

Shepard.MarciaAve
Brian Shepard
20.14 kW PV System
5621 Marcia Ave
New Orleans, LA 70124

Scope of Work

20.14 kW Enphase Roof Mounted PV System with BBU
Interconnection: Partial Home on Line Side Tie
2x 50A 2P Solar Breaker on Gateway Busbar
2x 60A Non-Fused Lockable Knifeblade Solar Disconnect

Adders

METER PULL REQUIRED
1 x Tesla Gateway 2 with Internal Generation Busbar
2 x Tesla Powerwall Plus
19 x Tesla MCIs Rapid Shutdown Devices

Site Conditions

Roof Type: Shingle
Roof Height: 14'
Mounting Planes: 1
Roof Pitch & Azimuth: 32° [7.5/12], 184°
Utility: **ENO**

Design Details

Module: 51 x JA Solar JAM54S31-395/MR (1500V)
Inverter: 2 x Tesla Solar Inverter 7.6 [240V]
Inverter Limitations: 12/string
No. branches: 5
Racking: Unirac SM Standard
Attachment: Flashkit Pro
Maximum Attachment Spacing: 72"

SOLAR
ALTERNATIVES

5804 RIVER OAKS RD S,
ELMWOOD, LA 70123
PHONE: 504-267-1660

PROJECT NAME & ADDRESS

Brian Shepard
5621 Marcia Avenue
New Orleans, LA 70124

REVISIONS

DESCRIPTION	DATE	REV

SHEET NAME

ROOF

SHEET SIZE

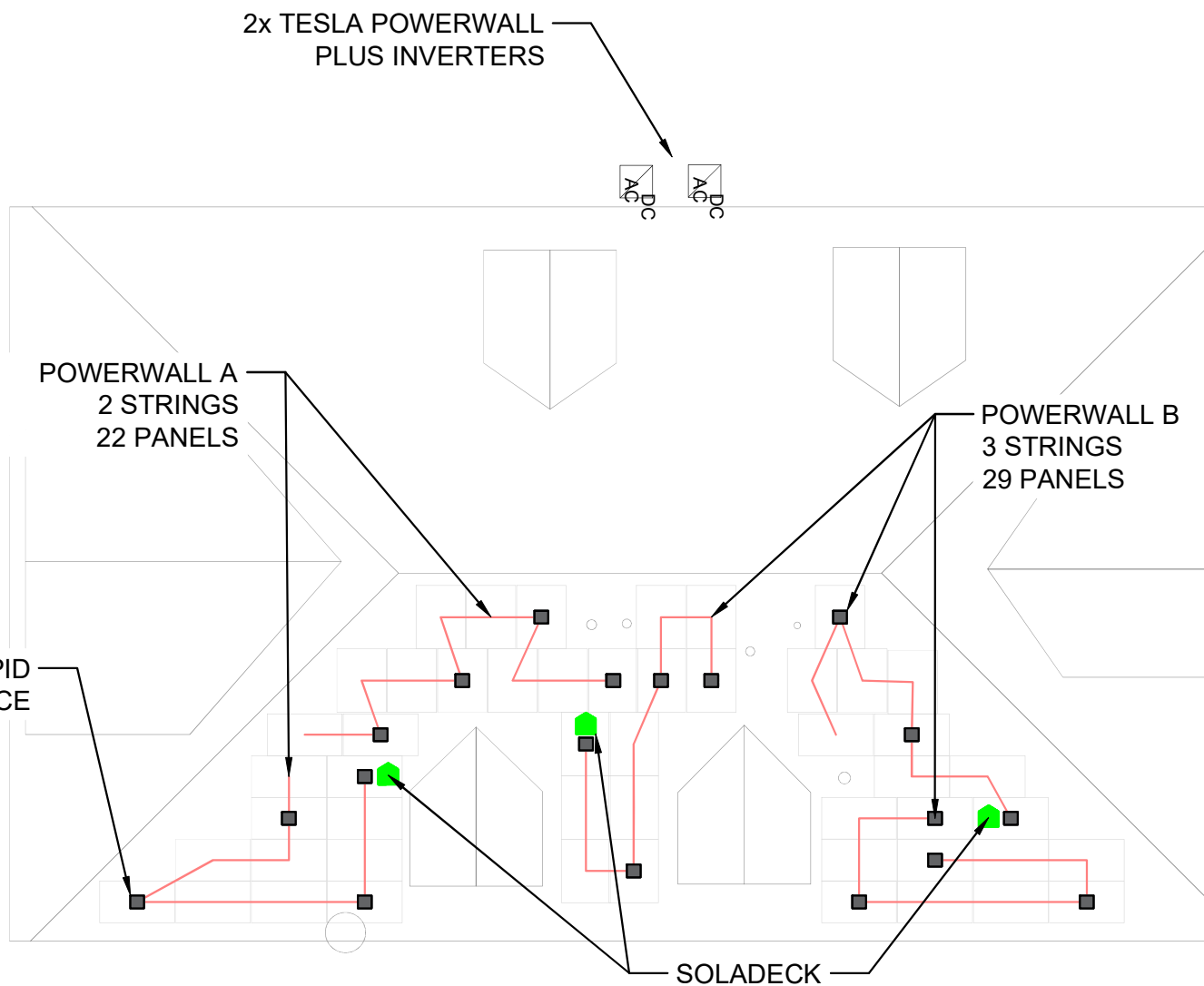
ARCH D
36" X 24"

DRAWN BY

NPB



TESLA MCI RAPID
SHUTDOWN DEVICE



5804 RIVER OAKS RD S,
ELMWOOD, LA 70123
PHONE: 504-267-1660

PROJECT NAME & ADDRESS

Brian Shepard
5621 Marcia Avenue
New Orleans, LA 70124

REVISIONS

DESCRIPTION	DATE	REV

SHEET NAME

STRING

SHEET SIZE

ARCH D
36" X 24"

DRAWN BY

NPB

Solar Bill of Materials

Project: Shepard.MarciaAve
Type: PV+PW +
Roof Type: Shingle

Updated: 11/29/2022

Pulled by: _____

Date pulled: ____/____/____

PROJECT NAME & ADDRESS

Brian Shepard
5621 Marcia Avenue
New Orleans, LA 70124

REVISIONS

DESCRIPTION	DATE	REV

SHEET NAME

ROOF

SHEET SIZE

ARCH D
36" X 24"

DRAWN BY

NPB

Material	Qty. Estimated	Qty. Pulled	Qty. Actual	S.A.	Stock #	Item Description	Notes
SOLAR	1	_____	_____			SA yard sign	
	3	_____	_____			Soladeck	
	118	_____	_____			Module clips (S Clips)	PV Module Clips
	100'	_____	_____			PV Wire	600 volt dc wire or larger
	5	_____	_____			2 port strain reliefs	
	21	_____	_____			Microinverter T-bolts ~1/2"	to secure microinverters
	46	_____	_____			UniRac SolarMount rail 168"	total feet + overage bring shortys
	8	_____	_____			UniRac SolarMount splice bar serrated, clear	
	83	_____	_____			UniRac SolarMount AF mid clamps	
	84	_____	_____			UniRac SolarMount AF end clamps	
	160	_____	_____			Unirac FlashKit Pro	shingle roof attachment
	20	_____	_____			lay-in w/ bolt for ground wire (Wiley/Burndy WEEB-LUG#1)	
	32	_____	_____			1/4" Stainless Steel Mounting Hardware	to secure splice bars
	11	_____	_____			terminal block	
	100'	_____	_____			6-gauge bare ground wire	total feet

RELOCATE BREAKERS FOR 2 BACKED UP INTERIOR SUBPANELS AND POOL FROM MAIN PANEL TO BACKUP SUBPANEL



PROJECT NAME & ADDRESS

Brian Shepard
5621 Marcia Avenue
New Orleans, LA 70124

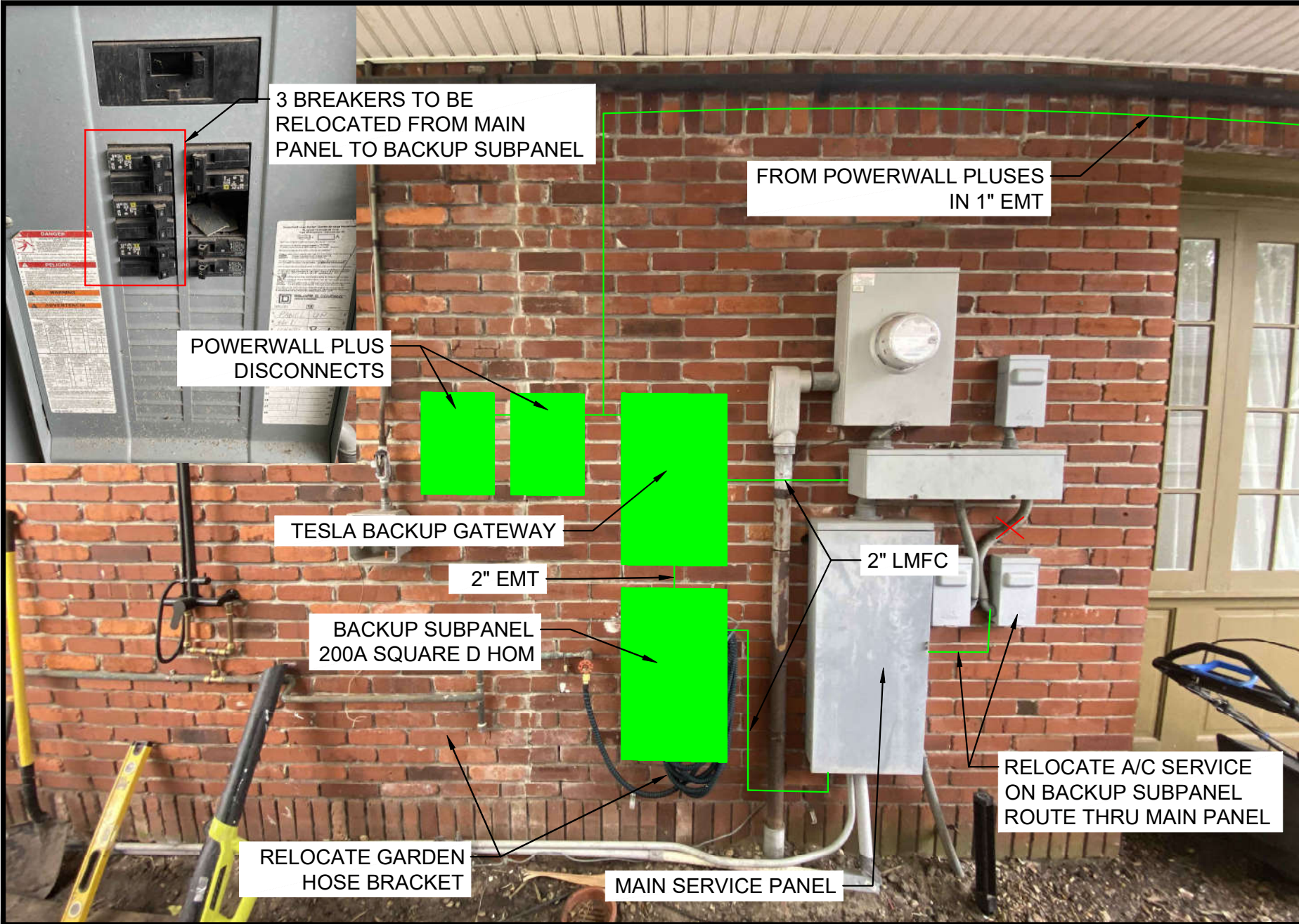
REVISIONS		
DESCRIPTION	DATE	REV

SHEET NAME
ONELINE

SHEET SIZE
ARCH D
36" X 24"

DRAWN BY

NPB



3 BREAKERS TO BE
RELOCATED FROM MAIN
PANEL TO BACKUP SUBPANEL

POWERWALL PLUS
DISCONNECTS

FROM POWERWALL PLUSES
IN 1" EMT

TESLA BACKUP GATEWAY

2" EMT

BACKUP SUBPANEL
200A SQUARE D HOM

2" LMFC

RELOCATE A/C SERVICE
ON BACKUP SUBPANEL
ROUTE THRU MAIN PANEL

RELOCATE GARDEN
HOSE BRACKET

MAIN SERVICE PANEL

PROJECT NAME & ADDRESS

Brian Shepard
5621 Marcia Avenue
New Orleans, LA 70124

REVISIONS

DESCRIPTION	DATE	REV

SHEET NAME

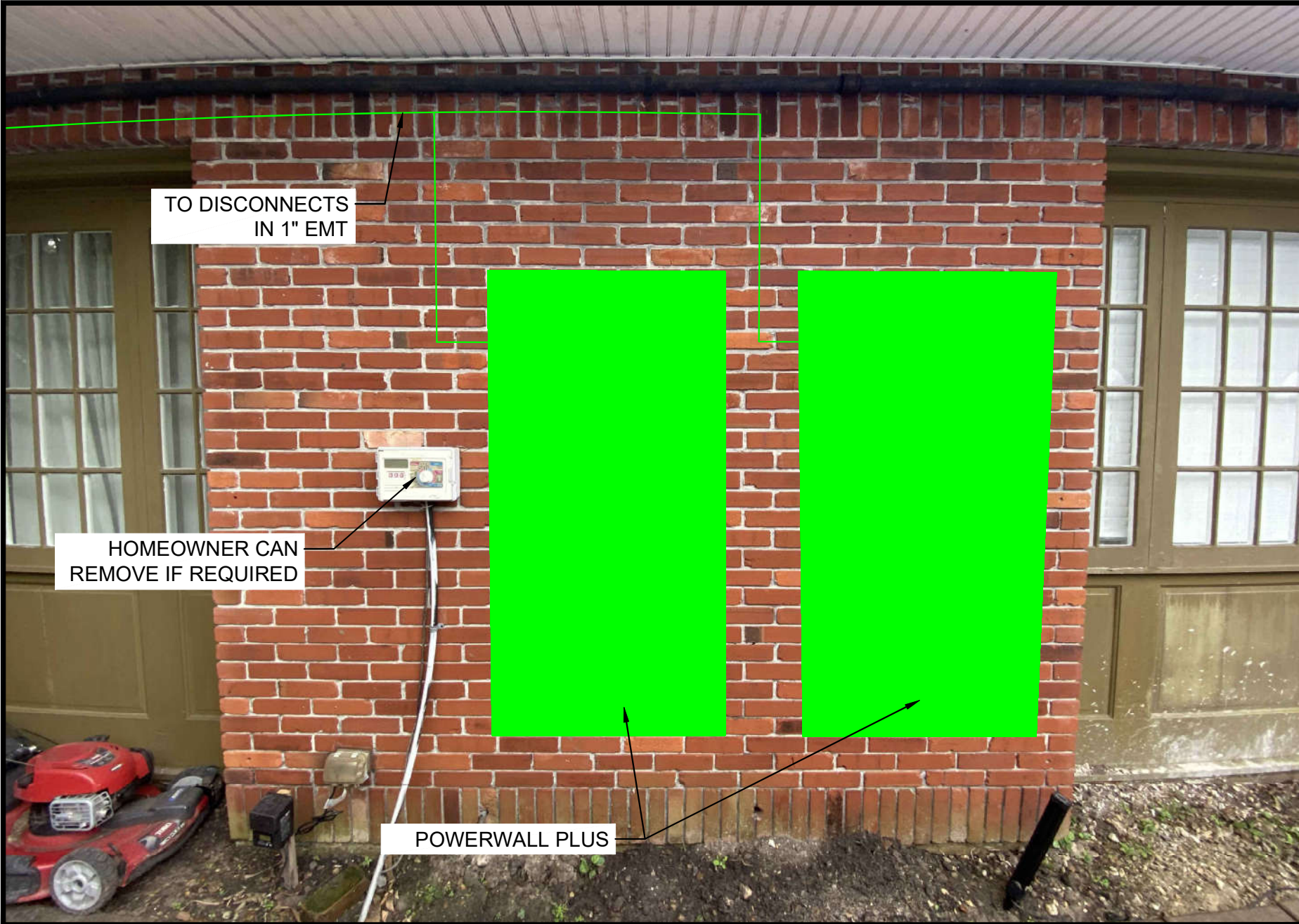
EQUIP

SHEET SIZE

ARCH D
36" X 24"

DRAWN BY

NPB



PROJECT NAME & ADDRESS

Brian Shepard
5621 Marcia Avenue
New Orleans, LA 70124

REVISIONS

DESCRIPTION	DATE	REV

SHEET NAME

EQUIP

SHEET SIZE

ARCH D
36" X 24"

DRAWN BY

NPB

Electrical Bill of Materials

Project: Shepard.MarciaAve
Type: PV+PW +
Roof Type: Shingle

Updated: 11/29/2022

Pulled by: _____

Date pulled: ____/____/____

Material	Qty. Estimated	Qty. Pulled	Qty. Actual	S.A.	Stock #	Item Description	Notes
ELEC	1	_____	_____			MidNite 240V AC Surge Protector	
	2	_____	_____			60A Non-fused Lockable Knifeblade Disconnect 3R	
	2	_____	_____			Tesla Powerwall Plus	
	2	_____	_____			Tesla Installation Kit	
	1	_____	_____			Tesla Internal Busbar kit	
	1	_____	_____			Tesla Backup Gateway 2	
	1	_____	_____			200A Square D Homeline Outdoor Panel	Backup Sub Panel
	2	_____	_____			Square D Hom 100A 2P breaker	for Backup Subpanel
	2	_____	_____			Square D Hom 40A 2P breaker	for Backup Subpanel
	2	_____	_____			Eaton 50A 2P breaker	for Tesla powerwall pluses
	1	_____	_____			Eaton 200A MBK breaker	for Tesla Gateway
	1	_____	_____			Eaton 20A 2P breaker	for surge protector
	5	_____	_____			Four Square Junction Box	for attic transition if needed
	3	_____	_____			Polaris Taps	for line side interconnection
		_____	_____			1" EMT conduit	10' stick
		_____	_____			1" Romex connector	
		_____	_____			1" LB	
		_____	_____			1" EMT offset	
		_____	_____			1" EMT connector	w/ locknut
		_____	_____			1" EMT coupling	w/ locknut
		_____	_____			1" one-hole straps	
		_____	_____			1" stand-off straps	
		_____	_____			2" LFMC Conduit	
		_____	_____			2" EMT conduit	10' stick
		_____	_____			2" 90	
		_____	_____			2" LB	
		_____	_____			2" EMT offset	
		_____	_____			2" EMT connector	w/ locknut
		_____	_____			2" EMT coupling	w/ locknut
		_____	_____			2" one-hole straps	
		_____	_____			2" stand-off straps	
		_____	_____			MC staples for 12/2	
		_____	_____			2/0 THHN	Blk, Wht, and Red
		_____	_____			#6 THHN	Blk, Wht, Red, and Green
		_____	_____			#8 THHN	Blk, Wht, Red, and Green
		_____	_____			#10 THHN	Blk, Wht, Red, and Green
		_____	_____			12/2 Romex	2 Conductors, 1 EGC
	3	_____	_____			NEC placards, kW placards	confirm text for location of disconnect: AC disconnect x2, **Located inside panel



5804 RIVER OAKS RD S,
ELMWOOD, LA 70123
PHONE: 504-267-1660

PROJECT NAME & ADDRESS

Brian Shepard
5621 Marcia Avenue
New Orleans, LA 70124

REVISIONS

DESCRIPTION	DATE	REV

SHEET NAME

EQUIP

SHEET SIZE

ARCH D
36" X 24"

DRAWN BY

NPB

PV Commissioning Checklist

Project Name: _____

Commissioning Agent: _____

System Size (kW): _____

Materials used: Modules: _____

Quantity: _____

Mods/string: _____

Inverter(s): _____

Monitoring: _____

Optimizers (if applicable): _____

Accessories: _____

Monitoring

____ Monitoring device installed

____ Internet connection to device verified

____ **All devices detected/producing**

____ **Engineering notified once system powered and connected to internet**

Placards

____ Meter placard has size and location

____ AC disconnect placard with arrow accurate

____ Solar breaker

____ Sol Alt service stickers

Electrical

____ All conduit/eqpt level, neat, and strapped

____ All Romex pinned/stapled but not damaged

____ No nicks/tears/kinks in wiring

____ Bond bushings installed/tight

____ Electrical connections pull tested

____ 120% rule verified (all panel inputs \leq 120% of bus)

____ Solar breaker located & sized properly

Images

____ Rooftop photos (array, racking etc.)

____ Conduit and wiring photos (attic and outside)

____ BOS/monitoring photos

____ Droned the site

____ **Photos of all equipment serial numbers**

****Photograph, Document, and Report any incomplete items or other issues****

I certify that the above work was completed accurately under my supervision. Signed,

X

Quality Control Technician:

Date: _____

PV PROJECT CHECKLIST - QAQC

Project Name: _____

QAQC Technician: _____

System Size (kW): _____

Materials used: Modules: _____

Quantity: _____

Mods/string: _____

Inverter(s): _____

Monitoring: _____

Optimizers (if applicable): _____

Accessories: _____

Monitoring

____ Monitoring device installed

____ All devices detected/producing

Racking/Roof

____ All clamps checked/proper size

____ Structural integrity of system verified

____ No wires hanging

____ Rail/Soladeck painted, cold galv if necessary

____ Holes/roof penetrations sealed

____ Grounding/bonding verified

____ Solar attic fan installed (if applicable)

____ Roof & gutters cleaned

Modules

____ Panels level, even, and clean

____ Array matches drawing

____ Pull test string/micro connections

____ Verify modules are not broken or scratched

____ No detrimental shading concerns

Attic/House/Yard

____ A/C pipes intact in attic

____ Attic access closed

____ Yard free of debris

Placards

____ Meter placard has size and location

____ AC disconnect placard with arrow accurate

____ Solar breaker

____ Sol Alt service stickers

Electrical

____ All conduit/eqpt level, neat, and strapped

____ All Romex pinned/stapled but not damaged

____ No nicks/tears/kinks in wiring

____ Lightning arrestors installed AC, and DC if applicable

____ Bond bushings installed/tight

____ Lugs tight/torqued

____ Electrical connections pull tested

____ Enclosures cleaned out

____ 120% rule verified (all panel inputs $\leq 120\%$ of bus)

____ Exterior holes caulked

____ Solar breaker located & sized properly

String/System Testing

DC Watts expected: _____ tested: _____

I_{mp} expected: _____ tested: _____

V_{mp} expected: _____ tested: _____

AC output current: _____ @time: _____

Battery

Client

____ Address any concerns the client has

____ Ensure client understands system & training

Images

____ Rooftop photos (array, racking etc.)

____ Conduit and wiring photos (attic and outside)

____ BOS/monitoring photos

____ Droned the site

I certify that the above work was completed accurately under my supervision. Signed,

X

Quality Control Technician:

Date: _____

Jobsite Safety Checklist

<input type="checkbox"/> Pre-Job	<input type="checkbox"/> Daily	<input type="checkbox"/> Weekly	<input type="checkbox"/> Post-Job
Location: _____		Date: _____	Emergency: _____
Lead Installer: _____		Lead's Phone #: _____	Job #: _____
JOB INFO/CHECKLIST			
General -Emergency phone numbers & procedures posted: -First aid supplies readily available: -First aid supplies adequate for job manpower: -Required posters & signs posted:	Yes No N/A <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Trenching & Excavation -Utilities located and marked: -Adjacent structures stabilized: -Other Barricades & Warnings (Pedestrians, Stop Logs, etc): -Material stored at least 2" from edge: -Competent person (assigned & performing inspections):	Yes No N/A <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
PPE -Hard hats: -Fall protection: -Skin protection: -Eye & face protection: -Hearing protection:	Yes No N/A <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Fire Protection: -Extinguishers where required: -Clearly visible & readily accessible: -Fully charged:	Yes No N/A <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Electrical Safety -Overhead power lines identified: -Electrical cords in good condition: -Electrical outlets not overloaded with multi-plug adaptors or extension cords: -Electrical panels are not blocked and have at least 30" of clearance:	Yes No N/A <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Ladders/Stairways -Anchored/Tied off & extend 3 feet above landing: -Proper angle (extension ladders): -Proper size & type: -Safe, usable condition: -Properly used: -Non-slip bases:	Yes No N/A <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
Chemical Safety -All chemical containers are labeled & sealed when not in use:	Yes No N/A <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Barricades -Located where required: -Adequately secured:	Yes No N/A <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
House Keeping & Security -Outside areas are free from tripping hazards, such as uneven pavement or holes: -Floors are free of tripping hazards, such as boxes, cords, etc: -Items are not stacked that create an overhead falling hazard:	Yes No N/A <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Other Hazards _____ _____ _____ _____	Yes No N/A <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
DISCUSSION			
NAMES & SIGNATURES OF ATTENDEES			