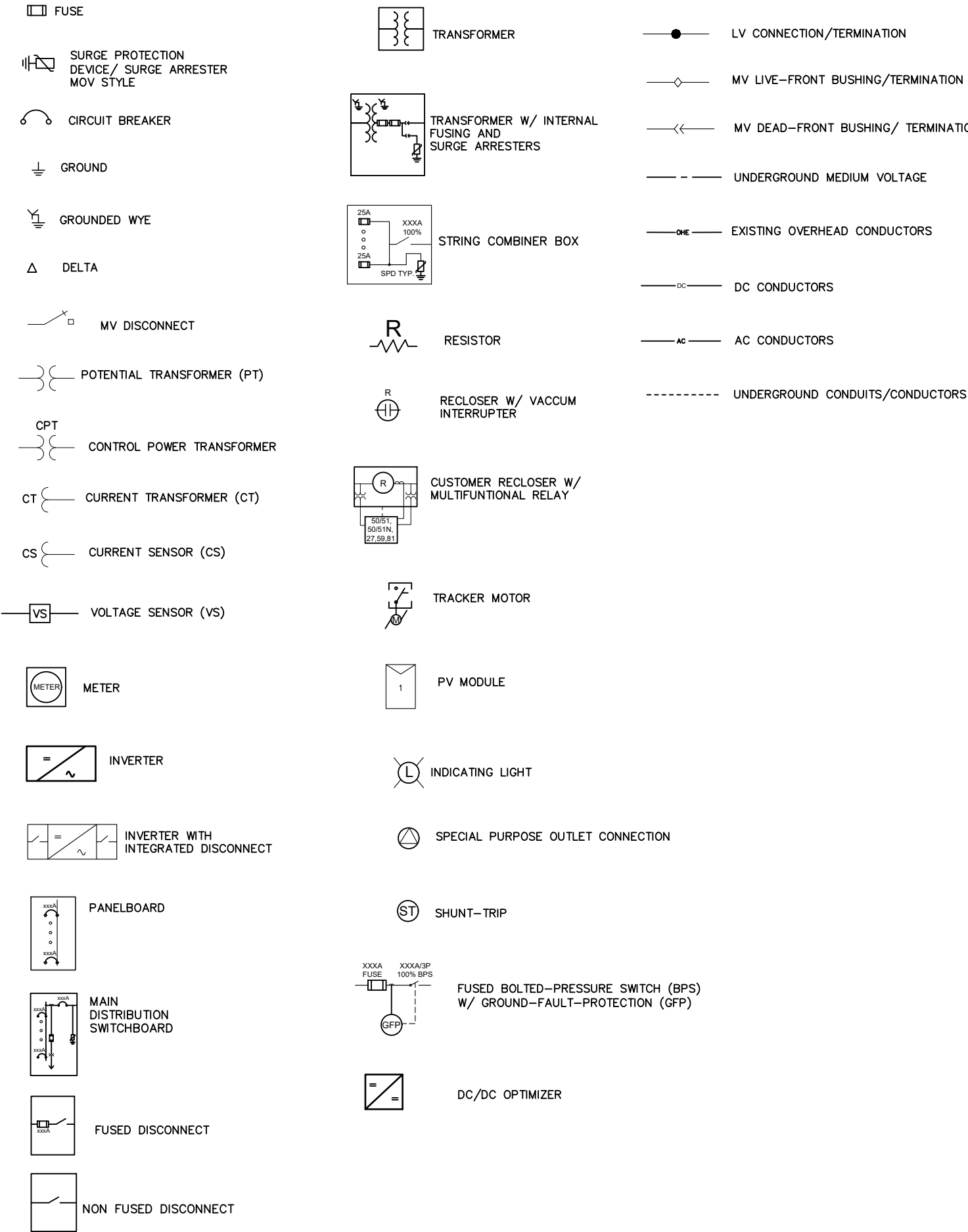


[illegible]

SYMBOL LEGEND:



GENERAL NOTES:

2. PROJECT COORDINATION:

- 2.1 THE CONTRACTOR SHALL VERIFY FIELD CONDITIONS AT THE SITE AND NOTIFY THE OWNER OF ANY DISCREPANCIES, PRIOR TO COMMENCING WITH THE WORK.
- 2.2 THE CONTRACTOR SHALL REVIEW AND COORDINATE WITH THE DOCUMENTS OF ALL TRADES.
- 2.3 THE CONTRACTOR SHALL FURNISH A SCHEDULE INDICATING HIS PORTION OF TIME, WITHIN THE OVERALL SCHEDULE, REQUIRED TO COMPLETE THE WORK, IN CONJUNCTION WITH ALL TRADES. ALL WORK THAT MAY AFFECT OPERATION OF BUILDING SYSTEMS SHALL BE COORDINATED WITH THE OWNER’S REPRESENTATIVE.
- 2.4 SHUT DOWN OF POWER SHALL BE COORDINATED WITH THE OWNER, ARCHITECT AND PROJECT MANAGER AT LEAST 14 WORKING DAYS PRIOR TO SHUT DOWN. SHUT DOWNS LONGER THAN 2 DAYS SHALL BE COORDINATED WITH THE ABOVE PERSONNEL AT LEAST ONE MONTH IN ADVANCE. TEMPORARY POWER FOR CONSTRUCTION SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR FOR SHUT DOWNS OVER 2 DAYS.
- 2.5 ALL CONDUITS AND DEVICE BOXES SHALL BE PROVIDED BY THE ELECTRICAL CONTRACTOR, INCLUDING ALL TECHNOLOGY CONDUITS AND BOXES.
- 2.6 EXACT LOCATIONS OF OUTLETS AND EQUIPMENT SHALL BE COORDINATED WITH ARCHITECTURAL AND MILLWORK PLANS. ALL OUTLET AND EQUIPMENT LAYOUTS SHALL BE VERIFIED AND COORDINATED WITH WORK OF OTHER TRADES.
- 2.7 PROVIDE TEMPORARY LIGHTING AND POWER IN ACCORDANCE WITH ARTICLE 305 OF THE NEC. TEMPORARY LIGHTING FIXTURES IN UNFINISHED AREAS SHALL REMAIN CONNECTED UNTIL REMOVAL IS REQUESTED BY THE CONTRACTOR.
- 2.8 THE CONTRACTOR SHALL CONTACT THE BUILDING MANAGER TO OBTAIN A COPY OF THE GENERAL REQUIREMENTS AND/OR CONDITIONS TO BE USED FOR THIS PROJECT.

3. PROTECTION OF WORK:

- 3.1EFFECTIVELY PROTECT ALL MATERIALS AND EQUIPMENT FROM ENVIRONMENTAL AND PHYSICAL DAMAGE UNTIL FINAL ACCEPTANCE. CLOSE AND PROTECT ALL OPENINGS DURING CONSTRUCTION. PROVIDE NEW MATERIALS AND EQUIPMENT TO REPLACE ITEMS DAMAGED.

4. WARRANTIES:

- 4.1 ALL MATERIALS AND EQUIPMENT SHALL BE GUARANTEED IN WRITING FOR A MINIMUM OF ONE YEAR AFTER FINAL ACCEPTANCE BY OWNER.
- 4.2 WORKMANSHIP SHALL BE GUARANTEED IN WRITING FOR A MINIMUM OF 5 YEARS AFTER FINAL ACCEPTANCE BY OWNER
- 4.3 OBTAIN AND DELIVER TO THE OWNER’S REPRESENTATIVE ALL GUARANTEES AND CERTIFICATES OF COMPLIANCE.

5. PERMITS:

- 5.1 CONTRACTOR SHALL OBTAIN AND PAY FOR ALL REQUIRED PERMITS AND INSPECTION FEES FOR ELECTRICAL WORK.

6. RACEWAYS:

- 6.1 ALL CONDUIT SHALL BE MINIMUM SIZE OF 1/2” FOR POWER CIRCUITS AND CONTROL CIRCUITS EXCEPT WHERE FLEXIBLE CONDUIT IS CALLED FOR ON PROJECT DOCUMENTS. ALL EXTERIOR EXPOSED CONDUIT SHALL BE PVC. ALL UNDERGROUND, IN SLAB OR UNDER SLAB SHALL BE SCH. 40 PVC. CHANGE TO SCH. 80 PVC CONDUIT BEFORE EXITING OUT OF UNDERGROUND SECTIONS. EMT IS ALLOWED IN INTERIOR DRY LOCATIONS WHERE NOT SUBJECT TO DAMAGE.
- 6.2 ALL FLEXIBLE CONDUIT IN WET OR DRY AREAS SHALL BE LIQUID TIGHT CONDUIT. NONMETALLIC FLEXIBLE CONDUIT IS SPECIFICALLY PROHIBITED.
- 6.3 CONDUIT SHALL BE RUN AT RIGHT ANGLES AND PARALLEL TO BUILDING LINES, SHALL BE NEATLY RACKED AND SECURELY FASTENED. JUNCTION BOXES SHALL BE PROVIDED WHERE REQUIRED TO FACILITATE INSTALLATION OF WIRES.
- 6.4 ALL CONDUIT AND ELECTRICAL EQUIPMENT SHALL BE SUPPORTED FROM THE BUILDING STRUCTURE IN AN APPROVED MANNER.
- 6.5 ALL EMPTY RACEWAYS SHALL BE FURNISHED WITH A 200 LB. TEST NYLON DRAG LINE.
- 6.6 ARRANGEMENT OF CONDUIT AND EQUIPMENT SHALL BE AS INDICATED, UNLESS MODIFICATION IS REQUIRED TO AVOID INTERFERENCES.
- 6.7 ALL RACEWAY AND WIRING SHALL BE CONCEALED IN FINISHED AREAS. RACEWAY IN MECHANICAL ROOMS, BASEMENTS AND CRAWL SPACES MAY BE SURFACE MOUNTED.
- 6.8 FOR CONDUITS CROSSING EXPANSION JOINTS, PROVIDE EXPANSION FITTINGS FOR SIZE 1–1/4”, AND LARGER. PROVIDE SECTIONS OF FLEXIBLE CONDUIT WITH GROUNDING JUMPERS FOR SIZES 1” AND SMALLER.
- 6.9 THE CONTRACTOR SHALL SEAL ALL PENETRATIONS THROUGH FIRE RATED WALLS AND FLOORS WITH APPROVED FIRE RATED SEALANT. ALL PENETRATIONS THROUGH ALL WALLS AND FLOORS SHALL BE SEALED. FOR ALL SLAB PENETRATIONS THE METHOD, DEPTHS AND LOCATIONS SHALL BE PRE–APPROVED BY THE BUILDING ENGINEER PRIOR TO THE START OF WORK.
- 6.10 THE CONTRACTOR SHALL INSTALL DETECTABLE UNDERGROUND TAPES FOR THE PROTECTION, LOCATION AND IDENTIFICATION OF UNDERGROUND CONDUIT INSTALLATION.
- 6.11 EXACT ROUTING OF CONDUITS AND CABLES SHALL BE DETERMINED IN FIELD.
- 6.12 ALL PENETRATIONS THROUGH FLOORS SHALL BE FIRE STOPPED AND SEALED WITH APPROVED SEALANT.
- 6.13 ELECTRICAL RACEWAY CONNECTIONS TO VIBRATING EQUIPMENT AND MACHINERY, SHALL BE MADE WITH FLEXIBLE LIQUID TIGHT METALLIC CONDUIT.
- 6.14 SECURE ALL SUPPORTS TO BUILDING STRUCTURE UTILIZING TOGGLE BOLTS IN HOLLOW MASONRY, EXPANSION SHIELDS OR INSERTS IN CONCRETE AND BRICK. MACHINE SCREWS IN METAL, BEAM CLAMPS IN FRAMEWORK AND WOOD SCREWS IN WOOD. NAILS, RAWL PLUGS AND WOOD PLUGS ARE NOT PERMITTED. WHERE REQUIRED BY STRUCTURE, PROVIDE THRU BOLTS AND FISH PLATES. SUPPORT RACEWAY RISERS AT EACH FLOOR LEVEL. RUN EXPOSED RACEWAYS PARALLEL WITH OR AT RIGHT ANGLES TO BUILDING LINES.
- 6.15 DO NOT RUN RACEWAYS CLOSER THAN 6 INCHES WHEN PARALLEL TO HOT WATER OR STEAM PIPES. WHEN CROSSING WATER OR STEAM PIPES CROSS A MINIMUM OF 3 INCHES ABOVE. IF CROSSING BELOW IS UNAVOIDABLE, PROVIDE DRIP SHIELDS EXTENDING 6 INCHES BEYOND THE WATER OR STEAMPIPE. BOXES INSTALLED IN PROXIMITY TO WATER OR STEAM PIPE SHALL BE RATED NEMA 4X.

7. BOXES:

- 7.1 INTERIOR JUNCTION BOXES SHALL BE SHEET STEEL. EXTERIOR JUNCTION BOXES SHALL BE NONMETALLIC, WITH SCREW COVERS. BOXES SHALL BE SUPPORTED INDEPENDENTLY OF CONDUITS.

8. WIRING:

- 8.1 ALL WIRE SHALL BE MADE OF COPPER WITH INSOLATION SUITABLE FOR THE APPLICABLE ENVIROMENT AND VOLTAGE. CONTRACTOR SHALL GET APPROVAL FOR ANY OTHER WIRE TYPE.
- 8.2 UNDER NO CIRCUMSTANCES SHALL FEEDERS BE SPLICED.
- 8.3 ALL ELECTRICAL TERMINAL TEMPERATURE RATINGS ASSUMED TO BE 75° C UNLESS SITE CONDITIONS REQUIRE OTHERWISE.
- 8.4 WIRE SIZES SHALL BE INCREASED WHERE NECESSARY TO LIMIT AC VOLTAGE DROP TO 1.5% TOTAL FROM INVERTER TO POINT OF COMMON COUPLING

9. GROUNDING:

- 9.1 PROVIDE A COMPLETE EQUIPMENT GROUND SYSTEM FOR THE ELECTRICAL SYSTEM AS REQUIRED BY ARTICLE 250 AND 690, OF THE NEC, AND AS SPECIFIED HEREIN.
- 9.2 ALL BRANCH CIRCUITS AND FEEDERS FOR POWER WIRING SHALL CONTAIN A COPPER GROUND WIRE. NO FLEXIBLE METAL CONDUIT OF ANY KIND OR LENGTH SHALL BE USED AS THE EQUIPMENT GROUNDING CONDUCTOR.

10. MECHANICAL SYSTEMS POWER:

- 10.1 DISCONNECT SWITCHES SHALL BE HEAVY DUTY, QUICK MAKE, QUICK BREAK TYPE, ENCLOSED IN A HEAVY SHEET METAL ENCLOSURE WITH HINGED INTERLOCKING COVER, IN PROPER NEMA RATED ENCLOSURES. FUSED OR NON–FUSED AS REQUIRED. DISCONNECT SWITCHES SHALL BE PROVIDED BY CONTRACTOR, EXCEPT AS NOTED ON DRAWINGS.
- 10.2 THE RATING FOR DISCONNECT SWITCHES SHALL BE THE SAME AS, OR GREATER THAN, THE PROTECTIVE DEVICE SERVING THE EQUIPMENT.
- 10.3 A STRUT FRAME SHALL BE PROVIDED AT ALL LOCATIONS WHERE STRUCTURE WILL NOT ADEQUATELY SUPPORT EQUIPMENT, OR FOR FREESTANDING EQUIPMENT.

11. PANEL BOARDS:

- 11.1 PANELBOARDS: SWITCHING UNITS SHALL BE 3 PHASE, 4 WIRE CIRCUIT BREAKER TYPE UNLESS OTHERWISE NOTED. BUS BARS SHALL BE HARD DRAWN COPPER, MINIMUM 98% CONDUCTIVITY, AND SILVER OR TIN–PLATED JOINTS. CABINETS SHALL BE GALVANIZED SHEET STEEL BACK BOX, WITH DOOR AND TRIM AND LAPPED AND WELDED CORNERS. HARDWARE SHALL BE CHROME–PLATED WITH FLUSH LOCK/LATCH HANDLE ASSEMBLY (UP TO 48 IN. HIGH DOORS) OR VAULT HANDLE, LOCK AND 3–POINT CATCH (LARGER THAN 48 IN. HIGH DOORS). HINGES SHALL BE SEMI–CONCEALED, 5–KNUCKLE STEEL WITH NONFRERROUS PINS, 180–DEG OPENING, LOCATED A MAXIMUM 26 IN. ON CENTERS. PROVIDE DOOR–IN–DOOR CONSTRUCTION. MINIMUM GUTTER SPACES FOR LIGHTING PANELS SHALL BE 5– BOTTOM. DIRECTORY HOLDER SHALL BE METAL FRAME WITH CLEAR PLASTIC, TRANSPARENT COVER.
- 11.2 PROVIDE A NEW TYPE WRITTEN CIRCUIT DIRECTORY FOR EACH PANEL AFFECTED BY THIS PROJECT.
- 11.3 WHEREVER POSSIBLE, PANELBOARDS SHALL BE RECESSED IN WALL. SURFACE MOUNTED PANELBOARDS SHALL BE MOUNTED ON A PLYWOOD BACKBOARD. PLYWOOD SHALL BE MOUNTED ON TOP OF GYMPSUM BOARD. PLYWOOD SHALL BE PAINTED ON ALL SIDES AND EDGES. COORDINATE WITH OWNER FOR COLOR.
- 11.4 PROVIDE LIGHTNING SURGE PROTECTION FOR MAIN SWITCHBOARD OR MAIN SERVICE PANEL BOARD. PROVIDE GROUNDING OF SURGE DEVICE PER THE NEC.
- 11.5 CONTRACTOR IS RESPONSIBLE FOR BALANCING LOADS ON ALL PHASES AND MAY ALTER ASSIGNMENT OF CIRCUITS FOR BALANCING PHASES.
- 11.6 CIRCUIT SCHEDULES ARE INTENDED TO REPRESENT THE GENERAL WIRING NEEDS OF THE EQUIPMENT SERVICED FROM THE PANEL. THE EXACT CIRCUIT ARRANGEMENT WILL BE DETERMINED BY PANEL SHOP DRAWING AND ARRANGEMENT WILL BE DETERMINED BY PANEL SHOP DRAWING AND PANELS ACTUALLY FURNISHED.

12. IDENTIFICATION:

- 12.1 REFER TO NEC LABELS DRAWING FOR LABELING REQUIREMENTS
- 12.2 INSTALL NAMEPLATES ON ALL MAJOR EQUIPMENT, INCLUDE STARTERS, TRANSFORMERS, PANELBOARDS, DISCONNECT SWITCHES AND OTHER ELECTRICAL BOXES AND CABINETS INSTALLED UNDER THIS CONTRACT.
- 12.3 APPLY CABLE/CONDUCTOR IDENTIFICATION MARKERS ON EACH CABLE AND CONDUCTOR IN EACH BOX, ENCLOSURE OR CABINET.

13. RECORD DRAWINGS:

- 13.1 THE CONTRACTOR SHALL SUBMIT SIX (6) COPIES OF SHOP DRAWINGS. THE APPROVAL OF SHOP DRAWINGS SHALL ONLY BE CONSTRUED TO APPLY TO THE GENERAL LAYOUT AND CONFORMANCE TO THE DESIGN CONCEPT OF THE PROJECT AND FOR THE COMPLIANCE WITH THE GENERAL REQUIREMENTS OF THE CONTRACT DOCUMENTS. THE CONTRACTOR SHALL RETAIN THE RESPONSIBILITY FOR ANY DEVIATIONS FROM THE REQUIREMENTS OF THE CONTRACT DOCUMENTS.
- 13.2 PROVIDE SHOP DRAWINGS FOR THE LIGHTING FIXTURES, PANEL BOARDS, CIRCUIT BREAKERS, WIRING DEVICES, FIRE ALARM DEVICES AND SEALS FOR FIRE AND WATER STOPPING.
- 13.3 DURING CONSTRUCTION, THE CONTRACTOR SHALL MAINTAIN A RECORD SET OF INSTALLATION PRINTS. HE SHALL NEATLY AND CLEARLY RECORD ON THESE PRINTS ALL DEVIATIONS FROM THE CONTRACT DRAWINGS IN SIZES, LOCATIONS AND DETAILS.
- 13.4 UPON PROJECT COMPLETION, THE CONTRACTOR SHALL COMPLETE THE MARK UP OF ALL PROJECT DRAWINGS TO RECORD INSTALLED CONDITIONS.
- 13.5 REPRODUCIBLE "RECORD" DRAWINGS PREPARED IN CAD FORMAT SHALL BE PROVIDED AS INSTALLED CONDITIONS OF THE WORK. A FULL SIZE PRINT OUT OF THE "RECORD" DRAWING FILE SHALL BE PROVIDED AFTER COMPLETION OF THE INSTALLATION.
- 13.6 UPON COMPLETION AND ACCEPTANCE OF WORK, THE CONTRACTOR SHALL FURNISH WRITTEN INSTRUCTIONS AND EQUIPMENT MANUALS AND DEMONSTRATE THE PROPER OPERATIONS AND MAINTENANCE OF ALL EQUIPMENT AND APPARATUS FURNISHED UNDER THIS CONTRACT.



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ELECTRICAL ENGINEER STAMP:

PROFESSIONAL ENGINEER STAMPS

ISSUANCE:

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PLAN SET (FOR
QUOTATION PURPOSES
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LICENSED STRUCTURAL ENGINEER certifies that they prepared all of the structural "S" sheets in this drawing set.
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7	07/02/24	17	
6	06/21/24	16	
5	06/14/24	15	
4	12/13/23	14	
3	12/06/23	13	
2	08/21/23	12	
1	02/17/23	11	
REV	SET/DATE	REV	SET/DATE
DRAWN BY: TG		CHECKED BY: BN	
SCALE: AS NOTED		JOB NO: 01320	

SV CSG WALDO,
LLC
(43.65683, –87.95052)

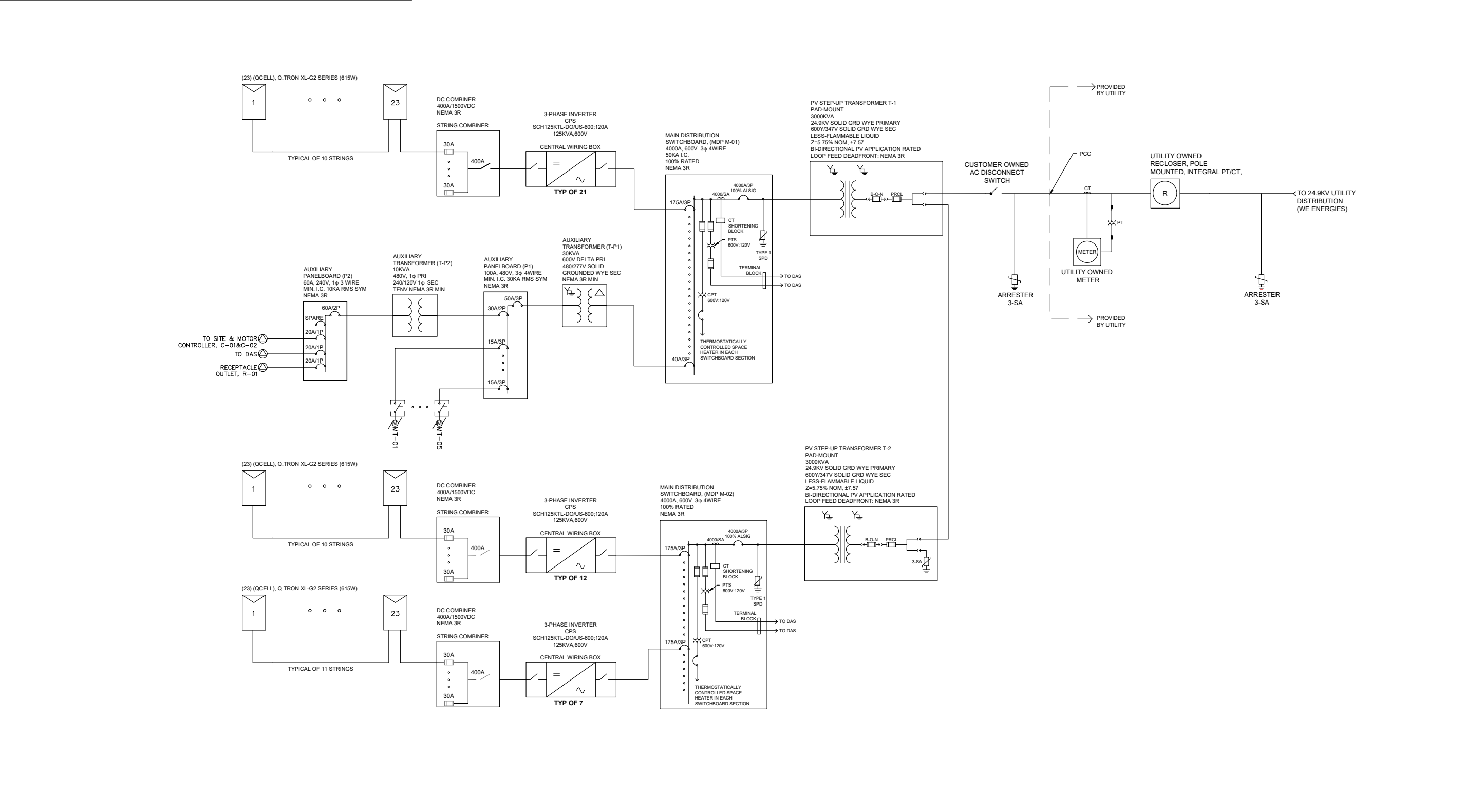
SHEET TITLE

GENERAL NOTES

DWG. NO.

G-2.00

PV SYSTEM DETAILS	
ARRAY TYPE:	SINGLE AXIS TRACKER
DC SYSTEM SIZE:	5.75702 MW DC
DC SYSTEM VOLTAGE:	1500 V
AC SYSTEM SIZE:	5.000 MW AC
MODULES	(9,361) QCELL, Q.TRON XL-G2 SERIES (615W)
INVERTERS:	(40) CPS, SCH125KTL-DO/US-600
OPTIMIZERS:	N/A
RACKING:	ATI
CLAMPS:	N/A
AZIMUTH:	SAT
ARRAY PITCH:	24'-1"
ARRAY TILT:	+/- 52° SAT





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2	08/21/23	12	
1	02/17/23	11	
REV	SET/DATE	REV	SET/DATE
DRAWN BY: TG		CHECKED BY: BN	
SCALE: AS NOTED		JOB NO: 01320	

SV CSG WALDO,
LLC
(43.65683, -87.95052)

SHEET TITLE
ONE LINE DIAGRAM

DWG. NO.
E-1.00

1. THE LANDSCAPE PLANT PLAN AND DETAILS ARE FOR LANDSCAPING INFORMATION ONLY. PLEASE REFER TO THE SITE LAYOUT PLAN, GRADING PLAN AND/OR UTILITIES PLAN FOR ALL OTHER INFORMATION.
2. THE CONTRACTOR SHALL MONITOR AND GUARANTEE THAT ALL PLANTS, TREES, AND SHRUBS SHALL BE HEALTHY AND FREE OF DISEASE FOR A PERIOD OF (1) ONE YEAR AFTER SUBSTANTIAL COMPLETION AND ACCEPTANCE BY THE OWNER. CONTRACTOR SHALL REPLACE ANY DEAD OR UNHEALTHY PLANTS AT CONTRACTOR'S EXPENSE. FINAL ACCEPTANCE SHALL BE MADE IF ALL PLANTS MEET THE GUARANTEE REQUIREMENTS INCLUDING MAINTENANCE. MAINTENANCE RESPONSIBILITIES INCLUDE INVASIVE SPECIES MONITORING, REMOVAL, AND SUPPLEMENTATION. MONITORING OF THE PROJECT SITE SHALL OCCUR IN THE SPRING AND FALL. DETERMINE THE PRESENCE OF INVASIVE SPECIES. SHOULD ANY INVASIVE SPECIES BE IDENTIFIED WITHIN THE PROJECT SITE, THE INVASIVE SPECIES SHALL BE REMOVED ACCORDING TO METHODS MOST LIKELY TO BE EFFECTIVE IN CONTROLLING THAT SPECIES AND SUPPLEMENTING ITS REPLACEMENT WITH APPROPRIATE VEGETATION AND SEED MIX IDENTIFIED (AND APPROVED) ON THIS PLAN AND/OR AN APPROVED EQUAL. ADDITIONAL MAINTENANCE RESPONSIBILITIES INCLUDE: APPROVED CULTIVATING, SPRAYING, WEEDING, WATERING, TIGHTENING OF TREE STRAP GUYS, PRUNING, FERTILIZING, MULCHING, AND ANY OTHER OPERATIONS NECESSARY TO MAINTAIN PLANT VIABILITY. MAINTENANCE SHALL BEGIN IMMEDIATELY AFTER PLANTING AND CONTINUE UNTIL 90 DAYS AFTER FINAL ACCEPTANCE.
3. THE CONTRACTOR SHALL SUPPLY ALL LABOR, PLANTS, APPROVED SEEDING MIX, AND MATERIALS IN QUANTITIES SUFFICIENT TO COMPLETE THE WORK SHOWN ON THE DRAWING(S) AND LISTED IN THE PLANT SCHEDULE(S) AND/OR SEEDING TABLE(S). IN THE EVENT OF A DISCREPANCY BETWEEN QUANTITIES SHOWN IN THE PLANT SCHEDULE AND/OR SEEDING TABLE AND THOSE REQUIRED BY THE DRAWINGS, THE LARGER SHALL APPLY. ALL PLANTS AND SHRUBS SHALL BE COMPLETED PRIOR TO PLANTING FOR APPROVAL BY THE OWNER. CERTIFIED LANDSCAPE INSPECTOR, OR LANDSCAPE ARCHITECT STAKING OF THE INSTALLED TREE MUST BE COMPLETED THAT THE PLANTING MATERIAL HAS BEEN GROWN FOR A MINIMUM OF (2) TWO YEARS AT THE SOURCE AND OBTAINED WITHIN 200 MILES OF PROJECT SITE UNLESS OTHERWISE APPROVED BY OWNER, CERTIFIED LANDSCAPE INSPECTOR, OR LANDSCAPE ARCHITECT.
4. THE LOCATIONS FOR PLANT MATERIAL ARE APPROXIMATE AND ARE SUBJECT TO FIELD ADJUSTMENT DUE TO SLOPE, VEGETATION, AND SITE FACTORS SUCH AS THE LOCATION OF ROCK OUTCROPS. PRIOR TO PLANTING THE CONTRACTOR SHALL ACCURATELY STAKE OUT THE LOCATIONS FOR ALL PLANTS. THE OWNER, CERTIFIED LANDSCAPE INSPECTOR, OR LANDSCAPE ARCHITECT SHALL APPROVE THE FIELD LOCATIONS OR ADJUSTMENTS OF THE PLANT MATERIAL.
5. ALL SHRUB MASSING SHALL BE MULCHED TO A DEPTH OF 2" AND SHREDDED HARDWOOD BARK MULCH SHALL BE USED FOR SHRUB MASSING AREAS.
6. NO PLANT SHALL BE PLACED IN THE GROUND BEFORE ROUGH GRADING HAS BEEN COMPLETED AND APPROVED BY THE OWNER, CERTIFIED LANDSCAPE INSPECTOR, OR LANDSCAPE ARCHITECT. STAKING THE LOCATION OF PLANTS AND SHRUBS SHALL BE COMPLETED PRIOR TO PLANTING FOR APPROVAL BY THE OWNER. CERTIFIED LANDSCAPE INSPECTOR, OR LANDSCAPE ARCHITECT STAKING OF THE INSTALLED TREE MUST BE COMPLETED THE SAME DAY IT IS INSTALLED. ALL TREES SHALL BE STAKED OR GUYED AS PER THE DETAIL. SEE LANDSCAPING PLAN(S) FOR PLANTING DETAILS.
7. COORDINATE PLANT MATERIAL LOCATIONS WITH SITE UTILITIES. SEE SITE LAYOUT, GRADING AND/OR UTILITY PLANS FOR STORM, SANITARY, GAS, ELECTRIC, TELEPHONE AND WATER LINES. UTILITY LOCATIONS ARE APPROXIMATE. EXERCISE CARE WITH DIGGING AREAS OF POTENTIAL CONFLICT WITH UNDERGROUND OR OVERHEAD UTILITIES. THE CONTRACTOR IS RESPONSIBLE FOR ANY DAMAGE DUE TO CONTRACTOR'S NEGLIGENCE AND SHALL REPLACE OR REPAIR ANY DAMAGE AT CONTRACTOR'S EXPENSE.
8. ALL PLANT MATERIAL SHALL CONFORM WITH STANDARDS SET FORTH BY THE AMERICAN ASSOCIATION OF NURSERYMEN AND THE PLANTING SCHEDULE.
9. ANY TREE WRAP WILL BE REMOVED AND PROPERLY DISPOSED OF FOLLOWING INSTALLATION.
10. LANDSCAPE PLANTING PITS MUST BE FREE DRAINING, PAVEMENT, COMPACTED SUBGRADE, AND BLASTED ROCK SHALL BE REMOVED TO A DEPTH OF 2" OR TO A GREATER DEPTH IF REQUIRED BY PLANTING DETAILS OR SPECIFICATIONS. REMOVE SOFT AND WOODED/STONY COMPACTED LOAM OR SANDY LOAM FREE FROM STONES AND RUBBISH 1" OR GREATER IN DIAMETER, AND ANY OTHER MATERIAL HARMFUL TO PLANT GROWTH AND DEVELOPMENT. PLANTING INSTALLATION SHALL BE AS DETAILED AND CONTAIN PLANTING MIX AS SPECIFIED UNLESS RECOMMENDED OTHERWISE BY SOIL ANALYSIS.

MYCORHIZA INOCULANT - "TRANSPLANT 1-STEP" AS MANUFACTURED BY ROOTS, INC. OR APPROVED
EQUAL. USE PER MANUFACTURER'S RECOMMENDATIONS FOR TREES AND SHRUBS. FERTILIZER/LIME
APPLY AS RECOMMENDED BY SOIL ANALYSIS

ALL PRUNING SHALL CONFORM TO THE TREE CARE INDUSTRY ASSOCIATION (TCIA) ANSI A300 (PART 1) - 2017 PRUNING STANDARDS. PRUNING STANDARDS SHALL RECOGNIZE BUT, ARE NOT LIMITED TO, THE FOLLOWING PRUNING OBJECTIVES: MANAGE RISK, MANAGE HEALTH, DEVELOP STRUCTURE, PROVIDE ORANCE, MANAGE SIZE OR SHAPE, IMPROVE AESTHETICS, MANAGE PRODUCTION OF FRUIT, FLOWERS, OR OTHER PRODUCTS, AND/OR MANAGE MILIOTU HABITAT. DEVELOPING STRUCTURE SHALL IMPROVE BRANCH AND TRUNK ARCHITECTURE, PROMOTE OR SUBORDINATE CERTAIN LEADERS, STEMS, OR BRANCHES; PROMOTE DESIRABLE BRANCH SPACING; PROMOTE OR DISCOURAGE GROWTH IN A PARTICULAR DIRECTION (DIRECTIONAL PRUNING); MINIMIZE FUTURE INTERFERENCE WITH TRAFFIC, LINES OF SIGHT, INFRASTRUCTURE, OR OTHER PLANTS; RESTORE PLANTS FOLLOWING DAMAGE; AND/OR REJUVENATE SHRUBS. PROVIDING CANOPY CANOPY SHALL ENSURE SAFE AND RELIABLE UTILITY SERVICES. MINIMIZE CURRENT AND FUTURE INTERFERENCE WITH TRAFFIC, LINES OF SIGHT, OR OTHER PLANTS; RAISE CROWN(S) FOR MOVEMENT OF TRAFFIC OR LIGHT PENETRATION; ENSURE LINES OF SIGHT OR DESIRED VIEWS; PROVIDE ACCESS TO SITES, BUILDINGS, OR OTHER STRUCTURES; AND/OR COMPLY WITH REGULATIONS.

ALL WILDFLOWERS AND GRASSES SOWN SHALL BE ALLOWED TO GROW TO THEIR NATURALLY OCCURRING HEIGHTS WHENEVER POSSIBLE. NATIVE WILDFLOWERS AND/OR GRASSES CAN BE MOWED/MAINTAINED (WITHIN ACCEPTABLE AREAS IDENTIFIED AND/OR APPROVED BY APPROPRIATE REGULATORY AGENCIES) AS OFTEN AS NEEDED TO KEEP THE VEGETATION AT A DESIRED AND/OR MANAGEABLE/MANICURED HEIGHT.

NO PESTICIDES OR HERBICIDES WILL BE USED AS PART OF GROUNDS MAINTENANCE ACTIVITIES.



NOT TO SCALE

NEVER CUT THE PRIMARY LEADER.

IT IS NOT RECOMMENDED TO AMEND THE EXISTING SOIL BEFORE BACKFILLING THE HOLE UNLESS SOIL CONDITIONS ARE POOR FOR PLANTING.

WATER THOROUGHLY TO HELP ENSURE THE REMOVAL OF AIR POCKETS AND PROPERLY SET THE TREE.

INSTALL LOW PROFILE PRAIRIE SEED MIX UNDER SOLAR ARRAYS
AND WITHIN THE PROPERTY BOUNDARY

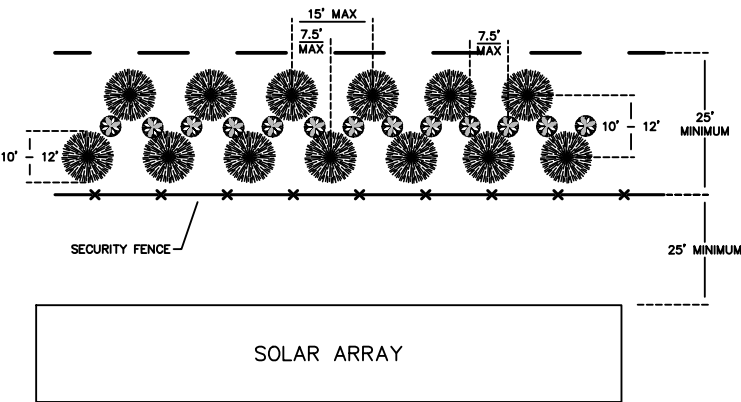
1. GROUNDS MAINTENANCE WILL OCCUR AS NEEDED ON SITE.
2. APPROPRIATE EQUIPMENT WILL BE USED FOR ALL GROUNDS MAINTENANCE ACTIVITIES. THIS SHOULD INCLUDE RIDE ALONG TRACTOR MOUNTED MOWERS, HANDS AND PUSH MOWERS, HANDHELD EQUIPMENT INCLUDING BUT NOT LIMITED TO WEED WHACKERS, TRIMMERS AND HEDGE TRIMMERS.
3. THE USE OF CHEMICALS WILL BE LIMITED TO THAT NECESSARY AND AVOIDED TO THE MAXIMUM EXTENT PRACTICABLE. ALL CHEMICAL CONTROL TREATMENTS WILL BE PERFORMED BY, OR PERFORMED UNDER THE DIRECT SUPERVISION OF, AN ILLINOIS CERTIFIED PESTICIDE APPLICATOR OR TECHNICIAN.

1. INVASIVE SPECIES AND OTHER WEEDS WILL BE REMOVED AND CONTROLLED THROUGHOUT THE PROJECT AREA DURING OPERATION OF THE PROJECT.
2. EMPHASIS WILL BE PLACED ON REMOVAL OF INVASIVE AND NOXIOUS WEED SPECIES FROM BUFFER AREAS TO MAINTAIN BUFFER HEALTH AND SCREENING PROPERTIES.

EVERGREEN PLANT LIST				
PLANT ID	PLANT QUANTITY	Scientific Name COMMON NAME	TYPE/SIZE	COMMENTS
To	77	Thuja occidentalis EMERALD GREEN	6' MIN.	B & B

SHRUB PLANT LIST				
PLANT ID	PLANT QUANTITY	Scientific Name COMMON NAME	TYPE/SIZE	COMMENTS
Vd	76	Viburnum dentatum ARROWHEAD VIBURNUM	#3 Container	

NOT TO SCALE



NOT TO SCALE



NOT TO SCALE

IN AREAS WITH MASS PLANTINGS, CONTINUOUS EXCAVATION AND MULCHING PRACTICES SHALL BE IMPLEMENTED WHENEVER POSSIBLE

IT IS NOT RECOMMENDED TO AMEND THE EXISTING SOIL BEFORE BACKFILLING THE HOLE UNLESS SOIL CONDITIONS ARE POOR FOR PLANTING.

WATER THOROUGHLY TO HELP ENSURE THE REMOVAL OF AIR POCKETS.

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6	06/21/24	16	
5	06/14/24	15	
4	12/13/23	14	
3	12/06/23	13	
2	08/21/23	12	
1	02/17/23	11	
REV	SET/DATE	REV	SET/DATE
DRAWN BY: TG		CHECKED BY: BN	
SCALE: AS NOTED		JOB NO: 01320	

SV CSG WALDO,
LLC
(43.65683, -87.95052)

SHEET TITLE

LANDSCAPE DETAILS

DWG. NO.

E-3.00

Q.TRON XL-G2 SERIES

610-635 Wp | 156 Cells
22.7% Maximum Module Efficiency

MODEL Q.TRON XL-G2.3/BFG



High performance Qcells N-type solar cells

QANTUM NEO Technology with optimized module layout boosts module efficiency up to 22.7%.



Bifacial energy yield gain of up to 21%

Bifacial QANTUM NEO solar cells make efficient use of light shining on the module rear-side for radically improved LCOE.



A reliable investment

Double glass module design enables extended lifetime with 12-year product warranty and improved 30-year performance warranty.*



Enduring high performance

Long-term yield security with Anti LeTID and Anti PID Technology*, Hot-Spot Protect.



Frame for versatile mounting options

High-tech aluminum alloy frame protects from damage, enables use of a wide range of mounting structures and is certified regarding IEC for high snow (5400 Pa) and wind loads (2750 Pa)*.



Innovative all-weather technology

Optimal yields, whatever the weather with excellent low-light and temperature behavior.

* See data sheet on rear for further information.
* APT test conditions according to IEC TS 62804-0205 method B (-1500°C/16h)
including pre-treatment according to IEC 6275-11 Ed. 2.0 (C2)
* See Installation Manual for instructions

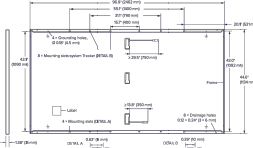
The ideal solution for:



Q.TRON XL-G2 SERIES

Mechanical Specification

Format	96.9in × 44.6in × 1.38in (Including frame) (2462 mm × 1134 mm × 35mm)
Weight	78.08kg (DS-4kg)
Front Cover	0.08in (2.0 mm) thermally pre-stressed glass with anti-reflection technology
Back Cover	0.08in (2.0 mm) semi-tempered glass
Frame	Anodized aluminum
Cell	6 × 26 monocrystalline QANTUM NEO solar half cells
Junction box	2.09x3.98 × 1.26x2.36 × 0.09-0.7in (53.10x1mm × 32.60mm × 15.18mm). Protection class IP67, with bypass diodes
Cable	4-core Solar cables (in ≥ 28.5in (750mm), (1) ≥ 13.8in (350mm)
Connector	Standard MC4-Evo2, Status MC4-IP68



Electrical Characteristics

POWER CLASS	610		615		620		625		630		635	
MINIMUM PERFORMANCE AT STANDARD TEST CONDITIONS, STC (POWER TOLERANCE ±5W/-0W)												
			BSTC*		BSTC*		BSTC*		BSTC*		BSTC*	
Power at MPP ¹	P _{MPP}	[W]	610	615	620	625	630	635	640	645	650	7031
Short Circuit Current ¹	I _{sc}	[A]	13.05	13.13	13.19	13.26	13.32	13.38	13.88	13.93	14.44	
Open Circuit Voltage ¹	V _{oc}	[V]	56.01	56.24	56.36	56.62	56.80	56.95	57.18	57.46	57.51	57.74
Current at MPP	I _{MPP}	[A]	12.95	14.34	13.00	14.40	13.05	14.46	13.10	14.57	13.21	14.62
Voltage at MPP	V _{MPP}	[V]	47.90	47.09	47.30	47.29	47.50	47.49	47.70	47.69	47.88	48.09
Efficiency ¹	η	[%]	≥21.8		≥22.0	≥22.2	≥22.4	≥22.6	≥22.8		≥22.7	

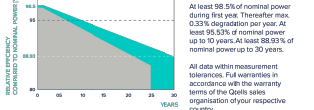
Efficiency of P_{MPP} and I_{sc} 80% ±15% efficiency given for rear side irradiation on top of STC (front side) - According to IEC 60904-1-2

* Measurement tolerance: P_{MPP} ±3%, I_{sc} ±3%, V_{oc} ±5%, STC: 1000W/m² ±1%, BSTC: 1000W/m² ±1%, g = 80%, 25 ±2°C, AM 1.5 according to IEC 60904-3

Minimum	Power at MPP	P_{MPP} [W]	4611	464.9	468.7	472.5	476.2	480.4
	Short Circuit Current	I_{sc} [A]	11.00	11.05	11.09	11.14	11.18	11.23
	Open Circuit Voltage	V_{oc} [V]	53.24	53.51	53.77	54.04	54.31	54.58
	Current at MPP	I_{MPP} [A]	10.18	10.22	10.26	10.30	10.34	10.38
	Voltage at MPP	V_{MPP} [V]	45.28	45.48	45.67	45.86	46.05	46.24

¹BS01W/m², NMOT, spectrum AM 1.5

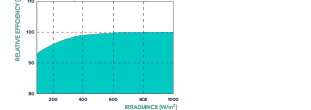
Ocells PERFORMANCE WARRANTY



At least 98.5% of nominal power during first year. Thereafter max. 0.5% degradation per year. At least 98.5% of nominal power up to 30 years. At least 98.5% of nominal power up to 30 years.

All data within measurement tolerance. Full warranty in accordance with the warranty terms of the Qcells sales organization of your respective country.

PERFORMANCE AT LOW IRRADIANCE



Typical module performance under low irradiance conditions in comparison to STC conditions (25°C, 1000W/m²).

High power production capacity in J201 (February J201)			Comparison Test TC conditions (25°C, 100%RH)				
TEMPERATURE COEFFICIENTS							
Temperature Coefficient of I_{sc}	α	[%/K]	-0.04	Temperature Coefficient of V_{oc}	β	[%/K]	-0.24
Temperature Coefficient of P_{MPP}	γ	[%/K]	-0.30	Nominal Module Operating Temperature	NMOT	[°C]	109±1.4 (43±1°C)

Properties for System Design

Maximum System Voltage	V _{max} [V]	1500	PV module classification	Class II
Maximum Series Fuse Rating	[A DC]	30	Fire Rating based on ANSI/UL 6770	TUV 23P
Max. Push Load ¹ , Test/Design	[lbs/ft ²]	113 (5400 Pa)/75 (3600 Pa)	Permitted Module Temperature on Continuous Duty	-40°F up to +85°F [-40°C up to +85°C]
Max. Pull Load ¹ , Test/Design	[lbs/ft ²]	78 (3750 Pa)/52 (2500 Pa)		

¹ See Installation Manual for instructions

* New Type is similar to Type 3 but with metallic frame

Qualifications and Certificates

UL 6750-1 & UL 6750-2, CE compliant,
Quality Certified (P1, T1, R1, R2),
IEC 6275-1, IEC 6275-2, IEC 6275-3, IEC 6275-4,
U.S. Patent No. 8,953,270 (P1)



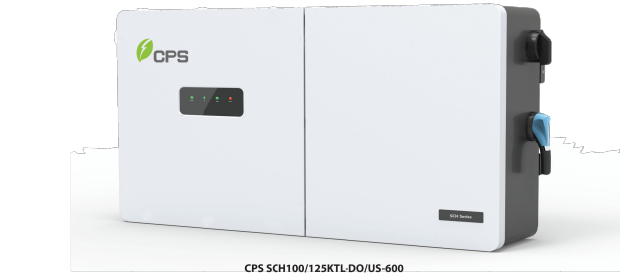
* Contact your Qcells Sales Representative for details regarding the module's eligibility to be Buy American Act (BAA) compliant.

Qcells pursues minimizing paper output in consideration of the global environment.

Notes: Installation instructions must be followed. Contact your Qcells Sales Representative for further information on approved installation practices.
Hardware: Q Cells America Inc., 480 Spectrum Center Drive, Suite 100, Richardson, TX 75081, USA. Tel: +1 972 788 99 98 (BAA), Email: info@qcellsusa.com | Web: www.qcellsusa.com



100/125kW, 1500Vdc String Inverters for North America



CPS SCH100/125KTL-DO/US-600

The 100 & 125kW high power CPS three-phase string inverters are designed for ground mount applications. The units are high performance, advanced and reliable inverters designed specifically for the North American environment and grid. High efficiency at 99.1% peak and 98.5% CEC, wide operating voltages, broad temperature ranges and a NEMA Type 4X enclosure enable this inverter platform to operate at high performance across many applications. The CPS 100/125kW products ship with the Standard or Centralized Wire-box, each fully integrated and separable with AC and DC disconnect switches. The Standard Wire-box includes touch safe fusing for up to 20 strings. The CPS FlexOM Gateway enables communication, controls and remote product upgrades.

Key Features

- NFPA 70 and NEC compliant
- Advanced Smart-Grid features (CA Rule 21 certified)
- CPS FlexOM Gateway enables remote firmware upgrades
- Integrated AC & DC disconnect switches
- 1 MPPT with 20 fused inputs for maximum flexibility
- Copper and Aluminum compatible AC connections
- NEMA Type 4X outdoor rated enclosure
- kVA headroom yields 100kW @ 0.9PF and 125kW @ 0.95PF
- Generous 1.87 (100kW) and 1.5 (125kW) DC/AC inverter load ratios
- Separable wire-box design for fast service
- Standard 5-year warranty with extensions to 20 years



100/125KTL Standard Wire-box



100/125KTL Centralized Wire-box



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Chint Power Systems America
1180 Presidential Drive, Suite 100, Richardson, TX 75081
Tel: 855-584-7168 Email: AmericaSales@chintpower.com Web: www.chintpowersystems.com



Technical Data

Model Name	CPS SCH100KTL-DO/US-600	CPS SCH125KTL-DO/US-600
DC Input		
Max. PV power	187.5kW	1500V
Max. DC input voltage	1500V	860-1450Vdc
Operating DC input voltage range	860-1450Vdc	900V / 250W
Start-up DC input voltage / power	900V / 250W	1
Number of MPPT trackers	1	870-1300Vdc
MPPT voltage range ¹	870-1300Vdc	25A
Max. PV input current (Isc x 1.25)	25A	20 PV source circuits, pos. & neg. fused with Standard Wire-box
Number of DC inputs	1	1 input circuit, 1-2 terminations per pole, non-fused with Centralized Wire-box
DC disconnection type	Load-rated DC switch	Load-rated DC switch
DC surge protection	Type II MOV (with indicator/remote signaling), Up=2.5kV, In=20kA (8/20uS)	Type II MOV (with indicator/remote signaling), Up=2.5kV, In=20kA (8/20uS)
AC Output		
Rated AC output power	100kW	125kW
Max. AC output power ²	100kVA (111kVA @ PF=0.9)	125kVA (132kVA @ PF=0.95)
Rated output voltage	600Vdc	528-660Vdc
Output voltage range ³	528-660Vdc	3B / PE / N (neutral optional)
Grid connection type ⁴	3B / PE / N (neutral optional)	120.3 / 127.0A
Max. AC output current @ 600Vdc	96.2 / 106.8A	60Hz
Rated output frequency	60Hz	57-63Hz
Output frequency range ⁵	57-63Hz	>0.99 (±0.8 adjustable)
Power factor	>0.99 (±0.8 adjustable)	<3%
Current THD	<3%	41.47A
Max. fault current contribution (1-cycle RMS)	41.47A	200A
Max. OCOP rating	200A	Load-rated AC switch
AC disconnection type	Load-rated AC switch	Type II MOV (with indicator/remote signaling), Up=2.5kV, In=20kA (8/20uS)
AC surge protection	Type II MOV (with indicator/remote signaling), Up=2.5kV, In=20kA (8/20uS)	
System		
Topology	Transformerless	
Max. efficiency	99.1%	
CEC efficiency	98.5%	
Stand-by / night consumption	<4W	
Environment		
Enclosure protection degree	NEMA Type 4X	
Cooling method	Variable speed cooling fans	
Operating temperature range	-22°F to +140°F / -30°C to +60°C (derating from +108°F / +42°C)	
Non-operating temperature range ⁶	-40°F to +158°F / -40°C to +70°C maximum	
Operating humidity	0-100%	
Operating altitude	8202ft / 2500m (no derating)	
Audible noise	<65dB(A) @ 1m and 25°C	
Display and Communication		
User interface and display	LED indicators, WiFi + APP	
Inverter monitoring	Modbus RS485	
Site-level monitoring	CPS FlexOM Gateway (1 per 32 inverters)	
Modbus data mapping	Standard / (with FlexOM Gateway)	
Remote diagnostics / firmware upgrade functions	Standard / (with FlexOM Gateway)	
Mechanical		
Dimensions (W x H x D)	45.28 x 24.25 x 9.84in (1150 x 616 x 250mm) with Standard Wire-box 39.37 x 24.25 x 9.84in (1000 x 616 x 250mm) with Centralized Wire-box	
Weight	121lb (55kg); Wire-box 55lb (25kg) with Standard Wire-box 33lb (15kg) with Centralized Wire-box	
Mounting / Installation angle	15 - 90 degrees from horizontal (vertical or angled)	
AC termination	M10 stud type terminal (348 (wire range: 1/AWG - 500kcmil CU/AL, lugs not supplied)) Screw clamp terminal block (N) (#12 - 1/AWG CU/AL)	
DC termination	Screw clamp fuse holder (wire range: #12 - 64AWG CU) with Standard Wire-box Busbar, M10 bolts (wire range: #AWG - 500kcmil CU/AL (1 termination per pole), #AWG - 300kcmil CU/AL (2 terminations per pole); lugs not supplied with Centralized Wire-box	
Fused string inputs	20A fuses provided (fuse values up to 30A acceptable)	
Safety		
Certifications and standards	UL 1741-SA/98 Ed. 3, CSA-C22.2 NO.107.1-01, IEEE 1547-2018, FCC PART 15	
Selectable grid standard	IEEE 1547-2014, IEEE 1547-2018, CA Rule 21, ISO-NE	
Smart-grid features	Volt-Ride-Thru, Freq-Ride-Thru, Ramp-Rate, Specified PF, Volt-VAR, Freq-Watt, Volt-Watt	
Warranty		
Standard ⁷	5 years	
Extended terms	10, 15 and 20 years	

1. See user manual for further information regarding MPPT voltage range when operating at non-unity PF.
2. Max. AC apparent power rating valid within MPPT voltage range and temperature range of -10°C to +40°C / -22°F to +104°F for 100kW PV >0.9 and 125kW PV >0.95.
3. The "output voltage range" and "rated frequency range" may differ according to the specific grid standard.
4. The output voltage range, data may not be carrier provided.
5. The output frequency range, data may not be carrier provided.
6. See user manual for further requirements regarding non-operating conditions.
7. Firmware version 12.0 or later required.



FOLLOW THE SUN.
FOLLOW THE LEADER.



7%
LOWER
LCOE

31%
LOWER
LIFETIME
O&M

DuraTrack® HZ v3

Three decades of field-tested design improvements have resulted in the DuraTrack® HZ v3 — the most durable, reliable tracking system under the sun. While our single-bolt module clamp and forgiving tolerances streamline installation, and our flexibly linked architecture maximizes power density, it's our innovative use of fewer components and a failure-free wind management system that makes Array Technologies the best choice for solar trackers. **Better. Stronger. Smarter.**



HIGHEST POWER DENSITY.

Higher density means more power and more profit. DuraTrack HZ v3 offers the unique ability to maximize the power density of each site, boasting 100 modules per row and higher density than our closest competition.



LEADING TERRAIN ADAPTABILITY.

Our flexibly linked architecture, with articulating driveline joints and forgiving tolerances, creates the most adaptable system on the market for following natural land contours while creating the greatest power generation potential from every site.



FEWER COMPONENTS. GREATER RELIABILITY.

Array was founded on a philosophy of engineered simplicity. Minimizing potential failure points (167 times fewer components than competitors), DuraTrack HZ v3 consistently delivers higher reliability and superior uptime.



FAILURE-FREE WIND DESIGN.

DuraTrack HZ v3 was designed and field tested to withstand some of the harshest conditions on the planet. It is the only tracker on the market that reliably handles wind events with a fully integrated, fully mechanical, passive wind-load mitigation system without the need for complex communication systems, batteries, or power.



ZERO SCHEDULED MAINTENANCE.

Maintenance-free motors and gears, lower moving parts, and industrial-grade components—what does this mean for our customers? No scheduled maintenance required. While our competitors average two unscheduled maintenance events per day, we average only one per year.



FOLLOW THE SUN.
FOLLOW THE LEADER.

COST VERSUS VALUE

We believe value is more than the cost of a tracking system. It's about building with forgiving tolerances and fewer parts so construction crews can work efficiently. It means protecting your investment in the harshest weather are but a few of the innovative differences that keep your system running flawlessly all day and your resting easy at night.

THE GLOBAL LEADER IN RELIABILITY

Array has spent decades designing and perfecting the most reliable tracker on the planet. Fewer moving parts, stronger components and intelligent design that protects your investment in the harshest weather are but a few of the innovative differences that keep your system running flawlessly all day and your resting easy at night.

ARRAY TECHNOLOGIES, INC.

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arraytechnic.com

30 GW YEARS OF OPERATION

167x FEWER COMPONENTS THAN COMPETITIVE TRACKERS

STRUCTURAL & MECHANICAL FEATURES/SPECIFICATIONS

Tracking Type	Horizontal single axis
MW per Drive Motor	Up to 1.152 MW DC using 360W crystalline
String Voltage	Up to 1,500V DC
Maximum Linked Rows	32
Maximum Row Size	100 modules crystalline, and bifacial; 240 modules First Solar; 78 modules First Solar 6
Drive Type	Rolling gear drive
Motor Type	2 HP, 3 PH, 480V AC
Motors per 1 MW DC	Less than 1
East-West/North-South Dimensions	Site / module specific
Mounting / Installation angle	5° standard, adjustable (48" min height above grade)
Ground Coverage Ratio (GCR)	Flexible, 28-45% typical, others supported on request
Terrain Flexibility	N/S tolerance: 0° - 8.5° standard, 15° optional; Driveline: 40° in all directions
Modules Supported	Most commercially available, including frameless crystalline, thin film, and bifacial
Tracking Range of Motion	± 52° standard, ± 62° optional
Operating Temperature Range	-30°F to 140°F (-34°C to 60°C)
Module Configuration available	Single in-portrait standard, including bifacial; Four-in-landscape (thin film) also
Module Attachment	Single fastener, high-speed mounting clamps with integrated grounding. Traditional rails for crystalline in landscape, custom racking for thin film and frameless crystalline and bifacial per manufacturer specs.
Materials	Pre-galv steel, HDG steel and aluminum structural members, as required
Allowable Wind Load (ASCE 7-10)	140 mph, 3-second gust exposure C
Wind Protection	Passive mechanical system protects against wind damage — no power required

ELECTRONIC CONTROLLER FEATURES/SPECIFICATIONS

Solar Tracking Method	Algorithm with GPS input
Control Electronics	MCU plus Central Controller
Data Feed	MODBUS over Ethernet to SCADA system
Night-time Slow	Yes
Tracking Accuracy	± 2" standard, field adjustable
Backtracking	Yes
INSTALLATION, OPERATION & MAINTENANCE	
Software	SmartTrack optimization available
PE Stamped Structural Calculations & Drawings	Yes
On-site Training and System Commissioning	Yes
Connection Type	Fully bolted connections, no welding
In-Field Fabrication Required	No
Dry Slide Bearings and Articulating Driveline Connections	No lubrication required
Scheduled Maintenance	None required
Module Cleaning Compatibility	Robotic, Tractor, Manual
GENERAL	
Annual Power Consumption (kWh per 1 MW)	400 kWh per MW per year, estimated

Array Technologies, Inc. reserves the right to make changes without notice.

REV 2.0 - 03/04/2019



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