ENVIRONMENTAL ASSESSMENT

for a portion of the:

OSCAR & ELLA WILF CAMPUS FOR SENIOR LIVING OFFICE BUILDING

Block(s): 386.07 Lot(s): 54.05

Township of Franklin

Somerset County, New Jersey

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menlo engineering associates

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INTRODUCTION

The following Environmental Assessment has been prepared by Menlo Engineering Associates, Inc. pursuant to the *Township of Franklin Land Development Ordinance* (Chapter 112-24A), requiring an applicant to complete an environmental quality review for any subdivision or site plans that:

- 1. Covers more than 75% of the site with improvements.
- 2. Proposes a building with more than 5,000 square feet: or,
- 3. Paves more than 5,000 square feet.

This report addresses potential impacts resulting from the construction of a new solar field and the subdivision of the remaining lands within Lot 54.05 into eleven new single-family dwellings. This report has been prepared because of an investigation of the site features and a review of available published data. The published information consulted for this report may be viewed within the reference section. This report is intended to be reviewed in conjunction with the project Development Plans prepared by Menlo Engineering Associates, Inc., dated March 25, 2022.

EXECUTIVE SUMMARY

The applicant proposes the construction of a solar field and subdividing the remaining lands of a 24.46-acre parcel in Franklin Township, Somerset County into twelve lots: eleven new single-family dwelling lots and a remaining lot as the solar field parcel. Block 386.07, Lot 54.05 is located approximately 3,000 feet east of the DeMott Lane and Amwell Road intersection in the northeast portion of the Township. The development tract's only frontage is the terminus of Berger Street (60 ft. right-of-way) along the southeast property line. Single family dwellings lie adjacent to the parcel on all sides except for the northwest corner where the property joins the Oscar & Ella Wilf Campus.

The project proposes subdividing the 24.5-acre tract into a 12.97-acre parcel supporting the solar field and the remaining 11.49 acres further subdivided into eleven conforming single family residential lots. The proposed eleven new single family lots are a permitted use and comply with the R-20 Single Family Residential Zone and the District's Bulk Standards. The tract's southern twelve acres are surrounded by single family homes. The proposed solar field on the parcel's northern half, however, is not listed as a permitted use within the R-20 District and requires a Use Variance approval from the Board of Adjustment. While the use is not permitted within this district, "renewable energy facilities" are considered an inherently beneficial use.

The tract is comprised of secondary woodlands in different successional stages of converting the former farmland back to a natural woodland. The woodland adjacent to the Wilf Campus on the tract's north side is younger in age and is dominated by Eastern red cedars and red maples. MEA' representatives identified a wetland complex straddling the Wilf Campus lands to the north and along the northern portion of Block 386.07, Lot 54.05. A previously issued Letter of Interpretation for the site confirms the presence of this regulated Freshwater Wetland. (See attached) The proposed development plans indicate the field delineated the wetland limits. In addition to the isolated wetland area along the northern boundary, fringe wetlands were identified along Seeley Brook which bisects the tract's midpoint in an east/west direction and along a second tributary that forms the property's eastern boundary.

The woodland community within the property's southern half, south of the stream corridor, is more mature in age and more diverse, including oaks, beech, maples, and ash. While this woodland is older, no significant species or specimens were observed. The vegetation communities identified onsite are typical floodplain and upland communities found throughout Franklin Township and the Central Jersey Piedmont. As with all forms of development that require impervious surfaces and tree removal, habit loss occurs. Mitigation measures, such as the implementation of a landscape plan and tree replacement aids in offsetting the unavoidable impact.

The parcel is bisected by Seeley's Brook, a tributary of the Delaware and Raritan Canal, which drains from the higher elevations southwest and southeast of the site to the Delaware and Raritan Canal found about 1.7 miles northeast of the property. A tributary of Seeley's Brook creates the property's southeast boundary. The tributary collects the runoff from south of the property and drains to its confluence with Seeley's Brook about 250 feet west of the property's easternmost point. Both tributaries drain more than fifty acres and have floodplains associated with the regulated surface water feature. The plans indicate the extent of the 100-year floodplains and the associated Delaware and Raritan Canal Commission (DRCC) required 100-foot buffers to those floodplains. The only intrusion into the 100-foot buffer is for the construction of the stormwater outlet from the infiltration

basin associated with the proposed single-family subdivision and a sanitary sewer crossing to connect the new homes with a 15-inch sanitary main paralleling Seeley's Brook. The project includes a stormwater management plan in conformance with the current NJDEP Stormwater Management Rules, therefore, the project will not cause or result in adverse impact on a downstream receiving water body.

The design program and project development planning minimize the adverse impacts to the immediate and adjacent baseline environmental conditions to the greatest extent practicable. These baseline conditions were compiled from local published information, and various Federal, State, and County documents and a site inspection. Potential impacts were evaluated for the period during construction activities and upon occupation of the completed of the facility.

Although the solar field use does not comply with the underlying zoning, it is of an intensity that is consistent with the majority of the Township's Master Plan Zoning Standards. The R-20 Residential Zone restricts the lot (building) cover to a maximum of 15% and maximum impervious cover to 25%, however according to Municipal Land Use Law (MLUL) 40:55D-38.1 elevated solar panels or arrays are not considered impervious cover. Other than the parcel not containing the required lot frontage and the solar field use, the project complies with all other standards. Therefore, the application does not exceed the anticipated impacts contemplated by the current zoning. Furthermore, the development aids in meeting the demand for new housing in the community and supplies a noncarbon producing renewable energy source.

The construction and development of this parcel, as with any form of development, will result in certain unavoidable impacts. These unavoidable impacts have been minimized through mitigation measures employed by the applicant within the development program and all necessary permits will be obtained from the various reviewing agencies prior to construction.

1.0 PROJECT LOCATION AND DESCRIPTION

The applicant proposes the construction of a solar field and subdividing the remaining lands of a 24.46-acre vacant parcel into eleven new single-family lots. The parcel is in the northern reaches of Franklin Township, Somerset County, New Jersey, and the municipal tax map identify the property as Block 386.07 Lot 54.05. The tract occupies only sixty feet of frontage at the terminus of Berger Street. The remaining boundaries join either single family lots or the Oscar & Ella Wilf Campus. Vehicular access to the property is approximately 3,000 feet east of the DeMott Lane/Amwell Road intersection. The site is located approximately twenty-three miles northeast of Trenton and 3.3 miles west of New Brunswick.

The parcel falls within an area zoned as R-20 Single Family Residential Zone permitting only single-family lots 20,000 square feet and larger. The zone lists conditional uses including, public utility installations, schools, wireless communication antennas, as well as offices in the R-20-H area. The proposed application includes the construction of a solar field and the extension of Berger Street to provide the required frontage for the construction of eleven new conforming single family dwelling lots. The solar field, however, is not a permitted use with the R-20 District, therefore a Use Variance is required for that portion of the application.

The development plans indicate the 24.46-acre tract will be subdivided into twelve parcels, the largest, a 12.97-acre parcel along the tract's west side encompasses the proposed solar field. The solar arrays are shown facing southeast in an east -west linear pattern. A 10 to 16-foot-wide access path encircles the array field as well as a six-foot-high chain link fence.

The plans subdivide the tract's southern portion into eleven new single-family homes with one parcel containing the required stormwater basin. The project extends Berger Street northward onto the property to create the required frontage for each of the new lots. Neither the proposed solar field nor the single-family dwellings encroach into any identified wetland area, transition zone or the required DRCC floodplain buffer.

The extent of wetland areas shown on the site plan replicate the wetland areas previously verified by the New Jersey Department of Environmental Protection (NJDEP) Letter of Interpretation (File #1808-97-0017.1). The previous NJDEP Letter of Interpretation classified the wetlands as intermediate resource value wetlands, thereby, establishing 50-foot wetland transition zones associated with all the wetlands identified onsite. Other than a Freshwater Wetlands Statewide General Permit GP#11 for two stormwater outfalls and a Statewide General Permit #2 for the residential subdivision sanitary sewer connection, the project does not require any other wetland disturbances. In addition to preserving the 50-foot transition zones associated with all the wetland areas, and the 100-foot buffer to the 100-year floodplain, a 50-foot naturally vegetated buffer surrounds the perimeter of the solar field.

The combined disturbance of the solar field and the residential subdivision requires the removal of 7.4 acres of trees. The tree removal is minimized to extent practicable encompassing only the area necessary to construct the solar field, the solar field access drive, the single-family dwellings, the extension of Berger Street and the stormwater management facilities required by the NJDEP to manage the stormwater runoff. The removed woodlands' composition changes from the northside of the stream to the south side. The property's northside (solar field area) is consists of a younger plant community dominated by pioneer species such as Eastern red cedars, red maples, and black cherry.

The southern side (residential subdivision) is more mature and includes oaks, maples ash and beech trees. The woodlands are indicative of early to mid-stage successional communities returning the previously farmed lands to a Piedmont upland woodland. A review of historic aerials indicates the upland areas along the southern half of the property were farmed into the early 1960's with the northwest portion farmed as late as early 1970's. Neither of the communities contain any rare or endangered species

The development's stormwater management plan is designed according to the Franklin Township's Land Use Regulations, Middlesex County and the NJDEP Stormwater Regulations. The system restricts the post-development peak flows to match or reduce the pre-development discharge rates, captures, and treats the vehicular use pavement runoff and replicates the pre-construction groundwater recharge in the post development condition thereby resulting in no net loss of groundwater recharge. The project will not cause any off-site flooding or adverse impacts to any downstream receiving bodies.

Only the project's residential portion requires linkages to the full spectrum of the surrounding infrastructure networks. The solar field requires only an electrical connect and it is expected to be via overhead lines to the electric system serving the Wilf Campus. The solar field does not require any other infrastructure connections. The tract falls within a highly developed area; therefore, both electric and gas companies expect to have ample service available for the building expansion. Previous contacts with the various utility companies involved did not identify any capacity or allocation problems.

Except for the sanitary sewer, the plans depict extending the required infrastructure from the mains found at the intersection of Berger Street and Lilac Lane. Unfortunately, the existing sanitary line inverts within the Berger Street/Lilac Lane intersection are too high to connect the new single-family homes without a pump station. The site's topography slopes down to the north away from Lilac Lane to the lower elevations along the stream corridor bisecting the tract. A gravity sanitary sewer connection is expected to be made to the existing 15-inch sanitary main paralleling the stream corridor along the streams northern bank. The stream crossing will require both a NJDEP Freshwater Wetland General Permit #2 and a Flood Hazard Area Individual Permit. The remaining utility connections, including public water will be via extensions of the services found at the Berger Street/Lilac Lane intersection.

Finally, the development plans depict new plantings to provide an aesthetically pleasing landscape design. Plantings will include ornamental, shade and evergreen trees, and shrubs and ornamental herbaceous vegetation. These plantings serve to provide continuity throughout the development and provide limited cover for generalist wildlife species, which may visit or rest on-site.

The applicant's design philosophy is to construct a new solar field and eleven new single-family dwellings with minimal environmental effects, while constructing a viable, attractive development. To achieve this goal, the project team thoroughly evaluated alternative solar field configurations and lot arrangements in relationship to the overall development potential and the associated impacts. The application presented herein represents a solution that achieves the minimum required program, while producing impacts to a magnitude of similar projects and the established zone. In addition, the project has been designed utilizing the Franklin Township Ordinance as guide for development. The single-family development does not require any bulk standard relief; however, the solar field requires a use variance and relief from the lot frontage requirement. The combined project will not result in any significant adverse impacts.

The application provides an appropriate level of development for an underdeveloped parcel bounded by a compatible senior living campus and single-family dwellings. The plan furthers the planning goals for the region by providing a non-industrial, residential use within an area completely developed with single family dwellings while taking the site's constraints into consideration. The solar field, which will serve the senior living campus, constitutes an appropriate accessory use to the overall campus. It is an ancillary structure that serves the previously approved uses on-site and surrounding it; therefore, the project meets the goals and objectives of the Franklin Township Master plan. The project site is removed from the municipal boundary therefore has no impact on the surrounding municipalities or Master Plans. The site falls within an area indicted on the NJDEP NJ-Geo-Web as a Metropolitan Planning Area (PA-1), which are areas suited for further development.

2.0 SITE DESCRIPTION AND INVENTORY

2.1 Natural Resources

Natural resources include geologic formations, soil formations and types, topography, surface and subsurface hydrologic features, vegetation, and wildlife.

2.2 Geology

The site's underlying geology is consistent with that of Franklin Township and southern Somerset County. The site is found in the Triassic Lowland comprised of the Passaic formation. The region's surficial formation is reddish brown, Brunswick shale or siltstone and mudstone, which are mildly folded and faulted. The solid shale bedrock is found to be at a depth greater than 3½ feet. The *Soil Survey of Somerset County* indicates bedrock depth for the Klinesville soils at between 1.0 to 1.5." As evidenced by the adjacent and previous site construction activities, bedrock was not a hindrance during the construction.

2.3 Soils

Soils mapped on-site within the *Soil Survey of Somerset County, New Jersey* include Klinesville channery loam (KkoC), 6 to 12 percent slopes, and Reaville silt loam (RehA), 0 to 2 percent slopes and Rowland silt loam (RorAt) 0 to 2 percent slopes. The following table demonstrates the limitations of the on-site soils for development:

Limitations	KkoC	RehA	RorAt
Mapped percentage of site	70.4%	12.7%	16.9%
Depth to bedrock	1.0'-1.5'	1.5-3.5'	> 4.0'
Seasonal High-Water Table	> 4.0'	0.5-3.0'	1.0-3.0'
Permeability	2.0-6.0"/hr	0.6-2"/hr.	2.0-
			6.0"/hr.
рН	4.5-5.5	4.5-6.0	4.5-5.5
Foundations/with basements	Moderate	Severe	Severe
Roads & Streets	Severe	Severe	Severe
Lawns/landscaping	Severe	Moderate	Severe

2.4 Hydrology, Water Quality, Flood Hazard Areas

The New Jersey Freshwater Wetlands Maps, as depicted on the NJDEP *NJ-GeoWeb* interactive website, depict the subject parcel as containing regulated wetland areas. MEA representatives field evaluated the site in comparison to the limits of wetland areas previously verified by the NJDEP through the issuance of a Letter of Interpretation (File #1808-97-0017.1) and reflagged the areas previously identified.

The plans depict a self-contained wetland area along the northwest common property line with the Wilf Campus. In addition, narrow wetland bands along with State Open Water segments were identified along both Seeley's Brook and its tributary along the southeast property line along with two small manmade ditches that drain into Seeley's Brook. The applicant has chosen not to proceed with a Letter of Interpretation instead file directly to the NJDEP for the Statewide General Permits required for the outfall and the utility crossing.

The site drains in two directions from the higher elevations found along the perimeter down to the lower elevations along Seeley's Brook. Seeley's Brook flows from the southwest property line to the northeast eventually draining to the D&R Canal about 1.7 miles northeast of the site. A second tributary drains from the higher elevations south of the property at the intersection of Berger Street and Lilac Lane northward to its confluence with Seeley's Brook. The confluence of the two streams occurs along the property's eastern boundary near the site's northeast corner.

The NJDEP Geoweb mapping indicates there are no water dependent species within one mile downstream, therefore the NJDEP should assign a standard 50-foot riparian zone to each tributary. MEA representatives observed two small human made ditches; one found along the western property line draining the southwest detention basin on the Wilf campus and the other acting as the outlet of the other detention basin serving the Wilf campus in the property's northwest corner. Neither of the ditches drain more than fifty acres, nor do they appear on the Soil Survey or the USGS quadrangle maps, and they are not a relocated natural stream; therefore, those features should not be assigned a riparian zone. The plans also depict the calculated 100-year floodplains and the DRCC required 100-foot buffer to those floodplains for the two tributaries.

Pavement runoff from the existing Wilf campus is directed to two stormwater basins along the proposed development's northwest side. The basin found in site's northeast corner serves the Wilf campus assisted living facility while the second basin adjacent to the property's southwest corner collects runoff from the remainder of the Wilf Campus. The proposed development does not impact the two existing basins. A new stormwater infiltration basin will be constructed to address the increased residential subdivision's runoff. The proposal will retain the existing hydrologic characteristics under the post construction condition as required by the 2021 NJDEP Stormwater Management Rules. The Rules require matching the drainage areas, controlling volume and rates and stipulate no net reduction of ground water recharge in the post developed condition.

The NJDEP *Geoweb-Geology* depicts the parcel as a moderately effective recharge area, assigning it the Class B (11-14 in/yr.) recharge zone for property southeast half and less effective along the northwest side Class C (8-10 in/yr.). The soil textures and descriptions along with the depth to the bedrock support this finding.

2.5 Topography

The undeveloped gentle to moderate sloping parcel does not contain any significant topographical features and except for eroded stream banks. The stream embankments, however, are steep to very steeply sloping resulting from the streams' increased volume undercutting the side slopes. The NJDEP Flood Hazard Control Act Rules prohibit construction activities within twenty-five feet of the top of banks therefore, with exception of the stormwater outfalls and the sanitary sewer crossing, the steep embankments remain undisturbed by the project. Overall, the property slopes in two directions; the solar field area slopes from the higher elevations along the west side of site eastward down to the lower elevations along the stream corridor. The property's southern portion (the residential area) slopes from the higher elevations along the southern boundary lines northwestward again down to Seeley's Brook which bisects the overall site. The elevations range from a high point elevation of 105 at the site's southernmost point to the low point of elevation sixtynine within the stream banks as Seeley's Brook flows offsite in the property's northeast corner.

2.6 Vegetation and Wildlife

2.6.1 Vegetation

The previously disturbed, former farmland includes two vegetative communities representing two distinct stages of succession converting former farmland back to woodlands. The northwest side of the site is a younger pioneer community comprised of Eastern red cedars and red maples, black cherry, and black locust while the southeast side an older community of more mature hardwoods such as oaks, ash, walnut, black cherry, and red maple. Based on a review of historical aerials, the farming operation appears to have ceased on this southeast portion of the site in the late 1950's to the early 1960's while farming occurred on northside of the property until the early to mid-1970's. The 25-acre site contains a woodland 90 percent canopy at this point. The wooded areas are, typical of a low gradient Piedmont upland woodland. The site contains individuals ranging from less than 6-inches D.B.H. up to greater than 18" D.B.H. individuals scattered in the treed areas. MEA representatives did not observe any outstanding or unusual species or specimens during the tree inventory.

Invasive materials dominate he sites' understory along both sides of the Seeley's Brook. The limited shrub understory typically contains multiflora rose (Rosa multiflora) and fragrant honeysuckle (Lonicera fragrantissima), Russian olive (Elaeagnus augustifolia) and black haw viburnum (Viburnum prunifolium).

Both woodland communities' herbaceous stratums include poison ivy (*Toxicodendron radicans*), Japanese honeysuckle (*Lonicera japonica*), Japanese stiltgrass, (*Microsetegium vimineum*), Wineberry (*Rubus phoenicolasius*) as well as natives such as, snakeroot, golden rods, and small white aster. No unusual or rare plant species were observed during the site inspections.

2.6.2 Wildlife

Suburban disturbed sites are not typically habitats suitable for a diversity of wildlife. The following list of wildlife can be expected to be present or visit urban disturbed areas:

Mammals:

Common Name **Botanical Name** muzzogo Didelphis virginiana raccoon Procyon loter striped skunk Mephitis mephitis eastern cottontail Sylvilagus flezridanus little brown bat Myotis lucifugus eastern chipmunk Tamias striatus white-footed mouse Peromyscus leucopus red-backed vole Clethrinonomys gapperi white-tail deer Odocoileus virginianus

Birds:

Common NameBotanical NamecatbirdDumetella carolinensisAmerican robinTurdus migratoriusblackcapped chickadeeParus atricapillusbrown-headed cowbirdMolothurs atercrowCocrus brackyshynchusbluejayEyancitta cristata

tufted titmouse Eyancitta cristata turkey vulture Cathartes aurea northern mockingbird Mimus polygluttis

During our site inspections, a few of the above-mentioned bird species were sighted and heard in the vicinity. However, the sightings were limited to members on this list and no sightings of other mammals or amphibians were recorded. The limited diversity of the wildlife on-site arises from the relative uniformity in habitat and the intensity of the surrounding land uses.

2.6.3 Endangered or Threatened Species

No evidence or sightings of any endangered or threatened species was recorded during the site inspections. The project area has a low probability index due to the degraded, previously disturbed habitat and the intensity of the surrounding human activity. Furthermore, the NJDEP *NJ-GeoWeb* interactive mapping indicate that that there are no records for rare plants, animals, or natural communities on the site or a within one-mile downstream from the site.

2.7 Wetlands

The development plans depict the extent of the regulated freshwater wetland areas Menlo Engineering Associates (MEA) identified on the property. The regulated features include an area that straddles the development parcel's northwest property line (common line with the Wilf campus), areas of fringe wetlands along the two stream corridors and two small ditches that function as discharge conveyances for the two detention basins on the Wilf Campus site. MEA representatives field delineated the features, and a surveyor located the points shown on the plans. Since the application requires only two minor general permits, the

application does not require a Letter of Interpretation and may proceed by directly applying to the NJDEP for the Statewide General Permits.

2.8 Man-Made Resources

Human made resources include existing on-site land use, adjacent land use, access and transportation patterns, zoning, Master Plan delineations, and community facilities.

The vacant site contains only minor ancillary drainage features associated with the existing Wilf Campus on the northwest side of the stream. The southeast side does not contain any structures. An existing 15-inch diameter sanitary sewer main parallels Seeley's Brook extending from the western property line across the property to the northeast corner.

Single family homes surround the project on all sides except for the common boundaries with the Wilf Campus.

The proposed use provides an appropriate development for an underdeveloped parcel bounded by a compatible senior living campus and single-family homes. The plan furthers the planning goals for the region by providing single family residential lots in an area specifically zoned for residential uses while taking the site's constraints into consideration.

The proposed solar field constitutes an ancillary use that serves the previously approved Wilf Campus uses surrounding it; therefore, the project meets the goals and objectives of the Franklin Township Master Plan. The project site is located a significant distance from the municipal boundary that new dwellings will have no direct impact on the surrounding municipalities or Master Plans. The site falls within an area indicted on the NJDEP *NJ-GeoWeb* as a Metropolitan Planning Area (PA-1), which is an area suited for further development.

2.9 Utilities

The tract falls within a highly developed area; therefore, both electric and gas companies expect to have ample service available for the building expansion. Previous contacts with the various utility companies involved did not identify any capacity or allocation problems.

The Franklin Township Department of Public Works supplies water to the site and the surrounding neighborhood. The plans indicate tapping into the water main at the intersection of Lilac Land and Berger Street about 120 feet south of the property. A new 8-inch water main will be extended northward within the new Berger Street right-of-way to serve the (11) new 5-bedroom single-family dwellings. New fire hydrant locations will be coordinated with Franklin Township Fire Department.

An existing 15-inch sanitary sewer main lies within a 25-foot-wide easement that bisects the property in a southwest to northeast direction along the northside of Seely's Brook. Another 8-inch sewer line is found along the westernmost property line draining lands to the northwest and a portion of the Wilf Campus. A third 8-inch sewer line is along the northeast property line which serves the assisted living facility. These two 8-inch lines connect to the 15-inch main bisecting the site along Seeley' Brook.

An additional 8-inch sanitary main is found within the intersection of Berger Street and Lilac Lane, but this main is too high for the new dwelling to connect without the use of an onsite pump station.

The 15-inch main bisecting the site is at an accessible elevation for the new single-family subdivision. The plans indicate connecting a new 8-inch main to the existing 15-inch main at an existing utility access hole near the southwest property line. The new connection requires a NJDEP Freshwater Wetlands Permit GP# 2, as well as a Flood Hazard Area Control Act Individual permit.

2.10 Cultural and Historic Resources

According to the *New Jersey & National Registers of Historic Places* (last update 12/22/2021) posted on the NJDEP Historic Preservation Office website, the site is neither adjacent to, nor contains any historic places or structures. Additionally, because the site constitutes a previously developed parcel, there is a low probability that it contains any significant archeological sites.

2.11 Pollution Problems

Information found on the NJDEP *NJ-GeoWeb* indicates there are no identified contaminated sites within the immediate proximity of the property. A residential site to the south across Cedar Brook Drive from the property does appear on the map.

Water and sanitary wastewater facilities are available to the region, which significantly reduces groundwater contamination. The project does not include the use private well water or a septic system; therefore, pollution potential or exposure is extremely limited, if non-existent. A subsurface collection system conveys the stormwater produced by the new residential subdivision to an above-ground infiltration basin that treats the runoff for quality through soil infiltration, retaining the water quality storm event while controlling the discharge rate entering the tributary along the southeast property line. The stormwater management program for the project ensures that the project will not increase any downstream flooding event, improves the exiting stormwater quality, and matches the predevelopment groundwater recharge rates in the post development condition.

The solar field includes only a 10- to 16-foot-wide stone access drive for an occasional maintenance vehicle, and under New Jersey State Law, solar panels are considered pervious, the runoff is considered "clean." Therefore, the solar field produces a minimal increase in total runoff, and no reduction in water quality or infiltration.

Soil erosion and sedimentation are not currently an issue, as the site is well-vegetated, providing stabilization to the soil. As a course of construction, the project will implement all the required aspects of a standard Soil Erosion and Sediment Control Plan reviewed and approved by the local Soil Conservation District. Air quality is consistent with central New Jersey and, since the project does not include a new industrial use, will not be a factor in the development of the site.

3.0 SITE IMPACT ASSESSMENT

The implementation of the proposed development does not result in impacts that exceed the anticipated unavoidable impacts deemed appropriate for the zone. As with all development, unavoidable impacts occur, the project plans include mitigation measures to reduce those unavoidable impacts to the extent practical.

3.1 Soil Erosion and Sedimentation

Any activity exposing soil results in an increase in sedimentation and erosion due to surface runoff. With the construction of this project, it is imperative that a soil erosion and sediment control plan be developed to ensure averting transportation of soil off-site during construction. The soil erosion and sediment control plan prepared for this application will be submitted to the Somerset-Union Soil Conservation District for review and approval. The Soil Erosion & Sediment Control plan incorporates mitigation measures controlling soil erosion and off-site sediment transportation during construction. The measures include, silt fence, inlet protection, construction entrance, and temporary and permanent seeding.

In addition, if project requires temporary stockpiles on-site, they will have sediment barriers so that, during the regrading of the site, stockpiled soils are prevented from eroding and transported off-site. The installation of a construction entrance stabilizes, if not totally alleviates, soil tracking by trucks off the subject site. Finally, the site's gentle topography aids in reducing the erosion potential of the site's soils.

Certain soils within Somerset County are described as acidic (i.e., a pH factor of less than 4.0, as defined by the Soil Conservation Service), with only moderate to low fertility in their natural state. These soils require rapid re-seeding and considerable amounts of lime and fertilizer to create fertility for quick re-establishment of vegetative cover. Exposing these soils for an extended period may be detrimental to surrounding areas. Therefore, an efficient construction sequence and the provision of a temporary liming program with an expeditious re-seeding program must be implemented to minimize the project impacts. As such, the project's construction sequence minimizes soil exposure to the maximum extent practical through an aggressive timetable.

3.2 Potential for Soil Contamination

Menlo Engineering does not conduct Phased Environmental Audits. A Phase I Environmental Audit is a normal course of action prior to land development for a previously developed or significantly disturbed property.

3.3 Water Quality and Hydrological Impacts

3.3.1 Stormwater Management

According to the drainage calculations prepared by Menlo Engineering, the post-development peak flows from the site will be attenuated to be equal to, or less than, the pre-development conditions. The design criteria utilized for the Stormwater Management Plan is in conformance with the standards and guidelines as required by the NJDEP, SCS, and the Township of Franklin.

The proposed subdivision will increase impervious surfaces, but the construction of the subsurface collection system, lawn areas, swales, along with the infiltration basin ensures the control of stormwater, volume, rate,

and quality. In addition, the infiltration basin ensures no net reduction of ground water recharge in the post development condition. The project effectively mitigates potential adverse environmental impacts to flood prone areas by providing the stormwater management basin as described in the Stormwater Management Report.

3.3.2 Surface and Groundwater Degradation

The development plans minimize the potential for groundwater pollution. A sanitary sewer system collects the sanitary (domestic) sewage generated by the proposed residential dwellings and discharges the waste to Township's system via a new 8" main connected to the existing 15-inch main that bisects the property. The new main connects to the existing 15-inch main at a manhole along the northside of Seeley's Brook near the project's southwest property line. Wastes will be effectively conveyed off the site, eliminating potential groundwater degradation from an on-site system.

3.3.3 Reduction in Groundwater Capabilities

The proposal does not intend to utilize any on-site source for water supply. However, the construction of this project will increase water demand regionally and, to some extent, reduce local groundwater capabilities. The project anticipates accessing potable water through a main found at the intersection of Berger Street and Lilac Lane.

3.4 Topography – Soil Movement and Construction Sequence

3.4.1 Soil Movement

The project plans limit the extent of grading and subsequent soil movement to only those areas required to properly grade and drain the proposed development. If imported material or exported material is required, the soils will be clean, debris-free subsoil. All existing topsoil shall remain on-site and redistributed within the disturbed areas. The redistribution of the topsoil ensures the existing dormant seed bank remains on-site, thereby reducing potential impacts from soil removal and grading.

3.4.2 Construction Sequence

The construction sequence for this project is as follows:

Cor	mmencement Date	Fall 2022
1.	Installation of Silt Fence	5 Days
2.	Installation of Stone at Construction Entrance	1 Day
3.	Site Demolition/Temporary Stabilization	1 Day
4.	Rough Clearing and Grubbing	2 Weeks
5.	Rough Grading & Temporary Seeding	2 Weeks
6.	Installation of Utilities & Foundations	6 Weeks
7.	Curbing	1 Week
8.	Pavement Sub-base	1 Day
9.	Finished Grading & Lighting	3 Weeks
10.	Scarify all disturbed areas around dwellings	2 Days
11.	Final Pavement	1 Day
12.	Landscaping & Permanent Seeding	1 Week

^{*}Note: When a C.O. for each dwelling is applied for, all site work around the dwelling shall be completed

(No. 11 subject to weather conditions and sales of individual homes to be completed between 3-6 months).

The above schedule is subject to weather conditions, sales of homesites and material availability.

3.5 Vegetation and Wildlife Impacts

3.5.1 Destruction of Vegetation and Natural Resources

The project's implementation requires plan requires 7.4 acres of tree removal. Destruction of the vegetation decreases the available suitable habitat for resident wildlife on the property. The extent of clearing encompasses only the area necessary for the construction of the project elements. The habitat loss will result in a reduction of native wildlife species residing at the site during construction and in the post construction condition, due to the removal of food sources and cover. However, the resident wildlife species observed and likely to found onsite are very adaptable generalist species and will disperse to surrounding areas.

During our site inspection, we did not observe any unique wildlife residing on-site and the site's proximity to human activity precludes its use as a major wildlife habitat. Only transient visitation by a few bird species and gray squirrels were noted in the vicinity of the tree removal. The commencement of the more intense human activity of construction will temporarily remove the site from transient visitations.

The proposed planting plan provides some mitigation for the loss of vegetative cover and wildlife habitat. The plan incorporates the use of materials that afford limited habitat for resident species. The planting of native trees and evergreens provides a nesting and resting area for birds, while providing shelter for mammal species. The provision of landscape materials serves a two-fold function: first, the plantings contribute a visual continuity assisting in the preservation of the local character; second, the use of trees and evergreens provide food and supply a limited habitat for the return of selective wildlife species. Although these measures will not replace lost habitat, the proposed plans mitigate the impact to the extent practicable. Furthermore, since the parcel does not support unusual or endangered wildlife species, any resident population will return upon completion of the construction activities.

3.6 Desirable Growth Pattern

The proposed subdivision and solar field represent a suitable infill development for this under-developed parcel surrounded by single family residential properties. The solar field represents an appropriate ancillary use to the senior campus while suppling a noncarbon producing energy source.

All the proposed eleven new single-family parcels conform to the R-20 District requirements including not exceeding the district's 15% building coverage requirement or the 25% impervious coverage requirements. The proposed development is an appropriate intensity for a parcel located in the State Plan's Metropolitan Planning Area PA-1 and compatible with the surrounding development pattern.

3.7 Community Services, Public Health, and Conservation Measures

No severe demand on community services can be expected from this project, when compared with the Township's overall demand for such services. The consumption of energy during construction and operation represents the unavoidable, irreversible commitment of resources associated with human activities. The respective utility companies do not expect any problems meeting the energy needs for the new building.

Water Supply

The Franklin Township Water Department will service the proposed eleven single-family residences. Potable water will be conveyed to the new single-family homes via a new eight" main connected to the public water main found at the intersection of Berger Street and Lilac Lane just south of the tract. Water conservation measures are typically employed within new residential building construction that includes flow restrictors to regulate minimum flow and flush rates on faucets and water closets. These architectural details are typically incorporated into the current building construction codes and their application is to be determined by the architect and owner.

The estimated water consumption based on the New Jersey Residential Site Improvement Standards (RSIS) standards (NJAC 5:21-5.1) is as follows:

Establishment Type	Number of Measurement Units		Gallons per Day per Unit		Projected Flow (G.P.D.)
5-bedroom Single Family Dwelling	Eleven units	Х	475	=	5,225
TOTAL			·	=	5,225

Sanitary Sewer System

The disposal of solid and liquid waste by application to land presents a substantial threat to surface and ground water quality. The proposed development does not include any on-site disposal of wastes. The project will be connected to the township's sanitary sewer system serving the region. Previous contact with the Sewerage Authority indicated that there are no known capacity problems within the area. The estimated daily sanitary sewer flow discharged from this site is calculated as follows (based on NJAC 7:14A-23.3):

Establishment Type	Number of Measurement Units		Gallons per Day per Unit		Projected Flow (G.P.D.)
5-bedroom Single Family Dwelling	Eleven units	х	300	11	3,300
TOTAL				=	3,300

3.8 Consistency with Municipal Plans

The proposed residential development of this site is consistent with, and does not contradict, the State or Township Master Plans, or any municipal ordinances relating to bulk requirements. Furthermore, the proposed development will be compatible with the surrounding existing single-family developments.

The proposed solar field and the parcel created for the filed, required a Use variance and relief for a parcel without any frontage. The solar field is an appropriate ancillary use to the adjacent senior living campus and will be accessed via an easement through the campus. Since the field does not contain an occupied structure, direct access tot street frontage is unnecessary.

4.0 UNAVOIDABLE ADVERSE IMPACTS

The proposed development has been designed to minimize the impacts on the environment. However, with all forms of land development, some environmental impacts are unavoidable. The development of this parcel will remove existing trees providing suitable habitat for some species. The project plans limit the tree removal to only those areas required to properly construct the new solar field, single family dwellings, the

new road, and the stormwater management basin. Upon removal of the construction activities, displaced generalist species are expected return to the site. As with any development, habitat loss occurs. Since the parcel's wooded area is surrounded by fully developed residential properties, the wildlife using and residing on this site is limited to highly adaptable species that able to find shelter and food sources in these developed neighborhoods.

An increase in traffic will have a minimal impact on the regional air quality along the adjacent roadway network. However, there is a countervailing trend of improved air quality and increased traffic volumes which results from the more stringent emission control systems required on newer automobiles.

The creation of impervious surfaces results in a site-specific decrease of water-infiltrating underlying aquifers, however, the site's contributing area is negligible compared to the extent of the underlying aquifer. To further mitigate the potential loss of groundwater recharge, the project's Stormwater Management Report indicates that the project matches the pre-development groundwater recharge rates in the post development condition, therefore, it meets the Stormwater Management Rules of no net loss of groundwater recharge.

The increase in runoff is detained within the infiltration basin and released at a controlled rate to ensure no increased peak flow rates downstream.

The project has been designed with the minimum environmental impact as practical. Any negative environmental effect resulting from development stems from the cumulative effects of many developments within the surrounding region.

5.0 MITIGATION POTENTIAL

Environmental impacts caused by the construction of the solar field and the eleven new single-family homes have been analyzed as required by the *Township of Franklin Land Development Ordinance*. The proposed development plan reduces and/or mitigates the project's impact on several components of the environment:

- 1. Proposed landscaping will provide visual integration of the project with the surrounding environment, along with providing limited habitat for the return of selective species displaced from project implementation.
- 2. Sediment and soil erosion controls will mitigate soil loss and runoff pollution.
- 3. Road access and site circulation have been designed to minimally affect traffic circulation.
- 4. Energy and water conservation devices may be incorporated into the design of the buildings and other aspects of the project, reducing demand of service.
- 5. Stormwater peak runoff rates will not be greater than the existing peak flows, the runoff is directed to an infiltration basin treating the runoff for water quality while allowing it to infiltrate into the underlying soil ensuring the project matches the predevelopment ground water recharge rate. The stormwater management plan also incorporates "green infrastructures" to mitigating groundwater

recharge, stormwater quality and quantity. The design criteria utilized for the Stormwater Management Plan is in conformance with the standards and guidelines as required by the NJDEP, SCS, and the Township of Franklin.

The impacts have been assessed and, where possible, mitigated to the maximum extent practical for this project. These mitigatory measures have been incorporated into the site development plans.

The proposed development does not represent a substantial detriment to the surrounding environment or the public welfare.

6.0 ALTERNATIVES

During the design process the design team, reviewed alternatives and evaluated their success on achieving the design program, associated environmental impacts, social impacts, and feasibility. The team evaluated the following alternatives:

- 1. Design and engineering alternatives.
- 2. No development.

The design process for this application included studying and discussing alternative methods of layouts and engineering practices. The site development plans are the summation of incorporating the most effective, efficient, and sensitive methods of this type of project development. Different scenarios were developed and were eliminated due to their greater impact or engineering requirements.

The second alternative evaluates the impacts that the no-build scenario would have on Township of Franklin. Although this scenario does not have a greater environmental impact on the site, it would deny the economic and social benefits of supplying housing in an area of high demand and the opportunity of installing a noncarbon producing renewable electric energy source.

Given the mitigation measures taken in the design of the project and the assessment of the impacts of the proposed construction, the proposed commercial development represents an appropriate development along Princeton Turnpike and Benjamin Franklin Road.

7.0 PERMITS AND APPROVALS

- 1. Township of Franklin Board of Adjustment- Use Variance, Site Plan & Subdivision Approvals-
- 2. Somerset County Planning Board Site Plan Approval- Revised
- 3. Somerset-Union Soil Conservation District Soil Erosion and Sediment Control Certification
- 4. NJDEP RFA for Stormwater Discharge from Construction Activities- Revised
- 5. NJDEP- Freshwater Wetlands General Permits
- 6. NJDEP- Flood Hazard Individual Permit
- 7. NJDEP- Water Extension
- 8. NJDEP Treatment Works Approval
- 9. Delaware and Raritan Canal Commission
- 10. Franklin Township Water & Sewer Department
- 11. Local Building Permits

8.0 REFERENCES

- 1. Farrand, John Jr. Eastern Birds. New York: McGraw-Hill Book Company: Chanticleer Press, Inc.
- 2. Federal Government. <u>Federal Manual for Identifying and Delineating Jurisdictional Wetlands</u>. Government Printing Warehouse. January 10, 1989.
- 3. Hightshoe, Gary L. <u>Native Trees, Shrubs, and Vines for Urban and Rural America</u>. New York: Van Nostrand Reinhold Company. 1989.
- 4. Macbeth Division of Kollmorgan Corporation. Munsell Color. <u>Munsell Soil Color Charts</u>. Baltimore, Maryland. 1975.
- 5. NJDEP Bureau of GIS. NJ-GeoWeb. August 2021. http://www.nj.gov/dep/gis/apps.html
- 6. NJDEP Division of Air Quality. 2020 Air Quality Report. November 2021.
- 7. NJDEP Division of Parks and Forestry. <u>New Jersey and National Registers of Historic Places</u>. Last updated June 23, 2021. https://www.nj.gov/dep/hpo/lidentify/nrsr lists/Somerset.pdf>
- 8. NJDEP. Freshwater Wetland Protection Act Rules. (N.J.A.C. 7:7A). Last amended July 15, 2019.
- 9. NJDEP. Flood Hazard Area Control Act Rules. (N.J.A.C. 7:13). Last amended July 15, 2019.
- 10. NJDEP. NJ Stormwater Best Management Practices Manual. April 2004, Revised March 2020.
- 11. NJDEP. Stormwater Management. (N.J.A.C. 7:8). Last updated March 02, 2021.
- 12. Township of Franklin. Chapter 112 <u>Land Development</u>. Current through November 23, 2021. https://ecode360.com/6274401
- 13. United States Department of Agriculture. <u>Soil Conservation Service, Soil Survey, Somerset County, New Jersey</u>. Washington, D.C.: Government Printing Office. 1972
- 14. Widmer, Kemble. <u>The Geology and Geography of New Jersey</u>. Princeton, New Jersey: D. Van Nostrand Company, Inc. 1964.

9.0 AUTHOR'S CREDENTIALS

The following credentials are presented to document the professional skills of Mr. Kenneth R. Grisewood, ASLA. This information is presented as an overview of his education, field, and professional experience.

BACHELOR'S DEGREE EDUCATION

Bachelor of Science in Landscape Architecture, College of Agriculture, University of Kentucky, 1980.

POST GRADUATE EDUCATION

Rutgers University, Graduate School of Management

CIVIC & PROFESSIONAL AFFILIATIONS:

Member, Holland Township Planning Board	2013-
Township Councilman, Bloomsbury NJ	1999-2001
Chairman, Tewksbury Township Environmental Commission	1988-1992
Member, Tewksbury Township Parks Committee	1989-1992
Director, Chatham Jaycees	1988-1989
Tewksbury Township Landscape Architect	1995-1996
American Society of Landscape Architect, Member	1985-

PROFESSIONAL REGISTRATION

Licensed Landscape Architect, New Jersey, 1985 Registered Landscape Architect, Delaware, 2012 Registered Landscape Architect, Pennsylvania, 1993 Registered Landscape Architect, New York, 1991 Registered Landscape Architect, Kentucky, 1983 Professional Planner, New Jersey, 2010

PROFESSIONAL EXPERIENCE

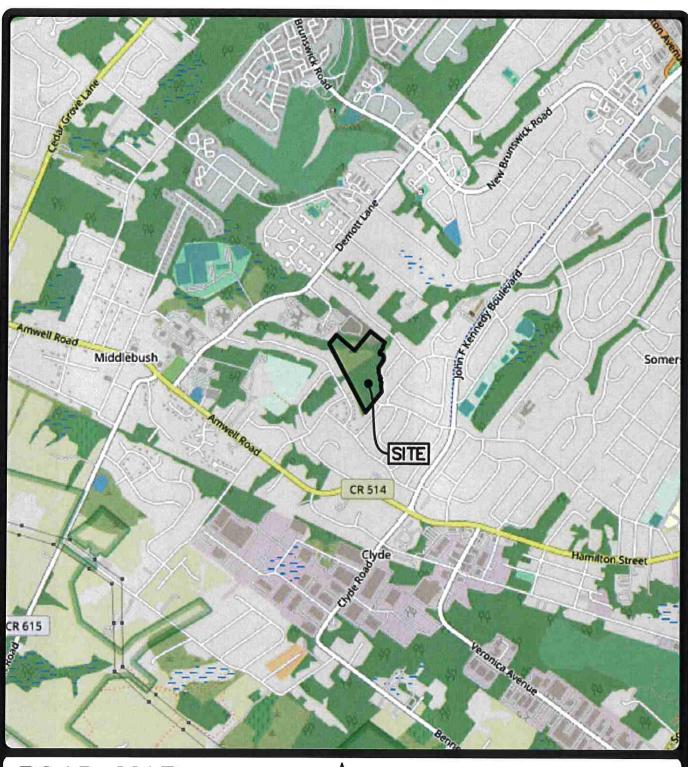
Menlo Engineering Associates, Inc., Principle Senior Landscape Architect, Environmental Specialist, 1993-present Simoff & Staigar Associates, Landscape Architect, Environmental Specialist and Regulatory Permit Specialist, 1985-1993

John Charles Smith Associates, Landscape Architect, Construction and Project Manager, 1980-1985

The experience acquired over 40 years includes responsibilities within the following:

- Natural Resources Inventories
- Site Development Plans
- Environmental Impact and Analysis
- Development Permitting Process
- Endangered Species Reports
- Wetland Evaluation and Determination
- Expert Testimony
- On-Site Construction Review

APPENDIX



ROAD MAP

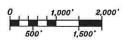
Franklin Township Somerset County



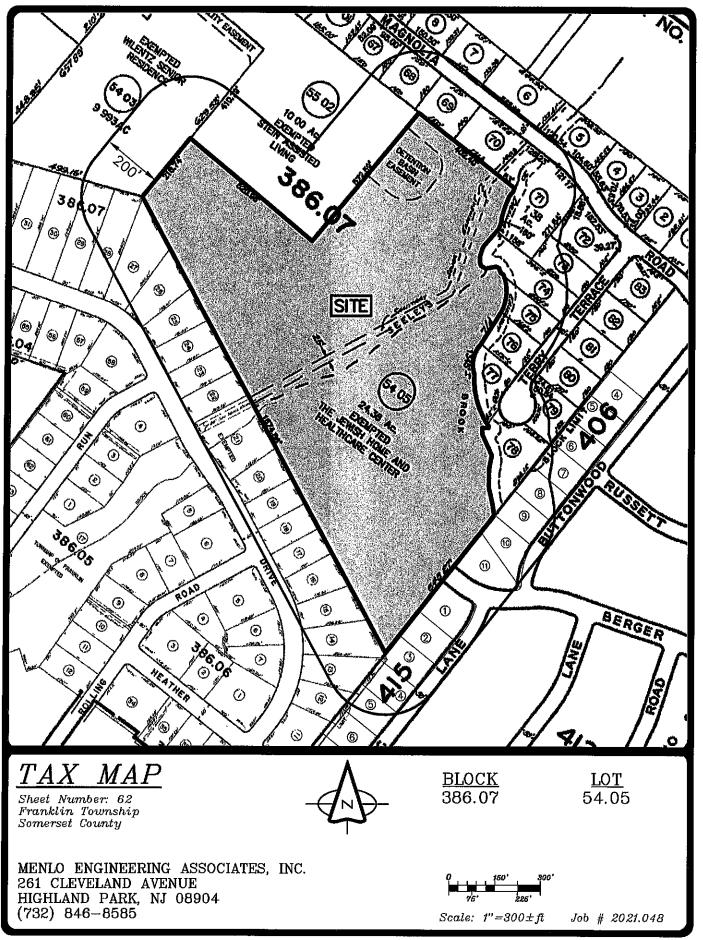
BLOCK 386.07

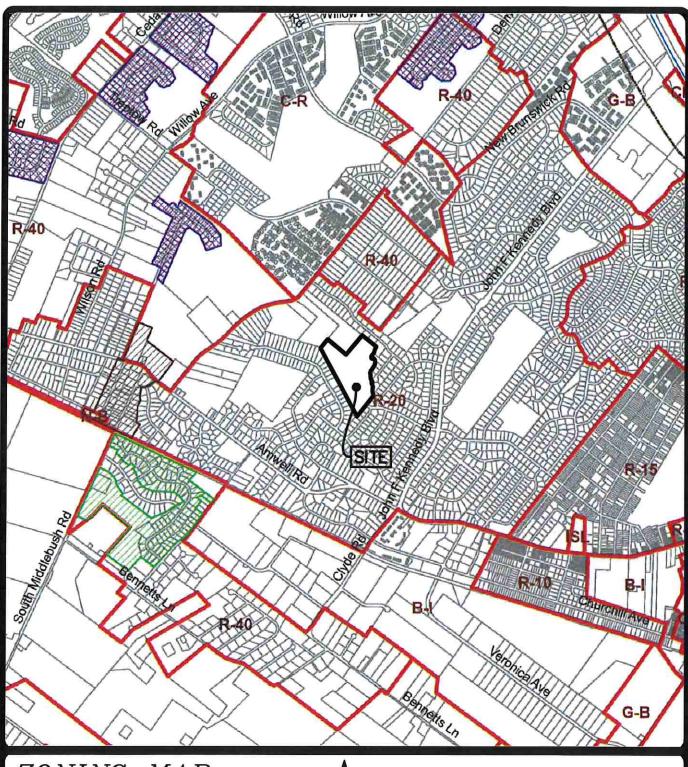
<u>LOT</u> 54.05

MENLO ENGINEERING ASSOCIATES, INC. 261 CLEVELAND AVENUE HIGHLAND PARK, NJ 08904 (732) 846-8585



Scale: 1"=2,000±ft Job # 2021.048



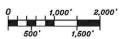


ZONING MAP

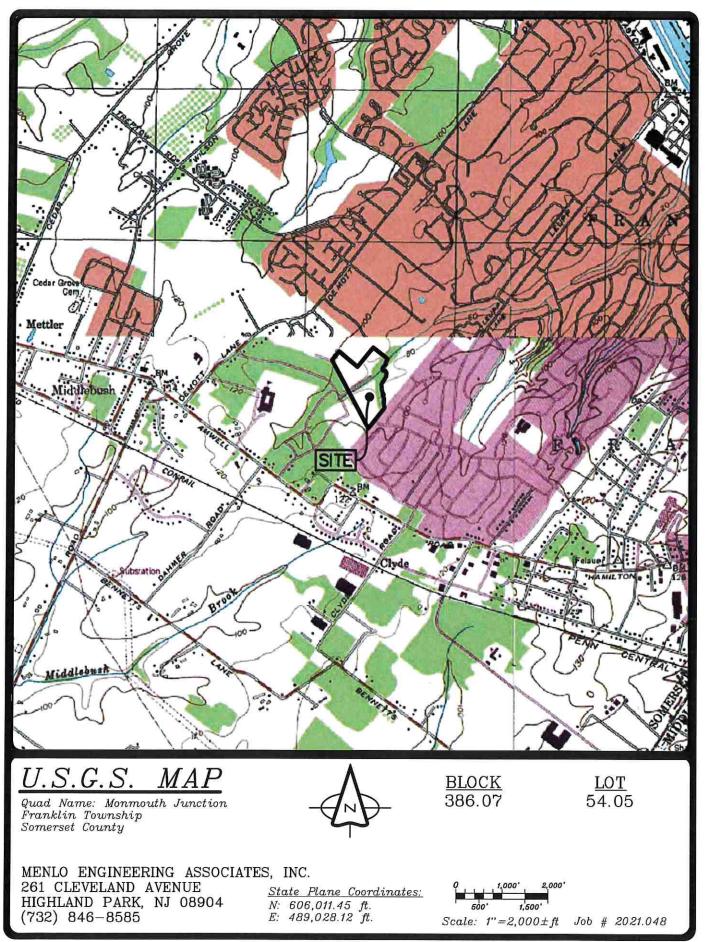
Zone: Single Family Residential (R-20) Franklin Township Somerset County

BLOCK 386.07 <u>LOT</u> 54.05

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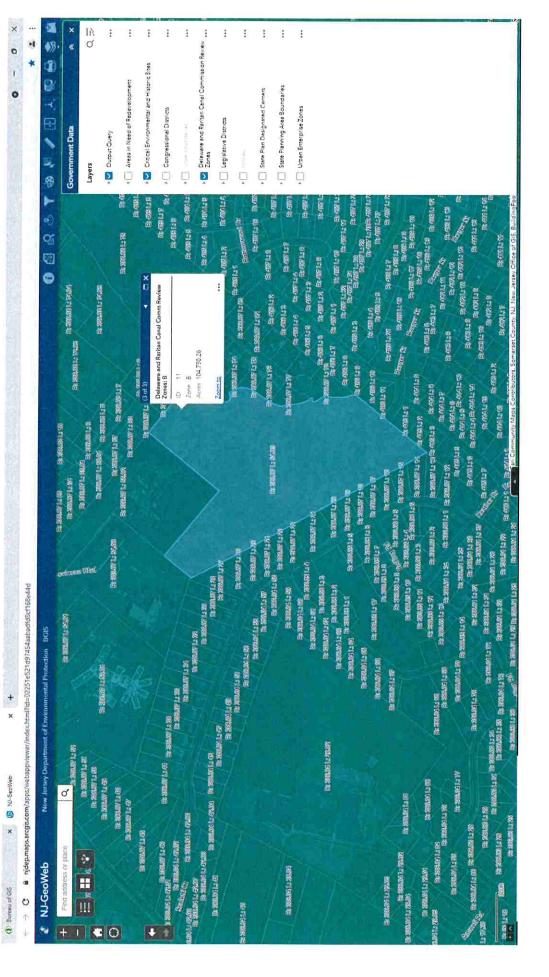


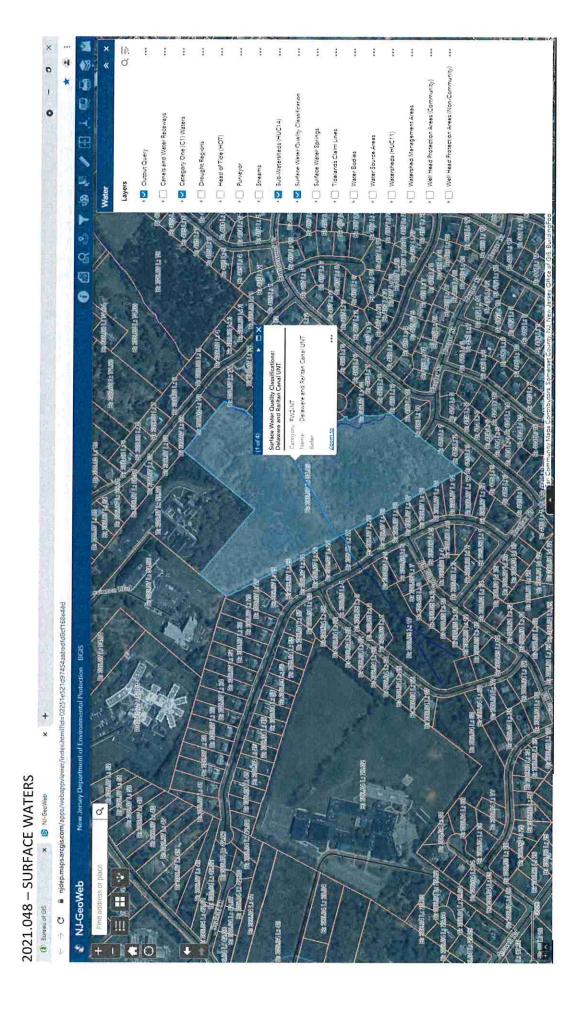
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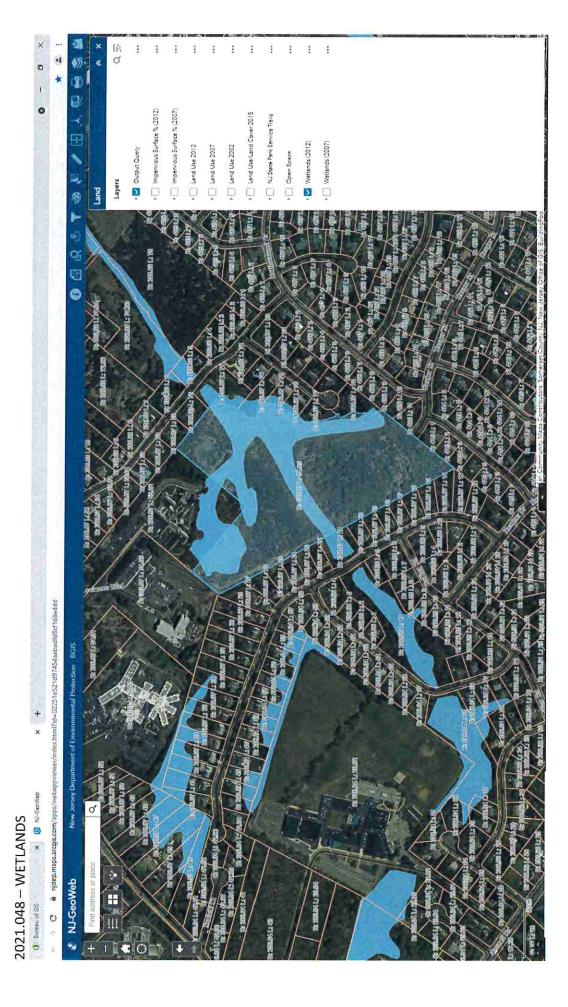




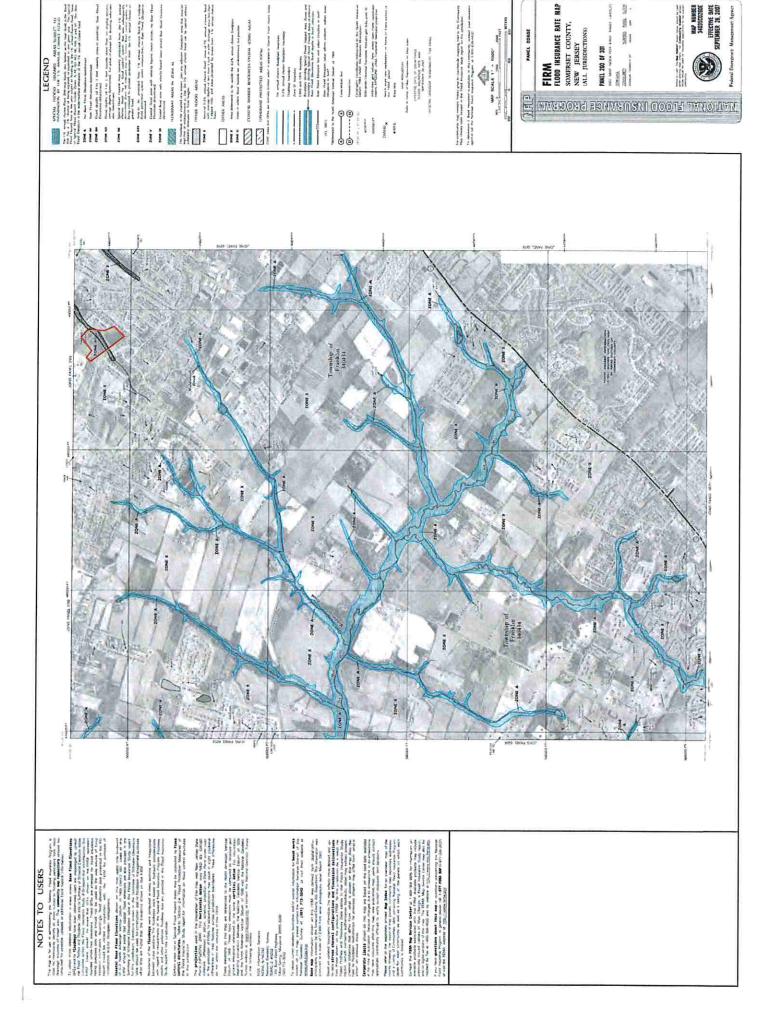
2021.048 – STATE PLANNING AREAS

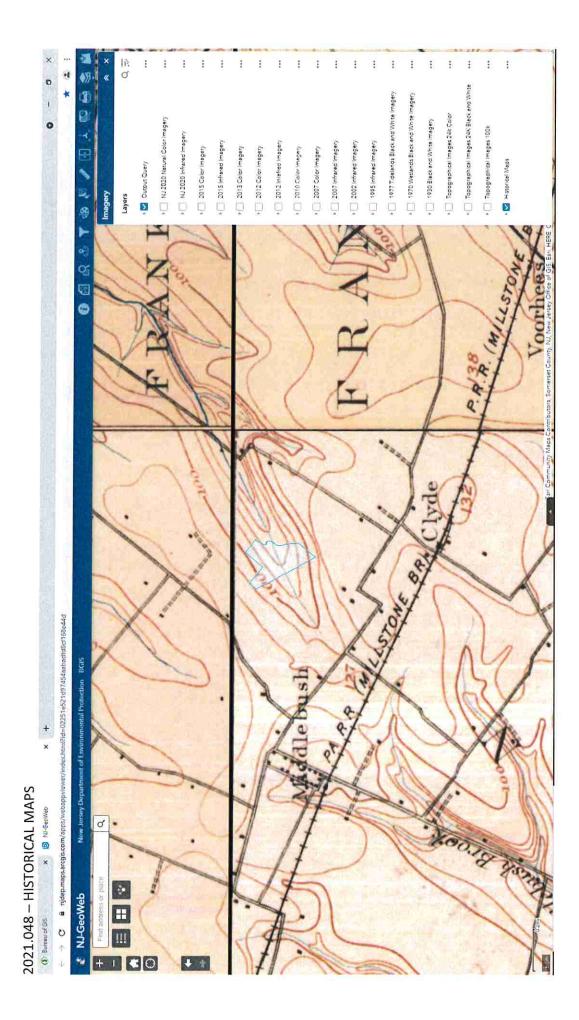


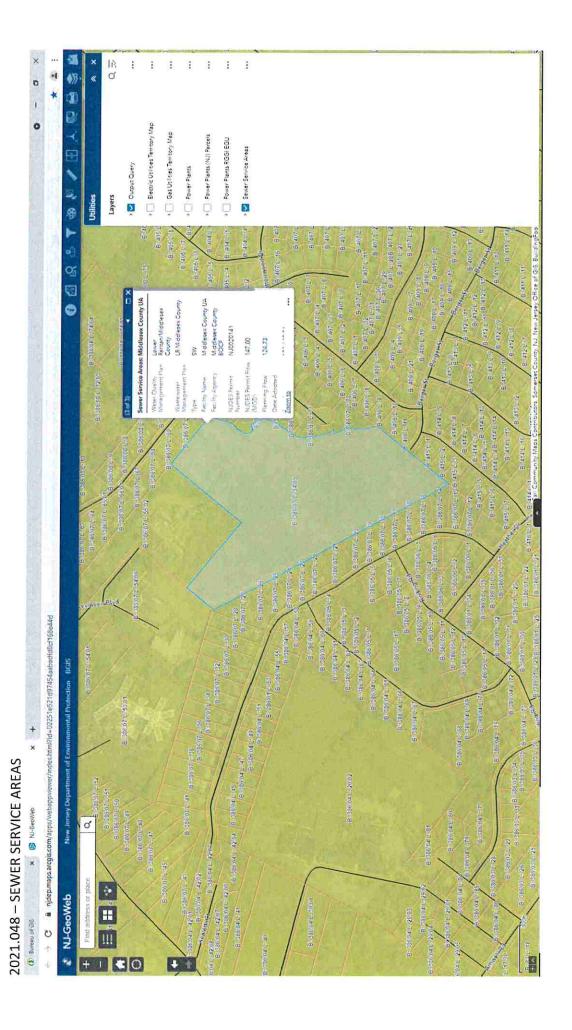




2021.048 - HUC-14









2021.048 - WATER PURVEYORS

Public Water System Deficit/Surplus

FRANKLIN TOWNSHIP DEPARTMENT PUBLIC WORKS

PWSID:

1808001

County:

Somerset

Last Updated: 01/30/2020

► Glossary of Terms Listed Below

Water Supply Firm Capacity: 7.800 MGD

Available Water Supply Limits

Allocation N/A MGM

Contract Total

N/A MGY

238.800 MGM 238.800 MGM 2847.000 MGY 2847,000 MGY

Water Demand

Monthly Limit

Yearly Limit

Daily Demand Monthly Demand

Yearly Demand

Current Peak Date 6.357 MGD 197.081 MGM

1832.581 MGY

07/2016 07/2016 2015

Committed Peak Total Peak 0.619 MGD 9.595 MGM

75.312 MGY

6.976 MGD 206.676 MGM 1907.893 MGY

Water Supply Deficit or Surplus

Firm Capacity

Water Allocation Permit

0.824 MGD

32.124 MGM 939.107 MGY

Note: Negative values (a deficit) indicate a shortfall in firm capacity and/or diversion privileges or available supplies through bulk purchase agreements.

Bureau of Water System and Engineering Comments:

Franklin Township Department of Public Works purchases water from NJAW - Raritan; New Brunswick WD and South Brunswick WD.

Bureau of Water Allocation and Well Permitting Comments:

Total Bulk Purchase System. No Allocation Permit.

For more information concerning water supply deficit and surplus, please refer to:

- ► Firm Capacity and Water Allocation Analysis (Pdf Format)
- ► Currently Effective Water Allocation Permits by County

This report displays all effective water allocation permits issued by the department.

- ▶ Pending Water Allocation and Dewatering Applications
- All pending water allocation permits.
- ▶ Water Allocation Permits Made Effective within a Selected Timeframe

This report displays water alloction permits based on a specified date range.

Questions regarding demands and firm capacity please contact the Bureau of Water System and Engineering at 609-292-2957 or for questions concerning water allocation and status please contact the Bureau of Water Allocation and Well Permitting at 609-984-6831.

Questions may also be sent to the Division of Water Supply and Geoscience

back to search results

Glossary of Terms

Allocation Limit: The maximum allowed by a valid Water Allocation Permit or Water Use Registration issued by the Bureau of Water Allocation and Well Permitting. This may be surface or ground water, and may be expressed in MGD, MGM, MGY or some combination thereof. Withdrawals may also be limited by other factors and have seasonal or other restrictions such as passing flow requirements.

Committed Peak Demand: The demand associated with projects that have been approved for ultimate connection to the system, but are not yet constructed as indicated through the submission of construction certifications or certificates of occupancy. This is calculated by totaling the demand as included in Water Main Extension (WME) permits and the demand associated with projects not requiring a WME permit. This field may also include bulk sale contractual obigations. For various review purposes this quantity may be represented as MGD, MGM and/or MGY.

Contract Limit: Purchased water, where regulated by an approved service contract, will be included in the overall allocation quantity where appropriate. Contracts may exist with minimum, maximum, seasonal or other restrictions. In some instances, the value is an estimate, not an exact limit.

Current Peak Demand: This is the average day of the highest recorded demand month occurring within the last five (5) years. (For the purpose of this table, the calculation for current peak demand was based on 31 days. Systems will be reviewed on an individual basis.) This includes water from a system's own sources and all other sources of water (i.e. purchased water). This field may also include bulk sale contractual obigations.

Firm Capacity: Adequate pumping equipment and/or treatment capacity (excluding coagulation, flocculation and sedimentation) to meet peak daily demand, when the largest pumping unit or treatment unit is out of service. The value is represented in MGD.

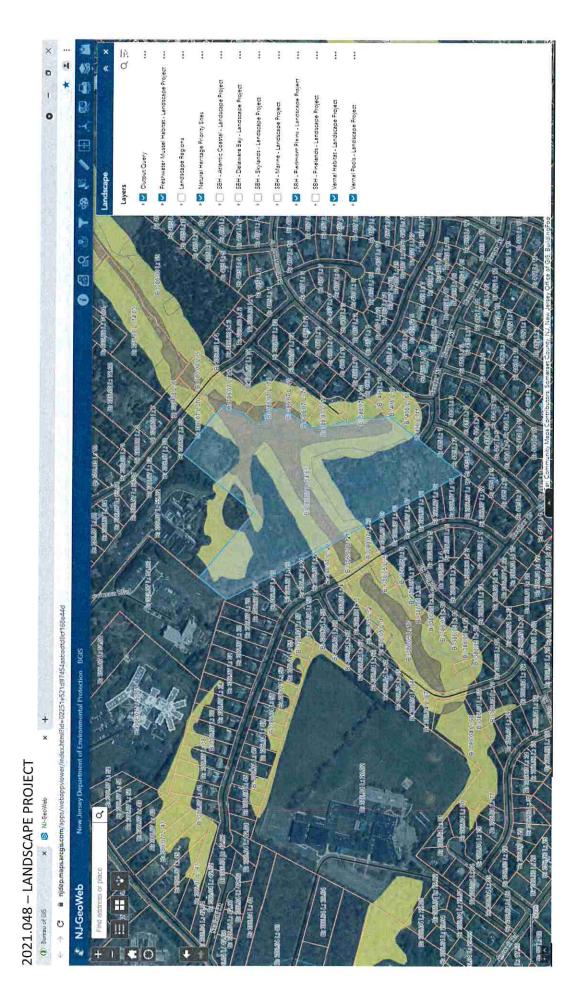
Firm Capacity Deficit or Surplus = (Firm Capacity - Total Peak Daily Demand): The difference between the Firm Capacity and the sum of the peak daily demand and committed daily demand. This is a measure of the physical ability to provide treated water at adequate pressure when the largest pumping unit or treatment unit is out of service. Negative values indicate a shortfall in Firm Capacity.

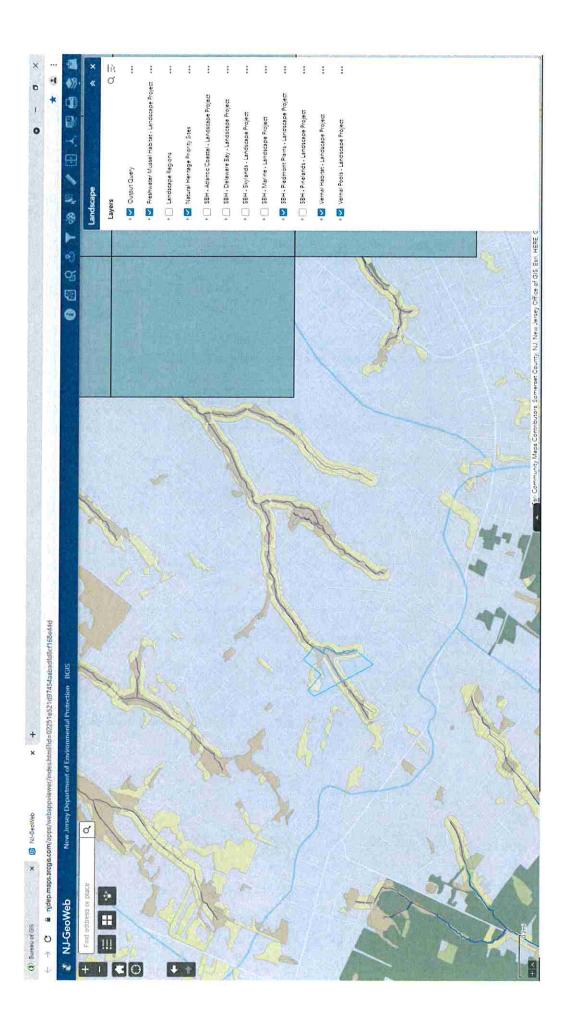
Total Peak Water Demand: The sum of the public water system's current peak demand and committed peak demand. The value is represented in MGD, MGM, and MGY.

Total Available Water Supply: The sum of the Allocation Limit and Contract Limit. This value is represented in MGM and MGY.

Water Supply Deficit or Surplus = (Total Water Allocation Permit Limit- Total Peak Demand): The monthly and/or annual limitations of an Allocation Permit or Water Use Registration minus the sum of the monthly and/or annual demands recorded based on the water use records plus the monthly and/or annual demand projected for approved but not yet constructed projects. Negative values indicate a shortfall in diversion privileges or available supplies through bulk purchase agreements.

back to top







Conservation Service Natural Resources

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at

Warning: Soil Map may not be valid at this scale.

contrasting soils that could have been shown at a more detailed misunderstanding of the detail of mapping and accuracy of soil Enlargement of maps beyond the scale of mapping can cause line placement. The maps do not show the small areas of scale.

Please rely on the bar scale on each map sheet for map measurements. Source of Map: Natural Resources Conservation Service Coordinate System: Web Mercator (EPSG:3857) Web Soil Survey URL:

Maps from the Web Soil Survey are based on the Web Mercator distance and area. A projection that preserves area, such as the projection, which preserves direction and shape but distorts Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required. This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

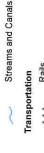
Somerset County, New Jersey Version 18, Jun 1, 2020 Survey Area Data: Soil Survey Area:

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger. Date(s) aerial images were photographed: Jun 22, 2019—Jul 13, 2019 The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

MAP LEGEND

Special Line Features Very Stony Spot Stony Spot Spoil Area Wet Spot Other W O 8 0 Soil Map Unit Polygons Area of Interest (AOI) Soil Map Unit Points Soil Map Unit Lines Special Point Features Area of Interest (AOI)

Soils



Borrow Pit

Blowout

Clay Spot

Water Features



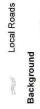
Closed Depression





Gravelly Spot

Gravel Pit









Marsh or swamp

Lava Flow

Landfill













Mine or Quarry

- Perennial Water
 - Rock Outcrop
 - Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Slide or Slip Sinkhole 2
- Sodic Spot

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI	
KkoC	Klinesville channery loam, 6 to 12 percent slopes	17.4	70.4%	
RehA	Reaville silt loam, 0 to 2 percent slopes	3.1	12.7%	
RorAt	Rowland silt loam, 0 to 2 percent slopes, frequently flooded	4.2	16.9%	
Totals for Area of Interest		24.7	100.0%	

Data Source Information

Soil Survey Area: Somerset County, New Jersey Survey Area Data: Version 18, Jun 1, 2020



MAP LEGEND

Not rated or not available Streams and Canals Interstate Highways Major Roads Local Roads US Routes Rails C/D Water Features ۵ Transportation Background ‡ Not rated or not available Area of Interest (AOI) Soil Rating Polygons Area of Interest (AOI) Soil Rating Lines B/D 8 20 ပ

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service Web Soil Survey URL: Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

Aerial Photography

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Somerset County, New Jersey Survey Area Data: Version 18, Jun 1, 2020

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Jun 22, 2019—Jul 13, 2019

Not rated or not available

B/D

S

C/D

Soil Rating Points

AD

BAD

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Hydrologic Soil Group

Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
KkoC	Klinesville channery loam, 6 to 12 percent slopes	D	17.4	70.4%
RehA	Reaville silt loam, 0 to 2 percent slopes	С	3,1	12.7%
RorAt	Rowland silt loam, 0 to 2 percent slopes, frequently flooded	С	4.2	16.9%
Totals for Area of Interest			24,7	100.0%

Description

Hydrologic soil groups are based on estimates of runoff potential. Soils are assigned to one of four groups according to the rate of water infiltration when the soils are not protected by vegetation, are thoroughly wet, and receive precipitation from long-duration storms.

The soils in the United States are assigned to four groups (A, B, C, and D) and three dual classes (A/D, B/D, and C/D). The groups are defined as follows:

Group A. Soils having a high infiltration rate (low runoff potential) when thoroughly wet. These consist mainly of deep, well drained to excessively drained sands or gravelly sands. These soils have a high rate of water transmission.

Group B. Soils having a moderate infiltration rate when thoroughly wet. These consist chiefly of moderately deep or deep, moderately well drained or well drained soils that have moderately fine texture to moderately coarse texture. These soils have a moderate rate of water transmission.

Group C. Soils having a slow infiltration rate when thoroughly wet. These consist chiefly of soils having a layer that impedes the downward movement of water or soils of moderately fine texture or fine texture. These soils have a slow rate of water transmission.

Group D. Soils having a very slow infiltration rate (high runoff potential) when thoroughly wet. These consist chiefly of clays that have a high shrink-swell potential, soils that have a high water table, soils that have a claypan or clay layer at or near the surface, and soils that are shallow over nearly impervious material. These soils have a very slow rate of water transmission.

If a soil is assigned to a dual hydrologic group (A/D, B/D, or C/D), the first letter is for drained areas and the second is for undrained areas. Only the soils that in their natural condition are in group D are assigned to dual classes.



State of New Jersey

Christine Todd Whitman
Governor

Department of Environmental Protection

· LAND USE REGULATIONS PROGRAM 501 E. STATE STREET P.O. BOX 401 TRENTON, NEW JERSEY 08625-0401 Robert C. Shinn, Jr. Commissioner

164.

Jule Szalay, NJPE, PLS Menlo Engineering Associates 261 Cleveland Avenue Highland Park, New Jersey 08904

RE:

Letter of Interpretation/Line Verification

File No.: 1808-97-0017.1

Applicant: Central New Jersey Jewish Home for The Aged

Block: 386.07; Lots: 53.01, 54.01, 54.04 & 55.01

Franklin Township, Somerset County

Dear Szalay:

This letter is in response to your request for a Letter of Interpretation to verify the jurisdictional boundary of the freshwater wetlands and waters on the referenced property.

In accordance with agreements between the State of New Jersey Department of Environmental Protection, the U.S. Army Corps of Engineers Philadelphia and New York Districts, and the U.S. Environmental Protection Agency, the NJDEP, Land Use Regulation Program is the lead agency for establishing the extent of State and Federally regulated wetlands and waters. The USEPA and/or USACOE retains the right to reevaluate and modify the jurisdictional determination at any time should the information prove to be incomplete or inaccurate.

Based upon the information submitted, and upon a site inspection conducted on January 16,1998, the Land Use Regulation Program has determined that the wetlands and waters boundary line(s) as shown on the plan map entitled: "Central New Jersey Jewish Home for The Aged, Wetlands Delineation Map, Township of Franklin, Somerset County, New Jersey, Block 386.07, Lot 53.01, 54.01, 54.04 & 55.01", dated December 3,1997, last revised January 28, 1998 and prepared by Menlo Engineering Associates Inc., is accurate as shown.

Any activities regulated under the Freshwater Wetlands Protection Act proposed within the wetlands or transition areas or the deposition of any fill material into any water area, will require a permit from this office unless exempted under the Freshwater Wetlands Protection Act, N.J.S.A. 13:9B -1 et seq., and implementing rules, N.J.A.C. 7:7A. A copy of this plan, together with the information upon which this boundary determination is based, has been made part of the Program's public records.

Pursuant to the Freshwater Wetlands Protection Act Rules (N.J.A.C. 7:7A-1 et seq., you are entitled to rely upon this jurisdictional determination for a period of five years from the date of this letter.

The freshwater wetlands and waters boundary line(s), as determined in this letter, must be shown on any future site development plans. The line(s) should be labeled with the above LURP file number and the following note:

"Freshwater Wetlands/Waters Boundary Line as verified by NJDEP."

The Department has determined that the wetlands on the subject property are of Intermediate resource value and the standard transition area or buffer required adjacent to these wetlands is 50 feet. In addition the Department also have identified State Open Waters on the property, they are noted on the referenced plan. There is no standard transition area required adjacent to State Open Waters. This classification may affect the requirements for an Individual Wetlands Permit (see N.J.A.C. 7:7A-3), the types of Statewide General Permits available for the wetlands portion of this property (see N.J.A.C. 7:7A-9) and the modification available through a transition area waiver (see N.J.A.C. 7:7A-7). Please refer to the Freshwater Wetlands Protection Act (N.J.S.A. 13:9B-1 et seq.) and implementing rules for additional information.

It should be noted that this determination of wetlands classification is based on the best information presently available to the Department. The classification is subject to change if this information is no longer accurate, or as additional information is made available to the Department, including, but not limited to, information supplied by the applicant.

This letter in no way legalizes any fill which may have been placed, or other regulated activities which may have occurred on-site. Also this determination does not affect your responsibility to obtain any local, State, or Federal permits which may be required.

In accordance with N.J.A.C. 7:7A-12.7, any person who is aggrieved by this decision may request a hearing within 30 days of the decision date by writing to: New Jersey Department of Environmental Protection, Office of Legal Affairs, Attention:

Letter of Interpretation Central New Jersey Jewish Home for The Aged 1808-97-0017.1

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Adjudicatory Hearing Requests, PO Box 402, Trenton, NJ 08625-0402. This request must include a completed copy of the Administrative Hearing Request Checklist.

Please contact R. Gary Bakelaar of our staff at (609) 633-6754 or you by e-mail at @dep.state.nj.us should you have any questions regarding this letter. Be sure to indicate the Program's file number in all communication.

Sincerely,

Christopher H Section Chief

Bureau of Inland Regulation

/sm c:

Franklin Township Municipal Clerk
Franklin Township Municipal Construction Official

c:\Dep(C)Smfw0198

