OWNER NAME RESIDENCE : PLAT OR HOUSE #, STREET NAME, CITY, STATE - ZIP CODE
9.62 KW DC ROOF MOUNTED PHOTOVOLTAIC SYSTEM

EQUIPMENT SUMMARY

26 NO'S - SOLARIA 370W 370R-PD MODULES
1 NO - SOLAREDGE SE7600H-US INVERTER WITH
26 NO'S OF P370 DC POWER OPTIMIZERS

BUILDING INFORMATION

Phase : -- LOT: --
ZONE : -- MAP: --
NO CHANGE TO USE, EGRESS OR OCCUPANCY.

EXISTING XX-STORY XX-FAMILY DWELLING
OCCUPANCY CLASSIFICATION: RES
CONSTRUCTION CLASSIFICATION: -
BUILDING HEIGHT: XX'
CROSS STREET(S): WOODLANDS DR, LONG MEADOW RD

SHEET INDEX

SCOPE OF WORK

SCOPE OF WORK IS SOLELY FOR THE INSTALLATION OF THE SOLAR ELECTRONIC GENERATING SYSTEM. ALL OTHER WORK IS NOT TO BE RELIED UPON AS BEING APPROVED AND/OR PERMITTED BY THE NYC DEPARTMENT OF BUILDINGS.

NO CHANGE TO USE, EGRESS OR OCCUPANCY .

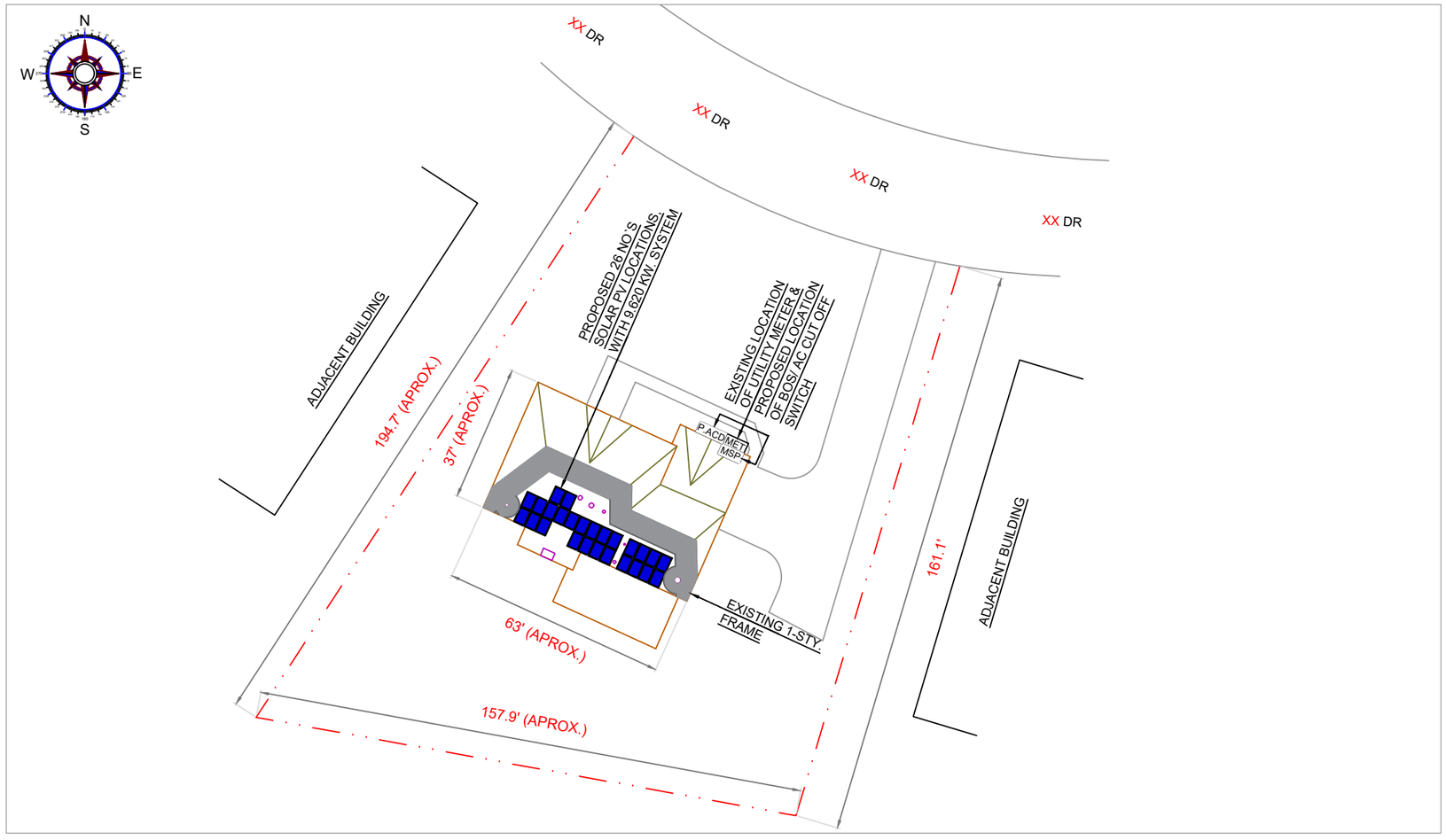
Note :

THERE IS SOME TREES AND NO UTILITY LINE OR ANY OTHER POTENTIAL HAZARD
THAT COULD COME INTO CONTACT
WITH ANY PART OF THE SOLAR ELECTRIC
GENERATING SYSTEM, LOCATION OF
MAIN SERVICE PANEL AT BASEMENT.

SITE AERIAL MAP

PROPERTY LAYOUT

SCALE : N T S



PROPERTY ADDRESS:	INSTALLER:
Owner Name	Installer Name
Plat or House #, Street Name	Plat or House #, Street Name
City, State - Zip code	City, State - Zip code

TITLE:		Rev	Designed By	Checked By	Date	Sheet No
DRAWING LIST, LOT DIAGRAM, SITE PLAN, SCOPE OF WORK, AND BUILDING INFORMATION		-	-	-	-	Z-100.00
						Page No 01 of 15
PHASE :	-					
LOT:	-					Package ID / R
ZONING:	-					---/--/--/R0
MAP:	-					

KGS Global Green

Seal & Signature:

GENERAL CONSTRUCTION NOTES

1. THESE CONSTRUCTION DOCUMENTS ARE BASED ON FIELD INSPECTIONS AND OTHER INFORMATION AVAILABLE AT THE TIME OF INSPECTION. ACTUAL FIELD CONDITIONS MAY REQUIRE MODIFICATIONS OF CONSTRUCTION DETAILS.
2. THE APPLICANT OF RECORD HAS NOT BEEN RETAINED TO SUPERVISE CONSTRUCTION OR INSTALLATION Of ANY EQUIPMENT AT SITE.
3. CONTRACTOR SHALL FURNISH ALL LABOR, MATERIAL, EQUIPMENT, TOOLS, OBTAIN ALL PERMITS AND LICENSES AND PAY ALL REQUIRED FEES AND COMPLETE INSTALLATION OF SOLAR PANELS AND EQUIPMENT.
4. THE CONTRACTOR HAS THE FULL RESPONSIBILITY TO CHECK AND VERIFY ALL DIMENSIONS AND EXISTING CONDITIONS INCLUDING THE ROOF AND STRUCTURE. ANY DISCREPANCIES SHALL BE REPORTED TO THE APPLICANT OF RECORD BEFORE PROCEEDING WITH THE WORK. ANY WORK STARTED BEFORE CONSULTATION AND ACCEPTANCE BY THE APPLICANT OF RECORD SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR AND SHALL BE SUBJECT TO CORRECTION BY HIM WITHOUT ADDITIONAL COMPENSATION.
5. DAMAGE CAUSED TO THE EXISTING STRUCTURE, PIPES, DUCTS, WINDOWS, WALL, FLOORS, ETC. SHALL BE REPAIRED TO ORIGINAL CONDITION OR REPLACED BY THE CONTRACTOR AT NO ADDITIONAL COST.
6. THE CONTRACTOR SHALL BE HELD RESPONSIBLE FOR THE PROPER INSTALLATION AND COMPLETION OF THE WORK WITH APPROVED MATERIALS.
7. NO CHANGES ARE TO BE MADE WITHOUT THE CONSULTATION AND APPROVAL OF THE ARCHITECT.
8. THE CONTRACTOR SHALL OBTAIN BUILDING PERMIT. NO WORK TO START UNLESS BUILDING PERMIT IS PROPERLY DISPLAYED.
9. ALL WORKMANSHIP AND MATERIALS SHALL BE OF FIRST QUALITY AND IN COMPLIANCE WITH THE REQUIREMENTS OF THE NEW YORK CITY BUILDING CODE, THE DEPARTMENT OF ENVIRONMENTAL PROTECTION AND ALL PERTINENT AGENCIES.
10. IT IS ESSENTIAL THAT ALL WORK PROCEED WITH THE MAXIMUM COOPERATION OF ALL PARTIES AND WITH MINIMUM INTERFERENCE TO THE OCCUPANTS WITHIN THE BUILDING. THE OWNER'S DIRECTIONS IN THIS REGARD SHALL BE FULLY COMPLIED WITH.
11. ALL EXPOSED PLUMBING, HVAC, ELECTRICAL DUCTWORK, PIPING AND CONDUITS ARE TO BE PAINTED BY GENERAL CONTRACTOR.
12. THE CONTRACTOR SHALL PERFORM THE WORK IN STRICT CONFORMANCE W/ LOCAL LAWS AND REGULATIONS AND THE NATIONAL ELECTRICAL CODE.
13. THE CONTRACTOR SHALL OBTAIN ALL PERMITS, APPROVALS, AFFIDAVITS, CERTIFICATIONS, ETC. AND PAY ALL FEES AS REQUIRED BY THE LOCAL AUTHORITIES.
14. CONTRACTOR SHALL OBTAIN FIRE CERTIF. UPON COMPLETION OF WORK.

STRUCTURAL STATEMENT

NO ADDITIONAL STRUCTURAL WORK REQUIRED @ ROOF FOR SOLAR PANEL INSTALLATION AND THE EXISTING ROOF IS CAPABLE OF SUPPORTING THE LOADS OF THE SOLAR ELECTRICAL GENERATION SYSTEM

NYCECC NOTES

1. THE SOLAR ELECTRIC GENERATING SYSTEM MEETS ALL THE REQUIREMENTS SET FORTH AND THAT IT DOESN'T INCLUDE ANY EQUIPMENT CONNECTED TO THE SOLAR ELECTRIC GENERATING SYSTEM THAT IS A COMPONENT OF PARTS OF AN NON-SOLAR ELECTRIC GENERATING SYSTEM OR THAT USES ANY SORT OF RECREATIONAL FACILITY OR EQUIPMENT AS A STORAGE MEDIUM.
2. THERE ARE NO TREES ON OR NEAR THE SUBJECT PARCEL THAT WILL BLOCK THE SOLAR PANELS, OR WITHIN THE HAZARD AREA.

CONTRACTORS MUST CHECK AND VERIFY ALL JOB CONDITIONS, DRAWINGS, DETAILS AN SPECIFICATIONS, AND REPORT ANY DISCREPANCIES TO THE ARCHITECT BEFORE PROCEEDING WITH THE WORK.

NYCECC ANALYSIS AND COMPLIANCE

ENERGY ANALYSIS AND SPECIAL/PROGRESS INSPECTIONS FOR SOLAR TAX ABATEMENTS

APPLICATION TYPE : ALT-2	SCOPE OF WORK : SOLAR ELECTRIC ARRAY INSTALLATION
CLIMATE ZONE : 6b (RESIDENTIAL)	2016 NYCECC CHAPTER 4 (RESIDENTIAL ENERGY EFFICIENCY)

NYCECC COMPLIANCE STATEMENT:
TO THE BEST OF MY KNOWLEDGE BELIEF AND PROFESSIONAL JUNDMENT, THESE PLANS AND SPECIFICATIONS ARE IN COMPLIANCE WITH THE NEW YORK CITY ENERGY CONVERSATION CODE.

ITEM DESCRIPTION	PROPOSED DESIGN VALUE	PRESCRIPTIVE VALUE & CITATION	SUPPORTING DOCUMENTS (SHEET NUMBERS)	PROGRESS INSPECTION NUMBER AND DESCRIPTION
ANCHOR SOLAR PANEL SUPPORTING STRUCTURE TO BUILDING STRUCTURE BY SCREWING TO STRUCTURAL MEMBERS, AS SHOWN ON DRAWINGS	SEALING ALL OPENINGS & PENETRATIONS AS PRESCRIBED IN SEC. ECC 402.4.1 & ECC TABLE 402.4.1.1	CAULKING, GASKETING, WEATHER-STRIPPING OR OTHER MATERIAL IN ACCORDANCE WITH SECTION ECC 402.4.1 AND TABLE R405.2(1) FOR CEILINGS AND ATTICS.	Z-100, A-001, A-002, A-100, A-101 A-200, A-201 A-300, A-301 A-400, A-500, A-600, A-700, A-701 A-800,	IA6: AIR SEALING – VISUAL INSPECTION OPTION: VISUAL INSPECTION OF OPENINGS AND PENETRATIONS IN THE BUILDING ENVELOPE TO VERIFY THAT THEY ARE PROPERLY SEALED, IN ACCORDANCE WITH SECTION R402.4.1 and TABLE R402.4.1.1 AND APPROVED DRAWINGS.

SPECIAL / PROGRESS INSPECTIONS

TYPE	SPECIAL / PROGRESS INSPECTION ITEMS	RESPONSIBLE PARTY
TR1	SPECIAL INSPECTION ITEMS	
	STRUCTURAL STABILITY-EXISTING BUILDINGS - BC1704.20.1	
	FIRE-RESISTANT PENETRATIONS AND JOINTS - BC1704.27	
	PROGRESS INSPECTION ITEMS	
	ENERGY CODE COMPLIANCE INSPECTIONS - BC110.3.5;	
	FINAL 28-116.2.4.2, BC 110.5, DIRECTIVE 14 OF 1975, AND 1 RCNY SEC.101-10	

ENERGY CODE PROGRESS INSPECTION

REQUIRED FOR APPLICATIONS WHERE ENERGY CODE COMPLIANCE PROGRESS INSPECTION IS MARKED "YES" ON TR-1

TYPE	INSPECTION ITEMS	RESPONSIBLE PARTY
TR8	AIR SEALING AND INSULATION - VISUAL (IA6), (IIA6)	

* FOR COMPLIANCE WITH NYCECC & RCNY §5000-01 (h) (1)

TENANT SAFETY NOTES

PER §28-104.8.4 TENANT PROTECTION PLAN, THE ELEMENTS OF THE TENANT PROTECTION PLAN FOR INSTALLATION OF SOLAR PANEL ON EXISTING ROOF ARE AS FOLLOWS:

1. EGRESS
THE PROPERTY WILL BE OCCUPIED DURING INSTALLATION. THROUGHOUT THE INSTALLATION OF SOLAR PANELS ON THE ROOF AND EQUIPMENT (INVERTER(S) AND AC CUT OFF SWITCH) ON OUTSIDE WALL, ALL MEANS OF EGRESS FROM THE BUILDING WILL BE FREE OF ANY OBSTRUCTION SUCH AS BUILDING MATERIAL, DEBRIS, ETC.
ALL ENTRANCE DOORS AND LIGHTS IN PUBLIC HALLWAYS WILL BE KEPT IN WORKING ORDER TO ENSURE PROPER EGRESS IN CASE OF AN EMERGENCY.

2. FIRE SAFETY
THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ADEQUATE FIRE SAFETY TO THE TENANTS IN ACCORDANCE WITH THE FIRE DEPARTMENT AND THE BUILDING DEPARTMENT.
INSTALLATION TO COMPLY WITH 2014 NYC FIRE CODE INCLUDING BUT NOT LIMITED TO SECTION 504.
A CLEAR PATH OF NOT LESS THAN 6 FEET HORIZONTAL WIDTH AND 9 FEET IN HEIGHT SHALL BE PROVIDED FROM THE FRONT OF THE BUILDING TO THE REAR OF THE BUILDING AND FROM ONE SIDE OF THE BUILDING TO THE OTHER FOR EACH 100 LINEAR FEET OF ROOFTOP WIDTH AND DEPTH.

SUCH PATH SHALL COMPLY WITH THE FOLLOWING REQUIREMENTS:

1. SUCH CLEAR PATH SHALL BE ACCESSIBLE FROM EACH ROOFTOP PERIMETER ACCESS LANDING REQUIRED PURSUANT TO FC504.4.3.
2. SUCH CLEAR PATH SHALL AFFORD REASONABLE ACCESS TO BULKHEAD DOORS, FIRE ESCAPES, ACCESS LADDERS, COCKLOFT, VENTS, SKYLIGHTS, SCUTTLES AND SHAFTS. SUCH ACCESS SHALL INCLUDE, TO THE MAXIMUM EXTENT PRACTICABLE, 3-FEET CLEARANCE ON THREE SIDES OF THE SKYLIGHT OR SCUTTLE.
3. A CONDUIT OR PIPE MAY CROSS SUCH CLEAR PATH IN ACCORDANCE WITH FC504.4.7.
4. ANY LAWFUL FENCE OBSTRUCTING SUCH CLEAR PATH SHALL BE PROVIDED WITH A STANDARD 3-FOOT-WIDE GATE, WHICH MAY BE SECURED BY PADLOCK OR CHAIN CAPABLE OF BEING CUT BY STANDARD BOLT CUTTERS, OR SECURED BY OTHER APPROVED DEVICE.
5. WHEN THE MAIN BUILDING ROOFTOP HAS MORE THAN ONE LEVEL, A FIXED LADDER OR OTHER APPROVED MEANS SHALL BE PROVIDED TO AFFORD ACCESS ALONG THE CLEAR PATH FROM ONE ROOF LEVEL TO THE NEXT, EXCLUDING ANY HEIGHT DIFFERENTIAL BETWEEN LEVELS EXCEEDING ONE STORY OR 16 FEET, AND ANY LEVEL WITH A ROOFTOP AREA THAT IS LESS THAN 6 FEET IN ANY DIMENSION.

3. HEALTH REQUIREMENTS
ALL DEBRIS WILL BE DISPOSED OF IN A LEGAL AND PROPER MANNER, NO DEBRIS WILL BE LEFT ON THE SITE. DUST SHALL BE CONTROLLED WITH THE USE OF DROP CLOTHS AND SHOULD BE REMOVED AFTER COMPLETION OF WORK EACH DAY. DISPOSAL OF CONSTRUCTION DEBRIS MUST BE DONE IN THE SAFE MANNER. MAINTAIN SANITARY FACILITIES. CONTROL PESTS AT ALL TIMES. CONTRACTOR MUST COMPLY WITH APPLICABLE LAWS RELATING TO LEAD AND ASBESTOS. IF OBSERVED IMMEDIATELY CONTACT OWNER OR ARCHITECT.

4. COMPLIANCE WITH HOUSING STANDARDS
ELECTRIC, GAS, OR OTHER UTILITIES ARE NOT TO BE INTERRUPTED. BUILDING SECURITY TO BE MAINTAINED TO PREVENT UNAUTHORIZED PERSONS FROM ENTERING THE BUILDING.
THE REQUIREMENTS OF THE NY CITY HOUSING MAINTENANCE CODE AND MD LAW SHALL BE STRICTLY OBSERVED.

5. STRUCTURAL SAFETY
NO STRUCTURAL WORK SHALL BE DONE THAT MAY ENDANGER THE OCCUPANTS.
IF THERE ARE TO BE ANY STRUCTURAL CHANGES REQUIRED DURING THIS ALTERATION OR BUILDING NOTICE, A WRITTEN NOTIFICATION WILL BE SENT TO THE ARCHITECT TO EXAMINE FOR ANY RISK OF ACCIDENTS WHICH MAY OCCUR DURING CONSTRUCTION.
SYSTEM COMPONENTS SHALL BE RATED FOR 110 MPH WIND LOADS, EXPOSURE & DESIGN CRITERIA. ROOF SHALL NOT BE OVERLOADED BEYOND WHAT PERMITTED.

6. NOISE RESTRICTIONS
CONSTRUCTION HOURS WILL BE DURING NORMAL BUSINESS HOURS. THERE WILL BE NO CONSTRUCTION WORK DURING THE EVENING HOURS.
CONSTRUCTION NOISE WILL BE CEASED AFTER NORMAL WORKING HOURS, LIMIT NOISE TO ACCEPTABLE LEVELS

PROPERTY ADDRESS:
Owner Name
Plat or House #, Street Name
City, State - Zip code

INSTALLER:
Installer Name
Plat or House #, Street Name
City, State - Zip code

TITLE: ENERGY ANALYSIS, INSPECTION ITEMS, STATEMENT & NOTES		Rev	Designed By	Checked By	Date	Sheet No A-001.00	Seal & Signature:
		-	-	-	-		
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PHASE :	-						
LOT:	-					Package ID / R	
ZONING:	-					---/--/--/R0	
MAP:	-						

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BUILDING & ROOFTOP ACCESS NOTES: (SECTION FC 504)

504.1 BUILDING ACCESS:
EXTERIOR DOORS AND OPENINGS REQUIRED BY THIS CODE OR THE CONSTRUCTION CODES, INCLUDING THE BUILDING CODE, SHALL BE MAINTAINED IN A MANNER THAT AFFORDS ACCESS BY FIREFIGHTING PERSONNEL IN ACCORDANCE WITH THE REQUIREMENTS OF THIS SECTION, CHAPTER 10, AND THE BUILDING CODE. AN APPROVED ACCESS WALKWAY LEADING FROM FIRE APPARATUS ACCESS ROADS TO EXTERIOR OPENINGS SHALL BE PROVIDED WHEN REQUIRED BY THE COMMISSIONER.

504.1.1 FRONTAGE SPACE OBSTRUCTIONS:
OBSTRUCTIONS, SUCH AS PLANTERS, FENCES AND BOLLARDS, SHALL NOT BE PLACED IN THE REQUIRED FRONTAGE SPACE UNLESS THEY HAVE BEEN APPROVED BY THE COMMISSIONER OF BUILDINGS, THE COMMISSIONER OF TRANSPORTATION, OR THE COMMISSIONER, AS APPLICABLE.

504.2 MAINTENANCE OF EXTERIOR DOORS AND OPENINGS:
EXTERIOR DOORS AND THEIR FUNCTION SHALL NOT BE ELIMINATED WITHOUT PRIOR APPROVAL OF THE NEW YORK CITY DEPARTMENT OF BUILDINGS. EXTERIOR DOORS THAT HAVE BEEN RENDERED NONFUNCTIONAL AND THAT RETAIN A FUNCTIONAL DOOR EXTERIOR APPEARANCE SHALL HAVE A SIGN AFFIXED TO THE EXTERIOR SIDE OF THE DOOR WITH THE WORDS THIS DOOR BLOCKED. THE SIGN SHALL CONSIST OF LETTERS HAVING A PRINCIPAL STROKE OF NOT LESS THAN 0.75 INCH (19.1 MM) WIDE AND AT LEAST 6 INCHES (152 MM) HIGH ON A CONTRASTING BACKGROUND. REQUIRED DEPARTMENT ACCESS DOORS SHALL NOT BE OBSTRUCTED OR ELIMINATED. EXIT AND EXIT ACCESS DOORS SHALL COMPLY WITH THE REQUIREMENTS OF CHAPTER 10 AND THE CONSTRUCTION CODES, INCLUDING THE BUILDING CODE. ACCESS DOORS FOR HIGH-PILED COMBUSTIBLE STORAGE SHALL COMPLY WITH THE REQUIREMENTS OF SECTION 2306.6.1.

504.3 STAIRWAY ACCESS TO ROOF:
STAIRWAY ACCESS TO THE ROOF SHALL BE IN ACCORDANCE WITH CHAPTER 10 AND THE CONSTRUCTION CODES, INCLUDING THE BUILDING CODE. SUCH STAIRWAY SHALL BE MARKED AT STREET AND FLOOR LEVELS WITH A SIGN INDICATING THAT THE STAIRWAY CONTINUES TO THE ROOF. WHERE ROOFS ARE USED FOR ROOF GARDENS OR FOR OTHER LAWFUL PURPOSES, STAIRWAYS SHALL BE PROVIDED AS REQUIRED FOR SUCH OCCUPANCY CLASSIFICATION.

504.4 ROOFTOP ACCESS AND OBSTRUCTIONS:
THE ROOFTOPS OF BUILDINGS 100 FEET (30 480 MM) OR LESS IN HEIGHT, EXCEPT ROOFTOPS WITH A SLOPE EXCEEDING 20° FROM THE HORIZONTAL, SHALL BE MAINTAINED IN A MANNER THAT AVOIDS OR MINIMIZES OBSTRUCTIONS TO ACCESS FOR FIREFIGHTING OPERATIONS. FOR PURPOSES OF THIS SECTION ONLY, "ROOFTOP" SHALL INCLUDE ROOFTOPS OF BUILDING SETBACKS, AND "OBSTRUCTION" SHALL MEAN ANY FIXTURE OR OTHER ITEM THAT IS NOT READILY MOVABLE BY A PERSON WITHOUT THE USE OF TOOLS OR EQUIPMENT, INCLUDING AIR CONDITIONING SYSTEMS, BILLBOARDS AND OTHER SIGNS, CELLULAR ANTENNA EQUIPMENT, COOLING TOWERS, FUEL OIL STORAGE TANKS, GENERATORS, HEATING SYSTEMS, PLANTERS, SOLAR PANELS, VENTILATION SYSTEM DUCTS, INTAKES AND EXHAUSTS, AND WINDOW CLEANING EQUIPMENT, BUT SHALL NOT INCLUDE NONMETALLIC3 DECKING.

504.4.1 ROOFTOP ACCESS:
ACCESS TO BUILDING ROOFTOPS SHALL BE PROVIDED AS FOLLOWS:
1. FOR EACH 12 LINEAR FEET (3658 MM) OF BUILDING PERIMETER ACCESSIBLE FROM THE FRONTAGE SPACE OF THE BUILDING AND FROM ANY OTHER EXPOSURE ACCESSIBLE TO FIRE APPARATUS, A MINIMUM CLEARANCE OF 6 FEET (1829 MM) IN WIDTH AND 6 FEET (1829 MM) IN DEPTH FROM ANY OBSTRUCTION SHALL BE PROVIDED AT THE PARAPET WALL OR OTHER PERIMETER OF THE ROOFTOP. WHERE SUCH BUILDING PERIMETER IS 24 LINEAR FEET (7315 MM) OR GREATER, BUT LESS THAN 36 LINEAR FEET (10 973 MM), THE REQUIRED CLEARANCE OPENINGS SHALL BE SEPARATED BY A DISTANCE LESS THAN 12 LINEAR FEET (3658 MM). WHERE SUCH BUILDING PERIMETER IS 36 LINEAR FEET (10 973 MM) OR GREATER, THE REQUIRED CLEARANCE OPENINGS MAY BE CONTIGUOUS, PROVIDED, HOWEVER, THAT SUCH CONTIGUOUS OPENINGS SHALL NOT EXCEED 12 LINEAR FEET (3658 MM) AND SHALL BE SEPARATED FROM OTHER REQUIRED CLEARANCE OPENINGS BY A DISTANCE OF NOT LESS THAN 12 LINEAR FEET (3658 MM). EACH EXPOSURE ACCESSIBLE BY FIRE APPARATUS MAY BE TREATED SEPARATELY FOR PURPOSES OF LOCATING CLEARANCE OPENINGS AND OTHERWISE COMPLYING WITH THE REQUIREMENTS OF THIS PROVISION.
2. A MINIMUM CLEARANCE OF 6 FEET (1829 MM) IN ALL DIRECTIONS SHALL BE PROVIDED FROM EACH DOOR OPENING ONTO A ROOFTOP FROM A DWELLING UNIT, STAIRWAY, BULKHEAD, OR OTHER OCCUPIED SPACE OR MEANS OF EGRESS, AS MEASURED FROM THE DOOR HINGE.
3. A MINIMUM CLEARANCE OF 3 FEET (914 MM) IN ALL DIRECTIONS SHALL BE PROVIDED FROM ANY FIRE ESCAPE OR ROOFTOP ACCESS LADDER, AS MEASURED FROM EACH SIDE OF THE LADDER OR LANDING.
4. EACH EXPOSURE ACCESSIBLE BY FIRE APPARATUS MAY BE TREATED SEPARATELY FOR PURPOSES OF LOCATING CLEARANCE OPENINGS AND OTHERWISE COMPLYING WITH THE REQUIREMENTS OF THIS PROVISION.
5. AWNINGS, SUN CONTROL DEVICES, SOLAR PANELS OR OTHER STRUCTURES AFFIXED TO AN EXTERIOR BUILDING WALL BELOW THE ROOF LINE SHALL NOT OBSTRUCT FIRE APPARATUS AERIAL LADDER ACCESS TO THE ROOFTOP PERIMETER ACCESS LOCATIONS. 6. SCAFFOLDING OBSTRUCTING ROOFTOP ACCESS LOCATIONS SHALL BE DESIGNED TO PROVIDE SECURE LANDINGS AT SUCH LOCATIONS IN AN APPROVED MANNER.

504.4.2 ROOFTOP ACCESS SIGNS AND MARKINGS:

WHERE REQUIRED BY THE DEPARTMENT, A SIGN, DECAL OR APPROVED MARKING SHALL BE PROVIDED ON THE EXTERIOR WALL OF A BUILDING, AT AN APPROVED LOCATION ON A LOWER STORY, DIRECTLY BELOW THE ROOFTOP PERIMETER ACCESS LANDINGS, TO IDENTIFY THE LOCATION OF SUCH ROOFTOP ACCESS. THE DEPARTMENT MAY REQUIRE SUCH SIGNS OR MARKINGS WHEN ROOFTOP CONDITIONS NOT APPARENT FROM THE STREET MAKE ROOFTOP ACCESS UNSAFE AT LOCATIONS OTHER THAN THE APPROVED BUILDING PERIMETER ACCESS LANDINGS, OR DO NOT ALLOW FOR ACCESS TO THE ROOF.

504.4.3 ROOFTOP ACCESS LANDINGS:

AT EACH ROOFTOP PERIMETER ACCESS LOCATION, THERE SHALL BE A SAFE LANDING AREA NOT LESS THAN 6 FEET (1829 MM) IN ANY DIMENSION, CONNECTED TO THE CLEAR PATH REQUIRED BY FC504.4.4. THE LANDING SHALL NOT BE OBSTRUCTED BY A FENCE, EXCEPT AS APPROVED. IF APPROVED, SUCH FENCE SHALL BE PROVIDED WITH A STANDARD 3-FOOT-WIDE (914 MM) GATE THAT SWINGS INWARD. SUCH GATE MAY BE SECURED BY A PADLOCK AND CHAIN CAPABLE OF BEING CUT BY STANDARD BOLT CUTTERS FROM EITHER SIDE OF THE GATE, OR SECURED BY OTHER APPROVED DEVICE.

504.4.4 ROOFTOP CLEAR PATH:

A CLEAR PATH OF NOT LESS THAN 6 FEET (1829 MM) HORIZONTAL WIDTH AND 9 FEET (2743 MM) IN HEIGHT SHALL BE PROVIDED FROM THE FRONT OF THE BUILDING TO THE REAR OF THE BUILDING AND FROM ONE SIDE OF THE BUILDING TO THE OTHER FOR EACH 100 LINEAR FEET (30 480 MM) OF ROOFTOP WIDTH AND SUCH PATH SHALL COMPLY WITH THE FOLLOWING **REQUIREMENTS:**

1. SUCH CLEAR PATH SHALL BE ACCESSIBLE FROM EACH ROOFTOP PERIMETER ACCESS LANDING REQUIRED PURSUANT TO FC504.4.3.
2. SUCH CLEAR PATH SHALL AFFORD REASONABLE ACCESS TO BULKHEAD DOORS, FIRE ESCAPES, ACCESS LADDERS, COCKLOFT VENTS, SKYLIGHTS, SCUTTLES AND SHAFTS. SUCH ACCESS SHALL INCLUDE, TO THE MAXIMUM EXTENT PRACTICABLE, 3-FEET (914 MM) CLEARANCE ON THREE SIDES OF THE SKYLIGHT OR SCUTTLE.
3. A CONDUIT OR PIPE MAY CROSS SUCH CLEAR PATH IN ACCORDANCE WITH FC504.4.7.
4. ANY LAWFUL FENCE OBSTRUCTING SUCH CLEAR PATH SHALL BE PROVIDED WITH A STANDARD 3-FOOT-WIDE (914 MM) GATE, WHICH MAY BE SECURED BY PADLOCK OR CHAIN CAPABLE OF BEING CUT BY STANDARD BOLT CUTTERS, OR SECURED BY OTHER APPROVED DEVICE.
5. WHEN THE MAIN BUILDING ROOFTOP HAS MORE THAN ONE LEVEL, A FIXED LADDER OR OTHER APPROVED MEANS SHALL BE PROVIDED TO AFFORD ACCESS ALONG THE CLEAR PATH FROM ONE ROOF LEVEL TO THE NEXT, EXCLUDING ANY HEIGHT DIFFERENTIAL BETWEEN LEVELS EXCEEDING ONE STORY OR 16 FEET (4077 MM), AND ANY LEVEL WITH A ROOFTOP AREA THAT IS LESS THAN 6 FEET (1829 MM) IN ANY DIMENSION.
6. ON AN "H"-SHAPED BUILDING OR OTHER BUILDING WHOSE IRREGULAR CONFIGURATION RENDERS A SINGLE CLEAR PATH INADEQUATE TO PROVIDE ACCESS TO EACH WING OF THE BUILDING OR OTHER ROOFTOP AREA, THE COMMISSIONER MAY REQUIRE ONE OR MORE ADDITIONAL CLEAR PATHS TO PROVIDE ADEQUATE ACCESS TO SUCH ROOFTOP AREAS.

504.4.5 ROOFTOP CLEAR PATH PROTECTION:
ADEQUATE PROTECTION, IN THE FORM OF A SECURELY AFFIXED PROTECTIVE RAILING OR BARRIER THAT IS 42 INCHES (1067 MM) ABOVE THE ROOF SURFACE IN HEIGHT ALONG THE CLEAR PATH, SHALL BE PROVIDED FOR ANY SHAFT, BUILDING PERIMETER OR ELEVATION ADJOINING THE CLEAR PATH OR ROOFTOP PERIMETER ACCESS LANDING (EXCEPT THE ROOFTOP ACCESS LANDING ITSELF).
EXCEPTION: HEIGHT DIFFERENTIALS OF 6 FEET (1829 MM) OR LESS.

504.4.6 REQUIRED ROOFTOP CLEARANCES:
A MINIMUM CLEARANCE OF 6 FEET (1829 MM) IN ALL DIRECTIONS SHALL BE PROVIDED FROM EACH DOOR OPENING ONTO A ROOFTOP FROM A DWELLING UNIT, STAIRWAY, BULKHEAD, OR OTHER OCCUPIED SPACE OR MEANS OF EGRESS, AS MEASURED FROM THE DOOR HINGE. A MINIMUM CLEARANCE OF 3 FEET (914 MM) IN ALL DIRECTIONS SHALL BE PROVIDED FROM ANY FIRE ESCAPE OR ROOFTOP ACCESS LADDER, AS MEASURED FROM EACH SIDE OF THE LADDER OR LANDING.

504.4.7 ROOFTOP CONDUITS AND PIPING:
TO THE MAXIMUM EXTENT PRACTICABLE, CONDUITS, INCLUDING CABLE TRAYS, AND PIPING, SHALL BE INSTALLED AT ROOFTOP LOCATIONS WHERE THEY DO NOT OBSTRUCT ROOFTOP ACCESS LANDINGS, CLEAR PATH OR REQUIRED CLEARANCES. IF IT IS IMPRACTICABLE TO AVOID THESE AREAS, CONDUITS AND PIPING SHALL BE DESIGNED AND INSTALLED TO FACILITATE ACCESS AND MINIMIZE TRIPPING HAZARDS. STEPS OR RAMPS (OR PLATFORMS WITH STEPS, RAMPS OR LADDERS) SHALL BE PROVIDED THAT ARE CONSTRUCTED OF NONCOMBUSTIBLE MATERIAL, EQUIPPED WITH RAILINGS, AND DESIGNED TO ALLOW ANY CONDUIT OR PIPING INSTALLATIONS THAT EXCEED 1 FOOT (305 MM) IN HEIGHT ABOVE THE ROOF SURFACE, OR MORE THAN 24 INCHES (610 MM) IN WIDTH, TO BE READILY TRAVERSED. STEPS, RAMPS, PLATFORMS AND LADDERS SHALL NOT BE PLACED IN AREAS OR IN A MANNER THAT WOULD OBSTRUCT ANY DOOR OR MEANS OF EGRESS. ALL CONDUITS AND PIPING INSTALLATIONS SHALL BE COLOR-CODED WITH CONTINUOUS, DURABLE AND WEATHERPROOF REFLECTIVE OR LUMINESCENT MARKINGS AS FOLLOWS, AND FOR CONDUIT AND PIPING INSTALLED AFTER JULY 1, 2014, SHALL BE CONTINUOUSLY LABELED IN AN APPROVED MANNER TO INDICATE ITS CONTENTS:
1. HIGH VOLTAGE WIRING – RED.
2. LOW VOLTAGE WIRING – ORANGE.
3. NATURAL GAS PIPING – YELLOW.
4. OTHER COMPRESSED GAS PIPING – YELLOW, LABELED AT REGULAR INTERVALS WITH THE TYPE OF GAS.
5. FUEL OIL PIPING – YELLOW WITH BLACK STRIPES

SECTION FC 512.4 PHOTOVOLTAIC SOLAR PANEL INSTALLATIONS NOTES

512.3 PITCHED-ROOFED BUILDINGS AND STRUCTURES 100 FEET OR LESS IN HEIGHT:

SOLAR PANEL INSTALLATIONS SHALL BE DESIGNED, INSTALLED, OPERATED AND MAINTAINED IN ACCORDANCE WITH THIS SECTION ON ROOFTOPS OF BUILDINGS AND STRUCTURES 100 FEET (30 480 MM) OR LESS IN HEIGHT WITH A SLOPE EXCEEDING 20 DEGREES, EXCEPT DETACHED GROUP U BUILDINGS AND STRUCTURES. 512.3.1 HIP ROOFS. SOLAR PANEL INSTALLATIONS SHALL PROVIDE A 3 FOOT (914 MM) WIDE CLEAR ACCESS AREA ALONG THE RIDGE ON EACH ROOF SLOPE UPON WHICH SOLAR PANELS ARE INSTALLED. 512.3.2 VENTILATION. SOLAR PANELS SHALL NOT BE INSTALLED CLOSER THAN 3 FEET (914 MM) TO THE RIDGE LINE.

512.4 PHOTOVOLTAIC SOLAR PANEL INSTALLATIONS:

PHOTOVOLTAIC SOLAR PANEL INSTALLATIONS SHALL BE DESIGNED, INSTALLED, OPERATED AND MAINTAINED IN COMPLIANCE WITH THE REQUIREMENTS OF THIS SECTION.

512.4.1 LOCATION OF PHOTOVOLTAIC SOLAR PANEL INSTALLATIONS ON PITCHED ROOFS:

DIRECT CURRENT CONDUIT, WIRING SYSTEMS, AND RACEWAYS FOR PHOTOVOLTAIC CIRCUITS INSTALLED ON PITCHED ROOFS SUBJECT TO THE REQUIREMENTS OF FC512.3 SHALL BE LOCATED ALONG HIPS AND VALLEYS, AWAY FROM THE RIDGE, AND ON OUTSIDE WALLS, TO MAXIMIZE VENTILATION OPPORTUNITIES. CONDUIT RUNS BETWEEN SUB-ARRAYS AND TO DIRECT CURRENT COMBINER BOXES SHALL BE INSTALLED IN A MANNER THAT MINIMIZES THE TOTAL AMOUNT OF CONDUIT ON THE ROOF BY TAKING THE SHORTEST PATH FROM THE ARRAY TO THE DIRECT CURRENT COMBINER BOX, EXCEPT AS NECESSARY TO MINIMIZE THE TRIPPING HAZARD. THE DIRECT CURRENT COMBINER BOXES SHALL BE LOCATED SUCH THAT CONDUIT RUNS ARE MINIMIZED IN THE PATHWAYS BETWEEN ARRAYS.

512.4.2 PHOTOVOLTAIC SOLAR PANEL INSTALLATION MARKINGS:

INDOOR AND OUTDOOR DIRECT CURRENT CONDUIT, ENCLOSURES, RACEWAYS, CABLE ASSEMBLIES, JUNCTION BOXES, COMBINER BOXES, & MAIN SERVICE & OTHER DISCONNECTS SHALL HAVE DURABLE, RETROREFLECTIVE &, IF OUTDOORS, WEATHERPROOF, MARKINGS, IN WHITE CAPITAL LETTERS WITH A HEIGHT OF NOT LESS THAN 3/8 INCH (9.5 MM) ON A RED **BACKGROUND, READING "WARNING: PHOTOVOLTAIC POWER** CONTINUOUS INSTALLATIONS, INCLUDING CONDUIT, RACEWAYS, ENCLOSURES AND CABLE ASSEMBLIES, SHALL BE MARKED EVERY 10 FEET (3048 WITHIN 1 FOOT (305 MM) OF ALL TURNS OR BENDS, AND WITHIN 1 FOOT (305 ABOVE AND BELOW ALL PENETRATIONS OF ROOF OR CEILING ASSEMBLIES AND ALL WALLS

PROPERTY ADDRESS:
Owner Name
Plat or House #, Street Name
City, State - Zip code

INSTALLER:
Installer Name
Plat or House #, Street Name
City, State - Zip code

TITLE: BUILDING & ROOFTOP ACCESS AND SOLAR PV INSTALLATION NOTES		Rev	Designed By	Checked By	Date	Sheet No A-002.00
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ZONING:	-					---/--/--/R0
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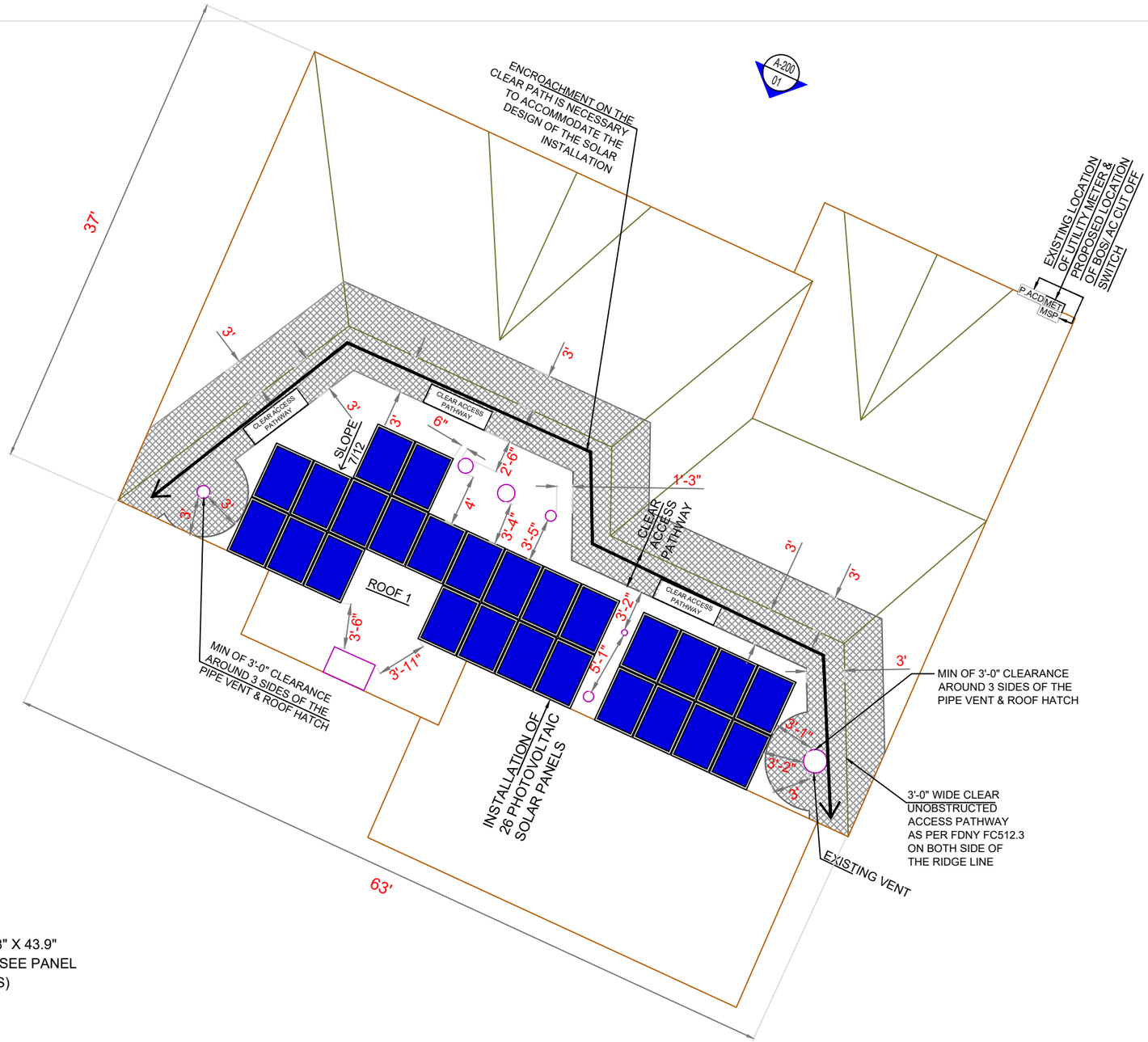
KGS Global Green

Seal & Signature:



LEGEND

- 3'-0" WIDE CLEAR ACCESS PATHWAY AS PER FDNY FC512.3
- (26) SOLARIA 370R-PD (370W) 63.8" X 43.9" PHOTOVOLTAIC SOLAR PANELS (SEE PANEL SPEC SHEET. FOR MORE DETAILS)
- FDNY PATH OF TRAVEL

ROOF 1
PITCH: 7/12

26 PANELS
ARRAY AREA 507 SF

PROPERTY ADDRESS:

Owner Name
Plat or House #, Street Name
City, State - Zip code

INSTALLER:

Installer Name
Plat or House #, Street Name
City, State - Zip code

ROOF PLAN

SCALE N.T.S

TITLE: ROOF PLAN		Rev	Designed By	Checked By	Date	Sheet No	Seal & Signature:
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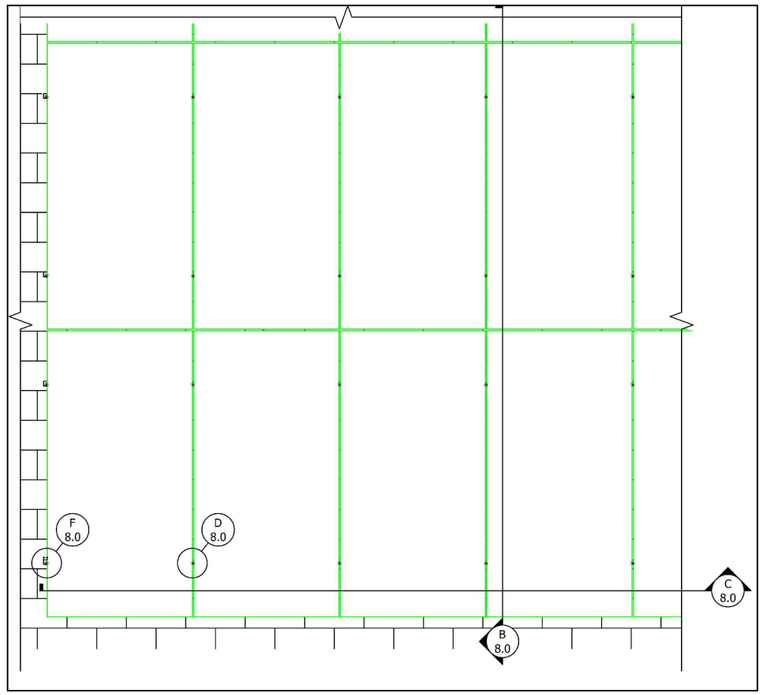
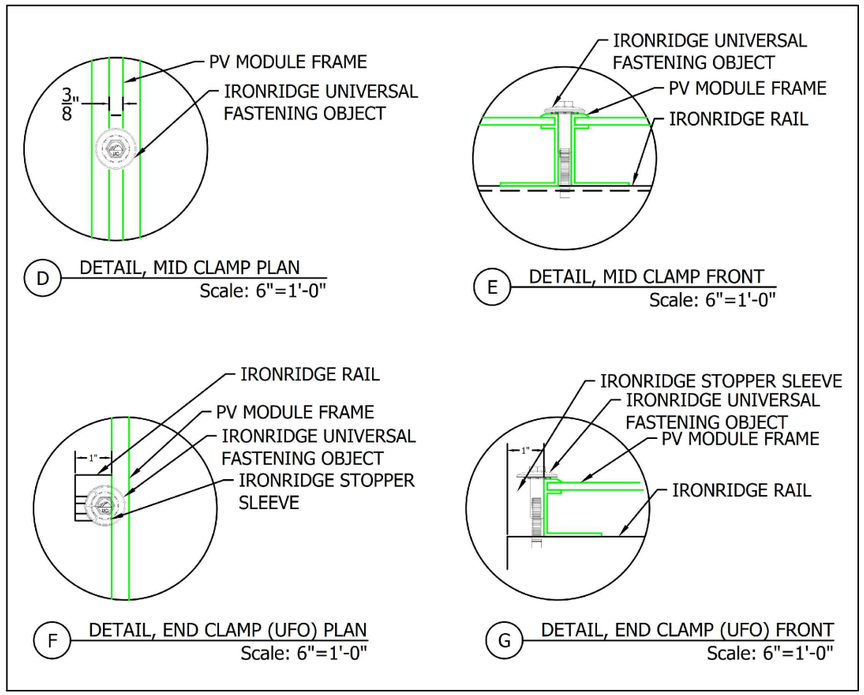


A PLAN VIEW DETAIL
SCALE N.T.S



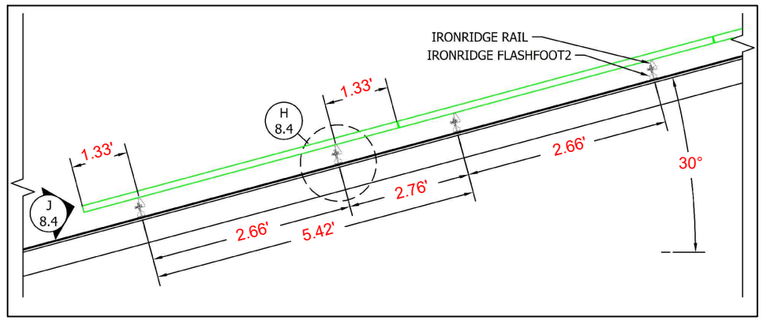
RACKING DETAILS
SCALE N.T.S

STATEMENT OF STRUCTURAL CERTIFICATION:

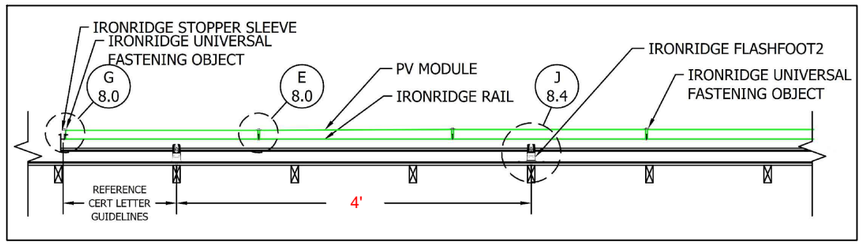
1. THE EXISTING ROOF STRUCTURE FOR THIS PROJECT, AS IS OR WITH THE STRUCTURAL REINFORCEMENT SPECIFIED HEREIN, HAS BEEN STRUCTURALLY ANALYZED AND HAS BEEN DETERMINED TO BE CAPABLE OF SUPPORTING THE LOADS IMPOSED BY THE INSTALLATION OF THE PROPOSED PV SOLAR PANEL SYSTEM AS DESCRIBED IN THESE DESIGN DOCUMENTS.
2. ALL PROPOSED WORK SHALL MEET THE STANDARDS SPECIFIED IN THE 2014 NEW YORK STATE RESIDENTIAL BUILDING CODE AND ALL OTHER APPLICABLE LOCAL AND STATE BUILDING AND FIRE CODES.
3. THIS INSTALLATION IS CAPABLE OF SUPPORTING SNOW LOADS EQUAL TO 30 PSF AND WIND LOADS EQUAL TO 100 MPH AS PER 2010 NYSRBC.
4. LAG SCREWS: 5/16" GALVANIZED,2.5" EMBEDMENT INTO TIMBER PROVIDE CHEMLINK M-1 SEALANT OR APPROVED EQUIVALENT AT LAG BOLT PENETRATION POINTS.

NOTE:

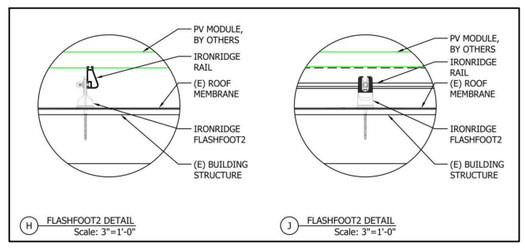
- NO ADDITIONAL STRUCTURAL WORK REQUIRED @ ROOF FOR INSTALLATION OF SOLAR PANELS.
- MICRO-INVERTERS ARE LOCATED ON THE ROOF BELOW THE SOLAR PANELS.
- AC DISCONNECT SWITCH MUST BE 'READILY ACCESSIBLE. TOP OF LEVER NO HIGHER THAN 2.0m/6'-7" ABOVE THE FLOOR OR PLATFORM. THIS FLOOR SURFACE MUST BE ACCESSIBLE WITHOUT THE USE OF LADDERS.



B RACKING ELEVATION DETAIL
SCALE N.T.S



C FRONT VIEW DETAIL
SCALE N.T.S



RACKING DETAILS
SCALE N.T.S

Roof Cover Type	: Shingle Roof
Rafter Size & (O.C)	: 2" X 4" & 16"
Roof Trusses (O.C)	: 23"

PROPERTY ADDRESS:
Owner Name
Plat or House #, Street Name
City, State - Zip code

INSTALLER:
Installer Name
Plat or House #, Street Name
City, State - Zip code

TITLE: ROOF DETAIL		Rev	Designed By	Checked By	Date	Sheet No
		-	-	-	-	A-101.00
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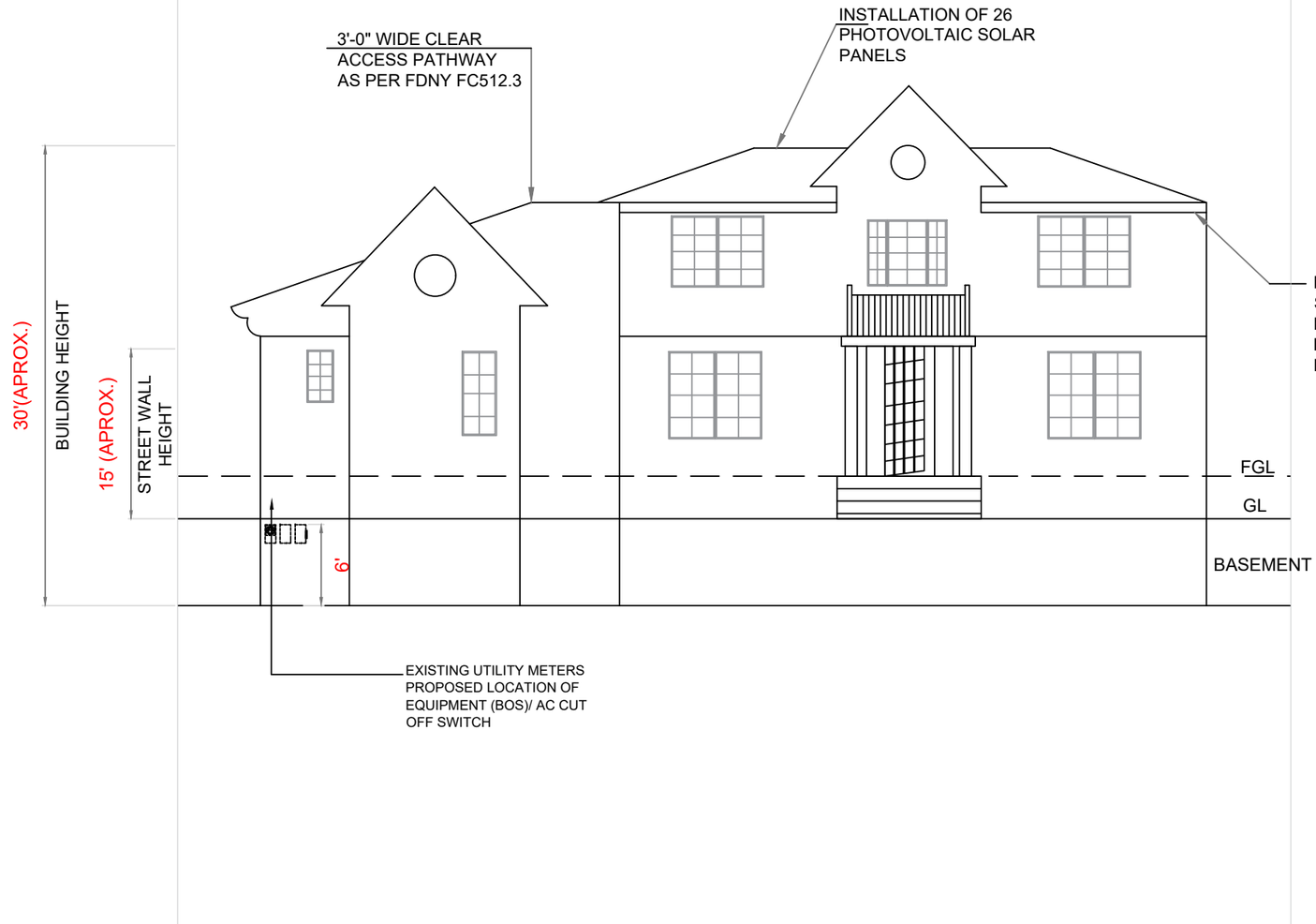
KGS Global Green

Seal & Signature:



NOTE:
AC DISCONNECT SWITCH MUST BE 'READILY ACCESSIBLE. TOP OF LEVER NO HIGHER THAN 2.0 M / 6'-7" ABOVE THE FLOOR OR PLATFORM.
THIS FLOOR SURFACE MUST BE ACCESSIBLE WITHOUT THE USE OF LADDERS.

SOLAR PANEL INSTALLATION COMPLIES WITH NYC ZONING RESOLUTION 23-62(m), 23-62 (m)

PROPERTY ADDRESS:

Owner Name
Plat or House #, Street Name
City, State - Zip code

INSTALLER:

Installer Name
Plat or House #, Street Name
City, State - Zip code

01 FRONT ELEVATION
SCALE N.T.S

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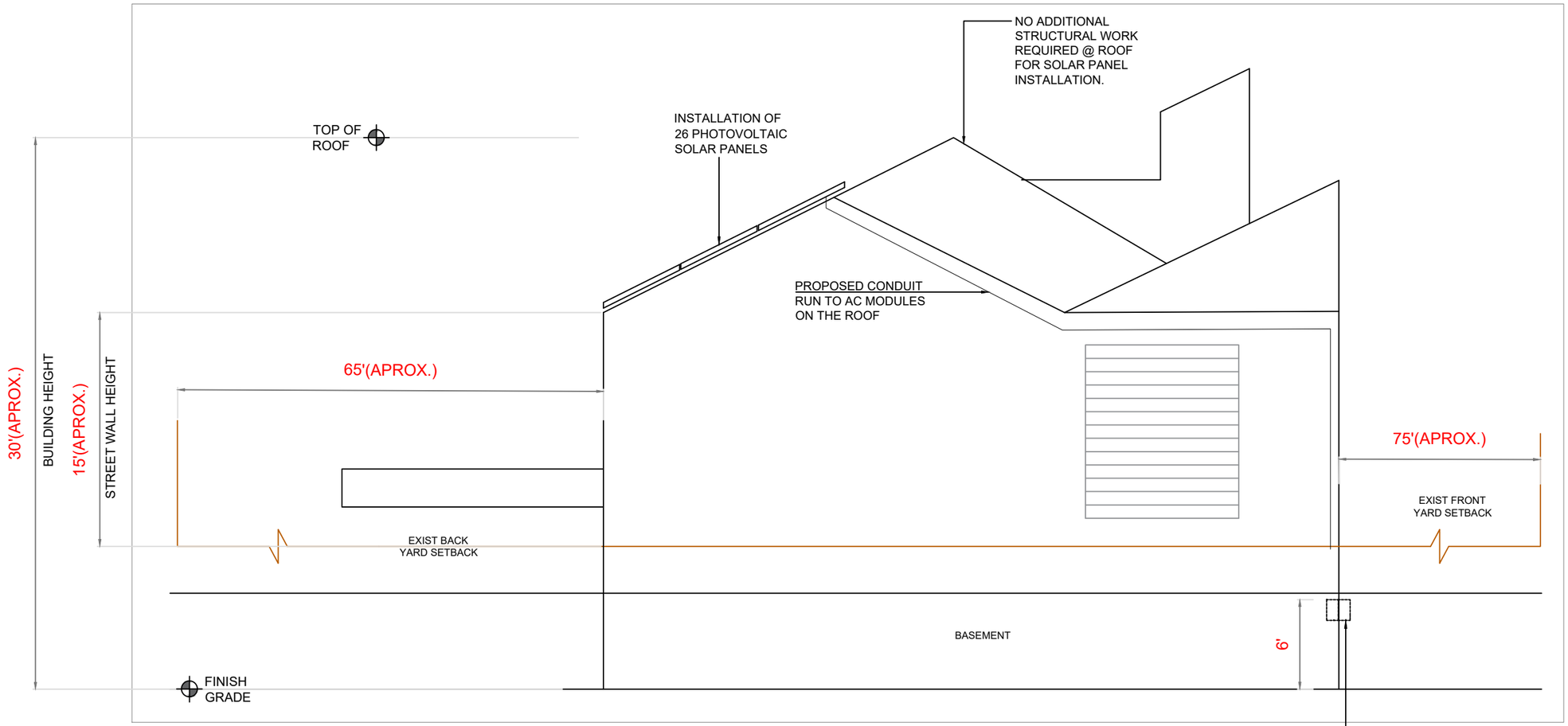
Seal & Signature:



02 SIDE ELEVATION
SCALE N.T.S

NOTE:
AC DISCONNECT SWITCH MUST BE 'READILY ACCESSIBLE. TOP OF LEVER NO HIGHER THAN 2.0 M / 6'-7" ABOVE THE FLOOR OR PLATFORM.
THIS FLOOR SURFACE MUST BE ACCESSIBLE WITHOUT THE USE OF LADDERS.

SOLAR PANEL INSTALLATION COMPLIES WITH NYC ZONING RESOLUTION 23-62(m), 23-62 (m)

PROPERTY ADDRESS:
Owner Name
Plat or House #, Street Name
City, State - Zip code

INSTALLER:
Installer Name
Plat or House #, Street Name
City, State - Zip code

TITLE: SIDE ELEVATION		Rev	Designed By	Checked By	Date	Sheet No
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KGS Global Green

Seal & Signature:

9.62 KW DC PROPOSED PV SYSTEM THREE LINE DIAGRAM

PV ARRAY (N)

Total No. of Strings : 2, Total No. of Modules : 26 (370W)

STRING-1 CONTAINING 13 MODULES AND 13 SOLAR EDGE P370 POWER OPTIMIZERS

STRING-2 CONTAINING 13 MODULES AND 13 SOLAR EDGE P370 POWER OPTIMIZERS

"INTEGRATED AUTOMATIC RAPID SHUTDOWN" INVERTER (N)

SOLAR EDGE
SE7600H-US

L1 L2 G N

JB (N)

JUNCTION BOX
NEMA 3R,
UL LISTED

GREEN - GROUND
WHITE - NEUTRAL
RED - L2
BLACK - L1

AC DISCONNECT (N)

240 VAC, 60A
NEMA 3R, UL Listed Fused
(2) 40A FUSES
Bussmann FRN-R Series
#10 TO #2 AWG (AL) /
#14 TO #2 AWG (CU)
PK3GTA Ground Kit

TO UTILITY GRID

Account Number: 11440-35022
Meter Number: 701305574

Bi-Directional
Utility Meter
1-Ph, 240V

Main Service
Disconnect
240V, 200A

200A

40A

Conduit Size: 3/4" EMT Min
(4)#10 AWG PV Wire
(1)#10 AWG Ground

Conduit Size: 3/4" EMT Min
(3)#8 AWG THWN-2
(1)#10 AWG Ground

Conduit Size: 3/4" EMT Min
(3)#8 AWG THWN-2
(1)#10 AWG Ground

Existing
Grounding
Electrode
System

MAIN SERVICE PANEL (E)

240V, 200A Rated

(N)-NEW
(E)-EXISTING

Module Rating Specs		
SOLARIA		
370R-PD		
Pmax -	370	Wp
Vmp -	40.2	V
Imp -	9.2	A
Voc -	48.3	V
Isc -	9.6	A

Inverter Rating Specs		
SOLAREDGE	SE7600H-US	
Nominal Input	20	A DC
Max.Short Circuit I/P	45	A DC
Output Voltage	240	V AC
Imax	32	A AC
Inec	40	A (@125%)
Outdoor	NEMA 3R	Enclosure
UL1741 / IEEE 1547		

PROPERTY ADDRESS:

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Installer Name
Plat or House #, Street Name
City, State - Zip code

TITLE:	Rev	Designed By	Checked By	Date	Sheet No
THREE LINE DIAGRAM	-	-	-	-	A-300.00
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MAP: -					

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ELECTRICAL CALCULATION :

WIRING AND CONDUIT SCHEDULE

DC SCHEDULE

ITEM		DESCRIPTION	ID	QTY	Voc (V)	Vmpp (V) STC	Impp (A) STC	ISC (A) STC	Max Circuit Current (A)	Nominal Power	Minimum Ampacity (A)	Adjusted Ampacity (A)	OCPD Rating (A)	Multiple Conductor Derate	Temperature Derate	Max One Way Length (ft)	Wire Size	Wire Ampacity (A)	Derated Ampacity (A)	Ground	Wire Type	R/1000FT	V Loss%	Temp Max	Total No Of Conductors	No. Of Current Carrying Conductors	Conduit
1	MODULE	SOLARIA		26	48.3	40.2	9.2	9.6	12.00	370	15.0	16.0	20	1.00	0.76	3.3	#12 AWG	30	22.8	#6 Bare	PV	1.98	0.02%	52 C	2	2	N/A
2	STRING WIRING	MODULE TO POWER OPTIMIZERS (e.g: PV MODULES CONNECTED IN SERIES FOR ONE STRING)	A	2	627.9	522.6	9.2	9.6	12.00	4810	15.0	19.9	20	0.80	0.76	10	#10 AWG	40	24.32	#10 AWG	PV Wire	1.24	0.09%	52 C	5	4	3/4" EMT Min
3		POWER OPTIMIZERS TO JUNCTION BOX TO INVERTER	B	2	627.9	522.6	9.2	9.6	12.00	4810	15.0	19.9	20	0.80	0.76	100	#10 AWG	40	24.32	#10 AWG	PV Wire	1.24	0.87%	52 C	5	4	3/4" EMT Min
							Total Nominal Power			9620												DC DROP	0.98%				

AC SCHEDULE

ITEM		DESCRIPTION	ID	QTY	Voltage (V)	Max Circuit Current (A)	Power	Minimum Ampacity (A)	Adjusted Ampacity (A)	OCPD Rating (A)	Multiple Conductor Derate	Temperature Derate	Max One Way Length (ft)	Wire Size	Wire Ampacity (A)	Derated Ampacity (A)	Ground	Wire Type	R/1000FT	V Loss%	Temp Max	Total No Of Conductors	No. Of Current Carrying Conductors	Conduit
4	AC WIRING	INVERTER TO AC DISCONNECT	C	1	240	32	7600	40.0	42.6	40	1.00	0.96	5	#8 AWG	55	52.8	#10 AWG	THWN-2	0.78	0.05%	30 C	4	2	3/4" EMT Min
5		AC DISCONNECT TO MAIN SERVICE PANEL	D	1	240	32	7600	40.0	42.6	40	1.00	0.96	100	#8 AWG	55	52.8	#10 AWG	THWN-2	0.78	1.04%	30 C	4	2	3/4" EMT Min
						Total Nominal Power	7600												AC DROP	1.09%				

BILL OF MATERIAL

REF. DES.	QTY.	MANUFACTURER	MODEL NUMBER	DESCRIPTION						
SOLAR MODULES	26	SOLARIA	370R-PD	SOLAR PANEL	370	W	1000	V (UL)		
		NOTES: 1. TYPE-1 UL 1703 class C								
INVERTER	1	SOLAREDGE	SE7600H-US	INVERTER	7.6	Kw	NEMA 3R		240	V AC
		NOTES: 1. DC INPUT WIRE RANGE (2) #12 to #2; AC OUTPUT WIRE RANGE (3) #12								
MSP	1	TBD	TBD	MAIN SERVICE PANEL, NEMA 3R ENCLOSURE	200	A	1	Ph	240	V AC
AC DISCONNECT	1	SQUARE D	TBD	AC DISCONNECT	60	A				
		NOTES: 1. USED AS PV UTILITY/SERVICE DISCONNECT 2. LOCKABLE HEAVY DUTY SWITCH WITH VISIBLE CONTACTS, UL LISTED								
AC JUNCTION BOX	1	TBD	TBD	AC JUNCTION BOX	600	V				
AC COMBINER PANEL	1	TBD	COMBINER PANEL	NEMA 3R ENCLOSURE	150	A	1	Ph	240	V AC

System Configuration		
Number of strings	2	No's
Number of Modules	26	No's
Modules Per string	2 X 13	
Number of Inverter	1	No's
Module Model	370R-PD	
Inverter Model	SE7600H-US	
PV Service Disconnect	40	A
DC Watts STC	9620	W
Max AC output Current	32	A
Operating AC Voltage	240	V

Inverter Rating Specs		
SOLAREDGE	SE7600H-US	
Nominal Input	20	A DC
Max.Short Circuit I/P	45	A DC
Output Voltage	240	V AC
Imax	32	A AC
Inec	40	A (@125%)
Outdoor	NEMA 3R	Enclosure
UL1741 / IEEE 1547		

Module Rating Specs		
SOLARIA		
370R-PD		
Pmax -	370	Wp
Vmp -	40.2	V
Imp -	9.2	A
Voc -	48.3	V
Isc -	9.6	A

PROPERTY ADDRESS:

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TITLE:		Rev	Designed By	Checked By	Date	Sheet No	Seal & Signature:
WIRING CALCULATION SHEET		-	-	-	-	A-301.00	
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KGS Global Green

SOLARIA

Solaria PowerXT® | DC Panel

Solaria PowerXT®-370R-PD

Achieving 20% efficiency, Solaria PowerXT solar panels are one of the highest power panels in the residential and commercial solar market. Compared to conventional panels, Solaria PowerXT panels have fewer gaps between the solar cells; this leads to higher power and superior aesthetics. Solaria PowerXT Pure Black™ panels are manufactured with black backsheet and frames, enhancing a home or building's architectural beauty.

Developed in California, Solaria's patented cell cutting and panel assembly takes processed solar wafers and turns them into PowerXT solar panels. The process starts by creating a highly reliable PowerXT cell where busbars and ribbon interconnections are eliminated. Solaria then packages the cells into the PowerXT solar panel, reducing inactive space between the cells. This process leads to an exceptionally cost effective and efficient solar panel.

Higher Efficiency, Higher Power

Solaria PowerXT panels achieve up to 20% efficiency; conventional panels achieve 15% – 17% efficiency. Solaria PowerXT panels are one of the highest power panels available.

Lower System Costs

Solaria PowerXT panels produce more power per square meter area. This reduces installation costs due to fewer balance of system components.

Improved Shading Tolerance

Sub-strings are interconnected in parallel, within each of the four panel quadrants, which dramatically lowers the shading losses and boosts energy yield.

Improved Aesthetics

Compared to conventional panels, Solaria PowerXT panels have a more uniform appearance and superior aesthetics.

Durability and Reliability

Solder-less cell interconnections are highly reliable and designed to far exceed the industry leading 25 year warranty.

About Solaria

Established in 2000, The Solaria Corporation has created one of the industry's most respected IP portfolios, with over 65 patents encompassing materials, processes, applications, products, manufacturing automation and equipment. Headquartered in Oakland, CA, Solaria has developed a technology platform that unlocks the potential of solar energy.

TOP PERFORMER 2018 DNV·GL PV MODULE RELIABILITY SCORECARD

TÜVRheinland® Precisely Right.

The Solaria Corporation 1700 Broadway, Oakland, CA 94612 P: (510) 270-2500 www.solaria.com

Rev 3C 08-15-2019

SOLARIA

Solaria PowerXT®-370R-PD

Performance at STC (1000W/m², 25° C, AM 1.5)

Solaria PowerXT-		360R-PD	370R-PD
Max Power (P_{max})	[W]	360	370
Efficiency	[%]	19.9	20.5
Open Circuit Voltage (V_{oc})	[V]	47.7	48.3
Short Circuit Current (I_{sc})	[A]	9.56	9.60
Max Power Voltage (V_{mp})	[V]	39.5	40.2
Max Power Current (I_{mp})	[A]	9.13	9.20
Power Tolerance	[%]	-0/+3	-0/+3

Performance at NOCT (800W/m², 20°C Amb, Wind 1 m/s, AM 1.5)

Max Power (Pmax)	[W]	265	272
Open Circuit Voltage (V_{oc})	[V]	44.8	45.4
Short Circuit Current (I_{sc})	[A]	7.71	7.74
Max Power Voltage (V_{mp})	[V]	36.3	37.0
Max Power Current (I_{mp})	[A]	7.30	7.35

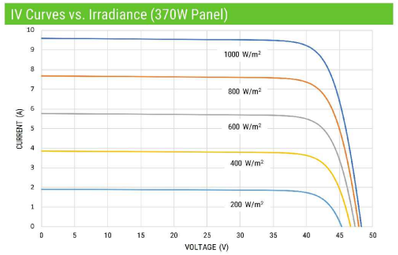
Temperature Characteristics

NOCT	[°C]	45 +/-2
Temp. Coeff. of P_{max}	[% / °C]	-0.39
Temp. Coeff. of V_{oc}	[% / °C]	-0.29
Temp. Coeff. of Isc	[% / °C]	0.04

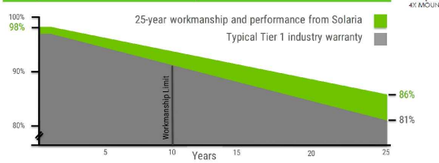
Design Parameters

Operating temperature	[°C]	-40 to +85
Max System Voltage	[V]	1000
Max Fuse Rating	[A]	15
Bypass Diodes	[#]	4

IV Curves vs. Irradiance (370W Panel)



Comprehensive 25-Year Warranty



Mechanical Characteristics

Cell Type	Monocrystalline Silicon
Dimensions (L x W x H)	1621mm x 1116mm x 40mm
Weight	21 kg / 46 lbs
Glass Type / Thickness	AR Coated, Tempered / 3.2mm
Frame Type	Black Anodized Aluminum
Cable Type / Length	12 AWG PV Wire (UL) / 1000mm
Connector Type	MC4
Junction Box	IP67 / 4 diodes
Front Load	5400 Pa / 113 psf*
Rear Load	3600 Pa / 75 psf*

* Refer to Solaria Installation Manual for details

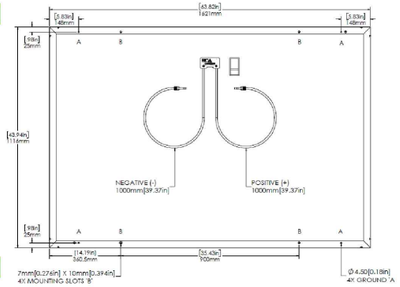
Certifications / Warranty

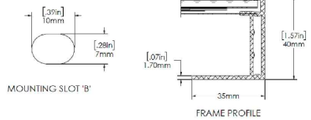
Certifications	UL 1703/IEC 61215/IEC 61730/CEC CAN/CSA-C22.2
Fire Type (UL 1703)	1
Power & Product Warranty	25 years*

* Warranty details at www.solaria.com

Packaging

Stacking Method	Horizontal / Palletized
Pcs / Pallet	25
Pallet Dims	1668 x 1150 x 1230 mm
Pallet Weight	590 kg / 1300 lbs
Pallets / 40-ft Container	28
Pcs / 40-ft Container	700





The Solaria Corporation 1700 Broadway, Oakland, CA 94612 P: (510) 270-2500 www.solaria.com

Rev 3C 08-15-2019

PROPERTY ADDRESS:

Owner Name
Plat or House #, Street Name
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INSTALLER:

Installer Name
Plat or House #, Street Name
City, State - Zip code

TITLE: MODULE DATA SHEET		Rev	Designed By	Checked By	Date	Sheet No
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MAP:	-					

KGS Global Green

Seal & Signature:

Power Optimizer
Frame-Mounted

P300 / P370 / P404 / P500

POWER OPTIMIZER

Fast mount power optimizers with module-level optimization

- Specifcally designed to work with SolarEdge inverters
- Quicker installation - Power optimizers can be mounted in advance saving installation time
- Up to 25% more energy
- Superior efficiency (99.5%)
- Mitigates all types of modules mismatch-loss, from manufacturing tolerance to partial shading
- Flexible system design for maximum space utilization
- Next generation maintenance with module level monitoring
- Module-level voltage shutdown for installer and firefighter safety

solaredge.com

solaredge

Power Optimizer
Frame-Mounted

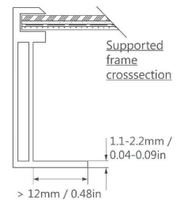
P300 / P370 / P404 / P500

OPTIMIZER MODEL (TYPICAL MODULE COMPATIBILTY)	P300 (FOR 60-CELL MODULES)	P370 (FOR HIGH-POWER 60-CELL AND FOR 72-CELL MODULES)	P404 (FOR 60-CELL AND 72-CELL, SHORT STRINGS)	P500 (FOR 96-CELL MODULES)	
INPUT					
Rated Input DC Power[1]	300	370	405	500	W
Absolute Maximum Input Voltage (Voc at lowest temperature)	48	60	80		Vdc
MPPT Operating Range	8 - 48	8 - 60	12.5 - 80	8 - 80	Vdc
Maximum Short Circuit Current (Isc)	11		10.1		Adc
Maximum Efficiency	99.5				%
Weighted Efficiency	98.8				%
Overvoltage Category	II				
OUTPUT DURING OPERATION (POWER OPTIMIZER CONNECTED TO OPERATING SOLAREDGE INVERTER)					
Maximum Output Current	15				Adc
Maximum Output Voltage	60		85	60	Vdc
OUTPUT DURING STANDBY (POWER OPTIMIZER DISCONNECTED FROM SOLAREDGE INVERTER OR SOLAREDGE INVERTER OFF)					
Safety Output Voltage per Power Optimizer	1 ± 0.1				Vdc
STANDARD COMPLIANCE					
EMC	FCC Part15 Class B, IEC61000-6-2, IEC61000-6-3				
Safety	IEC62109-1 (class II safety), UL1741				
RoHS	Yes				
Fire Safety	VDE-AR-E 2100-712:2013-05				
INSTALLATION SPECIFICATIONS					
Maximum Allowed System Voltage	1000				Vdc
Dimensions (W x L x H)	139 x 165 x 40 / 5.5 x 6.5 x 1.6		139 x 165 x 48 / 5.5 x 6.5 x 1.9		mm / in
Weight (including cables)	750 / 1.65	775 / 1.7	895 / 2.0	870 / 1.9	gr / lb
Input Connector	MC4[2]				
Input Wire Length	0.16 / 0.52				m / ft
Output Connector	MC4				
Output Wire Length	0.9 / 2.95	1.2 / 3.9			m / ft
Operating Temperature Range[3]	-40 - +85 / -40 - +185				°C / °F
Protection Rating	IP68 / NEMA6P				
Relative Humidity	0 - 100				%

[1] Rated power of the module at STC will not exceed the optimizer "Rated Input DC Power". Modules with up to +5% Power tolerance are allowed.
[2] For other connector types please contact SolarEdge.
[3] For ambient temperature above +85°C / +185°F power de-rating is applied. Refer to Power Optimizers Temperature De-Rating Technical Note for more details.

PV SYSTEM DESIGN USING A SOLAREDGE INVERTER[4]		SINGLE PHASE HD-WAVE		SINGLE PHASE	THREE PHASE	THREE PHASE FOR 277/480V GRID	
Minimum String Length (Power Optimizers)	P300/ P370/ P500[5]	8			16	18	
	P404	6			14 (13 with SE3K)	14	
Maximum String Length (Power Optimizers)		25			50	50	
Maximum Power per String		5700		5250	11250[6]	12750	W
Parallel Strings of Different Lengths or Orientations		Yes					

[4] It is not allowed to mix P404 with P300/P370/P500 in one string
[5] The P300/P370/P500 cannot be used with the SE3K three phase inverter (available in some countries; refer to Three Phase Inverter SE3K-SE10K datasheet).
[6] For SE27.6K, SE55K, SE82.8K: It is allowed to install up to 13,500W per string when 3 strings are connected to the inverter and when the maximum power difference between the strings is up to 2,000W; inverter max DC power: 37,250W



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KGS Global Green

Single Phase Inverter with HD-Wave Technology

for North America

SE3000H-US / SE3800H-US / SE5000H-US / SE6000H-US / SE7600H-US / SE10000H-US / SE11400H-US

INVERTERS

12-25 YEAR WARRANTY

Optimized installation with HD-Wave technology

- Specifically designed to work with power optimizers
- Record-breaking efficiency
- Fixed voltage inverter for longer strings
- Integrated arc fault protection and rapid shutdown for NEC 2014 and 2017, per article 690.11 and 690.12
- UL1741 SA certified, for CPUC Rule 21 grid compliance
- Extremely small
- Built-in module-level monitoring
- Outdoor and indoor installation
- Optional: Revenue grade data, ANSI C12.20 Class 0.5 (0.5% accuracy)

solaredge.com

Single Phase Inverter with HD-Wave Technology for North America

SE3000H-US / SE3800H-US / SE5000H-US / SE6000H-US/ SE7600H-US / SE10000H-US / SE11400H-US

	SE3000H-US	SE3800H-US	SE5000H-US	SE6000H-US	SE7600H-US	SE10000H-US	SE11400H-US	
OUTPUT								
Rated AC Power Output	3000	3800 @ 240V 3300 @ 208V	5000	6000 @ 240V 5000 @ 208V	7600	10000	11400 @ 240V 10000 @ 208V	VA
Maximum AC Power Output	3000	3800 @ 240V 3300 @ 208V	5000	6000 @ 240V 5000 @ 208V	7600	10000	11400 @ 240V 10000 @ 208V	VA
AC Output Voltage Min.-Nom.-Max. (211 - 240 - 264)	✓	✓	✓	✓	✓	✓	✓	Vac
AC Output Voltage Min.-Nom.-Max. (183 - 208 - 229)	-	✓	-	✓	-	-	✓	Vac
AC Frequency (Nominal)	59.3 - 60 - 60.5[1]							Hz
Maximum Continuous Output Current @240V	12.5	16	21	25	32	42	47.5	A
Maximum Continuous Output Current @208V	-	16	-	24	-	-	48.5	A
GFDI Threshold	1							A
Utility Monitoring, Islanding Protection, Country Configurable Thresholds	Yes							
INPUT								
Maximum DC Power @240V	4650	5900	7750	9300	11800	15500	17650	W
Maximum DC Power @208V	-	5100	-	7750	-	-	15500	W
Transformer-less, Ungrounded	Yes							
Maximum Input Voltage	480							Vdc
Nominal DC Input Voltage	380				400			Vdc
Maximum Input Current @240V[2]	8.5	10.5	13.5	16.5	20	27	30.5	Adc
Maximum Input Current @208V[2]	-	9	-	13.5	-	-	27	Adc
Max. Input Short Circuit Current	45							Adc
Reverse-Polarity Protection	Yes							
Ground-Fault Isolation Detection	600kΩ Sensitivity							
Maximum Inverter Efficiency	99	99.2						%
CEC Weighted Efficiency	99						99 @ 240V 98.5 @ 208V	%
Nighttime Power Consumption	< 2.5							W
ADDITIONAL FEATURES								
Supported Communication Interfaces	RS485, Ethernet, ZigBee (optional), Cellular (optional)							
Revenue Grade Data, ANSI C12.20	Optional[3]							
Rapid Shutdown - NEC 2014 and 2017 690.12	Automatic Rapid Shutdown upon AC Grid Disconnect							
STANDARD COMPLIANCE								
Safety	UL1741, UL1741 SA, UL1699B, CSA C22.2, Canadian AFCI according to T.I.L. M-07							
Grid Connection Standards	IEEE1547, Rule 21, Rule 14 (HI)							
Emissions	FCC Part 15 Class B							
INSTALLATION SPECIFICATIONS								
AC Output Conduit Size / AWG Range	1" Maximum / 14-6 AWG					1" Maximum /14-4 AWG		
DC Input Conduit Size / # of Strings / AWG Range	1" Maximum / 1-2 strings / 14-6 AWG					1" Maximum / 1-3 strings / 14-6 AWG		
Dimensions with Safety Switch (HxWxD)	17.7 x 14.6 x 6.8 / 450 x 370 x 174					21.3 x 14.6 x 7.3 / 540 x 370 x 185		in / mm
Weight with Safety Switch	22 / 10		25.1 / 11.4	26.2 / 11.9		38.8 / 17.6		lb / kg
Noise	< 25				<50			dBA
Cooling	Natural Convection							
Operating Temperature Range	-13 to +140 / -25 to +60[4] (-40°F / -40°C option)[5]							°F / °C
Protection Rating	NEMA 4X (Inverter with Safety Switch)							

(1) For other regional settings please contact SolarEdge support
(2) A higher current source may be used; the inverter will limit its input current to the values stated
(3) Revenue grade inverter P/N: SExxxxH-US000NNC2
(4) For power de-rating information refer to: https://www.solaredge.com/sites/default/files/se-temperature-derating-note-na.pdf
(5) -40 version P/N: SExxxxH-US000NNU4

RoHS

PROPERTY ADDRESS:
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Tech Brief

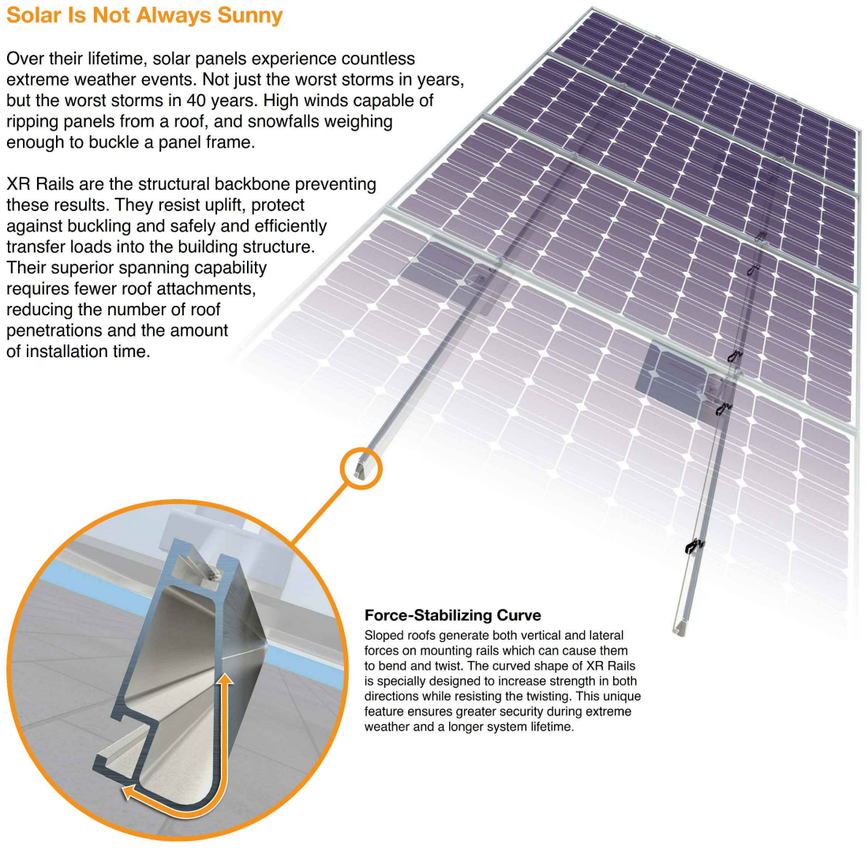
IRONRIDGE

XR Rail Family

Solar Is Not Always Sunny

Over their lifetime, solar panels experience countless extreme weather events. Not just the worst storms in years, but the worst storms in 40 years. High winds capable of ripping panels from a roof, and snowfalls weighing enough to buckle a panel frame.

XR Rails are the structural backbone preventing these results. They resist uplift, protect against buckling and safely and efficiently transfer loads into the building structure. Their superior spanning capability requires fewer roof attachments, reducing the number of roof penetrations and the amount of installation time.



Force-Stabilizing Curve

Sloped roofs generate both vertical and lateral forces on mounting rails which can cause them to bend and twist. The curved shape of XR Rails is specially designed to increase strength in both directions while resisting the twisting. This unique feature ensures greater security during extreme weather and a longer system lifetime.

Compatible with Flat & Pitched Roofs

XR Rails are compatible with FlashFoot and other pitched roof attachments.

IronRidge offers a range of tilt leg options for flat roof mounting applications.

Corrosion-Resistant Materials

All XR Rails are made of marine-grade aluminum alloy, then protected with an anodized finish. Anodizing prevents surface and structural corrosion, while also providing a more attractive appearance.

Tech Brief

XR Rail Family

The XR Rail Family offers the strength of a curved rail in three targeted sizes. Each size supports specific design loads, while minimizing material costs. Depending on your location, there is an XR Rail to match.

XR10

XR10 is a sleek, low-profile mounting rail, designed for regions with light or no snow. It achieves 6 foot spans, while remaining light and economical.

- 6' spanning capability
- Moderate load capability
- Clear anodized finish
- Internal splices available

XR100

XR100 is the ultimate residential mounting rail. It supports a range of wind and snow conditions, while also maximizing spans up to 8 feet.

- 8' spanning capability
- Heavy load capability
- Clear & black anodized finish
- Internal splices available

XR1000

XR1000 is a heavyweight among solar mounting rails. It's built to handle extreme climates and spans 12 feet or more for commercial applications.

- 12' spanning capability
- Extreme load capability
- Clear anodized finish
- Internal splices available

Rail Selection

The following table was prepared in compliance with applicable engineering codes and standards. Values are based on the following criteria: ASCE 7-10, Roof Zone 1, Exposure B, Roof Slope of 7 to 27 degrees and Mean Building Height of 30 ft. Visit IronRidge.com for detailed span tables and certifications.

Load		Rail Span					
Snow (PSF)	Wind (MPH)	4'	5' 4"	6'	8'	10'	12'
None	100	XR10		XR100		XR1000	
	120						
	140						
	160						
10-20	100						
	120						
	140						
	160						
30	100						
	160						
40	100						
	160						
50-70	160						
80-90	160						

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Seal & Signature:

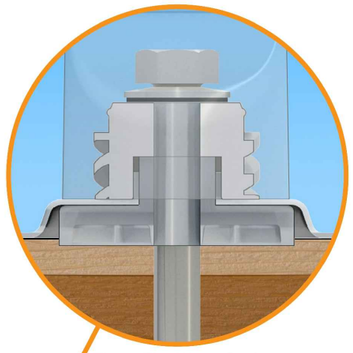
Tech Brief

IRONRIDGE

FlashFoot2

The Strongest Attachment in Solar

IronRidge FlashFoot2 raises the bar in solar roof protection. The unique water seal design is both elevated and encapsulated, delivering redundant layers of protection against water intrusion. In addition, the twist-on Cap perfectly aligns the rail attachment with the lag bolt to maximize mechanical strength.

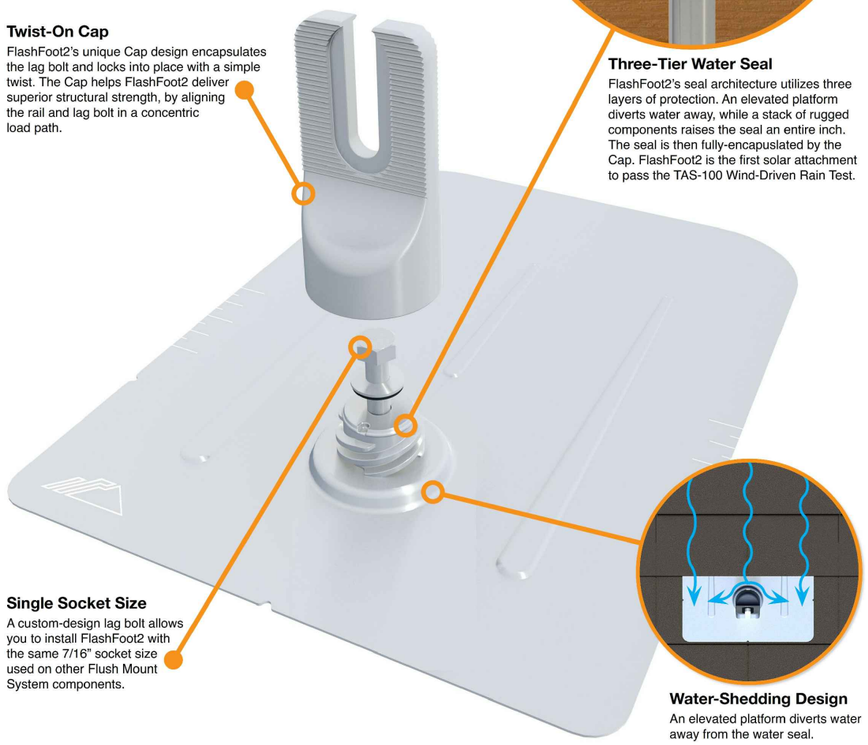


Three-Tier Water Seal

FlashFoot2's seal architecture utilizes three layers of protection. An elevated platform diverts water away, while a stack of rugged components raises the seal an entire inch. The seal is then fully-encapuslated by the Cap. FlashFoot2 is the first solar attachment to pass the TAS-100 Wind-Driven Rain Test.

Twist-On Cap

FlashFoot2's unique Cap design encapsulates the lag bolt and locks into place with a simple twist. The Cap helps FlashFoot2 deliver superior structural strength, by aligning the rail and lag bolt in a concentric load path.



Single Socket Size

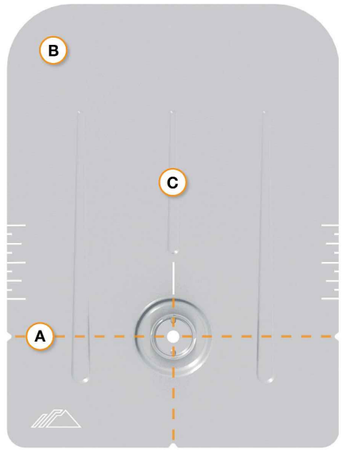
A custom-design lag bolt allows you to install FlashFoot2 with the same 7/16" socket size used on other Flush Mount System components.

Water-Shedding Design

An elevated platform diverts water away from the water seal.

Tech Brief

Installation Features



A Alignment Markers

Quickly align the flashing with chalk lines to find pilot holes.

B Rounded Corners

Makes it easier to handle and insert under the roof shingles.

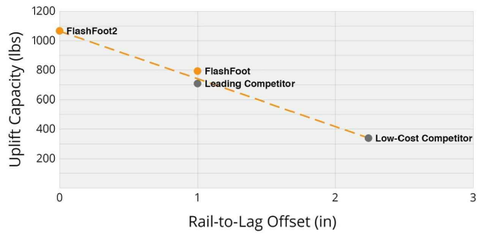
C Reinforcement Ribs

Help to stiffen the flashing and prevent any bending or crinkling during installation.

Benefits of Concentric Loading

Traditional solar attachments have a horizontal offset between the rail and lag bolt, which introduces leverage on the lag bolt and decreases uplift capacity.

FlashFoot2 is the only product to align the rail and lag bolt. This concentric loading design results in a stronger attachment for the system.



Testing & Certification

Structural Certification

Designed and Certified for Compliance with the International Building Code & ASCE/SEI-7.

Water Seal Ratings

Water Sealing Tested to UL 441 Section 27 "Rain Test" and TAS 100-95 "Wind Driven Rain Test" by Intertek. Ratings applicable for composition shingle roofs having slopes between 2:12 and 12:12.

UL 2703

Conforms to UL 2703 Mechanical and Bonding Requirements. See Flush Mount Install Manual for full ratings.

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CONDUIT/RACEWAYS

CONDUIT LABEL
1 PER 10FT

1/4" HT. → WARNING : PHOTOVOLTAIC POWER SOURCE

NEC 690.31

BACKGROUND: RED →
TEXT : WHITE →

XXXXXXXXXXXX
XXXXXXXX
XXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXX
XXXXXXXXXXXXXXXXX

THE WORD WARNING SHALL BE IN SAFETY BLACK LETTERS ON A SAFETY ORANGE BACKGROUND →

WARNING:

TEXT : BLACK → XXXXXXXXXXXX

BACKGROUND: WHITE → XXXXXXXXXXXXXXXXX

52-IT PANEL

52IT PANEL LABEL X 1
1 PER 52IT PANEL

WARNING

ELECTRIC SHOCK HAZARD

DO NOT TOUCH TERMINALS
TERMINALS ON LINE SIDE AND LOAD SIDES
MAY BE ENERGIZED IN THE OPEN POSITION

NEC 690.31(C)(2) 690.17

52IT PANEL LABEL X 1
1 PER 52IT PANEL

52IT PANEL - AC SUBPANEL

INVERTER OUTPUT CONNECTION
DO NOT LOADS TO THIS SWITCHBOARD
DO NOT RELOCATE THIS OCPD

NEC 705.12(D)(2)(C)

MSP

MSP LABEL X 1
1 PER MSP

WARNING

ELECTRIC SHOCK HAZARD

DO NOT TOUCH TERMINALS
TERMINALS ON LINE SIDE AND LOAD SIDES
MAY BE ENERGIZED IN THE OPEN POSITION

NEC 690.31(C)(2) 690.17

MSP LABEL X 1
1 PER MSP

WARNING

DUAL POWER SOURCE

MULTIPLE SOURCES OF POWER
UTILITY AND SOLAR ELECTRIC SYSTEM

NEC 690.64 705.12(D)(4)

89L - SERVICE DISCONNECT

AC DISCONNECT LABELS X 1
1 PER SERVICE DISCONNECT

3/8" → 89L
PV GENERATOR
DISCONNECT SWITCH

MAX AC OPERATING CURRENT :	32A
NOMINAL OPERATING VOLTAGE:	240 V

NEC 690.15

AC DISCONNECT LABEL X 1
1 PER SERVICE DISCONNECT

WARNING

ELECTRIC SHOCK HAZARD

DO NOT TOUCH TERMINALS
TERMINALS ON LINE SIDE AND LOAD SIDES
MAY BE ENERGIZED IN THE OPEN POSITION

NEC 690.31(C)(2) 690.17

METER

PV METER LABEL X 1
UTILITY METER

WARNING

DUAL POWER SOURCE

MULTIPLE SOURCES OF POWER
UTILITY AND SOLAR ELECTRIC SYSTEM

NEC 690.64 705.12(D)(4)

INTERCONNECTION

INTERCONNECTION LABEL X 1
@ MDP

LINE SIDE TAP

NYC ELECTRICAL CODE

1. EXISTING PLUMBING VENTS, SKYLIGHTS, EXHAUST OUTLETS, VENTILATION INTAKE AIR OPENING SHALL NOT BE COVERED BY THE SOLAR PHOTOVOLTAIC SYSTEM.

2. EQUIPMENT, PHOTOVOLTAIC MODULES, PHOTOVOLTAIC PANELS, AC PHOTOVOLTAIC MODULES, SOURCE-CIRCUIT COMBINERS, AND CHARGE CONTROLLERS INTENDED FOR USE IN PHOTOVOLTAIC POWER SYSTEMS SHALL BE IDENTIFIED AND LISTED FOR THE APPLICATION. (NEC 690.4(D)).

3. ALL OUTDOOR EQUIPMENT SHALL BE NEMA 3R RATED, INCLUDING ALL ROOF MOUNTED TRANSITION BOXES AND SWITCHES.

4. ALL EQUIPMENT SHALL BE PROPERLY GROUNDED AND BONDED IN ACCORDANCE WITH NEC ARTICLE 250.

5. ALL CIRCUITS CONNECTED TO MORE THAN ONE SOURCE SHALL HAVE OVER CURRENT DEVICES LOCATED SO AS TO PROVIDE OVER CURRENT PROTECTION FROM ALL SOURCES. (NEC 690.9(A))

6. ALL PHOTOVOLTAIC (PV) MODULES SHALL BE MOUNTED ON THE ROOF. ADDITIONAL EQUIPMENT OF THE PV SYSTEM SHALL BE LOCATED OUTSIDE THE BUILDING OR INDOORS NEAR THE MAIN ELECTRICAL SERVICES. (NEC 690.14(C))

7. THE UTILITY INTERACTIVE INVERTER SHALL AUTOMATICALLY DE-ENERGIZE ITS OUTPUT TO THE CONNECTED ELECTRICAL PRODUCTION AND DISTRIBUTION NETWORK UPON LOSS OF VOLTAGE IN THE SYSTEM AND SHALL REMAIN IN THE STATE UNTIL THE ELECTRICAL PRODUCTION AND DISTRIBUTION NETWORK VOLTAGE HAS BEEN RESTORED. (NEC 690.61)

8. DUE TO THE FACTS THAT PV MODULES ARE ENERGIZED WHENEVER EXPOSED TO LIGHT, PV CONTRACTOR SHALL DISABLE THE ARRAY DURING INSTALLATION AND SERVICE BY SHORT CIRCUITING, OPEN CIRCUITING, OR COVERING THE ARRAY WITH OPAQUE COVERING. (NEC 690.18)

9. ALL CONDUCTOR EXPOSED TO WEATHER SHALL BE LISTED AND IDENTIFIED FOR USE IN DIRECT SUNLIGHT (NEC 69031(B), 310.8(D))

10.THE MODULE CONDUCTORS MUST BE LISTED FOR PHOTOVOLTAIC (PV) WIRE, (NEC 690.31(B))

11. ALL CONDUCTORS SHALL BE MARKED ON EACH END FOR UNIQUE IDENTIFICATION.

12. PV SYSTEM CONNECTED ON THE LOAD SIDE OF THE SERVICE DISCONNECTING MEANS OF THE OTHER SOURCE(S) AT ANY DISTRIBUTION EQUIPMENT ON THE PREMISES SHALL MEET THE FOLLOWING (NEC 705.12(D))

13. EACH SOURCE CONNECTION SHALL BE MADE AT A DEDICATED CIRCUIT BREAKER OR FUSIBLE DISCONNECTING MEANS. (NEC 705.12(D)(1))

14. THE SUM OF THE AMPERE RATING OF THE OVER CURRENT DEVICES IN CIRCUITS SUPPLYING POWER TO THE BUS BAR OR CONDUCTOR SHALL NOT EXCEED 120% OF THE RATING OF THE BUS BAR OR CONDUCTOR. (NEC 705.12(D)(2)).

15. THE INTERCONNECTION POINT SHALL BE ON THE LINE SIDE OF ALL GROUND-FAULT PROTECTION EQUIPMENT. (NEC 705.12(D)(3))

16. EQUIPMENT CONTAINING OVER CURRENT DEVICES IN CIRCUITS SUPPLYING POWER TO A BUS BAR OR CONDUCTOR SHALL BE MARKED TO INDICATE THE PRESENCE OF ALL SOURCES. (NEC 705.12(D)(4)

17. CIRCUIT BREAKER, IF BACKFED, SHALL BE SUITABLE FOR SUCH OPERATION. (NEC 705.12(D)(5))

18. TO MINIMIZE OVER HEATING OF THE BUS BAR IN PANEL BOARD, THE PANEL BOARD MAIN CIRCUIT BREAKER AND THE PV POWER SOURCE CIRCUIT BREAKER SHALL BE PHYSICALLY LOCATED AT THE OPPOSITE END OF THE BUS BAR.

19. ALL THE NEC REQUIRED WARNING SIGNS MARKINGS AND LEVELS SHALL BE POSTED ON EQUIPMENT AND DISCONNECTS PRIOR TO ANY INSPECTIONS TO BE PERFORMED BY THE BUILDING DEPARTMENT INSPECTOR.

20. METALLIC RACEWAYS OR METALLIC ENCLOSURES ARE REQUIRED WIRING METHOD FOR INSIDE A BUILDING FOR PV SYSTEM. (NEC 690.31(E))

21. FLEXIBLE, FINE0STRANDED CABLES SHALL BE TERMINATED ONLY WITH TERMINALS, LUGS, DEVICES OR CONNECTOR THAT ARE IDENTIFIED AND LISTED FOR SUCH USE. (NEC 690.31(F))

22. CONNECTORS SHALL BE LATCHING OR LOCKING TYPE. CONNECTORS THAT ARE READILY ACCESSIBLE AND OPERATING AT OVER 30 VOLTS SHALL: REQUIRE A TOOL TO OPEN & BE MARKED "DO NOT DISCONNECT UNDER LOAD " OR "NOT FOR CURRENT INTERRUPTING". (NEC 693.33 (C)(E)2)

23. EQUIPMENT GROUNDING CONDUCTOR FOR PV MODULES SMALLER THAN 6AWG SHALL BE PROTECTED FROM PHYSICAL DAMAGE BY A RACEWAY OR CABLE ARMOR. (NEC 690.46 & 250.120(C))

24. EQUIPMENT GROUNDING CONDUCTOR FOR PV SYSTEMS WITHOUT GROUND FAULT PROTECTION AND INSTALLED ON NON0DWELLING UNIT MUST HAVE AMPACITY OF AT LEAST 2 TIMES THE TEMPERATURE AND CONDUIT FILL CORRECTED CIRCUIT CONDUCTOR AMPACITY. (NEC 690.45(B))

25. GROUNDING BUSHINGS ARE REQUIRED AROUND PRE-PUNCHED CONCENTRIC KNOCKOUTS ON THE DC SIDE OF THE SYSTEM (NEC 250.64 C)

26. GROUNDING ELECTRODE CONDUCTOR WILL BE CONTINUOUS, EXCEPT FOR SPLICES OR JOINTS AT BUS BAR'S WITHIN LISTED EQUIPMENT. (NEC 250.64 C)

27. INSTALLATION SHALL MEET ALL APPLICABLE SAFETY AND PERFORMANCE STANDARDS ESTABLISHED BY THE NATIONAL ELECTRICAL CODE, THE INSTITUTE OF ELECTRICAL AND ELECTRONICS ENGINEERS, AND ACCREDITED TESTING LABORATORIES SUCH AS UNDERWRITER LABORATORIES, AND WHERE APPLICABLE, RULE OF THE PUBLIC UTILITIES COMMISSION REGARDING SAFETY AND RELIABILITY, AS WELL AS MEET ALL MID REQUIREMENTS.

28. AC DISCONNECT SWITCH SHALL BE LOCKABLE, VISIBLE & ACCESSIBLE WITHOUT OVSTRUCTIONS SUCH AS GATES, FENCES OR WALLS.

29. CONTRACTOR WILL NOTIFY SERVING UTILITY BEFORE ACTIVATION OF PV SYSTEM.

30. WORK CLEARANCES AROUND ELECTRICAL EQUIPMENT WILL BE MAINTAINED PER NEC 110.26(A)(1)(2)(3)

31. ALL EXTERIOR CONDUITS, FITTINGS AND BOXES SHALL BE RAIN-TIGHT AND APPROVED FOR USE IN WET LOCATIONS PER NEC 314.15.

32. ALL METALLIC RACEWAYS AND EQUIPMENT SHALL BE BONDED AND ELECTRICALLY CONTINUOUS.

33. ALL PV EQUIPMENT, SYSTEMS ADN ALL ASSOCIATED WIRING AND INTERCONNECTIONS SHALL BE INSTALLED BY QUALIFIED PERSONS.

34. THE PHOTOVOLTAIC SYSTEM CONDUCTORS SHALL BE IDENTIFIED AND GROUPED. THE MEANS OF IDENTIFICATION SHALL BE PERMITTED BY SEPARATED COLOR CODING, MARKING TAPE, TAGGING OR
OTHER APPROVED MEANS. NEC 690.4(B)

35. ADEQUATE SPACING MUST BE MAINTAINED BETWEEN ANY PLUMBING SEWER VENTS EXTENDING THROUGH THE ROOF AND THE UNDERSIDE OF THE PHOTOVOLTAIC PANELS (6" MINIMUM RECOMMENDED).

36. PV EQUIPMENT, SYSTEMS AND ALL ASSOCIATED WIRING AND INTERCONNECTIONS SHALL ONLY BE INSTALLED BY QUALIFIED PERSONS (NEC 690.4(E))

37. PHOTOVOLTAIC SYSTEM CONDUCTORS SHALL BE IDENTIFIED AND GROUPED. THE MEANS OF IDENTIFICATION SHALL BE PERMITTED SEPARATE COLOR CODING, MARKING TAPE, TAGGING OR OTHER APPROVED MEANS. (NEC 690.4B)

38. CONDUCTOR CALCULATIONS WERE BASED ON CONDUIT IS 3.5" - 5" ABOVE ROOF DECK, USED ASHRAE DATA FOR CONDUIT ABOVE 3.5" AND BELOW 12".

39. WARNING SIGN(S) OR LABEL(S) SHALL COMPLY WITH NEC 110.21(B). WORDS, SYMBOLS, AND COLORS OF PRODUCTS SAFETY SIGNS AND LABELS SHALL COMPLY WITH ANSI Z535.4-2011 AS DIRECTED BY 110.21(B)

PROPERTY ADDRESS:

Owner Name
Plat or House #, Street Name
City, State - Zip code

INSTALLER:

Installer Name
Plat or House #, Street Name
City, State - Zip code

1 ELECTRICAL WARNING LABELS & NOTES

TITLE:		Rev	Designed By	Checked By	Date	Sheet No	Seal & Signature:
ELECTRICAL WARNING LABELS & NOTES		-	-	-	-	A-800.00	
						Page No	
PHASE :	-					15 of 15	
LOT:	-					Package ID / R	
ZONING:	-					---/--/--/R0	
MAP:	-						

KGS Global Green