From: Greg Oross <Greg.Oross@bloomenergy.com>
Sent: Tuesday, July 27, 2021 9:53 AM
To: Bachman, Melanie <Melanie.Bachman@ct.gov>
Subject: Petition No. 1419 - Bloom Energy

Hi Melanie,

I need to apologize, after discussions with our design and project management teams it has been decided that we are going to once again return to the originally CSC approved server foundation location, proposed in the parking lot.

I've attached the final site plan proposing the location of the server foundation which was amended late last week.

If you could please, when you have the time, once again, provide the necessary amendment letter to our Petition file so that I can get the building permit application submitted to Danbury.

If you need anything at all, please let me know.

Thanks for your patience.

Greg

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STORE NUMBER: 6209
114 FEDERAL ROAD
DANBURY, CT 06811

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SITE INFORMATION

PARCEL INFORMATION

PROPERTY OWNER	THE HOME DEPOT, INC.
COUNTY	FAIRFIELD COUNTY
TAX MAP #	Mblu L08/ / 15/ 2/

PROPERTY DESCRIPTION

PROPERTY TYPE	RETAIL
PROPERTY AREA	391,604 SF
BUILDING AREA*	111,650 SF
GARDEN CENTER AREA*	26,550 SF
DISTURBED AREA	±600 SF

PARKING INFORMATION

EXISTING PARKING**	1134
REQUIRED PARKING**	1134
REMOVED PARKING	02
ADDED PARKING***	CONVERT 30 STANDARD PARKING SPACES INTO 34 COMPACT PARKING SPACES
FINAL PARKING COUNT	1136

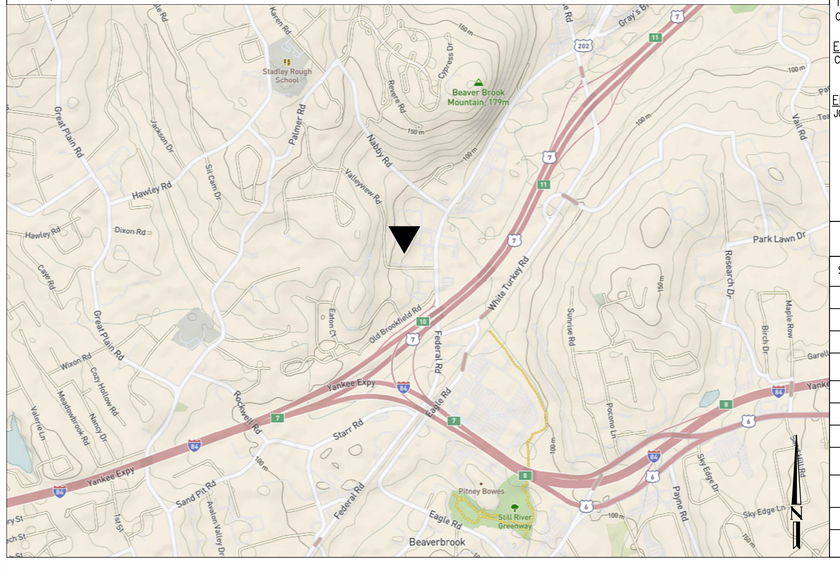
*BASED ON SITE PLAN 'SP-3' BY ROTONDO ENGINEERING LLC DATED 04/01/2004

**BASED ON SITE PLAN 'SP-1' BY ROTONDO ENGINEERING LLC DATED 04/01/2004

***SEE PARKING CALCULATION ON SHEET G1.2.

VICINITY MAP (NTS)

▼ PROJECT SITE



PERMITTING INFORMATION

MUNICIPAL

AGENCY	DEPARTMENT	CONTACT INFO
PLANNING	DANBURY PLANNING AND ZONING	(203) 797-4525
BUILDING	DANBURY BUILDING DEPARTMENT	(203) 797-4580
FIRE	DANBURY FIRE DEPARTMENT	(203) 796-1550

UTILITY

TYPE	COMPANY	CONTACT INFO
NATURAL GAS	EVERSOURCE (CT)	(860) 286-2000
ELECTRICAL	EVERSOURCE (CT)	(860) 286-2000
WATER	DANBURY WATER DEPARTMENT	(203) 797-4637

CODES

BUILDING	2018 CONNECTICUT STATE BUILDING CODE
	2015 INTERNATIONAL BUILDING CODE
	2015 INTERNATIONAL EXISTING BUILDING CODE
PLUMBING	2015 INTERNATIONAL PLUMBING CODE
MECHANICAL	2015 INTERNATIONAL MECHANICAL CODE
ELECTRICAL	2017 NFPA 70, NATIONAL ELECTRICAL CODE
FIRE	2018 CT FIRE SAFETY CODE
	2018 CT FIRE PREVENTION CODE

PROJECT TEAM CONTACTS

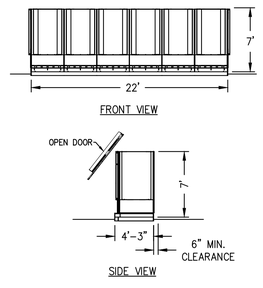
FIRM	ADDRESS	CONTACT INFO
MANUFACTURER		
BLOOM ENERGY	4353 N. FIRST STREET SAN JOSE CA 95134	(408) 543-1500
CUSTOMER		
THE HOME DEPOT, INC.	114 FEDERAL ROAD DANBURY, CT 06811	(203) 730-9600
CUSTOMER REPRESENTATIVE		
THE HOME DEPOT COLIN HOLLOWAY	2115 N GAFFEY STREET SAN PEDRO, CA 90731	(310) 221-0257 COLIN_P_ HOLLOWAY@ HOMEDEPOT.COM
ENGINEER OF RECORD (CIVIL)		
CARSON P. TURNER, PE	4353 N. 1ST STREET SAN JOSE, CA 95134	(408) 220-4101
ENGINEER OF RECORD (ELECTRICAL)		
JOSEPH A. TEMOWO, PE	4353 N FIRST ST SAN JOSE, CA 95134	(408) 543-1500

DRAWING INDEX

SHT #	DWG #	SHEET TITLE	REV#	DATE
01	G0.1	COVER SHEET	0C	07/19/2021
02	G0.2	GENERAL CONSTRUCTION NOTES	0C	07/19/2021
03	G1.1	OVERALL SITE PLAN	0C	07/19/2021
04	G1.2	PARKING REMOVAL REPLACEMENT PLAN	0C	07/19/2021
05	C1.1	DETAILED SITE PLAN	0C	07/19/2021
06	C2.1	DETAILS SHEET-1	0C	07/19/2021
07	C2.2	DETAILS SHEET-2	0C	07/19/2021
08	E3.1	ELECTRICAL SINGLE LINE DIAGRAM	0C	07/19/2021
09	E3.2	ELECTRICAL THREE LINE DIAGRAM	0C	07/19/2021
10	M1.1	PLACARD PLAN	0C	07/19/2021
11	R0.1	BLOOM ENERGY PRODUCT DATA SHEET	0C	07/19/2021

PROJECT DESCRIPTION

THIS PROJECT CONSISTS OF THE INSTALLATION OF ONE (1) BLOOM ENERGY ES5 OUTDOOR NATURAL GAS CLEAN ENERGY SERVER. THE CLEAN ENERGY SERVER IS SUPPORTED ON A STEEL SKID. THE WORK INCLUDES ALL ITEMS LISTED IN THE SCOPE OF WORK.



SCOPE OF WORK

THE SCOPE OF THIS PROJECT WILL CONSIST OF THE FOLLOWING:

1. CIVIL WORK
   - NEW TRENCH FROM BLOOM ENERGY SERVER TO BUILDING FOR GAS, WATER AND ELECTRICAL CONNECTIONS BETWEEN BLOOM ENERGY SERVER AND BUILDING. TRENCH TO BE BACKFILLED AND NEW ASPHALT COVER TO BE PROVIDED.
   - NEW SKID-MOUNTED ENERGY SERVER AND ANCILLARY EQUIPMENT TO BE PLACED ON EXISTING ASPHALT.
   - NEW BOLLARDS TO BE INSTALLED TO PROTECT BLOOM ENERGY SERVER.
2. ELECTRICAL WORK
   - FURNISH AND INSTALL ELECTRICAL FEEDERS BETWEEN PDS, DISC-MD1, CT & PT CABINET AND THE EXISTING MAIN SWITCHBOARD.
   - TERMINATE ELECTRICAL FEEDERS BETWEEN ENERGY SERVERS, ANCILLARY SKID AND ANCILLARY EQUIPMENT, HEAT TRACE.
   - INSTALL ANCILLARY EQUIPMENT, CT & PT CABINET, DISC-MD1, ENERGY SERVERS, HEAT TRACE & ACCESSORIES.
3. PLUMBING WORK
   - NEW WATER CONNECTION FROM POTABLE WATER SOURCE IN FACILITY TO BLOOM ENERGY SERVER.
   - NEW NATURAL GAS CONNECTION. NEW METER AND REGULATOR REQUIRED.

CONTRACTOR NOTES

1. CONTRACTOR SHALL CONTACT THE HOME DEPOT – BLOOM ENERGY CONSTRUCTION LIAISON FOR A PRE-CONSTRUCTION CONFERENCE TWO WEEKS PRIOR TO THE START OF THE WORK. THE SCOPE OF WORK AND TIMELINE SHALL BE DISCUSSED ALONG WITH ANY COORDINATION ISSUES WHICH COULD DISRUPT THE STORE'S OPERATIONS.
2. CONTRACTOR SHALL EMAIL THE HOME DEPOT – BLOOM ENERGY CONSTRUCTION LIAISON A WEEKLY STATUS REPORT WITH PICTURES OF THE JOB SITE DURING THE TIME OF CONSTRUCTION.
3. DURING CONSTRUCTION, IF ANY CHANGES OR MODIFICATION DIFFER FROM THE CONSTRUCTION DOCUMENTS, THE CONTRACTOR SHALL NOTIFY BLOOM ENERGY AND THE HOME DEPOT REPRESENTATIVE OF THE PROPOSED MAJOR/SIGNIFICANT CHANGE TO OBTAIN APPROVAL BEFORE PROCEEDING WITH THE WORK. THE PLAN CAN BE REDLINED AND A PICTURE OF THAT PROPOSED CHANGE(S) SHALL BE SENT ELECTRONICALLY TO OBTAIN APPROVAL FROM THE HOME DEPOT TO EXPEDITE THE APPROVAL. THE MINOR/NON-SIGNIFICANT CHANGES THAT DO NOT REQUIRE APPROVAL ARE:
   - SHIFTING SYSTEM, BOLLARD OR SCREENING/WALL LOCATION 12"OR LESS, AND NOT IMPACTING ANY DRIVE AISLES OR ADDITIONAL PARKING SPACES
   - CHANGES IN SPECIFIC RUN OF PIPING/CONDUIT, MODIFYING THE LOCATION LESS THAN 12"FROM WHAT IS SHOWN ON PLAN, BUT NOT MODIFYING THE METHOD OF RUN (IE. TRENCHING, BORING, EXPOSED, ROOFTOP, ETC.)
   - MINOR GAS LINE OR UTILITY GAS METER CHANGES (LESS THAN 12" MODIFICATION) AT THE GAS PLANNER'S DIRECTION
   - SIGNAGE LOCATION CHANGES AT INSPECTOR'S DIRECTION, OR BASED ON EXISTING SITE CONDITIONS
   - ANY WIRING OR CABLING CHANGES BETWEEN ANY BLOOM-PROVIDED EQUIPMENT, AT THE EOR OR BLOOM SUPERINTENDENT'S DIRECTION
   - ANY MODIFICATION TO SCOPE OF LOW VOLTAGE WIRING, AT EOR, BLOOM SUPERINTENDENT OR UTILITY'S DIRECTION
   - ANY CHANGES THAT STILL SATISFY MINIMUM SUBGRADE PREPARATION METHODS, BASED ON ON-SITE CONDITIONS
4. CONTRACTOR SHALL EMAIL THE HOME DEPOT – BLOOM ENERGY CONSTRUCTION LIAISON A CONSTRUCTION CHECKLIST INDICATING PROPOSED STAGING AREA(S), CONSTRUCTION AREA(S), DRIVEWAY CROSSING LOCATION(S), AND A BEST MANAGEMENT PLAN (BMP) PRIOR TO PRE-CONSTRUCTION CONFERENCE.
5. A BEST MANAGEMENT PLAN (BMP) SHALL BE FOLLOWED AT ALL TIMES. THE CONSTRUCTION CHECKLIST SHALL INCLUDE BUT IS NOT LIMITED TO THE FOLLOWING BMPS: "DANDY" SACK OR EQUAL WITH OUTFLOW PORTS AT STORM DRAIN INLETS, "OUTPAK" CONCRETE WASHOUT AND TUBULAR FILTRATION SOCKS ON ALL OTHER DISTURBED AREA(S). BMPS MUST BE INSTALLED BEFORE WORK STARTS AND TAKEN DOWN ONLY WHEN THE SITE IS FULLY STABILIZED. FULL STABILIZATION IS DEFINED AS WHEN THE HOME DEPOT – BLOOM ENERGY CONSTRUCTION LIAISON HAS BEEN ABLE TO REVIEW PICTURES AND HAS ACCEPTED THE STABILIZATION.
6. CONTRACTOR SHALL CONTACT THE HOME DEPOT STORE MAINTENANCE DIVISION 48 HOURS BEFORE CONSTRUCTION TO SET UP A PRE-CONSTRUCTION MEETING.
7. THE CONTRACTOR SHALL PHOTOGRAPH THE JOB SITE AREA PRIOR TO STARTING CONSTRUCTION AND CONSTRUCTION COMPLETION. CONTRACTOR SHALL FURNISH PHOTOGRAPHS IN A PDF FILE VIA EMAIL TO THE HOME DEPOT – BLOOM ENERGY CONSTRUCTION LIAISON AND ON A CD OR FLASH DRIVE TO THE HOME DEPOT MAINTENANCE DEPARTMENT AFTER THE COMPLETION OF CONSTRUCTION..
8. CONTRACTOR SHALL FURNISH A PDF COPY OF THE AUTHORITY HAVING JURISDICTION JOB CARD VIA EMAIL TO THE HOME DEPOT – BLOOM ENERGY CONSTRUCTION LIAISON AND ON A CD OR FLASH DRIVE TO THE HOME DEPOT MAINTENANCE DEPARTMENT PRIOR TO THE START OF CONSTRUCTION.
9. ALL UTILITY TRENCH WORK CROSSING DRIVEWAYS SHALL BE DONE AT NIGHT BETWEEN 10PM AND 6AM. TRENCHES MUST BE COVERED ONE HOUR BEFORE STORE OPENS.
10. COMPACTION OF TRENCH BACKFILL SHALL BE 95% COMPACTED. COMPACTION TEST SHALL BE COMPLETED AND EMAILED TO THE HOME DEPOT – BLOOM ENERGY CONSTRUCTION LIAISON FOR APPROVAL.
11. ALL UTILITY CONNECTIONS THAT REQUIRE CONNECTION OF LIVE LINES SHALL BE DONE AT NIGHT BETWEEN 10PM AND 6AM AND BE COORDINATED AND APPROVED BY THE HOME DEPOT – BLOOM ENERGY CONSTRUCTION LIASION PRIOR TO MAKING UTILITY CONNECTIONS. ANY PRECAUTIONARY MEASURES NEEDED DUE TO UTILITY SHUT OFF SHALL BE COMPLETED BY THE CONTRACTOR.
12. ONLY ONE HALF OF THE REAR DRIVE AISLE MAY BE CLOSED IN ACTIVE CONSTRUCTION AREA(S). OTHER VEHICLES OR MATERIALS SHALL BE KEPT IN STAGING AREA(S) AS TO NOT HINDER TRUCK DELIVERY TRAFFIC DURING THE DAY BETWEEN 6AM AND 10PM.
13. GENERAL HOUSEKEEPING OF SITE INCLUDING SWEEPING AND CONTROL OF SEDIMENT, TRASH, AND DEBRIS SHALL BE DONE DAILY OR IMMEDIATELY UPON CREATION.
14. CONTRACTOR SHALL NOT HAVE EQUIPMENT OR SUPPLIES ON THE JOB SITE FROM THE HOME DEPOT'S COMPETITORS.
15. ALL WORK ON THE HOME DEPOT'S PROPERTY SHALL BE DONE PER THE HOME DEPOT'S SPECIFICATION.
16. CONTRACTOR SHALL COMPLY WITH THE REQUIREMENTS SET FORTH WITHIN THE SOIL MANAGEMENT PLAN.
17. ALL INTERIOR CONSTRUCTION SHALL NOT INTERFERE WITH STORE OPERATIONS OR STORE CUSTOMERS AND IS TO OCCUR AT NIGHT BETWEEN 10PM AND 6AM.
18. CONTRACTOR SHALL FURNISH THE FOLLOWING AFTER COMPLETION OF CONSTRUCTION; ALL PROJECT REPORTS, SOIL COMPACTION REPORTS, ASPHALT PAVEMENT LAYER THICKNESS, AGGREGATE BASE THICKNESS, INSPECTION REPORT, CITY SIGNS OFFS, PHOTOS OF CONSTRUCTION THROUGH COMPLETION, AS BUILTS DRAWINGS, REDLINES TO CONSTRUCTION DRAWINGS, AND A SUMMARY OF ALL REDLINES MADE DURING THE CONSTRUCTION PROCESS. CONTRACTOR SHALL FURNISH ALL DOCUMENTS IN A HARDCOPY IN A THREE RING BINDER AND CONTRACTOR SHALL FURNISH CIVIL PLANS IN PDF AND AUTOCAD FORMAT ON A CD OR FLASH DRIVE. CONTRACTOR SHALL SUBMIT PLANS TO THE REGIONAL PLAN CHECKER.

811 Know what's below. Call before you dig.

PRIOR TO COMMENCING ANY EXCAVATION OR DEMOLITION, THE CONTRACTOR SHALL CONTACT LOCAL UTILITIES, INCLUDING BUT NOT LIMITED TO ELECTRICAL, GAS, WATER, CABLE, AND TELEPHONE, REQUESTING A UTILITY MARK OUT AND AS NECESSARY RETAIN THE SERVICES OF A PRIVATE UTILITY MARK OUT COMPANY TO PERFORM SUCH MARK OUT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE AND VERIFY THE LOCATION OF UTILITIES, IRRIGATION, SITE LIGHTING, AND ELECTRICAL LINES IN THE VICINITY OF THE CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR ANY AND ALL UTILITIES DAMAGED BY THE CONTRACTOR'S OPERATION AT NO ADDITIONAL EXPENSE.

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ENGINEER OF RECORD
CARSON TURNER, P.E.
LICENSE # 22700

CUSTOMER SITE
THE HOME DEPOT, INC.
STORE #6209
114 FEDERAL ROAD
DANBURY, CT 06811

REVISION HISTORY		
REV	REVISION ISSUE	DATE
0A	INITIAL RELEASE	10/05/2020
0B	FOR PERMIT	03/22/2021
0C	REVISED PER AHJ AND UTILITY COMMENTS	07/19/2021

DESIGNED BY KATE TAYLOR	REVIEWED BY RAJ RAGBOTRA
DRAWN BY BASAVARAJ BENAKANAHALLI	APPROVED BY CARSON TURNER

SHEET TITLE
COVER SHEET

DRAWING NUMBER
G0.1

BLOOM DOCUMENT
DOC-1012979

THIS DRAWING IS 24" X 36" AT FULL SIZE

SITE ID: HDP207.0 | SHEET 01 OF 11

GENERAL CONSTRUCTION NOTES

1. IN THE EVENT OF DISCREPANCIES BETWEEN THE DRAWINGS, SPECIFICATIONS, OR SCOPE OF WORK SUMMARY IN THIS PACKAGE, NOTIFY BLOOM ENERGY IMMEDIATELY. REFERENCE SEPARATE BLOOM ENERGY DOC-1008337 FOR ASSOCIATED ENERGY SERVER INSTALLATION SPECIFICATIONS.
2. THE EXISTING SITE PLAN FEATURES ARE BASED ON DESIGN DRAWINGS, AS-BUILT PLANS, AERIAL PHOTOGRAPHS AND FIELD MEASUREMENTS UNLESS OTHERWISE NOTED. THE LOCATIONS OF ALL FEATURES AND STRUCTURES ON THE PLANS ARE APPROXIMATE.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT ALL WORK IS DONE IN ACCORDANCE WITH CURRENT APPLICABLE NATIONAL, STATE OSHA AND LOCAL CODES, ORDINANCES AND REQUIREMENTS AT A MINIMUM; EVEN IF NOT SPECIFICALLY REFERENCED IN THESE DRAWINGS OR CALLED FOR IN THE SPECIFICATIONS. MORE STRINGENT REQUIREMENTS MAY BE SPECIFIED. IN SITUATIONS WHERE THERE IS A CONFLICT BETWEEN THE MINIMUM REGULATORY REQUIREMENTS AND INFORMATION PROVIDED IN THESE DRAWINGS OR SPECIFICATIONS CONSULT BLOOM ENERGY FOR RESOLUTION BEFORE COMMENCING WORK.
4. THE CONTRACTOR SHALL PROTECT ALL EXISTING ITEMS AND FACILITIES TO REMAIN THROUGHOUT CONSTRUCTION. CONTRACTOR SHALL REPAIR AND/OR REPLACE, AT CONTRACTOR'S EXPENSE, ANY EXISTING ITEMS AND FACILITIES TO REMAIN THAT ARE DAMAGED BY THE CONTRACTOR'S OPERATIONS, TO THE SATISFACTION OF PROPERTY OWNER AND BLOOM ENERGY.
5. UNLESS DELIVERY IS SPECIFIED BY BLOOM ENERGY TO THE JOB SITE, CONTRACTOR SHALL DELIVER ALL EQUIPMENT, DAMAGE-FREE TO THE JOB SITE.
6. PRIOR TO COMMENCING ANY EXCAVATION OR DEMOLITION, THE CONTRACTOR SHALL CONTACT LOCAL UTILITIES, INCLUDING BUT NOT LIMITED TO, ELECTRICAL, GAS, WATER, CABLE, AND TELEPHONE, CONTRACTOR SHALL REQUEST A UTILITY MARK OUT AND AS NECESSARY RETAIN THE SERVICES OF A PRIVATE UTILITY MARK OUT COMPANY TO PERFORM SUCH MARK OUT. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE AND VERIFY THE LOCATION OF UTILITIES, IRRIGATION, SITE LIGHTING, AND ELECTRICAL LINES IN THE VICINITY OF THE CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR THE REPAIR OF ANY AND ALL UTILITIES DAMAGED BY THE CONTRACTOR'S OPERATION AT NO ADDITIONAL EXPENSE.
7. BLOOM ENERGY WILL PROVIDE THE CONTRACTOR WITH COPIES OF ALL PERMITS AND PROVIDE THE CONTRACTOR ANY CONDITIONS OF APPROVAL BY THE PLANNING DEPARTMENT.
8. THE CONTRACTOR SHALL NOTIFY JURISDICTIONS AS REQUIRED FOR INSPECTIONS.
9. THE CONTRACTOR SHALL PROVIDE BLOOM ENERGY WITH
   - A CONSTRUCTION SCHEDULE PRIOR TO STARTING THE WORK
   - A QUALIFIED JOB SUPERINTENDENT THROUGHOUT THE WORK
   - PHOTOS SHOWING TRENCHES PRIOR TO BACKFILL, SLOPE OF STEEL OR PRECAST PADS
   - FINAL AS BUILT DRAWINGS OF ALL UNDERGROUND CONSTRUCTION.
10. THE CONTRACTOR SHALL FURNISH AND INSTALL BARRICADES AND SAFETY SIGNS PER OSHA REQUIREMENTS.
11. THE CONTRACTOR SHALL MAINTAIN OVERALL CONSTRUCTION SITE CLEANLINESS, INCLUDING PROVISIONS OF A DEBRIS BOX WITH WEEKLY SERVICING, REMOVAL OF ALL CONTRACTOR/SUBCONTRACTOR REFUSE AND DEBRIS, AND SWEEPING OF THE ENTIRE YARD AREA AT THE COMPLETION OF THE WORK.
12. UNLESS STATED OTHERWISE IN THE SCOPE OF WORK SUMMARY, THE CONTRACTOR SHALL FURNISH AND INSTALL PROCEDURES, TESTING, MATERIALS AND EQUIPMENT SHOWN ON THE PLANS.
13. THE PLAN VIEW DRAWINGS PROVIDED IN THIS SET INCLUDE A ROUGH SCALE REPRESENTATION OF EXISTING AND PROPOSED CONDITIONS AND SHOULD NOT BE SCALED. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFYING ALL DIMENSIONS ON SITE. ALL DRAWINGS MARKED "NTS" HAVE NO RELATIVE SCALE AND ONLY LISTED DIMENSIONS SHOULD BE USED.
14. EACH CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR OF DAMAGE TO THE WORK OF OTHER TRADES CAUSED BY THEIR OPERATIONS. ALL REPAIRS SHALL BE PERFORMED AT THE COST OF THE CONTRACTOR RESPONSIBLE FOR THE DAMAGES. WORK SHALL ONLY BE PERFORMED AFTER APPROVAL OF A REPRESENTATIVE OF THE TRADE WHOSE WORK WAS DAMAGED.
15. THE CONTRACTOR SHALL NOTIFY BLOOM ENERGY IF SITE CONDITIONS OR DIMENSIONS DISAGREE WITH INFORMATION SHOWN ON THE DRAWINGS. WORK IS NOT TO PROCEED UNTIL SUCH DIFFERENCES ARE RESOLVED.
16. THE CONTRACTOR SHALL EXAMINE THE SITE AND FAMILIARIZE THEMSELVES WITH ALL EXISTING CONDITIONS, AND BE PREPARED TO PERFORM THE WORK WITHIN THE EXISTING CONDITIONS.
17. THE CONTRACTOR SHALL INSPECT WORK PREVIOUSLY PREPARED OR INSTALLED BY OTHERS BEFORE APPLYING SUBSEQUENT MATERIALS OR FINISHES. IF UNSATISFACTORY, NOTIFY BLOOM ENERGY. DO NOT PROCEED UNTIL THE DEFECTIVE WORK HAS BEEN CORRECTED.
18. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FAULTY MATERIALS OR WORKMANSHIP FOR A PERIOD OF ONE YEAR AFTER FINAL PROJECT PAYMENT IS MADE. ANY DEFECT OR DAMAGE FOUND EVEN AFTER THE FINAL ACCEPTANCE, CERTIFICATION AND PAYMENT FOR THIS PROJECT WILL BE REMEDIED AT THE CONTRACTOR'S EXPENSE. REPAIRS OR REPLACEMENTS REQUIRED WILL SUBSEQUENTLY BE WARRANTED FOR ONE YEAR AFTER WORK COMPLETION AND ACCEPTANCE BY BLOOM ENERGY AND AHJ.
19. IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES AND OSHA REQUIREMENTS, THE CONTRACTOR SHALL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND WILL NOT BE LIMITED TO NORMAL WORKING HOURS.
20. THE CONTRACTOR SHALL BE RESPONSIBLE FOR RESTORING ANY LANDSCAPED AREAS TO PRE-CONSTRUCTION CONDITION AS ASSESSED BY THE PROPERTY OWNER OR CUSTOMER. CUSTOMER APPROVAL OF AN ACCEPTABLE STATE IS REQUIRED TO CONFIRM COMPLETION OF WORK. THE CONTRACTOR SHALL SCHEDULE A POST CONSTRUCTION WALK TO EVALUATE THE LANDSCAPING FUNCTIONALITY WITH THE OWNER OR CUSTOMER'S LANDSCAPER.
21. GENERAL HOUSEKEEPING OF THE SITE, INCLUDING SWEEPING AND CONTROL OF SEDIMENT, TRASH, AND DEBRIS SHALL BE PERFORMED DAILY OR IMMEDIATELY UPON THE OCCURRENCE.
22. DURING CONSTRUCTION ALL EXITS AND DOORWAYS MUST REMAIN UNOBSTRUCTED.
23. THE TYPES, LOCATION, SIZES, AND/OR DEPTHS OF EXISTING UNDERGROUND UTILITIES SHOWN ON THESE PLANS ARE APPROXIMATE AND WERE OBTAINED FROM SOURCES OF VARYING RELIABILITY. ONLY ACTUAL EXCAVATION WILL REVEAL THE TYPES, EXTENTS, SIZED , LOCATIONS AND DEPTHS OF SUCH GROUND UTILITIES. THE CONTRACTOR SHALL NOTIFY BLOOM ENERGY IF WORK CANNOT PROCEED AS PROPOSED.

SITE SPECIFIC CONSTRUCTION NOTES

1. CONSTRUCTION SUPERINTENDENT SHALL CONTACT THE CUSTOMER REPRESENTATIVE FOR A PRE-CONSTRUCTION CONFERENCE TWO WEEKS PRIOR TO THE START OF THE WORK. THE SCOPE OF WORK AND TIMELINE SHALL BE DISCUSSED WITH RESPECT TO ANY COORDINATION ISSUES WHICH SHALL DISRUPT THE FACILITY OPERATIONS. THE SUPERINTENDENT SHALL SUBMIT A WEEKLY STATUS REPORT TO THE CUSTOMER, WITH PICTURES, VIA EMAIL TO THE CUSTOMER REPRESENTATIVE. THIS INCLUDES ANY FACILITY EQUIPMENT WHICH ARE IN CLOSE PROXIMITY TO THE CONSTRUCTION WORK WHICH WILL BE MOVED BY THE FACILITY REPRESENTATIVES.
2. TRENCHING:
   - 2.1. ALLOWABLE TIMES FOR UTILITY TRENCH WORK IN DRIVEWAY SHALL BE COORDINATED WITH THE CUSTOMER.
   - 2.2. TRENCHING SHALL BE DONE IN STAGES, TO ENSURE CUSTOMER TRAFFIC FLOW IS NOT IMPEDED.
   - 2.3. WHEN THE TRENCH IS OPEN, IT SHALL BE COVERED DURING OFF-WORK HOURS WITH PLATES THAT ARE RATED FOR H-20 VEHICLE LOADING.
3. UTILITY CONNECTIONS THAT REQUIRE TAPPING ON LIVE LINES SHALL BE PERFORMED AT NIGHT AND BE COORDINATED WITH AND APPROVED BY THE CUSTOMER PRIOR TO MAKING UTILITY CONNECTIONS. ANY PRECAUTIONARY MEASURES REQUIRED DUE TO UTILITY SHUT-OFF NEED TO BE COMPLETED BY CONTRACTOR.
4. ONLY HALF OF DRIVE AISLES MAY BE CLOSED IN ACTIVE CONSTRUCTION AREAS. OTHER VEHICLES OR MATERIALS SHALL BE KEPT AWAY FROM THE AREA SO AS TO NOT HINDER TRAFFIC FLOW. COORDINATE THE LOCATION OF ON-SITE PARKING AND/OR TEMPORARY STORAGE WITH CUSTOMER REPRESENTATIVES.
5. MAINTAIN MINIMUM 20' FIRE LANE ACCESS DURING CONSTRUCTION AND STAGE TRENCHING TO ACCOMPLISH REQUIRED FIRE ACCESS AS NECESSARY.
6. STABILIZATION:
   - 6.1. SEDIMENT, EROSION AND TRASH CONTROL SHALL BE PERFORMED AT ALL TIMES. BEST MANAGEMENT PRACTICES (BMPS) SHALL BE INSTALLED PRIOR TO WORK START AND REMOVED ONLY WHEN THE SITE IS FULLY STABILIZED.
   - 6.2. THE SITE SHALL BE CONSIDERED "FULLY STABILIZED" WHEN THE CUSTOMER REPRESENTATIVE(S) HAS REVIEWED SUBMITTED PICTURES AND ACCEPTED THE STABILIZATION.
7. ALL SITE RELATED IMPROVEMENTS, INCLUDING BUT NOT LIMITED TO PAVEMENT RESTORATION, CURB INSTALLATION, AND TURF RESTORATION SHALL BE IN CONFORMANCE TO THE AUTHORITY HAVING JURISDICTION SITE DEVELOPMENT STANDARDS, SPECIFICATIONS, AND DETAILS, UNLESS MORE STRINGENTLY SPECIFIED HEREIN.

ABBREVIATIONS

°C	DEGREES CELSIUS
°F	DEGREES FAHRENHEIT
A	AMPS
AC	ALTERNATING CURRENT, ASPHALT CONCRETE
AC5	ES5 AC POWER SECTION
AHJ	AUTHORITIES HAVING JURISDICTION
AL	ALUMINUM
ASTM	AMERICAN SOCIETY OF THE INTERNATIONAL ASSOCIATION FOR TESTING AND MATERIALS
ATM	ATMOSPHERE
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
BC	BASE COURSE
BMPS	BEST MANAGEMENT PRACTICES
C	CONDUIT
CIP	CAST IN PLACE
CJ	CONTROL JOINT
CL	CENTER LINE
CLR	CLEAR
CONC	CONCRETE
CMU	CONCRETE MASONRY UNIT
CPT	CONTROL POWER TRANSFORMER
CT	CURRENT TRANSFORMER
CU	COPPER
DC	DIRECT CURRENT
DI	DEIONIZED
DISC.	DISCONNECT
ECM	ELECTRICAL COMBINATION MODULE
EDM	ELECTRICAL DISTRIBUTION MODULE
ELEV	ELEVATION
EMT	ELECTRICAL METAL TUBING
EPO	EMERGENCY POWER OFF
ES	ENERGY SERVER
FH	FIRE HYDRANT
FNPT	FEMALE NATIONAL PIPE THREAD
FP5	ES5 FUEL PROCESSING MODULE
FPM	FUEL CELL POWER MODULE
G	GROUND
GAL	GALLON
GF	GROUND FAULT
GFEP	GROUND FAULT EQUIPMENT PROTECTION
GND	GROUND
HDD	HORIZONTAL DIRECTIONAL DRILLING
HDPE	HIGH DENSITY POLYETHYLENE
HR	HOUR
HZ	HERTZ
ID	INNER DIAMETER
IEEE	INSTITUTE FOR ELECTRICAL & ELECTRONIC ENGR.
IOM	INPUT OUTPUT MODULE
ISC	SHORT CIRCUIT CURRENT
ISS	INTEGRATED STEEL SKID
K	KILO
KA	KILOAMPERE
KAIC	KILOAMPERE INTERRUPTING CAPACITY
KVA	KILOVOLT-AMPS
KW	KILOWATTS
LBS	POUNDS
LSIG	LONG, SHORT, INSTANTANEOUS, GROUND FAULT
MA	MILLIAMPERES
MDPE	MEDIUM DENSITY POLYETHYLENE
MIN	MINUTE/MINIMUM
MMBTU	MILLION BRITISH THERMAL UNITS
MNPT	MALE NATIONAL PIPE THREAD
MSA	METER SET ASSEMBLY
MTS	MANUAL TRANSFER SWITCH
MW	MEGAWATTS
N	NEW
NEC	NATIONAL ELECTRIC CODE
NFPA	NATIONAL FIRE PROTECTION AGENCY
NTS	NOT TO SCALE
OC	ON CENTER
OD	OUTER DIAMETER
OSHA	OCCUPATIONAL SAFETY AND HEALTH ADMIN.
P	POLE
PEX	CROSS-LINED POLYETHYLENE
PDS	POWER DISTRIBUTION SECTION
PH	PHASE
PM5	ES5 POWER MODULE
PSI	POUNDS PER SQUARE INCH
PSIG	POUNDS PER SQUARE INCH GAGE
PV	PHOTOVOLTAIC
PVC	POLYVINYL CHLORIDE
PWM	POWER MODULE
QDC	QUICK DISCONNECT
RSA	REGULATOR SET ASSEMBLY
RMC	RIGID METAL CONDUIT
SD	STORM DRAIN
SF	SQUARE FEET
SL5	STEP LOAD

SITE PLAN SYMBOLS

- DOOR
- BUILDING HATCH
- TREE/SHRUB
- SITE LIGHTING/POWER POLE
- UTILITY TRANSFORMER
- BOLLARD (REMOVABLE/FIXED)
- DETAIL CALL OUT (X / X#.#)
- DETAIL SECTION (1 / X#.#)
- GAS MSA/RSA (AS NOTED)
- GAS SHUTOFF VALVE
- SQUARE DRAIN COVER
- ROUND DRAIN COVER
- MANHOLE COVER
- FIRE HYDRANT
- ROOF DRAIN (BELOW GROUND/ABOVE GROUND)
- SLOPE — SLOPE DIRECTION
- DISCONNECT SWITCH
- OVERHEAD ROLL UP DOOR
- REVISION CONTROL SYMBOL

ELECTRICAL SINGLE LINE SYMBOLS

- XFMR-XXXX, ### kVA, XXX V – XXX/XXX V — TRANSFORMER (3-PHASE)
- CB-XX, XXX AF, XXX AT, XXX kAIC, XP — MOLDED CASE CIRCUIT BREAKER
- CB-XX, XXX AF, XXX AT, XXXkAIC, 3P — DRAWOUT CIRCUIT BREAKER
- ATS-XX, XXX A / XXX V, XXX kAIC, 3P — AUTOMATIC TRANSFER SWITCH (ATS)
- SPD-X — SURGE PROTECTIVE DEVICE
- CPT-X, XXXV – XXXV, X kVA, 1ø — POTENTIAL TRANSFORMER (PT)
- XXX:X, X% — CURRENT TRANSFORMER (CT) (POWER FLOWING INTO DOT FIRST REPRESENTS POSITIVE POWER, POWER FLOWING OUT OF DOT REPRESENTS NEGATIVE POWER)
- DISC-XX, XXX AS, XXX AF, XP, XXX kAIC, NEMA 3R — FUSED DISCONNECT SWITCH (STAND-ALONE ENCLOSURE)
- XX A, Xø — FUSE
- SW-XX, XXXA, XP — BOLTED PRESSURE SWITCH
- EMERGENCY POWER OFF (EPO) BUTTON
- DISC-XX, XP, XX kA, NEMA 3R — NON-FUSED DISCONNECT SWITCH (STAND-ALONE ENCLOSURE)
- TO XXX — CONTINUATION
- GEN XX, XXX kW, XXX V — GENERATOR
- K — KIRK KEY INTERLOCK
- DISC-XX, XXX AS, XXX AF, XP — FUSED DISCONNECT SWITCH
- M — POWER METER

ABBREVIATIONS (CONTINUED)

SPD	SURGE PROTECTIVE DEVICE
SS	STAINLESS STEEL
SSU	SANITARY SEWER
SWPP	STORM WATER POLLUTION PROTECTION
TBD	TO BE DETERMINED
TC	TELEMETRY CABINET
TM#	TAX MAP NUMBER
TYP	TYPICAL
UBC	UNIFORM BUILDING CODE
UL	UNDERWRITER'S LABORATORY
UPM	UNINTERRUPTIBLE POWER MODULE

ABBREVIATIONS (CONTINUED)

V	VOLTS
VAC	VOLTS (AC)
VDC	VOLTS (DC)
VIF	VERIFY IN FIELD
W	WIRE
WDM	WATER DISTRIBUTION MODULE
XFMR	TRANSFORMER

LINETYPES

		NEW	EXISTING	DEMOLISH
UTILITY	UNKNOWN UTILITY – UNDERGROUND	UTL	UTL	UTL X
	COMMUNICATIONS UTILITY – OVERHEAD	OCU	OCU	OCU X
	COMMUNICATIONS UTILITY – UNDERGROUND	UCU	UCU	UCU X
	ELECTRICAL UTILITY – OVERHEAD	OEU	OEU	OEU X
	ELECTRICAL UTILITY – UNDERGROUND	UEU	UEU	UEU X
	GAS UTILITY – UNDERGROUND	UGU	UGU	UGU X
	WATER UTILITY – UNDERGROUND	UWU	UWU	UWU X
	SANITARY SEWER UTILITY	SSU	SSU	SSU X
	STORM WATER UTILITY	SWU	SWU	SWU X
ELECTRICAL	COMMUNICATIONS FEEDER – ABOVE GROUND	C	C	C X
	COMMUNICATIONS FEEDER – OVERHEAD	OC	OC	OC X
	COMMUNICATIONS FEEDER – UNDERGROUND	UC	UC	UC X
	ELECTRICAL FEEDER – ABOVE GROUND	E	E	E X
	ELECTRICAL FEEDER – OVERHEAD	OE	OE	OE X
	ELECTRICAL FEEDER – UNDERGROUND	UE	UE	UE X
	FIBER OPTIC – ABOVE GROUND	FO	FO	FO X
	FIBER OPTIC – OVERHEAD	OFO	OFO	OFO X
	FIBER OPTIC – UNDERGROUND	UFO	UFO	UFO X
PLUMBING	GAS PIPING – ABOVE GROUND	G	G	G X
	GAS PIPING – UNDERGROUND	UG	UG	UG X
	WATER PIPING – ABOVE GROUND	W	W	W X
	WATER PIPING – UNDERGROUND	UW	UW	UW X
	PETROLEUM PIPING – ABOVE GROUND	P	P	P X
	PETROLEUM PIPING – UNDERGROUND	UP	UP	UP X
SITE	CURBS			/-/-/-/-/
	FENCING	-o-o-o-	-o-o-o-	-o-x-o-x-
	PARKING			
	EASEMENT BOUNDARY			
	PROPERTY LINE			
	TRENCHING BOUNDARY			
	WATER BOUNDARY			
	FLOOD LINE			
	SETBACK LINE			
	SHRUB/BUSH LINE			

HATCH: GRASS; GRAVEL SERVICE AREA; CONCRETE; FLOOD ZONE; BUILDING EXTERIOR WALL OUTLINE

ES5-VATAAN ENERGY SERVER SYSTEM

GROSS OUTPUT POWER	157.5 kW	TOTAL ENERGY SERVER WEIGHT (LESS SKID)	20,038 LBS
NET OUTPUT POWER	150 kW	WEIGHT – POWER MODULE PM5	3,577 LBS
VOLTAGE	480 VAC	WEIGHT – AC MODULE AC5	3,161 LBS
MAXIMUM OUTPUT CURRENT	189 Amps	WEIGHT – FUEL PROCESSING MODULE FP5	2,569 LBS
FREQUENCY	60 Hz	WEIGHT – ANCILLARY EQUIPMENT (WDM, PDS, & TC) (LESS SKID)	3130 LBS

FUEL REQUIREMENTS

CONNECTION	2" FLANGE	PRESSURE	15 (+3/-5) psig
FUEL TYPE	NATURAL GAS	AVERAGE CONSUMPTION RATE (60°F, 1 atm)	1.012 MMBtu/hr
PIPE SIZE – SUPPLY	SIZE SITE DEPENDENT	MAX CONSUMPTION RATE (60°F, 1 atm)	1.123 MMBtu/hr

WATER REQUIREMENTS

CONNECTION	1/2" MNPT	FLOW – STARTUP	0.8 gal/min MAXIMUM
WATER TYPE	MUNICIPAL GRADE	FLOW – CONTINUOUS	0 gal/min
MINIMUM PRESSURE	35 psi	WATER DISCHARGE	0 gal/min
MAXIMUM PRESSURE	150 psi	PIPE SIZE – SUPPLY	SIZE SITE DEPENDENT, USE STAINLESS STEEL OR PVC

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CUSTOMER SITE
THE HOME DEPOT, INC.
STORE #6209
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DANBURY, CT 06811

REVISION HISTORY		
REV	REVISION ISSUE	DATE
0A	INITIAL RELEASE	10/05/2020
0B	FOR PERMIT	03/22/2021
0C	REVISED PER AHJ AND UTILITY COMMENTS	07/19/2021

DESIGNED BY: KATE TAYLOR	REVIEWED BY: RAJ RAGBOTRA
DRAWN BY: BASAVARAJ BENAKANAHALLI	APPROVED BY: CARSON TURNER

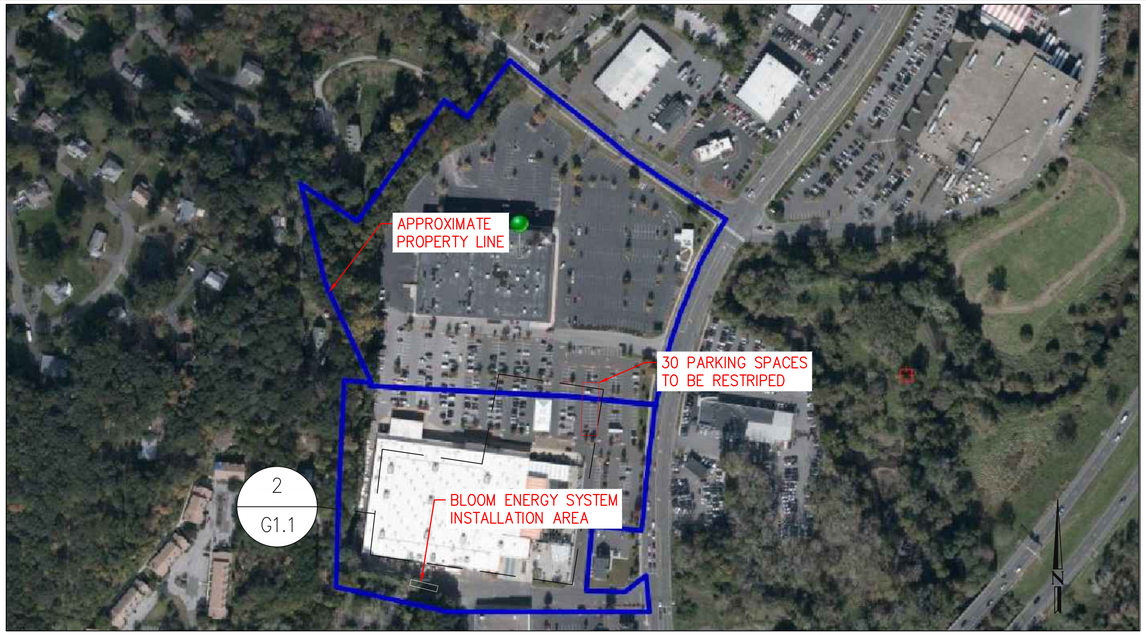
SHEET TITLE: GENERAL CONSTRUCTION NOTES

DRAWING NUMBER: G0.2

BLOOM DOCUMENT: DOC-1012979

THIS DRAWING IS 24" X 36" AT FULL SIZE

SITE ID: HDP207.0 | SHEET 02 OF 11



AERIAL IMAGE OF OVERALL SITE

SCALE: = NTS

1 / G1.1

NOTE: ALL ITEMS ON THE DRAWINGS ARE NEW UNLESS OTHERWISE STATED.

THE HOME DEPOT
STORE #6209
(EXISTING)

1 / C1.1 · 3 / M1.1 · 2 / M1.1 · 4 / M1.1

FLOOD ZONE AE

FLOOD ZONE SHADED ZONE X

FLOOD ZONE X

25' FRONT SETBACK LINE

FEDERAL RD

EXISTING PARKING LOT

EXISTING BUILDING

30' REAR SETBACK LINE

APPROXIMATE PROPERTY LINE PER FAIRFIELD COUNTY ASSESSOR'S MAP

EXISTING ELECTRICAL ROOM

EXISTING INTERNAL SWITCHBOARD

EXISTING DATA ROOM

DISC. MD2

WATER TIE IN POINT @ EXISTING WATER SOURCE

APPROXIMATE FLOOD ZONE BOUNDARY LINES PER FEMA FLOOD MAP NO : 09001C0141F

EXISTING GAS MSA

EXISTING LOADING DOCK

CT CABINET & LREC METER

EXISTING ELECTRICAL UTILITY METER #08114702

EXISTING ROOF DRAINS (TYP)

EXISTING PARKING LOT

FLOOD ZONE AE BASE FLOOD ELEVATION 287

EXISTING RETAINING WALL WITH 6' HIGH CHAIN LINK FENCE

EXISTING PARKING SPACES TO BE REMOVED (2X) SEE SHEET G1.2 FOR ADDITIONAL INFORMATION

59'-6"

EXISTING TRANSFORMER

EXISTING CURB DRAIN

EXISTING BOLLARDS (TYP)

EXISTING PROPANE STORAGE

EXISTING CURB

1 / M1.1

EXISTING WOODED AREA

GAS MSA

9'

53'

DISC. MD1

50' UTILITY EASEMENT

EXISTING ASPHALT PAVEMENT

20' SIDE SETBACK LINE

GOLFVIEW DR

FLOOD ZONE: SHADED ZONE X

EXISTING BUILDING

0 30' 60'

SITE REFERENCE NOTE:

EXISTING SITE CONDITIONS DRAWN BASED ON SITE PLAN SP-2 BY ROTONDO ENGINEERING LLC DATED ON 04/01/2004.

OVERALL SITE PLAN

SCALE: 1" = 30'

2 / G1.1

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DRAWN BY BASAVARAJ BENAKANAHALLI	APPROVED BY CARSON TURNER

SHEET TITLE

OVERALL SITE PLAN

DRAWING NUMBER

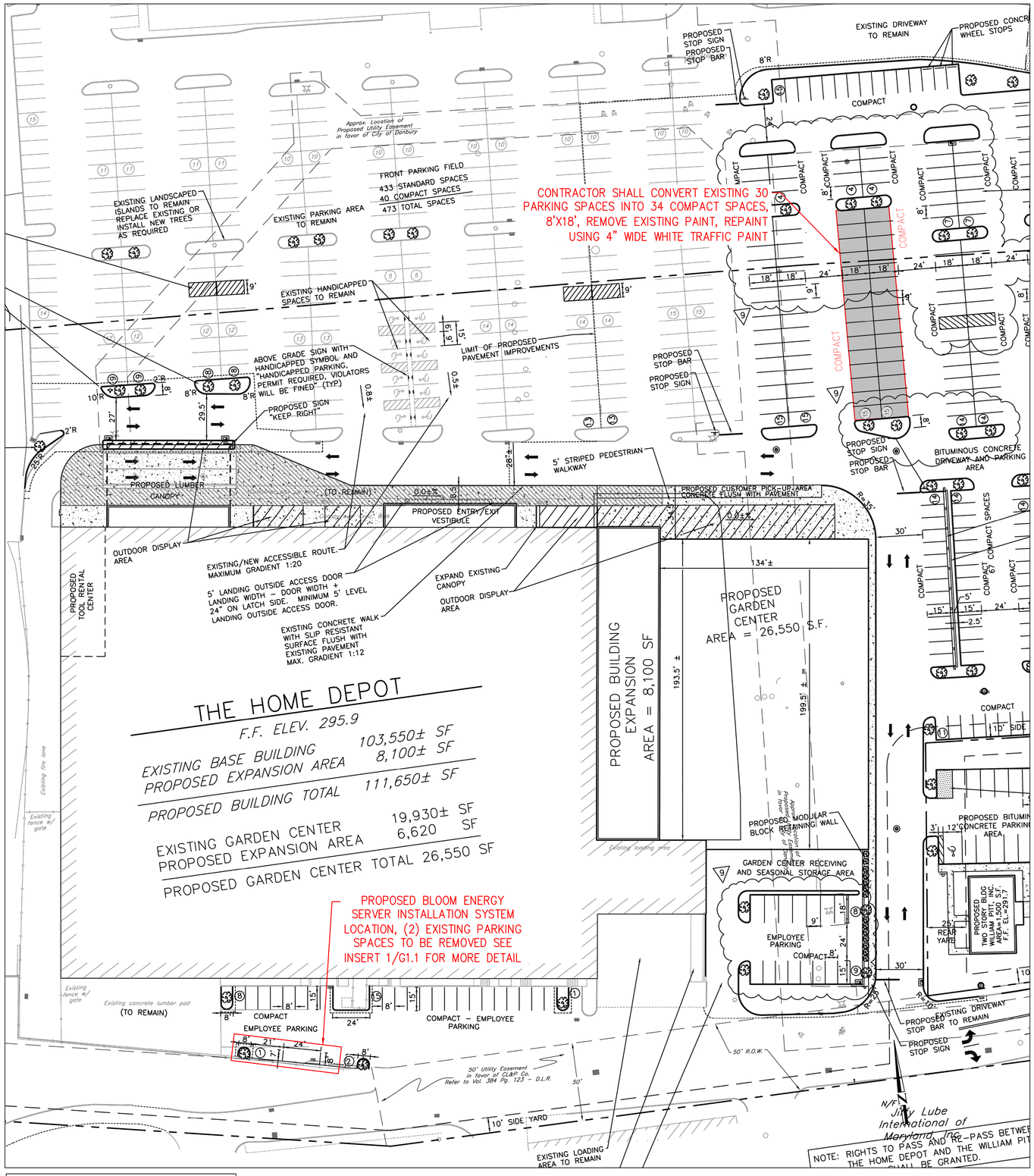
G1.1

BLOOM DOCUMENT

DOC-1012979

THIS DRAWING IS 24" X 36" AT FULL SIZE

SITE ID: HDP207.0 | SHEET 03 OF 11



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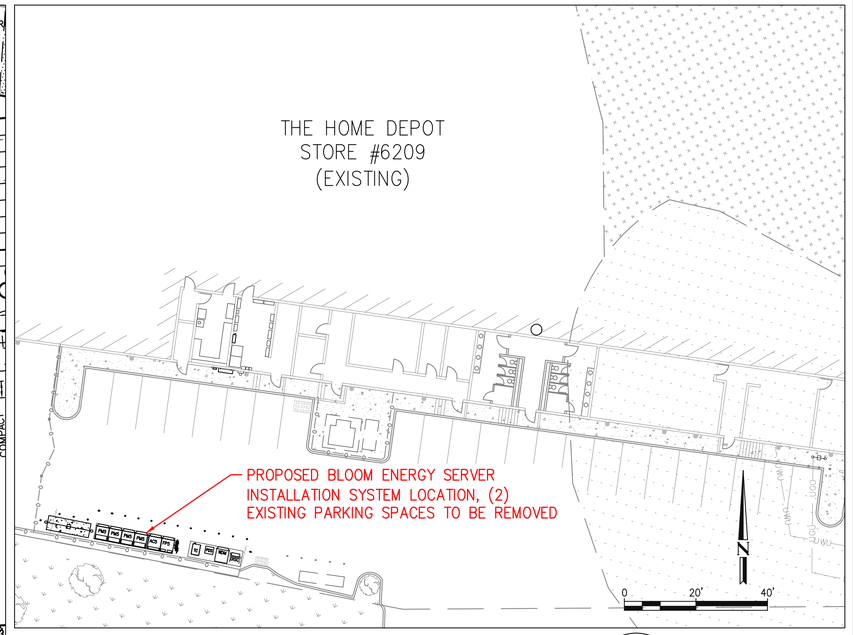
PARKING REMOVAL REPLACEMENT PLAN

SCALE: = NTS

2 / G1.2



SITE PLAN

SCALE: 1" = 20'

1 / G1.2

PARKING CALCULATION

THE HOME DEPOT – BOB'S/LINEN'S-N-THINGS PARCEL

THE HOME DEPOT		
USE: RETAIL		
RETAIL: 14,746 S.F.		
0.85 X 14,746 S.F. = 12,534 S.F.		
PARKING REQUIREMENT:		
RETAIL: 1 SPACE PER 150 S.F. OF USABLE GROSS FLOOR AREA		
12,534 S.F./150 = 83.5	84	
TOTAL SPACES REQUIRED – THE HOME DEPOT		
EXISTING APPROVAL:		
RETAIL	514	
OFFICE	6	
WAREHOUSE	13	
PROPOSED IMPROVEMENTS:		
RETAIL	84	
TOTAL SPACES REQUIRED – THE HOME DEPOT	617	

TOTAL SPACES REQUIRED – SITE	REQUIRED	EXISTING	PROPOSED	TOTAL
TOTAL SPACES REQUIRED – THE HOME DEPOT	617			
TOTAL SPACES REQUIRED – BOB'S/LINENS-N-THINGS & BANK	517			
	1134			
STANDARD SPACES PROVIDED – 9' X 18'		823	-30	793
COMPACT SPACES PROVIDED – 8' X 15' *		311	-2, +34	343
TOTAL SPACES PROVIDED		1134		1136
HANDICAPPED SPACES REQUIRED: OVER 1000 SPACES, 20 PLUS 1 FOR EACH 100 SPACES	22			
HANDICAPPED SPACES PROVIDED:		23		
* 311 + 32 = 343/1136 = 30.2% <33% 1/3% ALLOWED				

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DESIGNED BY: KATE TAYLOR	REVIEWED BY: RAJ RAGBOTRA
DRAWN BY: BASAVARAJ BENAKANAHALLI	APPROVED BY: CARSON TURNER

SHEET TITLE

PARKING REMOVAL REPLACEMENT PLAN

DRAWING NUMBER

G1.2

BLOOM DOCUMENT

DOC-1012979

THIS DRAWING IS 24" X 36" AT FULL SIZE

SITE ID: HDP207.0 | SHEET 04 OF 11

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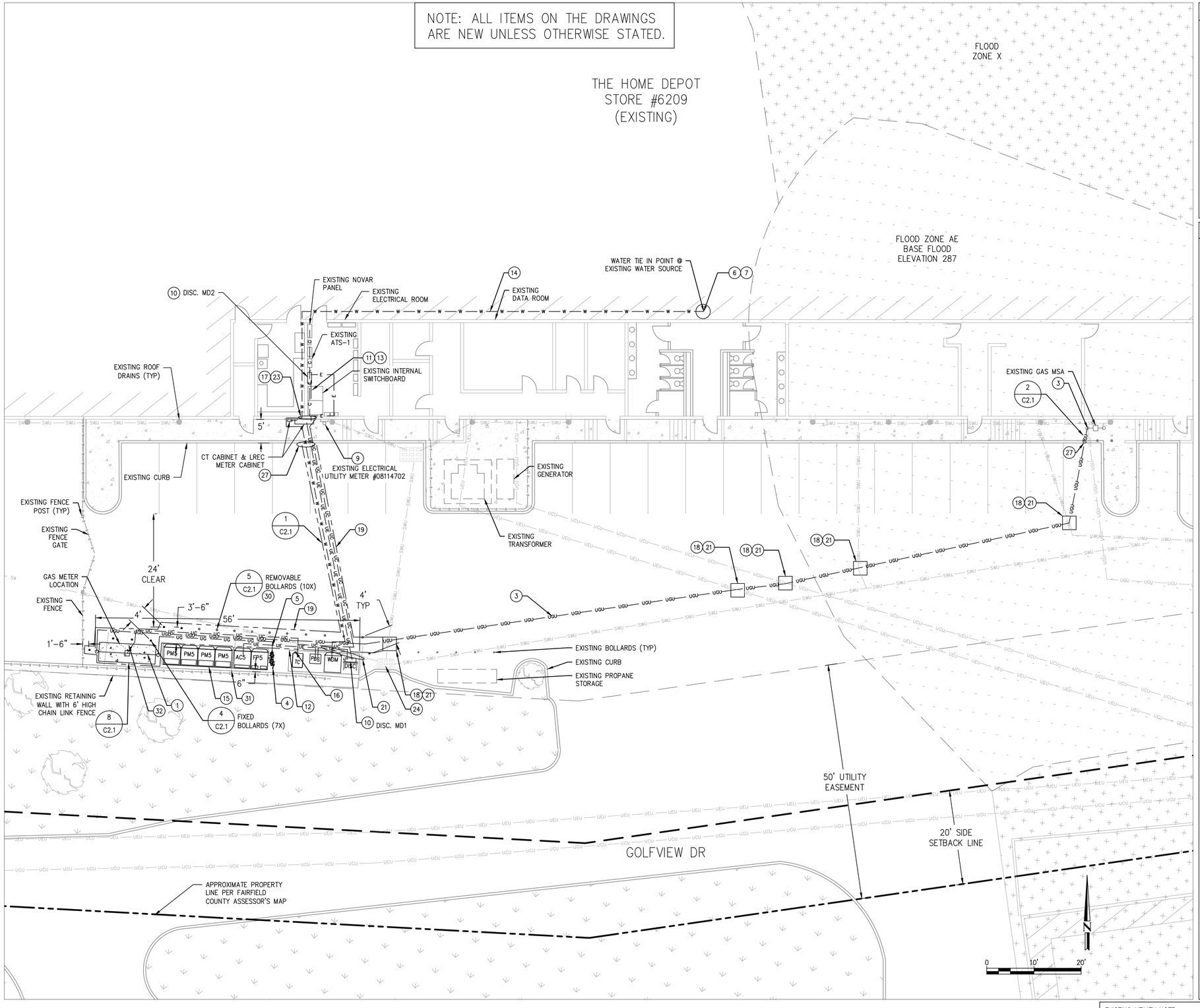

SITE REFERENCE NOTE:

EXISTING SITE CONDITIONS DRAWN BASED ON SITE PLAN SP-2 BY ROTONDO ENGINEERING LLC DATED ON 04/01/2004.

DETAILED SITE PLAN
SCALE: 1" = 10'

1
C1.1

GENERAL NOTES

1. CONTRACTOR SHALL CLEAN AND PRIME ALL WALL MOUNTED PIPING AND CONDUIT. PIPING AND CONDUIT SHALL BE PAINTED WITH EXTERIOR GRADE PAINT TO MATCH EXISTING.
2. CONDUITS AND PIPES MOUNTED TO BUILDING WALL SHALL BE SUPPORTED AS PER LOCAL CODE, RUN AT HEIGHT ABOVE DOORWAYS, AND STAND OFF WALL TO AVOID EXISTING CONDUITS AND PIPES.
3. SEE BLOOM ENERGY PRODUCT INSTALLATION DRAWINGS FOR UTILITY CONNECTIONS TO ANCILLARY EQUIPMENT AND ENERGY SERVER.
4. ALL PULL BOXES AND VAULTS REQUIRED ARE NOT SHOWN. CONTRACTOR SHALL PROVIDE PULL BOX OR VAULT FOR CONDUIT RUNS WITH MORE THAN 360-DEG BENDS OR OTHERWISE REQUIRED PER CABLE PULLING TENSION OR SIDEWALL PRESSURE LIMITATIONS. CONTRACTOR SHALL SIZE PULL BOX OR VAULT IN COMPLIANCE WITH NEC REQUIREMENTS.
5. ALL EXISTING FEATURES SHALL REMAIN AND PROTECTED THROUGHOUT THE CONSTRUCTION, UNLESS OTHERWISE NOTED ON PLAN.
6. ALL THE ABOVE FROST LINE SECTIONS OF WATER PIPES SHALL HAVE POWERED HEAT TRACE AND INSULATION, ENSURE UNDERGROUND WATER DEPTHS ARE BELOW FROST LINE.
7. CONTRACTOR TO FOLLOW THE HOME DEPOT SPECIFICATIONS DURING CONSTRUCTION AND INSTALLATION. CONSTRUCTION WILL NOT BE PERMITTED TO COMMENCE UNTIL THE CONTRACTOR HAS THE SPECIFICATION DOCUMENT.

REFERENCE SHEET NOTES

1. UTILITY PROVIDED AND INSTALLED GAS METER ASSEMBLY WITH SHUT-OFF VALVE. CONTRACTOR SHALL PROVIDE PAD PER DETAILS AS REQUIRED BY UTILITY COMPANY. COORDINATE ALL CONNECTIONS WITH GAS UTILITY.
3. UTILITY COMPANY SHALL INSTALL GAS SERVICE TAP.THE GAS UTILITY SHALL TRENCH AND BACKFILL FOR THE GAS PIPING. CONTRACTOR SHALL COORDINATE WITH GAS UTILITY AS NEEDED. REFER TO GAS RISER DETAIL FOR ADDITIONAL REQUIREMENTS.
4. GAS SHUT-OFF VALVE FOR ENERGY SERVER. REFER TO GAS RISER DETAIL FOR ADDITIONAL REQUIREMENTS.
5. CONTRACTOR SHALL FURNISH AND INSTALL GAS PIPE. REFER TO GAS RISER DETAIL FOR ADDITIONAL REQUIREMENTS.
6. TAP EXISTING WATER LINE AT NEAREST ACCESSIBLE LOCATION IN BUILDING AS SHOWN WITH A LOCAL SHUT-OFF VALVE. REFER TO WATER ROUTING DIAGRAM FOR ADDITIONAL REQUIREMENTS.
7. CONTRACTOR SHALL FURNISH AND INSTALL WATER PIPE. REFER TO WATER ROUTING DIAGRAM FOR ADDITIONAL REQUIREMENTS.
9. EXISTING UTILITY ELECTRIC METER. REFER TO ELECTRICAL SINGLE LINE DIAGRAM FOR ADDITIONAL REQUIREMENTS.
10. BLOOM ENERGY SHALL FURNISH DISCONNECT SWITCH AND CONTRACTOR SHALL INSTALL FURNISHED DISCONNECT SWITCH. CONTRACTOR SHALL MOUNT DISCONNECT SWITCH PER MANUFACTURER AND UTILITY SPECIFICATIONS.
11. CONTRACTOR SHALL TERMINATE ELECTRIC FEEDER AS SHOWN. REFER TO ELECTRICAL SINGLE LINE DIAGRAM FOR ADDITIONAL REQUIREMENTS.
12. CONTRACTOR SHALL FURNISH AND INSTALL TWO GROUNDING RODS TO BE PLACED 6' APART MINIMUM. REFER TO ELECTRICAL SINGLE LINE DIAGRAM FOR ADDITIONAL REQUIREMENTS.
13. CONTRACTOR SHALL FURNISH AND INSTALL ELECTRICAL FEEDERS. REFER TO ELECTRICAL SINGLE LINE DIAGRAM FOR ADDITIONAL REQUIREMENTS.
14. MOUNT NEW CONDUIT/PIPE TO CEILING. COORDINATE EXACT ROUTING WITH CUSTOMER REPRESENTATIVE IN THE FIELD.
15. BLOOM ENERGY SERVER. REFER TO BLOOM ENERGY STANDARD INSTALLATION DRAWING SET FOR ADDITIONAL BLOOM ENERGY SERVER DETAILS.
16. FACTORY WIRED BLOOM ENERGY SERVER EMERGENCY POWER-OFF SWITCH (EPO).
17. CONTRACTOR SHALL CORE CONDUIT AND/OR PIPE THROUGH WALL. SCAN WALL PRIOR TO CORING TO AVOID COLLATERAL DAMAGE TO EXISTING PLUMBING AND WIRING. REFER TO WALL PENETRATION DETAIL FOR ADDITIONAL REQUIREMENTS.
18. THE GAS UTILITY SHALL FURNISH AND INSTALL CONDUIT AND/OR PIPE BY HORIZONTAL DIRECTIONAL DRILLING (HDD) AS NOTED ON DRAWING. PROVIDE HDD PIT AT START AND END OF HDD. PROVIDE POTHOLE AT ALL LOCATIONS WHERE HDD CROSSES EXISTING UTILITIES PRIOR TO STARTING HDD OPERATIONS. PATCH BACK PIT AND SAW CUT TO MATCH EXISTING. THE GAS UTILITY SHALL TRENCH AND BACKFILL FOR THE GAS PIPING AS REQUIRED. REFER TO UNDERGROUND/TRENCH CONDUIT AND PIPING DETAIL FOR ADDITIONAL REQUIREMENTS.
19. CONTRACTOR SHALL FURNISH SAWCUT TRENCH FOR UNDERGROUND UTILITIES IN THIS LOCATION AND HAND DIG TRENCHES WHERE THEY CROSS EXISTING UTILITIES. REFER TO UNDERGROUND/TRENCH CONDUIT AND PIPING DETAIL FOR ADDITIONAL REQUIREMENTS. UTILITY UNDERGROUND WORK REQUIRING OPENINGS IN DRIVE AISLE SHALL BE DONE AFTER DELIVERY HOURS. DURING CONSTRUCTION, ONE LANE OF TRAFFIC (15' MINIMUM) SHALL BE PROVIDED WITH BARRICADES BEFORE DELIVERY HOURS WITH APPROVAL FROM THE STORE MANAGER.
21. PROTECT EXISTING UNDERGROUND UTILITY LINES FROM DAMAGE WHEN CROSSING WITH UNDERGROUND UTILITIES. CONTRACTOR SHALL REPAIR OR REPLACE ANY DAMAGED LINES.
23. CONTRACTOR SHALL TRANSITION ALL ABOVEGROUND LINES TO UNDERGROUND TOWARD ANCILLARY EQUIPMENT. ABOVE GROUND UTILITIES SHALL BE PROTECTED AS NECESSARY, THEN ROUTED UNDERGROUND TO EQUIPMENT STUB-UP LOCATIONS.
24. CONTRACTOR SHALL FURNISH AND INSTALL DANDY SACK OR AN APPROVED EQUAL WITH OUTFLOW PORTS AT STORM DRAIN INLET. REFER TO STORM DRAIN PROTECTION DETAIL FOR ADDITIONAL REQUIREMENTS.
27. CONTRACTOR SHALL UNDER-CUT EXISTING CURB FOR TRENCHING UTILITY LINES AND BACKFILL WITH CONCRETE SLURRY. IF CURB IS DAMAGED, REPAIR TO MATCH EXISTING.
30. BOLLARDS CLOSER THAN 4.5 FEET TO FRONT OF ENERGY SERVERS SHALL BE PLACED TO LINE UP BETWEEN ENERGY SERVER DOORS. ALL OTHER BOLLARDS SHALL BE PLACED A MINIMUM OF 4 FEET ON CENTER UNLESS OTHERWISE NOTED ON PLANS.
31. EXISTING PARKING SPACES (2X) TO BE REMOVED, SEE SHEET G1.2 FOR ADDITIONAL INFORMATION.
32. CONTRACTOR SHALL PROVIDE AND INSTALL CONDUIT AND CABLE FROM GAS MSA TO TELEMETRY CABINET FOR GAS UTILITY COMMUNICATION FOR UTILITY BILLING. REFER TO COMMUNICATION RISER DIAGRAM FOR CONNECTION REQUIREMENTS.

EXISTING UTILITY NOTE:
THE LOCATION OF EXISTING UTILITIES IS SHOWN FOR THE CONTRACTOR'S REFERENCE. EXACT LOCATION, DEPTH AND SIZE OF ALL EXISTING UTILITIES IS NOT KNOWN. CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR ALL EXISTING UTILITIES NOT SHOWN ON THESE DRAWINGS. CONTRACTOR TO FIELD VERIFY LOCATION OF EXISTING UNDERGROUND UTILITIES AND PROTECT THE EXISTING UNDERGROUND LINES FROM DAMAGE WHEN CROSSING WITH NEW UNDERGROUND UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR OR REPLACEMENT OF ANY DAMAGE LINES. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY IF ANY FIELD CONDITIONS ENCOUNTERED DIFFER FROM THOSE REPRESENTED HEREON. SUCH CONDITIONS COULD RENDER THE DESIGNS HEREON INAPPROPRIATE AND MAY REQUIRE ADJUSTMENTS TO AVOID CONFLICTS.

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DRAWN BY BASAVARAJ BENAKANAHALLI	APPROVED BY CARSON TURNER

SHEET TITLE
DETAILED SITE PLAN

DRAWING NUMBER
C1.1

BLOOM DOCUMENT
DOC-1012979

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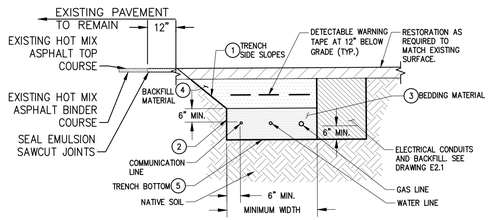
SITE ID: HDP207.0 | SHEET 05 OF 11



MINIMUM BURIAL DEPTHS AND CLEARANCES TABLE					
UTILITY	MINIMUM BURIAL DEPTH	MINIMUM HORIZONTAL DISTANCE TO LIKE UTILITY	MINIMUM HORIZONTAL DISTANCE TO DIFFERING UTILITY	MINIMUM VERTICAL DISTANCE TO LIKE UTILITY	VERTICAL DISTANCE TO DIFFERING UTILITY
COMMUNICATION	24"	6"	12"	3"	12"
GAS	24"	6"	12"	6"	12"
WATER	54"	6"	12"	6"	12"

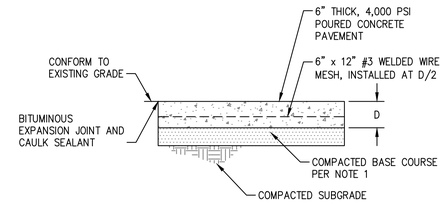
DETAIL NOTES

1. TRENCH SHALL BE EXCAVATED AND PROTECTED PER OSHA STANDARD 1926 SUBPART P. OPEN TRENCHES SHALL NOT EXCEED OSHA MAXIMUM SIDE SLOPES. CONTRACTOR TO SHORE AND PROTECT ALL VERTICAL EXCAVATIONS AS REQUIRED BY OSHA. TRENCH WALLS SHALL BE VERTICAL FROM BOTTOM OF EXCAVATION TO TOP OF PIPE OR CONDUIT.
2. TRENCH WALLS SHALL BE VERTICAL FROM BOTTOM OF EXCAVATION TO TOP OF PIPE OR CONDUIT BACKFILL.
3. BEDDING MATERIALS SHALL BE PLACED IN 6" MAXIMUM LIFTS AND MATCH ADJACENT DUCT BANK BEDDING MATERIALS WHERE APPLICABLE. ACCEPTABLE BEDDING GRADATIONS ARE:
   a. 3/4" MAXIMUM AGGREGATE BASE.
   b. ASTM C-33-FINE CONCRETE AGGREGATE (WELL GRADED SAND).
   c. ASTM C-33-GRADATION NO. 67 OR NO. 7.
   d. GRADATIONS SIMILAR TO WELL GRADED FINE ROAD BASE MATERIAL, ASTM D-1241 GRADATION C AND D.
4. BACKFILL MATERIALS SHALL BE 3/4" MAX AGGREGATE BASE MATERIAL, ASTM C33 SAND, OR NATIVE SOIL, AS NOTED PLACE BACKFILL IN 6" MAX. LIFTS AND TO BE COMPACTED TO 95% RELATIVE COMPACTION AT ± 2% OPTIMAL MOISTURE CONTENT PER ASTM D1557. SAND LAYER BELOW CONDUIT SHALL BE A MINIMUM DEPTH OF 3".
5. IF THE BOTTOM OF THE TRENCH IS SOFT AND COMPACTION CANNOT BE ACHIEVED, CONTRACTOR TO CONTACT GEOTECHNICAL ENGINEER FOR SUBGRADE PREPARATION RECOMMENDATIONS.
6. CONTRACTOR SHALL BE INSTALLED TO A DEPTH OF 36" OR AS REQUIRED TO SATISFY LOCAL BUILDING CODE CONSIDERATIONS FOR FROST DEPTH. CONTRACTOR SHALL INSTALL TO THE DEPTH OF WHICHEVER VALUE IS GREATER.
7. CONTRACTOR SHALL HIRE A THIRD PARTY SOILS INSPECTION AND TESTING AGENCY TO ASSURE COMPLIANCE OF MATERIALS AND PLACEMENT PROCEDURES WITH DESIGN DRAWINGS, SPECIFICATIONS, AND LOCAL CODES. WORK SHALL INCLUDE, BUT NOT LIMITED TO, THE FOLLOWING:
   - PHOTOGRAPH EXCAVATION BOTTOM
   - VERIFY SOIL SUITABILITY
   - VERIFY AND REPORT COMPACTION
   - SUBMIT INSPECTION REPORTS DATED AND SIGNED BY TESTING AGENCY
8. TESTING SERVICE DOCUMENTATION SHALL INCLUDE THE FOLLOWING:
   - DAILY RECORDS AND REPORT
   - TESTING RECORDS AND DATA SHEETS
   - PHOTOGRAPHIC RECORDS
   - FINAL REPORT

   ALL RECORDS SHALL AT A MINIMUM BEAR THE PROJECT NAME, LOCATION, DATE, WRITTEN DESCRIPTION OF VISUAL OBSERVATIONS, AND SIGNATURE OF PREPARED OR DESIGNATED AUTHORITY.
9. ALL CLEARANCES ARE EDGE TO EDGE AND NOT CENTER TO CENTER.
10. ALL UNDERGROUND UTILITIES SHALL BE INSTALLED PER FEDERAL, STATE, AND LOCAL CODES. ANY DEVIATION FROM HORIZONTAL OR VERTICAL UTILITY SEPARATION DISTANCES TO ACCOMMODATE FIELD CONDITIONS SHALL BE SUBMITTED BY THE CONTRACTOR TO BLOOM ENERGY FOR APPROVAL PRIOR TO UTILITY PLACEMENT.

UTILITY TRENCH EXCAVATION SPACING & BACKFILL DETAIL

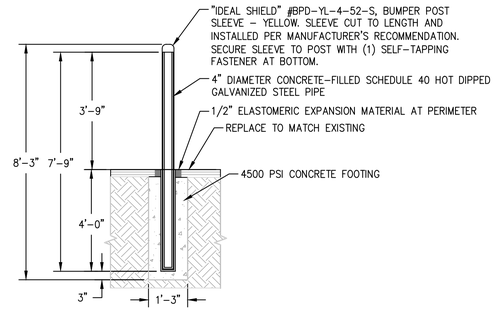
SCALE: NTS — 1 / C2.1



DETAIL NOTES:
1. REFER TO UNDERGROUND/TRENCH CONDUIT AND PIPING DETAIL OR ENERGY SERVER AND ANCILLARY PRECAST PAD GRADING FOR COMPACTED BASE COURSE REQUIREMENTS.

CONCRETE RESTORATION

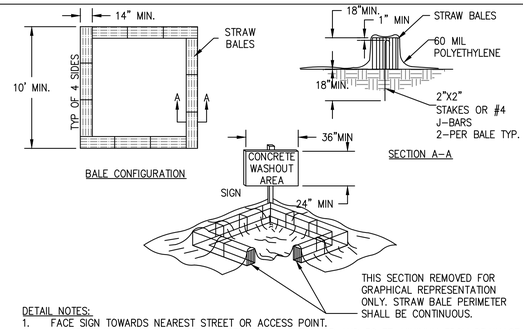
SCALE: NTS — 2 / C2.1



DETAIL NOTE:
1. CONCRETE FOUNDATIONS ARE MINIMUM REQUIREMENTS. LOCAL BUILDING CODES OR FROST LINE MAY REQUIRE GREATER DEPTH.

BOLLARD - FIXED

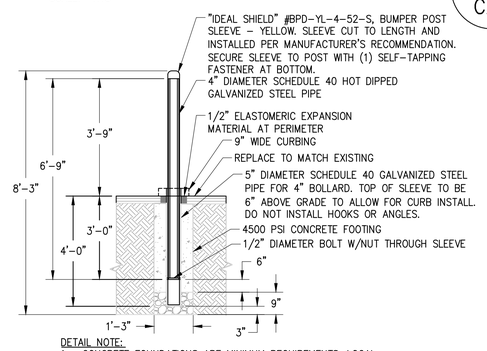
SCALE: NTS — 4 / C2.1



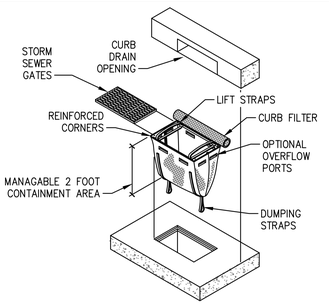
DETAIL NOTES:
1. FACE SIGN TOWARDS NEAREST STREET OR ACCESS POINT.
2. CONCRETE WASHOUT SHALL BE LOCATED BEHIND THE CURB AND 50 FT. MINIMUM FROM DRAINAGE INLETS OR WATERCOURSES AND IN A LOCATION THAT IS EASILY ACCESSIBLE BY CONCRETE TRUCKS.
3. CONTAINMENT MUST BE STRUCTURALLY SOUND AND LEAK FREE AND CONTAIN ALL LIQUID WASTES.
4. CONTAINMENT DEVICES MUST BE OF SUFFICIENT QUANTITY OR VOLUME TO COMPLETELY CONTAIN THE LIQUID WASTES GENERATED.
5. WASHOUT MUST BE CLEANED OR NEW FACILITIES CONSTRUCTED AND READY TO USE ONCE WASHOUT IS 75% FULL. THIS INCLUDES REPLACEMENT OF THE 60 MIL POLYETHYLENE SHEETING.
6. CONTRACTOR SHALL REMOVE ACCUMULATION OF SAND AND AGGREGATE AT LEAST WEEKLY AND DISPOSE OF PROPERLY.

CONCRETE WASHOUT

SCALE: NTS — 3 / C2.1



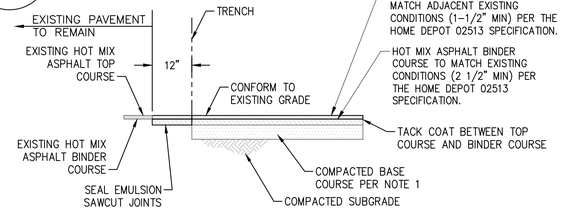
DETAIL NOTE:
1. CONCRETE FOUNDATIONS ARE MINIMUM REQUIREMENTS. LOCAL BUILDING CODES OR FROST LINE MAY REQUIRE GREATER DEPTH.



DETAIL NOTES:
1. THE SPECIFIED INLET PROTECTION CAN BE SUPPLIED IN A VARIETY OF SIZES. CONTRACTOR TO SELECT THE APPROPRIATE DRAINAGE INLET PROTECTION AS REQUIRED.

CURB DRAIN PROTECTION

SCALE: NTS — 4 / C2.2



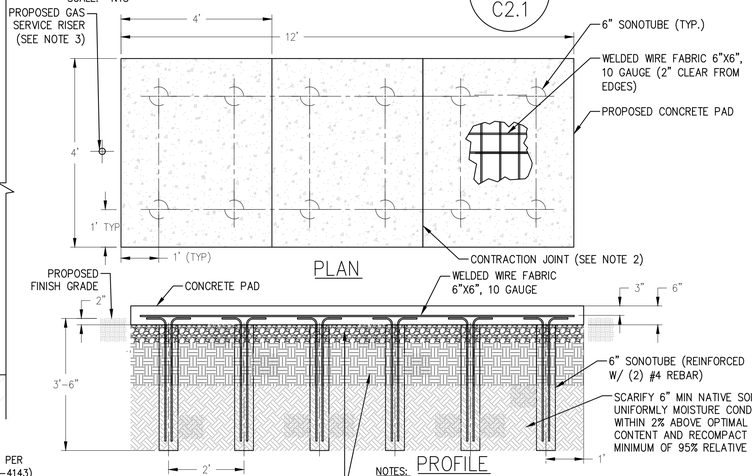
DETAIL NOTES:
1. BASE COURSE SHALL BE CLASS 2 AGGREGATE BASE (3/4" MAX) COMPACTED TO 95% RELATIVE COMPACTION. THICKNESS SHALL MATCH EXISTING THICKNESS OR 6", WHICHEVER IS GREATER.
2. MATERIALS AND METHODS OF CONSTRUCTION SHALL BE IN CONFORMANCE WITH SPECIFICATION SET FORTH BY NATIONAL, STATE, AND LOCAL CODES AND AUTHORITIES.

ASPHALT RESTORATION

SCALE : NTS — 6 / C2.1

BOLLARD - REMOVABLE

SCALE: NTS — 5 / C2.1



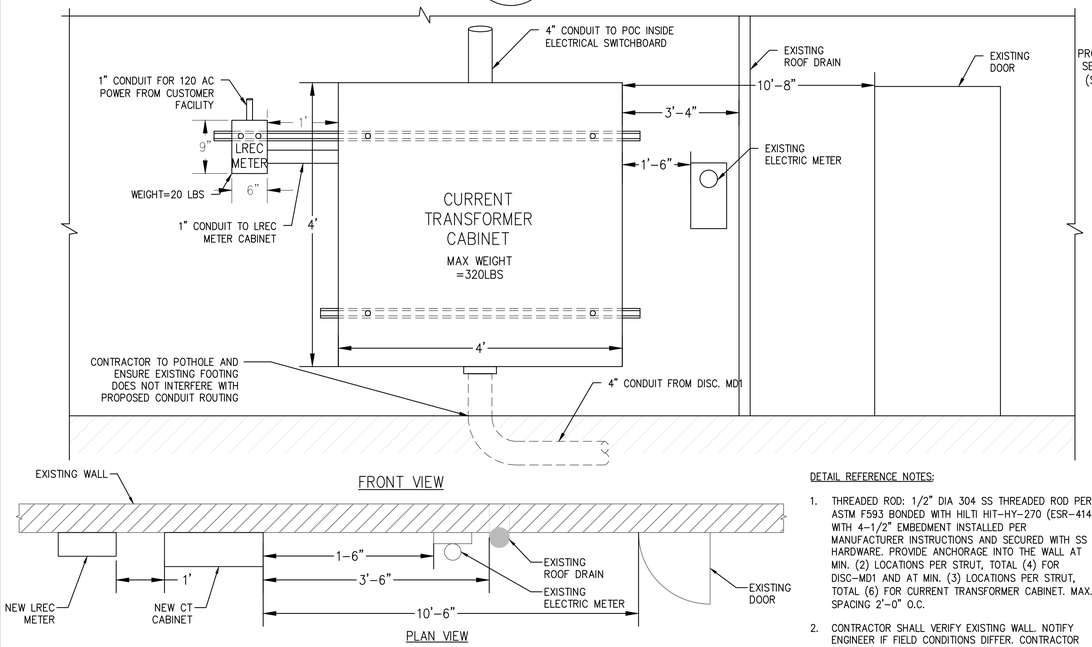
24" THICK MIN. OVER EXCAVATION TO COMPETENT SUBGRADE AND BACKFILL WITH ENGINEERED FILL. TOP 6" OF THE BACKFILL SHALL BE AGGREGATE BASE MATERIALS. BACKFILL TO BE INSTALLED IN 8" MAX LOOSE LIFTS AND COMPACTED TO A MINIMUM OF 95% RELATIVE COMPACTION IN ACCORDANCE WITH ASTM D1557 WITHIN 2% ABOVE THE OPTIMAL MOISTURE CONTENT ENGINEERED FILL MATERIAL SHALL BE CLASS II AGGREGATE BASE, CLEAN AND NON-EXPANSIVE ENGINEERED FILL COMPRISING RELATIVELY WELL GRADED SAND OR GRAVEL WITH 3/4" MAX SIZE, EXPANSION INDEX OF LESS THAN 20, 5% TO 15% OF MATERIAL FINER THAN #200 SIEVE, AND LESS THAN 2% ORGANIC MATTER BY WEIGHT.

PROFILE

NOTES:
1. CONTRACTOR SHALL INSTALL PAD PER UTILITY REQUIREMENTS.
2. CONCRETE TO BE MINIMUM OF 4500 PSI STRENGTH.
3. CONTRACTOR SHALL INSTALL CONTRACTION JOINTS EVERY 4' WITH A DEPTH OF 3/16".
4. CONTRACTOR SHALL VERIFY LOCATION OF CONCRETE PAD WITH CUSTOMER AND BLOOM ENERGY PRIOR TO INSTALLATION.
5. ASSUME MINIMUM SOIL STRENGTH PARAMETERS (1500 PSF) USED IN LIEU OF GEOTECHNICAL INVESTIGATION.
6. CONTRACTOR SHALL STOP WORK IMMEDIATELY AND CONTACT THE ENGINEER OF RECORD IF ANY OF THE FOLLOWING CONDITIONS ARE PRESENT:
   A. CONTAMINATED SOIL INDICATED BY ODOR, DARK SOIL, OR THE PRESENCE OF TAR LIKE SUBSTANCES;
   B. INDICATIONS THAT THE WATER TABLE IS WITHIN 5' OF THE SOIL SURFACE.
7. CONTRACTOR SHALL NOTIFY THE ENGINEER OF RECORD FOR DIRECTION WHERE THE PAD IS LOCATED WITHIN 10' BETWEEN BOTTOM OF THE PAD AND FACE OF THE NEAREST SLOPE.
8. ANY AREA THAT BECAME SOFTEN OR DISTURBED AS A RESULT OF WETTING OR REPEATED CONSTRUCTION TRAFFIC SHALL BE REPLACED WITH COMPACTED ENGINEER FILL.
9. SUBGRADE AND ENGINEER FILL SHALL BE STAMPED AND TESTED TO VERIFY COMPLIANCE WITH THE SPECIFICATIONS. IN ADDITION, IN-PLACE COMPACTION TEST SHOULD BE CONDUCTED FOR THE SUBGRADE.
10. CONTRACTOR SHALL HIRE A THIRD PARTY SOILS INSPECTION AND TESTING AGENCY TO OBSERVE BOTTOM OF EXAVATION, VERIFY SOILS ARE STABLE, AND VERIFY & REPORT COMPACTION PER LOCAL CODE. TEST REPORTS AND INSPECTION REPORTS SHALL BE STAMPED BY PROFESSIONAL ENGINEER AND SUBMITTED TO THE ENGINEER OF RECORD FOR REVIEW.
11. EQUIPMENT PAD SLOPE SHALL ONLY HAVE A MAXIMUM 2% IN ANY DIRECTION.
12. CONTRACTOR SHALL ENSURE FINISH GRADE OR PAVING ADJACENT TO EQUIPMENT PAD DRAINS AT MINIMUM 1% SLOPE AWAY FROM PAD. REFER TO CIVIL DRAWINGS FOR ORIENTATION OF PAD.
13. CONTRACTOR SHALL PROVIDE SUBMITTAL FOR SUBGRADE/ENGINEER FILL THE ENGINEER OF RECORD FOR REVIEW AND APPROVAL.

CONCRETE GAS METER PAD DETAIL

SCALE: NTS — 8 / C2.1



DETAIL REFERENCE NOTES:
1. THREADED ROD: 1/2" DIA 304 SS THREADED ROD PER ASTM F593 BONDED WITH HILTI HIT-HY-270 (ESR-4143) WITH 4-1/2" EMBEDMENT INSTALLED PER MANUFACTURER INSTRUCTIONS AND SECURED WITH SS HARDWARE. PROVIDE ANCHORAGE INTO THE WALL AT MIN. (2) LOCATIONS PER STRUT, TOTAL (4) FOR DISC-MD1 AND AT MIN. (3) LOCATIONS PER STRUT, TOTAL (6) FOR CURRENT TRANSFORMER CABINET. MAX. SPACING 2'-0" O.C.
2. CONTRACTOR SHALL VERIFY EXISTING WALL. NOTIFY ENGINEER IF FIELD CONDITIONS DIFFER. CONTRACTOR SHALL GROUT WALL SOLID MINIMUM 12" AROUND ANCHORS WITH GROUT HAVING A MINIMUM COMPRESSIVE STRENGTH OF 2000PSI PER ASTM C476. THERE SHALL BE NO DAMAGE TO EXISTING REINFORCEMENT. PROVIDE SUBMITTAL PRIOR TO COMMENCING WORK.

CT CABINET AND LREC METER WALL MOUNTING DETAIL

SCALE: NTS — 7 / C2.1

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REVISION HISTORY		
REV	REVISION ISSUE	DATE
0A	INITIAL RELEASE	10/05/2020
0B	**FOR PERMIT**	**03/22/2021**
0C	**REVISED PER AHJ AND UTILITY COMMENTS**	**07/19/2021**

DESIGNED BY KATE TAYLOR	REVIEWED BY RAJ RAGBOTRA
DRAWN BY BASAVARAJ BENAKANAHALLI	APPROVED BY CARSON TURNER

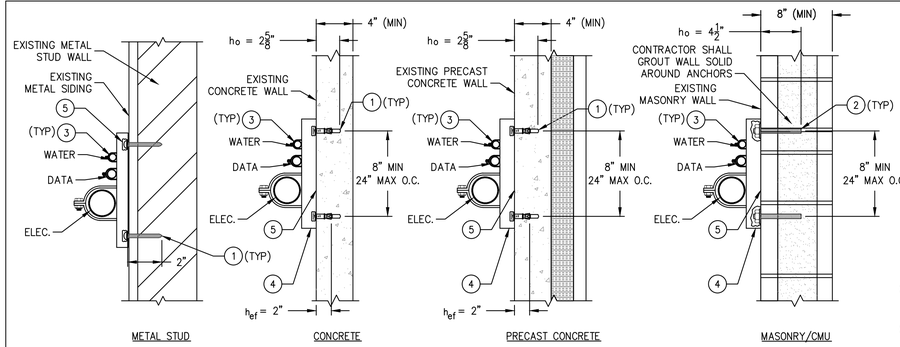
SHEET TITLE
DETAILS
SHEET-1

DRAWING NUMBER
C2.1

BLOOM DOCUMENT
DOC-1012979

THIS DRAWING IS 24" X 36" AT FULL SIZE

SITE ID: HDP207.0 — SHEET **06** OF 11



METAL STUD | CONCRETE | PRECAST CONCRETE | MASONRY/CMU

TYPICAL CONDUIT/PIPE WALL MOUNTING DETAIL

1 / C2.2

SCALE: NTS

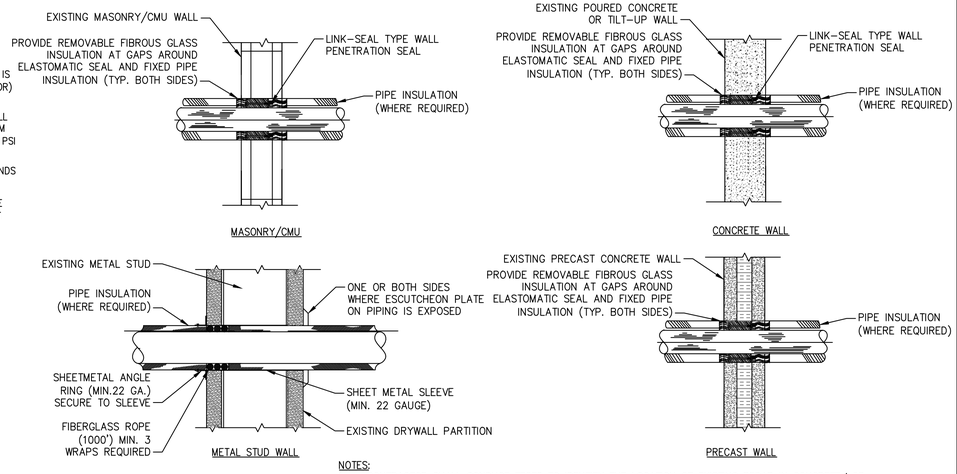
DETAIL NOTES:

1. 10'–0" MAX SPACING BETWEEN MOUNTS OR PER CONDUIT/PIPE MANUFACTURER RECOMMENDATION.
2. SPACE ALL CONDUITS/PIPES AT 1" MIN BETWEEN ITEMS.
3. CONTRACTOR SHALL VERIFY MINIMUM THICKNESS OF PANEL FACE SHELL IS AS SHOWN. IF MINIMUM IS NOT MET, CONSULT ENGINEER OF RECORD (EOR) FOR ALTERNATE ANCHOR.
4. CONTRACTOR SHALL VERIFY SOLID GROUTED MASONRY WALL. IF THE WALL IS NOT SOLID GROUTED, CONTRACTOR SHALL GROUT WALL SOLID MINIMUM 12" AROUND ANCHORS WITH MINIMUM COMPRESSIVE STRENGTH OF 2000 PSI PER ASTM C476.

   WHERE BENDING IS REQUIRED, PROVIDE ADDITIONAL MOUNTS ON BOTH ENDS OF THE BEND WITHIN 3'–0".
6. MAXIMUM (4) 4" ELECTRICAL CONDUITS PER MOUNT OR STRUT SHALL BE 4'–0" MAX LONG. CONCRETE/MASONRY ANCHOR SHALL BE REQUIRED AT 24" O.C. MAX. IF MORE ELECTRICAL CONDUITS ARE REQUIRED, CONTACT EOR FOR ADDITIONAL WALL MOUNTING REQUIREMENTS.

DETAIL REFERENCE NOTES:

1. BOLT: HILTI 1/2" KWIK BOLT 'TZ' (PER ESR–1917 & RR2570) WITH 2–5/8" EMBEDMENT OR EQUIVALENT IN WALL, INSTALLED PER MANUFACTURER SPECIFICATIONS.
2. THREADED ROD: 1/2" 304 SS THREADED ROD PER ASTM F593 BONDED WITH HILTI HIT–HY–270 (ESR–4143) WITH 4–1/2" EMBEDMENT INSTALLED PER MANUFACTURER INSTRUCTIONS AND SECURED WITH SS HARDWARE.
3. 1–5/8" UNISTRUT OR EQUIVALENT CLAMP SIZED FOR THE WATER PIPE ("CUSH–A–CLAMP" PN 2028), PIPE OR RIGID CONDUIT (PN P1117) OR THIN WALL (EMT) CONDUIT (PN P1430) AS INDICATED.
4. 1–5/8" UNISTRUT OR EQUIVALENT STRUT MEMBER, 1–5/8" TALL (PN P1000) WITH 'HS' OR 'T' HOLE PATTERN.
5. CONTRACTOR SHALL PROVIDE SMOOTH WALL SURFACE FOR STRUT MOUNTING. APPLY THIN LAYER OF SIKA REPAIR MORTAR TO PROVIDE FLUSH SURFACE FOR CHANNEL CONNECTION.



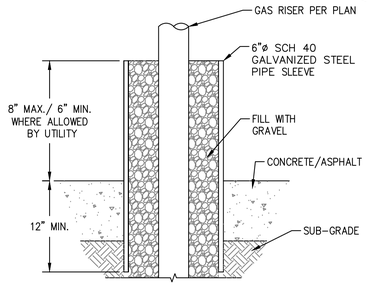
NOTES:

1. CONTRACTOR SHALL CONDUCT TESTS TO IDENTIFY THE LOCATION OF EXISTING REBAR IN CONCRETE/ OR CMU WALLS. CONTRACTOR SHALL SUBMIT THE TEST RESULT AND PROPOSED WALL PENETRATION LOCATION TO THE ENGINEER OF RECORD PRIOR TO ANY WALL PENETRATION AND PRIOR TO CUTTING ANY EXISTING REBAR IN WALL.
2. CONTRACTOR SHALL PROVIDE FIRE STOP SEALANT AT ALL WALL PENETRATIONS PER LOCAL CODE.

WALL PENETRATION

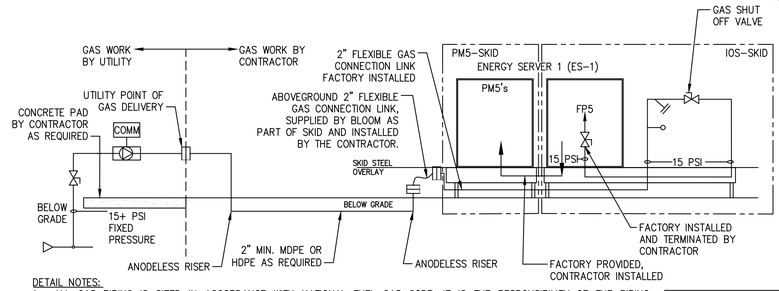
2 / C2.2

SCALE: NTS



DETAIL NOTES:

1. GAS RISER COLLAR SHALL BE REQUIRED AT ALL LOCATIONS WHERE NEW VERTICAL GAS PIPING PENETRATES NEW OR EXISTING CONCRETE OR ASPHALT.



DETAIL NOTES:

1. ALL GAS PIPING IS SIZED IN ACCORDANCE WITH NATIONAL FUEL GAS CODE. IT IS THE RESPONSIBILITY OF THE PIPING CONTRACTOR TO INSTALL SAID PIPING SYSTEM IN ACCORDANCE WITH THE GAS CODE AND ACCEPTABLE PIPING PRACTICES. THIS DRAWING DOES NOT EXCUSE THE CONTRACTOR FROM INSTALLATION PER APPLICABLE BUILDING CODES OR MANUFACTURER REQUIRMENTS. IN THE EVENT OF A DISCREPANCY, CONTRACTOR SHALL NOTIFY BLOOM ENERGY
2. CONTRACTOR SHALL ENSURE ANODELESS RISERS ARE INSTALLED IN COMPLIANCE WITH THE MANUFACTURE'S REQUIRED MAXIMUM AND MINIMUM BURIAL DEPTHS.
3. ANODELESS RISERS SHALL CONFORM TO ASTMD2513 AND USDOT 1921.281, 192.283, 192.375. ANODELESS RISERS SHALL BE CSA AND IAMPO/UPC LISTED.
4. ALL ABOVE GROUND GAS PIPE SHALL BE SCHEDULE 40 BLACK STEEL, ASTM A53 TYPE E, GALVANIZED WITH FLANGED AND WELDED JOINTS. ABOVE GROUND PIPE SHALL BE PAINTED YELLOW. UNDERGROUND GAS PIPE SHALL BE MDPE OR HDPE.
5. ALL PIPE OPERATING ABOVE 5 PSIG SHALL BE FLANGED AND WELDED.
6. ALL ABOVE GROUND CONNECTIONS TO BE FLANGED AND WELDED AT COMPONENTS DOWNSTREAM OF NEW UTILITY METER/REGULATOR ASSEMBLY.
7. THE USE OF NATURAL GAS AS A FUEL SYSTEM CLEANING MEDIUM DURING FUEL CELL CONSTRUCTION, INSTALLATION OR MODIFICATION IS PROHIBITED. CONTRACTOR IS PROHIBITED FROM USING PIPELINE GAS AND SHALL PURGE SYSTEM WITH NITROGEN. TESTING AND PURGING FOR NEW GAS PIPING SHALL COMPLY WITH NFPA 54 AND SHALL BE WITNESSED BY AN OSFM REPRESENTATIVE.
8. CONTRACTOR SHALL PROVIDE PRIVATE GPR MARK–OUT NO MORE THAN 2 WEEKS PRIOR TO GAS UTILITY INSTALLING GAS SERVICE PIPING CONTRACTOR SHALL COORDINATE TIMING WITH BLOOM ENERGY GAS UTILITY SPECIALIST.

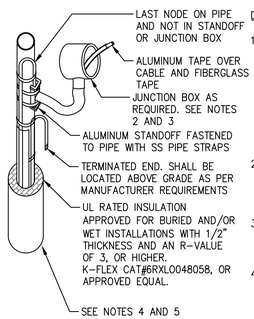
LEGEND

- GAS REGULATOR
- COMM — GAS METER
- SHUT OFF VALVE
- PRESSURE INDICATION
- FLANGE

GAS RISER–FIXED DELIVERY

3 / C2.2

SCALE: NTS



DETAIL NOTES:

1. SELF REGULATING HEAT TRACE, OUTDOOR RATED, 5 WATTS/FT., 120VAC, RAYCHEM 5BTV–CT/CR OR EQUAL. HEAT TRACE SHALL BE PROVIDED AND INSTALLED BY CONTRACTOR ON ALL EXTERIOR WATER PIPING INSTALLED ABOVE THE FROST LINE (48" DEPTH). WHERE INSTALLATIONS HAVE NEW WATER PIPING PENETRATING EXTERIOR FACILITY WALLS HEAT TRACE SHALL BE EXTENDED 18" INTO THE BUILDING. HEAT TRACE FOR BLOOM ENERGY SERVER PAD PLUMBING SHALL BE OFCI, ENSURE HEAT TRACE IS PROVIDED AT WATER JUMPER BETWEEN BLOOM ENERGY SERVER PLUMBING AND CONTRACTOR PROVIDED PLUMBING.
2. JUNCTION BOX SHALL BE PROVIDED AND INSTALLED BY CONTRACTOR AT ENDS OF HEAT TRACE LINES THAT TERMINATE AT A POWER SOURCE, COORDINATE MOUNTING REQUIREMENTS IN THE FIELD. JUNCTION BOX AT ENERGY SERVER SHALL BE OFCI AND MOUNTED WITH SELF TAPPING SCREWS.
3. IN WDM THE HEAT TRACE LINE SHALL LAND DIRECTLY AT CABLE GLAND, ALLOW 10' ADDITIONAL HEAT TRACE LENGTH AT WDM INLET AND OUTLET TO COVER ALL WDM PIPING AND LENGTH TO TERMINATION AT CABLE GLAND.
4. HEAT TRACE INSTALLED FROM THE FROST LINE TO 6" ABOVE GRADE SHALL BE PROVIDED WITH 4" PVC JACKET FILLED WITH 3/4" STONE FOR DRAINAGE. PVC JACKET SHALL EXTEND BEYOND HEAT TRACE TO FULL WATER PIPE BURIAL DEPTH. PVC JACKET SHALL NOT BE PROVIDED AT STUB UP TO ENERGY SERVER WATER CONNECTION.
5. WHERE HEAT TRACE IS INSTALLED BEYOND 6" ABOVE GRADE AND EXPOSED TO THE ELEMENTS (NOT WITHIN EQUIPMENT) IT SHALL BE PROVIDED WITH ALUMINUM ROLL JACKETING FOR PROTECTION.

HEAT TRACE

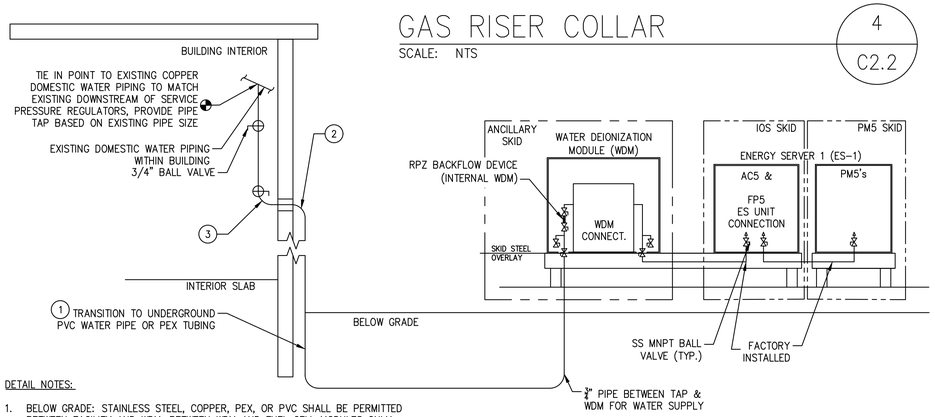
5 / C2.2

SCALE: NTS

GAS RISER COLLAR

4 / C2.2

SCALE: NTS



DETAIL NOTES:

1. BELOW GRADE: STAINLESS STEEL, COPPER, PEX, OR PVC SHALL BE PERMITTED BETWEEN FACILITY AND WDM. BETWEEN WDM AND FUEL CELL MODULES ONLY STAINLESS STEEL, PEX, AND PVC WITH STAINLESS STEEL FITTINGS SHALL BE PERMITTED.
2. PROVIDE INSULATION FOR ALL WATER PIPES ON EXTERIOR OF BUILDING.
3. CONTRACTOR SHALL PROVIDE HEAT TRACE FOR ALL ABOVE FROST LINE BURIED WATER PIPES. FOR STUB–UP LOCATIONS, PROVIDE ADEQUATE EXTRA LENGTH OF HEAT TRACE TO PROPERLY HEAT TRACE ANY VALVES AND OVERLAP WITH BLOOM PROVIDED HEAT TRACE INSIDE BLOOM PROVIDED EQUIPMENT. CONTRACTOR SHALL HEAT TRACE AND INSULATE PIPE FROM FULL BURIAL DEPTH THROUGH BUILDING WALL WITH RAYCHEM 38TV–CT TRACING AND 1" ARMACELL ELASTOMERIC INSULATION. CONTRACTOR SHALL INSTALL HEAT TRACE AND INSULATED PIPE WITHIN A 4" SCH. 80 PVC SLEEVE FROM FULL BURIAL DEPTH THROUGH THE BUILDING WALL AND SECURE SLEEVE TO BUILDING WALL.

WATER ROUTING DIAGRAM

6 / C2.2

SCALE: NTS

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DESIGNED BY KATE TAYLOR	REVIEWED BY RAJ RAGBOTRA
DRAWN BY BASAVARAJ BENAKANAHALLI	APPROVED BY CARSON TURNER

SHEET TITLE

DETAILS
SHEET–2

DRAWING NUMBER

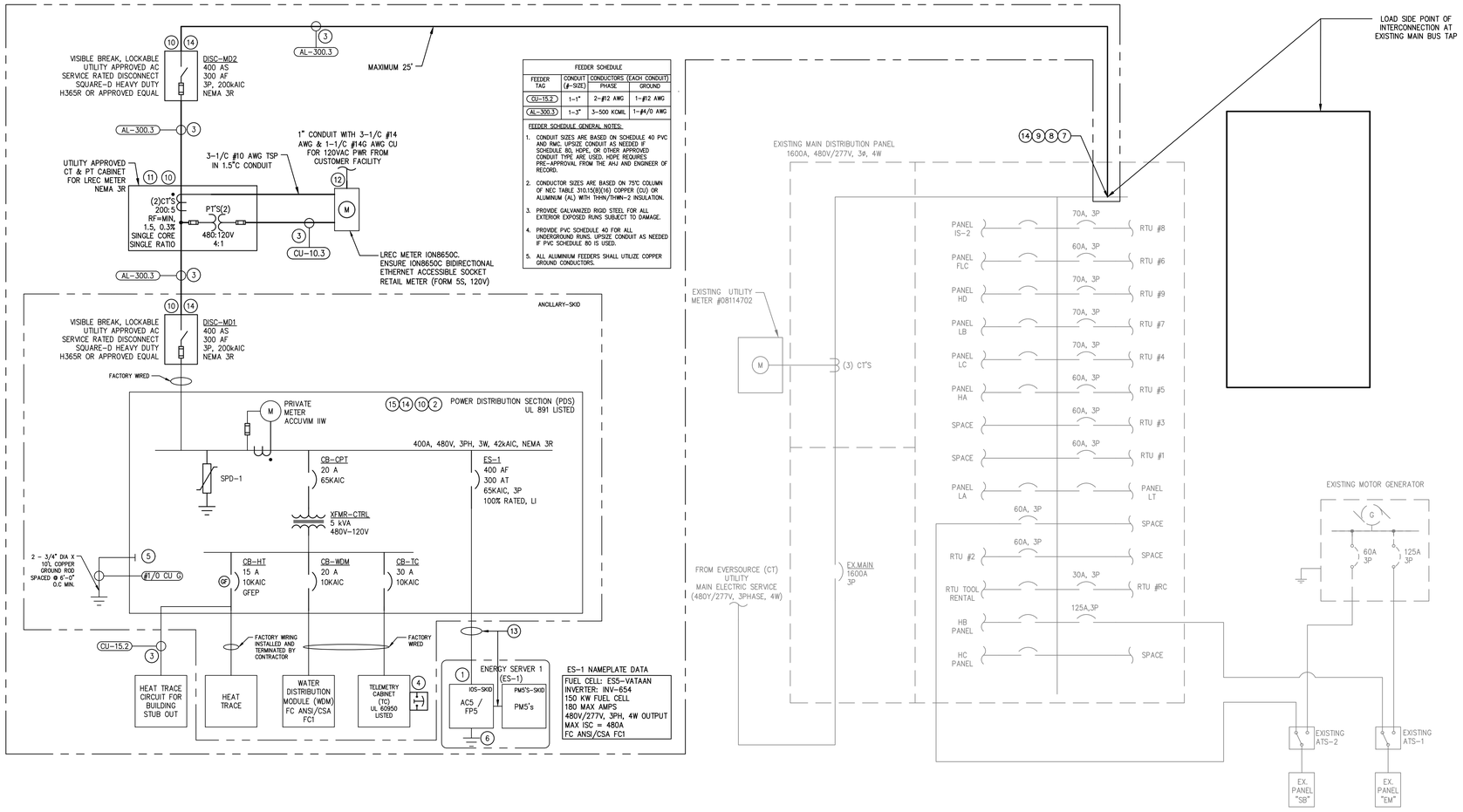
C2.2

BLOOM DOCUMENT

DOC–1012979

THIS DRAWING IS 24" X 36" AT FULL SIZE

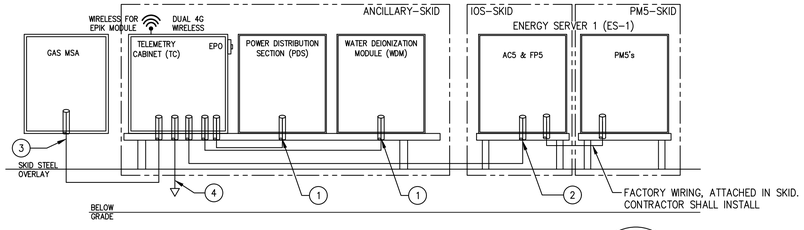
SITE ID: HDP207.0 | SHEET **07** OF 11



SINGLE LINE DIAGRAM

SCALE: NTS

1 / E3.1



COMMUNICATIONS RISER DIAGRAM

SCALE: NTS

2 / E3.1

DETAIL REFERENCE NOTES

1. FACTORY INSTALLED AND TERMINATED CABLE BETWEEN TC AND OTHER EQUIPMENTS WITHIN STEEL OVERLAY.
2. TWO (2) OUTDOOR RATED SHIELDED CAT5E CABLES AND ONE (1) OUTDOOR RATED SHIELDED CAT5E CABLE WITH RJ-45 (MALE/MALE AT BOTH ENDS) BETWEEN TC AND ES, INSTALLED ON CABLE TRAYS BETWEEN SKIDS.
3. 1" CONDUIT BETWEEN UTILITY GAS MSA AND TC, WITH ONE (1) OUTDOOR RATED SHIELDED CAT5E CABLE WITH RJ-45 (MALE/MALE) ENDS BETWEEN TC AND GAS MSA. THE COMMUNICATION FOR GAS MSA IS THROUGH THE BLOOM ENERGY PROVIDED, CONTRACTOR INSTALLED EPIK MODULE INSTALLED INSIDE TC.
4. CONTRACTOR SHALL PROVIDE 1" CONDUIT PROVISION FROM TC TO BUILDING WALL.

DETAIL NOTES

1. ALL CONDUIT AND WIRE TO BE PROVIDED AND INSTALLED BY THE CONTRACTOR.
2. REFER TO THE DETAILED SITE PLAN FOR EQUIPMENT LOCATIONS.
3. ROUTING SHALL BE DETERMINED IN THE FIELD BASED ON PREVAILING FIELD CONDITIONS.
4. CAT6 IS ACCEPTABLE IN LIEU OF CAT5E. IF INSTALLING CAT6 CABLES, CONTRACTOR SHALL VERIFY CONDUIT FILL RATIO AND UPSIZE CONDUIT AS NECESSARY.
5. ALL TWISTED PAIR CABLES SHALL BE OUTDOOR RATED SINGLE JACKETED CABLE, 18 AWG MINIMUM.
6. ALL SHIELDED CONDUCTOR SHALL HAVE THE SHIELD GROUNDED ON TELEMETRY SIDE ONLY.
7. ALL OUTDOOR RATED SHIELDED CAT5E CABLES SHALL BE TYPE F/UTP WITH DRAIN WIRE, OSP RATED.

FEEDER SCHEDULE			
FEEDER TAG	CONDUIT (#-SIZE)	CONDUCTORS (EACH CONDUIT) PHASE	GROUND
CU-15.2	1-1"	2-#12 AWG	1-#12 AWG
AL-300.3	1-3"	3-500 KCMIL	1-#4/0 AWG

FEEDER SCHEDULE GENERAL NOTES:

1. CONDUIT SIZES ARE BASED ON SCHEDULE 40 PVC AND RMC. UPSIZE CONDUIT AS NEEDED IF SCHEDULE 80, HDPE, OR OTHER APPROVED CONDUIT TYPE ARE USED. HDPE REQUIRES PRE-APPROVAL FROM THE AHJ AND ENGINEER OF RECORD.
2. CONDUCTOR SIZES ARE BASED ON 75°C COLUMN OF NEC TABLE 310.15(B)(16) COPPER (CU) OR ALUMINUM (AL) WITH THHN/THWN-2 INSULATION.
3. PROVIDE GALVANIZED RIGID STEEL FOR ALL EXTERIOR EXPOSED RUNS SUBJECT TO DAMAGE.
4. PROVIDE PVC SCHEDULE 40 FOR ALL UNDERGROUND RUNS. UPSIZE CONDUIT AS NEEDED IF PVC SCHEDULE 80 IS USED.
5. ALL ALUMINUM FEEDERS SHALL UTILIZE COPPER GROUND CONDUCTORS.

GENERAL NOTES

1. FEEDER SHALL NOT BE ROUTED THROUGH THE UTILITY PULL OR UTILITY METER SECTIONS. FEEDER SHALL NOT BE ROUTED THROUGH ANY OTHER SECTION THAN THAT IN WHICH IT TERMINATES UNLESS BARRIERS ARE PROVIDED PER NEC 408.3.
2. THE ENERGY SERVER INVERTER OUTPUT CHARACTERISTICS SHALL BE IN ACCORDANCE WITH NEC 705.14.
3. INTERCONNECTIONS SHALL BE IN ACCORDANCE WITH NEC 705.12.
4. THE ENERGY SERVER OUTPUT IS EQUIPPED WITH UTILITY-INTERACTIVE INVERTERS RECOGNIZED BY UL TO UL1741 AND IEEE 1547 AND COMPLIES WITH NEC 692.62. INVERTER SETTINGS PER THE PROVIDED TABLE BELOW.
5. THE ENERGY SERVER IS NOT A SEPARATELY DERIVED SYSTEM PER NEC 250.30 [ART. 100]
6. CONTRACTOR SHALL GROUND AND BOND ALL METALLIC EQUIPMENT, BOXES, AND CONDUIT BETWEEN EACH BLOOM ENERGY SERVER AND FACILITY POINT OF CONNECTION IN COMPLIANCE WITH LOCAL AHJ AND NEC REQUIREMENTS.
7. CONTRACTOR SHALL TEST ALL NEW CIRCUIT BREAKERS GREATER THAN 100A.
8. INSTALLATION PHASING SHOULD MATCH THE EXISTING FACILITY PHASING FOR 3-PHASE WIRES.

REFERENCE SHEET NOTES

1. ALL CONNECTIONS FROM FUEL CELLS TO INVERTER ARE FACTORY WIRED AND ALL MAINTENANCE CABINETS ARE ACTIVELY PRESSURIZED; THEREFORE, NO CLASS 1, DIVISION 2 WIRING IS REQUIRED.
2. ALL COMPONENTS SHOWN IN THIS BOUNDARY SHALL BE UL LISTED TOGETHER AS A SINGLE, COMPLETE, ALL INCLUSIVE UNIT. ALL ELECTRICAL CONDUIT/CABLE CONNECTIONS WITHIN THIS BOUNDARY SHALL BE FACTORY INSTALLED WITH SOME FINAL CONNECTIONS TO BE COMPLETED BY THE CONTRACTOR IN THE FIELD. REFER TO BLOOM ENERGY INSTALLATION MANUAL FOR ALL FINAL TERMINATION POINTS.
3. CONTRACTOR SHALL FURNISH AND INSTALL CONDUIT AND CONDUCTOR AS REQUIRED. SELECTION OF CONDUIT TYPE SHALL BE PER NEC REQUIREMENTS. REFER TO BLOOM ENERGY INSTALLATION MANUAL FOR ALL FINAL TERMINATION POINTS AT BLOOM ENERGY FURNISHED EQUIPMENT.
4. MANUFACTURER INSTALLED, PRE-WIRED EPO BUTTON LOCATED IN READILY ACCESSIBLE LOCATION AT ENERGY SERVER PLATFORM AND CONNECTED TO TELEMETRY CABINET TERMINAL STRIP.
5. CONTRACTOR SHALL FURNISH GROUND CONDUCTOR FROM THE POWER DISTRIBUTION SECTION TO THE UFER GROUND ROD IN THE ANCILLARY PAD.
6. CONTRACTOR SHALL FURNISH AND INSTALL 1-#1/0G AWG CU FROM ENERGY SERVER GROUND TO UFER GROUND IN ENERGY SERVER PAD, TYP.
7. CONTRACTOR SHALL FURNISH AND INSTALL SPARE LUGS, WHERE AVAILABLE, CONTRACTOR SHALL USE EXISTING SPARE LUGS AT POINT OF INTERCONNECTION. IF SPARE LUGS ARE NOT AVAILABLE, UTILIZE EXISTING MANUFACTURED HOLES IN BUS LABELED FOR TAP AND TERMINATE GROUND CONDUCTOR TO THE GROUND BUS.
8. CONTRACT SHALL FURNISH AND INSTALL UL LISTED CABLE ON ALL CONDUCTORS AT EACH PHASE AT THE POINT OF INTERCONNECTION PER NEC.
9. THE UTILITY-INTERACTIVE INVERTER POINT OF CONNECTION SHALL BE IN ACCORDANCE WITH NEC 705.12
10. BLOOM ENERGY SHALL FURNISH EQUIPMENT AND THE CONTRACTOR SHALL INSTALL FURNISHED EQUIPMENT. CONTRACTOR SHALL FURNISH AND INSTALL FUSES.
11. CABINET SUPPLIED BY BLOOM ENERGY AND INSTALLED BY CONTRACTOR. EVERSOURCE APPROVED CTs &, PTs SHALL BE SUPPLIED AND INSTALLED BY CONTRACTOR
12. LREC METER, SOCKET AND ENCLOSURE SHALL BE SUPPLIED BY BLOOM ENERGY AND INSTALLED BY CONTRACTOR.
13. FACTORY WIRING, ATTACHED IN SKID. CONTRACTOR SHALL ROLL OUT THESE FEEDERS, INSTALL THEM ON CABLE TRAYS AND TERMINATE PER REQUIREMENT.
14. BLOOM ENERGY SHALL FURNISH ARC FLASH LABELING FOR APPLICABLE EQUIPMENT AND CONTRACTOR SHALL INSTALL ARC FLASH LABELING.
15. BLOOM ENERGY SHALL COORDINATE COMMUNICATION CONTROL I/O SCHEDULE, TESTING AND COMMISSIONING OF ENERGY SERVER EQUIPMENT.

MANUFACTURER SUPPLIED INVERTER SETTINGS

FUNCTION	TRIP VALUE	TRIP TIME
UNDERVOLTAGE (27-1)	≤ 50% (240 V)	0.16 SECONDS (10 CYCLES)
UNDERVOLTAGE (27-2)	≤ 88% (422.4V)	5.00 SECONDS (300 CYCLES)
OVERVOLTAGE (59-1)	≥ 110% (528V)	1.00 SECONDS (60 CYCLES)
OVERVOLTAGE (59-2)	≥ 120% (576V)	9.6 SECONDS (576 CYCLES)
UNDERFREQUENCY (81U-1)	≤58 HZ	180 SECONDS (108000 CYCLES)
UNDERFREQUENCY (81U-2)	≤ 56.5 HZ	9.6 SECONDS (576 CYCLES)
OVERFREQUENCY (810-1)	≥61 HZ	180 SECONDS (108000 CYCLES)
OVERFREQUENCY (810-2)	≥62 HZ	9.6 SECONDS (576 CYCLES)
RECONNECT TIMER		300 SECONDS (1800 CYCLES)

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CUSTOMER SITE

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REVISION HISTORY		
REV	REVISION ISSUE	DATE
0A	INITIAL RELEASE	10/05/2020
0B	FOR PERMIT	03/22/2021
0C	REVISED PER AHJ AND UTILITY COMMENTS	07/19/2021

DESIGNED BY: SUPREETHA	REVIEWED BY: RAJ RAGBOTRA
DRAWN BY: BASAVARAJ BENAKANAHALLI	APPROVED BY: JOSEPH A. TEMOWO

SHEET TITLE

ELECTRICAL SINGLE LINE DIAGRAM

DRAWING NUMBER

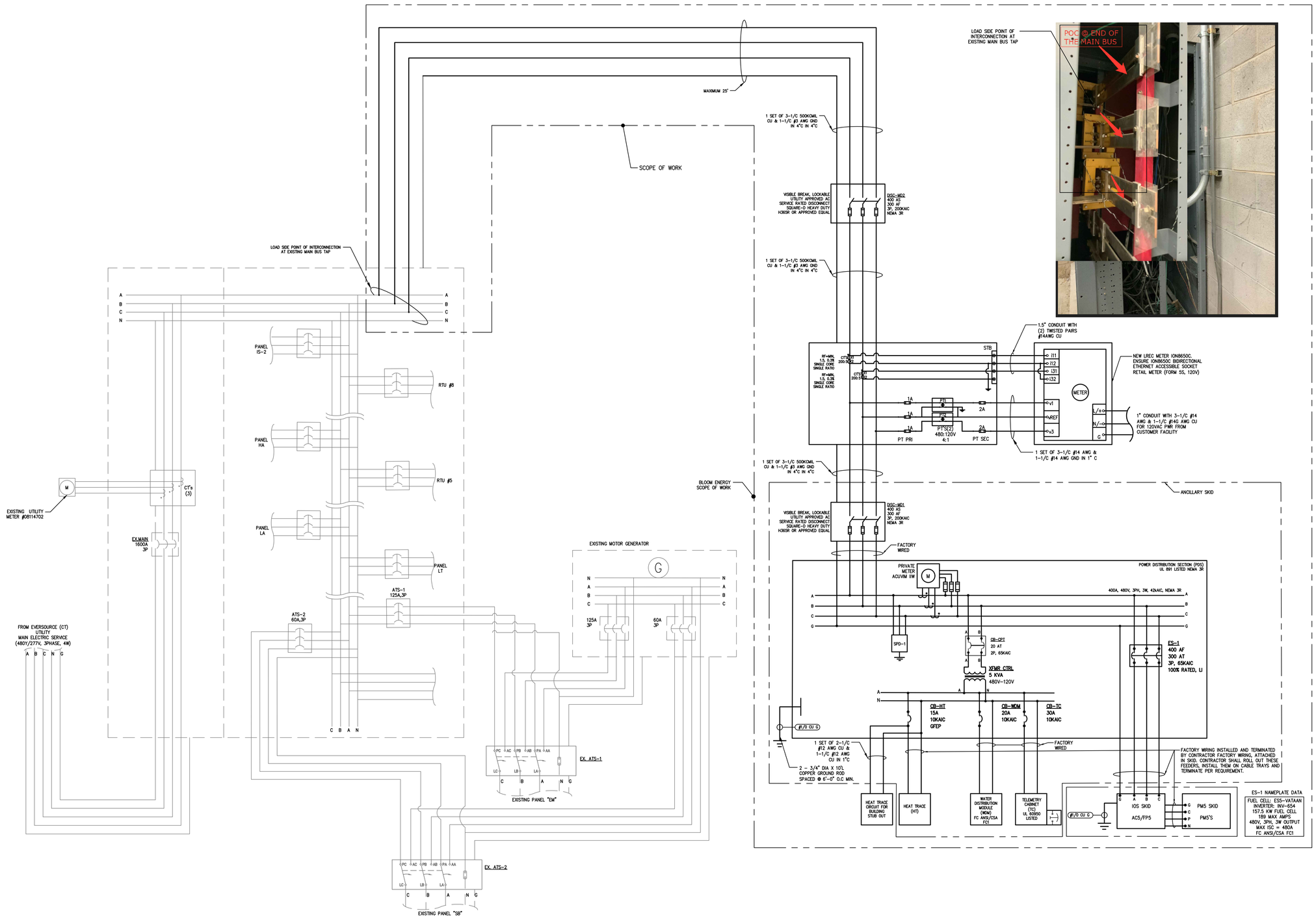
E3.1

BLOOM DOCUMENT

DOC-1012979

THIS DRAWING IS 24" X 36" AT FULL SIZE

SITE ID: HDP207.0 | SHEET 08 OF 11



ELECTRICAL THREE LINE DIAGRAM 1
SCALE: NTS E3.2

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SHEET TITLE
ELECTRICAL THREE LINE DIAGRAM

DRAWING NUMBER
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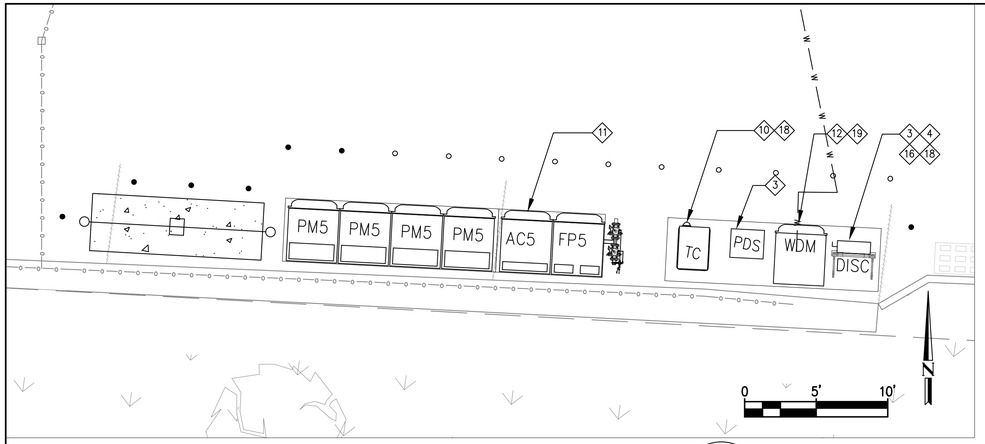
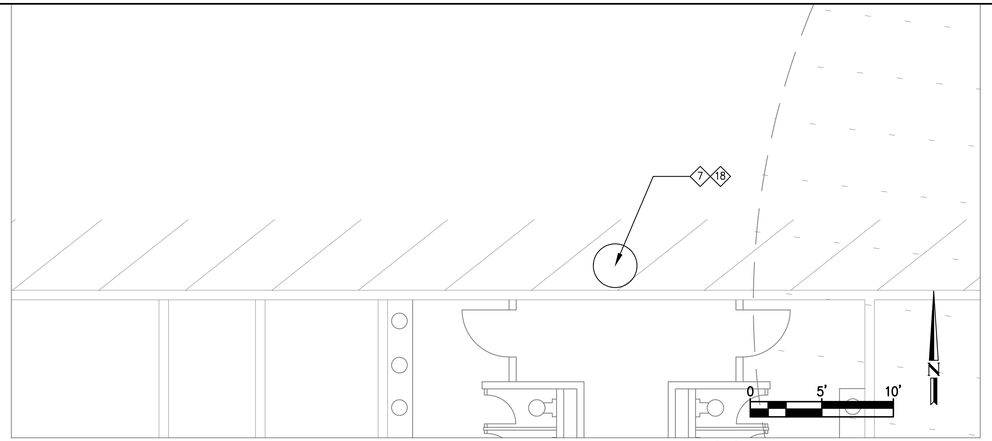


ES AREA PLACARD PLAN

SCALE: 1" = 5'

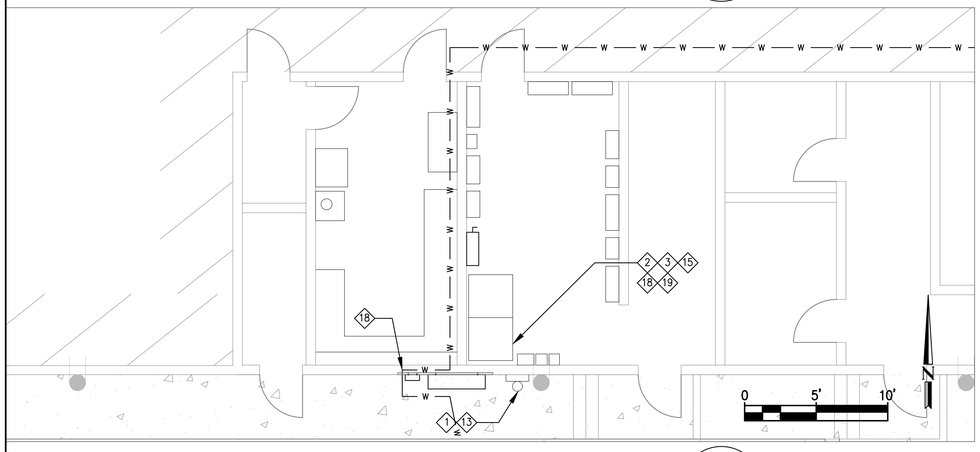
1 / M1.1



WATER TAP PLACARD PLAN

SCALE: 1" = 5'

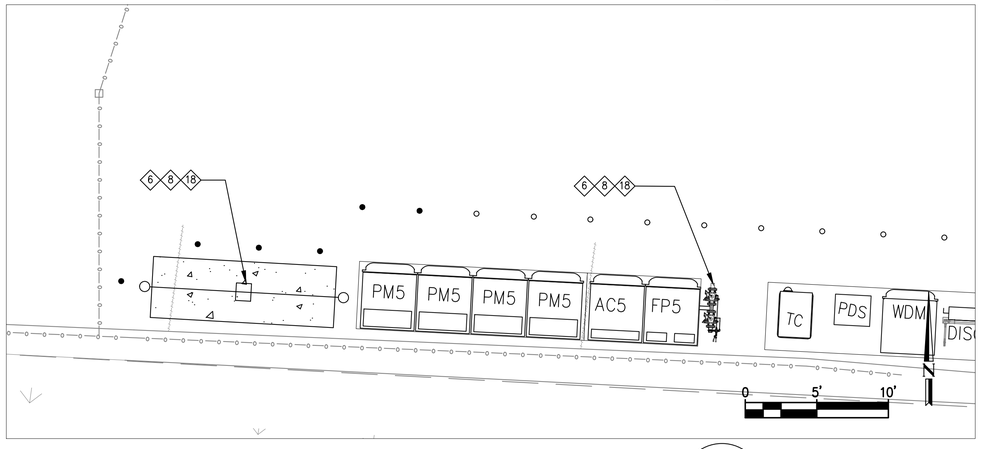
2 / M1.1



ELEC TIE IN PLACARD PLAN

SCALE: 1" = 5'

3 / M1.1



GAS METER PLACARD PLAN

SCALE: 1" = 5'

4 / M1.1

GENERAL NOTES

1. BLOOM ENERGY SHALL FURNISH THE SIGNS AS SHOWN AND CONTRACTOR SHALL INSTALL SIGNS.
2. THE CONTRACTOR SHALL FURNISH AND INSTALL ALL ADDDITIONAL SIGNS REQUIRED BY THE AHJS AND UTILITIES.

1'–2" × 10"

WARNING – GENERATOR INSTALLED ON PREMISES

FUEL CELL POWER SISTEM PRODUCES ELECTRICAL ENERGY

POSSIBLE DANGER OF ELECTRICAL BACKFEED

CHECK INSTALLATION BEFORE PERFORMING ANY WORK DISCONNECT SWITCH IS LOCATED – [OPEN LINE FOR WRITE IN]

TEXT: 1/2" HIGH RED LETTERING
BACKGROUND: WHITE
MATERIAL: SELF–ADHESIVE VINYL

SIGN SHALL BE MOUNTED AT POINT OF COMMON COUPLING, NEAR UTILITY METER. PLACE 5' FROM THE GROUND OR AS SPACE IS PROVIDED CENTERED ON UNIT.

1

10" × 7"

WARNING

FUEL CELL POWER SYSTEM

OUTPUT. DO NOT RELOCATE

THIS CIRCUIT BREAKER

TEXT: 1/2" HIGH RED LETTERING
BACKGROUND: WHITE
MATERIAL: SELF–ADHESIVE VINYL

SIGN SHALL BE MOUNTED ON INTERCONNECTION CIRCUIT BREAKER IN MAIN SWITCHBOARD (LOAD SIDE TAPS ONLY)

2

7" × 5"

DANGER

ELECTRICAL SHOCK HAZARD – DO NOT TOUCH TERMINALS – BOTH THE LINE AND LOAD SIDES MAY BE ENERGIZED IN THE OPEN POSITION

HEADER: DANGER
TEXT: BLACK AND WHITE LETTERING
BACKGROUND: WHITE, BLACK, & RED
MATERIAL: SELF–ADHESIVE VINYL

SIGN SHALL BE MOUNTED ON ALL ELECTRICAL PROTECTIVE DEVICES, PLACED 5' FROM THE GROUND CENTERED ON UNIT.

3

10" × 7"

UTILITY LOCKABLE VISIBLE GENERATOR DISCONNECT SWITCH

TEXT: 1/2" HIGH RED LETTERING
BACKGROUND: WHITE
MATERIAL: PLASTIC

SIGN SHALL BE MOUNTED ON THE FRONT OF THE ELECTRICAL DISCONNECT SWITCH, CENTERED ON UNIT AS SPACE IS PROVIDED.

4

NOT IN USE

7" × 5"

NOTICE

FUEL CELL GAS SHUT–OFF

HEADER: NOTICE
TEXT: BLACK AND WHITE LETTERING
BACKGROUND: WHITE & BLUE
MATERIAL: PLASTIC

SIGN SHALL BE MOUNTED ON OR AS NEAR AS POSSIBLE TO THE POINT OF CONNECTION TO THE GAS UTILITY.

6

8" × 2"

WATER

TEXT: WHITE LETTERING
BACKGROUND: GREEN
MATERIAL: ROLL FORM PIPE MARKERS

SIGN SHALL BE MOUNTED ON THE FRONT OF THE WATER TAP & SHUT OFF VALVE.

7

8" × 2"

GAS

TEXT: WHITE LETTERING
BACKGROUND: YELLOW
MATERIAL: ROLL FORM PIPE MARKERS

SIGN SHALL BE MOUNTED ON OR AS NEAR AS POSSIBLE TO UTILITY GAS METER

8

NOT IN USE

7" × 5"

NOTICE

FUEL CELL EMERGENCY SHUT DOWN

HEADER: NOTICE
TEXT: BLACK & WHITE LETTERING
BACKGROUND: WHITE & BLUE
MATERIAL: PLASTIC

SIGN SHALL BE MOUNTED ON THE FRONT OF THE ENERGY SERVER EMERGENCY POWER–OFF SWITCH (EPO), PLACED 5' FROM THE GROUND.

10

6" × 2"

ES 1 UPM 1

ES 2 UPM 2

TEXT: ENGRAVED WHITE LETTERING
BACKGROUND: BLACK
MATERIAL: PLASTIC

SIGN SHALL BE MOUNTED ON THE EDGE AND IN THE CENTER OF EACH ENERGY SERVER AND UPM PAD FACING THE ENTRANCE SIDE OF SITE

11

11" × 8.5"

NO SMOKING

TEXT: BLACK & RED LETTERING
BACKGROUND: WHITE
MATERIAL: PLASTIC

SIGN SHALL BE MOUNTED AT ENTRANCE TO ES UNIT AREA (COMMONLY WDM), PLACE 5' FROM THE GROUND CENTERED ON UNIT.

12

8" × 3"

WARNING! (2) SOURCES OF POWER: FUEL CELL BACKFEED

TEXT: 1/2" HIGH WHITE LETTERING
BACKGROUND: RED
MATERIAL: PLASTIC

SIGN SHALL BE MOUNTED AT POINT OF COMMON COUPLING, NEAR UTILITY METER. CENTERED ON UNIT AS SPACE IS AVAILABLE.

13

NOT IN USE

7" × 2"

SOURCE 1

TEXT: 1/2" HIGH WHITE LETTERING
BACKGROUND: RED
MATERIAL: PLASTIC

SIGN SHALL BE MOUNTED NEXT TO MAIN DISCONNECT IN CUSTOMER MAIN SWITCHBOARD, CENTERED ON UNIT AS SPACE IS AVAILABLE.

15

7" × 2"

SOURCE 2

TEXT: 1/2" HIGH WHITE LETTERING
BACKGROUND: RED
MATERIAL: PLASTIC

SIGN SHALL BE MOUNTED ON FUEL CELL INTERCONNECTION CIRCUIT BREAKER (IF LOAD SIDE TAP) OR FUEL CELL DISCONNECT SWITCH (IF LINE SIDE TAP) AND CENTERED.

16

NOT IN USE

4" × 1.5"

CALL BLOOM ENERGY BEFORE TURNING OFF. (408) 543–1678

TEXT: 1/4" HIGH RED LETTERING
BACKGROUND: WHITE
MATERIAL: SELF ADHESIVE VINYL

SIGN SHALL BE MOUNTED AT ANY AND ALL ELECTRICAL DISCONNECTING MEANS, ALL WATER VALVES, ALL GAS VALVES AND EPO SWITCH, CENTERED IF POSSIBLE.

18

SITE SPECIFIC SITE MAP

MATERIAL: PLASTIC

SIGN SHALL BE MOUNTED ON THE FRONT DOOR OF THE MAIN SWITCHBOARD AND AT THE ENTRANCE TO THE ES AREA (COMMONLY WDM), CENTERED ON UNIT AS SPACE IS AVAILABLE.

19

NOT IN USE

NOT IN USE

NOT IN USE

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THE HOME DEPOT

REVISION HISTORY

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0A	INITIAL RELEASE	10/05/2020
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DESIGNED BY KATE TAYLOR	REVIEWED BY RAJ RAGBOTRA
DRAWN BY BASAVARAJ BENAKANAHALLI	APPROVED BY CARSON TURNER

SHEET TITLE

PLACARD PLAN

DRAWING NUMBER

M1.1

BLOOM DOCUMENT

DOC–1012979

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SITE ID: HDP207.0 | SHEET 10 OF 11

Bloomenergy®

PRODUCT DATASHEET

Energy Server 5

Always On, Clean Energy
Using Patented Solid Oxide
Fuel Cell Technology

The Energy Server 5 provides combustion-free electric power with these benefits

Clean
Our systems produce near zero criteria pollutants (NOx, SOx, and particulate matter) and far fewer carbon emissions than legacy technologies.

Reliable
Bloom Energy Servers are designed around a modular architecture of simple repeating elements. This enables us to generate power 24 x 7 x 365 and can be configured to eliminate the need for traditional backup power equipment.

Resilient
Our system operates at very high availability due to its fault-tolerant design and use of the robust natural gas pipeline system. Bloom Energy Servers have survived extreme weather events and other incidences and have continued providing power to our customers.

Simple Installation and Maintenance
Our Energy Servers are 'plug and play' and have been designed in compliance with a variety of safety standards. Bloom Energy manages all aspects of installation, operation and maintenance of the systems.

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Energy Server 5	Technical Highlights (ES5-VATAAN)
Outputs	
Nameplate power output (net AC)	157.5kW
Load output (net AC)	150kW
Electrical connection	480V, 3-phase, 60 Hz
Inputs	
Fuels	Natural gas, directed biogas
Input fuel pressure	10-18 psig (15 psig nominal)
Water	None during normal operation
Efficiency	
Cumulative electrical efficiency (LHV net AC)[1]	65-53%
Heat rate (HHV)	5,811-7,127 Btu/kWh
Emissions[2]	
NOx	0.0017 lbs/MWh
SOx	Negligible
CO	0.034 lbs/MWh
VOCs	0.0159 lbs/MWh
CO_2 @ stated efficiency	679-833 lbs/MWh on natural gas; carbon neutral on directed biogas
Physical Attributes and Environment	
Weight	10 tons
Dimensions (variable layouts)	10'9" x 8'8" x 6'9" or 21'6" x 4'4" x 7'2"
Temperature range	-20° to 45° C
Humidity	0% - 100%
Seismic vibration	IBC site class D
Location	Outdoor
Noise	< 70 dBA @ 6 feet
Codes and Standards	
Complies with Rule 21 interconnection and IEEE1547 standards	
Exempt from CA Air District permitting; meets stringent CARB 2007 emissions standards	
An Energy Server is a Stationary Fuel Cell Power System. It is Listed by Underwriters Laboratories, Inc. (UL) as a 'Stationary Fuel Cell Power System' to ANSI/CSA FC1-2014 under UL Category IRGZ and UL File Number MH45102.	
Additional Notes	
Access to a secure website to monitor system performance & environmental benefits	
Remotely managed and monitored by Bloom Energy	
Capable of emergency stop based on input from the site	

[1] 65% LHV efficiency verified by ASME PTC 50 Fuel Cell Power Systems Performance Test
[2] NOx and CO measured per CARB Method 100, VOCs measured as hexane by SCAQMD Method 25.3

About Bloom Energy

Bloom Energy's mission is to make reliable, clean energy affordable for everyone in the world. The company's product, the Bloom Energy Server, delivers highly reliable and resilient, Always On electric power that is clean and sustainable. Bloom's customers include twenty-five of the Fortune 100 companies and leaders in cloud services and data centers, healthcare, retail, financial services, utilities and many other industries.

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SHEET TITLE

BLOOM ENERGY PRODUCT DATA SHEET

DRAWING NUMBER

R0.1

BLOOM DOCUMENT

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