EXTERIOR, GARAGE CANOPY:

EXTERIOR, ALLEYWAY OR GARAGE, SECURED:

(80) QCELL 340W PV MODULES
5 STRINGS OF (16), TYPICAL OF 7

MPPT A: 3 STR

MPPT B: 2 STR

DC COMBINER BOX (TYP 7)
SMA CU 1000-US-10
(10) 20A FUSES (+5 / -5)
AND DC DISCONNECT

MPPT-A OUTPUT

MPPT-B OUTPUT

INVERTER (TYP 7):
SMA STP24000TL-US-10
MAX AC OUTPUT 29.0A

DC

AC

AC DISCONNECT

400A DEDICATED SOLAR AC PANEL
7-CIRCUIT, 277 / 480 V, 3-PH, 4W
(7) 40A 3-POLE BREAKERS
300A MAIN BREAKER

40

40

300

XFMR, 168kVA OR GREATER
480V / 208V
3P PADMOUNT

AC DISCONNECT,
600A 208V 3P

PRIVATE REC METER
(POINT OF DELIVERY)
SOLAR-LOG 2000 OR EQUIVALENT

M

DAISY CHAIN ALL INVERTERS TO DAS

INTERIOR, HOTEL ELECTRICAL ROOM:

3000A MAIN PANEL AT HOTEL
120 / 208 V, 3-PH, 4W
3000A MAIN BREAKER
600A SOLAR BACKFEED BREAKER

UTILITY METER

TO UTILITY

3000

600

ReVision Energy

142 PRESUMPSCOT ST
PORTLAND, ME 04103
(207) 221-6342

CLIENT:

EAST BROWN COW
100 COMMERCIAL ST #306
PORTLAND, ME 04101

PROJECT ADDRESS:

FORE STREET PARKING GARAGE
427 FORE STREET
PORTLAND, ME 04101

SYSTEM TYPE:

190.40 kW_{DC}
PHOTOVOLTAIC ARRAY

PRELIMINARY DESIGN,
NOT FOR CONSTRUCTION

DESIGNED BY:	LB
REVISION:	0
PRINT SIZE:	17" x 11"
SCALE:	NTS
DATE:	FEBRUARY 7, 2017

ONE-LINE DIAGRAM

DWG NUMBER:
E01

Module Specifications	
Q CELL Q.PLUS L-G4.2	
STC Rating	340.00
V_{MP}	37.63
I_{MP}	9.03
V_{OC}	47.07
I_{SC}	9.59
Temp Coeff. V_{OC} [%/°C]	-0.29%

Inverter Specifications	
SMA Sunny Tripower STP24000TL-US-10	
Nominal AC Rating [W]	24000.0
Rated MPPT Range V_{DC}	450 - 800
Max Input V_{DC}	1000.0
Nominal V_{AC}	480 / 277 WYE
Max I_{AC}	29.0
CEC Efficiency	98.0%

System Specifications		
Max DC Voltage (-27°C)	866.69	V
DC Operating Voltage (Max)	602.08	V
Max DC Current, per string	11.99	A
DC Operating Current, per string	9.03	A
Max AC Inverter Output	29.00	A
AC Nominal Voltage	480 / 277 WYE	V

Electrical Design Notes

- All photovoltaic equipment is rated for use and listed by a recognized laboratory.
- All photovoltaic equipment is outdoor rated and listed for 1000 VDC.
- Lowest expected ambient temperature is based on ASHRAE extreme min for the specified location.
- Average high temperature is based on ASHRAE 2% Avg. for the specified location.
- Grounding and bonding procedures for all photovoltaic equipment comply with NEC 2014.
- Rapid shutdown requirements are in accordance with NEC 690.12.
- Busbar Rule: 1.20(3000) – 3000 = 600 amps of solar backfeed.
- Conduit between subarrays, combiners, and disconnects shall take the shortest reasonable path.
- Space requirements for electrical equipment shall comply with NEC Article 110.
- Any plaques shall be of metal or plastic construction, with engraved or machine printed lettering, or electro-plating, in a red background with white lettering, a minimum of 3/8" height and all capital letters.

ReVision Energy
142 PRESUMPSCOT ST
PORTLAND, ME 04103
(207) 221-6342

Client:

EAST BROWN COW
100 COMMERCIAL ST #306
PORTLAND, ME 04101

Project Address:

FORE STREET PARKING GARAGE
427 FORE STREET
PORTLAND, ME 04101

System Type:

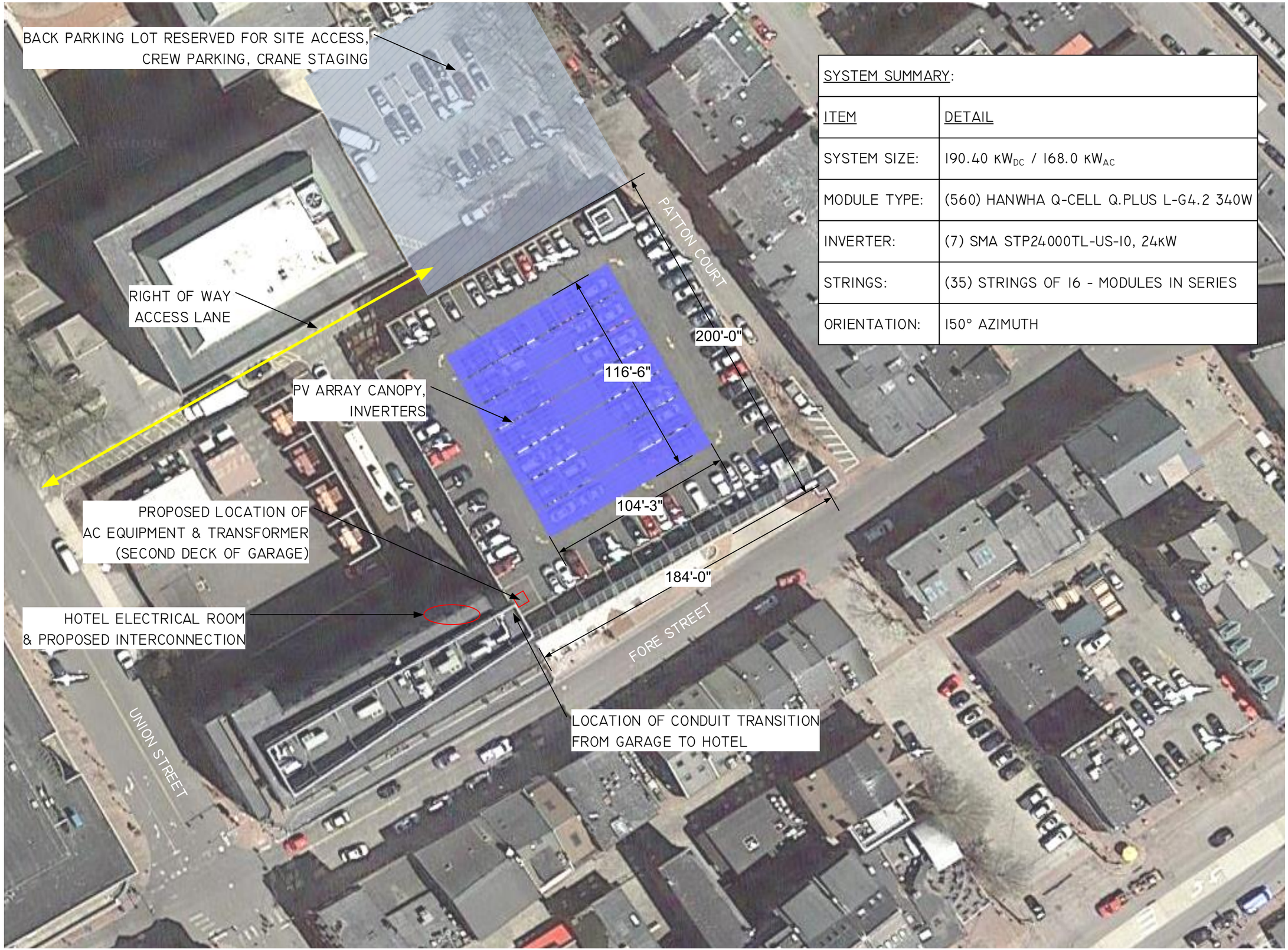
190.40 kW_{DC}
Photovoltaic Array

PRELIMINARY DESIGN,
NOT FOR CONSTRUCTION

Designed by:	LB
Revision:	0
Print Size:	17" x 11"
Scale:	
Date:	February 7, 2017

EQUIPMENT SPECIFICATIONS

DWG Number:
E02



SYSTEM SUMMARY:

ITEM	DETAIL
SYSTEM SIZE:	190.40 kW_{DC} / 168.0 kW_{AC}
MODULE TYPE:	(560) HANWHA Q-CELL Q.PLUS L-G4.2 340W
INVERTER:	(7) SMA STP24000TL-US-10, 24kW
STRINGS:	(35) STRINGS OF 16 - MODULES IN SERIES
ORIENTATION:	150° AZIMUTH

ReVision Energy

142 PRESUMPSCOT ST
PORTLAND, ME 04103
(207) 221-6342

CLIENT:

EAST BROWN COW
100 COMMERCIAL ST #306
PORTLAND, ME 04101

PROJECT ADDRESS:

FORE STREET PARKING GARAGE
427 FORE STREET
PORTLAND, ME 04101

SYSTEM TYPE:

190.40 kW_{DC}
PHOTOVOLTAIC ARRAY

PRELIMINARY DESIGN, NOT FOR CONSTRUCTION

DESIGNED BY:	LB
REVISION:	0
PRINT SIZE:	17" x 11"
SCALE:	1" = 50'
DATE:	FEBRUARY 7, 2017

SITE MAP

DWG NUMBER:
A01