Residential Site Improvement Standards Compliance Report

Prepared for:

KRE Acquisition Corp

Block 42, Lots 37, 37.02, 38, & 41
100 Deforest Avenue

Township of East Hanover
Morris County, New Jersey

Prepared by:

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1. Introduction

This report has been prepared to document compliance with the Residential Site Improvement Standards, as outlined in the N.J.A.C. 5:21. for the proposed development.

2. Residential Site Improvement Standards Compliance

2.1 Roadway Classification

Per Table 4.3, Street Type can be determined by the Total Average Daily Traffic anticipated. Roadways classified as Residential Neighborhood should have a Total Average Daily Traffic of 0 – 1,500, and roadways classified as Minor Collector should have a Total Average Daily Traffic of 1,500 – 3,500.

Compliance: It is anticipated that the Ring Road and Access Drives from River Road and DeForest Avenue will have a Total Average Daily Traffic of 1,500 – 3,500. Therefore, these roadways have been classified as Minor Collector and have been designed as such. It is anticipated that Roads A, B, C, D, E & F will have a Total Average Daily Traffic of 0 – 1,500. Therefore, these roadways will be classified as Residential Neighborhood.

2.2 Traveled Way & Cartway Width

Per Table 4.3, roadways classified as Residential Neighborhood should have a minimum traveled way of 16 feet and cartway width of 30 feet. Roadways classified as Minor Collector should have a traveled way of 20 feet and a cartway width of 20 feet.

Compliance: The Ring Road is proposed at a width of 28', exceeding the 20' required cartway and traveled way width. No parking is permitted on the Ring Road. Roads A, B, C, D, E & F are also proposed at a width of 28' where a 16' traveled way and 30' cartway width is required for two-sided parking. The 30' cartway is required to allow parking on both sides of the road. As no on-street parking is permitted, the 28' roadway width is compliant with the RSIS standards.

2.3 Minimum Centerline Radius

Per Table 4.6 – Street Grade, Curve, and Intersection Design Criteria, the Minimum Centerline Radius requirement for roadways classified as Residential Neighborhood and Minor Collector is 100 feet and 150 feet, respectively.

Compliance: The proposed development includes modifications to the Ring Road to ensure compliance with RSIS. Within the residential portion of the site, the minimum centerline radius for the Ring Road is 260', exceeding the 150' minimum requirement. The minimum centerline radius proposed within Roads A, B, C, D, E & F is 100', therefore meeting the RSIS requirement.

2.4 Minimum Grade

Per Table 4.6 – Street Grade, Curve, and Intersection Design Criteria, the Minimum Grade requirement for roadways classified as Residential Neighborhood and Minor Collector is 0.5%.

Compliance: The proposed grading along the Ring Road was designed to match the existing to the maximum extent practical. The minimum grade along the Ring Road within the residential

portion is 0.75%, exceeding the 0.5% minimum. The minimum proposed grade throughout Roads A, B, C, D, E, & F is 1%, which exceeds the 0.5% minimum. These minimum grades are located on the easterly portion of Roads B & C.

2.5 Maximum Grade

Per Table 4.6 – Street Grade, Curve, and Intersection Design Criteria, the Maximum Grade requirement for roadways classified as Residential Neighborhood and Minor Collector is 12% and 10%, respectively.

Compliance: The proposed grading along the Ring Road was designed to match the existing to the maximum extent practical. The maximum grade along the Ring Road within the residential portion is 5%, which is below the 12% maximum. The maximum proposed grade throughout Roads A, B, C, D, E, & F is 5%, which is below the 10% maximum. This maximum grade is located on the westerly portion of Road D.

2.6 Minimum Tangent Length Between Reverse Curves

Per Table 4.6 – Street Grade, Curve, and Intersection Design Criteria, the Minimum Tangent Length Between Reverse Curves requirement for roadways classified as Residential Neighborhood and Minor Collector is 50 feet and 100 feet, respectively.

Compliance: The proposed development includes modifications to the Ring Road to ensure compliance with RSIS. Within the residential portion of the site, the minimum tangent length between curves for the Ring Road is 103.8', exceeding the 100' minimum requirement. The proposed minimum tangent length between curves within Roads A, B, C, D, E & F is 56.5', exceeding the 50' minimum requirement, located at the westerly portion of Road D.

2.7 Curb Radii

Per Table 4.6 – Street Grade, Curve, and Intersection Design Criteria, the Minimum Curb requirement for roadways classified as Residential Neighborhood and Minor Collector is 25 feet and 30 feet, respectively.

Compliance: The proposed curb radii from the Access Drives off of DeForest Avenue, and River Road to the Ring Road are a minimum of 30', meeting the minimum RSIS requirement. The curb radii between Roads A, B, C, D, E & F, and the Ring Road are a minimum of 25', also meeting the minimum RSIS requirement.

2.8 Street and Traffic Signs

Per §5:21-4.13, Design and placement of traffic signs included in "Manual on Uniform Traffic Control Devices for Streets and Highways" shall follow the requirements specified in "Manual on Uniform Traffic Control Devices for Streets and Highways," published by the U.S. Department of Transportation and adopted by the N.J. Department of Transportation.

Compliance: All signs for the proposed development will be installed in compliance with the "Manual on Uniform Traffic Control Devices for Streets and Highways," published by the U.S. Department of Transportation and adopted by the N.J. Department of Transportation.

2.9 Curbing

Per §5:21-4.3(e), A municipality may designate a curb type by ordinance. Where curb type is not established by municipal ordinance, flexibility regarding curb type shall be permitted as long as the curb type accommodates the proposed drainage system. Generally, curbs should be constructed of concrete or granite block.

Per §5:21-4.17, Curb should be constructed as stated below:

(a) Where granite block curb is used, a transition from granite block to concrete shall be provided at all accessible sidewalk ramps or curb cuts.

(b) Concrete gutters with a minimum width of four inches may be installed to separate the curb from the pavement.

(c) The standard concrete curb section used shall be a maximum of 20 feet in length, with a scored joint every 10 feet. All concrete used for curbs or combination curbs and gutters shall be prepared in accordance with the requirements, by class of concrete, of the New Jersey Department of Transportation, Standard Specifications for Road and Bridge Construction, effective at the time of preparation. Where bituminous concrete pavement is used for the road surface, the curb and/or gutter shall be constructed first.

(d) Where drainage inlets are constructed but curbs are not required, curbing must be provided at least 10 feet on each side of the inlet, set back one foot from the extension of the pavement edge.

(e) Where mountable curb is used, vertical curbing shall be provided at least 10 feet on each side of drainage inlets.

Compliance: All curbing for the proposed development is either concrete curb or granite block curb. A concrete curb is utilized adjacent to all ADA parking stalls and curb ramps. The dimension requirements stated above have been utilized in the design and will be adhered to during the construction of the proposed development.

2.10 Pavement Section

Per Table 4.8 – Per-Inch Structural Value for Various Paving Materials, the minimum asphalt surface course permitted is 1.5 inches. The minimum asphalt base course is 3 inches, and the minimum dense graded aggregate base course is 4 inches.

Compliance: The pavement section for the proposed development includes 1.5 inches surface course, 3 inches asphalt base course, and 6 inches of dense graded aggregate base course, therefore exceeding the minimum requirements outlined in the RSIS guidelines.

2.11 Sidewalks

Per §5:21-4.5, Sidewalk width shall be four feet; wider widths may be necessary near pedestrian generators and employment centers. Where sidewalks abut the curb and cars overhang the sidewalk, widths shall be six feet.

Per §5:21-4.18, The following apply to sidewalks and graded areas:

1. Sidewalks of concrete shall be four inches thick except at points of vehicular crossing, where they shall be at least six inches thick. At vehicular crossings, concrete sidewalks shall be reinforced with welded wire fabric mesh or an equivalent.
2. Concrete, air-entrained sidewalks shall be Class B concrete, having a 28-day verification strength of 4,500 p.s.i. Other materials may be permitted, depending on the design of the development.
3. Graded areas shall be planted with grass or treated with

Compliance: All sidewalks proposed throughout the development are a minimum of 4 feet in width, except for where they abut head in parking, in which case the sidewalks are proposed at a minimum of 6 feet in width. The detail provided on the plan set follows all RSIS requirements stated above, and the same standards will be adhered to during construction.

3. Conclusions

As demonstrated in the above sections, the proposed development meets the *Residential Site Improvement Standards set forth in N.J.A.C. 5:21*. As a result, our office believes the proposed development is consistent with similar developments throughout the state and that it promotes vehicle and pedestrian safety.