

**RECOMMENDATION ON THE VARIANCE APPLICATION OF
PSE&G/North Bergen Substation Switchgear Upgrades/Variiances
FILE # 17-068**

I. INTRODUCTION

An application for two bulk variances has been filed with the New Jersey Sports & Exposition Authority (NJSEA) by Public Service Electric and Gas Company (PSE&G), for the premises located at 4001 Paterson Plank Road, identified as Block 442, Lot 8, in the Township of North Bergen, New Jersey. The subject property is located within a PSE&G right-of-way. As per N.J.A.C. 19:4-3.6(a), "All streets, roads, highways, public ways, and railroad rights-of-way, if not otherwise specifically designated, shall be deemed to be in the same zone as the property immediately abutting upon the same." The properties adjacent to the property in question are zoned Light Industrial A and, therefore, the subject property is deemed to be in the Light Industrial A zone. The variances are sought in connection with the applicant's proposal to install switchgear upgrades at the North Bergen Substation, as required by the PSE&G Distribution Hardening Program.

Specifically, the applicant is requesting relief as follows:

1. N.J.A.C. 19:4-5.77(a)3i, which requires a minimum front yard setback of 50 feet, whereas the applicant is proposing concrete structures with a minimum setback of 18.7 feet from the easterly front yard property line along West Side Avenue.
2. N.J.A.C. 19:4-5.77(a)3iii, which requires a minimum rear yard setback of 75 feet, whereas the applicant is proposing concrete structures with a minimum setback of 19.73 feet from the westerly rear yard property line.

Notice was given to the public and all interested parties as required by law. The public notice was published in The Jersey Journal. No written objections were received. A public hearing was held in the Office of the Commission on Tuesday, April 25, 2017. All information submitted to the Division of Land Use Management relative to this application is made part of the record of this recommendation.

II. GENERAL INFORMATION

A. Existing and Proposed Use

The property in question, Block 442, Lot 8, contains approximately 7.996 acres, of which a 1.898-acre portion of the lot parallel to West Side Avenue is subject to the instant application. The property is designated as right-of-way (ROW) on the Official Zoning Map for the Hackensack Meadowlands District, however, pursuant to N.J.A.C. 19:4-3.6(a), the property is deemed to be within the District's Light Industrial A zone.

The portion of the property that is subject to the variance request is rectangular in shape with 551.51 linear feet of frontage along West Side Avenue. The property is bordered to the north and south by PSE&G ROW property and to the east by West Side Avenue. A warehouse/distribution facility is located to the west of the subject premises. The surrounding properties are principally developed with industrial uses. West Side Avenue is a heavily travelled roadway with significant trucking movements.

The proposed project involves utility improvements being implemented as part of PSE&G's Distribution Hardening Initiative, the intention of which is to improve reliability and resiliency of the utility's infrastructure by raising equipment above 100-year flood elevations established by FEMA. The existing footprint of the substation will not be expanded.

The subject property is currently developed with an electric substation, control house, transmission wires, and associated site improvements. The site is

accessed by driveways from West Side Avenue. This application proposes to upgrade the existing substation with the installation of BUS supports and their foundations, a 38-foot by 27-foot IBC switchgear building, and an isolation wall with associated processing equipment. The equipment will be raised a minimum of one foot above the base flood elevation, as indicated on the FEMA Flood Insurance Rate Maps, to make it more resilient to flooding conditions. The substation is not manned in its existing or proposed condition.

B. Response to the Public Notice

No written objections were received prior to the public hearing.

III. PUBLIC HEARING (April 25, 2017)

A public hearing was held on Tuesday, April 25, 2017. NJSEA staff in attendance were Sara J. Sundell, P.E., P.P., Director of Land Use Management and Chief Engineer; Sharon Mascaró, P.E., Deputy Director of Land Use Management and Deputy Chief Engineer; Mia Petrou, P.P., AICP, Senior Planner and Ronald Seelogy, P.E., P.P., Senior Engineer.

A. Exhibits

The following is a list of the exhibits submitted by the applicant at the public hearing and marked for identification as follows:

<u>Number</u>	<u>Description</u>
A-1	"Site Plan," prepared by PSEG Services Corporation on February 10, 2017, last revised March 13, 2017.
A-2	"Key Plan," Drawing No. 253040, prepared by Black & Veatch on April 8, 1984.

A-3 "Sections & Elevations Sheet No. 2," Drawing No. 247835, prepared by Black & Veatch on December 3, 1979, last revised December 15, 2016.

A-4 "Key Plan Elevations," Drawing No. 391468, prepared by Black & Veatch on July 31, 2015, last revised December 15, 2016.

B. Testimony

Robert A. Verdibello, Esq., of the firm Connell Foley LLP, represented the applicant at the hearing. The following witness testified in support of the application:

1. Sanda Brumaru, DP&C, a division of PSE&G;
2. Eric Nelson, P.E., Black & Veatch; and
3. William F. Masters, Jr., P.P.

Staff findings and recommendations are based on the entire record. A transcript of the public hearing was prepared and transcribed by Beth Calderone, Certified Shorthand Reporter.

C. Public Comment

No members of the public were present at the public hearing.

IV. RECOMMENDATION

- A. Standards for the Granting of a Bulk Variance from the Provisions of N.J.A.C. 19:4-5.77(a)3i, which requires a minimum front yard setback of 50 feet, whereas the applicant is proposing concrete structures with a minimum setback of 18.7 feet from the easterly front yard property line along West Side Avenue.

The Hackensack Meadowlands District Zoning Regulations at N.J.A.C. 19:4-4.14(e) state in part that, *a variance shall not be granted unless specific written findings of fact directly based upon the particular evidence presented are made that support conclusions that...*

1. *Concerning bulk variances:*

- i. *The variance requested arises from such condition that is unique to the property in question, is not ordinarily found in the same zone, and is not created by any action of the property owner or the applicant.*

The subject premises is owned by PSE&G and consists of a 1.898-acre portion of Block 442, Lot 8. The property is deemed to be within the District's Light Industrial A zone, pursuant to N.J.A.C. 19:4-3.6(a). The subject property is uniquely configured, having a 150-foot-wide lot depth and 551.51-foot-long frontage along West Side Avenue to the east. The subject property is currently improved with an existing electric substation with a control house, transmission towers, and electrical equipment, and contains access driveways from West Side Avenue. The location and configuration of these improvements on the existing lot include a pre-existing nonconforming front yard setback of 21.2 feet along West Side Avenue, whereas a minimum setback of 50 feet is required.

The upgrade project is required by PSE&G's Distribution Hardening Initiative to improve reliability by raising equipment above 100-year flood elevations established by FEMA. As part of this initiative, the applicant proposes concrete structures and supports to raise BUS equipment above the effective base flood elevation of eight feet in the North American Vertical Datum of 1988 (NAVD88), which provide for a minimum 18.7-foot front yard setback along West Side Avenue. The placement of the BUS equipment is dictated by the location of existing equipment and regulatory requirements of the National Electric Safety Code (NESC) to maintain certain clearances between equipment and structures. Therefore, the variance requested arises from conditions that are unique to the property in question and are not ordinarily found in the same zone.

- ii. The granting of the variance will not adversely affect the rights of neighboring property owners or residents.*

The preexisting nonconforming front yard setback of 21.2 feet to the existing mast foundation is proposed to be decreased by 2.5 feet to 18.7 feet as a result of the installation of the concrete structures and BUS supports needed to protect against potential flooding of utility equipment. The further reduction in setback does not greatly diminish existing conditions. Existing site and maintenance operations at the unmanned substation will be maintained at their present levels.

The proposed variance will not impact the ability of neighboring industrial and commercial properties to function as intended. The

neighbor to the east is located across the 70-foot-wide ROW of West Side Avenue, and this distance, combined with fencing in the front yard of the subject property, will not cause a significant negative impact to the neighboring properties. Rather, the proposed improvements will promote energy resiliency, which will benefit area energy customers. In addition, no residential uses are located within the vicinity of the subject property. Therefore, the granting of the requested variance will not adversely affect the rights of neighboring property owners or residents.

iii. The strict application of the regulations will result in peculiar and exceptional practical difficulties to, or exceptional and undue hardship upon, the property owner.

The strict application of the minimum front yard setback requirement of 50 feet on the subject property would result in particular and exceptional practical difficulties to, or exceptional and undue hardship upon, the property owner. The subject property has a lot depth of 150 feet with an existing nonconforming front yard setback of 21.2 feet, which is proposed to be reduced to 18.7 feet as a result of the installation of the concrete structures and BUS supports. When applying the required front yard setback of 50 feet and the required rear yard setback of 75 feet, the resulting building envelope is only 25 feet wide. The proposed concrete structures and BUS supports cannot be constructed within the 25-foot-wide building envelope due to the existing configuration of the electric process equipment, which represents an exceptional practical difficulty in the ability to comply with the front yard setback requirements. The placement of the proposed structures on

the site is also limited by the NESC, which requires specific clearance distances between equipment. The proposed setback is necessary to accommodate the required upgrades to the existing substation on the site, while maintaining adequate area to accommodate required clearances between equipment and structures. Therefore, the existing site conditions present exceptional practical difficulties in the ability to comply with the front yard setback requirements.

iv. The variance will not result in substantial detriment to the public good and will not adversely affect the public health, safety, morals, order, convenience, prosperity or general welfare.

Approval of the requested variance to permit a minimum 18.7-foot front yard setback, whereas the minimum required front yard setback is 50 feet, will not result in substantial detriment to the public good and will not adversely affect the public health, safety, morals, order, convenience, prosperity or general welfare. The proposed substation upgrades will promote the general welfare through the improvement of power capacity and energy resiliency to the public customers of PSE&G that are served by this substation.

The upgrade project proposes concrete structures for BUS supports, which result in an 18.7-foot front yard setback. The positioning of these structures is based on required regulatory clearances between equipment and structures on the site. Reduction in the front yard setback from the existing 21.2 feet to 18.7 feet as proposed will not have a negative impact on the public good. The existing substation

is unmanned and traffic is minimal, and the proposed conditions will not substantially differ from the current operations of the site.

v. The variance will not have a substantial adverse environmental impact.

The granting of the variance to permit a front yard setback of 18.7 feet, whereas a minimum of 50 feet is required, will not have a substantial adverse environmental impact. The existing non-conforming front yard setback is 21.2 feet and is being further decreased by 2.5 feet by the proposed upgrades. The installation of the concrete structures, although within the required setback, will raise BUS equipment above FEMA's effective base flood elevation, which is particularly important on a property within the floodplain. Minimum lot coverage and open space requirements are met, and existing drainage patterns will be maintained. The District's environmental performance standards for noise, glare, vibrations, airborne emissions, hazardous materials or water quality will not be exceeded.

vi. The variance represents the minimum deviation from the regulations that will afford relief.

The proposed project involves an upgrade to an existing substation involving the raising of equipment above FEMA's 100-year flood elevation as part of PSE&G's Distribution Hardening Initiative to improve reliability of the regional utility system. The particular characteristics of the property, including the shallow depth of the parcel and the location of existing improvements, constrain the ability of the proposed improvements to comply with the front

yard setback requirements. These conditions represent exceptional practical difficulties in the accommodation of the required upgrades to the substation. The placement of the proposed structures and equipment on the site is also limited by national regulatory codes that require specific clearance distances between equipment and structures. The proposed upgrades extend a minimal 2.5 feet beyond the preexisting nonconforming front yard setback, and occupy only a small portion of the property's frontage along West Side Avenue. The walls are required in this location to adequately protect equipment already existing within the required front yard setback. Adequate light, air, and open space will continue to be provided. Therefore, the requested variance represents the minimum deviation from the regulations that will afford relief.

vii. Granting the variance will not substantially impair the intent and purpose of these regulations.

The granting of the requested variance to permit an 18.7-foot front yard setback, whereas a minimum front yard setback of 50 feet is required, will not substantially impair the intent and purpose of these regulations. Due to the existing configuration of property and the improvements on the site, including the shallow depth of the parcel, the layout of the proposed equipment required for the upgrades, and the existing nonconforming setback, the site is constrained in its ability to meet the required front yard setback. As the District regulations are intended to provide for infrastructure and utility improvements and to promote the efficient use of the land, the requested variance will not substantially impair these purposes.

B. Standards for the Granting of a Bulk Variance from the Provisions of N.J.A.C. 19:4-5.77(a)3iii, which requires a minimum rear yard setback of 75 feet, whereas the applicant is proposing concrete structures with a minimum setback of 19.73 feet from the westerly rear yard property line.

The Hackensack Meadowlands District Zoning Regulations at N.J.A.C. 19:4-4.14(e) state in part that, *a variance shall not be granted unless specific written findings of fact directly based upon the particular evidence presented are made that support conclusions that...*

1. *Concerning bulk variances:*

- i. The variance requested arises from such condition that is unique to the property in question, is not ordinarily found in the same zone, and is not created by any action of the property owner or the applicant.*

The subject premises is owned by PSE&G and consists of a 1.898-acre portion of Block 442, Lot 8. The property is deemed to be within the Commission's Light Industrial A zone, pursuant to N.J.A.C. 19:4-3.6(a). The subject property is uniquely configured, having a 150-foot-wide lot depth and 551.51-foot-long frontage along West Side Avenue to the east. The subject property is currently improved with an existing electric substation with a control house, transmission towers, and electrical equipment, and contains access driveways from West Side Avenue. The location and configuration of these existing improvements on the lot include a pre-existing nonconforming rear yard setback of 22.8 feet, whereas a minimum rear yard setback of 75 feet is required.

The upgrade project is required by PSE&G's Distribution Hardening Initiative to improve reliability by raising equipment above 100-year flood elevations established by FEMA. As part of this initiative, the applicant proposes concrete structures and supports to raise a switchgear cabinet above the effective base flood elevation of eight feet in NAVD88, which provides for a minimum 19.73-foot rear yard setback as measured from the westerly property line. The placement of the switchgear cabinet is dictated by the location of existing equipment and regulatory requirements of the NESC to maintain certain clearances between equipment and structures. Therefore, the variance requested arises from conditions that are unique to the property in question and are not ordinarily found in the same zone.

- ii. The granting of the variance will not adversely affect the rights of neighboring property owners or residents.*

The preexisting nonconforming rear yard setback of 22.8 feet to the existing mast foundation is proposed to be decreased by 3.07 feet to 19.73 feet as a result of the installation of the concrete foundation structures for the switchgear cabinet. The further reduction in setback does not greatly diminish existing conditions and will not result in a significant impact to neighboring properties. The adjoining property to the west contains an approximately 80-foot-wide open area between its vehicular use area and the subject property's rear lot line, allowing for sufficient separation between uses. Existing site and maintenance operations at the unmanned substation will be maintained at their present levels.

The proposed variance will not impact the ability of neighboring industrial and commercial properties to function as intended. Rather, the proposed improvements will promote energy resiliency, which will benefit area energy customers. In addition, no residential uses are located within the vicinity of the subject property. Therefore, the granting of the requested variance will not adversely affect the rights of neighboring property owners or residents.

iii. The strict application of the regulations will result in peculiar and exceptional practical difficulties to, or exceptional and undue hardship upon, the property owner.

The strict application of the minimum rear yard setback requirement of 75 feet on the subject property will result in particular and exceptional practical difficulties to, and exceptional and undue hardship upon, the property owner. The subject property has a depth of 150 feet with an existing nonconforming rear yard setback of 22.8 feet, which is proposed to be reduced to 19.73 feet as a result of the installation of the switchgear cabinet. When applying both the required front yard setback of 50 feet and the required rear yard setback of 75 feet, the resulting building envelope is only 25 feet wide. The proposed switchgear cabinet cannot be constructed within the 25-foot-wide building envelope due to the existing configuration of the electric process equipment, which represents exceptional practical difficulties in the ability to comply with the rear yard setback requirements. The placement of the proposed switchgear cabinet on the site is also limited by the NESC, which requires specific clearance distances between

equipment. The proposed setback reduction is required to accommodate the necessary upgrades to the existing substation on the site, while maintaining adequate area to provide the mandatory clearances between equipment and structures. Therefore, the existing site conditions present exceptional practical difficulties in the ability to comply with the rear yard setback requirements.

iv. The variance will not result in substantial detriment to the public good and will not adversely affect the public health, safety, morals, order, convenience, prosperity or general welfare.

Approval of the requested variance to permit a 19.73-foot rear yard setback, whereas a minimum rear yard setback of 75 feet is required, will not result in substantial detriment to the public good and will not adversely affect the public health, safety, morals, order, convenience, prosperity or general welfare.

Rather, the proposed substation upgrades will promote the general welfare through the improvement of power capacity and energy resiliency to the public customers of PSE&G that are served by this substation. The upgrade project proposes concrete structures that will support a switchgear cabinet, which result in a 19.73-foot rear yard setback. The positioning of the concrete structures and the switchgear cabinet is based upon required regulatory clearances between equipment and structures on the site. Due to the substation design requirements, the shallow depth of the parcel and the location of the existing equipment, it is not possible to maintain a 75-foot rear yard setback. Reduction in the rear yard

setback from the existing 22.8 feet to 19.73 feet as proposed will not have a negative impact on the public good.

v. The variance will not have a substantial adverse environmental impact.

The granting of the variance to permit a minimum rear yard setback of 19.73 feet, whereas a minimum of 75 feet is required, will not have a substantial adverse environmental impact. The preexisting nonconforming rear yard setback of 22.8 feet is being decreased by 3.07 feet as a result of the proposed upgrades. All minimum lot coverage and open space requirements are met, and existing drainage patterns will be maintained. The proposed substation upgrade project includes the installation of concrete structures that will raise a switchgear cabinet above the effective base flood elevation, which is particularly important on a property within the floodplain. The District's environmental performance standards for noise, glare, vibrations, airborne emissions, hazardous materials or water quality will not be exceeded.

vi. The variance represents the minimum deviation from the regulations that will afford relief.

The proposed project involves an upgrade to an existing substation involving the raising of equipment above the FEMA 100-year flood elevation as part of PSE&G's Distribution Hardening Initiative to improve reliability. The particular characteristics of the property, including the shallow depth of the parcel and the location of existing improvements, constrain the ability of the proposed improvements to comply with the rear yard setback requirements

of the Light Industrial A zone. These conditions represent exceptional practical difficulties in the accommodation of the required upgrades to the substation. The proposed improvements extend approximately 3.07 feet beyond the site's existing nonconforming rear yard setback of 22.8 feet, and occupy only a small portion of the property's rear yard. Installation of the proposed switchgear cabinet will allow for the consolidation of process equipment. As a result, the degree of nonconformity will be reduced by the removal of unnecessary equipment foundations presently located within the required rear yard. Adequate light, air, and open space will continue to be provided. Therefore, the requested variance represents the minimum deviation from the regulations that will afford relief.

vii. Granting the variance will not substantially impair the intent and purpose of these regulations.

The granting of the requested variance to permit a 19.73-foot rear yard setback, whereas a minimum rear yard setback of 75 feet is required, will not substantially impair the intent and purpose of these regulations. The intent of the minimum required 75-foot rear yard setback in the Light Industrial A zone is generally to provide sufficient area for truck maneuvering and loading areas in the rear of industrial properties, however, this purpose will not be impaired as the subject utility use on this site does not involve such loading operations.

The site is constrained in its ability to meet the required rear yard setback due to the existing configuration of the property and the

improvements on the site, including the shallow depth of the parcel, the layout of the proposed utility upgrade equipment, and the preexisting nonconforming setback. As the District regulations are also intended to provide for infrastructure and utility improvements and to promote the efficient use of the land, the requested variance will not substantially impair these purposes.

IV. SUMMARY OF CONCLUSIONS

A. Standards for the Granting of a Bulk Variance from the Provisions of N.J.A.C. 19:4-5.77(a)3i, which requires a minimum front yard setback of 50 feet, whereas the applicant is proposing concrete structures with a minimum setback of 18.7 feet from the easterly front yard property line along West Side Avenue.

Based on the record in this matter, the bulk variance application to construct concrete structures within the required front yard along West Side Avenue with a minimum setback of 18.7 feet, whereas a minimum front yard setback of 50 feet is required, is hereby recommended for APPROVAL.

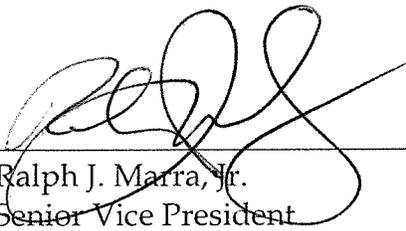
APPROVAL
Recommendation on
Variance Request

6/5/2017
Date


Sara J. Sundell, P.E., P.P.
Director of Land Use Management

APPROVAL
Recommendation on
Variance Request

6/5/2017
Date


Ralph J. Marra, Jr.
Senior Vice President
Legal & Governmental Affairs

B. Standards for the Granting of a Bulk Variance from the Provisions of N.J.A.C. 19:4-5.77(a)3iii, which requires a minimum rear yard setback of 75 feet, whereas the applicant is proposing concrete structures with a minimum setback of 19.73 feet from the westerly rear yard property line.

Based on the record in this matter, the bulk variance application to construct concrete structures within the required rear yard with a minimum setback of 19.73 feet, whereas a minimum rear yard setback of 75 feet is required, is hereby recommended for APPROVAL.

APPROVAL

Recommendation on
Variance Request

6/5/2017

Date



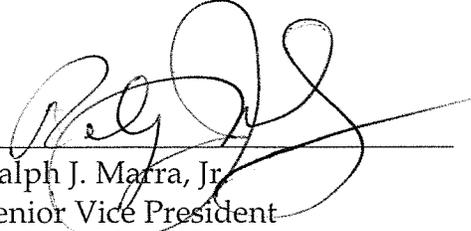
Sara J. Sundell, P.E., P.P.
Director of Land Use Management

APPROVAL

Recommendation on
Variance Request

6/5/2017

Date



Ralph J. Mafra, Jr.
Senior Vice President
Legal & Governmental Affairs