

SCOPE OF WORK

TO INSTALL A ROOF MOUNTED SOLAR PHOTOVOLTAIC SYSTEM AT THE OWNER RESIDENCE LOCATED AT 3312 DELANA WAY, ALVA, FL 33920, USA.  
THE POWER GENERATED BY THE PV SYSTEM WILL BE INTERCONNECTED WITH THE UTILITY GRID THROUGH THE EXISTING ELECTRICAL SERVICE EQUIPMENT.  
THE PV SYSTEM DOES NOT INCLUDE STORAGE BATTERIES.

EQUIPMENT SUMMARY
14 URECO FBM445M7G-BB MODULES
29 EXISTING URECO FBM400MFG-BB MODULES
14 ENPHASE IQ8PLUS -72-2-US (240V) MICROINVERTERS
29 EXISTING ENPHASE IQ8PLUS -72-2-US (240V) MICROINVERTERS

GENERAL NOTES

- THESE CONSTRUCTION DOCUMENTS HAVE BEEN BASED ON FIELD INSPECTIONS AND OTHER INFORMATION AVAILABLE AT THE TIME. ACTUAL FIELD CONDITIONS MAY REQUIRE MODIFICATIONS
- CONTRACTOR SHALL FURNISH ALL LABOR, MATERIAL, EQUIPMENT, TOOLS, OBTAIN ALL PERMITS, LICENSES AND PAY ALL REQUIRED FEES AND COMPLETE INSTALLATION.
- CONTRACTOR SHALL OBTAIN BULDING PERMIT. NO WORK TO START UNLESS BUILDING PERMIT IS PROPERLY DISPLAYED.
- ALL WORKMANSHIP AND MATERIALS SHALL BE OF FIRST QUALITY AND IN COMPLIANCE WITH THE REQUIREMENTS OF THE FLORIDA BUILDING CODE, THE DEPARTMENT OF ENVIRONMENTAL PROTECTION AND ALL PERTINENT AGENCIES.
- 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.
- THE CONTRACTOR SHALL PERFORM THE WORK IN STRICT CONFORMANCE WITH THE LOCAL LAWS, REGULATIONS AND THE NATIONAL ELECTRIC CODE.
- THE CONTRACTOR SHALL OBTAIN ALL PERMITS, APPROVALS, AFFIDAVITS, CERTIFICATIONS, ETC. AND PAY ALL FEES AS REQUIRED BY THE LOCAL AUTHORITIES.
- CONTRACTORS SHALL OBTAIN FIRE CERTIF. UPON COMPLETION OF WORK.

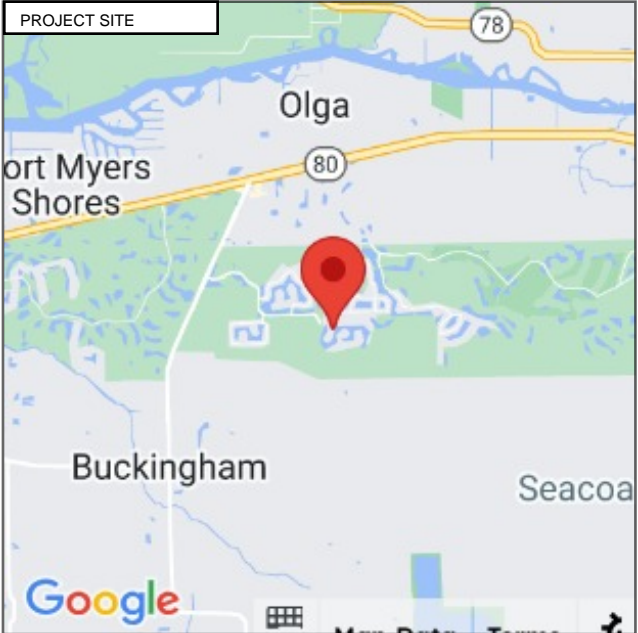
ELECTRICAL NOTES

- ALL EQUIPMENT TO BE LISTED BY UL OR OTHER NRTL, AND LABELED FOR ITS APPLICATION.
- ALL CONDUCTORS SHALL BE COPPER, RATED FOR 600 V AND 90 DEGREE C WET ENVIRONMENT.
- WIRING, CONDUIT, AND RACEWAYS MOUNTED ON ROOFTOPS SHALL BE ROUTED DIRECTLY TO, AND LOCATED AS CLOSE AS POSSIBLE TO THE NEAREST RIDGE, HIP, OR VALLEY.
- WORKING CLEARANCES AROUND ALL NEW AND EXISTING ELECTRICAL EQUIPMENT SHALL COMPLY WITH NEC 110.26.
- WHERE SIZES OF JUNCTION BOXES, RACEWAYS, AND CONDUITS ARE NOT SPECIFIED, THE CONTRACTOR SHALL SIZE THEM ACCORDINGLY.
- ALL WIRE TERMINATIONS SHALL BE APPROPRIATELY LABELED AND READILY VISIBLE.
- MODULE GROUNDING CLIPS TO BE INSTALLED BETWEEN MODULE FRAME AND MODULE SUPPORT RAIL, PER THE GROUNDING CLIP MANUFACTURERS INSTRUCTION.
- MODULE SUPPORT RAIL SHALL BE BONDED TO THE MODULE

GOVERNING CODES
2021 NFPA 1 (FIRE CODE) 2020 NATIONAL ELECTRICAL CODE 2023 FLORIDA BUILDING CODE (8TH EDITION) 2023 FLORIDA FIRE PREVENTION CODE (8TH EDITION) FLORIDA ADMINISTRATIVE CODE(FAC)
AHJ NAME : LEE COUNTY

WIRING AND CONDUIT NOTES

- ALL CONDUIT SIZES AND TYPES SHALL BE LISTED FOR ITS PURPOSE AND APPROVAL FOR THE SITE APPLICATIONS
- ALL PV CABLES AND HOMERUN WIRES BE #10AWG \*USE-2, PV WIRE, OR PROPRIETARY SOLAR CABLING SPECIFIED BY MFR, OR EQUIVALENT; ROUTED TO SOURCE CIRCUIT COMBINER BOXES AS REQUIRED
- ALL PV DC CONDUCTORS IN CONDUIT EXPOSED TO SUNLIGHT SHALL BE DERATED ACCORDING TO AS PER LATEST NEC CODE.
- EXPOSED ROOF PV DC CONDUCTORS SHALL BE USE-2, 90°C RATED, WET AND UV RESISTANT, AND UL LISTED RATED FOR 600V, UV RATED SPIRAL WRAP SHALL BE USED TO PROTECT WIRE FROM SHARP EDGES
- PHASE AND NEUTRAL CONDUCTORS SHALL BE DUAL RATED THHN/THWN-2 INSULATED, 90°C RATED, WET AND UV RESISTANT, RATED FOR 1000V AS PER APPLICABLE NEC
- 4-WIRE DELTA CONNECTED SYSTEMS HAVE THE PHASE WITH THE HIGHER VOLTAGE TO GROUND MARKED ORANGE OR IDENTIFIED BY OTHER EFFECTIVE MEANS
- ALL SOURCE CIRCUITS SHALL HAVE INDIVIDUAL SOURCE CIRCUIT PROTECTION
- VOLTAGE DROP LIMITED TO 2%
- AC CONDUCTORS >4AWG COLOR CODED OR MARKED: PHASE A OR L1- BLACK, PHASE B OR L2- RED, PHASE C OR L3- BLUE, NEUTRAL- WHITE/GRAY



VICINITY MAP

SCALE: NTS



HOUSE PHOTO

SCALE: NTS

INFENERGY



INFENERGY  
5448 PROVINE PL,  
ALEXANDRIA, LA 71303, USA  
PH# : (850) 693-0167  
72494

SYSTEM INFO
(14) URECO FBM445M7G-BB
(14) ENPHASE IQ8PLUS -72-2-US (240V)
DC SYSTEM SIZE: 6.230 kWDC
AC SYSTEM SIZE: 4.060 kWAC

REVISIONS		
DESCRIPTION	DATE	REV

PROJECT NAME & ADDRESS

Ava Morales Residence

3312 DELANA WAY, ALVA, FL 33920, USA

EMAIL ID: AVA.MORALESCARDENEZ@VA.GOV

PHONE NO. (615) 717-8056

DATE: 8/20/2024
SHEET NAME COVER PAGE
SHEET SIZE ANSI B 11" X 17"
SHEET NUMBER PV-1

- SITE NOTES
- A LADDER SHALL BE IN PLACE FOR INSPECTION IN COMPLIANCE WITH OSHA REGULATIONS.
  - THE PV MODULES ARE CONSIDERED NON-COMBUSTIBLE AND THIS SYSTEM IS AN UTILITY INTERACTIVE SYSTEM WITH NO STORAGE BATTERIES.
  - THE SOLAR PV INSTALLATION SHALL NOT OBSTRUCT ANY PLUMBING, MECHANICAL, OR BUILDING ROOF VENTS.
  - PROPER ACCESS AND WORKING CLEARANCE AROUND EXISTING AND PROPOSED ELECTRICAL EQUIPMENT WILL BE PROVIDED AS PER SECTION [NEC 110.26]

LEGEND

JB

(N) JUNCTION BOX

UM

(E) UTILITY METER

MSP

(E) MAIN SERVICE PANEL

IQ

(E) ENPHASE IQ COMBINER

AC

(N) NON FUSED AC DISCONNECT

VENT, ATTIC FAN (ROOF OBSTRUCTION)

ROOF ATTACHMENT

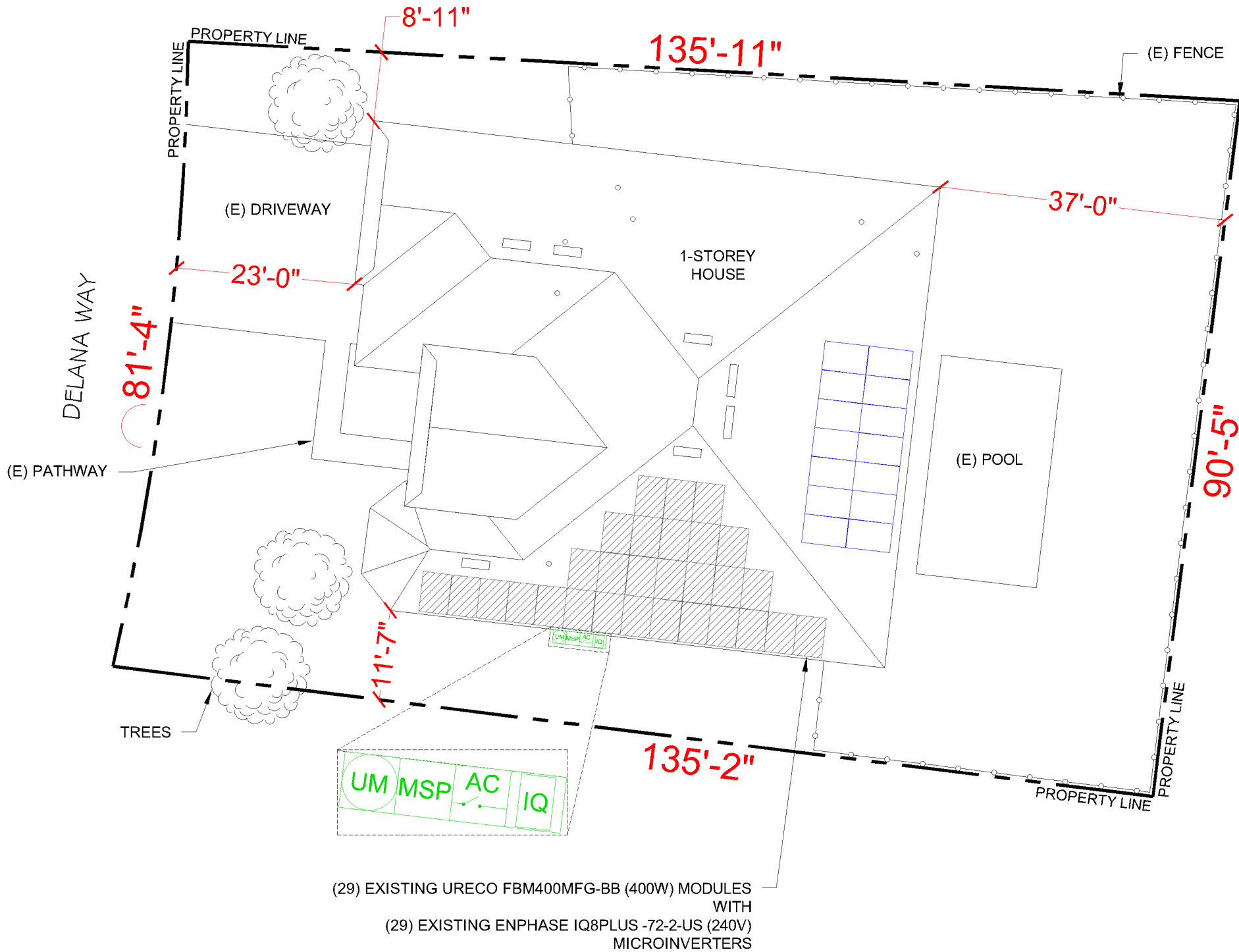
CONDUIT

ENPHASE IQ8PLUS -72-2-US (240V) MICROINVERTER

URECO FBM445M7G-BB MODULES

K2 CROSSRAIL 44-X

TRENCH



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AC SYSTEM SIZE: 4.060 kWAC

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DESCRIPTION	DATE	REV

PROJECT NAME & ADDRESS

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RESIDENCE  
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EMAIL ID: AVA.MORALESCARDENEZ@VA.GOV  
PHONE NO. (615) 717-8056

DATE: 8/20/2024
SHEET NAME SITE PLAN
SHEET SIZE ANSI B 11" X 17"
SHEET NUMBER PV-2

DESIGN SPECIFICATION	
RISK CATEGORY:	II
CONSTRUCTION:	SFD
ZONING:	RESIDENTIAL
SNOW LOAD (ASCE7-22):	0 PSF
EXPOSURE CATEGORY:	B
WIND SPEED (ASCE7-22):	150 MPH

MODULE TYPE, DIMENSIONS & WEIGHT	
NUMBER OF MODULES:	14 MODULES
MODULE TYPE:	URECO FBM445M7G-BB
MODULE WEIGHT:	53.35 LBS
MODULE DIMENSIONS:	75.12" X 44.65" = 23.29 SF
UNIT WEIGHT OF AREA:	2.3 PSF

ROOF DESCRIPTION				
ROOF	ROOF TILT	RAFTER SIZE	RAFTER SPACING	ROOF MATERIAL
#1	24°	2" x 4"	24" o.c.	COMP SHINGLE

ARRAY AREA & ROOF AREA CALC'S		
ROOF	# OF MODULES	ARRAY AREA (Sq. Ft.)
#1	14	326.1
(TOTAL ARRAY AREA/TOTAL ROOF AREA) X 100%		
= (620.28/4755) X 100% = 13.05%		

LEGEND

JB

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UM

(E) UTILITY METER

MSP

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AC

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○

VENT, ATTIC FAN (ROOF OBSTRUCTION)

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ROOF ATTACHMENT

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CONDUIT

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ENPHASE IQ8PLUS -72-2-US (240V) MICROINVERTER

URECO FBM445M7G-BB MODULES

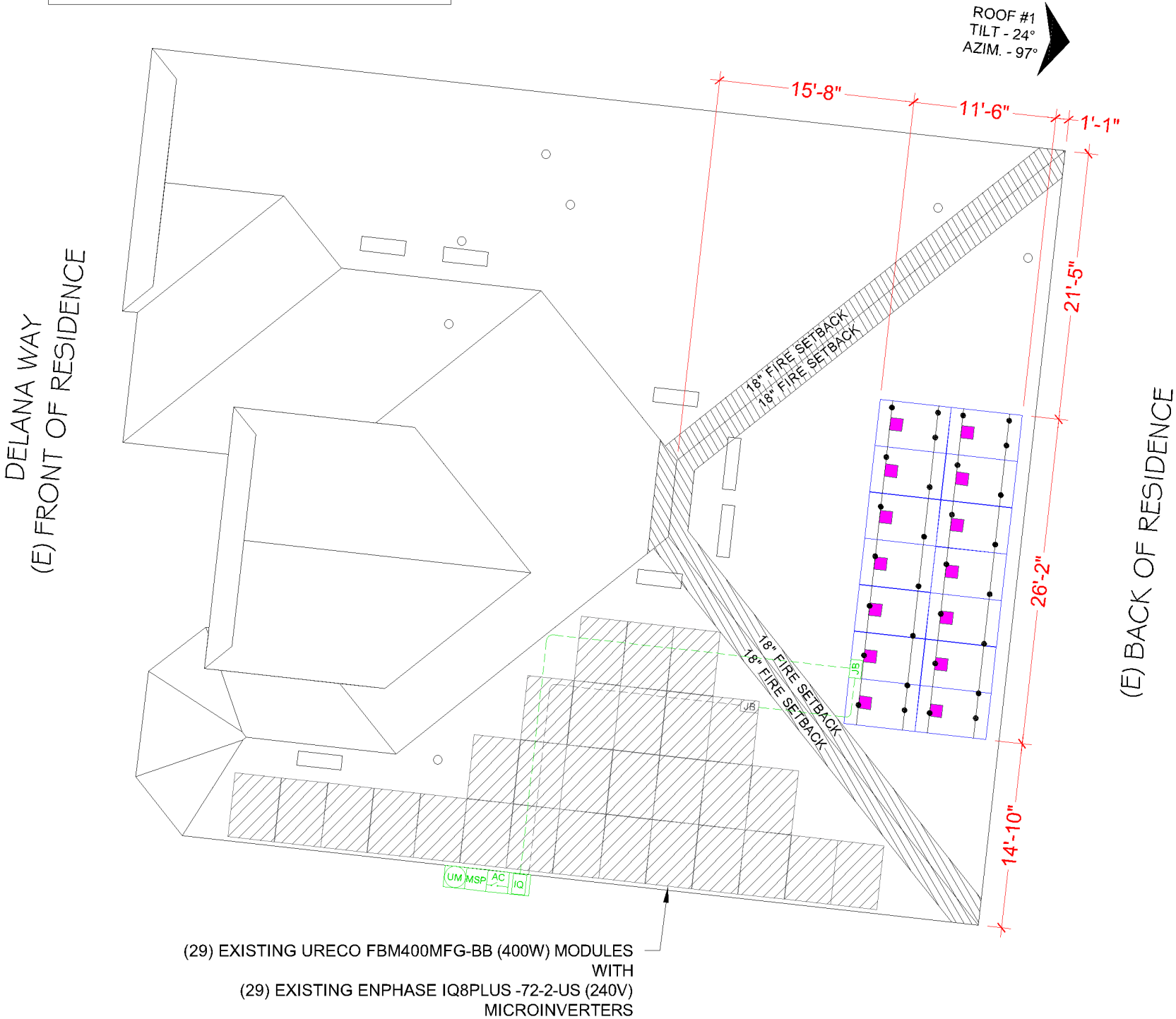
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K2 CROSSRAIL 44-X

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TRENCH

NOTE:-ATTACHMENT SPACING  
@48" O.C. STAGGERED.



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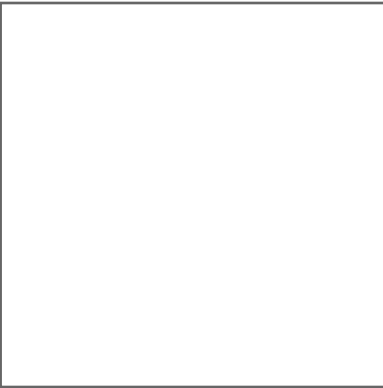
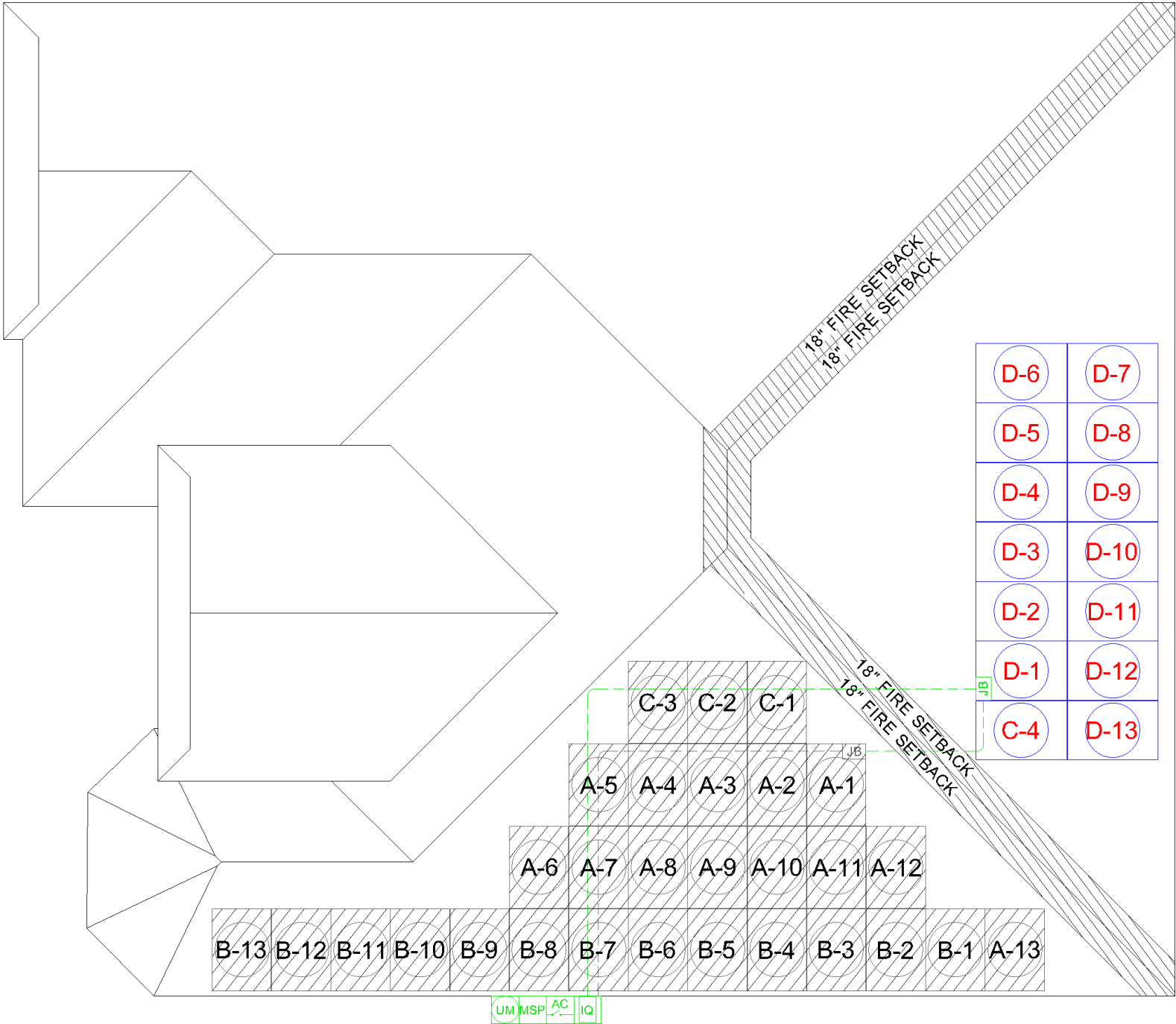
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EMAIL ID: AVA.MORALESCARDENEZ@VA.GOV  
PHONE NO. (615) 717-8056

DATE: 8/20/2024
SHEET NAME ROOF PLAN
SHEET SIZE ANSI B 11" X 17"
SHEET NUMBER PV-3



BILL OF MATERIALS		
EQUIPMENT	QTY	DESCRIPTION
SOLAR PV MODULE	14	URECO FBM445M7G-BB
INVERTER	14	ENPHASE IQ8PLUS -72-2-US (240V)
JUNCTION BOX	1	JUNCTION BOX, NEMA 3R, UL LISTED
NON FUSED AC DISCONNECT	1	100A NON FUSED AC DISCONNECT, 240V, NEMA 3R, UL LISTED
ATTACHMENT	30	K2 SPLICEFOOT XL
ATTACHMENT	30	K2 EVERSEAL
ATTACHMENT	60	#14 X 3IN X 5/16IN HEX HEAD SCREW
ATTACHMENT	30	T-BOLT & HEX NUT SET
ENPHASE Q CABLE	15	ENPHASE Q CABLE 240V (PER CONNECTOR)
BRANCH TERMINATOR	2	BRANCH TERMINATOR
IQ WATER TIGHT CAP	1	IQ WATER TIGHT CAPS
RAILS	8	K2 CROSSRAIL 44-X
BONDED SPLICE	4	SPLICE KIT
MID CLAMP	24	MODULES MID CLAMPS
END CLAMP	8	MODULES END CLAMPS
GROUNDING LUG	2	GROUNDING LUG

DELANA WAY  
(E) FRONT OF RESIDENCE



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DATE: 8/20/2024
SHEET NAME STRING LAYOUT & BOM
SHEET SIZE ANSI B 11" X 17"
SHEET NUMBER PV-4

(E) BACK OF RESIDENCE



SCALE: 3/32"= 1'-0"

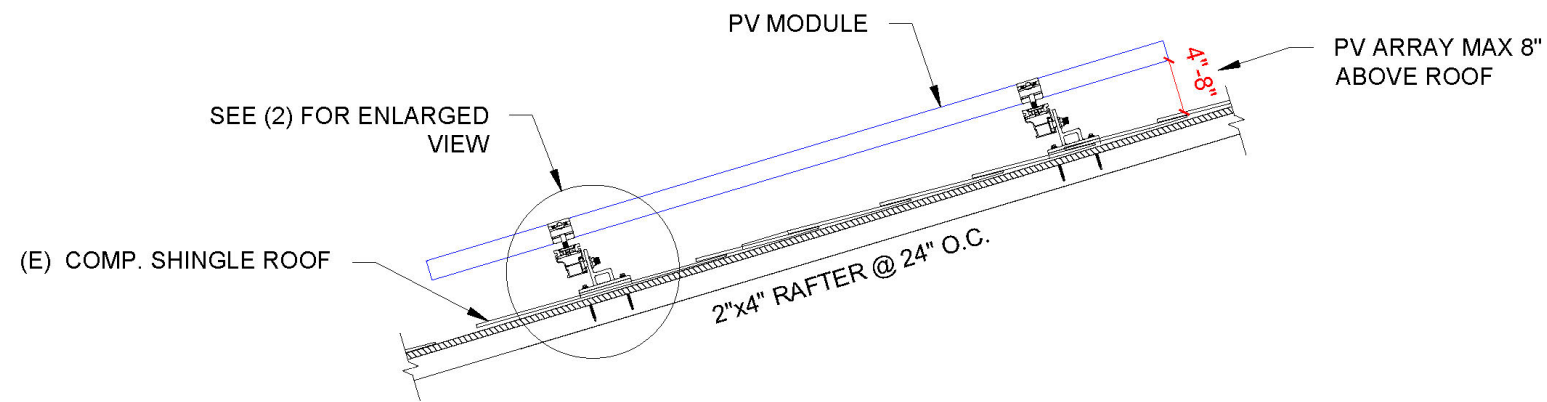
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B

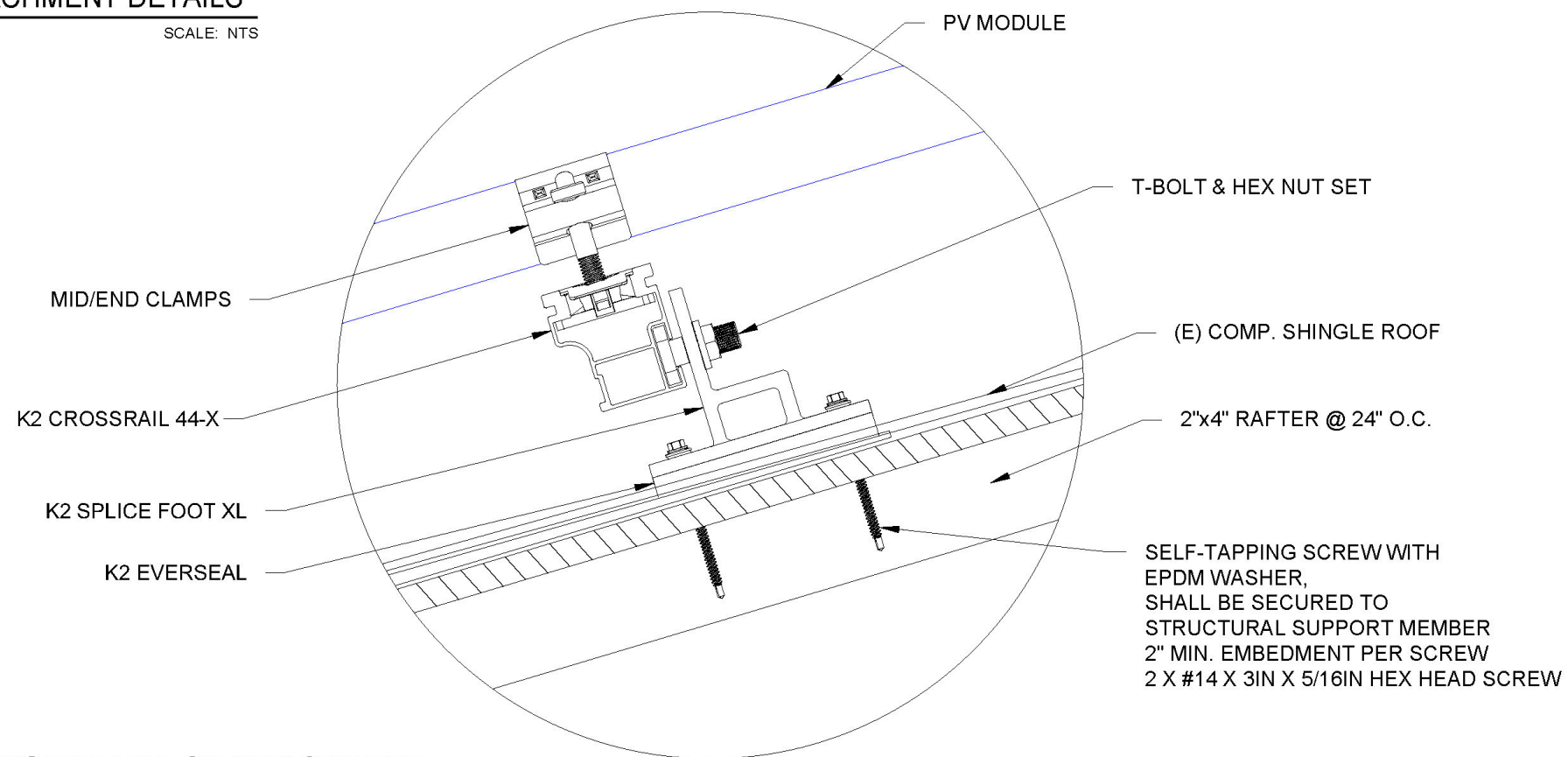
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D

- MODULE STRINGING



1 ATTACHMENT DETAILS  
SCALE: NTS



2 ENLARGED VIEW OF ATTACHMENT  
SCALE: NTS

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DATE: 8/20/2024
SHEET NAME ATTACHMENT DETAILS
SHEET SIZE ANSI B 11" X 17"
SHEET NUMBER PV-5