February 24, 2021

Melanie Bachman, Esq.
Executive Director
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

RE: **PETITION NO. 1438 -** Bloom Energy Corporation petition for a declaratory ruling, pursuant to Connecticut General Statutes §4-176 and §16-50k, for the proposed construction, maintenance and operation a customer-side 500-kilowatt AC fuel cell facility and associated equipment to be located at 69 (a/k/a 65) Woodland Street and a customer-side 500-kilowatt AC fuel cell facility and associated equipment to be located off of Drake Hill Road, both located at the Dyno Nobel campus in Simsbury, Connecticut.

Dear Ms. Bachman:

Please see the attached responses to the interrogatories provided to Bloom Energy on February 18, 2021.

Sincerely,

Justin Adams
Permitting Manager

Bloomenergy
Connecticut
860.839.8373
justin.adams@bloomenergy.com

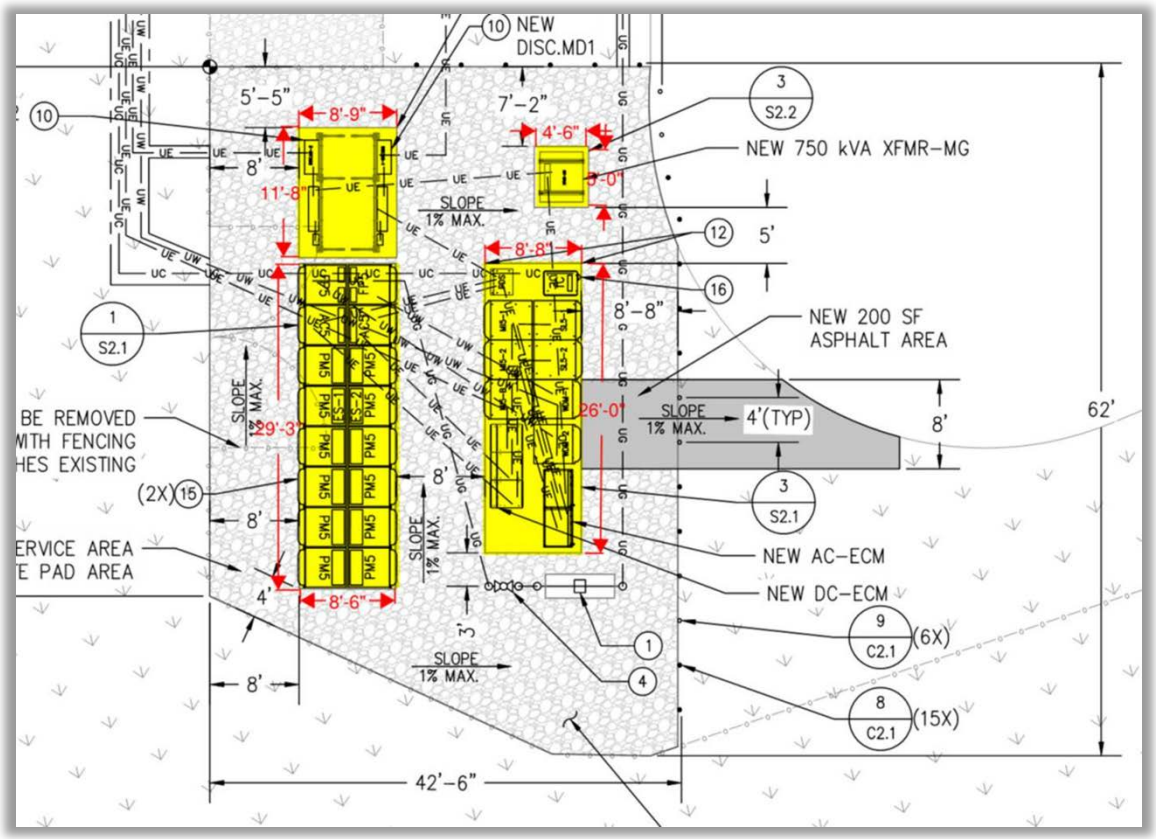
Petition No. 1438
Bloom Energy Corporation
Dyno Nobel campus
69 (a/k/a 65) Woodland Street & off of Drake Hill Road
Simsbury, Connecticut

Interrogatories – Set I

1. Would the proposed fuel cells and/or associated equipment be installed on concrete pads? If so, please provide the location and dimensions of the concrete pads on the site plans.

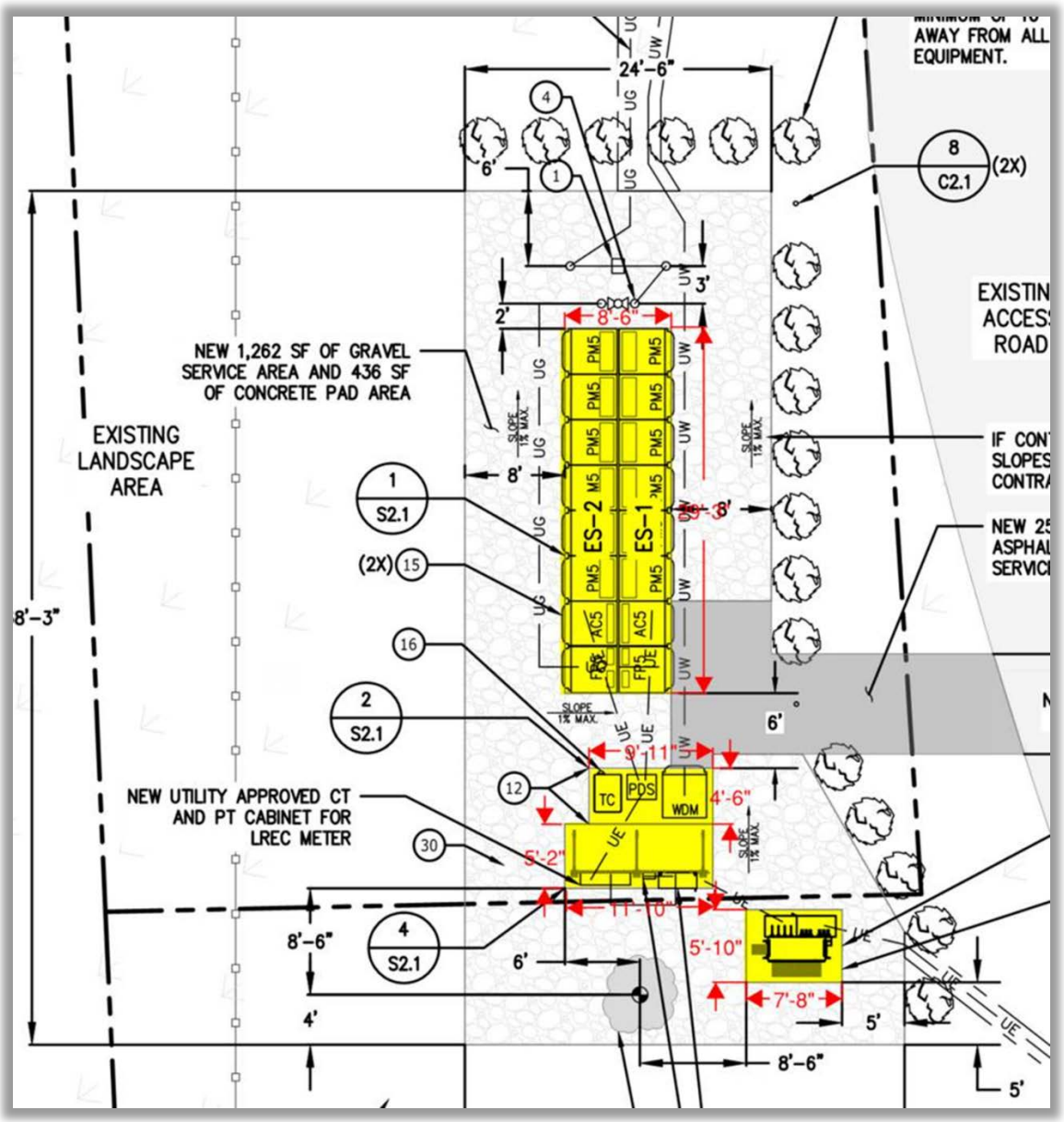
Yes, all equipment will be anchored to concrete pads. Amended site plans including the pad dimensions and other distances are provided as Attachments 1a and 1b. See figures below for specific dimensions of each proposed pad.

69 Woodland



4353 North First Street San Jose CA 95134 T 408 543 1500 F 408 543 1501 www.bloomenergy.com

Drake Hill Road



2. Provide the number of trees six inches in diameter or greater that would be removed for installation of the proposed facilities at each site.

There are no trees six inches in diameter or greater that would be removed for installation of the proposed Facilities at either site.

4353 North First Street San Jose CA 95134 T 408 543 1500 F 408 543 1501 www.bloomenergy.com

3. What is the distance of the nearest point of the Site 2 fuel cell from Drake Hill Road? Would the existing gravel access road be used to access the facility? Will any improvements to that access road be necessary? Could the access road be redesigned to minimize visibility from Drake Hill Road?

   The fuel cells would be installed approximately 193' South from Drake Hill Road. The existing gravel access road will be used to access the facility. Minor improvements, would be made as necessary to maintain the integrity and function of the access road during and after construction. A gravel construction entrance will be installed as shown in the provided Soil Erosion and Sediment Control Details in the amended plans for Site 2 (Attachment 1b). Redesigning the entrance is not within the scope of this proposed work.

4. Page 5 of the Petition states the nearest property line to the Site 2 equipment is "a State of Connecticut Right of Way and subsequently a commercial property, approximately 30 feet to the west." What is the distance from the Site 2 equipment to the nearest property line to the east?

   The distance from the equipment on Site 2 fuel cell to the nearest to the nearest neighboring property to the East is approximately 215'.

5. Page 10 of the Petition states that the nearest noise receptor to Site 2 is a residentially developed property. However, page 5 of the Petition identifies the nearest property as a commercial property. Please explain.

   The nearest noise receptor to Site 2 is a <u>commercially</u> developed property 30 feet to the west of the site. The characterization on page 10 is incorrect – it should read "commercially" not "residentially" developed.

6. If the nearest noise receptor to Site 2 is residential, the sound levels for Site 2 are predicted to be 56.2 dBA at 30 feet from the facility. Would noise mitigation measures be necessary to ensure compliance with DEEP Noise Regulations? Please provide clarification and, if needed, possible noise mitigation measures.

   The nearest noise receptor is commercially developed and will comply with State of Connecticut regulations for the Control of Noise.

7. What is the status of Bloom's Department of Energy and Environmental Protection Natural Diversity Database request?

   Attached is the correspondence with the DEEP NDDB. Subsequent to the correspondence with NDDB, Bloom energy had the email communication with the DEEP Wildlife Biologist coordinating monitoring (Attachment 2).

   In addition to this correspondence, a Rare Species Protection Plan will be prepared for incorporation in the construction drawings for the site. In addition to species-specific provisions for the listed species, the Plan will provide for contractor training in advance of construction and periodic monitoring.

4353 North First Street San Jose CA 95134 T 408 543 1500 F 408 543 1501 www.bloomenergy.com

8. Referencing the Petition Figure 5B, please respond to the following:

    a) What are the 100 year and 500 year flood elevations?

    Response: The Site is located between FEMA defined cross sections. Based on these cross section elevations, 100-year flood elevation is between 156.6 and 157.2. FEMA does not define elevations for the 500 year flood.

    b) Has the petitioner considered raising the height of the fuel cell facility above the 100 year and/or 500 year flood elevations due to its proximity to the flood zones?

    Response: Based on the FEMA flood mapping the Facility is outside the both the 100-year and 500-year flood zones. The existing ground elevation of the Facility is approximately 164, which is over 6 feet above the 100-year flood elevation.

    c) What is the distance from the fuel cell facility at its closest point to the 100 year and 500 year flood zones AND the area marked "Floodplain Forest Farmington River"?

    Response: The Facility is approximately 15 feet from the 500-year flood zone, 115 feet from the 100-year flood zone, and 120 feet from the "Floodplain Forest Farmington River".

    d) Given that the electrical interconnection is within the area marked as the 500 year flood zone, what is the possibility of flooding or inundation of the trench during heavy rain events and are any additional mitigation measures necessary**?**

    Response: There is a 0.2% chance that a 500-year flood event occurs during a given year so it is very unlikely that a 500-year storm would occur during the short period of time that the electrical interconnection is being installed. However the Petitioner is willing to make sure that the trench in this area is closed at the end of every work day as an additional mitigation measure.

9. Referring to page 10 of the Petition, views of the Site 2 facility are expected from adjacent residential and commercial properties, Drake Hill Road and the Farmington Canal Trail. Could landscaping be installed along the eastern and northern boundaries of the facility to provide visual screening of the facility from adjacent properties?

    Response: Bloom has revised the plans for Site 2 and is proposing the installation arborvitae on the northern and western sides of the proposed Facility.

10. Where would the excavated soils be stockpiled during construction?

    Response: All existing excavated material that are not to be reused in the work will be immediately removed and properly disposed. Excess soils that are to be reused will be stockpiled in an upland location, will not to exceed 35 feet in height and sloped at no more than a 2:1 ratio. The stockpiles will also be surrounded with a compost filter sock to prevent erosion.

4353 North First Street San Jose CA 95134 T 408 543 1500 F 408 543 1501 www.bloomenergy.com

11. Does the petitioner intend to provide on-site training to the Town of Simsbury emergency responders, if requested?

    Response: Yes, Bloom is in conversation with the Simsbury Fire Marshal and will arrange a short training and presentation of the fuel cell facilities near commissioning.

12. Please identify the media to be used for pipe cleaning procedures at the proposed facility in accordance with Connecticut General Statutes § 16-50ii.

    Response: The media to be used for the pipe cleaning procedures at the proposed facility would be compressed air.

4353 North First Street San Jose CA 95134 T 408 543 1500 F 408 543 1501 www.bloomenergy.com

Attachment 1a: Revised Site Plans Site 1

4353 North First Street San Jose CA 95134 T 408 543 1500 F 408 543 1501 www.bloomenergy.com

DYNO®
Dyno Nobel

STORE NUMBER: BLDG 200/WEST
65 WOODLAND STREET
BLDG 200, SIMSBURY,
CT 06070

Bloomenergy®

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.

Bloomenergy®
4353 N. FIRST STREET
SAN JOSE, CA 95134

GPD Engineering and Architecture Professional Corporation

520 SOUTH MAIN STREET
AKRON, OH 44311
t: (330) 572-2100, FAX (330) 572-2102

ENGINEER OF RECORD
LEONARDO A SFERRA, P.E.
LICENSE #31512

STATE OF CONNECTICUT · LEONARDO A SFERRA · 31512 · LICENSED PROFESSIONAL ENGINEER

01/25/21

SITE INFORMATION

PARCEL INFORMATION

PROPERTY OWNER	DYNO NOBEL INCCT
COUNTY	HARTFORD
TAX MAP #	E12 103 005-C

PROPERTY DESCRIPTION

PROPERTY TYPE	LIGHT INDUSTRIAL
PROPERTY AREA	97,382.74 SF
DISTURBED AREA	2,000 SF

PERMITTING INFORMATION

MUNICIPAL

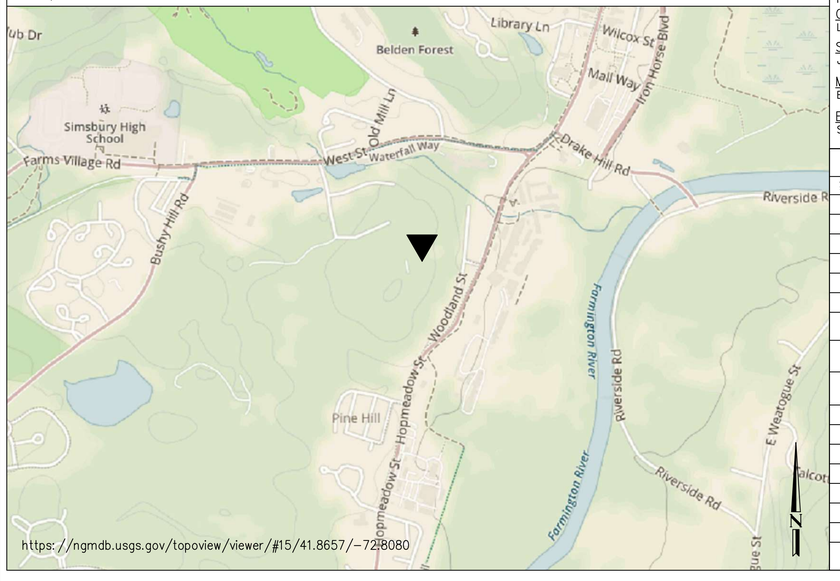
AGENCY	DEPARTMENT	CONTACT INFO
PLANNING	SIMSBURY TOWN PLANNING DEPARTMENT	(860) 658-3245
BUILDING	SIMSBURY TOWN BUILDING DEPARTMENT	(860) 658-3234
FIRE	SIMSBURY FIRE MARSHAL	(860) 658-1973

UTILITY

TYPE	COMPANY	CONTACT INFO
NATURAL GAS	CONNECTICUT NATURAL GAS (CNG)	(860) 456-8745
ELECTRICAL	EVERSOURCE (CT)	(877) 944-5325
WATER	HARTFORD WATER DEPARTMENT	(860) 278-7850

VICINITY MAP (NTS)

▼ PROJECT SITE



CODES

BUILDING	2015 INTERNATIONAL BUILDING CODE
BUILDING	2018 CONNECTICUT STATE BUILDING CODE
ENERGY	2015 INTERNATIONAL ENERGY CONSERVATION CODE
PLUMBING	2015 INTERNATIONAL PLUMBING CODE
FUEL GAS	2015 INTERNATIONAL FUEL GAS CODE
ELECTRICAL	2017 NFPA 70, NATIONAL ELECTRICAL CODE
FIRE	2018 CONNECTICUT STATE FIRE SAFETY CODE
MECHANICAL	2015 INTERNATIONAL MECHANICAL CODE

PROJECT TEAM CONTACTS

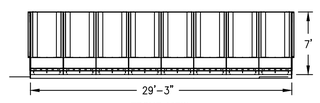
FIRM	ADDRESS	CONTACT INFO
MANUFACTURER		
BLOOM ENERGY	4353 N. FIRST STREET SAN JOSE, CA 95134	(408) 543-1500
CUSTOMER		
DYNO NOBEL INCCT	65 WOODLAND STREET BLDG 200, SIMSBURY, CT 06070	(860) 408-1800
GPD ENGINEERING AND ARCHITECTURE PROFESSIONAL CORP.		
DESIGN LEAD/COORDINATOR		
ROB WILSON	520 SOUTH MAIN STREET SUITE 2531, AKRON, OH 44311	(330) 572-2281
CIVIL		
LEONARDO A. SFERRA, PE	520 SOUTH MAIN STREET SUITE 2531, AKRON, OH 44311	(330) 572-2281
STRUCTURAL		
JOHN N. KABAK, PE	520 SOUTH MAIN STREET SUITE 2531, AKRON, OH 44311	(330) 572-2281
MECHANICAL		
BRANDON M. MARZLEY, PE	520 SOUTH MAIN STREET SUITE 2531, AKRON, OH 44311	(330) 572-2281
ELECTRICAL		
STEVEN P. SCHAUB, PE	520 SOUTH MAIN STREET SUITE 2531, AKRON, OH 44311	(330) 572-2281

DRAWING INDEX

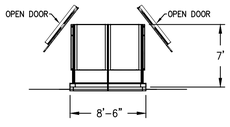
SHT#	DWG#	SHEET TITLE	REV#	DATE
01	G0.1	COVER SHEET	–	12/21/2020
02	G0.2	GENERAL CONSTRUCTION NOTES	–	12/21/2020
03	G1.1	OVERALL SITE PLAN	–	12/21/2020
04	C1.1	DETAILED SITE PLAN	–	12/21/2020
05	C2.1	DETAILS SHEET 1	–	12/21/2020
06	C2.2	DETAILS SHEET 2	–	12/21/2020
07	S0.1	STRUCTURAL GENERAL NOTES AND DETAILS	–	12/21/2020
08	S2.1	EQUIPMENT PAD DETAILS (CAST-IN-PLACE)	–	12/21/2020
09	S2.2	EQUIPMENT PAD DETAILS (CAST-IN-PLACE)	–	12/21/2020
10	E0.1	ELECTRICAL SPECIFICATION	–	12/21/2020
11	E2.1	ELECTRICAL DUCT BANK DETAIL	–	12/21/2020
12	E3.1	ELECTRICAL SINGLE LINE DIAGRAM	–	12/21/2020
13	E3.2	ELECTRICAL THREE LINE DIAGRAM	–	12/21/2020
14	M0.1	MECHANICAL SPECIFICATION	–	12/21/2020
15	M1.1	PLACARD PLAN	–	12/21/2020
16	M1.2	PLUMBING DETAILS	–	12/21/2020
17	R0.1	BLOOM ENERGY PRODUCT DATA SHEETS	–	12/21/2020

PROJECT DESCRIPTION

THIS PROJECT CONSISTS OF THE INSTALLATION OF TWO (2) BLOOM ENERGY ES5 OUTDOOR NATURAL GAS CLEAN ENERGY SERVERS ARE THE CLEAN ENERGY SERVERS ARE SUPPORTED ON A CONCRETE PAD. THE WORK INCLUDES ALL ITEMS LISTED IN THE SCOPE OF WORK.



FRONT VIEW



SIDE VIEW

SCOPE OF WORK

THE SCOPE OF THIS PROJECT WILL CONSIST OF THE FOLLOWING:

1. CIVIL WORK
   - EXISTING LANDSCAPE SHALL BE REMOVAL FOR NEW EQUIPMENT PAD FOR BLOOM ENERGY SERVER.
   - EXISTING SUBGRADE AT LANDSCAPE WILL BE PREPARED FOR THE NEW EQUIPMENT WEIGHT.
   - 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 LANDSCAPE COVER TO BE PROVIDED.
   - NEW ENERGY SERVER CONCRETE PAD AND ANCILLARY CONCRETE PAD TO BE PLACED AT PREPARED SURFACE.
   - NEW BOLLARDS TO BE INSTALLED TO PROTECT BLOOM ENERGY SERVER.
2. ELECTRICAL WORK
   - NEW ELECTRICAL FEEDERS BETWEEN BLOOM ENERGY SERVER AND EXISTING MAIN SERVICE SWITCHBOARD.
   - NEW XFMR, LREC METER WITH CT-PT CABINET, DISCONNECT, STS AND CRITICAL LOAD PANEL TO BE INSTALLED.
3. PLUMBING WORK
   - NEW WATER CONNECTION FROM POTABLE WATER SOURCE IN FACILITY TO BLOOM ENERGY SERVER.
   - NEW NATURAL GAS CONNECTION. NEW METER AND SHUTOFF VALVE REQUIRED.

BLOOM ENERGY FAQ's

Q: WHAT IS A BLOOM ENERGY SERVER?
A: THE BLOOM ENERGY SERVER IS A STATIONARY FUEL CELL POWER SYSTEM.
Q: IS THE BLOOM ENERGY SERVER PRODUCT LISTED OR CERTIFIED?
A: YES. ES-5XXX SERIES:
- THE FUEL CELL IS UL LISTED AS A "STATIONARY FUEL CELL POWER SYSTEM" TO ANSI/CSA AMERICA FC 1-2004.
- IT IS UL LISTED UNDER UL CATEGORY IRGZ AND UL FILE NUMBER MH45102.

ES5 SERIES:
- THE FUEL CELL IS UL LISTED AS A "STATIONARY FUEL CELL POWER SYSTEM" TO ANSI/CSA FC 1-2014.
- IT IS UL LISTED UNDER UL CATEGORY IRGZ AND UL FILE NUMBER MH45102.

Q: WHERE ARE FUEL CELLS COVERED IN THE NATIONAL ELECTRICAL CODE (NEC)?
A: FUEL CELLS ARE COVERED IN ARTICLE 692 OF THE NEC (NFPA 70). FUEL CELLS HAVE BEEN INCORPORATED INTO THE NEC SINCE 2002.
Q: WHAT IS THE MODEL NUMBER OF THIS PRODUCT?
A: PLEASE SEE THE DATA SHEET PROVIDED WITH THIS FAQ.
Q: WHAT IS THE NOISE LEVEL OF THE FUEL CELL SYSTEM?
A: FOR SPECIFIC DB RANGES, PLEASE REFER TO THE DATA SHEET PROVIDED WITH THIS FAQ.
Q: DO BLOOM ENERGY FUEL CELL SYSTEMS PROVIDE LIFE SAFETY POWER?
A: NO. WE ARE NOT LIFE SAFETY AND DO NOT PROVIDE LIFE SAFETY POWER, EVEN WHEN A UPM IS INSTALLED. WE ARE NOT ALTERING WHATEVER LIFE SAFETY IS CURRENTLY PRESENT AT THE FACILITY.
Q: IS THE BLOOM ENERGY FUEL CELL SYSTEM TAMPER-PROOF?
A: YES. THE FUEL CELLS ARE SECURED IN PLACE AND DOORS ARE SECURED AND LOCKED. ONLY BLOOM SERVICE PERSONNEL HAVE THE KEYS AND CAN BE ON-SITE WITHIN 24 HOURS.
Q: WHAT HAPPENS TO THE CUSTOMER FACILITY POWER IF THE FUEL CELLS SHUT DOWN?
A: THE FUEL CELL SYSTEM IS OPERATED IN GRID-PARALLEL MODE. IF THE UTILITY GRID IS OPERATIONAL, THE CUSTOMER FACILITY WILL RECEIVE POWER FROM THE GRID AND NOTICE NO DIFFERENCE.
Q: WHAT HAPPENS TO THE FUEL CELL SYSTEM WHEN THE UTILITY POWER SHUTS DOWN?
A: IF UTILITY PROVIDED POWER IS LOST FOR ANY REASON, THE FUEL CELL SYSTEM WILL ALSO STOP PRODUCING POWER. THE FUEL CELL SYSTEM WILL REMAIN IN STAND-BY MODE UNTIL IT AUTOMATICALLY SENSES THE UTILITY GRID HAS BEEN RESTORED.
Q: WHAT HAPPENS TO THE FUEL CELL SYSTEM WHEN THE UTILITY GAS SHUTS DOWN?
A: IF THE UTILITY GAS IS INTERRUPTED, THE FUEL CELL SYSTEM WILL AUTOMATICALLY SHUT DOWN AS WELL.
Q: CAN THE FUEL CELL SYSTEM BE SHUT DOWN LOCALLY IN CASE OF AN EMERGENCY?
A: YES. IF THE FUEL CELL MUST BE SHUT DOWN RIGHT AWAY--FOR EXAMPLE, IN CASE OF A BUILDING FIRE OR ELECTRICAL HAZARD--TWO SHUTOFF CONTROLS ARE INSTALLED AT THE FACILITY EXTERNAL TO THE SYSTEM. THE LOCATIONS OF THESE TWO CONTROLS SHOULD BE KNOWN TO THE FACILITIES MANAGER BEFORE OPERATION AND SHOULD BE NOTED ON THE SITE DIAGRAM THAT IS CREATED FOR EACH SITE DURING INSTALLATION. THE TWO SHUTOFFS ARE:
(1) THE ELECTRICAL DISCONNECT SWITCH AND
(2) THE MANUAL NATURAL GAS SHUTOFF VALVE. A THIRD SHUTOFF, AN EMERGENCY POWER OFF (EPO) BUTTON, MAY BE PROVIDED ON-SITE.
Q: DOES THE BLOOM ENERGY FUEL CELL SYSTEM OPERATE 24/7?
A: YES.
Q: ARE THE BLOOM ENERGY FUEL CELL SYSTEMS MONITORED?
A: YES. BLOOM ENERGY FUEL CELL SYSTEMS ARE CONTROLLED REMOTELY AND HAVE INTERNAL SENSORS THAT CONTINUOUSLY MONITOR SYSTEM OPERATION. IF SAFETY CIRCUITS DETECT A CONDITION OUTSIDE NORMAL OPERATING PARAMETERS, THE FUEL SUPPLY IS STOPPED AND INDIVIDUAL SYSTEM COMPONENTS ARE AUTOMATICALLY SHUT DOWN. A BLOOM ENERGY REMOTE OPERATOR CAN ALSO REMOTELY INITIATE ANY EMERGENCY SEQUENCE. AN EMERGENCY STOP ALARM INITIATES AN AUTOMATIC SHUTDOWN SEQUENCE THAT PUTS THE SYSTEM INTO "SAFE MODE" AND CAUSES IT TO STOP EXPORTING POWER. IF YOU HAVE QUESTIONS ABOUT ANY OF THESE SAFETY FEATURES, PLEASE CONTACT BLOOM ENERGY AT CUSTOMERCARE@BLOOMENERGY.COM.
Q: WHAT ARE THE EMISSIONS GENERATED BY BLOOM ENERGY FUEL CELL SYSTEMS?
A: THE SPECIFIC PERCENTAGE OF CARBON EMISSION REDUCTIONS ARE DEPENDENT ON YOUR STATE'S GENERATION MIX, BUT BLOOM ENERGY FUEL CELL SYSTEMS VIRTUALLY ELIMINATE NOX, SOX, AND OTHER CRITICAL AIR POLLUTANTS THAT ARE FOUND IN TRADITIONAL ELECTRICITY GENERATION METHODS. FOR SPECIFIC EMISSIONS RANGES, PLEASE REFER TO THE DATA SHEET PROVIDED WITH THIS FAQ.
Q: WHAT IS THE SUSTAINABILITY IMPACT OF BLOOM ENERGY FUEL CELL SYSTEMS?
A: BLOOM ENERGY FUEL CELL SYSTEMS GENERATE ELECTRICITY ON-SITE THROUGH AN EFFICIENT ELECTROCHEMICAL REACTION WITHOUT COMBUSTION. DUE TO THE HIGH EFFICIENCY (60%-53% COMPARED TO A COMBINED CYCLE NATURAL GAS PLANT WITH EFFICIENCY OF 40-45% OR COAL PLANTS AT 35%) BLOOM ENERGY SERVERS REDUCE CARBON EMISSIONS BY 20-50% COMPARED TO THE US GRID EMISSION RATES. THE VARIATION IN EMISSIONS REDUCTION IS DUE TO THE VARIATION IN HOW DIFFERENT STATES GENERATE ELECTRICITY. IN ADDITION, BLOOM ENERGY FUEL CELL SYSTEMS USE NO WATER DURING NORMAL OPERATION

CUSTOMER SITE

DYNO NOBEL INC.
65 WOODLAND STREET
BLDG 200, SIMSBURY,
CT 06070

DYNO®
Dyno Nobel

REVISION HISTORY

REV	REVISION ISSUE	DATE
–	INITIAL RELEASE	12/21/2020

DESIGNED BY BRIAN CURTIS	REVIEWED BY ROBERT PROVOST
DRAWN BY THARA SRINIVASACHARI	APPROVED BY LEONARDO A. SFERRA

SHEET TITLE

COVER SHEET

DRAWING NUMBER

G0.1

BLOOM DOCUMENT

DOC-1012744

THIS DRAWING IS 24" X 36" AT FULL SIZE

SITE ID: DYN000.0 | SHEET 01 OF 17

OVERALL SITE PLAN

SCALE: NTS

1 / G1.1

OVERALL SITE PLAN

SCALE: 1" = 30'

2 / G1.1

Bloomenergy®

4353 N. FIRST STREET
SAN JOSE, CA 95134

GPD Engineering and Architecture
Professional Corporation

520 SOUTH MAIN STREET
AKRON, OH 44311
t: (330) 572-2100, FAX (330) 572-2102

ENGINEER OF RECORD
LEONARDO A SFERRA, P.E.
LICENSE #31512

STATE OF CONNECTICUT
LEONARDO A. SFERRA
31512
LICENSED
PROFESSIONAL ENGINEER

01/25/21

CUSTOMER SITE

DYNO NOBEL INC.
65 WOODLAND STREET
BLDG 200, SIMSBURY,
CT 06070

DYNO®
Dyno Nobel

REVISION HISTORY		
REV	REVISION ISSUE	DATE
–	INITIAL RELEASE	12/21/2020

DESIGNED BY BRIAN CURTIS	REVIEWED BY ROBERT PROVOST
DRAWN BY THARA SRINIVASACHARI	APPROVED BY LEONARDO A. SFERRA

SHEET TITLE

OVERALL
SITE PLAN

DRAWING NUMBER

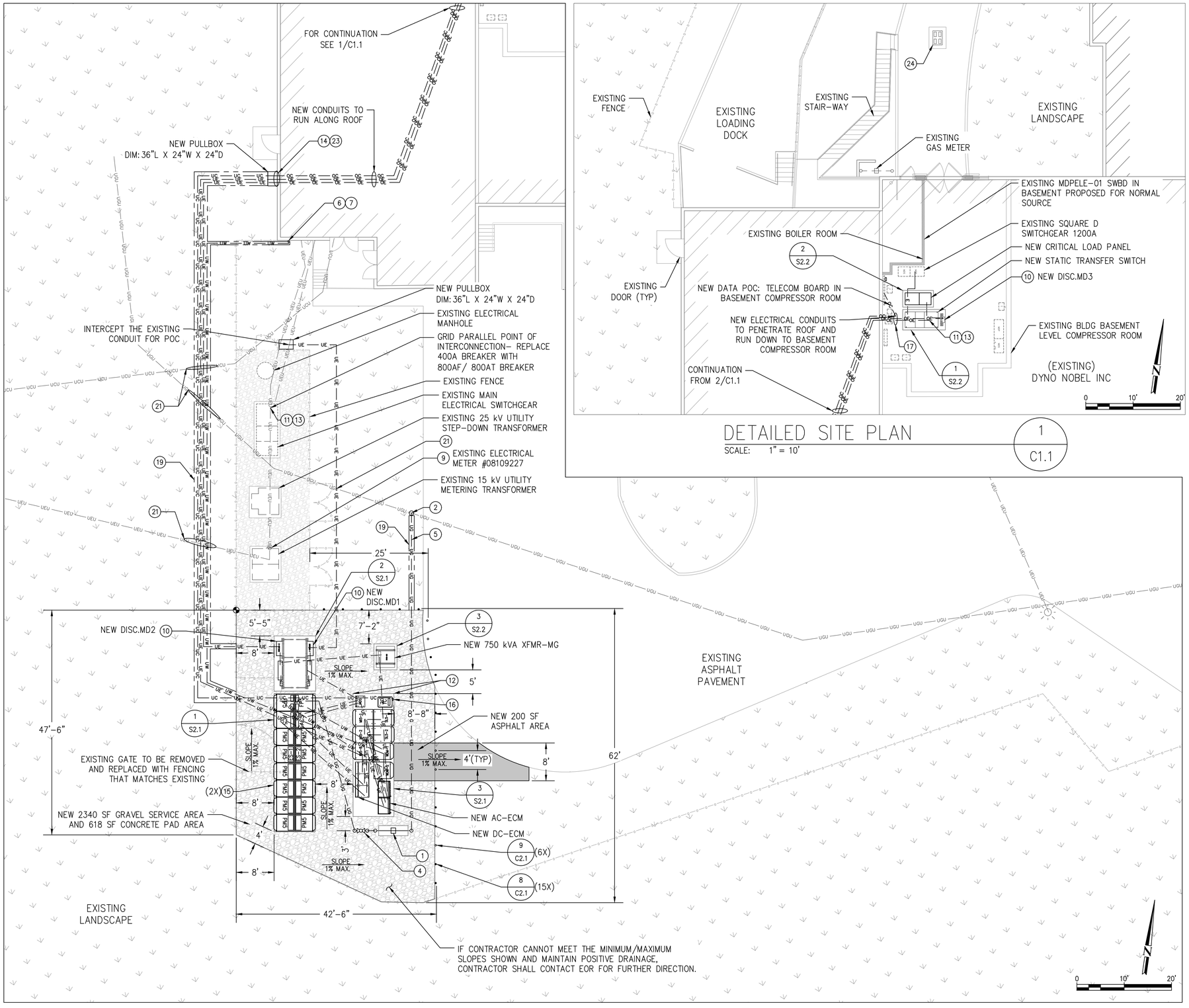
G1.1

BLOOM DOCUMENT

DOC-1012744

THIS DRAWING IS 24" X 36" AT FULL SIZE

SITE ID: DYN000.0 | SHEET 03 OF 17



DETAILED SITE PLAN

SCALE: 1" = 10'

1 / C1.1

DETAILED SITE PLAN

SCALE: 1" = 10'

2 / C1.1

GENERAL NOTES

1. CLEAN AND PRIME ALL NEW 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. SLOPE LINES SHOWN ARE APPROXIMATE AND INTENDED TO SHOW THE GENERAL DIRECTION OF WATER RUN OFF; SLOPE LINES ARE DRAWN PER VISUAL SURVEY OF SURROUNDING AREA.
4. SEE BLOOM ENERGY PRODUCT INSTALLATION DRAWINGS FOR UTILITY CONNECTIONS TO ANCILLARY EQUIPMENT AND ENERGY SERVER.
5. 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.

REFERENCE SHEET NOTES

1. NEW UTILITY PROVIDED AND INSTALLED GAS METER ASSEMBLY. CONTRACTOR SHALL PROVIDE PAD PER DETAILS IF REQUIRED BY UTILITY COMPANY. COORDINATE ALL CONNECTIONS WITH GAS UTILITY.
2. NEW UNDERGROUND GAS SERVICE TAP BY UTILITY COMPANY. CONTRACTOR SHALL COORDINATE WITH GAS UTILITY PRIOR TO CONSTRUCTION. CONTRACTOR SHALL PERFORM COMPACTION AND MATCH EXISTING SURFACE AND GRADE. REFER TO GAS RISER DETAIL FOR ADDITIONAL REQUIREMENT.
4. NEW PRIVATE GAS SHUT OFF VALVE ASSEMBLY FOR BLOOM ENERGY SERVER. REFER TO GAS RISER DETAIL FOR ADDITIONAL REQUIREMENTS.
5. NEW GAS PIPE SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. 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 DOMESTIC WATER CONNECTION DETAIL FOR ADDITIONAL REQUIREMENTS.
7. NEW WATER PIPE SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. REFER TO WATER RISER DETAIL FOR ADDITIONAL REQUIREMENTS.
9. EXISTING UTILITY ELECTRIC METER. REFER TO ELECTRICAL SINGLE LINE DIAGRAM FOR ADDITIONAL REQUIREMENTS.
10. NEW BLOOM ENERGY FURNISHED, CONTRACTOR INSTALLED, DISCONNECT SWITCH. STRUCT MOUNT 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 PROVIDE TWO GROUNDING RODS TO BE PLACED 6' APART MINIMUM. REFER TO ELECTRICAL SINGLE LINE DIAGRAM FOR ADDITIONAL REQUIREMENTS.
13. NEW ELECTRICAL FEEDER SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. REFER TO ELECTRICAL SINGLE LINE DIAGRAM FOR ADDITIONAL REQUIREMENTS.
14. MOUNT NEW CONDUIT/PIPE TO EXTERIOR WALL. COORDINATE EXACT ROUTING WITH CUSTOMER REPRESENTATIVE IN THE FIELD. REFER TO WALL MOUNTING DETAIL FOR ADDITIONAL REQUIREMENTS.
15. NEW 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 ROOF. SCAN ROOF PRIOR TO CORING TO AVOID COLLATERAL DAMAGE TO EXISTING PLUMBING AND WIRING. REFER TO ROOF PENETRATION DETAIL FOR ADDITIONAL REQUIREMENTS.
19. CONTRACTOR SHALL PROVIDE 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.
21. PROTECT EXISTING UNDERGROUND UTILITY LINES FROM DAMAGE WHEN CROSSING WITH NEW UNDERGROUND UTILITIES. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR OR REPLACEMENT OF ANY DAMAGED LINES.
23. CONTRACTOR SHALL TRANSITION ALL ABOVEGROUND NEW LINES TO UNDERGROUND TOWARD ANCILLARY EQUIPMENT. ABOVE GROUND UTILITIES SHALL BE PROTECTED AS NECESSARY, THEN ROUTED UNDERGROUND TO EQUIPMENT STUB–UP LOCATIONS PER MECHANICAL DETAIL.
24. PROVIDE "DANDY SACK" OR EQUAL WITH OUTFLOW PORTS AT STORM DRAIN INLET. REFER TO EROSION CONTROL DETAIL FOR ADDITIONAL 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 UTILITY LINES FROM DAMAGE WHEN CROSSING WITH NEW UNDERGROUND UTILITIES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR OR REPLACEMENT OF ANY DAMAGED 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.

Bloomenergy

4353 N. FIRST STREET
SAN JOSE, CA 95134

GPD Engineering and Architecture Professional Corporation

520 SOUTH MAIN STREET
AKRON, OH 44311
t: (330) 572-2100, FAX (330) 572-2102

ENGINEER OF RECORD
LEONARDO A SFERRA, P.E.
LICENSE #31512

STATE OF CONNECTICUT · LEONARDO A. SFERRA · 31512 · LICENSED PROFESSIONAL ENGINEER

01/25/21

CUSTOMER SITE

DYNO NOBEL INC.
65 WOODLAND STREET
BLDG 200, SIMSBURY,
CT 06070

DYNO® Dyno Nobel

REVISION HISTORY

REV	REVISION ISSUE	DATE
–	INITIAL RELEASE	12/21/2020

DESIGNED BY: BRIAN CURTIS	REVIEWED BY: ROBERT PROVOST
DRAWN BY: THARA SRINIVASACHARI	APPROVED BY: LEONARDO A. SFERRA

SHEET TITLE

DETAILED SITE PLAN

DRAWING NUMBER

C1.1

BLOOM DOCUMENT

DOC–1012744

THIS DRAWING IS 24" X 36" AT FULL SIZE

SITE ID: DYN000.0 | SHEET 04 OF 17

Attachment 1b: Revised Site Plans Site 1

4353 North First Street San Jose CA 95134 T 408 543 1500 F 408 543 1501 www.bloomenergy.com

DYNO
Dyno Nobel

660 HOPMEADOW ST
SIMSBURY,CONNECTICUT 06070

Bloomenergy®

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.

Bloomenergy®
4353 N. FIRST STREET
SAN JOSE, CA 95134

GPD Engineering and Architecture Professional Corporation

520 SOUTH MAIN STREET
AKRON, OH 44311
t: (330) 572-2100, FAX (330) 572-2102

ENGINEER OF RECORD
LEONARDO A SFERRA, P.E.
LICENSE #31512

STATE OF CONNECTICUT · LEONARDO A. SFERRA · 31512 · LICENSED PROFESSIONAL ENGINEER

02/09/21

GPD PROJECT #2020345.12

CUSTOMER SITE
DYNO NOBEL INC.
660 HOPMEADOW STREET
SIMSBURY, CT 06070

DYNO
Dyno Nobel

SITE INFORMATION

PARCEL INFORMATION

PROPERTY OWNER	DYNO NOBEL INC,
COUNTY	HARTFORD COUNTY
TAX MAP #	G11-144-005

PROPERTY DESCRIPTION

PROPERTY TYPE	COMMERCIAL
PROPERTY AREA	4,748,040 S.F
DISTURBED AREA	2,430 S.F

PERMITTING INFORMATION

MUNICIPAL

AGENCY	DEPARTMENT	CONTACT INFO
PLANNING	THE PLANNING AND LAND USE DEPARTMENT	(860) 658-3245
BUILDING	THE BUILDING DEPARTMENT	(860) 658-3234
FIRE	THE FIRE DEPARTMENT	(860) 658-3243

UTILITY

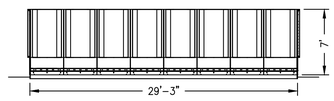
TYPE	COMPANY	CONTACT INFO
NATURAL GAS	CONNECTICUT NATURAL GAS	(860) 524-8361
ELECTRICAL	EVERSOURCE (CT)	(888) 955-8824
WATER	THE WATER DEPARTMENT	(860) 658-3258

CODES

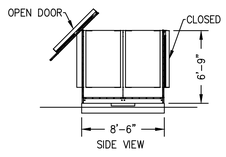
BUILDING	2015 INTERNATIONAL BUILDING CODE
BUILDING	2018 CONNECTICUT STATE BUILDING CODE
ENERGY	2015 INTERNATIONL ENERGY CONVERSATION CODE
PLUMBING	2015 INTERNATIONAL PLUMBING CODE
FUEL GAS	2015 INTERNATIONAL FUEL GAS CODE
ELECTRICAL	2017 NATIONAL ELECTRICAL CODE
FIRE	2018 CONNECTICUT STATE FIRE SAFETY CODE
MECHANICAL	2015 INTERNATIONAL MECHANICAL CODE

PROJECT DESCRIPTION

THIS PROJECT CONSISTS OF THE INSTALLATION OF TWO (2) BLOOM ENERGY ES5 OUTDOOR NATURAL GAS CLEAN ENERGY SERVER. THE CLEAN ENERGY SERVERS ARE SUPPORTED ON A CONCRETE PAD. THE WORK INCLUDES ALL ITEMS LISTED IN THE SCOPE OF WORK.



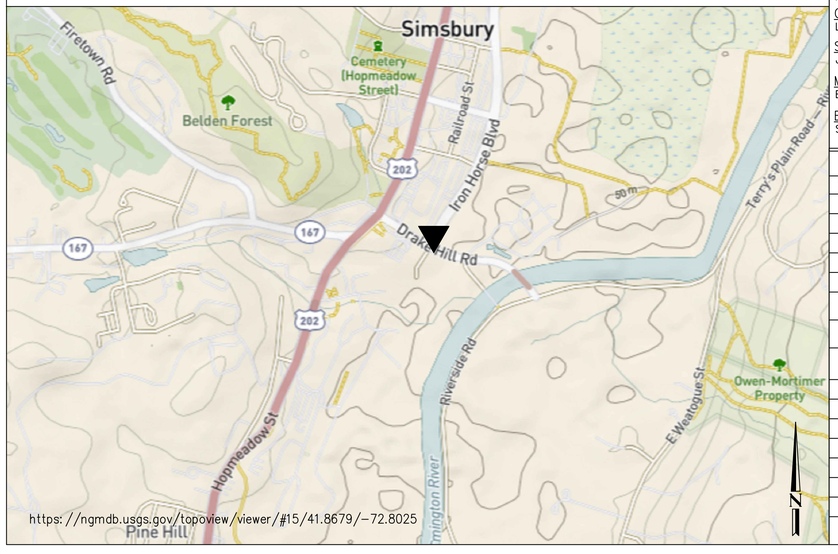
FRONT VIEW



SIDE VIEW

VICINITY MAP (NTS)

▼ PROJECT SITE



https://ngmdb.usgs.gov/topoview/viewer/#15/41.8679/-72.8025

PROJECT TEAM CONTACTS

FIRM	ADDRESS	CONTACT INFO
MANUFACTURER		
BLOOM ENERGY	4353 N. FIRST STREET SAN JOSE, CA 95134	(408) 543-1500
CUSTOMER		
DYNO NOBEL INC,	660 HOPMEADOW ST SIMSBURY,CT-06070	(860) 408-1800
GPD ENGINEERING AND ARCHITECTURE PROFESSIONAL CORP.		
DESIGN LEAD/COORDINATOR		
ROBERT WILSON	520 SOUTH MAIN STREET SUITE 2531, AKRON, OH 44311	(330) 572-2281
CIVIL		
LEONARDO A. SFERRA, PE	520 SOUTH MAIN STREET SUITE 2531, AKRON, OH 44311	(330) 572-2281
STRUCTURAL		
JOHN N. KABAK, PE	520 SOUTH MAIN STREET SUITE 2531, AKRON, OH 44311	(330) 572-2281
MECHANICAL		
BRANDON M. MARZLEY, PE	520 SOUTH MAIN STREET SUITE 2531, AKRON, OH 44311	(330) 572-2281
ELECTRICAL		
STEVEN P. SCHAUB, PE	520 SOUTH MAIN STREET SUITE 2531, AKRON, OH 44311	(330) 572-2281

DRAWING INDEX

SHT#	DWG#	SHEET TITLE	REV#	DATE
01	G0.1	COVER SHEET	–	3/2/2021
02	G0.2	GENERAL CONSTRUCTION NOTES	–	3/2/2021
03	G1.1	OVERALL SITE PLAN	–	3/2/2021
04	C1.1	DETAILED SITE PLAN	–	3/2/2021
05	C2.1	DETAILS SHEET 1	–	3/2/2021
06	C2.2	SOIL EROSION AND SEDIMENT CONTROL DETAILS	–	3/2/2021
07	S0.1	STRUCTURAL GENERAL NOTES AND DETAILS	–	3/2/2021
08	S2.1	EQUIPMENT PAD DETAILS (CAST-IN-PLACE)	–	3/2/2021
09	E0.1	ELECTRICAL SPECIFICATIONS	–	3/2/2021
10	E2.1	ELECTRICAL DUCT BANK DETAILS	–	3/2/2021
11	E3.1	ELECTRICAL SINGLE LINE DIAGRAM	–	3/2/2021
12	E3.2	ELECTRICAL THREE LINE DIAGRAM	–	3/2/2021
13	M0.1	MECHANICAL SPECIFICATIONS		3/2/2021
14	M1.1	PLACARD PLAN	–	3/2/2021
15	M1.2	PLUMBING DETAIL	–	3/2/2021
16	R0.1	BLOOM ENERGY PRODUCT DATA SHEETS	–	3/2/2021

SCOPE OF WORK

THE SCOPE OF THIS PROJECT WILL CONSIST OF THE FOLLOWING:

1. CIVIL WORK
   - EXISTING LANDSCAPE SHALL BE REMOVED FOR NEW EQUIPMENT PAD FOR BLOOM ENERGY SERVER.
   - EXISTING SUBGRADE AT LANDSCAPE REMOVAL WILL BE PREPARED FOR THE NEW EQUIPMENT WEIGHT.
   - 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 LANDSCAPE COVER TO BE PROVIDED.
   - NEW BLOOM ENERGY SERVERS CONCRETE PAD AND ANCILLARY CONCRETE PAD TO BE PLACED AT PREPARED SURFACE AT LANDSCAPE REMOVAL.
   - 6' EVERGREEN TREES TO BE PLANTED FOR SCREENING.
2. ELECTRICAL WORK
   - NEW ELECTRICAL FEEDERS BETWEEN BLOOM ENERGY SERVER AND EXISTING UTILITY POLE.
   - NEW XFMR, LREC METER WITH CT-PT CABINET, DISCONNECT TO BE INSTALLED.
3. PLUMBING WORK
   - NEW WATER CONNECTION FROM POTABLE WATER SOURCE FROM STREET TO BLOOM ENERGY SERVER.
   - NEW NATURAL GAS CONNECTION. NEW METER AND SHUTOFF VALVE REQUIRED.

BLOOM ENERGY FAQ's

Q: WHAT IS A BLOOM ENERGY SERVER?
A: THE BLOOM ENERGY SERVER IS A STATIONARY FUEL CELL POWER SYSTEM.
Q: IS THE BLOOM ENERGY SERVER PRODUCT LISTED OR CERTIFIED?
A: YES. ES-5XXX SERIES:
- THE FUEL CELL IS UL LISTED AS A "STATIONARY FUEL CELL POWER SYSTEM" TO ANSI/CSA AMERICA FC 1-2004.
- IT IS UL LISTED UNDER UL CATEGORY IRGZ AND UL FILE NUMBER MH45102.

ES5 SERIES:
- THE FUEL CELL IS UL LISTED AS A "STATIONARY FUEL CELL POWER SYSTEM" TO ANSI/CSA FC 1-2014.
- IT IS UL LISTED UNDER UL CATEGORY IRGZ AND UL FILE NUMBER MH45102.

Q: WHERE ARE FUEL CELLS COVERED IN THE NATIONAL ELECTRICAL CODE (NEC)?
A: FUEL CELLS ARE COVERED IN ARTICLE 692 OF THE NEC (NFPA 70). FUEL CELLS HAVE BEEN INCORPORATED INTO THE NEC SINCE 2002.
Q: WHAT IS THE MODEL NUMBER OF THIS PRODUCT?
A: PLEASE SEE THE DATA SHEET PROVIDED WITH THIS FAQ.
Q: WHAT IS THE NOISE LEVEL OF THE FUEL CELL SYSTEM?
A: FOR SPECIFIC DB RANGES, PLEASE REFER TO THE DATA SHEET PROVIDED WITH THIS FAQ.
Q: DO BLOOM ENERGY FUEL CELL SYSTEMS PROVIDE LIFE SAFETY POWER?
A: NO. WE ARE NOT LIFE SAFETY AND DO NOT PROVIDE LIFE SAFETY POWER, EVEN WHEN A UPM IS INSTALLED. WE ARE NOT ALTERING WHATEVER LIFE SAFETY IS CURRENTLY PRESENT AT THE FACILITY.
Q: IS THE BLOOM ENERGY FUEL CELL SYSTEM TAMPER-PROOF?
A: YES. THE FUEL CELLS ARE SECURED IN PLACE AND DOORS ARE SECURED AND LOCKED. ONLY BLOOM SERVICE PERSONNEL HAVE THE KEYS AND CAN BE ON-SITE WITHIN 24 HOURS.
Q: WHAT HAPPENS TO THE CUSTOMER FACILITY POWER IF THE FUEL CELLS SHUT DOWN?
A: THE FUEL CELL SYSTEM IS OPERATED IN GRID-PARALLEL MODE. IF THE UTILITY GRID IS OPERATIONAL, THE CUSTOMER FACILITY WILL RECEIVE POWER FROM THE GRID AND NOTICE NO DIFFERENCE.
Q: WHAT HAPPENS TO THE FUEL CELL SYSTEM WHEN THE UTILITY POWER SHUTS DOWN?
A: IF UTILITY PROVIDED POWER IS LOST FOR ANY REASON, THE FUEL CELL SYSTEM WILL ALSO STOP PRODUCING POWER. THE FUEL CELL SYSTEM WILL REMAIN IN STAND-BY MODE UNTIL IT AUTOMATICALLY SENSES THE UTILITY GRID HAS BEEN RESTORED.
Q: WHAT HAPPENS TO THE FUEL CELL SYSTEM WHEN THE UTILITY GAS SHUTS DOWN?
A: IF THE UTILITY GAS IS INTERRUPTED, THE FUEL CELL SYSTEM WILL AUTOMATICALLY SHUT DOWN AS WELL.
Q: CAN THE FUEL CELL SYSTEM BE SHUT DOWN LOCALLY IN CASE OF AN EMERGENCY?
A: YES. IF THE FUEL CELL MUST BE SHUT DOWN RIGHT AWAY--FOR EXAMPLE, IN CASE OF A BUILDING FIRE OR ELECTRICAL HAZARD--TWO SHUTOFF CONTROLS ARE INSTALLED AT THE FACILITY EXTERNAL TO THE SYSTEM. THE LOCATIONS OF THESE TWO CONTROLS SHOULD BE KNOWN TO THE FACILITIES MANAGER BEFORE OPERATION AND SHOULD BE NOTED ON THE SITE DIAGRAM THAT IS CREATED FOR EACH SITE DURING INSTALLATION. THE TWO SHUTOFFS ARE:
(1) THE ELECTRICAL DISCONNECT SWITCH AND
(2) THE MANUAL NATURAL GAS SHUTOFF VALVE. A THIRD SHUTOFF, AN EMERGENCY POWER OFF (EPO) BUTTON, MAY BE PROVIDED ON-SITE.
Q: DOES THE BLOOM ENERGY FUEL CELL SYSTEM OPERATE 24/7?
A: YES.
Q: ARE THE BLOOM ENERGY FUEL CELL SYSTEMS MONITORED?
A: YES. BLOOM ENERGY FUEL CELL SYSTEMS ARE CONTROLLED REMOTELY AND HAVE INTERNAL SENSORS THAT CONTINUOUSLY MONITOR SYSTEM OPERATION. IF SAFETY CIRCUITS DETECT A CONDITION OUTSIDE NORMAL OPERATING PARAMETERS, THE FUEL SUPPLY IS STOPPED AND INDIVIDUAL SYSTEM COMPONENTS ARE AUTOMATICALLY SHUT DOWN. A BLOOM ENERGY REMOTE OPERATOR CAN ALSO REMOTELY INITIATE ANY EMERGENCY SEQUENCE. AN EMERGENCY STOP ALARM INITIATES AN AUTOMATIC SHUTDOWN SEQUENCE THAT PUTS THE SYSTEM INTO "SAFE MODE" AND CAUSES IT TO STOP EXPORTING POWER. IF YOU HAVE QUESTIONS ABOUT ANY OF THESE SAFETY FEATURES, PLEASE CONTACT BLOOM ENERGY AT CUSTOMERCARE@BLOOMENERGY.COM.
Q: WHAT ARE THE EMISSIONS GENERATED BY BLOOM ENERGY FUEL CELL SYSTEMS?
A: THE SPECIFIC PERCENTAGE OF CARBON EMISSION REDUCTIONS ARE DEPENDENT ON YOUR STATE'S GENERATION MIX, BUT BLOOM ENERGY FUEL CELL SYSTEMS VIRTUALLY ELIMINATE NOX, SOX, AND OTHER CRITICAL AIR POLLUTANTS THAT ARE FOUND IN TRADITIONAL ELECTRICITY GENERATION METHODS. FOR SPECIFIC EMISSIONS RANGES, PLEASE REFER TO THE DATA SHEET PROVIDED WITH THIS FAQ.
Q: WHAT IS THE SUSTAINABILITY IMPACT OF BLOOM ENERGY FUEL CELL SYSTEMS?
A: BLOOM ENERGY FUEL CELL SYSTEMS GENERATE ELECTRICITY ON-SITE THROUGH AN EFFICIENT ELECTROCHEMICAL REACTION WITHOUT COMBUSTION. DUE TO THE HIGH EFFICIENCY (60%-53% COMPARED TO A COMBINED CYCLE NATURAL GAS PLANT WITH EFFICIENCY OF 40-45% OR COAL PLANTS AT 35%) BLOOM ENERGY SERVERS REDUCE CARBON EMISSIONS BY 20-50% COMPARED TO THE US GRID EMISSION RATES. THE VARIATION IN EMISSIONS REDUCTION IS DUE TO THE VARIATION IN HOW DIFFERENT STATES GENERATE ELECTRICITY. IN ADDITION, BLOOM ENERGY FUEL CELL SYSTEMS USE NO WATER DURING NORMAL OPERATION

REVISION HISTORY

REV	REVISION ISSUE	DATE
–	INITIAL RELEASE	03/02/2021

DESIGNED BY BRIAN CURTIS	REVIEWED BY ROBERT PROVOST
DRAWN BY JAGANNATH BHEEMANNA	APPROVED BY LEONARDO A. SFERRA

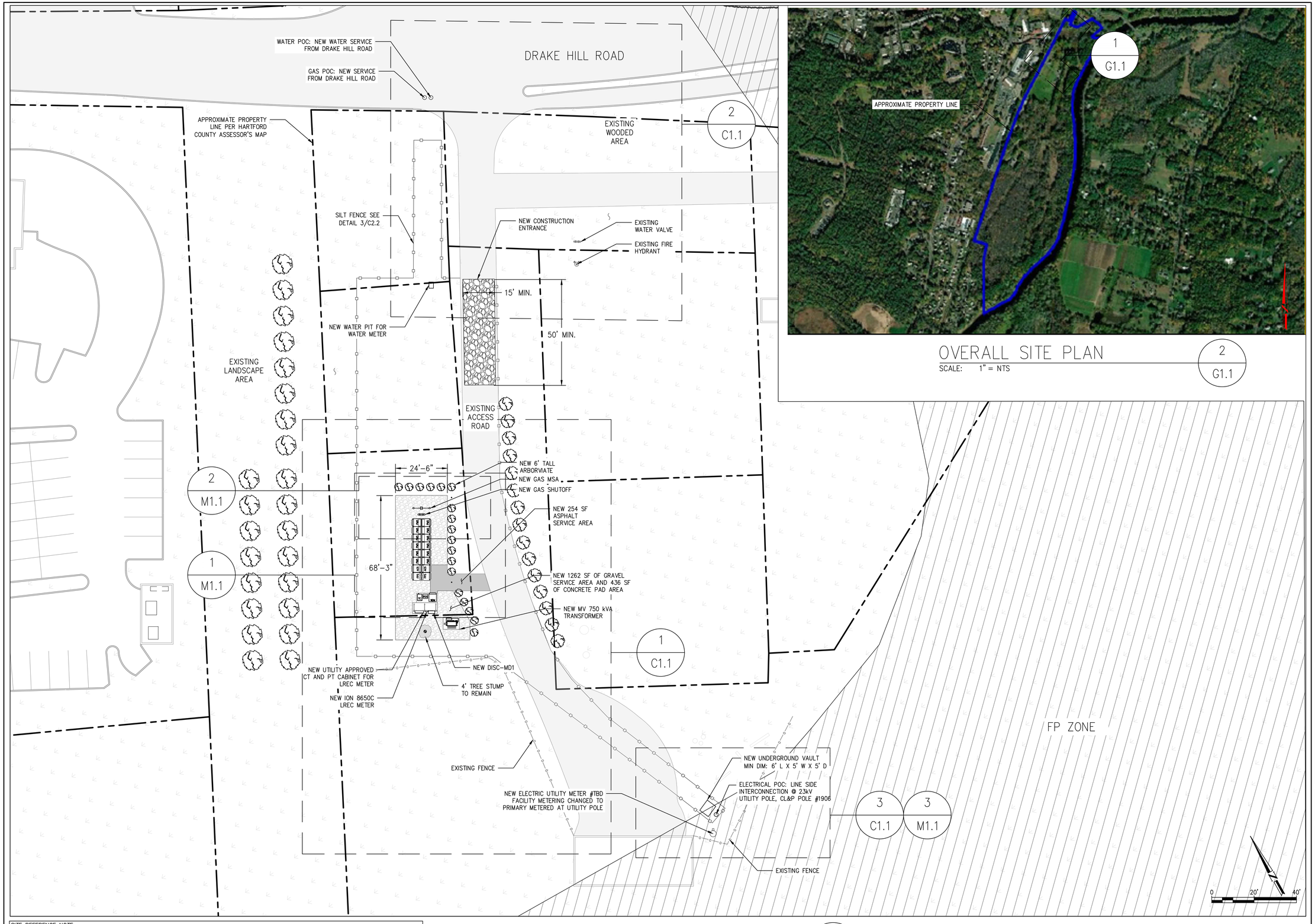
SHEET TITLE
COVER SHEET

DRAWING NUMBER
G0.1

BLOOM DOCUMENT
DOC-1012745

THIS DRAWING IS 24" X 36" AT FULL SIZE

SITE ID: DYN001.0 | SHEET 01 OF 16



OVERALL SITE PLAN
SCALE: 1" = NTS
2 G1.1

OVERALL SITE PLAN
SCALE: 1" = 20'
1 G1.1

SITE REFERENCE NOTE:

EXISTING SITE CONDITIONS TAKEN FROM BING MAPS. CONTRACTOR SHALL FIELD VERIFY ALL ELEVATIONS, UTILITIES, ETC, TO ENSURE THE INTENDED DESIGN IS ACHIEVEABLE, AND NOTIFY THE OWNER IF ANY CONFLICTS OR DISCREPANCIES ARISE. THE CONTRCTOR SHALL CONFIRM IN WRITING WITH THE CONSTRUCTION MANAGER AT TIME OF CONSTRUCTION THAT THEY HAVE THE MOST CURRENT VERSION OF CONSTRUCTION DOCUMENTS AND SURVEY RELATED INFORMATION NECESSARY TO CONSTRUCT THE PROJECT.

ZONING LEGEND
FP FLOOD PLAIN OVERLAY

Bloomenergy

4353 N. FIRST STREET
SAN JOSE, CA 95134

GPD Engineering and Architecture Professional Corporation
520 SOUTH MAIN STREET
AKRON, OH 44311
t: (330) 572-2100, FAX (330) 572-2102

ENGINEER OF RECORD
LEONARDO A SFERRA, P.E.
LICENSE #31512

02/09/21

GPD PROJECT #2020345.12

CUSTOMER SITE
DYNO NOBEL INC.
660 HOPMEADOW STREET
SIMSBURY, CT 06070

DYNO Dyno Nobel

REVISION HISTORY		
REV	REVISION ISSUE	DATE
–	INITIAL RELEASE	03/02/2021

DESIGNED BY BRIAN CURTIS	REVIEWED BY ROBERT PROVOST
DRAWN BY JAGANNATH BHEEMANNA	APPROVED BY LEONARDO A. SFERRA

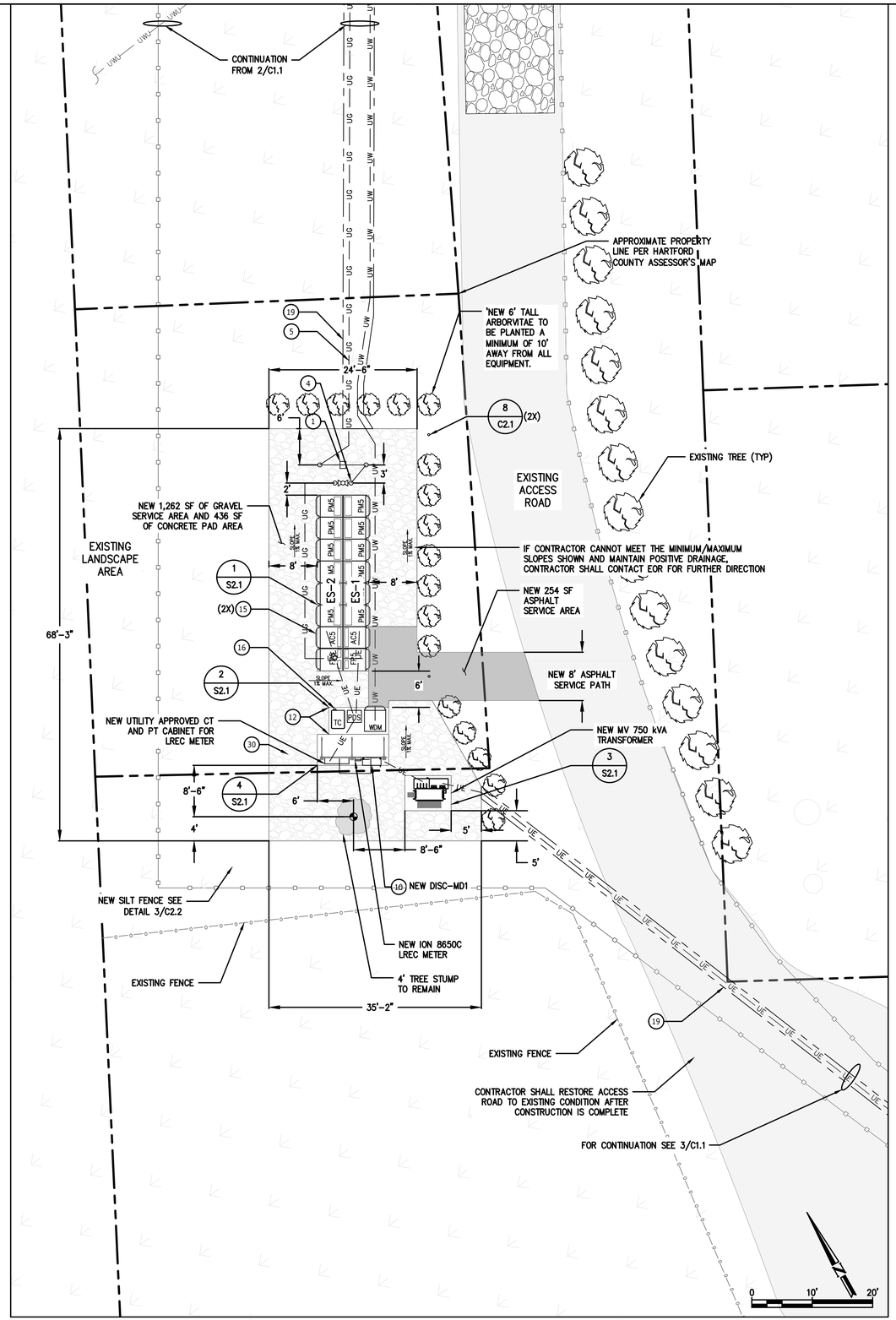
SHEET TITLE
OVERALL SITE PLAN

DRAWING NUMBER
G1.1

BLOOM DOCUMENT
DOC-1012745

THIS DRAWING IS 24" X 36" AT FULL SIZE

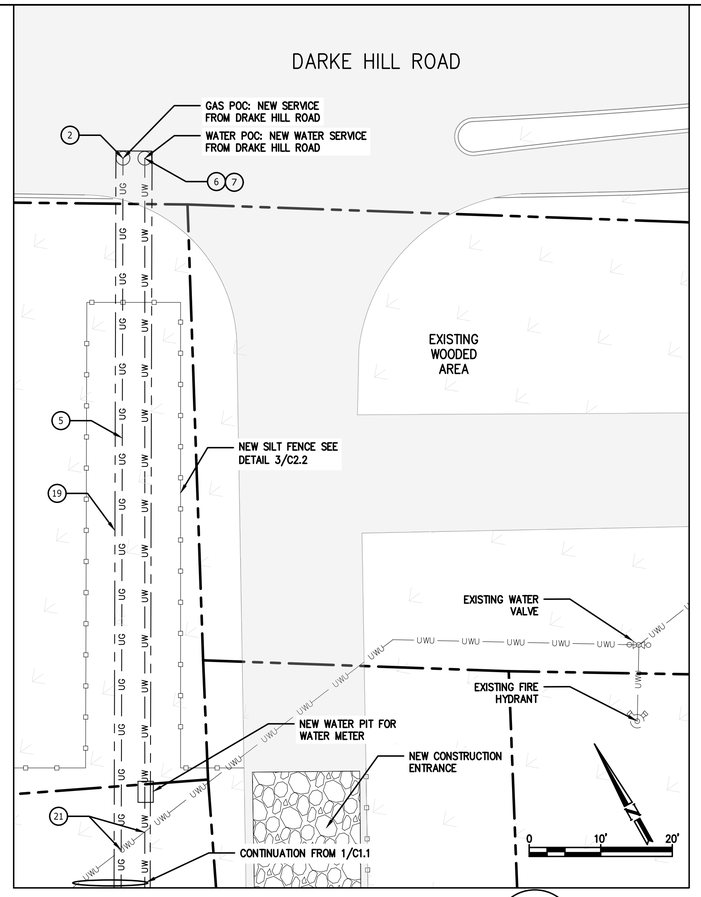
SITE ID: DYN001.0 | SHEET 03 OF 16



DETAILED SITE PLAN

SCALE: 1" = 10'

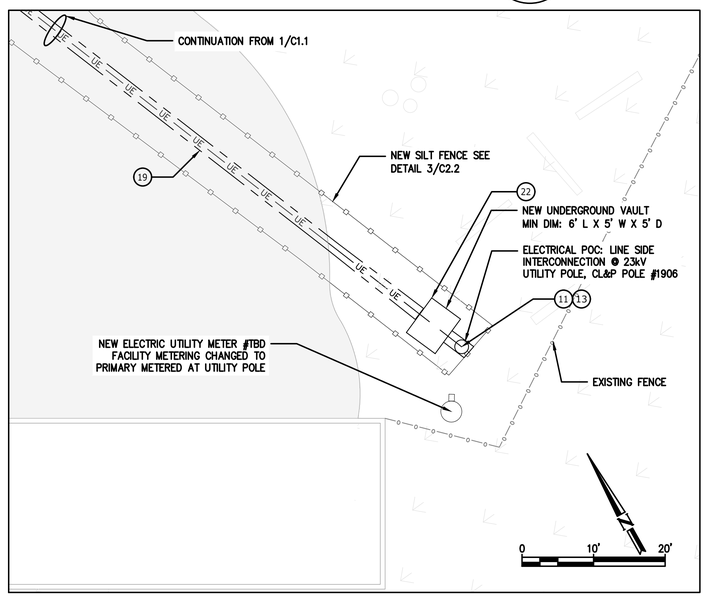
1 C1.1



DETAILED SITE PLAN

SCALE: 1" = 10'

2 C1.1



DETAILED SITE PLAN

SCALE: 1" = 10'

3 C1.1

GENERAL NOTES

1. CLEAN AND PRIME ALL NEW WIRE 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. SLOPE LINES SHOWN ARE APPROXIMATE AND INTENDED TO SHOW THE GENERAL DIRECTION OF WATER RUN OFF; SLOPE LINES ARE DRAWN PER VISUAL SURVEY OF SURROUNDING AREA.
4. SEE BLOOM ENERGY PRODUCT INSTALLATION DRAWINGS FOR UTILITY CONNECTIONS TO ANCILLARY EQUIPMENT AND ENERGY SERVER.

REFERENCE SHEET NOTES

(1) NEW UTILITY PROVIDED AND INSTALLED GAS METER ASSEMBLY WITH SHUT-OFF VALVE. CONTRACTOR SHALL PROVIDE PAD PER DETAILS IF REQUIRED BY UTILITY COMPANY. COORDINATE ALL CONNECTIONS WITH GAS UTILITY.

(2) NEW UNDERGROUND GAS SERVICE TAP BY UTILITY COMPANY. COORDINATE WITH GAS UTILITY. UTILITY SHALL PERFORM COMPACTION AND MATCH EXISTING SURFACE AND GRADE. CONTRACTOR SHALL COORDINATE GAS PIPE SIZING AND INSTALLATION REQUIREMENTS WITH UTILITY PRIOR TO CONSTRUCTION.

(4) NEW PRIVATE SHUTOFF VALVE FOR ENERGY SERVER. REFER TO GAS RISER DETAIL FOR ADDITIONAL REQUIREMENTS.

(5) NEW GAS PIPE SHALL BE FURNISHED AND INSTALLED BY THE UTILITY. REFER TO GAS RISER DETAIL FOR ADDITIONAL REQUIREMENTS.

(6) TAP EXISTING WATER LINE AT NEAREST ACCESSIBLE LOCATION NEAR STREET AS SHOWN WITH A LOCAL SHUT-OFF VALVE. IF INSTALLING A LOCAL BACK FLOW PREVENTION DEVISE PLEASE ENSURE THAT A CHECK VALVE IS ALSO INSTALLED. REFER TO DOMESTIC WATER CONNECTION DETAIL FOR ADDITIONAL REQUIREMENTS. COORDINATE WITH WATER AUTHORITY PRIOR TO CONSTRUCTION FOR ALL CONNECTION REQUIREMENTS. CONTRACTOR SHALL INCLUDE ALL ITEMS FOR COMPLETE INSTALLATION INCLUSIVE OF BUT NOT LIMITED TO PAVEMENT REPAIR, TRENCHING, ETC.

(7) NEW WATER PIPE SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. REFER TO WATER RISER DETAIL FOR ADDITIONAL REQUIREMENTS.

(10) NEW BLOOM ENERGY FURNISHED, CONTRACTOR INSTALLED, DISCONNECT SWITCH. TO UNI-STRUT MOUNT 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 PROVIDE TWO GROUNDING RODS TO BE PLACED 6' APART MINIMUM. REFER TO ELECTRICAL SINGLE LINE DIAGRAM FOR ADDITIONAL REQUIREMENTS.

(13) NEW ELECTRICAL FEEDER SHALL BE FURNISHED AND INSTALLED BY THE CONTRACTOR. REFER TO ELECTRICAL SINGLE LINE DIAGRAM FOR ADDITIONAL REQUIREMENTS.

(15) NEW BLOOM ENERGY SERVER. REFER TO BLOOM STANDARD INSTALLATION DRAWING SET FOR ADDITIONAL ENERGY SERVER DETAILS.

(16) FACTORY WIRED ENERGY SERVER EMERGENCY POWER-OFF SWITCH (EPO).

(19) CONTRACTOR SHALL PROVIDE 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.

(21) PROTECT EXISTING UNDERGROUND UTILITY LINES FROM DAMAGE WHEN CROSSING WITH NEW UNDERGROUND UTILITIES. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR OR REPLACEMENT OF ANY DAMAGED LINES.

(22) A PULL BOX OR UNDERGROUND VAULT IS NEEDED FOR EVERY 360° EQUIVALENT OF CONDUIT BEND. CONTRACTOR TO FIELD VERIFY THE LOCATION OF PULL BOXES ALONG WITH AGREEMENT WITH CUSTOMER FOR THEIR LOCATION.

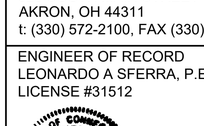
(30) CONTRACTOR SHALL PROVIDE LANDSCAPE/TURF RESTORATION. REFER TO LANDSCAPE/TURF RESTORATION DETAIL FOR ADDITIONAL REQUIREMENTS. IRRIGATION SHALL BE PROTECTED AND REMAIN OPERATIONAL DURING CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE FOR EXTENDING AND/OR REROUTING IRRIGATION LINES AS NECESSARY AND THE REPAIR/REPLACEMENT IF ANY DAMAGE OCCURS.

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 UTILITIES FROM DAMAGE WHEN CROSSING WITH NEW UNDERGROUND UTILITIES. CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR OR REPLACEMENT OF ANY DAMAGED LINES. THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY IF ANY FIELD CONDITIONS ENCOUNTERED DIFFER FROM THOSE REPRESENTED HEREON. SUCH CONDITIONS COULD RENDER THE DESIGN HEREON INAPPROPRIATE AND MAY REQUIRE ADJUSTMENTS TO AVOID CONFLICTS.

Bloomenergy
4353 N. FIRST STREET
SAN JOSE, CA 95134

GPD Engineering and Architecture Professional Corporation
520 SOUTH MAIN STREET
AKRON, OH 44311
t: (330) 572-2100, FAX (330) 572-2102

ENGINEER OF RECORD
LEONARDO A SFERRA, P.E.
LICENSE #31512



02/09/21

GPD PROJECT #2020345.12

CUSTOMER SITE
DYNO NOBEL INC.
660 HOPMEADOW STREET
SIMSBURY, CT 06070

DYNO
Dyno Nobel

REVISION HISTORY		
REV	REVISION ISSUE	DATE
–	INITIAL RELEASE	03/02/2021

DESIGNED BY: BRIAN CURTIS	REVIEWED BY: ROBERT PROVOST
DRAWN BY: JAGANNATH BHEEMANNA	APPROVED BY: LEONARDO A. SFERRA

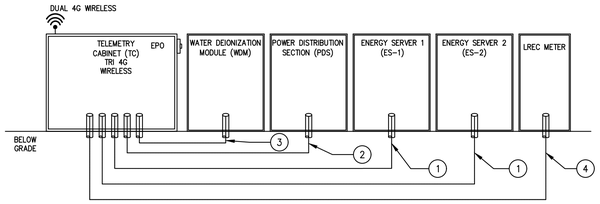
SHEET TITLE
DETAILED SITE PLAN

DRAWING NUMBER
C1.1

BLOOM DOCUMENT
DOC-1012745

THIS DRAWING IS 24" X 36" AT FULL SIZE

SITE ID: DYN001.0 | SHEET 04 OF 16



DETAIL REFERENCE NOTES

1. PER ENERGY SERVER: 1" CONDUIT BETWEEN TC AND ES WITH TWO (2) OUTDOOR RATED CAT5E CABLES AND ONE (1) OUTDOOR RATED SHIELDED CAT5E CABLE WITH RJ-45 (MALE/MALE) ENDS.
2. 1" CONDUIT BETWEEN TC AND PDS WITH ONE (1) OUTDOOR RATED SHIELDED CAT5E CABLE WITH RJ-45 (MALE/MALE) ENDS.
3. 1" CONDUIT BETWEEN TC AND WDM WITH ONE (1) OUTDOOR RATED SHIELDED CAT5E CABLE WITH RJ-45 (MALE/MALE) END ON WDM SIDE.
4. ONE (1) 1" CONDUIT BETWEEN LREC METER AND CRADLEPOINT ADAPTER IN TC WITH ONE (1) OUTDOOR RATED SHIELDED CAT6 CABLE WITH RJ-45 (MALE/MALE) ENDS.

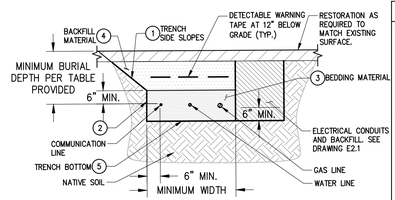
DETAIL NOTES

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 CONDUCTORS SHALL HAVE THE SHIELD GROUNDED ON ONE END.
7. ALL OUTDOOR RATED SHIELDED CAT5E CABLES SHALL BE TYPE F/UTP WITH DRAIN WIRE, OSP RATED.
8. CONTRACTOR SHALL PROVIDE DRAWING OF CONDUCTOR LAYOUT IN CABLE TRAY AFTER INSTALLATION. ALL COMMUNICATION CONDUCTORS SHALL BE LABELED IN TC CABINET FOR APPLICABLE USE AND TERMINATIONS.
9. CONTRACTOR TO GROUND SHIELDING ON TELEMETRY SIDE ONLY.

COMMUNICATIONS RISER DIAGRAM

SCALE: NTS

1 / C2.1



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"

UTILITY TRENCH EXCAVATION SPACING & BACKFILL DETAIL

SCALE: 3/4" = 1'-0"

2 / C2.1

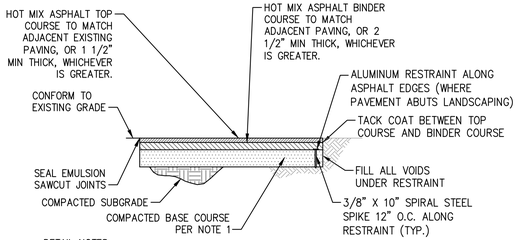
DETAIL NOTES

1. 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
2. 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.
3. ALL CLEARANCES ARE EDGE TO EDGE AND NOT CENTER TO CENTER.
4. 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.

DETAIL REFERENCE 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 IF APPROVED BY GEOTECHNICAL ENGINEER, 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.



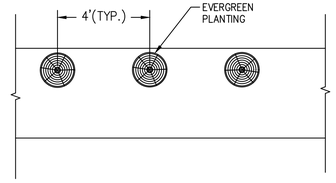
DETAIL NOTES:

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.
3. ALUMINUM RESTRAINT ALONG ASPHALT EDGE TO BE USED WHEREVER ASPHALT PAVEMENT ABUTS LANDSCAPING.

ASPHALT SERVICE AREA

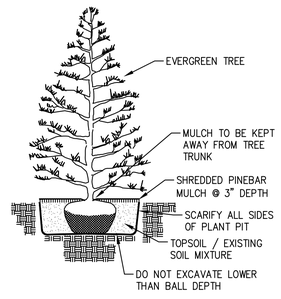
SCALE: NTS

3 / C2.1



DETAIL NOTES:

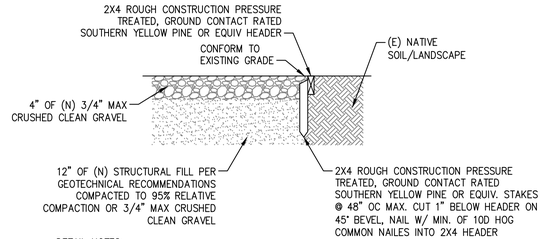
1. EVERGREEN PLANTINGS SHALL HAVE A MINIMUM HEIGHT OF 6'-0". ALTERNATE SPECIES EVERY 5 PLANTINGS
2. REMOVE ALL PLASTIC AND WIRE TAGS FROM NEW TREES BEFORE PLANTING
3. REMOVE ALL WIRE BASKETS, NON-DECOMPOSIBLE CORDS AND BURLAP FORM THE ROOT BALL IF PRESENT
4. REMOVE ALL ACCUMULATED SOIL OR MULCH FROM THE ROOT CROWN AREA



TREE PLANTING

SCALE: NTS

4 / C2.1



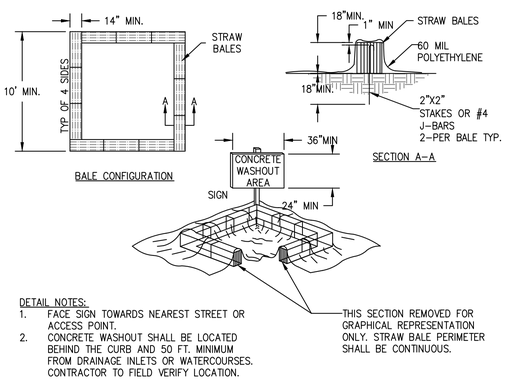
DETAIL NOTES:

1. 1"X4"X36" CONSTRUCTION 2X4 PRESSURE TREATED, GROUND CONTACT RATED SOUTHERN YELLOW PINE OR EQUIV SCAB AT ALL BUTT JOINTS. INSTALL SCABS ON STAKE SIDE OF JOINTS ON STRAIGHT RUNS. BUTT JOINTS SHALL OCCUR AT STAKES. NAIL W/ 8D HOG COMMON NAILS SPACED AT 4" OC INTO 2X4 HEADER.
2. TWO (2) STAKES AT ALL JOINTS 18" EACH SIDE OF JOINT.

GRAVEL SERVICE AREA

SCALE: NTS

5 / C2.1



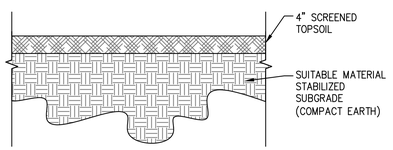
DETAIL NOTES:

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. CONTRACTOR TO FIELD VERIFY LOCATION.

CONCRETE WASHOUT

SCALE: NTS

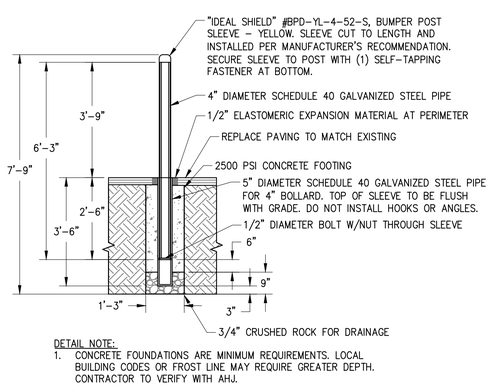
6 / C2.1



LANDSCAPE RESTORATION

SCALE: NTS

7 / C2.1



DETAIL NOTE:

1. CONCRETE FOUNDATIONS ARE MINIMUM REQUIREMENTS. LOCAL BUILDING CODES OR FROST LINE MAY REQUIRE GREATER DEPTH. CONTRACTOR TO VERIFY WITH AHJ.

BOLLARD - REMOVABLE

SCALE: NTS

8 / C2.1

Bloomenergy

4353 N. FIRST STREET
SAN JOSE, CA 95134

GPD Engineering and Architecture Professional Corporation

520 SOUTH MAIN STREET
AKRON, OH 44311
t: (330) 572-2100, FAX (330) 572-2102

ENGINEER OF RECORD
LEONARDO A SFERRA, P.E.
LICENSE #31512

02/09/21

GPD PROJECT #2020345.12

CUSTOMER SITE

DYNO NOBEL INC.
660 HOPMEADOW STREET
SIMSBURY, CT 06070

DYNO Dyno Nobel

REVISION HISTORY

REV	REVISION ISSUE	DATE
-	INITIAL RELEASE	03/02/2021

DESIGNED BY BRIAN CURTIS	REVIEWED BY ROBERT PROVOST
DRAWN BY JAGANNATH BHEEMANNA	APPROVED BY LEONARDO A. SFERRA

SHEET TITLE

DETAILS
SHEET 1

DRAWING NUMBER

C2.1

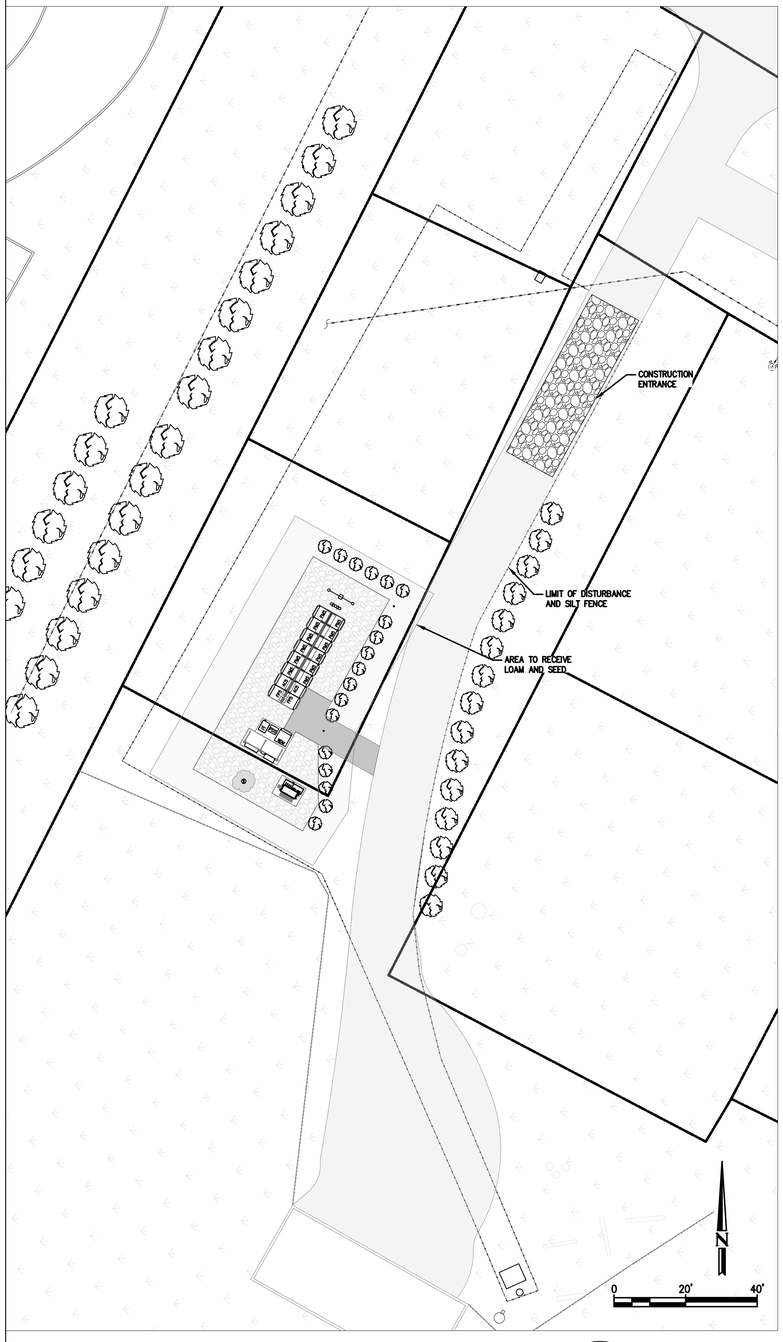
BLOOM DOCUMENT

DOC-1012745

THIS DRAWING IS 24" X 36" AT FULL SIZE

SITE ID: DYN001.0 | SHEET 05 OF 16

CONSTRUCTION OPERATION AND MAINTENANCE PLAN – BY CONTRACTOR		
E&S MEASURE	INSPECTION SCHEDULE	MAINTENANCE REQUIRED
CONSTRUCTION ENTRANCE	DAILY	PLACE ADDITIONAL STONE, EXTEND THE LENGTH OR REMOVE AND REPLACE THE STONE. CLEAN PAVED SURFACES OF TRACKED SEDIMENT.
COMPOST FILTER SOCK	WEEKLY & WITHIN 24 HOURS OF RAINFALL > 0.25"	REPAIR/REPLACE WHEN FAILURE OR DETERIORATION IS OBSERVED.
TOPSOIL/BORROW STOCKPILES	DAILY	REPAIR/REPLACE SEDIMENT BARRIERS AS NECESSARY.



EROSION & SEDIMENT CONTROL PLAN

SCALE: 1"=20'

4 C2.2

LEGEND

AREA TO RECEIVE LOAM AND SEED

EROSION CONTROL NOTES

EROSION AND SEDIMENT CONTROL PLAN NOTES

1. THE CONTRACTOR SHALL CONSTRUCT ALL SEDIMENT AND EROSION CONTROLS IN ACCORDANCE WITH THE 2002 CONNECTICUT GUIDELINES FOR SOIL EROSION AND SEDIMENT CONTROL, LATEST EDITION, IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, AND AS DIRECTED BY THE TOWN OF PERMITTEE AND/OR SWPCP MONITOR. ALL PERIMETER SEDIMENTATION AND EROSION CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE START OF CLEARING AND GRUBBING AND DEMOLITION OPERATIONS.
2. THESE DRAWINGS ARE ONLY INTENDED TO DESCRIBE THE SEDIMENT AND EROSION CONTROL MEASURES FOR THIS SITE. ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES SHOWN ON THE EROSION & SEDIMENT CONTROL PLAN ARE SHOWN IN A GENERAL SIZE AND LOCATION ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT ALL EROSION CONTROL MEASURES ARE CONFIGURED AND CONSTRUCTED IN A MANNER THAT WILL MINIMIZE EROSION OF SOILS AND PREVENT THE TRANSPORT OF SEDIMENTS AND OTHER POLLUTANTS TO STORM DRAINAGE SYSTEMS AND/OR WATERCOURSES. ACTUAL SITE CONDITIONS OR SEASONAL AND CLIMATIC CONDITIONS MAY WARRANT ADDITIONAL CONTROLS OR CONFIGURATIONS, AS REQUIRED, AND AS DIRECTED BY THE PERMITTEE AND/OR SWPCP MONITOR. SEE SEDIMENT AND EROSION CONTROL DETAILS AND SUGGESTED CONSTRUCTION SEQUENCE FOR MORE INFORMATION. REFER TO SITE PLAN FOR GENERAL INFORMATION AND OTHER CONTRACT PLANS FOR APPROPRIATE INFORMATION.
3. A BOND OR LETTER OF CREDIT MAY BE REQUIRED TO BE POSTED WITH THE GOVERNING AUTHORITY FOR THE EROSION CONTROL INSTALLATION AND MAINTENANCE.
4. THE CONTRACTOR SHALL APPLY THE MINIMUM EROSION & SEDIMENT CONTROL MEASURES SHOWN ON THE PLAN IN CONJUNCTION WITH CONSTRUCTION SEQUENCING, SUCH THAT ALL ACTIVE WORK ZONES ARE PROTECTED. ADDITIONAL AND/OR ALTERNATIVE SEDIMENT AND EROSION CONTROL MEASURES MAY BE INSTALLED DURING THE CONSTRUCTION PERIOD IF FOUND NECESSARY BY THE CONTRACTOR, OWNER, SITE ENGINEER, MUNICIPAL OFFICIALS, OR ANY GOVERNING AGENCY. THE CONTRACTOR SHALL CONTACT THE OWNER AND APPROPRIATE GOVERNING AGENCIES FOR APPROVAL IF ALTERNATIVE CONTROLS OTHER THAN THOSE SHOWN ON THE PLANS ARE PROPOSED BY THE CONTRACTOR.
5. THE CONTRACTOR SHALL TAKE EXTREME CARE DURING CONSTRUCTION SO AS NOT TO DISTURB UNPROTECTED WETLAND AREAS OR INSTALLED SEDIMENTATION AND EROSION CONTROL MEASURES. THE CONTRACTOR SHALL INSPECT ALL SEDIMENT AND EROSION CONTROLS WEEKLY AND WITHIN 24 HOURS OF A STORM WITH A RAINFALL AMOUNT OF 0.25 INCHES OR GREATER TO VERIFY THAT THE CONTROLS ARE OPERATING PROPERLY AND MAKE REPAIRS AS NECESSARY IN A TIMELY MANOR.
6. THE CONTRACTOR SHALL KEEP A SUPPLY OF EROSION CONTROL MATERIAL (SILT FENCE, COMPOST FILTER SOCK, EROSION CONTROL BLANKET, ETC.) ON-SITE FOR PERIODIC MAINTENANCE AND EMERGENCY REPAIRS.
7. ALL FILL MATERIAL PLACED ADJACENT TO ANY WETLAND AREA SHALL BE GOOD QUALITY, WITH LESS THAN 5% FINES PASSING THROUGH A #200 SIEVE (BANK RUN), SHALL BE PLACED IN MAXIMUM ONE FOOT LIFTS, AND SHALL BE COMPACTED TO 95% MAX. DRY DENSITY MODIFIED PROCTOR OR AS SPECIFIED IN THE CONTRACT SPECIFICATIONS.
8. PROTECT EXISTING TREES THAT ARE TO BE SAVED BY FENCING, ORANGE SAFETY FENCE, CONSTRUCTION TAPE, OR EQUIVALENT FENCING/TAPE. ANY LIMB TRIMMING SHOULD BE DONE AFTER CONSULTATION WITH AN ARBORIST AND BEFORE CONSTRUCTION BEGINS IN THAT AREA; FENCING SHALL BE MAINTAINED AND REPAIRED DURING CONSTRUCTION.
9. CONSTRUCTION ENTRANCES (ANTI-TRACKING PADS) SHALL BE INSTALLED PRIOR TO ANY SITE EXCAVATION OR CONSTRUCTION ACTIVITY AND SHALL BE MAINTAINED THROUGHOUT THE DURATION OF ALL CONSTRUCTION IF REQUIRED. THE LOCATION OF THE TRACKING PADS MAY CHANGE AS VARIOUS PHASES OF CONSTRUCTION ARE COMPLETED. CONTRACTOR SHALL ENSURE THAT ALL VEHICLES EXITING THE SITE ARE PASSING OVER THE ANTI-TRACKING PADS PRIOR TO EXISTING.
10. ALL CONSTRUCTION SHALL BE CONTAINED WITHIN THE LIMIT OF DISTURBANCE, WHICH SHALL BE MARKED WITH SILT FENCE, SAFETY FENCE, HAY BALES, RIBBONS, OR OTHER MEANS PRIOR TO CLEARING. CONSTRUCTION ACTIVITY SHALL REMAIN ON THE UPHILL SIDE OF THE SEDIMENT BARRIER UNLESS WORK IS SPECIFICALLY CALLED FOR ON THE DOWNHILL SIDE OF THE BARRIER.
11. NO CUT OR FILL SLOPES SHALL EXCEED 2:1 EXCEPT WHERE STABILIZED BY ROCK FACED EMBANKMENTS OR EROSION CONTROL BLANKETS. ALL SLOPES SHALL BE SEEDED AND BANKS WILL BE STABILIZED IMMEDIATELY UPON COMPLETION OF FINAL GRADING UNTIL TURF IS ESTABLISHED.
12. DIRECT ALL DEWATERING PUMP DISCHARGE TO A SEDIMENT CONTROL DEVICE THE GUIDELINES WITHIN THE APPROVED LIMIT OF DISTURBANCE IF REQUIRED. DISCHARGE TO STORM DRAINS OR SURFACE WATERS FROM SEDIMENT CONTROLS SHALL BE CLEAR AND APPROVED BY THE PERMITTEE OR MUNICIPALITY.
13. THE CONTRACTOR SHALL MAINTAIN A CLEAN CONSTRUCTION SITE AND SHALL NOT ALLOW THE ACCUMULATION OF RUBBISH OR CONSTRUCTION DEBRIS ON THE SITE. PROPER SANITARY DEVICES SHALL BE MAINTAINED ON-SITE AT ALL TIMES AND SECURED APPROPRIATELY. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO AVOID THE SPILLAGE OF FUEL OR OTHER POLLUTANTS ON THE CONSTRUCTION SITE AND SHALL ADHERE TO ALL APPLICABLE POLICIES AND REGULATIONS RELATED TO SPILL PREVENTION AND RESPONSE/CONTAINMENT.
14. MINIMIZE LAND DISTURBANCES. SEED AND MULCH DISTURBED AREAS WITH TEMPORARY MIX AS SOON AS PRACTICABLE (2 WEEK MAXIMUM UNSTABILIZED PERIOD) USING PERENNIAL RYEGRASS AT 40 LBS PER ACRE. MULCH ALL CUT AND FILL SLOPES AND SWALES WITH LOOSE HAY AT A RATE OF 2 TONS PER ACRE. IF NECESSARY, REPLACE LOOSE HAY ON SLOPES WITH EROSION CONTROL BLANKETS OR JUTE CLOTH. MODERATELY GRADED AREAS, ISLANDS, AND TEMPORARY CONSTRUCTION STAGING AREAS MAY BE HYDROSEEDED WITH TACKIFIER.
15. SWEEP AFFECTED PORTIONS OF OFF SITE ROADS ONE OR MORE TIMES A DAY (OR LESS FREQUENTLY IF TRACKING IS NOT A PROBLEM) DURING CONSTRUCTION. FOR DUST CONTROL, PERIODICALLY MOISTEN EXPOSED SOIL SURFACES WITH WATER ON UNPAVED TRAVELWAYS TO KEEP THE TRAVELWAYS DAMP. CALCIUM CHLORIDE MAY ALSO BE APPLIED TO ACCESS ROADS. DUMP TRUCK LOADS EXITING THE SITE SHALL BE COVERED.
16. TURF ESTABLISHMENT SHALL BE PERFORMED OVER ALL DISTURBED SOIL, UNLESS THE AREA IS UNDER ACTIVE CONSTRUCTION, IT IS COVERED IN STONE OR SCHEDULED FOR PAVING WITHIN 30 DAYS. TEMPORARY SEEDING OR NON-LIVING SOIL PROTECTION OF ALL EXPOSED SOILS AND SLOPES SHALL BE INITIATED WITHIN THE FIRST 7 DAYS OF SUSPENDING WORK IN AREAS TO BE LEFT LONGER THAN 30 DAYS.
17. MAINTAIN ALL PERMANENT AND TEMPORARY SEDIMENT CONTROL DEVICES IN EFFECTIVE CONDITION THROUGHOUT THE CONSTRUCTION PERIOD. UPON COMPLETION OF WORK SWEEP CONCRETE PADS, CLEAN THE STORMWATER MANAGEMENT SYSTEMS AND REMOVE ALL TEMPORARY SEDIMENT CONTROLS ONCE THE SITE IS FULLY STABILIZED AND APPROVAL HAS BEEN RECEIVED FROM PERMITTEE OR THE MUNICIPALITY.
18. SEEDING MIXTURES SHALL BE NEW ENGLAND EROSION CONTROL/RESTORATION MIX FOR DRY SITES, OR APPROVED EQUAL BY OWNER.

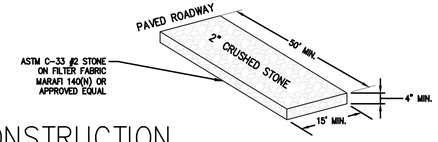
SEDIMENT & EROSION CONTROL NARRATIVE

1. THE PROJECT INVOLVES THE CONSTRUCTION OF A FUEL CELL POWER GENERATION FACILITY WITH ASSOCIATED EQUIPMENT, INCLUDING THE CLEARING, GRUBBING AND GRADING OF APPROXIMATELY ±2,500 SF OF EXISTING LOT.
2. IT IS ANTICIPATED THAT CONSTRUCTION WILL BE COMPLETED IN APPROXIMATELY 6-8 MONTHS.
3. REFER TO THE CONSTRUCTION SEQUENCING AND EROSION AND SEDIMENTATION NOTES FOR INFORMATION REGARDING SEQUENCING OF MAJOR OPERATIONS IN THE ON-SITE CONSTRUCTION PHASES.
4. STORMWATER MANAGEMENT DESIGN CRITERIA UTILIZES THE APPLICABLE SECTIONS OF THE 2004 CONNECTICUT STORMWATER QUALITY MANUAL AND THE TOWN OF SIMSBURY STANDARDS, TO THE EXTENT POSSIBLE AND PRACTICABLE FOR THIS PROJECT ON THIS SITE. EROSION AND SEDIMENTATION MEASURES ARE BASED UPON ENGINEERING PRACTICE, JUDGEMENT AND THE APPLICABLE SECTIONS OF THE CONNECTICUT EROSION AND SEDIMENT CONTROL GUIDELINES FOR URBAN AND SUBURBAN AREAS, LATEST EDITION.
5. DETAILS FOR THE TYPICAL STORMWATER MANAGEMENT AND EROSION AND SEDIMENTATION MEASURES ARE SHOWN ON THE PLAN SHEETS OR PROVIDED AS SEPARATE SUPPORT DOCUMENTATION FOR REVIEW IN THIS PLAN.
6. CONSERVATION PRACTICES TO BE USED DURING CONSTRUCTION AREA:
   A. STAGED CONSTRUCTION;
   B. MINIMIZE THE DISTURBED AREAS TO THE EXTENT PRACTICABLE DURING CONSTRUCTION;
   C. STABILIZE DISTURBED AREAS AS SOON AS POSSIBLE WITH TEMPORARY OR PERMANENT MEASURES;
   D. MINIMIZE IMPERVIOUS AREAS;
   E. UTILIZE APPROPRIATE CONSTRUCTION EROSION AND SEDIMENTATION MEASURES.

SUGGESTED CONSTRUCTION SEQUENCE

THE FOLLOWING SUGGESTED SEQUENCE OF CONSTRUCTION ACTIVITIES IS PROJECTED BASED UPON ENGINEERING JUDGEMENT AND BEST MANAGEMENT PRACTICES. THE CONTRACTOR MAY ELECT TO ALTER THE SEQUENCING TO BEST MEET THE CONSTRUCTION SCHEDULE, THE EXISTING SITE ACTIVITIES AND WEATHER CONDITIONS.

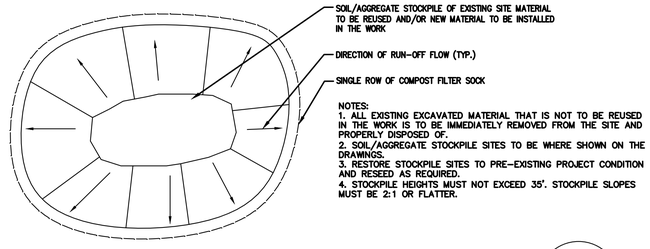
1. THE CONTRACTOR SHALL SCHEDULE A PRE-CONSTRUCTION MEETING. PHYSICALLY FLAG THE LIMITS OF DISTURBANCE IN THE FIELD AS NECESSARY TO FACILITATE THE PRE-CONSTRUCTION MEETING.
2. CONDUCT A PRE-CONSTRUCTION MEETING TO DISCUSS THE PROPOSED WORK AND EROSION AND SEDIMENTATION CONTROL MEASURES. THE MEETING SHOULD BE ATTENDED BY THE OWNER, THE OWNER REPRESENTATIVE(S), THE MUNICIPALITY, THE GENERAL CONTRACTOR, DESIGNATED SUB-CONTRACTORS AND THE PERSON, OR PERSONS, RESPONSIBLE FOR THE IMPLEMENTATION, OPERATION, MONITORING AND MAINTENANCE OF THE EROSION AND SEDIMENTATION MEASURES. THE CONSTRUCTION PROCEDURES FOR THE ENTIRE PROJECT SHALL BE REVIEWED AT THIS MEETING.
3. NOTIFY TOWN OF SIMSBURY AGENT AT LEAST FORTY-EIGHT (48) HOURS PRIOR TO COMMENCEMENT OF ANY DEMOLITION, CONSTRUCTION OR REGULATED ACTIVITY ON THIS PROJECT.
4. NOTIFY DIG SAFE AT 811, AS REQUIRED, PRIOR TO THE START OF CONSTRUCTION.
5. REMOVE EXISTING IMPEDIMENTS AS NECESSARY AND PROVIDE MINIMAL CLEARING AND GRUBBING TO INSTALL THE REQUIRED CONSTRUCTION ENTRANCES.
6. INSTALL ELECTRICAL CONDUIT, GAS PIPES AND CONCRETE PADS.
7. INSTALL FUEL CELLS AND COMPLETE GAS AND ELECTRICAL INSTALLATION.
8. AFTER SUBSTANTIAL COMPLETION OF THE INSTALLATION OF THE FUEL CELLS, COMPLETE REMAINING SITE WORK, STABILIZE ALL DISTURBED AREAS.
9. FINE GRADE, RAKE, SEED AND MULCH ALL REMAINING DISTURBED AREAS.
10. AFTER THE SITE IS STABILIZED AND WITH THE APPROVAL OF THE PERMITTEE AND TOWN OF SIMSBURY AGENT, REMOVE PERIMETER EROSION AND SEDIMENTATION CONTROLS.



CONSTRUCTION ENTRANCE DETAIL

SCALE: NTS

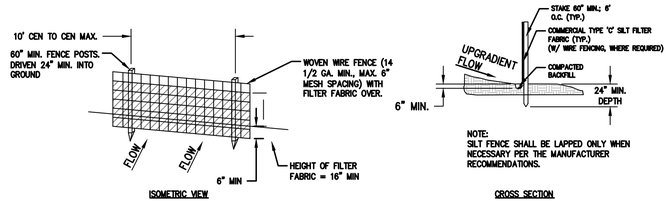
1 C2.2



MATERIALS STOCKPILE DETAIL

SCALE: NTS

2 C2.2



DETAIL NOTES:
1. WOVEN WIRE FENCE TO BE FASTENED SECURELY TO FENCE POSTS WITH WIRE TIES OR STAPLES.
2. FILTER CLOTH TO BE FASTENED SECURELY TO WOVEN WIRE FENCE WITH TIES SPACED EVERY 24" AT TOP AND MID SECTION.
3. WHEN TWO SECTIONS OF FILTER CLOTH ADJOIN EACH OTHER THEY SHALL BE OVERLAPPED BY SIX INCHES AND FOLDED.
4. MAINTENANCE SHALL BE PERFORMED AS NEEDED AND MATERIAL REMOVED WHEN "BULGES" DEVELOP IN THE SILT FENCE.
5. POSTS: STEEL EITHER T OR U TYPE OR 2" HARDWOOD.
6. FENCE: WOVEN WIRE, 14 1/2 GA. 6" MAX.MESH OPENING.
7. FILTER CLOTH SHALL BE A WOVEN GEOTEXTILE COMPOSED OF POLYPROPYLENE CONFORMING TO AASHTO M288.

SILT FENCE

SCALE: NTS

3 C2.2

Bloomenergy

4353 N. FIRST STREET
SAN JOSE, CA 95134

GPD Engineering and Architecture Professional Corporation

520 SOUTH MAIN STREET
AKRON, OH 44311
t: (330) 572-2100, FAX (330) 572-2102

ENGINEER OF RECORD
LEONARDO A SFERRA, P.E.
LICENSE #31512

02/09/21

GPD PROJECT #2020345.12

CUSTOMER SITE

DYNO NOBEL INC.
660 HOPMEADOW STREET
SIMSBURY, CT 06070

DYNO Dyno Nobel

REVISION HISTORY		
REV	REVISION ISSUE	DATE
–	INITIAL RELEASE	03/02/2021

DESIGNED BY BRIAN CURTIS	REVIEWED BY ROBERT PROVOST
DRAWN BY JAGANNATH BHEEMANNA	APPROVED BY LEONARDO A. SFERRA

SHEET TITLE

SOIL EROSION AND SEDIMENT CONTROL DETAILS

DRAWING NUMBER

C2.2

BLOOM DOCUMENT

DOC-1012745

THIS DRAWING IS 24" X 36" AT FULL SIZE

SITE ID: DYN001.0 | SHEET 06 OF 16

Attachment 2: CTDEEP NDDB Correspondences

4353 North First Street San Jose CA 95134 T 408 543 1500 F 408 543 1501 www.bloomenergy.com

Connecticut Department of
ENERGY &
ENVIRONMENTAL
PROTECTION

79 Elm Street • Hartford, CT 06106-5127 www.ct.gov/deep Affirmative Action/Equal Opportunity Employer

December 23, 2020

Dean Gustafson
All-Points Technology Corporation, PC
567 Vauxhall Street Ext, Suite 311
Waterford, CT 06385
dgustafson@allpointstech.com

NDDB DETERMINATION NUMBER: 202079552

Project: Installation of two fuel cell facilities at Dyno Nobel campus; DYNO SITES 1 & 2, 65 Woodland St and 660 Hopmeadow St, in SIMSBURY, CT

Expiration: December 23, 2022

I have reviewed Natural Diversity Data Base (NDDB) maps and files regarding this project. According to our records, the following State-listed species (RCSA Sec. 26-306) are documented in the project area.

Site 1:

- **Bald eagle (*Haliaeetus leucocephalus*) State Threatened**

Site 2:

- **Northern leopard frog (*Rana pipiens*) State Special Concern**
- **Eastern box turtle (*Terrapene carolina carolina*) State Special Concern**
- **Upland watershed of multiple state listed Freshwater mussels**

Bald eagle (*Haliaeetus leucocephalus*) State Threatened
It is illegal pursuant to section 26-93 of the Connecticut General Statutes to disturb Bald eagles. This law prohibits disturbing the birds while they are roosting, feeding, or nesting. The wildlife division recommends a **660'** setback with no public access from a bald eagle nest or critical roosting site. The critical time for nesting eagles is February 1- August 1. The critical time period for winter roosts is December 31- March 1. To determine if nest or roost in your area is active this year contact the DEEP Wildlife Biologist coordinating eagle monitoring (Brian.hess@ct.gov).

I do not anticipate impacts to Bald eagle from your project activities. Your work area in Detailed Site Plan C1.1 is measuring over 700 feet from our recorded nest location.

Northern leopard frog (*Rana pipiens*) State Special Concern
This species is found in open, grassy habitats either along the floodplain of a large stream or river, or in wetlands around the margins of large lakes. This species is dormant from November 1 to March 31. Maintaining healthy wetlands and undisturbed buffers will benefit this species. Do not change water quality, turbidity, temperature, or chemistry of wetland complex. Avoid shoreline development of wetland complexes. It will increase indirect effects of water quality change and general disturbance of the marsh.

Eastern box turtle (*Terrapene carolina carolina*) State Special Concern

In Connecticut, these turtles are found in well-drained forest bottomlands and a matrix of open deciduous forests, early successional habitat, fields, gravel pits, and or powerlines. Turtles are dormant between November 1 and April 1 and hibernate in only a few inches from the surface in forested habitat.

Land disturbance activities that will crush adult turtles or unearth hibernating turtles or turtle nests need to consider local habitat features and apply fencing and/or time of year restrictions as appropriate.

- Preferably, conduct your project during the dormant season (between November 1- March 31), when turtles will not be in your work area.

If you must conduct work during the active season, between April 1- November 1:

- Exclusionary practices will be used to prevent any turtle access into disturbance areas. These measures will need to be installed at the limits of disturbance as shown on the plans.
- Exclusionary fencing be at least 20 in tall and must be secured to and remain in contact with the ground and be regularly maintained (at least bi-weekly and after major weather events) to secure any gaps or openings at ground level that may let animal pass through.
- All staging and storage areas, outside of previously paved locations, regardless of the duration of time they will be utilized, must be reviewed to remove individuals and exclude them from re-entry.
- All construction personnel working within the turtle habitat must be apprised of the species description and the possible presence of a listed species.
- The Contractor search the work area each morning prior to any work being done.
- Any turtles encountered within the immediate work area shall be carefully moved to an adjacent area outside of the excluded area and fencing should be inspected to identify and remove access point. This animal is protected by law and should not be relocated off-site.
- In areas where silt fence is used for exclusion, it shall be removed as soon as the area is stable and disturbance is finished to allow for reptile and amphibian passage to resume.

Upland watershed of multiple Freshwater mussels

Freshwater mussels are aquatic animals that play an important role in our environment. These sedentary organisms live in sediments on the bottom of streams and rivers and provide a service to all by filtering water and removing bacteria and phytoplankton. It is because they are filter-feeding animals that they are very susceptible to sediments and pollutants in the water in which they live. The greatest diversity of freshwater mussels in the world is found in Eastern North America. Freshwater mussels are one of the most endangered groups of animals with almost three-quarters of the native mussels in North America imperiled. The disappearance of freshwater mussels is a reliable indicator of chronic water pollution. The following considerations will help protect and benefit these species.

- Adhere strictly to water quality standards at your project site.
- Pay special attention and address specific monitoring targets for sediment, water temperature, copper, and ammonia (TAN).
- No vegetation should be removed from the 100ft buffer of waterways.
- Turf grass and impervious surface should be minimized in the surrounding watershed.
- Reconnect waterways that are disconnected by perched, undersized, or shallow stream culverts.
- Ensure precautions are taken to avoid direct kill of freshwater mussels during any instream construction or modification.
- Employ precautions to prevent the introduction and spread of invasive plants and bivalves.

- Take action to reduce non-point source pollution and educate the surrounding community about how to reduce non-point source pollution. More information can be found in our resources for Low Impact Development here:
- www.ct.gov/deep/cwp/view.asp?a=2719&q=464958&deepNav_GID=1654

This is determination is valid for two years.

Natural Diversity Data Base information includes all information regarding critical biological resources available to us at the time of the request. This information is a compilation of data collected over the years by the Department of Energy and Environmental Protection's Bureau of Natural Resources and cooperating units of DEEP, independent conservation groups, and the scientific community. This information is not necessarily the result of comprehensive or site-specific field investigations. Consultations with the NDDB should not be substituted for on-site surveys required for environmental assessments. Current research projects and new contributors continue to identify additional populations of species and locations of habitats of concern, as well as, enhance existing data. Such new information is incorporated in the NDDB as it becomes available.

Please contact me if you have any questions (shannon.kearney@ct.gov). Thank you for consulting with the Natural Diversity Data Base and continuing to work with us to protect State-listed species.

Sincerely,

/s/ Shannon B. Kearney
Wildlife Biologist

From:	Hess, Brian
To:	Justin Adams
Subject:	RE: NDDB DETERMINATION NUMBER: 202079552 Project: Installation of two fuel cell facilities at Dyno Nobel campus; SIMSBURY, CT
Date:	Monday, January 11, 2021 2:56:48 PM

EXTERNAL EMAIL

Hi Justin,

Sorry for the phone tag – email works fine. Those plans sound good. I was concerned about sudden loud noises like clanging tailgates of dump trucks. That can be problematic especially during the pre-fledge phase (late June).

But it sounds like that shouldn't be an issue.

Thanks,
Brian

From: Justin Adams <Justin.Adams@bloomenergy.com>
Sent: Friday, January 08, 2021 14:06
To: Hess, Brian <Brian.Hess@ct.gov>
Subject: RE: NDDB DETERMINATION NUMBER: 202079552 Project: Installation of two fuel cell facilities at Dyno Nobel campus; SIMSBURY, CT

EXTERNAL EMAIL: This email originated from outside of the organization. Do not click any links or open any attachments unless you trust the sender and know the content is safe.

OK. This will be typical excavation work. There will not be any noise outside of normal business hours and there won't be any especially loud work. We are digging down about 6 feet to make a foundation and then to trench for the utility hook-ups. I expect the digging to occur over about 2-weeks.

Justin Adams
Sr. Permitting Manager
Bloomenergy
860.839.8373
justin.adams@bloomenergy.com

From: Hess, Brian <Brian.Hess@ct.gov>
Sent: Friday, January 8, 2021 1:10 PM
To: Justin Adams <Justin.Adams@bloomenergy.com>
Subject: RE: NDDB DETERMINATION NUMBER: 202079552 Project: Installation of two fuel cell facilities at Dyno Nobel campus; SIMSBURY, CT

EXTERNAL EMAIL

Hi Justin,

Thanks for reaching out. I apologize for missing your call – I have had trouble receiving and retrieving calls lately.

My initial thought is that this should not have any impact. It is far enough from the nest and protected by foliage. I do have questions about the process of digging any noise that might be associated with it.

Thanks,
Brian

From: Justin Adams <Justin.Adams@bloomenergy.com>
Sent: Tuesday, January 05, 2021 08:33
To: Hess, Brian <Brian.Hess@ct.gov>
Subject: NDDB DETERMINATION NUMBER: 202079552 Project: Installation of two fuel cell facilities at Dyno Nobel campus; SIMSBURY, CT

Good Morning Brian,

I recently left you a VM regarding the attached NDDB determination. I would like to determine if the identified bald eagle nest or roost in our area is active this year. We would like to begin construction in May and we expect the duration to be about 1-2 months. The work will primarily consist of grading a small area, pouring a concrete pad and trenching for utility connections. The area of disturbance for each of the fuel cell installations is relatively small and we are not clearing any trees or any significant vegetation.

Here is a link to the full NDDB submittal: https://bloomenergy.egnyte.com/dl/ZCSVM3vZMf

Please let me know how you would like us to proceed and what steps, if any, need to be taken to safely perform the work in late spring and early summer.

Best,

Justin Adams
Sr. Permitting Manager
Bloomenergy
860.839.8373
justin.adams@bloomenergy.com