the County to help protect the Navesink Watershed. According to the Monmouth County Park System, "plans have yet to be developed to provide for public access to the Park. Visitation to this site will be encouraged once appropriate amenities, such as parking, are in place." The maps show a proposed trail system through the park to connect the YMCA to the Henry Hudson Trail, nearby residential properties and a proposed trail system on the Marlboro State Hospital property to the north.



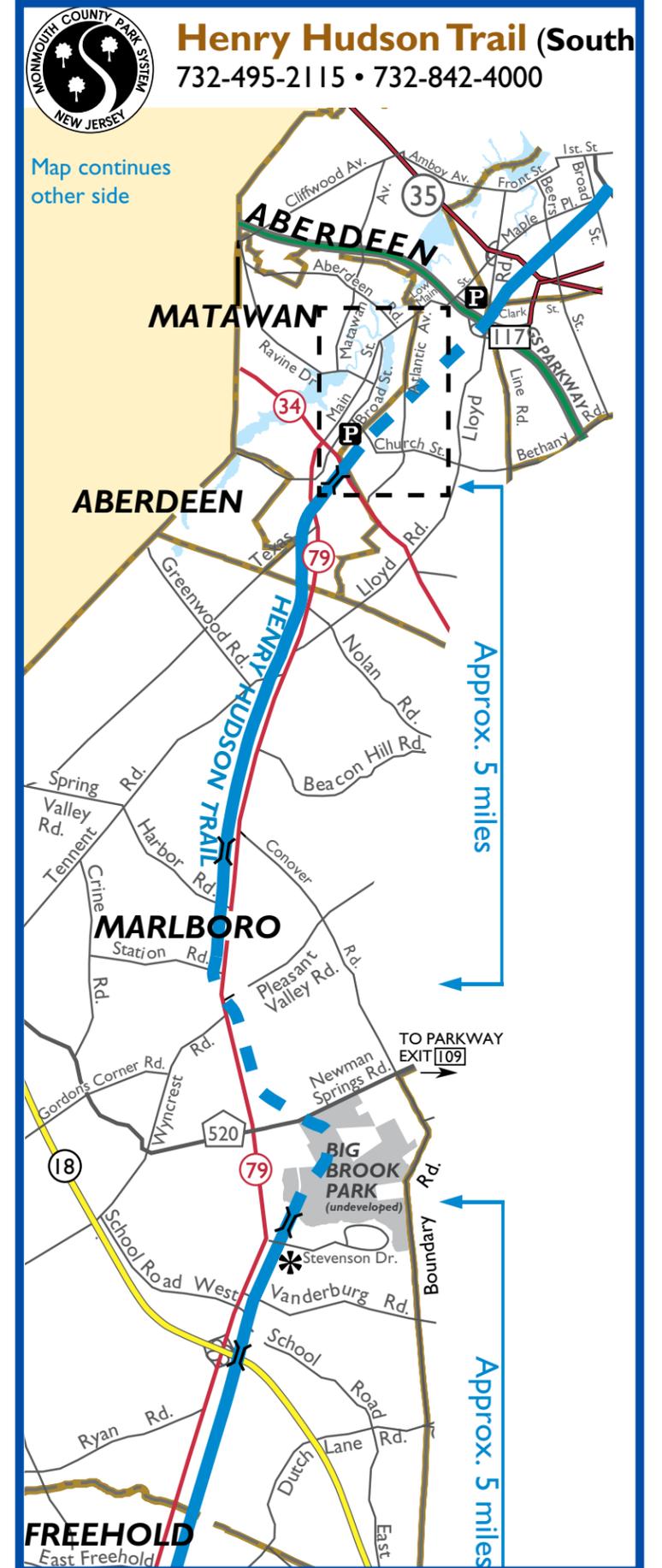
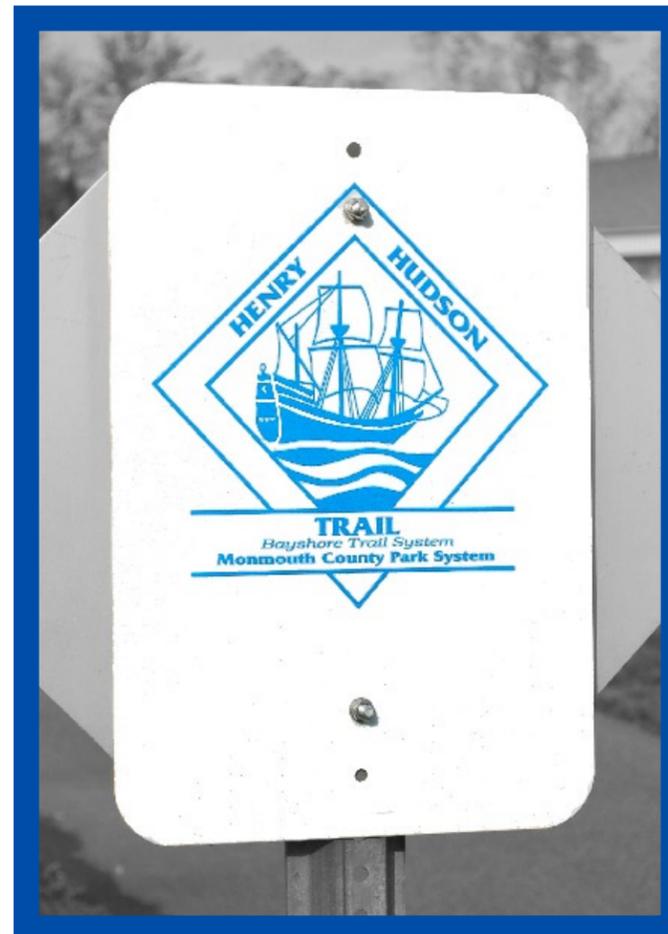
RECREATION CORRIDORS



Henry Hudson Trail

A paved, 10-foot wide, 22-mile long regional bike/pedestrian path that was formerly a railroad right-of-way. The trail extends from Freehold north to Keyport and then east to the Atlantic Highlands and loosely follows the same north to south path as Route 79. In addition to being a popular means of exercise the path also offers an alternate transportation route in the Township.

The Trail however is not fully connected or complete between Stevenson Road and Station Road. As a result, users must deal with high traffic roadways to access the other portions of the trail. It is possible to bike approximately 2 miles northwards on Route 79 to rejoin the trail, however, there are currently no dedicated bike lanes or sidewalks along the busy 2-lane highway. In addition to the completion of the trail, creation of paths linking nearby residential properties and the addition of sidewalks to safely connect pedestrians and bicyclists from Route 79 would increase the viability of this trail as thoroughfare.



Route 9 Corridor

The Route 9 Corridor which stretches from Old Bridge, through Marlboro, into Manalapan, is a major commercial corridor for the Township. The citizens have cited issues with traffic congestion, uncoordinated atmosphere, and lack of adequate pedestrian connections. Very few sections of Route 9 have sidewalks and those that do are short sections centered on bus stops. There is a distinct lack of connectivity between the surrounding residential properties and the commercial uses. In addition to the much needed sidewalk infrastructure needed in this corridor the Township should also seek opportunities to create trails connecting the residences to the rear of the commercial properties. Commercial businesses should also be encouraged to create a pedestrian access and atmosphere in the rear of the properties adjoining residential neighborhoods.

Proposed Village Center & Route 79 Corridor

During the Community Visioning Process residents voiced their concern that the current "Village Center" has developed into a suburban non-pedestrian friendly area. The Proposed Village Center will be located in centralized area of the Township along Route 79 between Route 18 and the high school. The goal of this new "Center" is to create a mix of commercial and residential uses that is walkable with public transportation options. The "Center" is also proposed to include creatively designed walkways which would connect mixed-uses to surrounding areas, including the Henry Hudson Trail. There are currently few if any sidewalks along Route 79 in the area of the proposed "Village Center". This area has been identified as one of the highest priority areas for sidewalk infrastructure construction to aid in the future development of the area and to create more safe connections to the Henry Hudson Trail.

Tennent Road Corridor

The section of Tennent Road from Harbor Road to Route 79 immediately adjacent to the western side of the road is zoned Neighborhood Commercial. Except for two residential subdivisions there are no sidewalks along this section of Tennent Road. This area should become a focus for future development and increased pedestrian connectivity due to its proximity to the Henry Hudson Trail and the NJ Transit bus lines on Route 79.

SHOPPING DISTRICTS



PUBLIC BUILDINGS

Public Library – Wyncrest Rd.

The property has excellent sidewalk connections to the nearby middle school. The nearby residential area also has an excellent sidewalk network. However there are no crosswalks to safely link the residential to the library and school.



Marlboro State Hospital

A redevelopment plan was completed for the vacated Hospital property in May 2008. The 411 acre tract is divided into two distinct areas, which include the 120 acre portion on which most of the hospital facility structures were located and the remaining 291 acre portion of the Area, which contains farmland. The plan proposes preservation of the non-disturbed areas and reuse of the existing facilities for community services such as education, day care and health care. The hospital campus has an existing sidewalk network connecting the buildings. It is anticipated that Monmouth County will be acquiring at least 200 acres of the Area in the southern and southwestern portion adjacent to Big Brook Park. The County proposes walking and biking paths to be used to connect different portions of the site that would link open space opportunities, especially a linkage to the Henry Hudson trail that currently exists adjacent to the western boundary of the property. The map shows proposed trails linking the existing roadways and sidewalks to the Henry Hudson Trail as well as a path connecting to the proposed trail system in Big Brook Park.

In addition to the destinations discussed previously, medium to high density and multi-family residential were also analyzed for sidewalk connectivity. Most of the high density residential neighborhoods already have an excellent sidewalk network in place with gaps typically only appearing between separate developments along major roads. The high density residential neighborhoods in the northern portion of the Township near the intersection of Route 79 and Lloyd Road are the exception however where there are very few sections of sidewalks. Taking into account the proximity to the bus line along Route 79, the Henry Hudson Trail, and Marlboro Memorial Middle School this area should have a better pedestrian network in place. Other residential neighborhoods lacking a sufficient sidewalk network include: the properties fronting Dunn Drive near Big Brook Park; the area near the intersection of Route 79 and Pleasant Valley Road; the area of Crine Road, Sinclair Court, Rico Drive N, and Hemingway Court; a multi-family townhomes complex at the intersection of Robertsville Road and Ryan Road; East Francis Avenue off of Route 520; Robbie Court off of Union Hill Road; and gap completion needed for Marlboro Greens Condominiums near Route 9.

As portions of Tennent Road continue to develop crosswalks should be added to connect residential areas and recreation. For example, Clayton Lane looks like a private driveway at first glance but is actually a viable connection between the residential properties on the east side of Tennent Road to the residential properties that between Route 9 and Tennent Road. It is recommended that a crosswalk be added to Tennent Road at this intersection and sidewalk be installed on at least one side of Clayton Lane. This study also focused on the section of Tennent Road between Brown Road and Route 79. The area has close proximity to the bus lines along Route 79 and the Henry Hudson Trail. Much of the area is zoned for medium to high residential and multi-family properties. This area is a prime location for creating a better pedestrian network for the residents. An application was recently submitted to the Township to develop age-restricted single family housing on 7 parcels

totally 75.5 acres of land that lie on either side of the Henry Hudson Trail and front along Tennent Road and Route 79. This project presents a unique opportunity to incorporate pathway linkages between Route 79 and the Henry Hudson Trail. The Township should work closely with the developer to create pathways that connect the residents to these vital transportation routes.

Not all connectivity issues within the residential areas can be easily solved with the construction of sidewalks along the roads. Many residential neighborhoods would benefit greatly from a trail system connecting them to each other, schools, commercial uses and recreation facilities. Nearly all of the trails proposed within this plan are placed on land already owned by the Township of Marlboro. There are a few locations where an access easement would be necessary but nothing that would adversely affect any homeowners. Many of the proposed trails begin at the end of existing cul-de-sacs.



PROPOSED DEVELOPMENT APPLICATIONS

In addition to reviewing aerial photographs and performing field observations, the Planning and Zoning Boards' applications and resolutions were reviewed for any sidewalk requirements of proposed future developments.

The following applications were reviewed and analyzed:

Case #	Block	Lot	Property Description	Sidewalk Requirement	Status
926-05	268	26	Two story office	Sidewalks included	Route 520 frontage, no sidewalk
927-05	172	40.05	Commercial building	No sidewalks proposed	Sidewalks on interior, none along frontage on cul-de-sac road
933-05	360.02	15	Office/warehouse	Broom finish sidewalks	No sidewalks present along Timber Lane frontage. Site may not be completed.
937-05	214	28	Residential		No sidewalk along Boundary Road frontage
940-05	157	14,18, 21	80 acres, minor-sub	No sidewalks included	No development as of 2009 aerials
942-05	176	106	Office & warehouse, parking expansion	No sidewalks	No sidewalks on Route 520 or Ginesi Drive
950-05	103	10	6.9 acres of residential	Crosswalks, curb and sidewalks conditioned	No development as of 2009 aerials
931-05	421	3,4,8	22 residential lots	Broom finish sidewalks conditioned.	No development as of 2009 aerials. Important development, adjacent to Henry Hudson Trail.
932-05	176	5.01, 5.02, 9,10,11	Costco Store, gas station and kiosk,	Broom finish sidewalks conditioned on Route 9 between Texas Road and Route 520	Sidewalk completed along Route 9 except for short portion of property line
945-05	157	9	7 lot subdivision	Sidewalks required inside development but not on Newman Springs Road	No development as of 2009 aerials
968-06	225	195	Rite Aid Pharmacy with drive-thru	Sidewalks along Route 79 included in application.	Sidewalks along Route 79 completed
971-06	412	165	9 single-family attached units on 2.15 acres	Sidewalks conditioned on entire frontage of Ryan Road	No development as of 2009 aerials. Macadam path existing along Ryan Road.
976-06	179	1	92,125 sf Office building on 12.43 acres	No sidewalks on any public right of way	No development as of 2009 aerials. Sidewalks not necessary
992-07	178	292	Warehouse addition	No sidewalks, 9' easement provided	No sidewalks
974-06	267	41, 42	6 single family dwellings	Sidewalks conditioned on Church Road as part of application	No development as of 2009 aerials. Due to proximity to high density residential and schools this should be followed through.
981-07	147	13	Hindu American Temple	Contribution in lieu of sidewalks.	Sidewalks not necessary
988-07	172	41	Office and Warehouse	Sidewalk waiver requested but not granted	No development as of 2009 aerials
994-07	268	55-57, 59-62, 65, 80	Chase Bank, Pathmark, TJ Maxx	No sidewalks were required on Route 9 or internal Kendrick Drive,	Construction completed, Lost opportunity to add sidewalks on Route 9
995-07	176	2	American Equities Bank	Sidewalks conditioned on site frontage, access road, etc.	No development as of 2009 aerials. Due to proximity to multi-family and Route 9 this should be followed through.
1000-07	178	291	Tennis and Training Center	Conditioned to report feasibility of sidewalks	Appears to be no development as of 2009 aerials
1004-08	214.07	57	Warehouse expansion	No sidewalks	Sidewalks should have been required along County Route 41
1007-08	214	52	Office addition	Sidewalks conditioned; sidewalk on one half of frontage on Boundary Road	Sidewalk completed

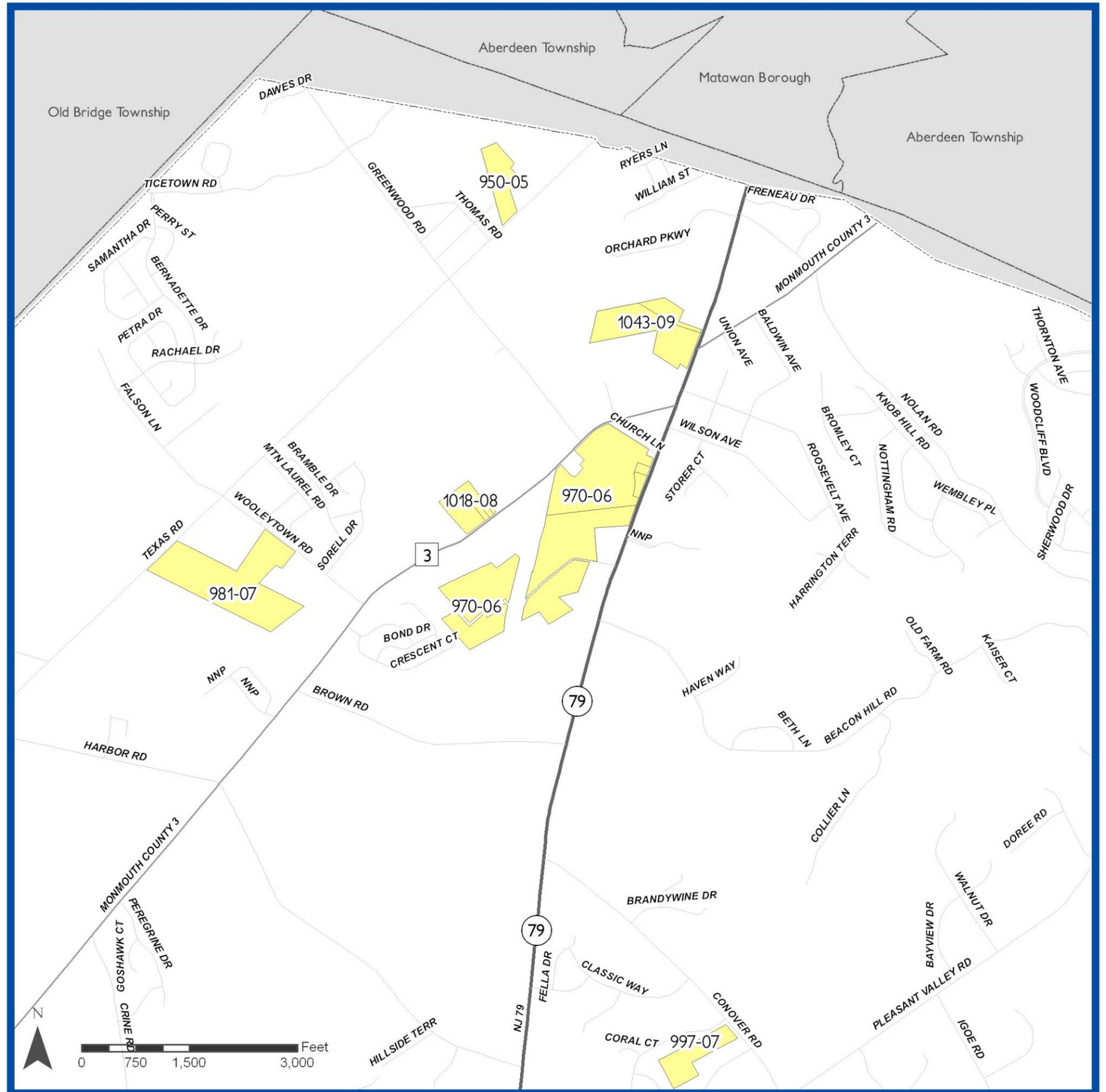
PROPOSED DEVELOPMENT APPLICATIONS

Case #	Block	Lot	Property Description	Sidewalk Requirement	Status
929-05	413	38, 39, 40	9 single family units on a cul-de-sac	Sidewalks inside development and Old Mill Road	No development as of 2009 aerials. All conditions should be met.
964-06	168	8	Residential to office conversion	Sidewalks conditioned	Sidewalk condition should be met along Route 79 frontage.
970-06	148	31	Age restricted single family on 75.5 acres	Sidewalks part of application except Route 79 and Tennent Road, Sidewalks conditioned on all frontages.	All sidewalk conditions should be met, especially along route 79 and Tennent Road frontages. Layout should include connections to Henry Hudson Trail.
	149	16			
	150	2 - 4, 9			
	151	4			
977-06	364	60, 63	8 single family homes	Sidewalks along one side of cul-de-sac (Jesse Court) and corner of Yellow Brook Road.	Sidewalk conditions should be met.
997-07	160.03	16	4 single family on cul-de-sac on 7.9 acres	No sidewalk on Conover Road, sidewalks on Gal-laya Grove and proposed internal road.	Under construction as of 2009 aerials. Sidewalk conditions should be met.
1014-05	222	19	Dentist Office		Sidewalks should be conditioned on School Road East and Hudson Street.
1018-08	120	21 - 24	Parking expansion on 69 acre tract	No sidewalks on Tennent Road	Sidewalks should be required along Tennent Road.
1027-08	355	4	Commercial real estate office	No sidewalks, contribution in lieu conditioned.	No sidewalks necessary.
1028-08	415	31	Family restaurant and bar, conversion of existing building		No sidewalks necessary.
1032-09	172	40.07	Mixed-use 10,000 sf office/warehouse	Sidewalk conditioned along Tennent Road	Sidewalk condition is good but not a priority area. Perhaps offer contribution in lieu.
1043-09	122	27.01, 27.02	General retail, bank with drive-thru, CVS pharmacy with drive-thru	Sidewalks and crosswalks on Route 79	Sidewalk and crosswalk conditions should be met.

PROPOSED DEVELOPMENT APPLICATIONS

Legend

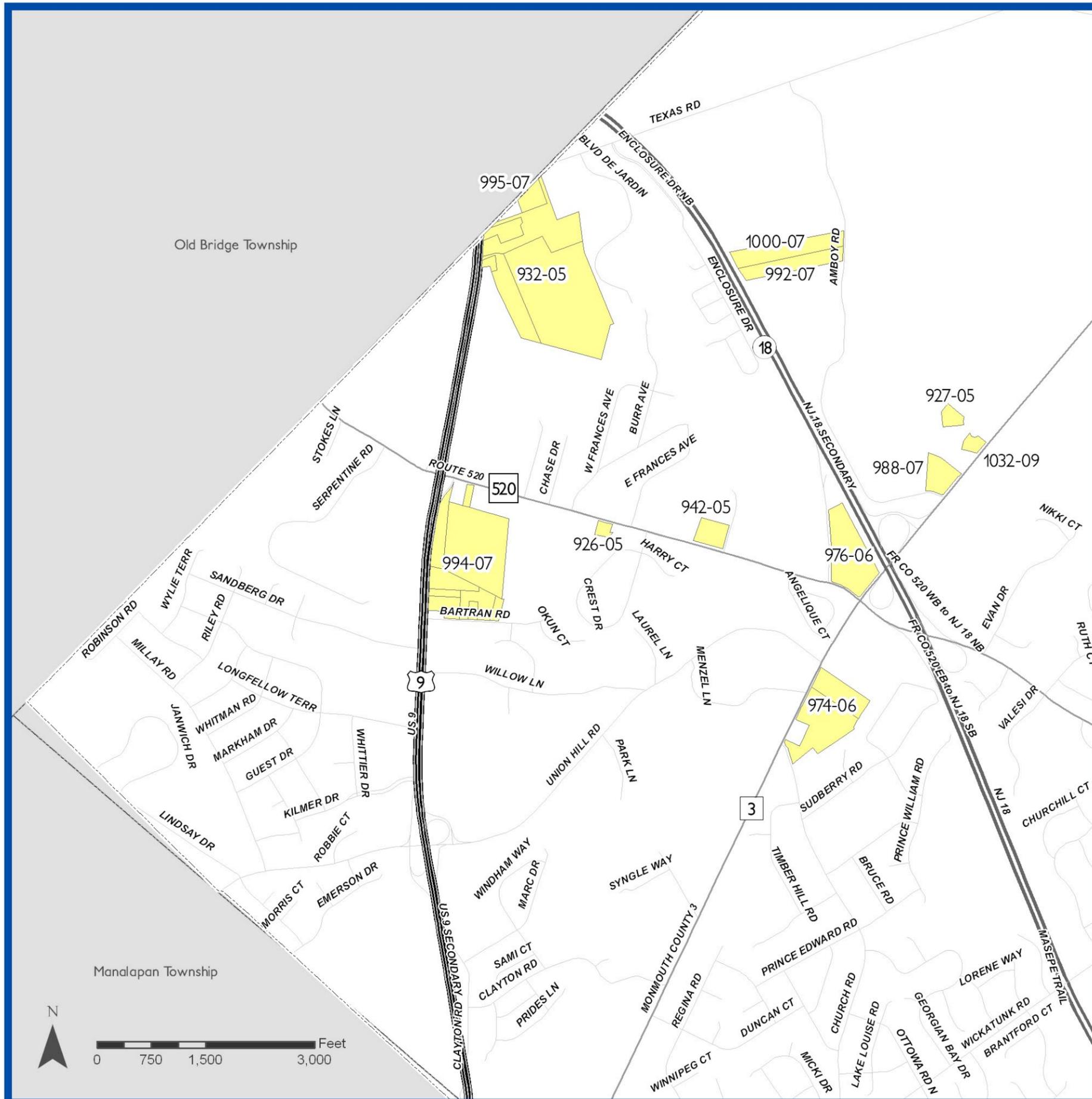
- Parcels Submitted for Development Approval



PROPOSED DEVELOPMENT APPLICATIONS

Legend

- Parcels Submitted for Development Approval



PROPOSED DEVELOPMENT APPLICATIONS

Legend

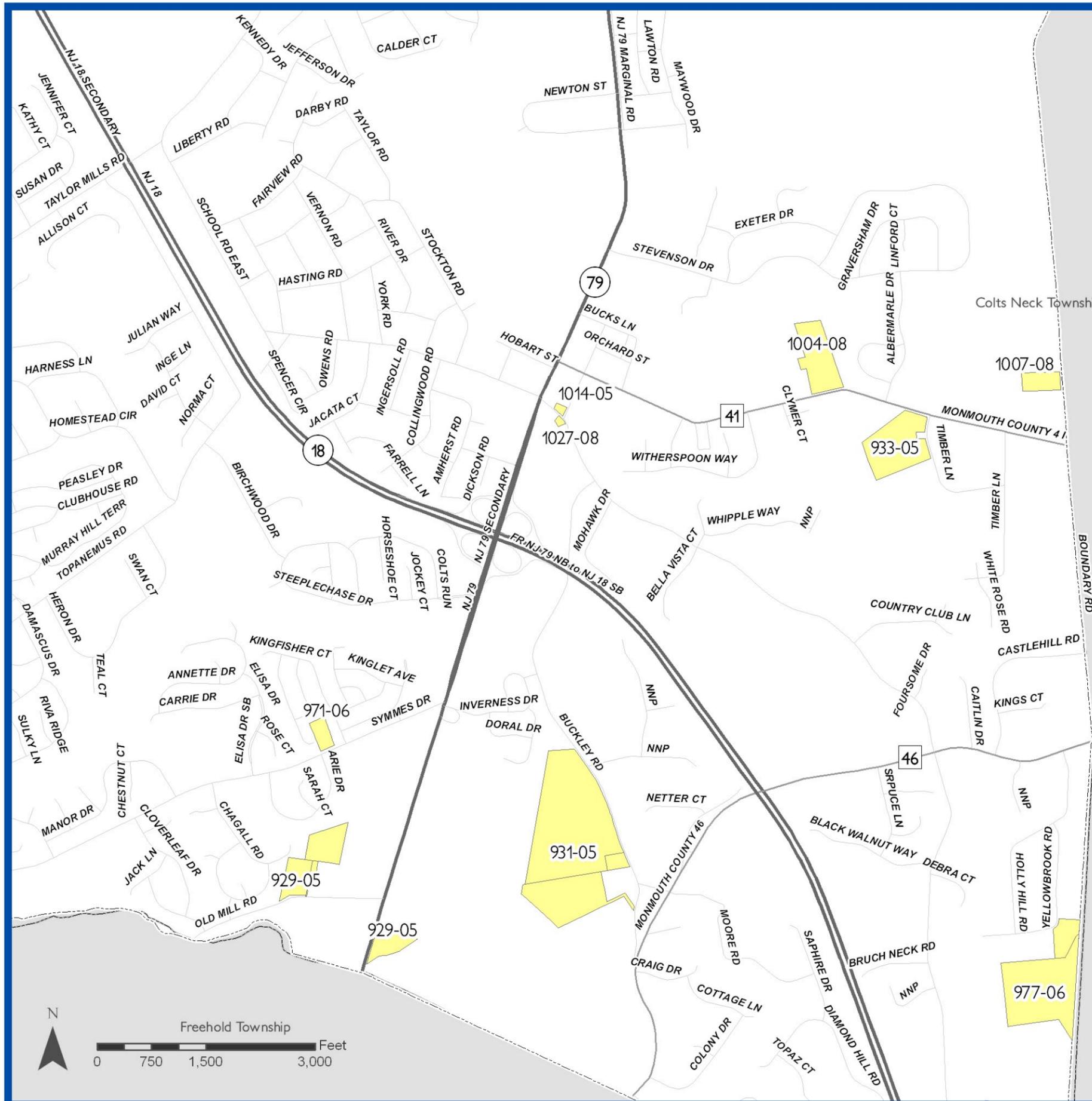
- Parcels Submitted for Development Approval



PROPOSED DEVELOPMENT APPLICATIONS

Legend

-  Parcels Submitted for Development Approval



RECOMMENDATIONS



The maps included in Appendix A give a detailed view of the existing pedestrian network along with proposed segments to fill in gaps in the network. In addition to assessing gaps in the sidewalk connections, the suggested sidewalk segments were ranked and given a completion time frame based on the following criteria:

Priority Level 1 – Less than 1 year

- Within ¼ mile of Bus Routes on Routes 9 and 79
- Connections between Route 79 and the Henry Hudson Trail
- Connections to commercial properties

Priority Level 2 – 1 to 3 years

- Within ½ mile of Bus Routes on Routes 9 and 79
- Within ½ mile of recreation
- In areas of high density and multi-family residential

Priority Level 3 – 3 to 5 years

- Within ¼ mile of schools
- In areas of medium density residential

Sidewalk Materials

Where sidewalks are necessary within scenic urban/suburban areas, the use of alternative construction materials should be considered. Alternative materials for sidewalk construction may include, but not be limited to: stamped concrete, brick paver, concrete paver, aggregate concrete, or asphalt. Where a sidewalk is necessary within scenic rural areas, rubberized surface material, quarry dust or crushed stone may also be used. The use of white concrete for sidewalks is discouraged along scenic roadways such as Route 520.

Education

It is important to educate pedestrians, bicyclists, and motorists about proper safety techniques and encourage courteous and lawful behavior. A campaign effort to increase pedestrian and bicycle safety should include the materials and processes to specifically target the regularly observed lack of pedestrian and bicycle “etiquette” including the following “worst practices”:

- Riding against traffic even on clearly marked bicycle lanes;
- Going too fast on sidewalks in commercial districts, weaving in and out and failing to warn pedestrians when passing;
- Riding fast on residential sidewalks creating the possibility of a crash when someone steps onto the sidewalk from a stoop, building or gate;
- Running stoplights; and stop signs;
- Not yielding to pedestrians in cross walks;
- Failing to remain as far to the right as practicable on streets without bike lanes;
- Passing on either the left or right at intersections setting up the potential of being run over by a turning motorist;
- Riding at night without lights and reflective clothing;
- Talking on a cell phone or texting while riding or walking;
- Stepping out into crosswalks without any consideration to driver stopping distances;
- Allowing children to ride without helmets
- Riding on handlebars

Knowing how to obtain the funding to implement the recommendations is often more critical than having the recommendations. Appendix B lists many grants and programs available to the Township to assist in the implementation of the recommendations included in this plan.

To better understand the costs related to the recommendations a chart of the proposed sidewalks is included listing the linear foot totals by road name and priority level. The cost to pour a concrete sidewalk runs approximately \$50 - \$70 per linear foot for a 5-foot wide sidewalk. The actual cost of providing sidewalks will vary by location and with the season. Actual bid prices are also influenced by how busy contractors are at the time of construction.

To better understand the costs related to the recommendations a chart of the proposed sidewalks is included listing the linear foot totals by road name and priority level. Recent bids for sidewalk installation in the Township were \$4.15 per square foot for 4" thick concrete walks and \$5.35 per square foot for reinforced 6" thick concrete walks. The cost to construct a 4-foot wide sidewalk would be \$16 to \$22 per linear foot and \$21 to \$27 for a 5-foot wide sidewalk. Traditional dark black asphalt used for sidewalks and other walkways averages \$1-\$5 per square foot. The cost estimates in the included tables assume \$22 per linear foot to average the concrete options.

Factors to consider when calculating the cost of sidewalks:

1. Presence of curb and gutter: The costs of providing curb and gutter, which presumes the need to also provide a street drainage system, run much higher than the cost of sidewalk alone. A standard perpendicular curb ramp and top landing need a minimum border width of almost 12 ft at intersections if there is a 6-in curb. A 6-in curb reduces the minimum border width to 10 ft. Yet, on many urban streets, this work must be performed prior to installing sidewalks. If this is the case, only the cost of sidewalks and curb ramps should be attributed to expenditures for pedestrians – catch basins are provided to drain the roadway surface used by motor vehicle traffic.

2. Number of driveways: To comply with ADA, many existing

driveways must be replaced with ones that provide a level passage at least 3 ft wide. It can also be advantageous to inventory all existing driveways to see if any can be closed, resulting in a cost-savings.

3. Number of intersections: While intersections represent a reduction in the sidewalk, curb ramps are required where sidewalks cross intersections and the cost of providing additional traffic control at each intersection should be considered.

4. Obstacles to be removed: The cost for moving or removing obstacles such as utility poles, signposts, and fire hydrants vary too much to be itemized here; however, they are required to be moved if they obstruct access. These costs must be calculated individually for each project.

5. Structures: While minor sidewalk projects rarely involve new structures such as a bridge, many projects with significant cuts and fills may require retaining walls and/or culvert extensions. The costs of retaining walls must be calculated individually for each project.

6. Miscellaneous factors: Planters, irrigation, benches, decorative lampposts, and other aesthetic improvements cost money, but they are usually well worth it if the impetus for the project is to create a more pleasant and inviting walking environment.



Priority Level 1 – Less than 1 year

- Within ¼ mile of Bus Routes on Routes 9 and 79
- Connections between Route 79 and the Henry Hudson Trail
- Connections to commercial properties

Legend

 Transit Buffer - 1/4 mile

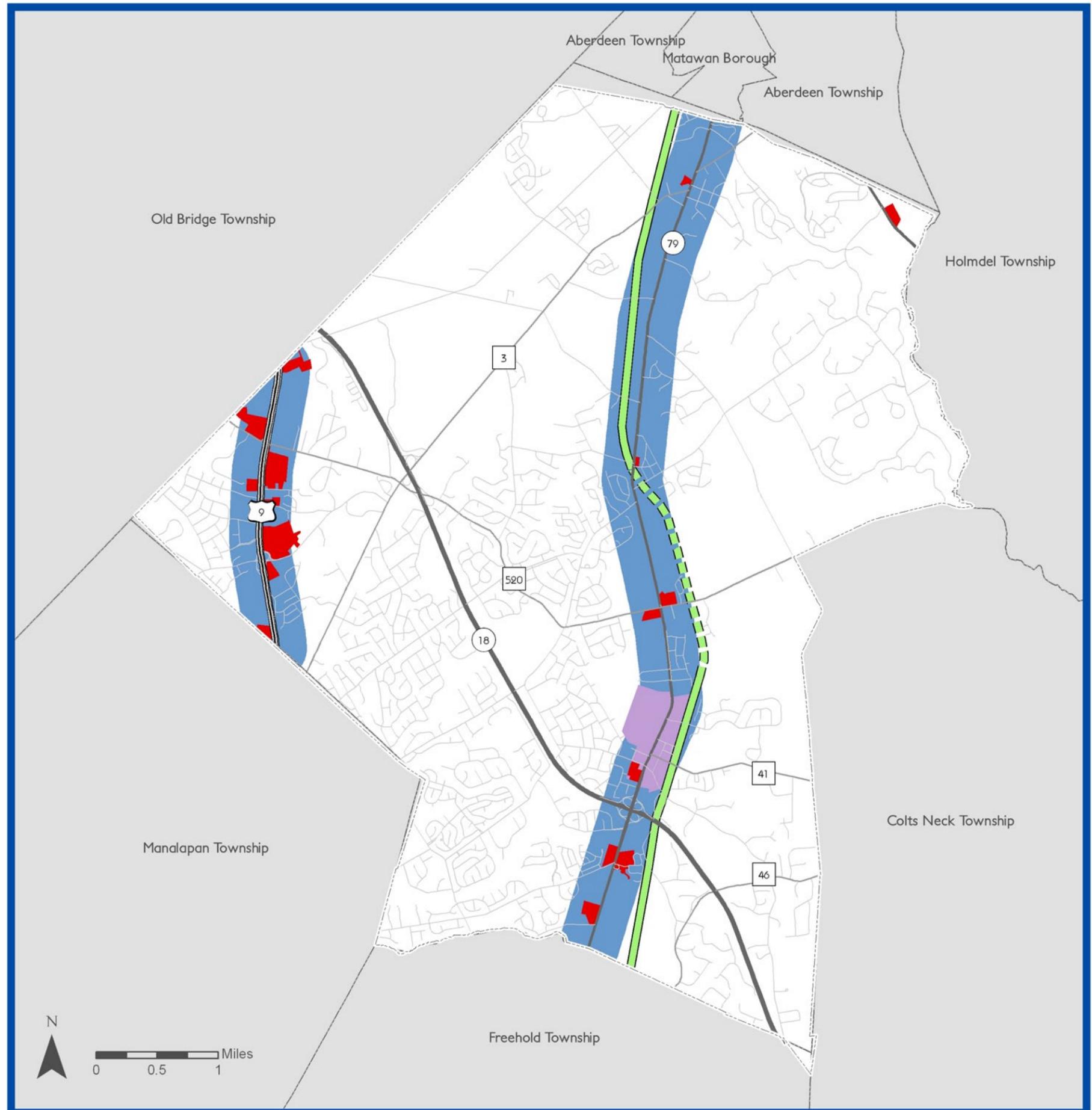
 Shopping Center

 Proposed Village Center

Henry Hudson Trail

 Existing

 Future



Road Name	LF	Cost @ \$22 per LF
ROUTE 9	20,199	\$444,387
ROUTE 79	31,704	\$697,480
ROUTE 520	7,072	\$155,580
BARTRAM RD	1,452	\$31,954
BAYBERRY BLVD	1,814	\$39,899
BECKET WAY	659	\$14,493
BROWN RD	1,690	\$37,183
CHURCH LN	804	\$17,685
PIN OAK RD	448	\$9,866
PLEASANT VALLEY RD	1,589	\$34,951
ROOSEVELT AVE	971	\$21,368
RYAN RD	894	\$19,663
SCHOOL RD	1,370	\$30,131
STATION RD	1,350	\$29,705
STEEPLECHASE DR	213	\$4,690
TENNENT RD	1,908	\$41,983
UNION HILL RD	1,152	\$25,337
VANDEBURG RD	2,047	\$45,040
WILLOW LN	754	\$16,595
WILSON AVE	978	\$21,519
WYNCREST RD	434	\$9,544
Grand Total	79,502	\$1,749,051

Route 9	LF (E)	Cost @ \$22 per LF	LF (W)	Cost @ \$22 per LF
Boundary to 520	3,044	\$66,958	3,101	\$68,212
520 to Bartram Rd	2,170	\$47,744		
520 to Sandberg Dr			1,611	\$35,449
Bartram Rd to Willow Ln	709	\$15,604		
Sandberg Dr to Longfellow Terr			1,045	\$22,981
Longfellow Terr to Union Hill Rd			731	\$16,086
Willow Ln to Union Hill Rd	2,606	\$57,327		
Union Hill Rd to Boundary	3,063	\$67,395	2,120	\$46,631
	11,592	\$255,029	8,607	\$189,358

Route 79	LF (E)	Cost @ \$22 per LF	LF (W)	Cost @ \$22 per LF
Boundary to Rt 3 (Lloyd Rd)	2,037	\$44,814		
Boundary to Rt 3 (Tennent Rd)			2,655	\$58,400
Lloyd Rd to Roosevelt Ave	630	\$13,862		
Roosevelt Ave to Wilson Ave	529	\$11,642		
Tennent Rd to Harnley Rd			769	\$16,921
Wilson Ave to Beacon Hill Rd	2,688	\$59,137		
Conover Rd to Flower Ln	1,696	\$37,318		
Flower Ln to Ridge Rd	2,486	\$54,686		
Harbor Rd to Station Rd			2,571	\$56,567
Ridge Rd to Blossom Ave	1,315	\$28,923		
Blossom Ave to Pleasant Valley Rd	941	\$20,704		
Station Rd to Wyncrest Rd			1,635	\$35,979
Pleasant Valley Rd to Wyncrest Rd	780	\$17,151		
Rt 520 to Stevenson Dr	987	\$21,715		
Newton St to School Rd	2,739	\$60,251	2,558	\$56,286
School Rd to Steeplechase Dr			2,386	\$52,482
Steeplechase Dr to Symmes Dr			1,469	\$32,321
Symmes Dr to Boundary			833	\$18,318

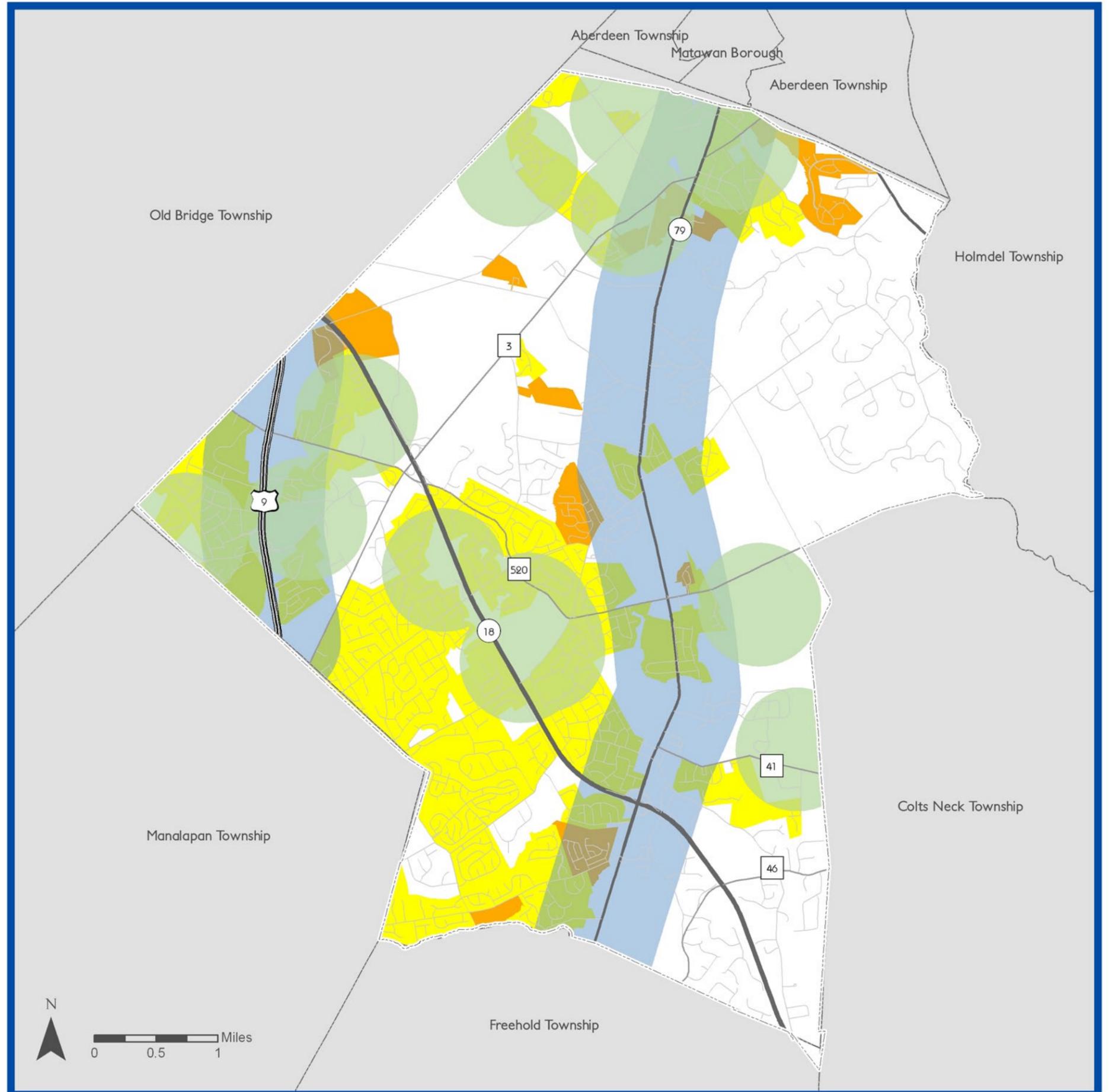
Route 520	LF (N)	Cost @ \$22 per LF	LF (S)	Cost @ \$22 per LF
Dunn Dr to Rt 79			1,601	\$35,211
Osprey Ct to Rt 79	787	\$17,317		
Rt 79 to Wright Ln	2,221	\$48,854		
Bluffs Ct to Rt 9			233	\$5,129
Rt 9 to Boundary	1,738	\$38,245	492	\$10,824
	4,746	\$104,416	2,326	\$51,163

Priority Level 2 – 1 to 3 years

- Within 1/2 mile of Bus Routes on Routes 9 and 79
- Within 1/2 mile of recreation
- In areas of high density and multi-family residential

Legend

-  Recreation Buffer - 1/2 mile
-  Transit Buffer - 1/2 mile
-  High Density Residential
Maximum lot size: 5,000 sf to 30,000 sf
-  Multi-Family



Road Name	LF	Cost @ \$22 per LF
ROUTE 520	2,409	\$53,003
APPLE BLOSSOM LN	194	\$4,278
ASPEN AVE	138	\$3,031
BELIL DR	1,076	\$23,662
BENNETT CT	112	\$2,466
BIRCHWOOD DR	1,154	\$25,391
BLUEBERRY HILL	65	\$1,433
BROMLEY CT	1,303	\$28,675
BROWN RD	3,022	\$66,488
BUCKLEY RD	912	\$20,067
BURR AVE	715	\$15,724
CALDER CT	286	\$6,289
CAMBRIDGE CT	1,417	\$31,182
CARRAIGE CT	86	\$1,901
CHURCH RD	449	\$9,869
CLAYTON LN	883	\$19,430
ORANGE LN	1,028	\$22,617
PEAR DR	487	\$10,723
PETRA DR	234	\$5,142
PLUM DR	1,367	\$30,078
RACHAEL DR	385	\$8,480
RAMSGATE DR	1,933	\$42,529
RAVENSWOOD RD	134	\$2,939
RECREATION CENTER DR	516	\$11,351
RIDGE RD	1,948	\$42,861
ROBBIE CT	1,180	\$25,956

Road Name	LF	Cost @ \$22 per LF
ROBERTSVILLE RD	955	\$21,006
ROOSEVELT AVE	3,699	\$81,375
RYAN RD	2,042	\$44,923
SCHOOL RD	482	\$10,595
STATION RD	1,025	\$22,543
SUNNYMEDE ST	221	\$4,854
SUNSHINE CIR	730	\$16,066
SUNSHINE WAY	119	\$2,609
TALL OAK CT	38	\$835
TANGERINE DR	1,459	\$32,100
TENNENT RD	4,231	\$93,088
TEXAS RD	2,506	\$55,136
TICETOWN RD	2,798	\$61,565
TOPANEMUS RD	4,234	\$93,159
TOWNSHIP DR	2,465	\$54,227
VANDEBURG RD	5,099	\$112,174
W FRANCIS AVE	1,090	\$23,985
WEMBLEY PL	1,527	\$33,602
WICKER PL	502	\$11,036
WILSON AVE	1,402	\$30,837
WOOLEYTOWN RD	4,825	\$106,140
WYNCREST RD	3,576	\$78,661
YORKSHIRE DR	2,939	\$64,663
UNNAMED	1,061	\$23,345
Grand Total	72,458	\$1,594,087

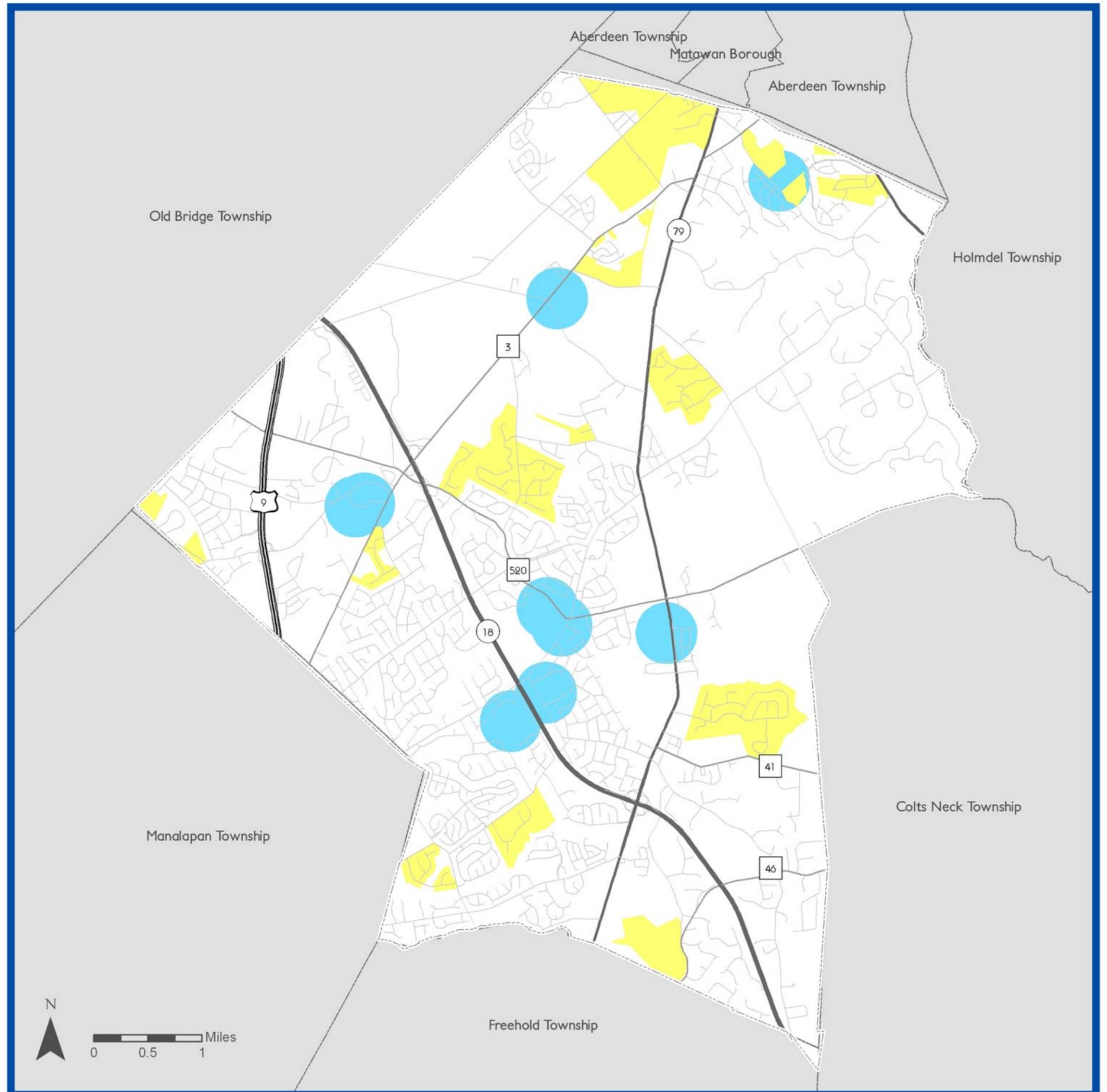
Priority Level 3 – 3 to 5 years

- Within 1/4 mile of schools
- In areas of medium density residential

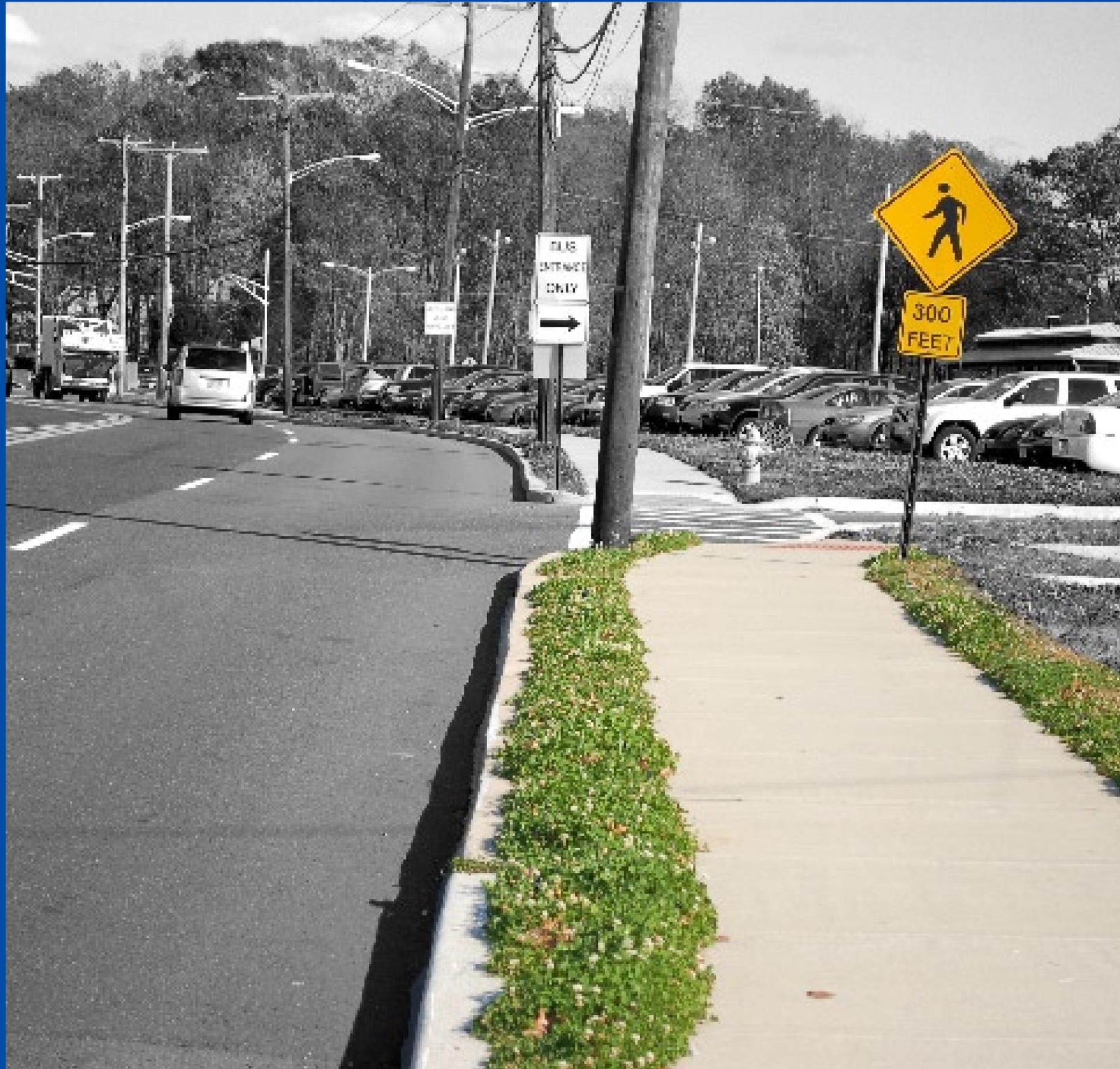
Legend

-  School Buffer - 1/4 mile
-  Medium Density Residential
Maximum lot size: 30,000 sf to 60,000 sf

Road Name	LF	Cost @ \$22 per LF
Route 520	2,702	\$59,455
ALCOTT CT	730	\$16,062
ANGELIQUE CT	106	\$2,323
BIRCHWOOD DR	523	\$11,499
BLOSSOM AVE	1,574	\$34,621
BUCK LN	1,266	\$27,858
CENTER ST	1,230	\$27,066
CHURCH RD	880	\$19,353
ORCHARD ST	976	\$21,468
PLEASANT VALLEY RD	625	\$13,757
RAILROAD AVE	1,394	\$30,677
RICO DR	4,351	\$95,732
RIDGE RD	1,858	\$40,867
SALINGER CT	657	\$14,458
SCHOOL RD	54	\$1,179
SINCLAIR CT	3,912	\$86,072
STATION RD	1,033	\$22,729
TENNENT RD	4,636	\$101,989
TEXAS RD	3,164	\$69,603
TOPANEMUS RD	1,248	\$27,448
WILLIS ST	853	\$18,776
UNNAMED	2,135	\$46,962
Grand Total	35,907	\$789,954

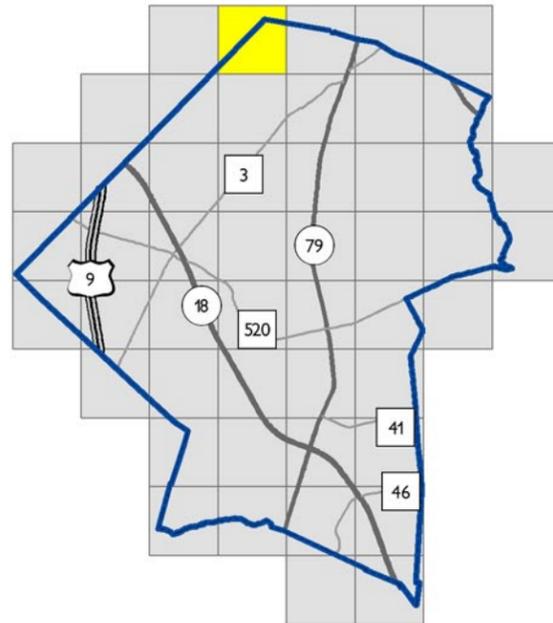


APPENDIX A
PEDESTRIAN ACCESS MAPS



TOWNSHIP OF MARLBORO Pedestrian Access Plan

Location Index



Legend

Proposed Sidewalks

- Prop. Sidewalk - < 1 year
- Prop. Sidewalk - 1-3 years
- Prop. Sidewalk - 3-5 years
- ◆ Proposed Crosswalk

- Proposed Trail
- Proposed Trail with Easement

Existing Sidewalk Conditions

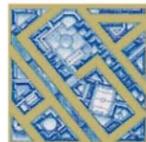
- No Sidewalk
- Existing Sidewalk
- ◆ Existing Crosswalk
- Median

Destinations

- ★ Schools
- ★ Recreation
- ★ Historic Sites
- ★ Religious Institutions
- P Park and Ride Location
- 🚌 Bus Stops
- Shopping Center
- Henry Hudson Trail
- Existing Trail
- - - Future Trail



Map Prepared by
Heyer, Gruel and Associates

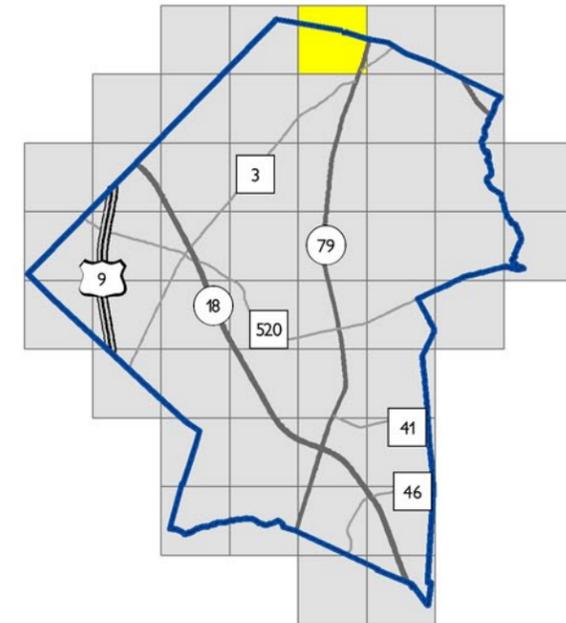


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Existing Sidewalk Conditions

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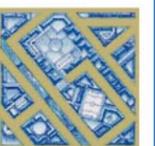
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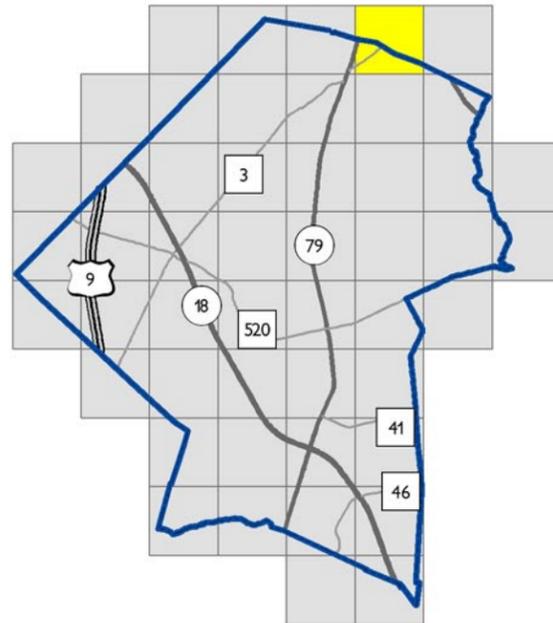
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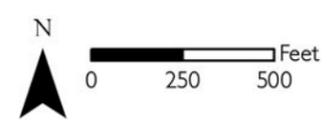
- Proposed Trail
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Existing Sidewalk Conditions

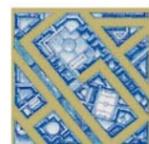
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Destinations

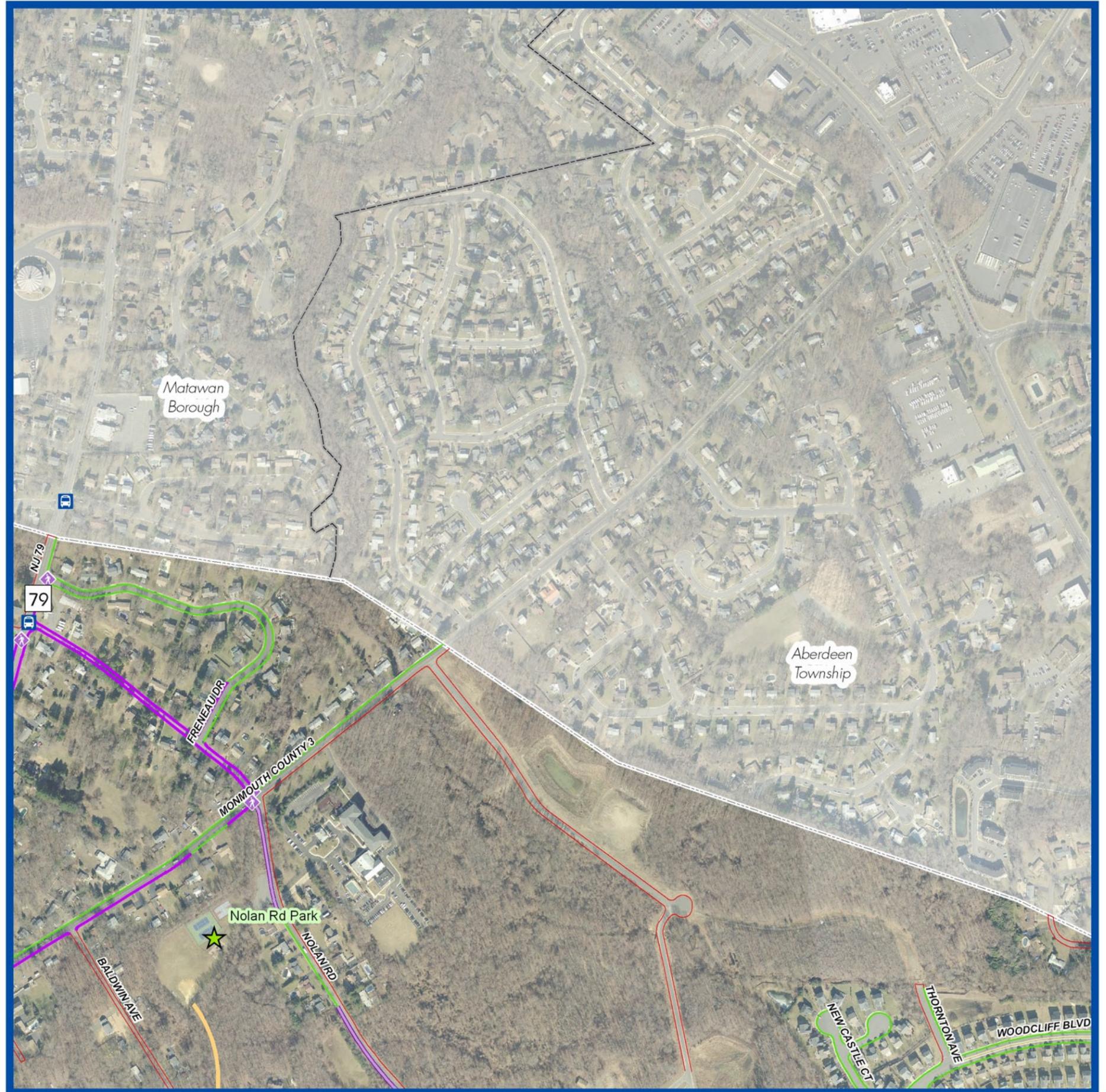
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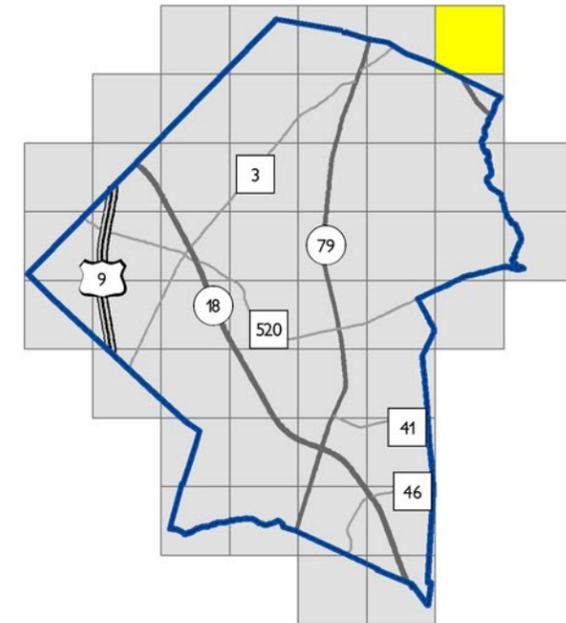
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TOWNSHIP OF MARLBORO Pedestrian Access Plan



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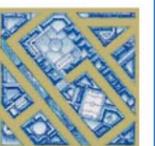
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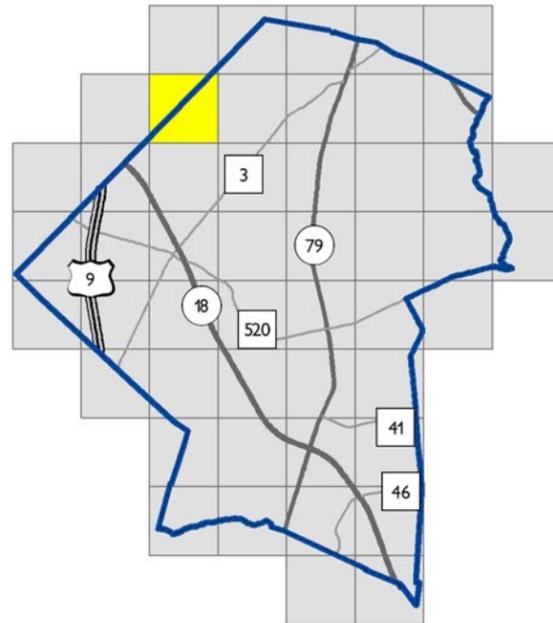
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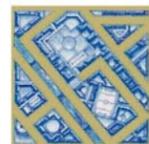
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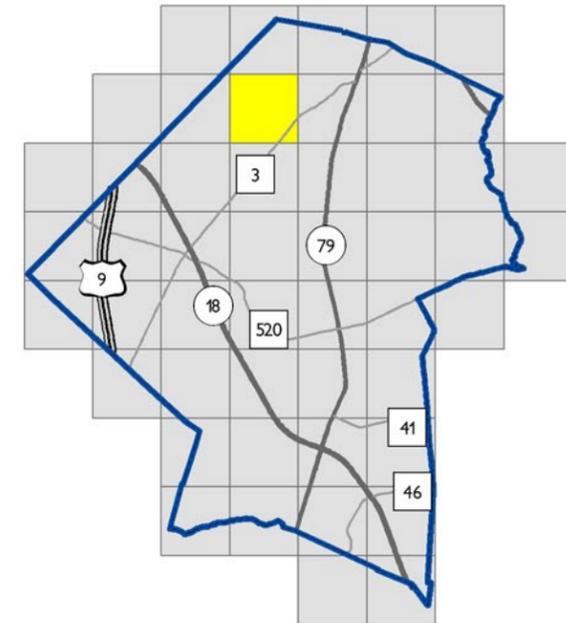


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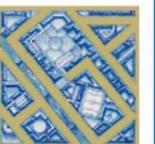
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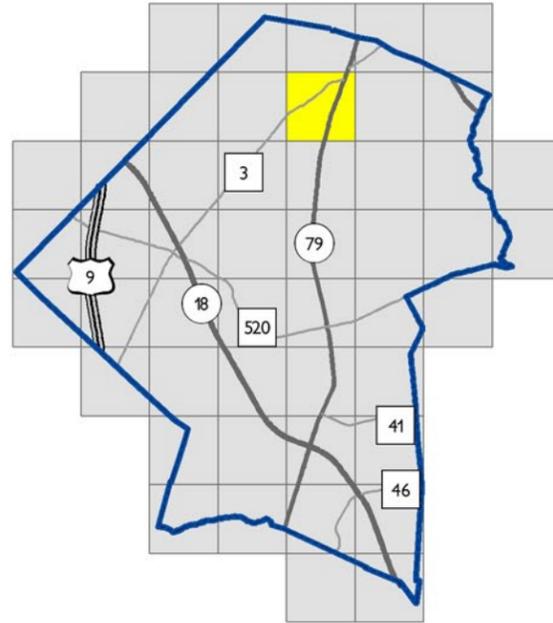
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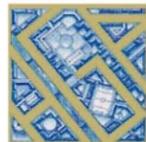
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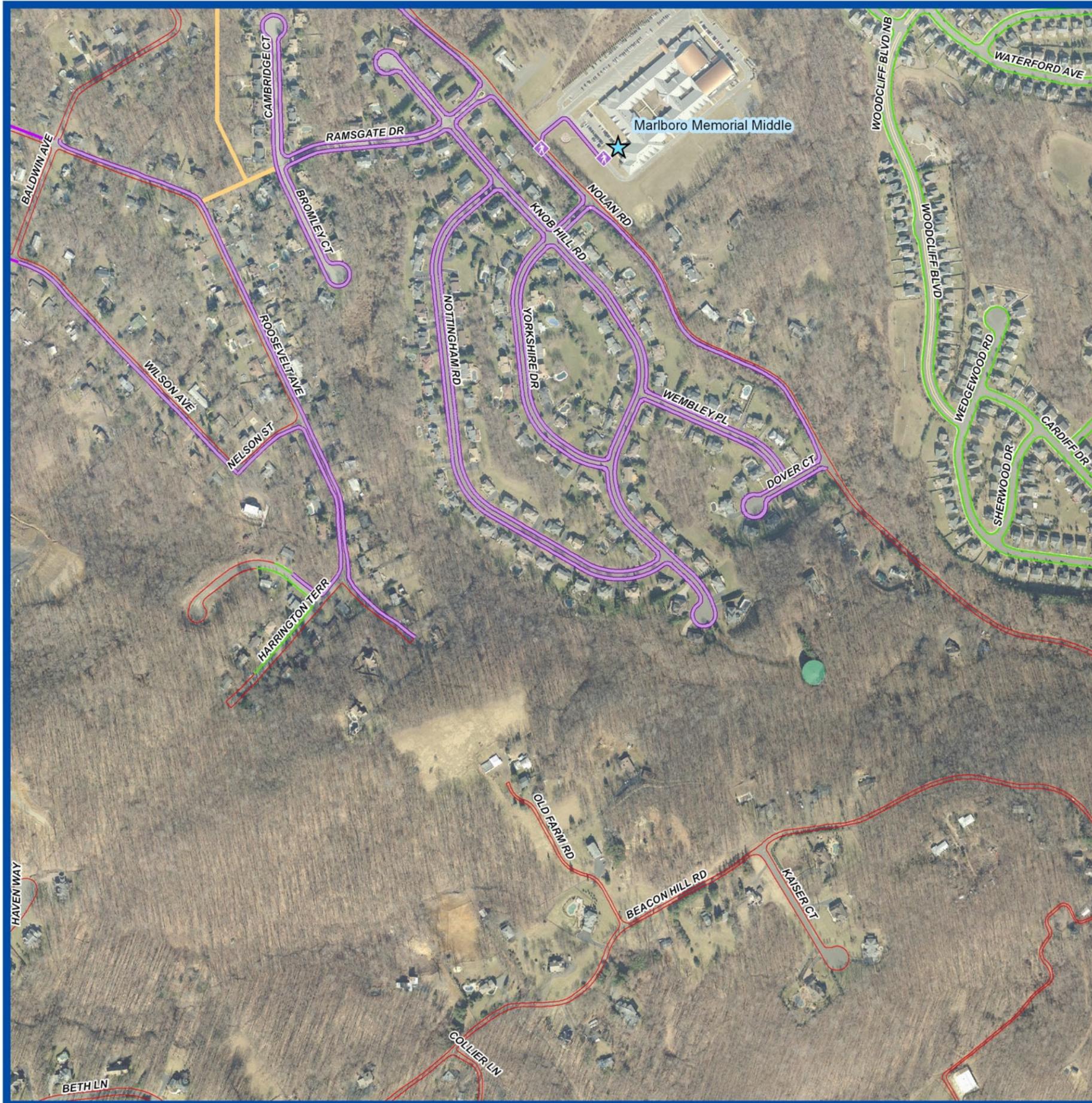


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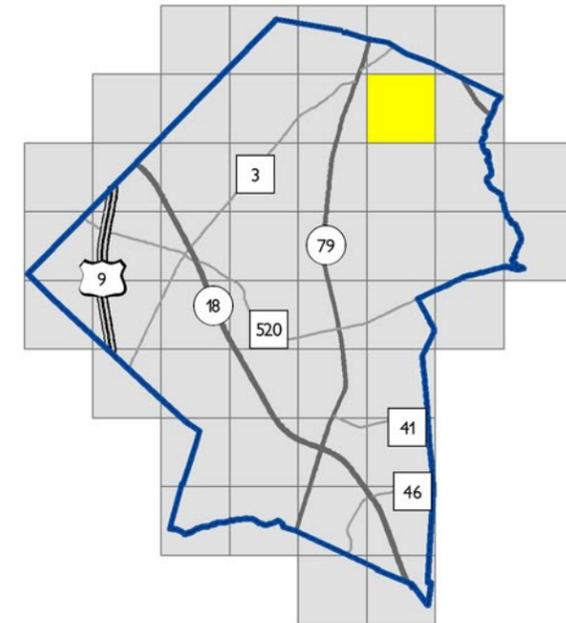


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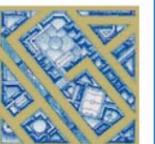
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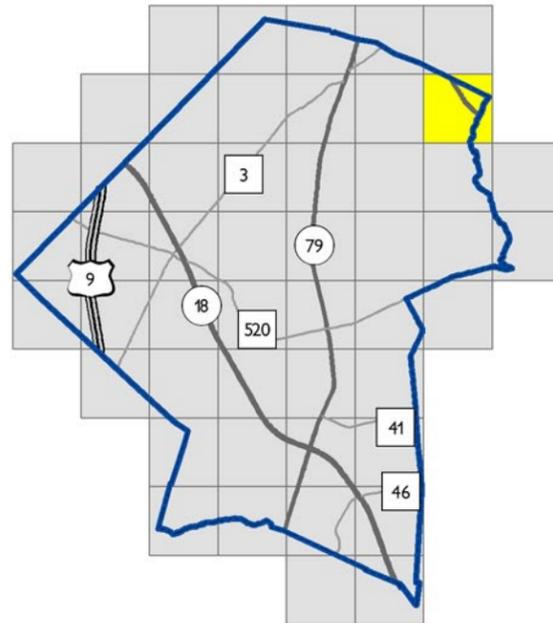
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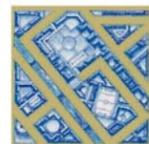
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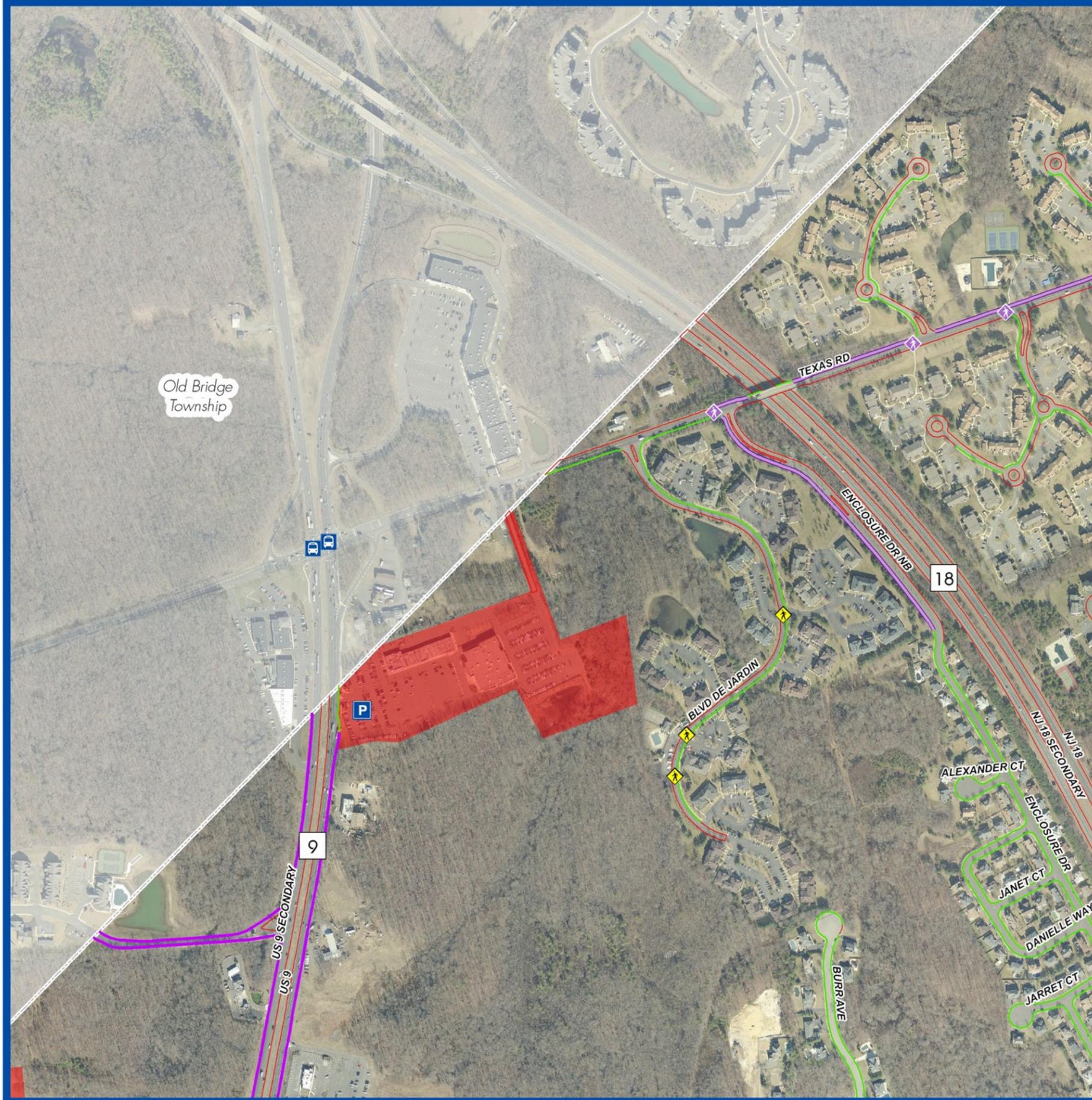


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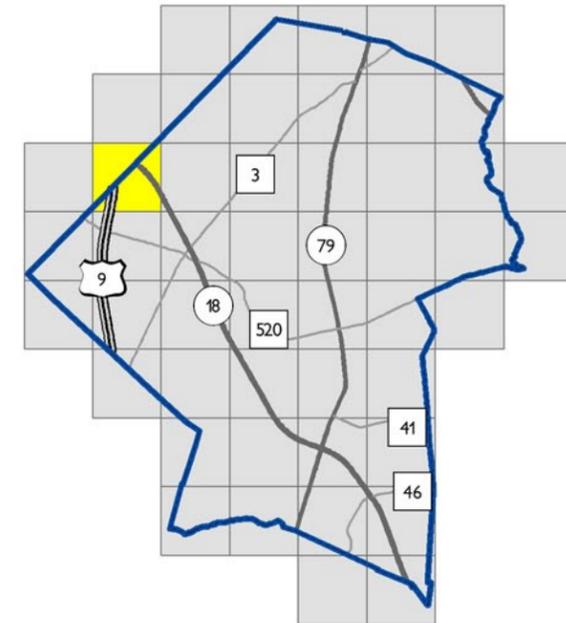


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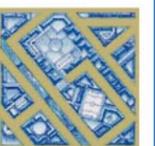
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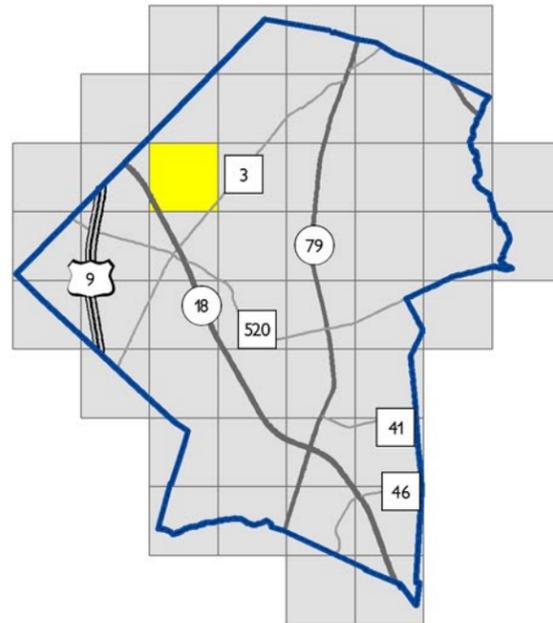
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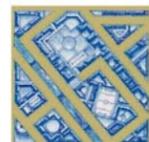
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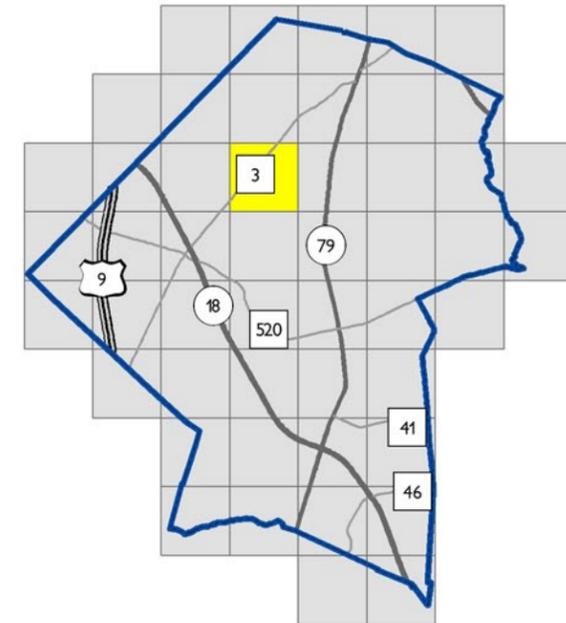


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TOWNSHIP OF MARLBORO Pedestrian Access Plan



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Legend

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- Proposed Trail
- Proposed Trail with Easement

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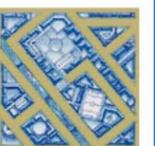
Destinations

- ★ Schools
- ★ Recreation
- ★ Historic Sites
- ★ Religious Institutions
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- B Bus Stops
- Shopping Center
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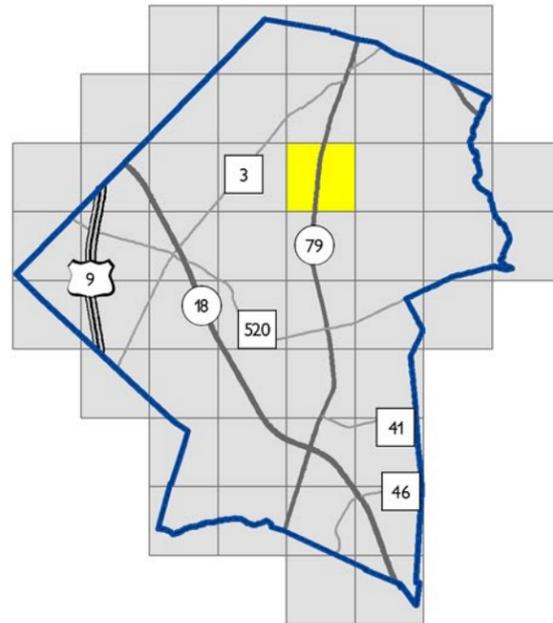
Map Prepared by
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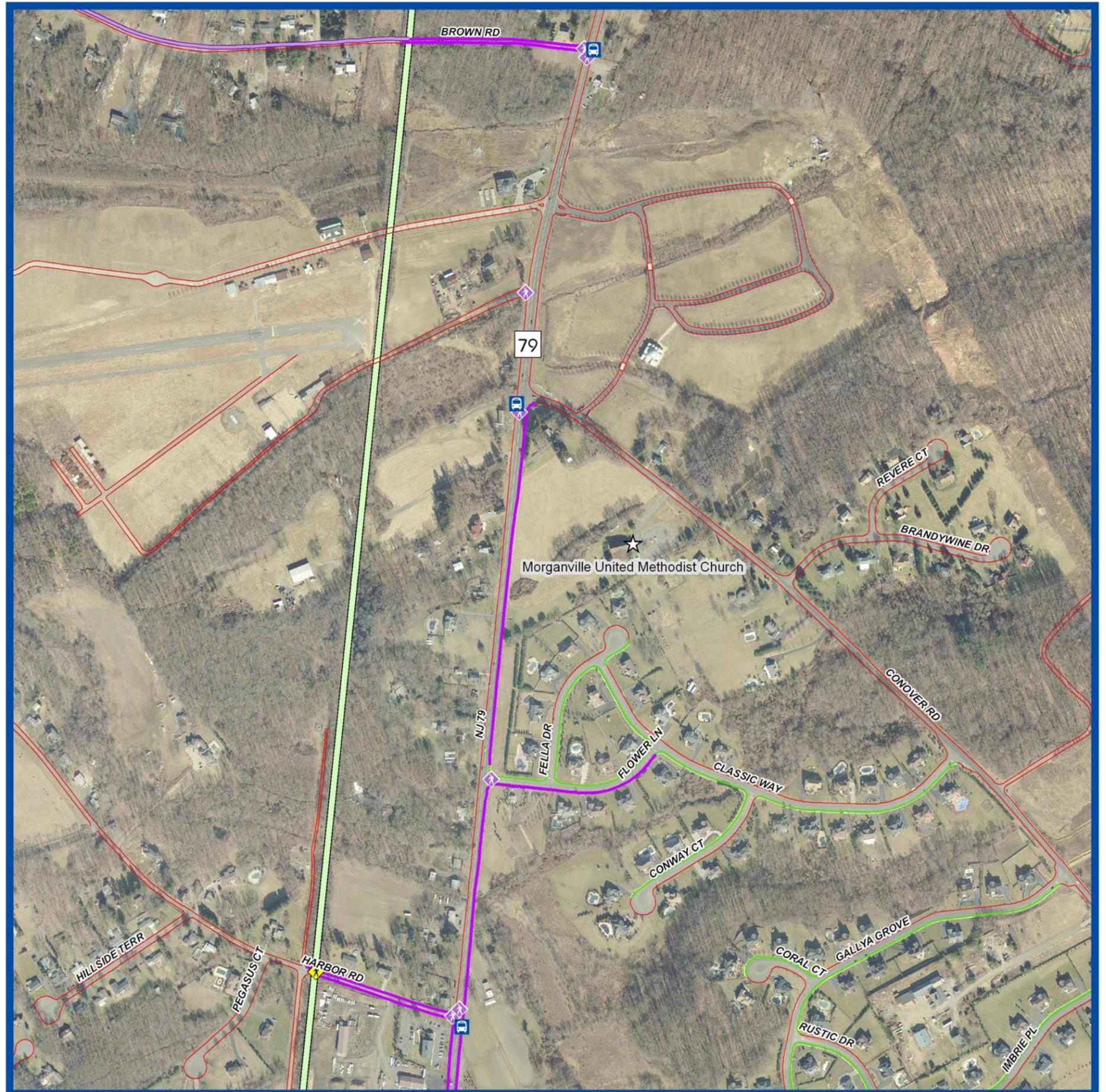
- Proposed Trail
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Existing Sidewalk Conditions

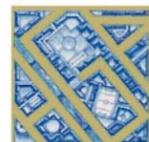
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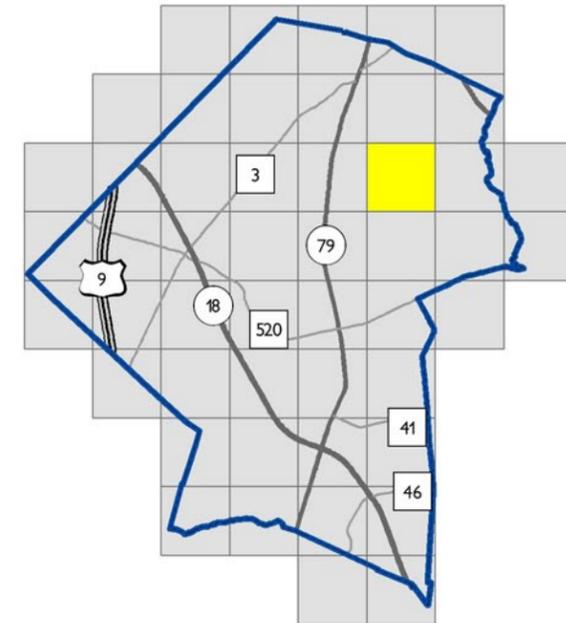


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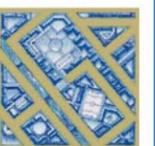
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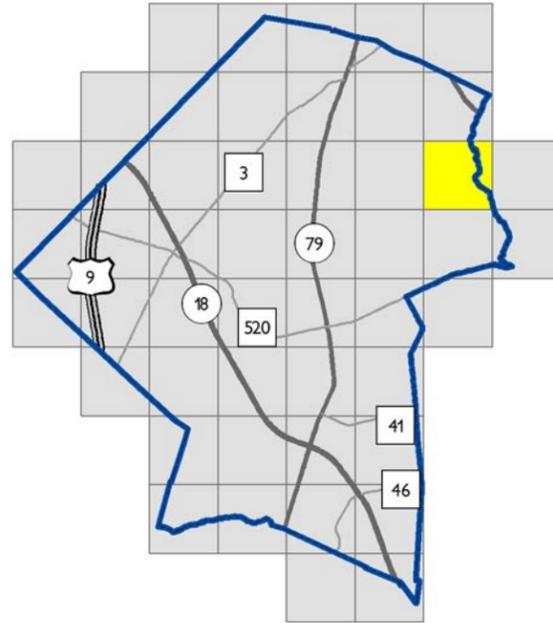
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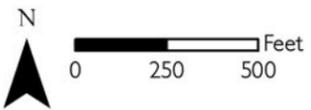
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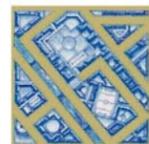
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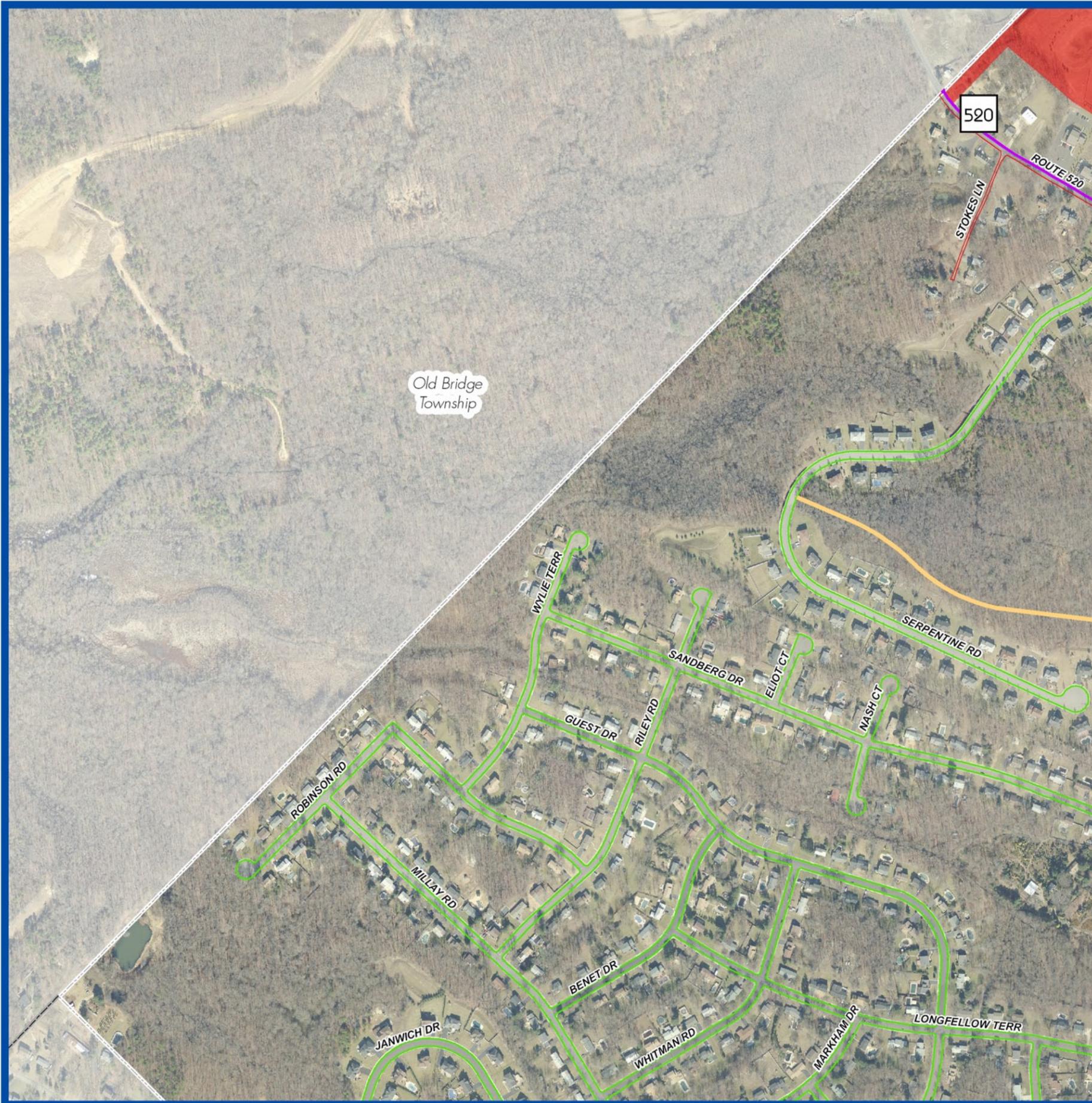


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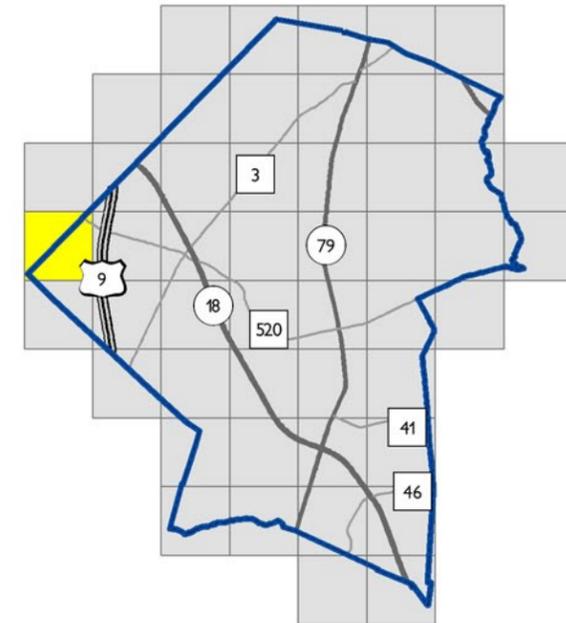


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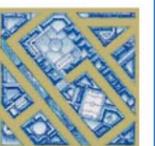
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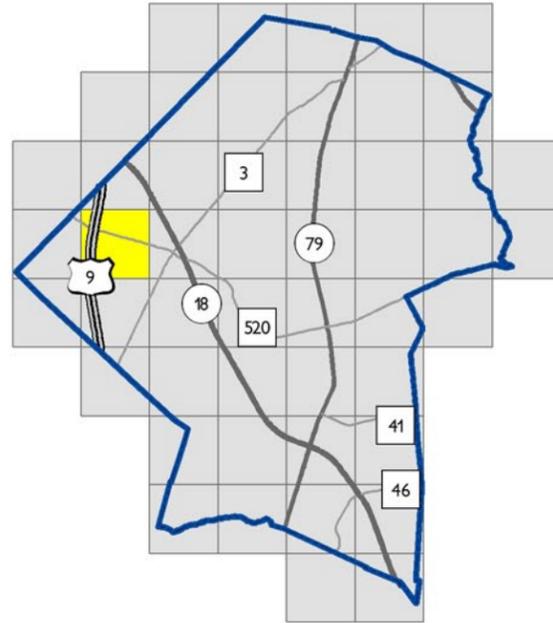
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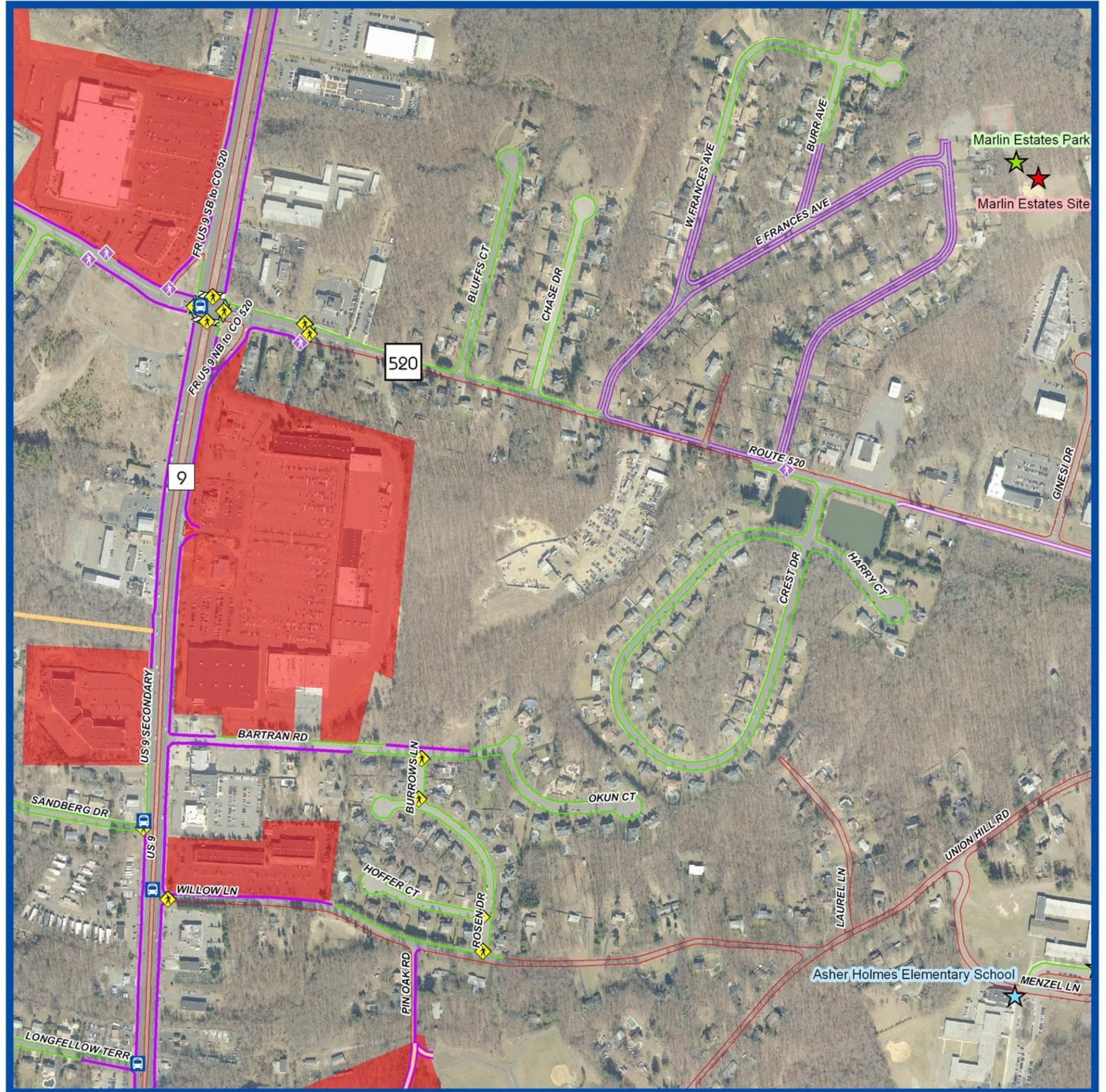
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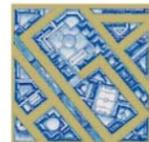
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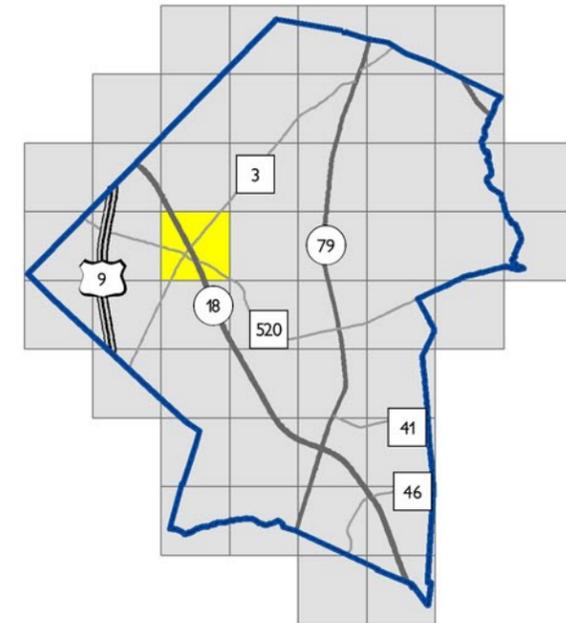


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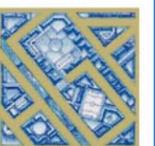
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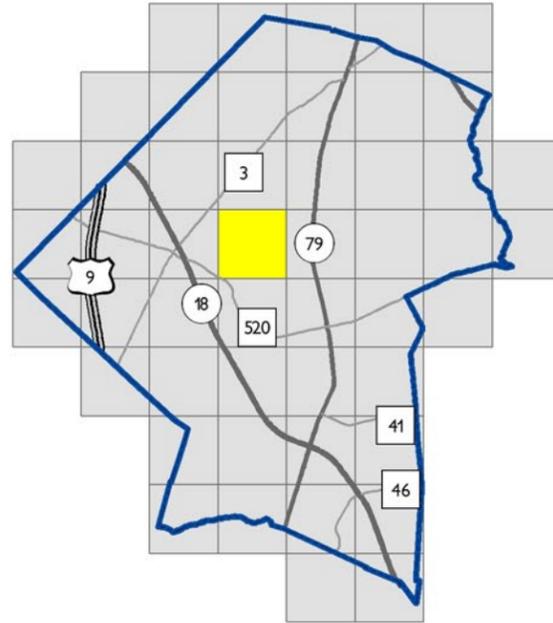
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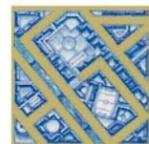
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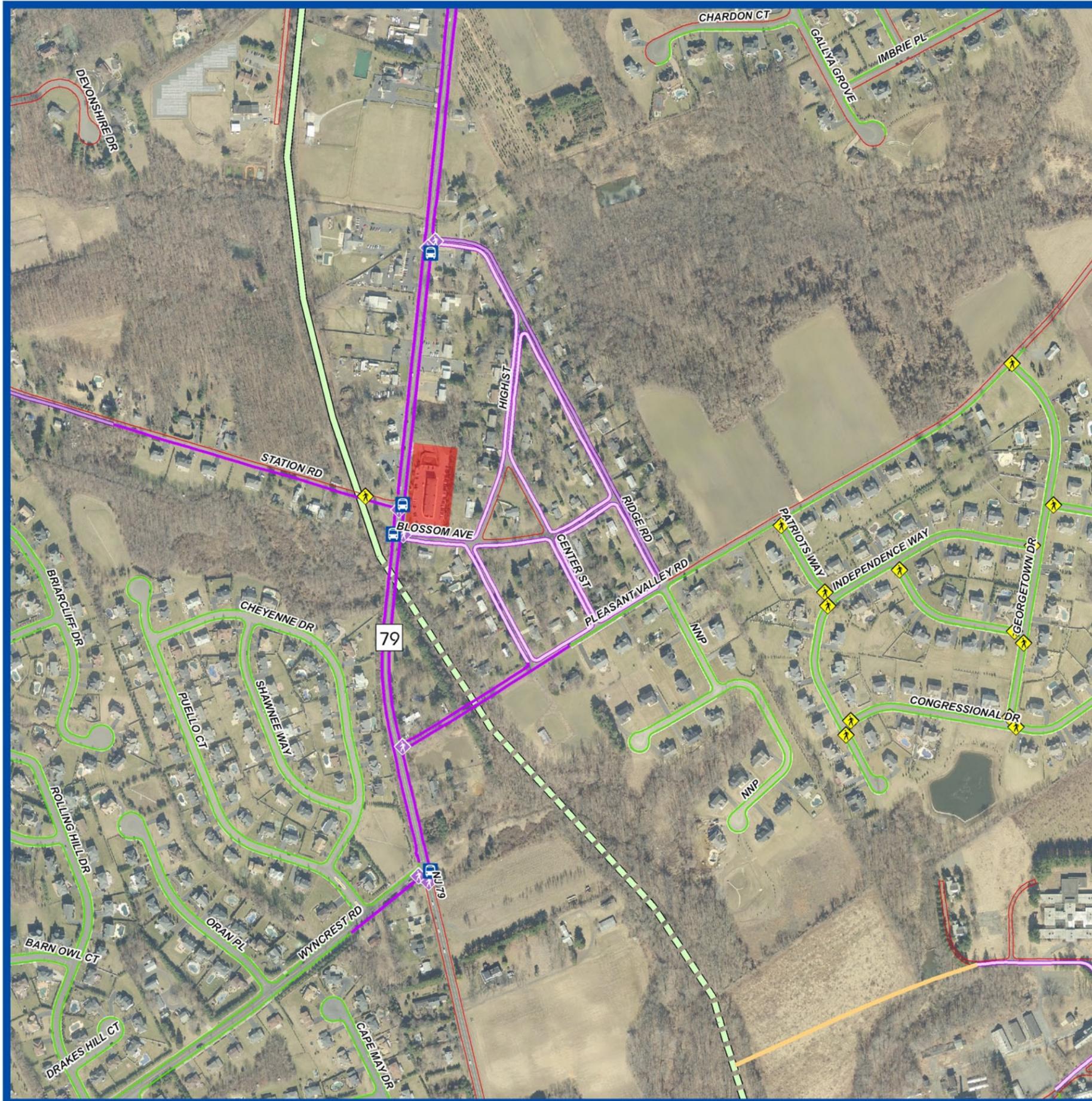


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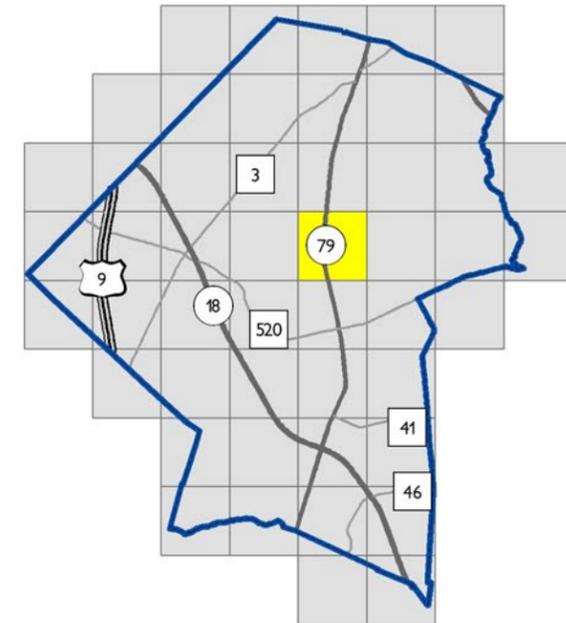


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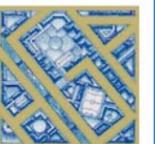
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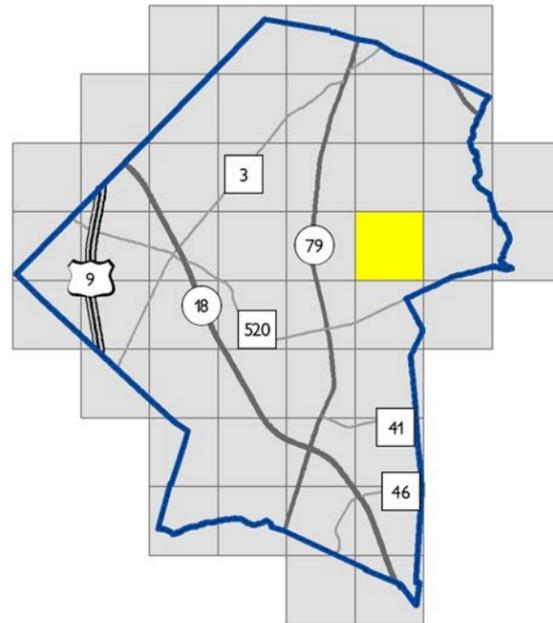
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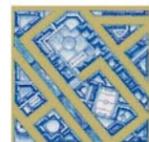
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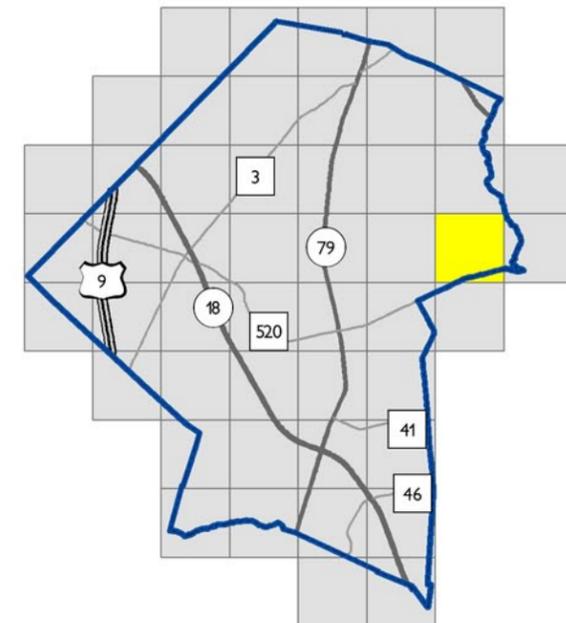


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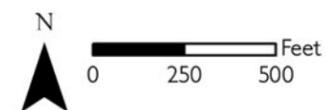
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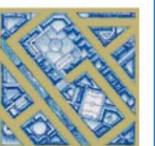
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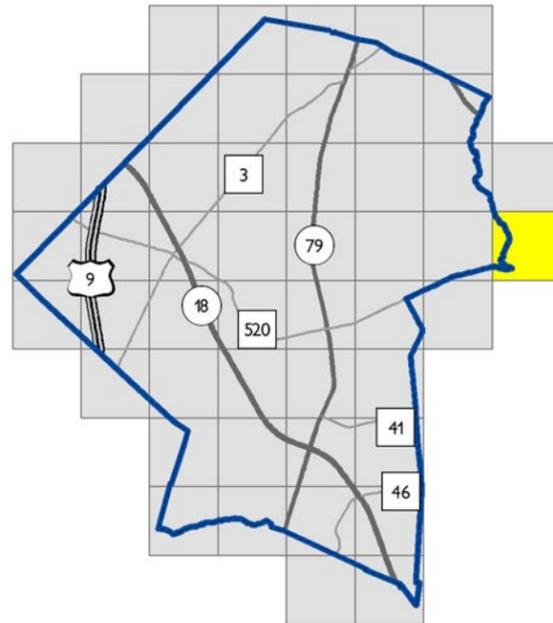
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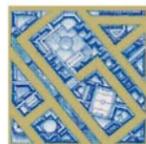
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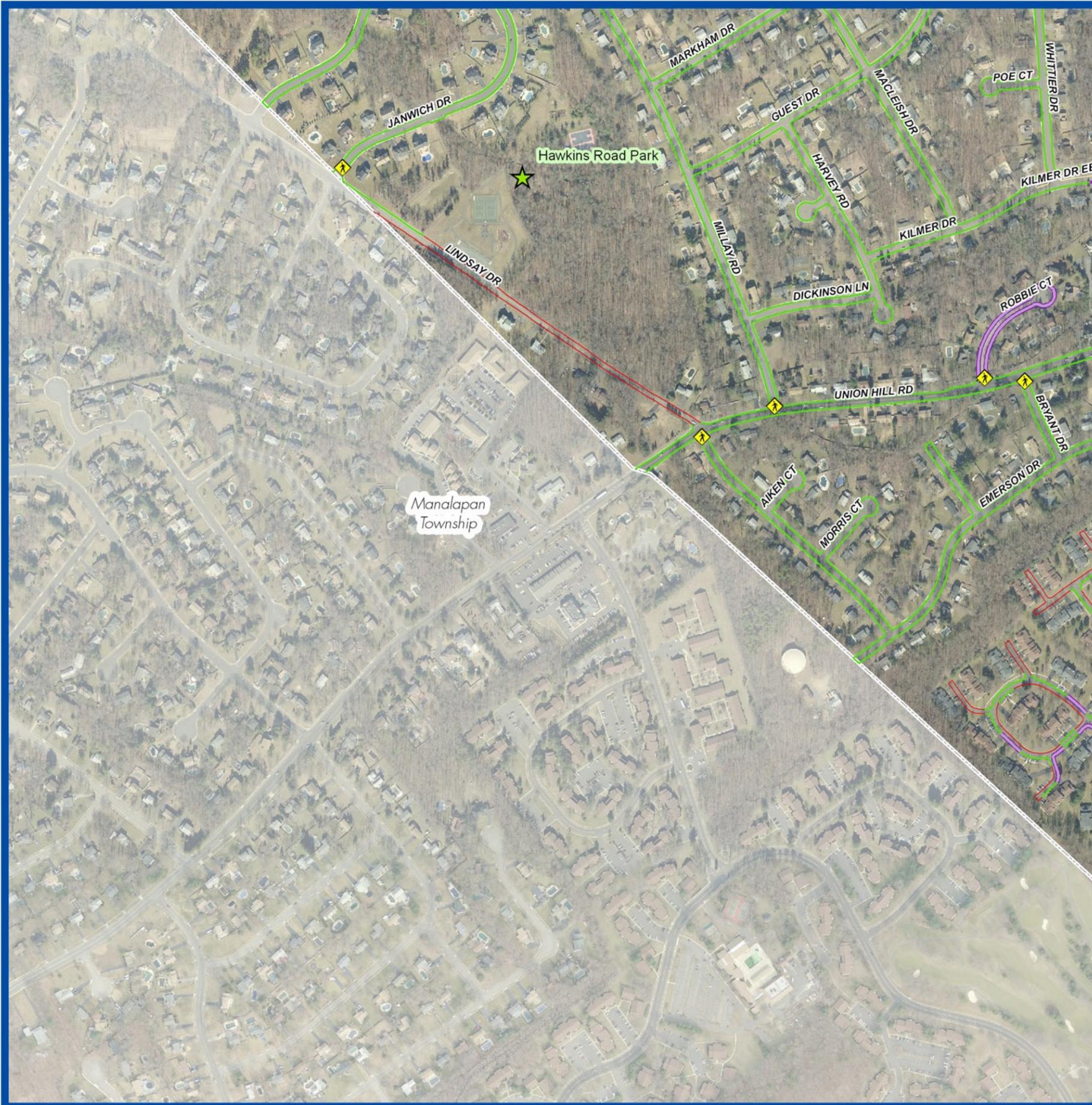


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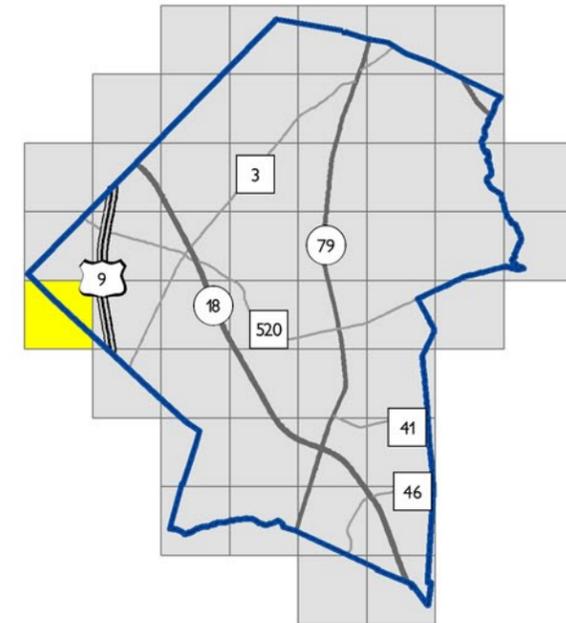


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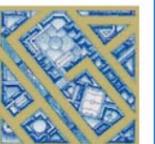
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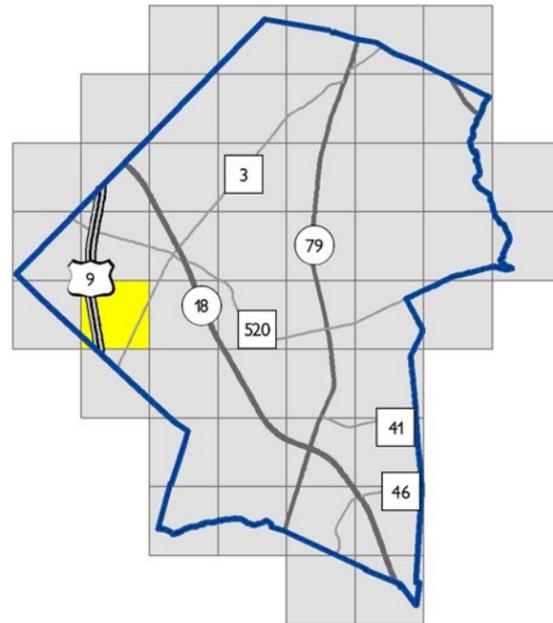
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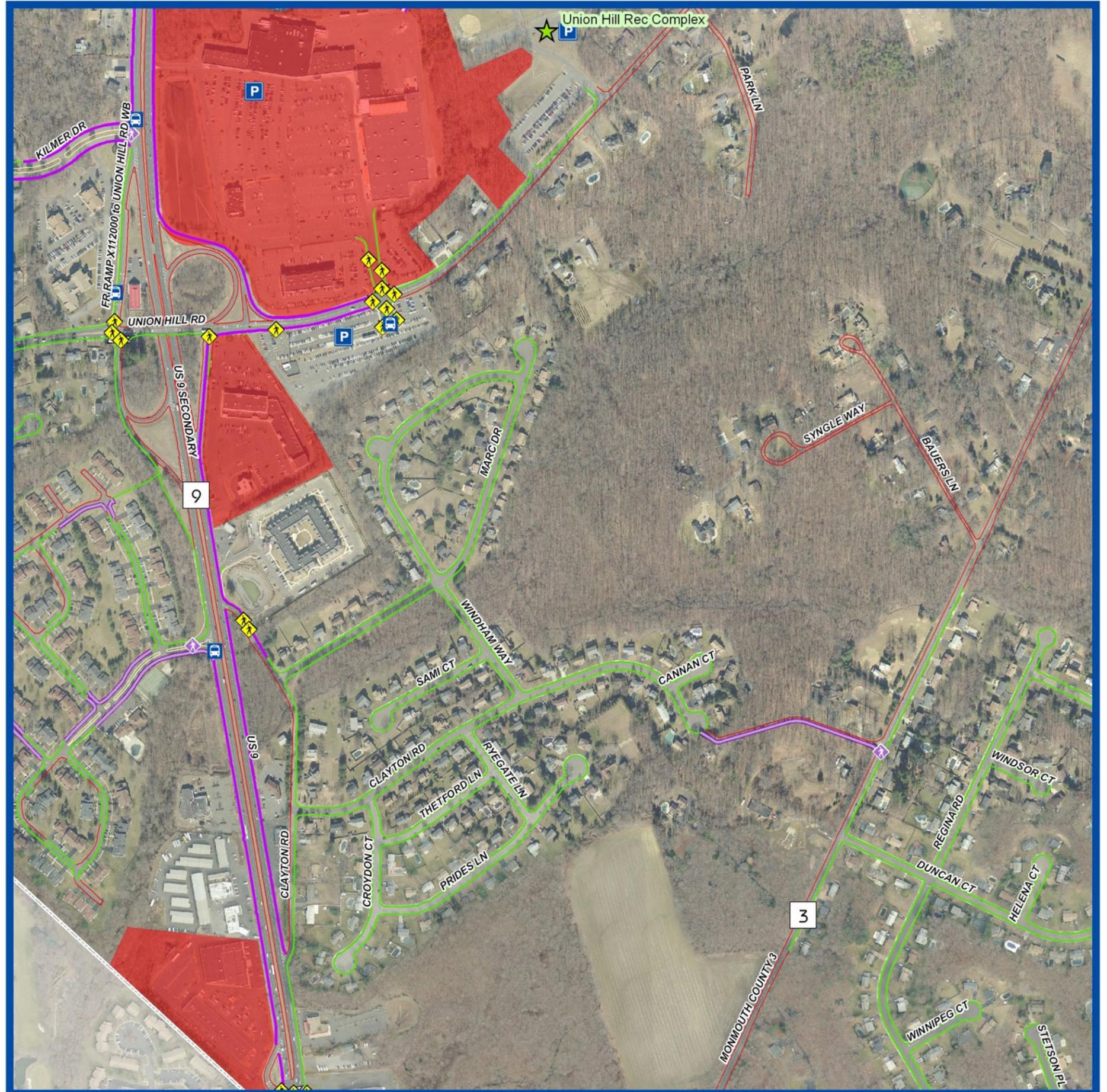
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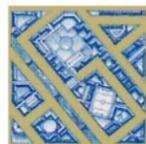
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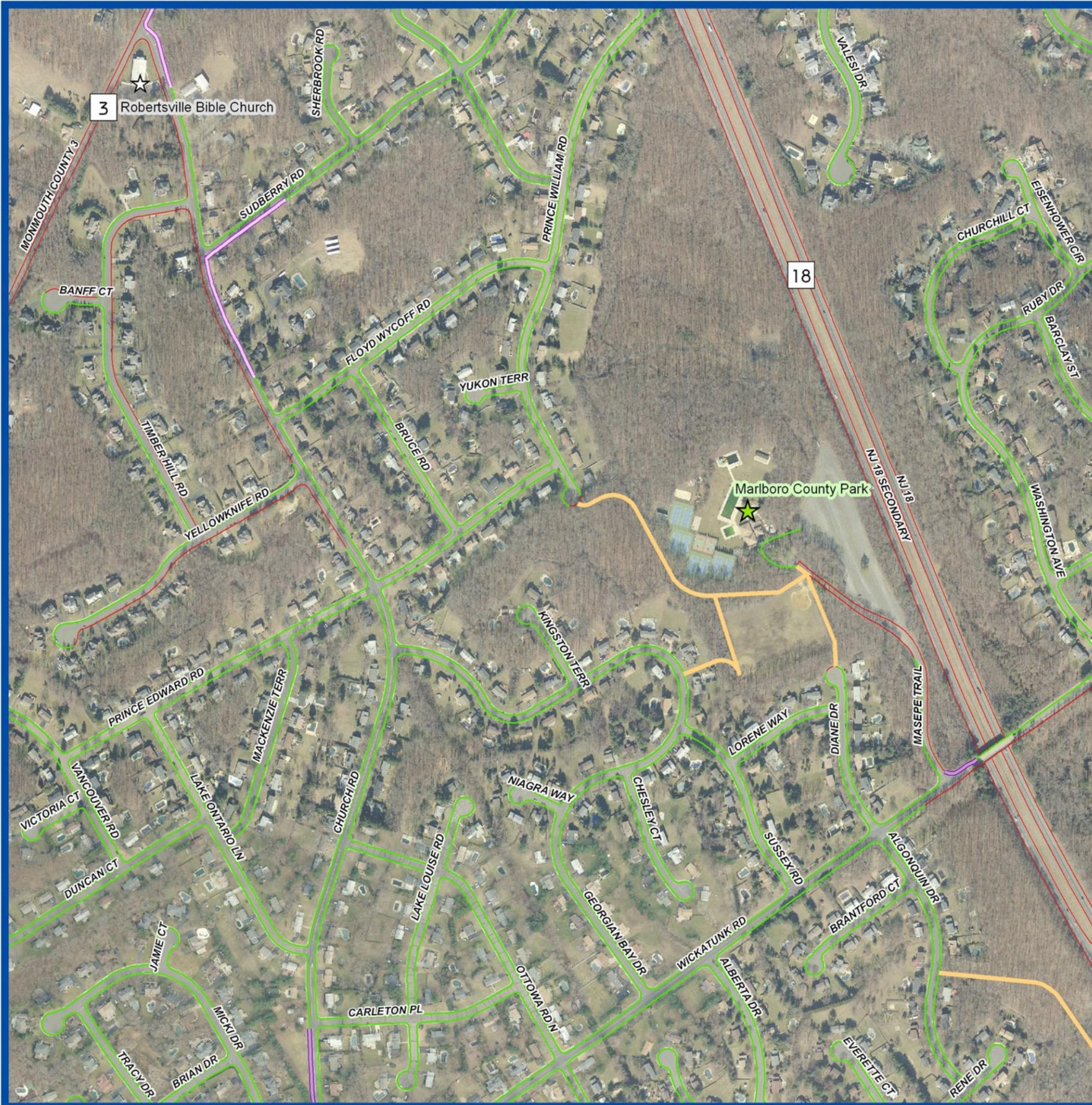


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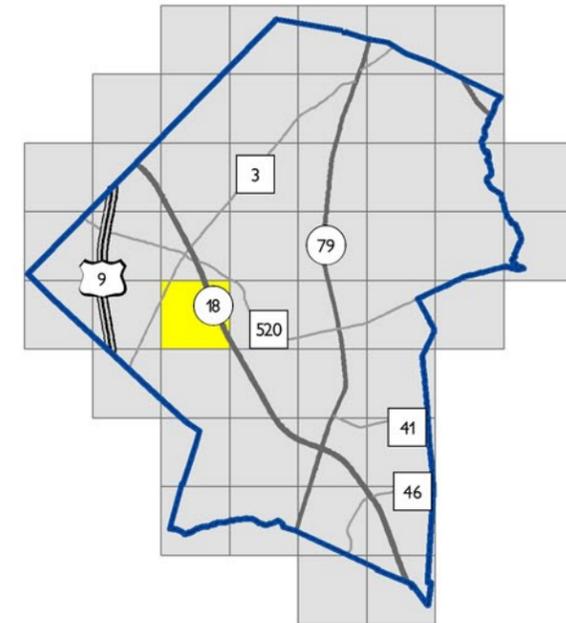


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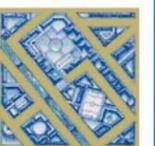
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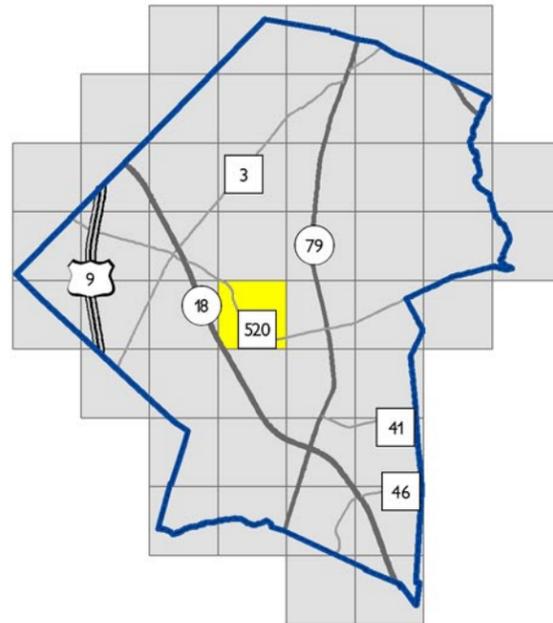
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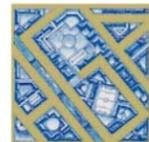
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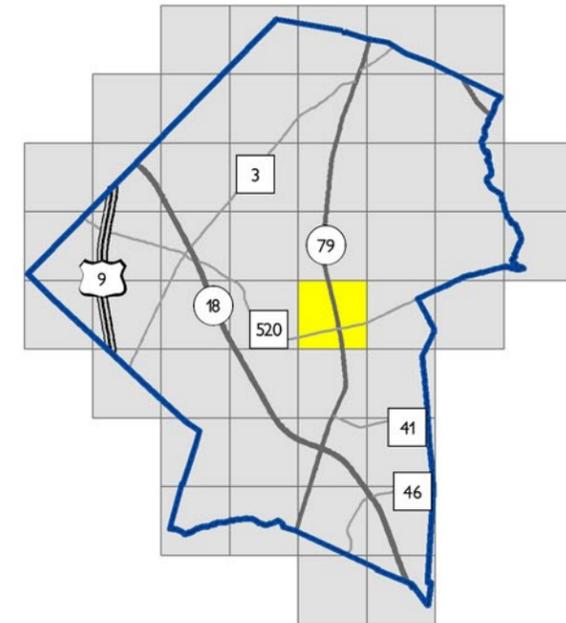


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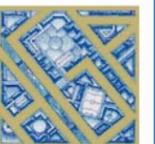
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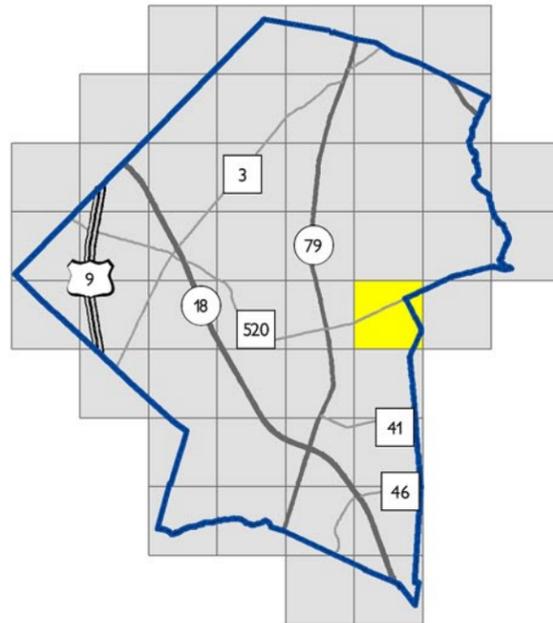
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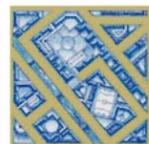
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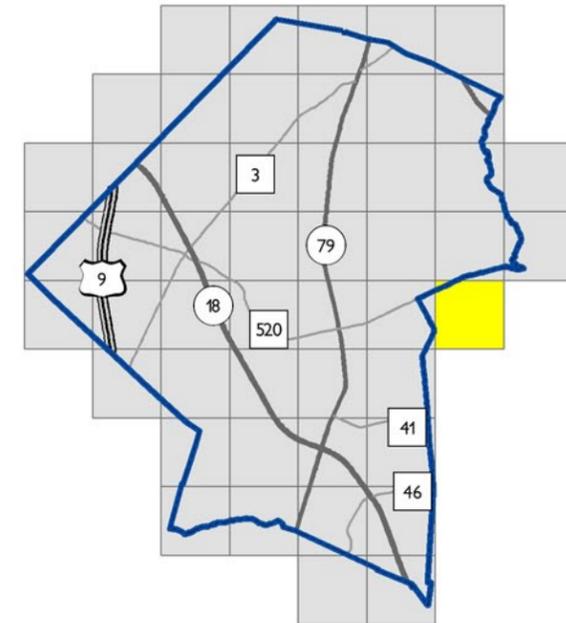


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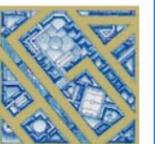
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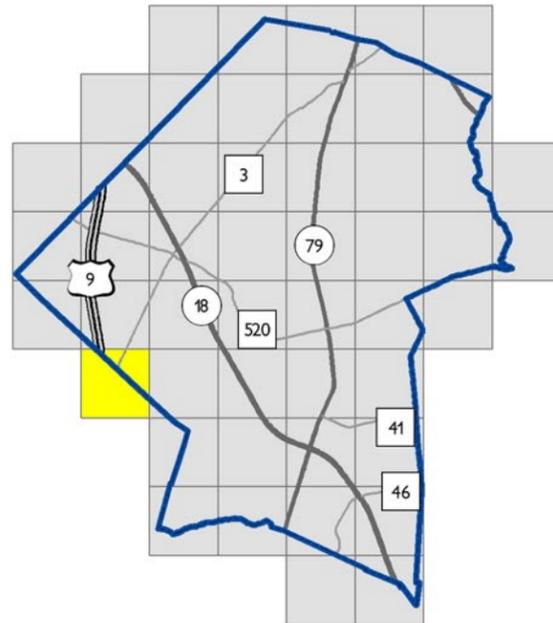
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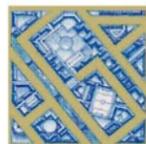
- No Sidewalk
- Existing Sidewalk
- ◆ Existing Crosswalk
- Median

Destinations

- ★ Schools
- ★ Recreation
- ★ Historic Sites
- ★ Religious Institutions
- P Park and Ride Location
- 🚌 Bus Stops
- Shopping Center
- Henry Hudson Trail
- Existing Trail
- - - Future Trail



Map Prepared by
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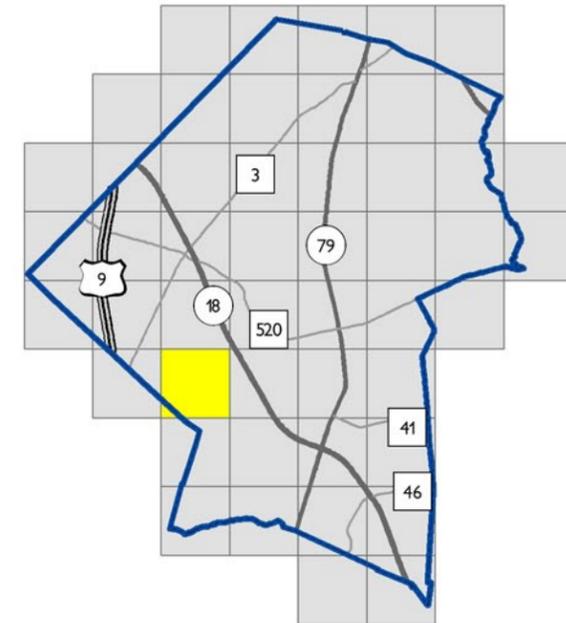


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TOWNSHIP OF MARLBORO Pedestrian Access Plan



Location Index



Legend

Proposed Sidewalks

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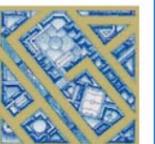
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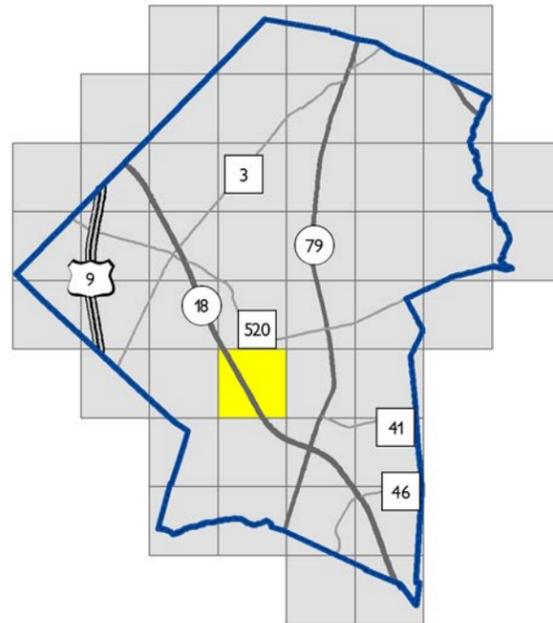
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Legend

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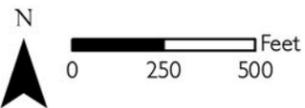
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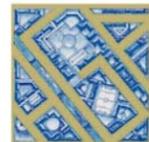
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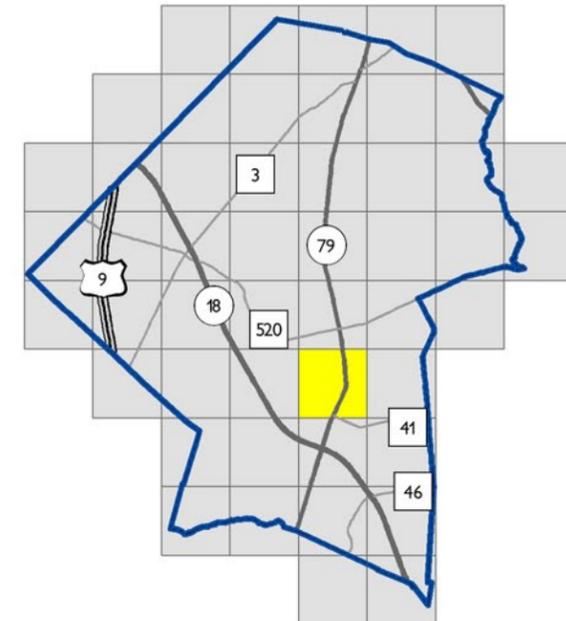


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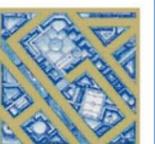
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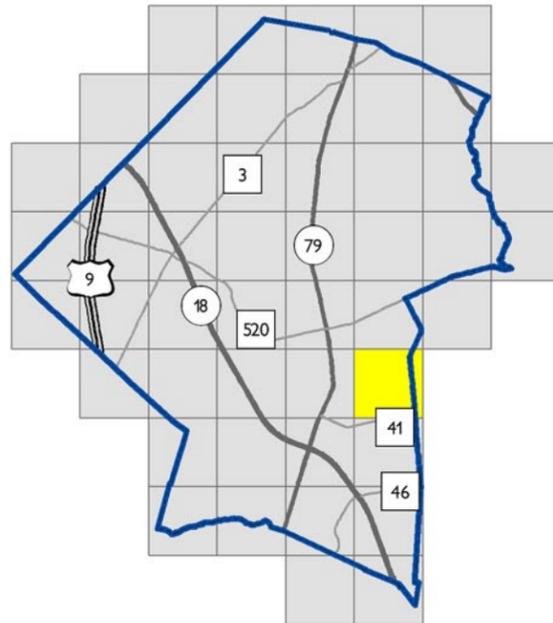
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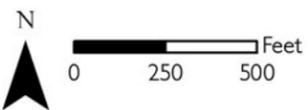
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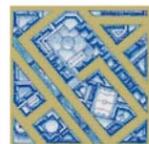
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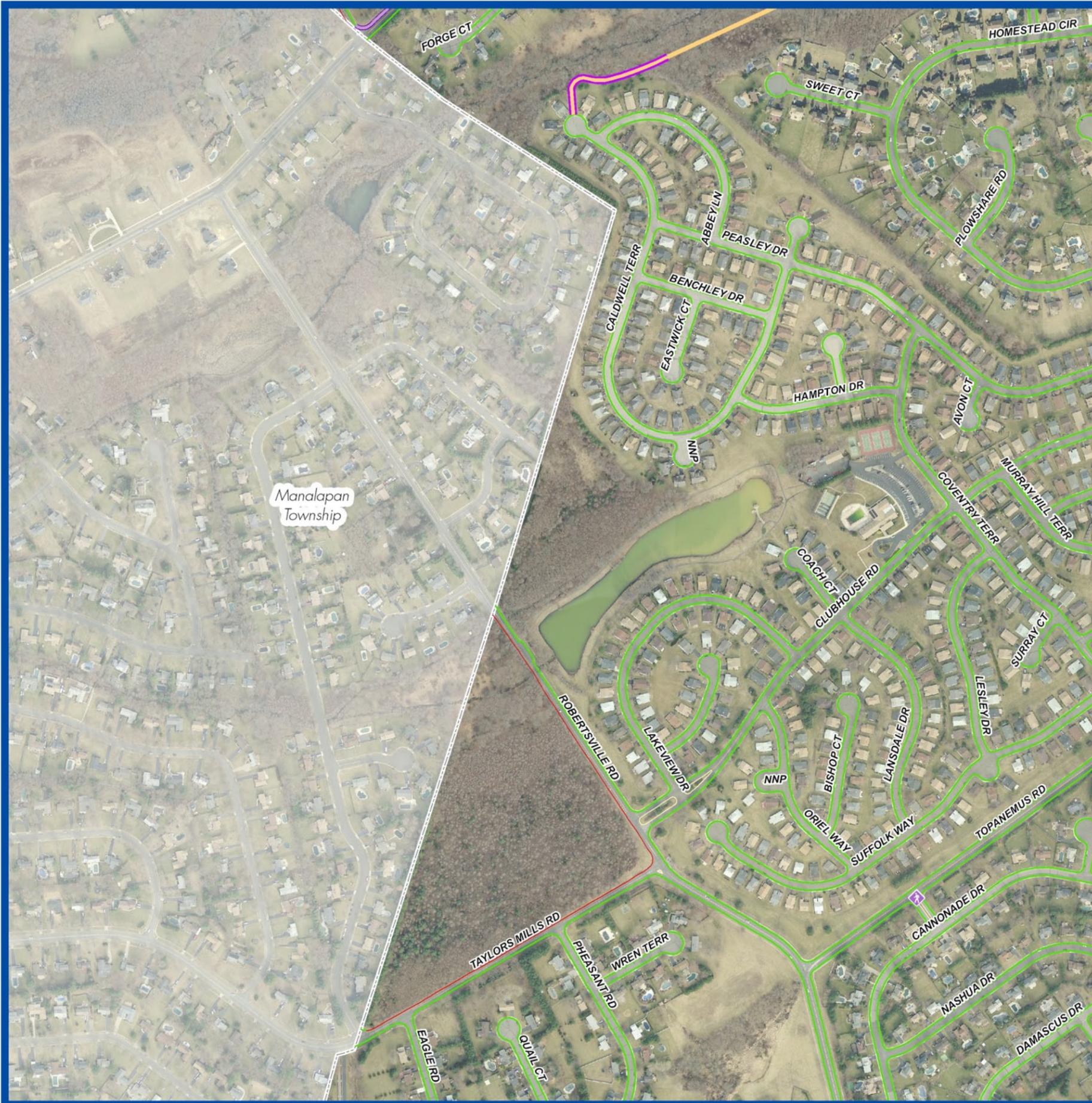


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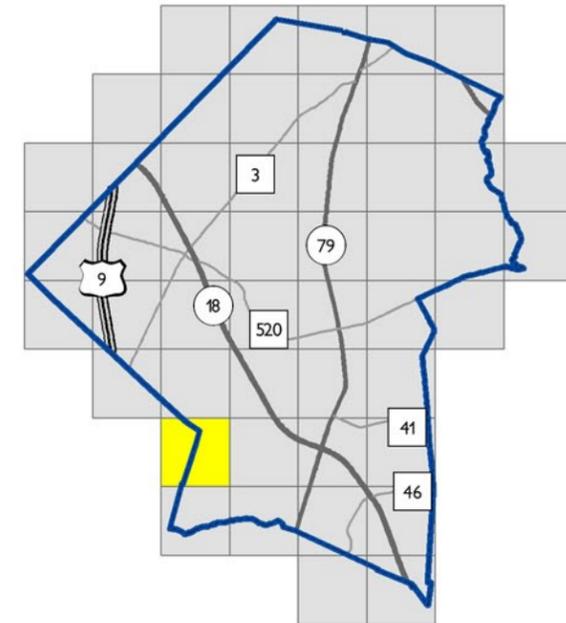


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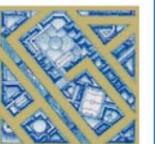
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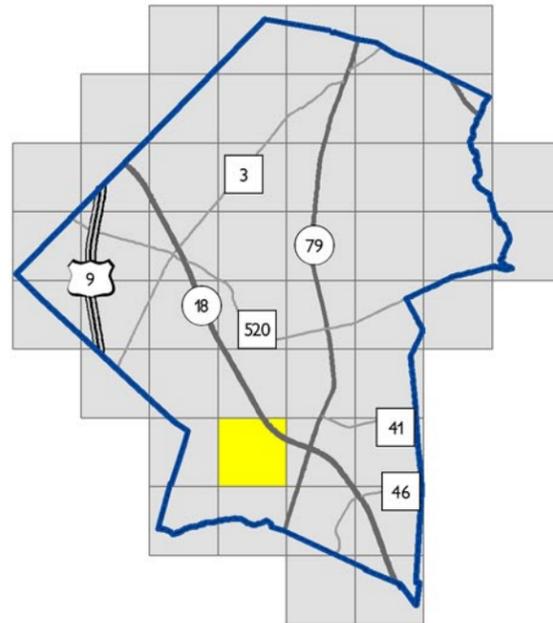
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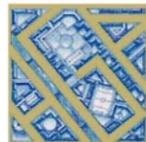
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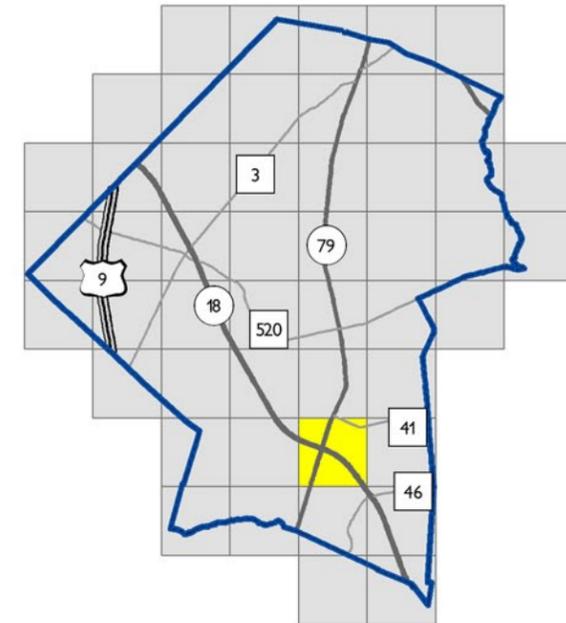


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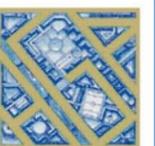
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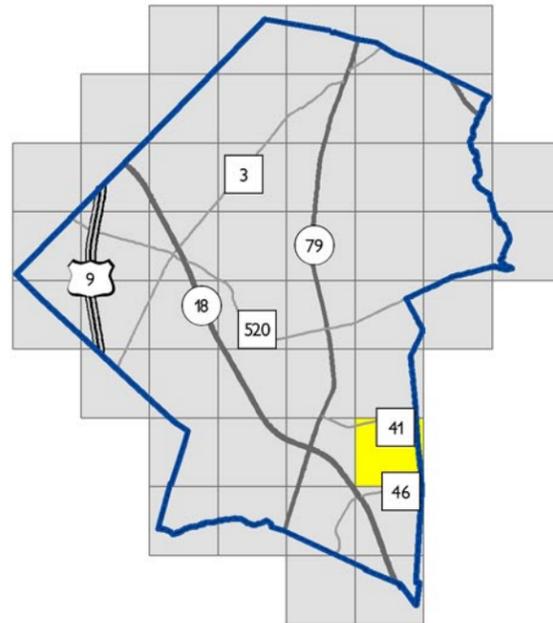
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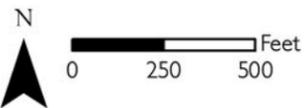
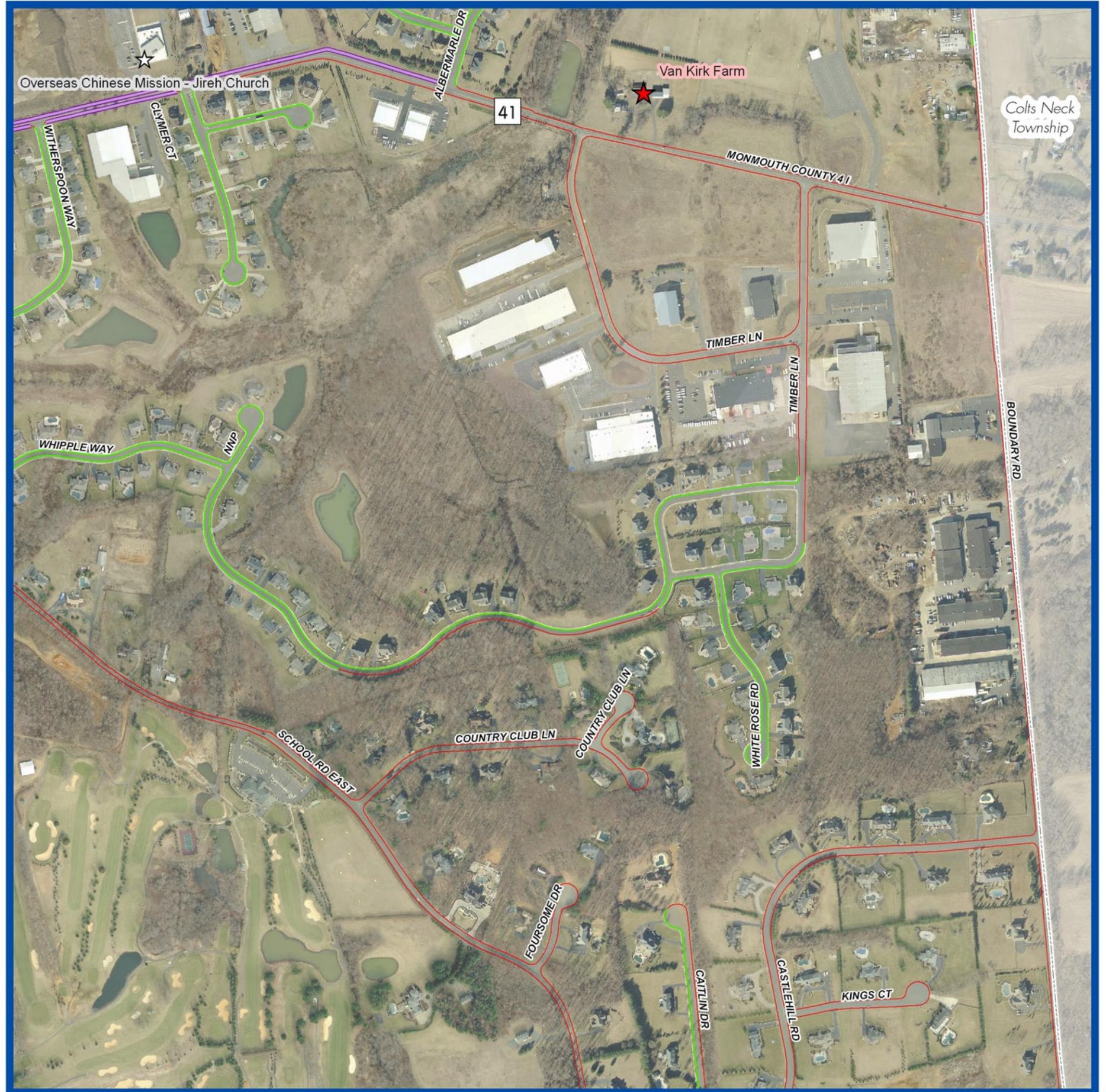
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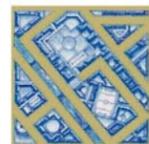
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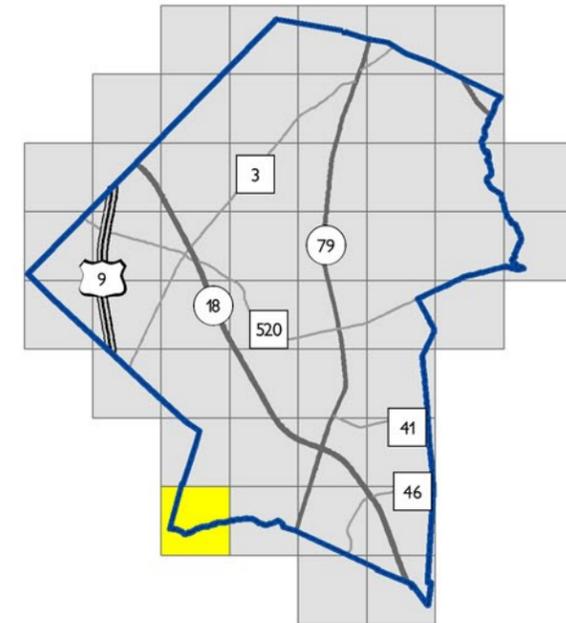


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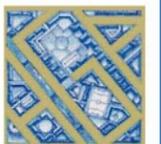
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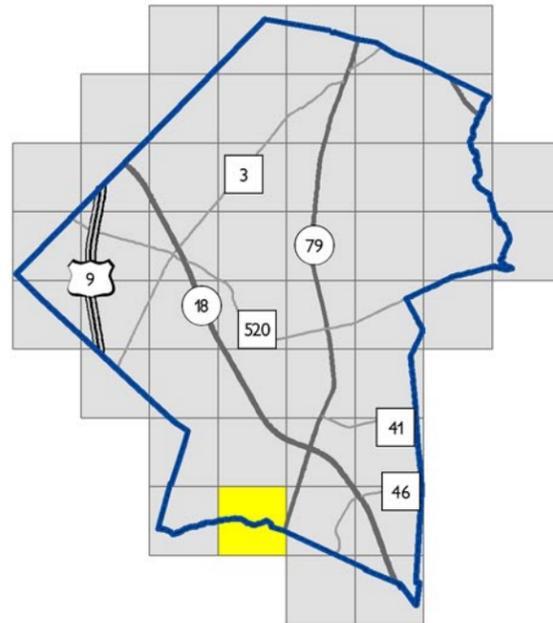
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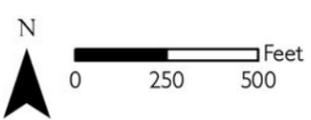
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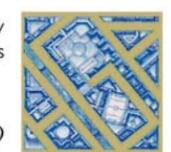
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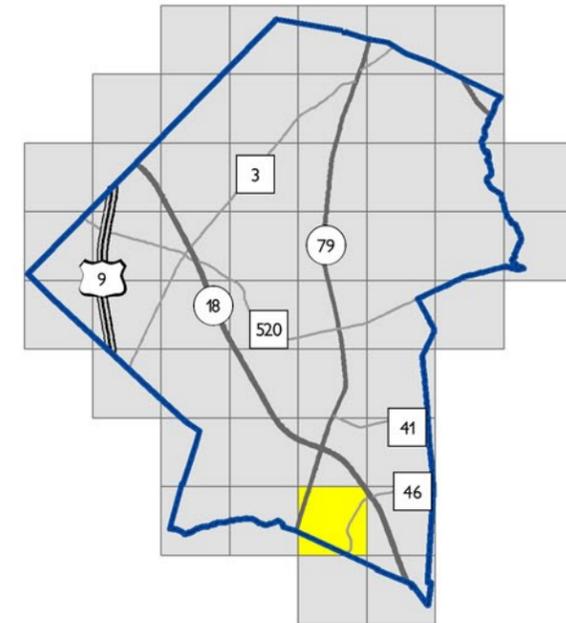
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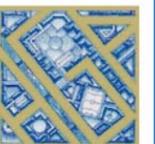
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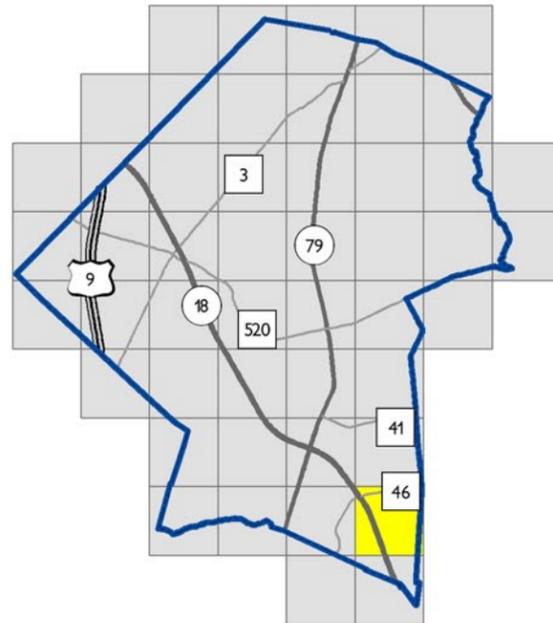
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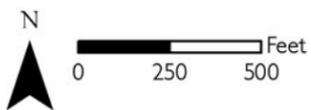
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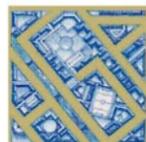
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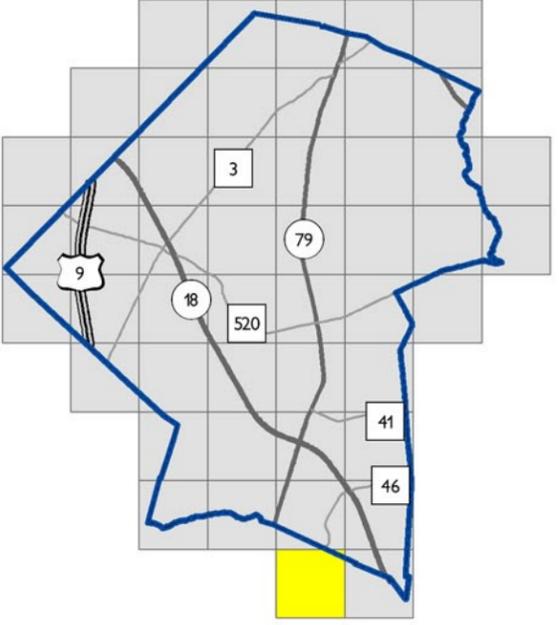
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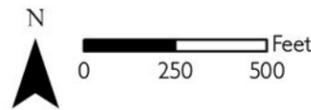
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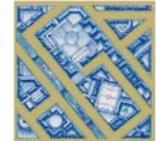


Legend

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|-------------------------------------|------------------------------|---------------------------|------------------------|
| Proposed Sidewalks | | Destinations | |
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| | Prop. Sidewalk - 3-5 years | | Historic Sites |
| | Proposed Crosswalk | | Religious Institutions |
| | Proposed Trail | | Park and Ride Location |
| | Proposed Trail with Easement | | Bus Stops |
| Existing Sidewalk Conditions | | | Shopping Center |
| | No Sidewalk | Henry Hudson Trail | |
| | Existing Sidewalk | | Existing Trail |
| | Existing Crosswalk | | Future Trail |
| | Median | | |



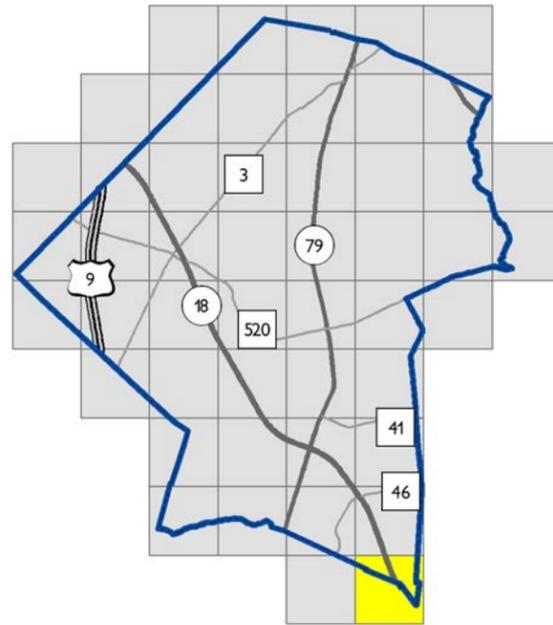
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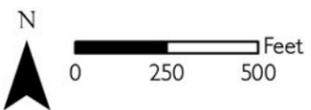
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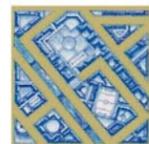
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APPENDIX B
FUNDING SOURCES



APPENDIX B

FUNDING SOURCES

Congestion Mitigation and Air Quality Program

Source: Metropolitan Planning Organizations

Congestion Mitigation and Air Quality (CMAQ) funds are focused primarily on transportation control measures (TCMs). TCMs are strategies whose primary purpose is to lessen the pollutants emitted by motor vehicles by decreasing travel demand (e.g., reducing motor vehicle trips, vehicle-miles traveled, and use of single occupant vehicles) and encouraging more efficient facility use (e.g., reducing vehicle idling and stop-and-start traffic in congested conditions, managing traffic incidents expeditiously).

County Aid Program

Source: NJ Department of Transportation

County Aid funds are appropriated by the Legislature annually for the improvement of public roads and bridges under county jurisdiction. These funds are allocated to New Jersey's 21 counties by a formula that takes into account road mileage and population. Each county develops an Annual Transportation Program (ATP) that identifies all projects to be undertaken and their estimated cost. Projects may include improvements to public roads and bridges under county jurisdiction, public transportation or other transportation related work. Funding can be used for design, right-of-way and construction. Independent pedestrian and bicycle projects can be funded under the county aid program; however, few independent pedestrian and bicycle projects have been funded. This program is administered by the NJDOT Division of Local Aid and Economic Development.

Discretionary Aid Program

Source: NJ Department of Transportation

The Discretionary Aid Program provides funding to address emergency or regional needs throughout the state. Any county or municipality may apply at any time. These projects are approved at the discretion of the Commissioner. Under this program a county or municipality may also apply for funding for safe streets to schools and bikeway projects. This program is administered by the NJDOT Division of Local Aid and Economic Development.

Locally Initiated Pedestrian Projects

Source: NJ Department of Transportation

This program provides funds for municipalities and counties for the construction of pedestrian access and safety improvements. It includes the Safe Streets to School program. The solicitation for project applications occurs at the same time as the solicitation for municipal aid projects. Applications are solicited, evaluated, and rated by NJDOT staff. Based on this evaluation, a list of recommended projects is proposed to the Commissioner of Transportation, who makes the final selection. The program is administered by NJDOT's Division of Local Government Services.

Local Scoping and Local Lead Projects

Source: Metropolitan Planning Organizations

The Local Scoping Program provides the MPOs' subregions (counties) the opportunity to use federal funding to advance local, surface transportation projects through preliminary engineering and the National Environmental Policy Act (NEPA), thereby developing a solution to a defined transportation problem. The subregion identifies a transportation problem (i.e., congested roadway, structurally deficient bridge, missing link in a bike or pedestrian system) and solves this problem during the "scoping" phase of the project development process. After the scoping process, the project would be ready for final design. The Local Lead Program allows the MPOs' subregions to apply directly for federal funding for the advancement of local, surface transportation projects through the final design, right-of-way acquisition and construction phases of the project development process. Projects must be surface transportation projects (i.e., roadways, bridges, bike paths, pedestrian facilities) on roads with the functional classification of rural major collector, rural minor arterial, rural principal arterial, urban collector, urban minor arterial, or urban principal arterial.

Municipal Aid Program

Source: NJ Department of Transportation

Municipal Aid funds are appropriated by the Legislature annually for the improvement of public roads and bridges under municipal jurisdiction. Funding is made available for municipalities in each county based on

a formula that takes into account municipal road mileage within the county and county population. These funds are allocated to individual projects within various municipalities through a competitive process. Projects may be improvements to public roads and bridges under municipal jurisdiction. As is the case with the County aid program, independent pedestrian and bicycle projects can be funded under the municipal aid program; however, few if any independent pedestrian and bicycle projects have been funded through this program. This program is administered by the NJDOT Division of Local Aid and Economic Development.

Public Works (Capital) Funding

Source: County and Municipal Governments

County or Municipal funding can be used to fund smart transportation and smart land use projects, by including the projects in the municipal (or county) budget, or bonding for it in the same way bonds are used to fund the construction and rehabilitation of roadway improvements for cars. Pedestrian improvements can be fully or partially assessed against the property owners along whose frontage the improvement (ordinarily a sidewalk) is placed. As with other categories of funding, bicycle and pedestrian improvements may be incidental to larger roadway projects; or they can be independent and solely to address pedestrian needs. Even small amounts of funding in county or municipal sources can be very important since they may be used to leverage or show local commitment in applications for other funding sources (e.g., Transportation Enhancements, Local Aid For Centers, etc.).

Safe Routes to School

Source: NJ Department of Transportation

Its purposes are to enable and encourage children, including those with disabilities, to walk and bicycle to school; make bicycling and walking to school a safer and more appealing transportation alternative, thereby encouraging a healthy and active lifestyle from an early age; and facilitate the planning, development, and implementation of projects and activities that improve safety and reduce traffic, fuel consumption and air pollution in the vicinity of schools. In New Jersey, the program is coordinated by the Division of Local Aid and Economic Development.

Safe Streets to School

Source: NJ Department of Transportation

This funding is available for communities seeking to improve the safety of children walking to school, and encourage more children to walk to school. Types of projects funded include: new sidewalks, pedestrian walkways, crosswalks, traffic signals, pedestrian signs, warning devices, traffic calming and intersection improvements. This program is administered by the NJDOT Division of Local Aid and Economic Development.

State and Community Highway Safety Grants

Source: NJ Department of Law & Public Safety

State and Community Highway Safety grants are apportioned to the States through the National Highway and Traffic Safety Administration to pay for the non-construction costs of highway safety programs aimed at the reduction of injuries, deaths, and property damage from motor vehicle accidents. These projects generally consist of developing or upgrading traffic record systems; collecting and analyzing data; conducting traffic engineering studies and analyses; developing technical guides and materials for States and local highway agencies; developing work zone safety programs; encouraging the use of safety belts and child safety seats; developing roadway safety public outreach campaigns; reducing impaired drivers; developing programs to combat drivers who speed or drive impaired; and developing programs to reduce aggressive driving. Pedestrian and bicycle projects are on the NHTSA priority list. In each state, the program is administered by a designated Highway Safety representative. In New Jersey, the designated representative is the Director of the Division of Highway Traffic Safety in the Department of Law and Public Safety. Pedestrian projects have been funded, including the development and dissemination of brochures and public service announcements promoting safe pedestrian practices and a 3-E (Engineering, Enforcement, Education) program in cooperation with the City of Trenton which includes road signs and crosswalk marking. Recently, cooperative pedestrian safety programs have been implemented with Jersey City and Elizabeth. This program may be repeated in other communities with high pedestrian accident experiences, where there is local support.

APPENDIX B

FUNDING SOURCES

Transportation Enhancements

Source: NJ Department of Transportation

The Transportation Enhancements program funds community-based projects that expand travel choices and enhance the transportation experience by improving the cultural, historic, aesthetic and environmental aspects of the transportation infrastructure. Several types of transportation-related projects are eligible, including:

- -Provisions for pedestrians and bicycles;
- -Safety and educational programs for pedestrians and bicyclists;
- -Scenic or historic highway programs;
- -landscaping and other scenic beautification;
- -Historic preservation and site acquisition;
- -Rehabilitation of historic transportation buildings;
- -Preservation of abandoned railway corridors;
- -Control and removal of outdoor billboards;
- -Archeological planning;
- -Environmental mitigation of stormwater;
- -Establishment of transportation-related museums.

Any municipal or county government, non-profit organization or State agency may submit a Transportation Enhancement application. However, the municipal governing body in which the project is located must support it. All applications from local agencies and non-profit civic groups should receive municipal governing body endorsement. Regional projects should receive the endorsement of all affected counties and municipalities. A multi-discipline Committee reviews the projects and makes recommendations to the Commissioner of Transportation who makes final selections.

Pedestrian Safety Corridor Program

Source: NJ Department of Transportation

This program designates "Pedestrian Safe Corridors" based on accident history and estimated rates of exposure to motor vehicles/pedestrian conflicts. Once designated, NJDOT will deploy Safety Impact Teams and make recommendations for engineering improvements. These areas will also be targeted for enhanced education and enforcement measures.

Safe Streets to Transit Program

Source: NJ Department of Transportation

This program provides funding to counties and municipalities in improving access to transit facilities and all nodes of public transportation. The objectives of the SSTT program are:

- To improve the overall safety and accessibility for mass transit riders walking to transit facilities.
- To encourage mass transit users to walk to transit stations.
- To facilitate the implementation of projects and activities that will improve safety in the vicinity of transit facilities (approximately one-half mile for pedestrian improvements).

Annually, NJDOT announces the availability of grant funds to counties and municipalities. Application for this program is made through the System for Administering Grants Electronically (SAGE). All applications are reviewed, evaluated and prioritized by the Safe Street to Transit Review Committee. A recommendation is made for final approval by the Commissioner of Transportation.

Pedestrian Law Enforcement

Source: NJ Department of Transportation

Enforcement strategies are an integral part of the Pedestrian Safety Initiative. The New Jersey attorney general is working with local law enforcement agencies to more vigorously enforce and prosecute the laws currently in place to protect pedestrian safety. The attorney general will collaborate with local and county prosecutors to ensure prosecution of failure-to-yield violations and to reduce the plea bargaining and downgrading of such offenses that has frequently occurred in the past. The attorney general, through the Division of Highway and Traffic Safety, will also issue \$1.5 million in grants to state and local law enforcement agencies for targeted enforcement and educational efforts. New, stronger legislation is also being considered to protect pedestrians.

Pedestrian Safety Initiative

Source: NJ Department of Transportation

Fund to provide for pedestrian safety projects and improvements. This money will be used for intersection and sidewalk safety improvements and traffic calming measures. It also funds new and high technology solutions to improve pedestrian accommodations such as overhead crosswalk illumination and high visibility crosswalk paint.

APPENDIX C
DATA CREATION METHODOLOGY



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DATA CREATION METHODOLOGY

The information shown on the enclosed maps are the result of a combination of gathered data. We chose to use the road edge data layer provided by the Township of Marlboro as a base for our analysis. The data was first converted from a polygon to polyline feature. Then each section of road edge was coded

0	-	No Sidewalk
1	-	Sidewalk
2	-	Crosswalk
3	-	Needs field inspection

The first analysis was done using NJDEP 2007 orthophotography. A second review was completed using Google Street View. Remaining areas in question were field verified. Once 2009 orthophotography provided by the Township of Marlboro became available, a final review was completed.

The Planning and Zoning Board Secretaries were contacted regarding pending projects and approved projects after 2006.

The data used and sources are as follows:

- Road_edge_2003.shp provided by the Township of Marlboro
- New Jersey 2007 - 2008 High Resolution Orthophotography provided by NJ Office of Information Technology (NJ/OIT), Office of Geographic Information Systems (OGIS), publication date 10/2008, captured during March-May, 2007 and April 3rd, 10th and 15th of 2008.
- Google Maps Streetview
- Bing Birds Eye View
- 2009 Orthophotography provided by the Township of Marlboro



