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August 22, 2025 Index Added

Mr. Joseph Pannullo
WeCare NJ Corp.
West Orange, NJ 07052

Re: West Essex Highlands, Inc. PB 24-01
Township of West Orange, Essex County, NJ
Block 179, Lot 32
LAI 2024-006

RE: RESIDENTIAL SITE IMPROVEMENT STANDARDS (RSIS) – TRAFFIC REVIEW

BACKGROUND

The project application is for a high-density residential project for 496 apartments in four mid-rise apartment buildings in the Township of West Orange, Essex County, New Jersey. The development will have access to Warner Road, a private two-lane roadway connecting to Oval Road, another two-lane roadway that connects with Eagle Rock Avenue. Thus, the project will in effect, form one large Cul-de-sac since there is only one connected roadway for the entire development and that roadway opening will be at Eagle Rock Avenue where the applicant has previously called for installation of a traffic signal with Oval Road. The project is defined as a high-density residential project by RSIS standards. This is the third application for this property with previous applications rejected for failure to follow the RSIS standards and residents' objections related to those failures.

RESIDENTIAL SITE IMPROVEMENT STANDARDS

The Residential Site Improvement Standards (RSIS) of New Jersey presently govern residential development in the state. The RSIS was developed to streamline the development approval process and improve the efficiency of the application process by providing a uniform set of technical site improvement standards for residential land development. The standards for residential projects are based to the greatest extent possible upon sound objective site improvement standards rather than upon discretionary design standards (RSIS 5:21-1.3). It should be noted that the streets shall be provided in conformance with the RSIS standard.

From RSIS: Paragraph 5:21-1.5 Scope and Applicability:

(a) These rules shall govern any site improvements carried out or intended to be carried out or required to be carried out in connection with any application for residential subdivision, site plan approval, or variance before any Planning Board or Zoning Board of Adjustment created pursuant to the Municipal Land Use Law (N.J.S.A. 40:55D-1 et seq.); or in connection with any other residential development approval required or issued by any municipality or agency or instrumentality thereof.

(b) Except as is otherwise specifically provided, these rules shall control all matters concerning the construction, alteration, addition, repair, removal, demolition, maintenance, and use of any site improvements constructed by a developer in connection with residential development. Except as otherwise required by rules or other permit requirements of the Department of Environmental Protection regarding stormwater management, the rules are to be interpreted as the minimum required to ensure public health and safety, and the maximum that may be required in connection with residential development

Cul-de-sac

To maintain safe development standards, cul-de-sacs were specifically defined and the number of trips per cul-de-sac was limited. Townships throughout the state have often limited the length of cul-de-sacs with different design standards. Therefore, the RSIS specifically addresses cul-de-sacs. Cul-de-sacs are defined and described, and the amount of traffic that can be accommodated from a cul-de-sac is limited.

A *cul-de-sac* is specifically defined as a street with a single means of ingress and egress and having a turnaround, the design of which may vary (RSIS 5:21-1.4). Cul-de-sacs are further defined in Table 4.2 as: *"A street with a single means of ingress and egress and having a turnaround, the design of which may vary. A divided - type entrance roadway to at least the first cross street with median of sufficient width to ensure freedom of continued emergency access by lanes on one side. Parking lots with a single means of ingress and egress shall not be included within the definition of cul-de-sac. In addition, the average daily traffic maximum is to be 250 vehicles per day."* Since this is exceeded the project cannot be approved.

Warner Road from Oval Road is the only access to the cul-de-sac already existing with 300 units and the RSIS rules are already exceeded without any new development. Paragraph b above from RSIS controls the addition, alteration of an existing cul-de-sac and based on the "rules" no new development is supported by the current limited access on Warner Road.

The proposed development violates the definition of a Cul-de-sac as follows:

1. The extension of Warner Road, the only way into the development of 496 mid-rise apartments is via a single roadway that, while now partly divided, is not wide enough to provide emergency access by lanes on one side of the median. It does not allow for two-way traffic on either side of the divided roadway. Thus, it does not conform to the RSIS.

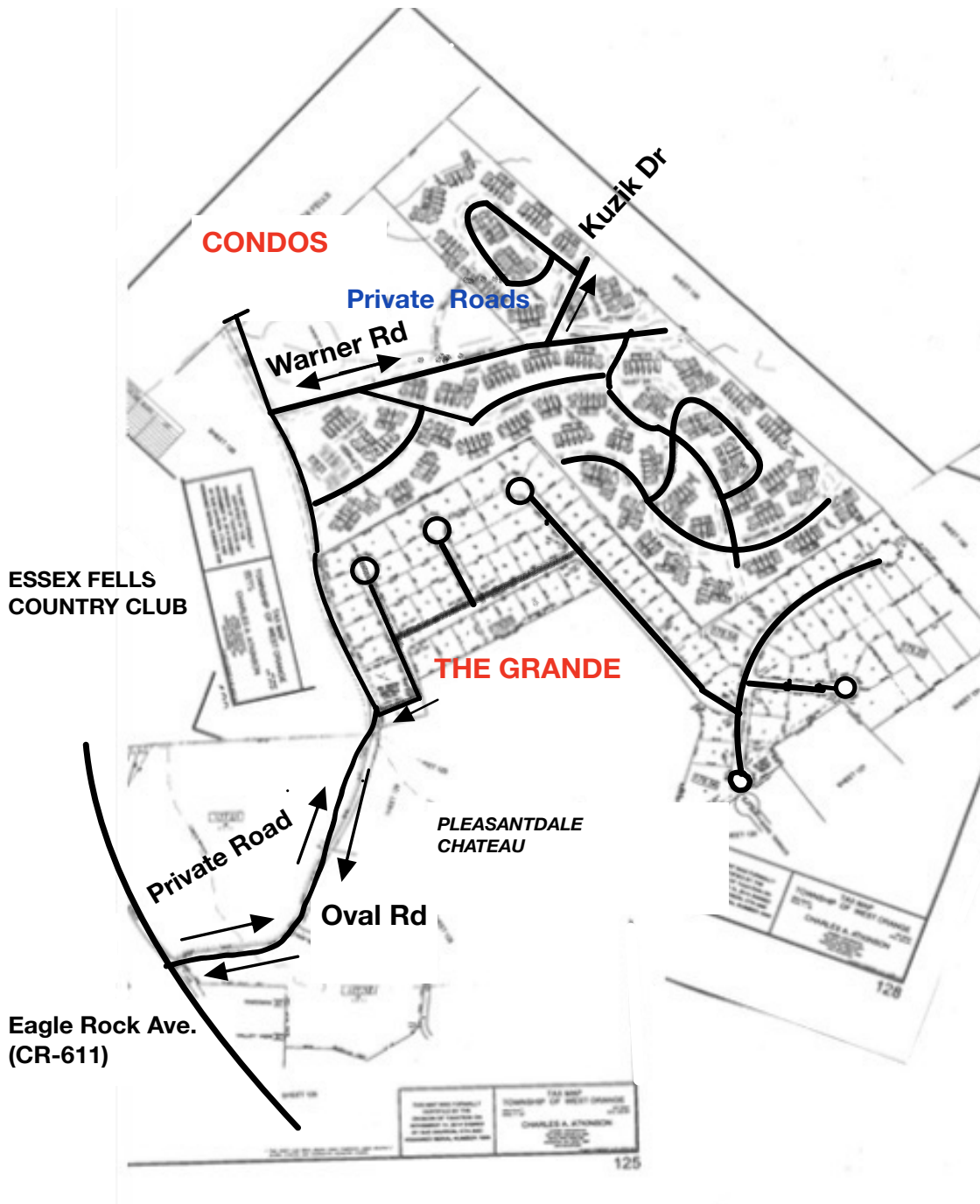
2. The Warner Roadway Extension will service 496 mid-rise apartments. The traffic volume from an apartment dwelling unit is defined in the RSIS as 5.5 trips per apartment dwelling unit. With 496 dwelling units, the traffic on Warner Road from this project is estimated to be 2728 trips per day ADT. This is a violation of the RSIS, as a street with a single means of ingress and egress can only allow 1000 trips per day ADT. Thus, the application is for a traffic volume that is 2.70 times the allowable traffic volume!

3. The applicant stated that emergency vehicles could get to those homes on the exit street by going the opposite direction, as traffic is not that great, this is not true as ADT computed 2.7 times the allowed volume in RSIS. It is common policy for fire departments to not allow the Big Res Truck (Fire Truck) to go the wrong way on a one way street or go across a grassed median to get to a fire. If there was a road blockage in this area, all traffic in and out of the site would be blocked.

See the existing cul-de-sac accessed by Oval Road from Eagle Rock. Oval Road is private on the West Orange tax maps and Eagle Rock is a major collector. All other roads depicted are private residential streets of lowest hierarchy.

Figure 1 - Existing Interior Private Roadways

PB-24-01



A review of the development quickly points out that this development is not only a large cul-de-sac that violates the RSIS definition of a cul-de-sac as explained above, but the entire area with only one way in and one way out via Oval Road to the intersection of Oval Road and Eagle Rock Avenue creates in effect, a much larger cul-de-sac. In this instance, the various interconnected streets in the development form one large cul-de-sac since there is only one way in and out of the various developments via Oval Road. Thus, the expansion of a new cul-de-sac within another cul-de-sac will exacerbate an already tenuous situation and is not recommended to utilize Kuzik Drive. Kuzik Drive is private and is simply a branch off Warner Road, which is an extension of Oval Road allowing access to 300 housing units. When questioned, the applicant's traffic engineer stated that if there was an accident on Oval Road "They would be impeded until it was cleared." See page 88 of traffic engineer's PB testimony.

The applicant has provided plans that call for emergency exit/entrance from Kuzik Drive. It is my understanding that the applicant does not have approval from the homeowners to make that part of his application without permission from the land owners and adjacent townships. Also, Kuzik Drive terminates into Warner Road which is one way in and out. The applicant cannot use the cul-de-sac at the end of Road "D" as an emergency exit. That proposed exit has grade slope in excess of that required for emergency vehicles in winter conditions. Permission to use this route has not been approved by the property owners.

Road and Sidewalk Grade Issues:

RSIS Table 4.6 Street Grade, Curve, and Intersection Design Criteria.

Road "D" services Building D which has 166 units with 1, 2, 3 bedroom units and parking for residents of all these units on a two level parking garage on one end and a one level parking garage on the other end. The garages have 3 entry and exits to the Road "D" that runs to the circle connecting to Warner Road the only exit road from Building "D".

Road "D" has sections where the travel lane grade is 10% which exceeds Table 4.6 Requirements (See Attachment 1 Table 4.6) grade limits for a major collector and is on the upper edge of a minor collector. Since Road "D" is a driveway and a dead end cul-de-sac this slope is objectionable. Further, the lower garage exit into Road "D" appears to intersect in the 10% slope region. Considering this is essentially an intersection, Table 4.6 shows a limit of 5% slope on either street of the intersection but Road "D" is sloped 10%. This is a huge safety issue as the slope is twice what is allowed.

The Kuzik Drive profile on drawing SP-46 has slope of 9.7%, also near to the intersection of the driveway into Building "A". Since Kuzik Drive is so sloped then the driveway into the outdoor parking area must be sloped just as much to meet. Both conditions are safety issues especially the intersection with Kuzik Drive.

Kuzik Drive has a 10% profile where it passes the entrance to the Clubhouse parking making this intersection in violation of the RSIS slope limits of 5% through an intersection.

Kuzik Drive which runs past building “C” and “B” also has an intersection slope violation at the entrance to parking area of Building “B” where Kuzik is sloped 9.7% based on drawing SP-47 Profile.

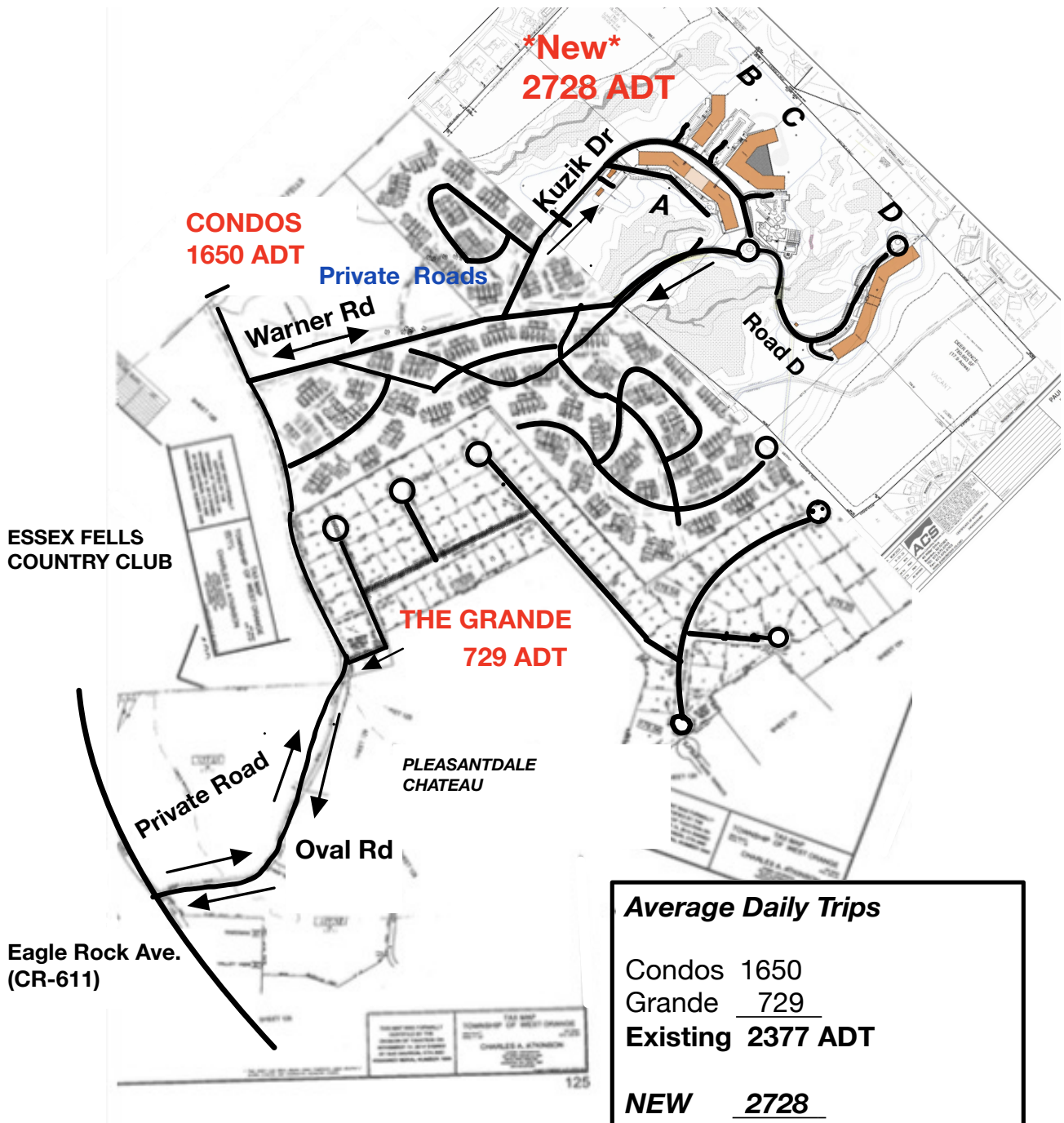
Kuzik Drive which runs down to the existing condominium community is also severely sloped as seen on drawing SP-47. Drainage storm water will flow down this paved slope like a waterfall flowing past the inlets to the basins and cause flooding in the existing neighborhood. Without Kuzik Drive extended there is reported flooding from the natural terrain. Warner Road has a similar issue with storm water despite the many basins and drainage pipes.

Warner Road extended to the circle shown on drawing SP-29 also has severe slopes inconsistent with RSIS Table 4.6. In addition Warner Road collects all the traffic from Buildings A, B, C, D, and the clubhouse. The traffic from this extension of Warner Road is added to the existing traffic ADT of 1650 from 300 residential units already serviced by Warner Road and Oval Road exclusively. We also add the 72 single family homes in The Grande with 727 ADT accessing Oval Road. The combined total ADT of 5,105 greatly exceeds RSIS standards of 1000 ADT on a multi-unit cul-de-sac and further adds to Oval Road and Eagle Rock Road intersection traffic and degrades the levels of service. Additional traffic generated by Pleasantdale Chateau catering facility with approximately 300 parking spaces is unaccounted for. See the marked up modified tax map of the area.

Figure 2 - Average Daily Trips (ADT)

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Existing (2377) + WEHI Proposed Development Total = 5105 ADT



Average Daily Trips	
Condos	1650
Grande	729
Existing	2377 ADT
NEW	2728
Total	5105 ADT

This cul-de-sac has a major emergency exit issue because there are an estimated 1500 people residing in this cul-de-sac that in an emergency would need to leave by automobile. Our traffic engineering experience is that in this situation average speed would be limited to 5 mph due to density of traffic, conflicts at intersections and spacing. The number of automobiles estimated to evacuate the residents is 1000. Given a car space is 20 feet we have a line of 20,000 feet of cars to move at 7.3 feet per second which gives a 50 minute time frame. This assumes that Oval Road to Eagle Rock is cleared by police in first few minutes of declared evacuation minimizing the intersection bottleneck. The time elapse is more likely to be up to twice that long for various reasons making the time up to 100 minutes.

An RSIS cul-de-sac is limited to 1000 ADT which limits the residents and vehicles to less than 200 and thus the evacuation time from a properly designed cul-de-sac would be 10 to 20 minutes.

The RSIS ADT limits were used to provide a safe community for the public. Current conditions are already dangerous. On April 27, 2025, an emergency event on Oval Road blocked Warner Road egress for all existing condo residents for up to two hours.

ADA regulations require sidewalks as does the RSIS. The rules specify every 200 feet or less a 5' wide section for passing and turning. ADA also limits sidewalks to less than 5 % slope. A ramp is above 5% but ADA limits to 8.3%. Road slopes are at or near 10% and sidewalks along these roads will not be ADA compliant on any of the proposed roads in this application. This is a major safety issue for handicapped residents who by the regulations are required to have access to all the site facilities. All of the RSIS high density housing requires sidewalks on both sides of the street. The lack of sidewalks creates a severe hazard for pedestrians.

Site Parking Analysis

RSIS requires parking for each residential unit. For 1 bedroom units it is 1.8 parking spots per unit, for 2 bedroom units it is 2 parking spots per unit and for 3 bedroom units it's 2.1 parking spaces per unit. The 1 bedroom units are balanced by the 3 bedroom units 2.1 parking spots per unit. RSIS also requires 0.5 spots per residential unit for visitors. We used 1.9 parking spaces for all units for this analysis. We computed the spaces required by the units in each building adding resident's requirement to visitor's requirement. We then counted all the parking spaces shown in the drawings. We then computed the required spaces and compared that total to the provided spaces.

There are 4 buildings with residential units and we find all 4 meet the RSIS requirement as shown on SP-3 of the most recent engineering drawing set. We are in agreement with the CME assessment of parking including the deficiency of EV spaces. Recent regulations require 15% of the parking be "make ready for future installation and 1/3 of them operational EV stations. This would prevent tandem parking.

Residential parking is a very important aspect of mid-rise apartment complexes. Furthermore this site is isolated from any shopping where residents could walk, this project is not on any bus route, there are no train stations in walking distance for access to the cities therefore parking space variance for either residents or visitors. Residents need motor vehicles to access all services required to live. The applicant proposes hundreds of tandem parking spaces in all four buildings. Tandem parking is not recommended in our opinion.

The RSIS states in Section 5:21-1.5 that Planning Boards and Zoning Boards of Adjustment shall insure that any plans and plats comply with the requirements of these rules before issuing a preliminary or final application approval. The word used in the law is SHALL. This development cannot be approved as presently proposed because it violates many rules of the RSIS. The application should not be deemed complete until all the plats include all deed restrictions. More importantly, all property owners are a not part of the application. The roads are currently private. Since the owners are not a part of the application, this application cannot be considered complete and this application should not have been heard. In addition, a licensed surveyor must provide a recent complete site survey before the application can be heard.

These plans cannot be approved as submitted. The applicant has provided a dualized roadway in areas that create cul-de-sacs within his new proposed area of development. The applicant has relied on this to create loop roadways using either side of the divided roadways into and/or out of the development. However, the roadways are shown to be 15 foot and 18 foot wide. To be allowed to meet the requirement of a two-way residential street, the roadways must be 20 feet in width on either side of the divider. Even if this is done, it should be remembered that there is still only one way into or out of the development.

It should also be pointed out that the developer's experts, its planner and traffic engineer, both insisted that they were providing loop roadways in the development at the end of the first divided entranceway. The traffic volume at the end of the first divided roadway would be approximately 2,728 vehicles per day using a volume of 5.5 trips per dwelling unit per the RSIS. Remember the present design requires all housing units to be accessed by driving to the end of the first divided streets.

The RSIS states that loop roads will have a maximum traffic volume of 750 vehicles per day. The volume will determine the length of the loop road. Thus, this aspect of a loop roadway is not met. The development is over developed for the slope problem and the amount of housing units proposed. It appears that the maximum number of units would be 180 for this development to be in line with the RSIS as presently designed. Twice this many housing units already exist on West Orange tax maps, leaving no space to add 496 more housing units.

The municipality should insist on having a minimum width of 20 feet on each side of the divided entranceway proposed. The RSIS states that the developer should agree on the street widths with the Township. This is a safety concern.

De Minimis Exceptions

To obtain a de minimis exception, the RSIS states in Section 5:21-3.1 that a municipal approving authority may grant such de minimis exceptions from the requirements of the site improvement standards as may be reasonable and within the general purpose and intent of the standards, if the literal enforcement of one or more provisions of the standards is impracticable or will exact undue hardship because of the peculiar conditions pertaining to the development in question.

To do this, the RSIS states in Section 5:21-3.1 (b), an application of an exception pursuant to this section shall be filed in writing with the municipal approving authority and shall include:

1. A statement of the requirements of the standards from which an exception is sought;
2. A statement of the manner by which strict compliance with said provisions would result in practical difficulties; and
3. A statement of the nature and extent of such practical difficulties.

The applicant is not guaranteed a de minimis exception, and in this instance, the only justification is in the traffic report. The traffic report anchors its reasons for the granting of a de minimis exception to providing emergency access and utilization of existing roadways. The traffic report states that this de minimis exception is consistent with the intent of the act to provide for emergency access. This would also be true if the intent of the RSIS was to provide cul-de-sacs with large traffic volumes.

The traffic volume proposed for this development would be 2.7 times (2.7x) what the RSIS standards are for a cul-de-sac and 4 times (4x) the amount of traffic at one point of a loop roadway. This is not a de minimis amount in our opinion, and should not be granted. The applicant has still not met the RSIS requirements.

The applicant has not met or explained his need for:

1. Violating the width of the entrance way (divided roadway).
2. Having loop road volumes over 750 vehicles at a single point.
3. Violating the total volume of a Cul-de-sac since the other aspects of the RSIS are not met; this remains one large Cul-de-sac.
4. Failure to provide the required EV charging stations.
5. Failure to provide sidewalks on both sides of all the streets per RSIS requirements.

Eagle Rock Avenue

There are three problems with the intersection of Eagle Rock Avenue and Oval Road.

1. A New and Larger Cul-de-sac

One new and larger Cul-de-sac is being created.

The applicant also notes in his report that the Board may grant a de minimis exception for the length of cul-de-sac since the applicant is providing two emergency access points. However, the applicant is not addressing the fact that this entire development and the various streets connecting with it are all one huge cul-de-sac that meet on Oval Road at Eagle Rock Avenue.

There are no other emergency roadways existing or proposed that will provide an alternate roadway into and out of the various existing developments. The proposed development will in effect, worsen and increase the possibility of access problems for residents in all three developments. It should be noted that the greater the traffic volume, the more traffic conflicts and the greater the possibility of an accident. Accidents would restrict access to this development. This was not addressed by the applicant and is a safety issue of the greatest concern to me.

The additional traffic to the area should preclude the additional development of the proposed apartment units. This newly expanded Cul-de-sac, including the existing development of 300 dwelling units would be far in excess of the RSIS allowed traffic on Warner Road. With the proposed development, the trips on Warner Road leading onto Oval Road are estimated to increase to over 5,100 trips per day without any emergency access roadway or other alternate roadway connections. This creates a dangerous situation and is contrary to the intent of the RSIS and good planning in any community where the safety of the community is a concern.

It is my opinion that since the divided roadway width is deficient and does not provide for two lanes of traffic on each side of the divided entranceway, with a minimum width of 20 feet on each side of the entrance way, a cul-de-sac will still be in place.

2. Intersection of Oval Road and Eagle Rock Avenue

The applicant must provide a warrant analysis and bond for the installation of a traffic signal at Oval Road and Eagle Rock Avenue and have the signal installed prior to the issuance of CO's to the new apartments.

The applicant's traffic consultant has stated in his traffic report that the intersection of Oval Road and Eagle Rock Avenue will soon be signalized. All of the traffic analyses in the traffic report assumed that this intersection would be signalized when the proposed apartment units are in place. This would, in my mind, correlate with the granting of any certificates of occupancy. Therefore, if the Board should approve this development, any approvals should require the traffic signal to be installed prior to the granting of any certificates of occupancy,

or an analysis of the intersection as an unsignalized intersection should be performed to show how the present intersection operates and what impact the proposed development would have on the intersection at buildout, if the signal is not installed.

The analysis performed at the intersection of Oval Road and Eagle Rock Avenue as a signalized intersection did not take into account any progression analysis that may modify the traffic signal operation and require a minimum of green times on Eagle Rock Avenue. This may affect the level of service analysis on side streets entering Oval Road. This should also be addressed by the applicant.

It should also be pointed out that the intersection of Eagle Rock Avenue and Oval Road is approximately 450 feet from another signalized intersection, the intersection of Eagle Rock Avenue and Laurel Avenue. The Manual on Uniform Traffic Control Devices states in Section 4C.07 that coordinated signal system warrants should not be applied where resultant spacing of traffic control signals would be less than 1,000 feet apart. This is because signals spaced closer than 1,000 feet usually do not allow vehicles to platoon and progression of vehicles will not be successful. The proposed traffic signal at Oval Road and Eagle Rock Avenue will violate these criteria and it is doubtful that progression will be maintained in the area if this traffic signal is installed.

The applicant has advised that a signal will be provided and that an authorization to design was provided, but there are no plans submitted in conjunction with this application. The applicant has not indicated that he will be paying for the signal or a part of the cost of the signal installation, but the signal will be required if this development is built.

The analysis of this intersection should also be performed as an unsignalized intersection, or the project should only be approved with the condition that no certificates of occupancy could be granted without the traffic signal at the intersection of Oval Road and Eagle Rock Avenue installed and operational.

3. A Left Turn Lane on Eagle Rock Avenue at Oval Road

The applicant should install a left turn lane on Eagle Rock Avenue.

The traffic volumes warrant this improvement to assure safe entry into the development. This should be addressed by the applicant. In other words, it is recommended that a left turn lane be provided on Eagle Rock Avenue for traffic into Oval Road and the development. This should be done as soon as possible and included in the signal plan.

TRAFFIC CALMING MEASURES

If this project is approved, traffic calming measures should be provided along the existing roadways in the development.

EMERGENCY ACCESS ROADWAYS

It should be noted that emergency access connections are proposed but are questionable because the land is deed restricted from any use but single family homes. The land there is also very highly sloped and not suitable for access. These connections should be paved and maintained. If they are not paved and maintained, which includes plowing in the winter, then they will be unavailable during emergencies. In addition, fire departments will not go over unplowed unpaved roadways for fear of bogging down and putting buildings and the public at risk if their equipment is not available.

CONSTRUCTION CIRCULATION PLAN

The only way in or out of the tract is from Eagle Rock Ave via Oval Road and then up Warner Road up through existing neighborhood. This is an unacceptable situation. Furthermore the only right of way for utilities is the same path and major disruptions will occur if this project is approved.

STREET WIDTHS

The applicant has stated that he may place the street widths that he wants on the plans in accordance with the RSIS. It should be pointed out to the Board that Section 5:21-4.1(d) states:

“The municipality and the developer shall determine the highest order street required to be used in a given residential development.

Sidewalks must be provided to meet ADA requirements for an accessible route between all housing units and facilities such as handicap parking spaces and EV charging stations.”

Thus, the Board must require sidewalks and wider streets than were requested to be used by the developer. The Board can err on the side of safety and not provide minimal street widths requested by the developer.

The applicant shows 24’ travel way widths with sidewalks on latest plans only in some areas close to the buildings.

ROAD SLOPES

RSIS Table 4.6 Street Grade, Curve, and Intersection Design Criteria.

Specifically, Road “D” servicing Building D which has 177 units with 1, 2, and 3 bedroom units and parking for residents of all these units on a two level parking garage on one end and a one

level parking garage on the other end. The garages have 3 entry and exits to the Road “D” that runs to the circle connecting to Warner Road the only exit road from Building “D”. Road “D” has sections where the travel lane grade is 10% which exceeds Table 4.6 grade limits for a major collector and is on the upper edge of a minor collector. Since Road “D” is a driveway and a dead end to a cul-de-sac this slope is objectionable. Further, the lower garage exit into Road “D” appears to intersect in the 10% slope region. Considering this is an intersection, Table 4.6 shows a limit of 5% slope on either street of the intersection required for 50 feet. This intersection is extremely unsafe. No grades over 10% should be allowed near the busy driveways to the parking garages. This is a huge safety issue.

Kuzik Drive profile on SP-46 has slope of 9.7% also near to the intersection of the driveway into Building “A”. If Kuzik Drive is so sloped, then the driveway into the outdoor parking area is likely sloped just as much. Both conditions are safety issues, especially the intersection with Kuzik Drive. All driveways and intersecting roadways should have a maximum slope of 5% and be level for 100 feet from the intersection in each direction.

Kuzik Drive has a 10% profile where it passes the entrance to the Clubhouse parking making this intersection in violation of the RSIS slope limits of 5% and it is not level for 100 feet from the intersection as recommended.

Kuzik Drive which runs past building “C” and “B” also has an intersection slope violation at the entrance to parking area of Building “B” where Kuzik is sloped 9.7% based on drawing SP-47 Profile.

Kuzik Drive which runs down to the existing condominium community is also severely sloped as seen on drawing SP-47. Drainage stormwater will flow down this paved slope like a waterfall and cause flooding in the existing neighborhood. Warner Road has a similar issue with stormwater despite the many basins and drainage pipes.

Warner Road extended to the circle shown on drawing SP-29 also has severe slopes inconsistent with RSIS Table 4.6, but in addition Warner Road collects all the traffic from Buildings A, B, C, D, and the clubhouse. The new traffic from this extension of Warner Road is added to the existing traffic from 300 residential units already serviced by Warner Road exclusively. The combined total ADT exceeds RSIS and further adds to Oval Road and Eagle Rock Avenue.

AIR QUALITY IN GARAGES

The application we reviewed did not have an air quality study covering the indoor garages on the four proposed buildings. There are 941 parking spaces in the entire project located in garages and engine exhaust fumes must be evacuated effectively and the air quality study would make appropriate recommendations on exhaust fan specifications required to meet the air quality standards. Since this was not done, the application must not be approved as it is incomplete.

SIGHT TRIANGLES

Sight triangles are a means of assuring drivers can see far enough to make a safe turning movement decision. The parking exits from building A and building D are questionable because of the road slopes and the curves. Applicant has not shown sight triangles on the plans to prove the sight distances are adequate. Further, 90 degree parking along Road "D" where the road curves and is also on a 10% grade doesn't allow for sufficient sight distance in our opinion. This is a traffic safety issue that needs to be considered before application can be deemed complete or a waiver request be accepted by the Planning Board.

STREET CLASSIFICATION

RSIS identifies three categories of street depending upon its usage. Residential access is the lowest category, and it is limited to 1500 ADT. Minor collector is the next highest category and RSIS limits that category to 3500 ADT. The highest category is Major Collector and none of the roads in this development application qualifies for that category. The residential access category might apply which limits ADT to 1500. The calculated ADT for this application is 2728 which is 1228 more than this category. This applies to the Warner Road segment. Oval Road sees 5100 ADT and is also a residential access road as it is the cul-de-sac main access.

CONCLUSIONS

Remember, the RSIS was adopted so that residential projects would be based to the greatest extent possible upon sound, objective site improvement standards rather than upon discretionary design standards (RSIS 5:21-1.3). With this in mind, the application should not be approved as presently proposed for the following reasons:

1. The Traffic from One Cul-de-Sac Roadway Is Excessive.

The RSIS states that a cul-de-sac must have a maximum of 250 vehicle trips per day. The application will create a single cul-de-sac with an estimated daily traffic of over 5,100 trips per day when existing development is taken into account. This would be created with only one way in or out of the entire complex. This violates good planning and violates the applicant's requirement that two access points are required for emergency access. Providing a single access with 5,100 trips per day via one roadway, without an alternate access, is not sound planning and is unsafe. It is recommended that another full access roadway into the development be provided from a major collector.

2. The RSIS Must Be Met - This Is Still a Cul-de-Sac.

The applicant has no reason to be granted a de minimis exception by the Board for the proposed development to allow all access via one roadway, Warner Road. The amount of traffic to be utilizing Warner Road from the proposed development would be way in excess of the 1000 trips per day that the RSIS allows. It would be approximately 2,728 trips or about 2.7 times the allowed volume for a multi-unit cul-de-sac and quadruple (4x) the amount of traffic at one point at a loop roadway. Therefore, this de minimis exception is not de minimis, and should not be granted by the Board.

The applicant has stated that he would provide emergency access roadways. The RSIS does not call for emergency roadways but full access points. Emergency access roadways often are snow covered and unpassable during storms, the very time that these roadways would be required. The applicant has provided a scheme of divided roadways with widths of 15 feet and 18 feet separated by a median approximately 8 feet in width. The roadway widths must be 20 feet in width on each side to satisfy the requirements of RSIS. This is still a Cul-de-sac.

3. The intersection of Eagle Rock Avenue and Oval Road Must Be Signalized.

The applicant should address the intersection of Eagle Rock Avenue and Oval Road as an unsignalized intersection as the traffic signal is not yet installed, and while planned, it is not guaranteed that this will happen. If this occurs, it may not occur prior to the development being built out and occupied. It is not a part of this application. No approval should therefore be provided unless the improvement is bonded by or constructed by the applicant prior to any certificates of occupancy being provided by the municipality. In addition, the work must be bonded and in place prior to any certificates of occupancy can be issued.

4. A Left Turn Lane Should Be Installed on Eagle Rock Avenue at Oval Road.

The applicant should install a left turn lane on Eagle Rock Avenue. The traffic volumes warrant this improvement to assure safe entry into the development. This should be addressed by the applicant. In other words, it is recommended that a left turn lane should be provided on Eagle Rock Avenue for traffic into Oval Road and the development. The left turn storage length should be calculated and implemented ASAP. This work should be done as soon as possible and should be bonded by the applicant. The applicant should provide a traffic signal application and approval and a signal design plan.

5. **The Roadway Width should be improved** at the divided section to a minimum of 20 feet on each side of the median.
6. **Road slopes are higher than RSIS allows.** ADT on all roads in this subdivision all violate RSIS standards and represent a very high safety risk for various reasons. Steep slopes prevent vehicles from stopping safely and will contribute to accidents. Emergency vehicles will have difficulty traversing up the slope in harsh winter weather leaving approximately 1000 people vulnerable to health emergencies helpless. Intersections are safety hazards on level roads but much worse when the main travel road is sloped braking distances are greater due to wet or icy conditions therefore stopping is not normal. Roads can collect stormwater and on slopes the water velocity can bypass storm water inlets and continue down the travel way, causing travel safety issues and flooding at the end of the road. This application contains many safety and RSIS issues that cannot be ignored and in our opinion the application should be rejected as presented.
7. **ADA requirements must be met** with adequate sidewalk width from parking to the travel path to the residences and all other amenities offered to the residents. As noted above the roadway slopes exceed the 5% walkway allowable slope and also the ramp maximum slope of 8.3%. This application cannot meet ADA requirements on any of the roads as they all have slopes above 8.3% and 5%.

The many areas of concern are so severe and affect safety to such a degree that de-minimis exceptions cannot be allowed on this application in regards to volumes as the volumes added are not de-minimis. We have identified many variances from the RSIS, many of which cannot be cured such as too much ADT and slopes too steep for safe travel and ADA limits. Emergency access is curable but not until the applicant gets property rights and privileges to access Kuzik Drive but even then, Warner Road is still a constriction to access from Oval Road to existing and proposed residential units.

Currently there are runoff stormwater issues from this unimproved tract. The addition of two roads funneling water to the existing community is very concerning. The stormwater report in our opinion ignores the reality of rushing water bypassing inlets that inevitably get plugged with leaves and loose trash. The filters employed will be plugged faster than maintenance can clear them in a NorEaster storm or Hurricane.

Warner Road from Oval Road is the only access to the Cul-de-sac already existing with 300 units and the RSIS rules are already exceeded without any new development. Paragraph b on page 2 of this report controls the addition, alteration of an existing cul-de-sac and based on the "rules" **no** new development is supported by the current limited access on Warner Road!

The planning board members should take note of all these issues and act accordingly by rejecting this application.

I reserve the right to supplement or amend this report as new information comes to light.

If you have any questions, please do not hesitate to call our office.

Respectfully submitted,

Litwornia Associates, Inc.

A handwritten signature in black ink, appearing to read "A. J. Litwornia", written in a cursive style.

By:

Alexander J. Litwornia, PE PP
President

CC: WH Green, PE

Appendix A

What could be built on the applicant's lot if it was a new Cul-de-Sac?

RSIS Table 4.2 limits ADT to 1000 trips on multiunit Cul-de-sac. Warner Road already has its limit and much more. Setting that aside, using Table 4.1 from RSIS giving ADT per dwelling factors, we get the following possibilities if it were a new Cul-de-sac off Eagle Rock Avenue:

- 1 250/10.1 ADT/Dwelling = 24 Single family homes allowed
- 2 250/5.9 ADT/Dwelling = 42 townhouses
- 3 1000/5.5 ADT/Dwelling = 182 Mid Rise on Multiple apartments on Cul-de-sac
- 4 250/3.7 ADT/Dwelling = 68 Senior adult house - detached
- 5 250/3.5 ADT/Dwelling = 71 Senior adult housing – attached

Appendix B

List of application deficiencies with De-minimis items marked with *:

1. * Number of dwelling units exceeds RSIS for a cul-de-sac. Currently Oval Road has a 72 house development with 747 ADT where cul-de-sac is only allowed 250 ADT but in addition to that there are 300 apartment units on Warner Road extended from Oval Road which adds 1650 ADT where if taken as only a multiunit Cul-de-sac would be limited to 1000 ADT. This existing cul-de-sac is then 2377 ADT far in excess of the RSIS standard. New proposed 496 units represents another 2728 ADT far in excess of RSIS.
2. * Parking on Road D is dangerous as the sight distance on the curve is too short. See attached drawing SP-48.
3. ADA requirements on all roads specifies 5' sidewalk sections every 200' or less and sidewalks on both sides of street, this is missing.
4. Sidewalks don't comply with ADA slope requirements limiting slope to 5%, many areas are at or near 10% which is dangerous for wheel chairs. This occurs on Road D, Kuzik Drive and Warner Road in places. See SP-46, 47, 48 attached.
5. Road slope on Road D is 10% plus it passes parking entrance on that slope. Violates RSIS and is dangerous in icy conditions. Vehicles cannot stop at the driveway on this slope.
6. Road slope on Kuzik Drive has at or near 10% slope and also passes parking entry/exit on the slope at building A this is dangerous during icy conditions. See drawing SP-47 attached.
7. Warner Road has steep sloped area and as the only access to residential units and may become impassible in winter when it ices up. Emergency equipment has difficulty climbing steep grade. Vehicles cannot stop at the driveway on this slope.
8. Warner Road entry median and road widths violate RSIS where a 6' median and 20' road on either side is required.
9. Application lacks a Warrant Analysis and a signal design at Oval and Eagle Rock. No certificates of occupancy should be allowed until the traffic signal is operable and the turning lanes are built. It should be noted there is major concern that the construction of the signal will require additional right of way approval by the county, but the county involvement is not part of the application. A separate contract agreement is required since the applicant removed the construction of the traffic signal and warrant analysis from this application.

10. Eagle Rock Avenue requires a turning lane to access Oval Road given the high ADT. In addition, a turning lane may be required on Oval Road.
11. * **ADT** for the application is 2728 trips which exceeds RSIS for Cul-de-sac but also exceed trips for Residential Access category of road 1500 **ADT** and Minor Collector which allows 3500 when the existing 300 units along Warner Road are considered making the total **ADT** equal 5105. This cannot be considered a De-minimis exception because, the NJDOT considers an increase of 10% a substantial impact if Warner Road is considered a minor collector it exceeds the limit by 29%. Warner Road is not owned by the applicant and it is noted that the owners of the road are not a part of this application and since they are not part of the application then this application should not be considered on a road they do not own. The West Orange Tax map shows Oval Road, Warner Road and everything else off Oval Road is private. Applicant can't assume he has access to a private road he does not own.
12. **ITE Peak hour trips from ITE occur at intersections with Oval Road and Eagle Rock Ave, Oval Road and Warner Road and Warner Road at the first Cul-de-sac branch. The peak hour trips triple to over 300 per hour from 100 per hour. In peak hours the trips exceed the RSIS limit for a Cul-de-sac ADT (all day).**
13. * There are insufficient EV make ready and ready parking stations for the size of this development. A de-minimis exception should not be allowed because the EV requirements are required by a state statute. No credits should be allowed for EV parking spaces because unit occupants would be short of required spaces per unit. A plan as to how the EV stations would be shared is not provided.
14. A current certified surveyor's site survey plan is not provided in the application. This is required.
15. Site plan does not show metes and bounds. A current complete survey was not included as required by an application to the PB.
16. No air quality study was provided for the garages on all 4 buildings.
17. Stormwater will not be collected as claimed due to the filters and inlets getting blocked by fall leaves that will accumulate during a storm even if the inlets and filters started clean. Stormwater already rushes down the rough vegetated slope and floods the existing development of 300 units, now two roads will provide an unobstructed path down the hill into the existing neighborhood. The applicant's stormwater study does not address this flooding. There is also an issue with depositing stormwater to nearest creek.

18. Stormwater discharging into the Creek on site which is feedwater to the drinking water for the existing neighboring housing complex and Essex Fells Water Department will contaminate the Creek and downstream well field with pollutants like oils. Existing treatment plant may not be equipped to treat for oils.
19. Emergency egress is excessively long because the RSIS ADT limits are greatly exceeded making all these residences traps in the event of possible fires, explosion risks (NG) or vehicle accidents.
20. The proposed emergency exit to Howell Drive is not viable because there are deed restrictions on the lots preventing anything but single family homes. Verona Township conveyed this to the WOPB therefor this tract is landlocked and cannot be developed because it cannot meet RSIS standards.
21. No suitable construction plan has been offered and it is a problem accessing this tract from the existing residential streets already burdened with excess ADT.
22. Egress time was estimated in case of an emergency requiring evacuation. A natural gas leak is one such emergency as explosions are possible. With density proposed we estimated 100 minutes for 1000 vehicles. Time is totally dependent on management of the Oval Road exit to Eagle Rock Ave which under peak conditions can take 25 seconds per vehicle.
23. Oval Road does not meet RSIS road standards and would need to be upgraded with sidewalks, shoulders and the utilities right of way opened for water, sewer, power and storm pipe/conduit.

See attached drawings with slopes and the ADA requirement with notes on slope.

Index:

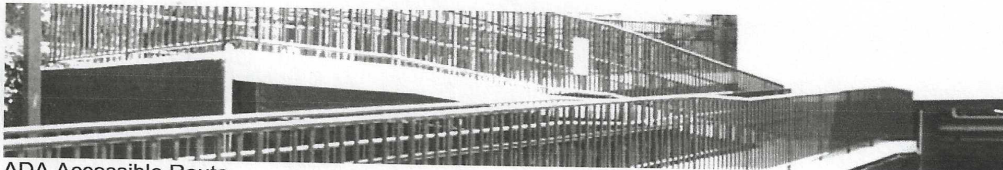
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- 6 Dwg SP-47 and SP-29 issues
- 7 Site map with ADT new and existing
- 8 Site Parking Analysis
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- 13 Road Slopes, Construction Circulation Plan, Emergency access, road widths
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 - Appendix A
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 - ADA Accessible Route reference
 - SP-44 Warner Road Plan and Slope
 - SP-45 Building A Plan and Profile
 - SP-46 Kuzik Drive Plan and Profile A
 - SP-47 Kuzik Drive Plan and Profile B
 - SP-48 Conceptual Bridge Crossing
 - SP-49 Road D Plan and Profile D
 - Tax Map with new roads depicted from Eagle Rock Ave

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ADA Accessible Route - ADA Compliance

ADA ACCESSIBLE ROUTE



ADA Accessible Route

3 Accessible Route.

4.3.1* General

All walks, halls, corridors, aisles,

skywalks, tunnels, and other spaces that are part of an accessible route shall comply with 4.3.

4.3.2 Location

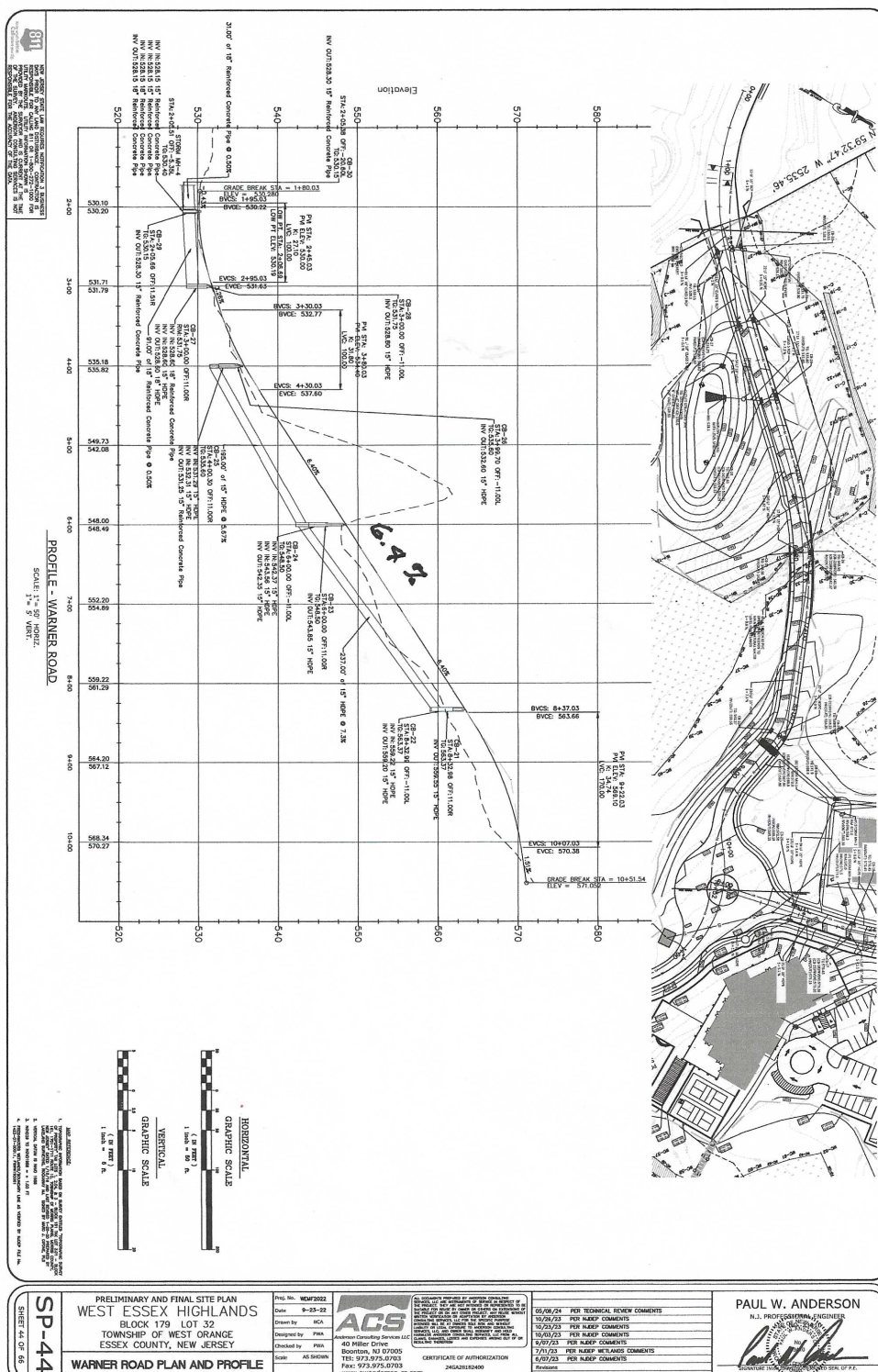
- (1) At least one accessible route within the boundary of the site shall be provided from public transportation stops, accessible parking, and accessible passenger loading zones, and public streets or sidewalks to the accessible building entrance they serve. The accessible route shall, to the maximum extent feasible, coincide with the route for the general public.
- (2) At least one accessible route shall connect accessible buildings, facilities, elements, and spaces that are on the same site.
- (3) At least one accessible route shall connect accessible building or facility entrances with all accessible spaces and elements and with all accessible dwelling units within the building or facility.
- (4) An accessible route shall connect at least one accessible entrance of each accessible dwelling unit with those exterior and interior spaces and facilities that serve the accessible dwelling unit.

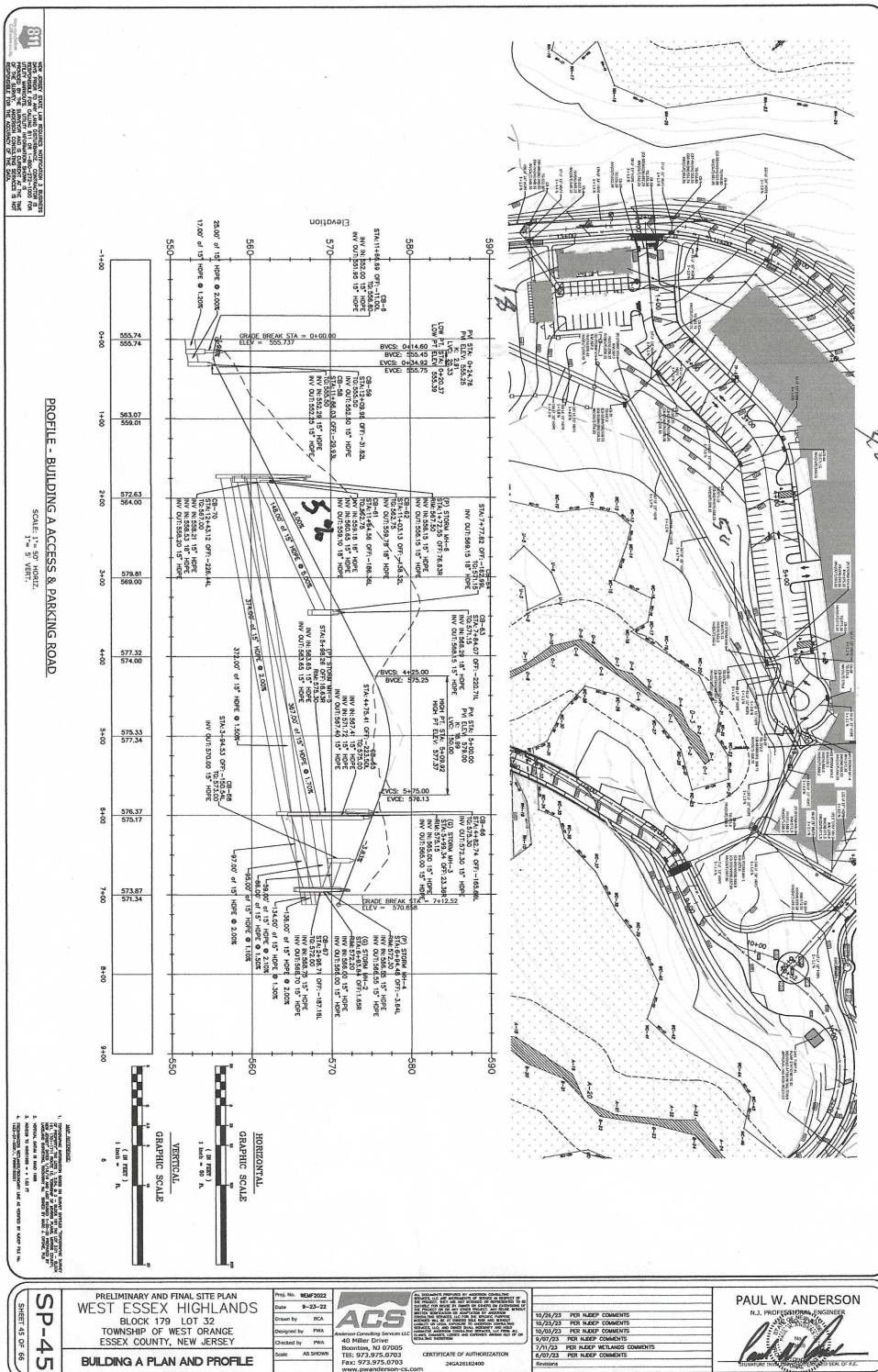
4.3.3 Width

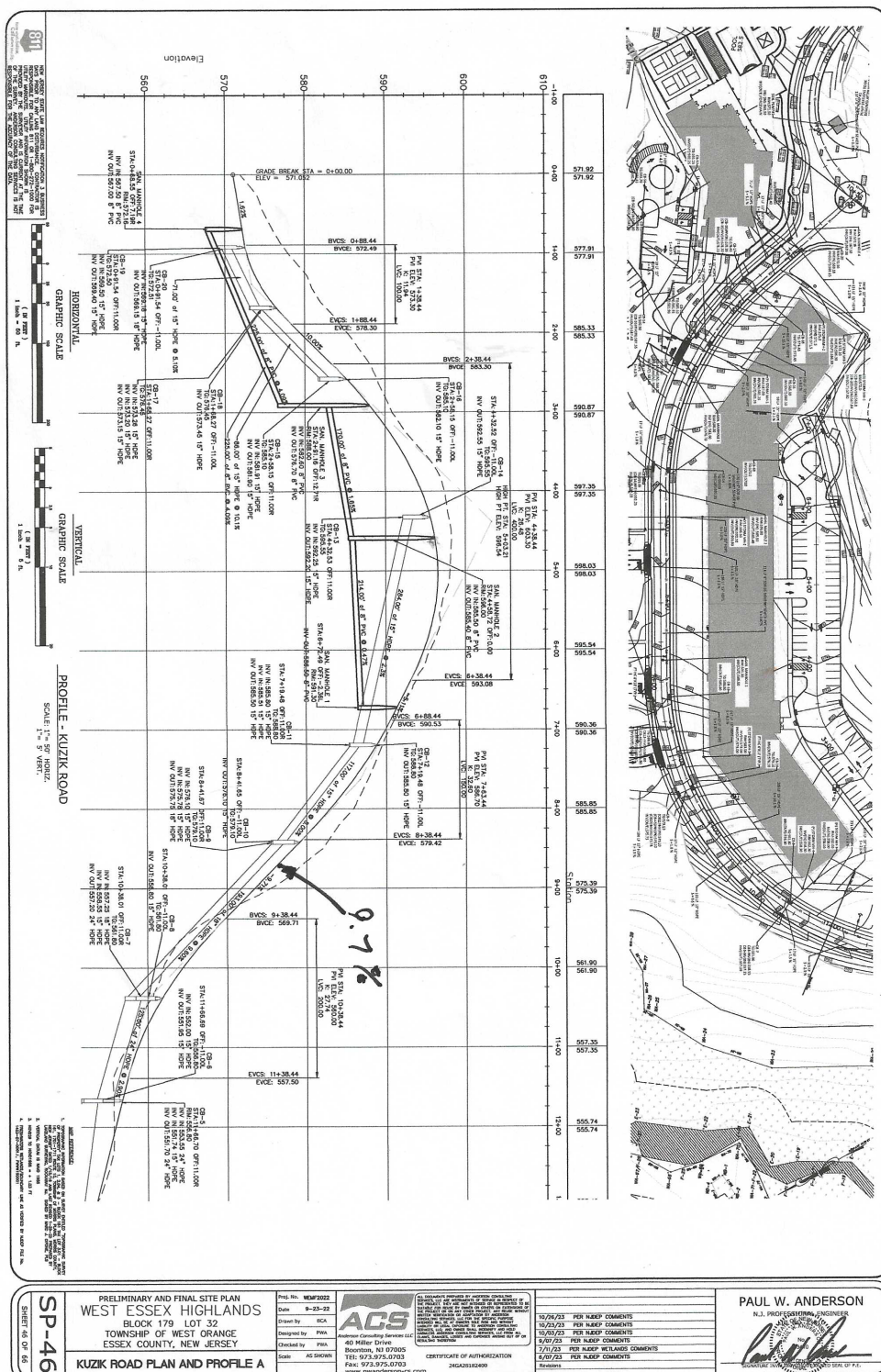
The minimum clear width of an accessible route shall be 36 in (915 mm) except at doors (see 4.13.5 and 4.13.6). If a person in a wheelchair must make a turn around an obstruction, the minimum clear width of the accessible route shall be as shown in picture here-under.

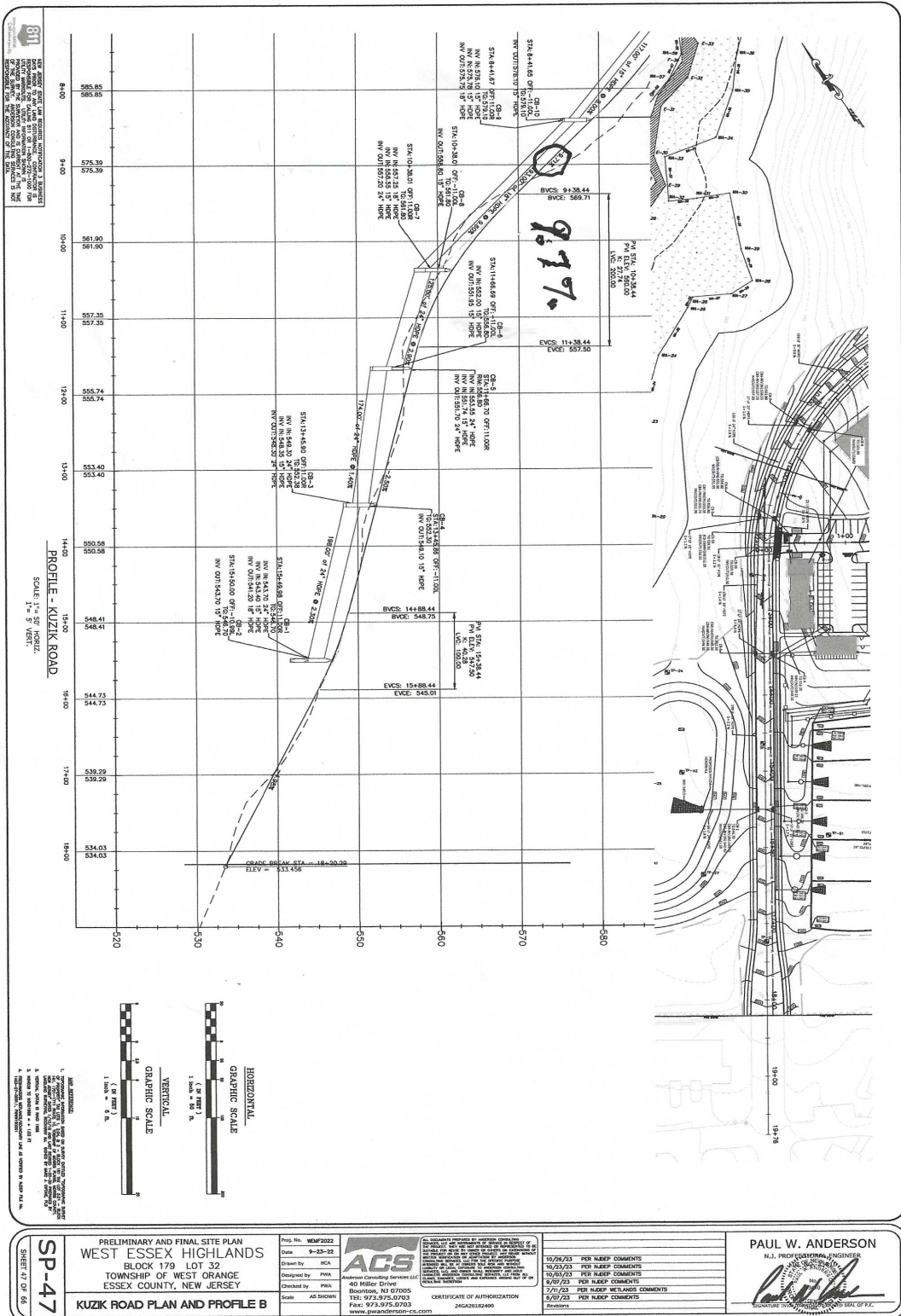
Slope < 5% > 5% = RAMP 1:12 < 8.3%

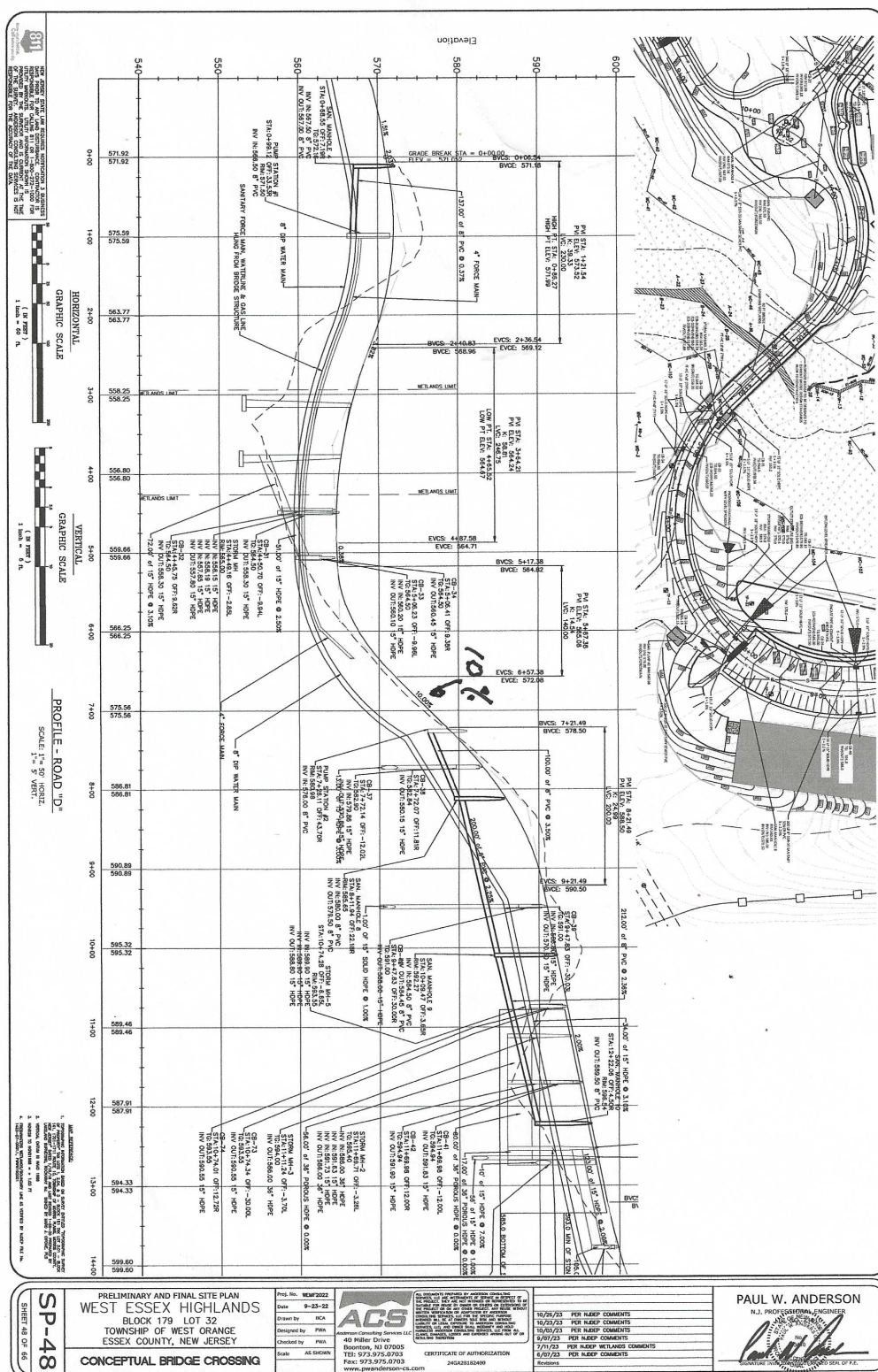
MAX Slope
Allowed











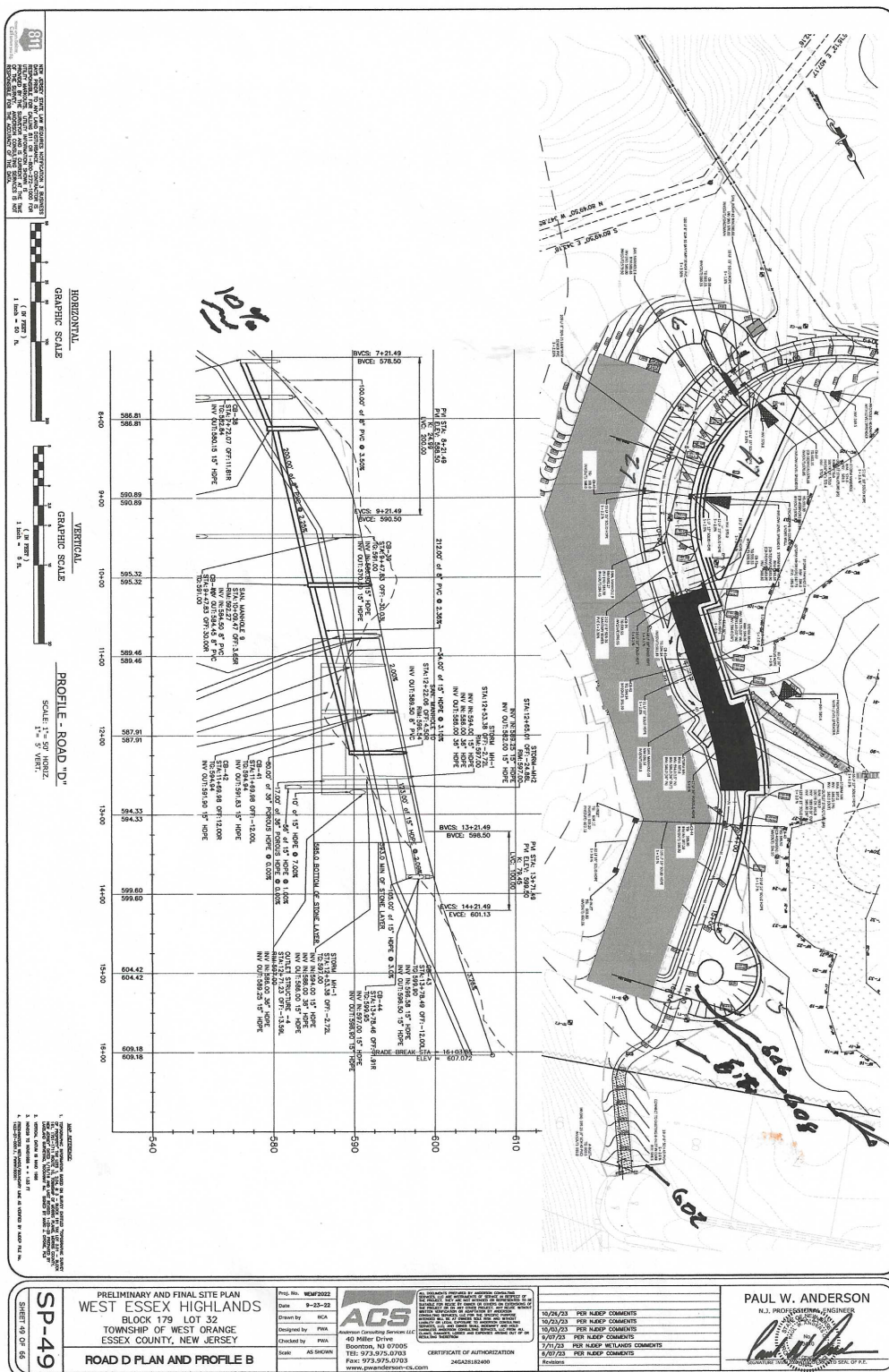


Figure 2 - Average Daily Trips (ADT)

PB-24-01

Existing (2377) + WEHI Proposed Development Total = 5105 ADT

