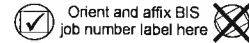




Local Law 92/94 of 2019 Sustainable Roof Zone

Form must be typewritten.



1 Location Information (required for all applicants)

House No(s) 42

Street Name WAIMER PL

Borough S.I.

Block 3589

Lot 57

BIN 5174405

CB No. 503

2 Applicant Information (required for all applicants - mobile phone and business fax are optional)

Last Name MARTARELLA III

First Name FRANK

Middle Initial

Business Name THINK DESIGN ARCHITECTURE

Business Phone 7189873729

Business Address 1000 SOUTH AVE, SUITE 104

Business Fax

City S.I.

State NY

Zip 10314

Mobile Phone

Email FRANK@THINKDESIGNARCH.COM

License No. 033343

☐ PE ☒ RA

3 Sustainable Roof Zone Compliance - per Building Code Section 1511.2 (select one and provide required documentation as indicated)

- ☐ The construction documents include roof plans with a code compliant sustainable roofing zone. This sustainable roof zone is subject to inspection prior to issuance of a Temporary Certificate of Occupancy, final Certificate of Occupancy or Letter of Completion.
- ☒ The roof is exempt because the roof assembly has a slope greater than two units vertical in 12 units horizontal (17 percent) that would accommodate less than 4kW of solar photovoltaic electricity generating capacity.
(calculations and a shading report prepared by a qualified contractor or NYS registered design professional must be submitted)
- ☐ Site conditions are unfavorable to either a solar photovoltaic electricity generating system or a green roof system.
(a statement substantiating limitations must be submitted by a NYS registered design professional)
- ☐ NYC Housing Preservation and Development (HPD) has determined that the building is not currently required to comply with the requirements of Local Law 92 and 94.
(HPD documentation must be submitted)

4 Historic Structures subject to the jurisdiction of the NYC Landmarks Preservation Commission (LPC) (select one and provide required documentation as indicated)

- ☐ The sustainable roof zone has been approved by LPC.
(LPC documentation must be submitted)
- ☐ The sustainable roof zone has been disapproved by LPC.
(LPC documentation must be submitted)

5 Applicant's Statements and Signatures (required for all applicants)

Falsification of any statement is a misdemeanor and is punishable by a fine or imprisonment, or both. It is unlawful to give to a City employee, or for a City employee to accept, any benefit, monetary or otherwise, either as a gratuity for properly performing the job or in exchange for special consideration. Violation is punishable by imprisonment or fine or both. I understand that if I am found after hearing to have knowingly or negligently made a false statement or to have knowingly or negligently falsified or allowed to be falsified any certificate, form, signed statement, application, report or certification of the correction of a violation required under the provisions of this code or of a rule of any agency, I may be barred from filing further applications or documents with the Department.

Name (print): FRANK MARTARELLA III

Sign and Date:

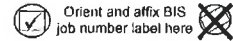
5-11-2020

P.E./R.A. Seal (apply seal, then sign and date over seal)



AI1: Additional Information

Must be typewritten.



Page number 1 of 2

BIS Document No

1 Location and Job Information Required for all applications.

House No(s) 42, 44 & 46 Street Name WAIMER PLACE

Borough STATEN ISLAND Block 5589 Lot 57-59 BIN

CB No. 503

2 Revisions to Plans/Drawings Required whenever updating plans. All revisions for each page must be clearly described in section 3.

Submission is part of a Post Approval Amendment (PAA)? ☐ Yes PW1 required ☐ No Indicate all actions for this submission:

Action	Original/New/ Omit Page ID	Superseding Page ID	Action	Original/New/ Omit Page ID	Superseding Page ID	Action	Original/New/ Omit Page ID	Superseding Page ID	Action	Original/New/ Omit Page ID	Superseding Page ID

For "Action" use "N" for new page, "S" for superseding page, "O" for omitting page.

Is this section continued on additional AI1 forms? ☐ Yes ☐ No

3 Additional Information Required for all applications.

ROOF AREA CALC'S

ROOF AREA (A)
SURFACE AREA
= HORIZ. PROJECTED AREA
COSINE (37 SLOPE)
= 273.9 SF. = 316.3 SF.
0.866

ROOF AREA (B)
SURFACE AREA
= HORIZ. PROJECTED AREA
COSINE (37 SLOPE)
= 241.3 SF. = 278.6 SF.
0.866

ROOF AREA (C)
SURFACE AREA
= HORIZ. PROJECTED AREA
COSINE (37 SLOPE)
= 42.8 SF. = 49.4 SF.
0.866

ROOF AREA (D)
SURFACE AREA
= HORIZ. PROJECTED AREA
COSINE (37 SLOPE)
= 35.2 SF. = 40.6 SF.
0.866

ROOF AREA (E)
SURFACE AREA
= HORIZ. PROJECTED AREA
COSINE (37 SLOPE)
= 84.6 SF. = 97.7 SF.
0.866

SUSTAINABLE ROOF AREA CALC'S

SOLAR READY AREA (A)
SURFACE AREA
= HORIZ. PROJECTED AREA
COSINE (37 SLOPE)
= 46.7 SF. = 53.9 SF.
0.866

SOLAR READY AREA (B)
SURFACE AREA
= HORIZ. PROJECTED AREA
COSINE (37 SLOPE)
= 46.7 SF. = 53.9 SF.
0.866

SOLAR READY AREA (C) THRU (E)
ARE NOT ACCOMMODATE FOR
SOLAR PANELS BECAUSE OF
FONY REQUIREMENTS

SUSTAINABLE ROOF AREA CALC'S

ROOF AREA (A) = 316.3 SF.
FONY ACCESS REQ'S = 262.4 SF.
SUSTAINABLE ROOF AREA = 53.9 SF.

ROOF AREA (B) = 278.6 SF.
FONY ACCESS REQ'S = 224.7 SF.
SUSTAINABLE ROOF AREA = 53.9 SF.

SUSTAINABLE ROOF AREA (A) THRU (E)
ARE NOT ACCOMMODATE FOR SOLAR
PANELS BECAUSE OF FONY REQUIREMENTS

SOLAR PANEL CAPACITY CALCULATION

SOLAR PANEL CAPACITY: AVERAGE = 250W
SOLAR PANEL SIZE: 3'-3" x 5'-5"

ROOF (A) THRU (E) (0) SOLAR PANELS
(55-90 % EFF.) = 0 W

SOLAR PANELS CAN NOT MEET OR EXCEED A
CAPACITY OF 4KW AS REQUIRED BY LL 92 AND LL
94 OF 2019.

THEFORE THE ROOF IS EXEMPT.

SOLAR PANEL LAYOUT

SUSTAINABLE ROOF AREA TOTAL = 107.8 SF.
READY FOR (A) THRU (E) (0) SOLAR PANELS

NOTES:

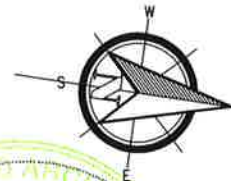
1. ALL DATA CALCULATIONS ARE DONE WITHOUT SHADE. SHADE CAN IMPACT THESE INSULATION VALUES, AND SHIFT THE TILT AND AZIMUTH OPTIMUM VALUES. FOR EXAMPLE SHADE IN THE EAST MAY SHIFT THE (LOWERED) OPTIMUM VALUE TO THE WEST. WITH SHADING DATA AND TILT ORIENTATION FACTOR (TOF), TOTAL SOLAR RESOURCE FRACTION (TSRF) CAN BE CALCULATED.

2. ANNUAL INSULATION IS CALCULATED BY INTEGRATING THE HOURLY TMY3 INSULATION VALUES FOR THE YEAR AT EACH TILT/AZIMUTH COMBINATION.

3. THE PEREZ MODEL IS USED FOR THE CALCULATIONS. SEE PEREZ, R.; INGHEN, P.; SEALS, R.; MICHALSKY, J.; STEWART, R. (1990). "MODELING DAYLIGHT AVAILABILITY AND IRRADIANCE COMPONENTS FROM DIRECT AND GLOBAL IRRADIANCE." SOLAR ENERGY, 44(5), PP. 271-289

TILT AND ORIENTATION FACTOR (TOF). TOF IS THE SOLAR INSULATION AT THE ACTUAL TILT AND ORIENTATION DIVIDED BY THE INSULATION AT THE OPTIMUM TILT AND ORIENTATION, EXPRESSED IN PERCENT.

TOTAL SOLAR RESOURCE FRACTION (TSRF). TSRF IS THE RATIO OF INSULATION AVAILABLE ACCOUNTING FOR BOTH SHADING AND TOF, COMPARED TO THE TOTAL INSULATION AVAILABLE AT A GIVEN LOCATION AT THE OPTIMUM TILT AND ORIENTATION AND WITH NO SHADING. TSRF IS ALSO EXPRESSED IN PERCENT, ACCORDING TO THE FOLLOWING EQUATION: TSRF = SOLAR ACCESS * TOF.



Falsification of any statement is a misdemeanor and is punishable by a fine or imprisonment, or both. It is unlawful to give to a city employee, or for a city employee to accept, any benefit, monetary or otherwise, either as a gratuity for properly performing the job or in exchange for special consideration. Violation is punishable by imprisonment or fine or both. I understand that if I am found after hearing to have knowingly or negligently made a false statement or to have knowingly or negligently falsified or allowed to be falsified any certificate, form, signed statement, application, report or certification of the correction of a violation required under the provisions of this code or of a rule of any agency. I may be barred from filing further applications or documents with the Department.

Name (please print)

FRANK MARTARELLA III

Signature

Date

5-11-2020

P.E. / P.A. Seal (apply seal, then sign and date over seal)

