STATE OF CONNECTICUT

CONNECTICUT SITING COUNCIL

IN RE:	:	
	:	
PETITION OF TRS FUEL CELL, LLC FOR A DECLARATORY RULING THAT A CERTIFICATE OF ENVIRONMENTAL COMPATIBILITY AND PUBLIC NEED IS NOT REQUIRED FOR THE INSTALLATION OF A FUEL CELL AT 64 TRIANGLE STREET IN DANBURY	:	PETITION NO. _____
	:	JULY 21, 2016

PETITION FOR DECLARATORY RULING:
INSTALLATION HAVING NO SUBSTANTIAL ENVIRONMENTAL EFFECT

I. INTRODUCTION

Pursuant to Connecticut General Statutes ("Conn. Gen. Stat.") § 16-50k, TRS Fuel Cell, LLC ("TRS"), a wholly-owned subsidiary of FuelCell Energy, Inc. ("FCE"), hereby petitions the Connecticut Siting Council (the "Council") for a declaratory ruling ("Petition") that a Certificate of Environmental Compatibility and Public Need ("Certificate") is not required for the installation of a 3.7 megawatt ("MW") fuel cell combined heat and power generating facility, including all associated equipment and related site improvements, as described herein (collectively, the "Project").

Conn. Gen. Stat. § 16-50k(a) provides, in pertinent part:

> Notwithstanding the provisions of this chapter or title 16a, the council shall, in the exercise of its jurisdictions over the siting of generating facilities, approve by declaratory ruling . . . the construction or location of any fuel cell unless the council finds a substantial adverse environmental effect . . . .

TRS respectfully submits that the construction and operation of the proposed Project satisfies the criteria of Conn. Gen. Stat. § 16-50k(a) and, as described in more detail below, will not have a substantial adverse environmental effect.

II. THE PETITIONER

TRS is a Connecticut limited liability company and an indirect, wholly-owned subsidiary of FCE created for financing purposes. FCE is a Delaware corporation with a principal place of business at 3 Great Pasture Road, Danbury, Connecticut. TRS has entered into a lease agreement with J.A.R. Associates, a Connecticut limited partnership ("JAR"), pursuant to which TRS shall rent from JAR a portion of JAR's property located at 64 Triangle Street, Danbury, Connecticut (the "Site"). JAR currently operates a facility at its Triangle Street property (the "Facility"). FCE will enter into an Engineering, Procurement and Construction Agreement whereby FCE constructs and installs a fuel cell power plant nominally rated at 3.7 MW at the Site and a Long Term Service Agreement whereby FCE operates and maintains the Project for a term of twenty (20) years with TRS.

Correspondence and/or communications regarding this Petition should be addressed to:

Craig Stevenson
Project Manager
FuelCell Energy, Inc.
3 Great Pasture Road
Danbury, CT 06810
(203) 205-2061 (office)
(203) 825-6100 (fax)
cstevenson@fce.com

A copy of all such correspondence or communications should also be sent to the Petitioner's attorney:

Jennifer D. Arasimowicz, Esq.
Vice President, Managing Counsel
FuelCell Energy, Inc.
3 Great Pasture Road
Danbury, CT 06810
(203) 825-6070 (office)
(203) 825-6069 (fax)
jarasimowicz@fce.com

III. FACTUAL BACKGROUND

A. Public Benefit

A public benefit exists if a project "is necessary for the reliability of the electric power supply of the state or for a competitive market for electricity." Conn. Gen. Stat. § 16-50p(c)(1). The State of Connecticut has further articulated its energy goals in the Comprehensive Energy Strategy as encouraging the provision of cheap, clean, reliable electricity, fostering the development of microgrids and promoting economic development and job growth. The Project is located on property owned by JAR and will deliver electrical power to the nearby neighborhood electrical substation. As a result, the electric power that JAR and other neighbors will use will be produced locally, rather than drawn from the electric transmission grid, thereby, reducing the stress on the system and reducing load on overloaded transmission lines. The Project will provide JAR with direct savings as compared to purchasing thermal energy from the local distribution system by making heat recovered from the fuel cell available for comfort heating purposes. The fuel cell will be manufactured in Connecticut, and installed and operated by TRS. Thus, the Project satisfies all of the articulated goals of the Comprehensive Energy Strategy.

Based on the current schedule, the Project is also anticipated to be the first commercially

operable High Efficiency Fuel Cell ("HEFC"). FCE's HEFC system is configured with a series of three fuel cell modules that operate in sequence, yielding a higher electrical efficiency than the standard DFC3000 configuration of two fuel cell modules operating in parallel. The heat energy and unused hydrogen from two fuel cell modules is supplied to the third module, along with some natural gas to generate additional electricity. The HEFC configuration is designed to extract more electrical power from each unit of fuel with electrical efficiency of approximately 60%.

B. Project

TRS proposes to build and operate the Project to be located at the JAR Facility in Danbury, Connecticut. The Project will be installed within the Site on a 152 foot x 83 foot area surrounded by an eight (8) foot high fence and gates. *See* Tab A for preliminary project drawings.

The Project will include a natural gas-fired power plant provided by FCE. The Project will cogenerate a nominal 3.7 MW of Connecticut Class I renewable energy. The power generated by the Project will be delivered to the local distribution electrical grid. A portion of the Project's excess thermal output will be recovered into a glycol/water mixture and made available for JAR's optional use via supply and return flanges provided at the fenceline of the power plant.

The Project consists of multiple skids classified into three major subsystems. The mechanical balance of plant ("MBOP") is comprised of three separate components; the desulfurization system, the main process skids, and the water treatment system ("WTS") skid. The MBOP supplies fresh air, cleans and heats fuel and water, and includes the power plant control system. The electrical balance of plant ("EBOP") is comprised of seven sections; three inverters, three transformers and one switchgear for grid connection. The EBOP converts the fuel

cell DC power into utility grade AC power. The power plant includes three fuel cell modules. Each module performs the electrochemical conversion of the continuous fuel supply into DC electric power. Each module contains four fuel cell stacks.

Each stack contains the assembly of electrochemical cells that produce DC power. Resembling a large battery, each of the four stacks is constructed of approximately 400 individual fuel cells clamped together with manifolds inside an insulated container.

C. Local Input

On July 20, 2016, representatives of FCE and JAR met with The Hon. Mark D. Boughton, Mayor of the City of Danbury, to present an overview of the Project. Mayor Boughton expressed no concerns regarding the Project.

D. Notice of Petition

A copy of this Petition has been sent to each person appearing of record as an owner of property that abuts the Facility and to relevant Connecticut state agencies, the Attorney General, regional planning agencies, legislators representing Danbury and representatives of the City of Danbury, all as set forth on Exhibit B attached hereto.

IV. THE INSTALLATION WILL NOT HAVE A SUBSTANTIAL ADVERSE ENVIRONMENTAL EFFECT

The Project will provide 3.7 MW of clean electrical energy without the environmental impacts normally associated with the use of natural gas as a fuel.

A. Natural Environment and Ecological Balance

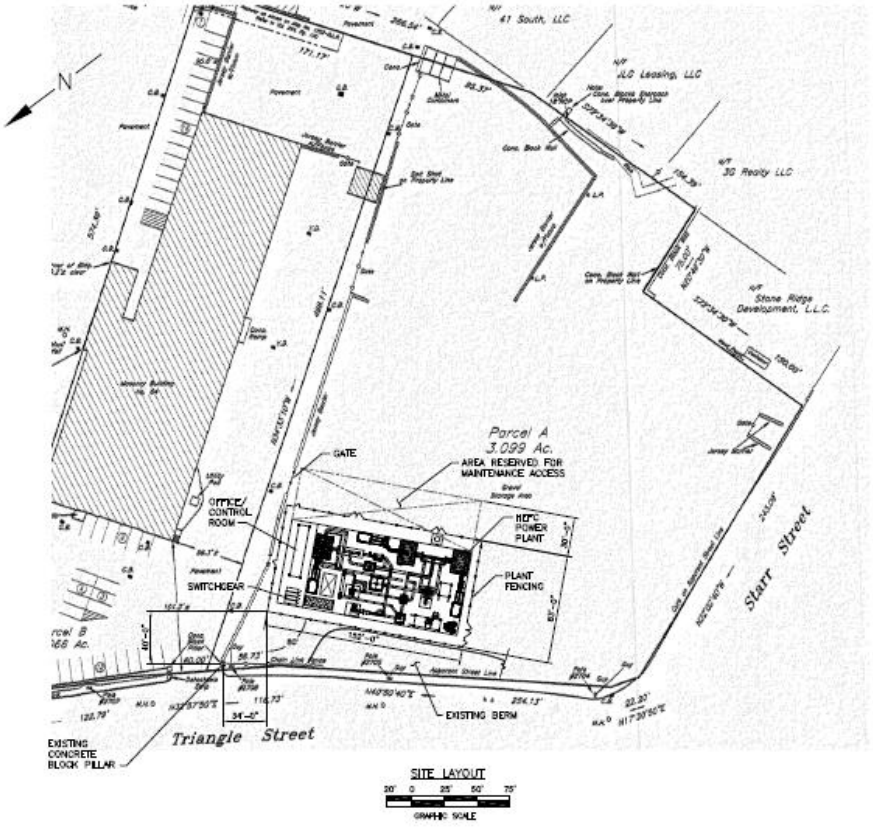
Approximately 2,000 litres of liquid nitrogen will be stored on-Site to be used in the Project. Nitrogen is non-toxic; however, it is a Department of Transportation Division 2.2 (non-

flammable gas) hazardous material. There are no U.S. Environmental Protection Agency ("EPA") reporting requirements for nitrogen.

B. Public Health and Safety

The Project will be located at the industrial Site as depicted in Figure 1 below. The roadways in the area are adequate for all deliveries to support the construction and operation of the Project. These same roadways have been used in the past and are often currently used to deliver major equipment to the area. The limited number of truck trips necessary to support installation will not have any adverse impacts on local roadways or traffic conditions. Long term operational personnel trips will be insignificant, as the Site will be unmanned and only visited periodically by technicians.

Figure 1



The Project has been designed with significant attention to protecting the community sound environment. The core of the fuel cell technology (*i.e.*, the fuel cell modules) will produce no significant sound. Ancillary equipment associated with the Project includes a blower that will draw fresh air through a silencer into the main process piping. An air conditioning unit, which is similar to many used in residential applications, will be located above the water treatment cabinet to support equipment inside the cabinet and will produce sound only when the fan is actively providing cooling for the system. Relatively small transformers, electrical buswork, and inverters, as well as fans providing ventilation to some of the equipment, will produce modest sound. Under normal conditions, these few acoustic sources would produce consistent sound throughout the day and night.

The acoustic levels associated with the Project were estimated at community receptors per the Regulations of Connecticut State Agencies ("R.C.S.A.") § 22a-69-1 *et seq.* The Project Site is categorized as a Class C Noise Zone, where the sound level is limited to 70 dBA at Class C receptors, 66 dBA at Class B receptors, and 61 dBA at Class A receptors during the daytime and 51 dBA at Class A receptors during the nighttime.

The zoning and land uses for the Project Site and adjacent properties to the north, south and east are industrial. To the west at approximately 200 to 240 feet away from the Project Site are residences, classified as Class A receptors.

A study was performed by an independent third party to identify the noise levels at the adjacent receptors, and is attached as Exhibit C. The results of the analytical predictions are provided in the table below.

Receptor	Direction & Distance from Facility source	Predicted Sound Level from Source	Noise Criterion
Residence	200 feet West	49 dBA	51 dBA
Residence	220 feet West	48 dBA	51 dBA
Residence	240 feet West	44 dBA	51 dBA
Commercial	240 feet South	45 dBA	66 dBA
Industrial	290 feet Southeast	44 dBA	70 dBA

The results of the sound evaluation clearly indicate that the Project can be operated at the Site within the applicable regulatory noise performance criteria.

Prior to operation, TRS will discuss the Project with the Danbury Fire Department. In addition, in accordance with the Council's Final Decision in Docket NT-2010, TRS is attaching an Emergency Response Plan ("ERP") for the Council's review. *See* ERP attached as Exhibit D. The ERP includes the following information:

- A description of any simulated emergency response activities with any state and/or local emergency response officials;
- Details of any facility Site access system; and
- Establishment of an emergency responder/local community notification system for on-Site emergencies and planned construction-related activities that could cause community alarm.

All other requirements of the NT-2010 Decision will be adhered to.

Project design has begun, and the drawing package attached as Exhibit A represents preliminary drawings depicting the site installation.

C. Scenic Values

The proposed Project will have little impact on the visual character of the community. Generally, the potential visual impact is inherently small due to the low profile of the Project in the context of the existing buildings adjacent to the Facility and the industrial nature of the area

in which it is situated. Views from the North and West will be obstructed by the existing berm. Views from the South and East will be obstructed by existing site structures.

D. Historical Values

On June 3, 2016 a request was overnight mailed to the Connecticut State Historic Preservation Office ("SHPO") requesting a determination regarding the Project's effect on historic, architectural or archaeological resources listed on or eligible for the National Register of Historic Places. *See* Correspondence attached as Exhibit E. As of the date of filing of this Petition, the SHPO has not responded. However, given the location of the Project in an industrial area and, specifically, at a site heretofore used by JAR for the storage of industrial and other heavy equipment, TRS is confident that there will be no impact to the State's historic, architectural or archaeological resources. TRS will supplement this application with the response of the SHPO as soon as it is received.

E. Air Quality

Air emissions from the fuel cell associated with the Project, assuming continuous year-round full power operation, are expected to be as follows:

Pollutant	**Total Potential Emissions (tpy)**
Oxides of Nitrogen ("NO_x")	0.16
Oxides of Sulfur ("SO_x")	0.001
Particulate Matter ("PM")	0.003
Carbon Monoxide ("CO")	1.6
Volatile Organic Compounds ("VOC")	0.32
Carbon Dioxide ("CO_2")	11,750

In addition to the emissions from the fuel cell itself, there will also be minor emissions

associated with a 10 MMBtu/hr gas-fired startup burner that will be included with the fuel cell power plant. The burner is used at start-up only to heat the plant to its required operating temperature. The criteria pollutant potential emissions (assuming 8,760 hours of operation) associated with the gas-fired burner along with the fuel cell are less than 15 tpy using conservative EPA AP-42 emission factors.

Total emissions from the proposed Project will be below levels that would render the Project a "major stationary source" as defined at R.C.S.A. § 22a-174-1(57). The Project's maximum emissions will operate well below the serious non-attainment area thresholds for VOC and NO_x. Thus, the Project will be a minor source and is not subject to Federal Non-Attainment New Source Review ("NSR"). Also, there is no requirement for emission offsets for this Project as it will be below the non-attainment NSR major source thresholds.

A Permit to Construct and Operate Stationary Sources is not required for the Project because the potential emissions of any individual criteria air pollutant are less than 15 tpy; the source is not a new major stationary source; and, the source is not a new major source of hazardous air pollutants. The Project is also not subject to DEEP's "permit by rules" because the potential emissions from the fuel cell are less than 15 tpy. Thus, there are no registrations or applications required to be submitted to the DEEP; nor are there anticipated to be any approvals from the DEEP Air Bureau required prior to the construction and operation of the Project.

On May 13, 2010, EPA issued the final greenhouse gas ("GHG") Tailoring Rule. This rule effectively raised the thresholds for GHG emissions that define when permits under the Prevention of Significant Deterioration and Title V Operating Permit programs are required for new and existing industrial facilities. However, since the potential GHG emissions from the

Project will be well below the 75,000 tpy trigger established by the Tailoring Rule, those emissions will not trigger the requirement for an air permit.

On average, the Project will offset power from the utility grid, which has an average CO_2 footprint of 1,107 lbs CO_2 per MWh (EPA EGRID 9th Edition (February 2014) NEWE New England subregion, non-baseload). As a result, operation of the Project will result in the following net reduction of CO_2 GHG:

- CO_2 produced from power generation: 725 lbs/MWh
- CO_2 avoided by not using grid power: 1,107 lbs/MWh

Net CO_2 impact: 382 lbs/MWh or approximately 6191 tpy **reduction**

F. Water Quality

The Project Site is not located within either 100- or 500-year floodplains or the coastal zone. There are also no surface water bodies, wetlands or hydric soils at or near the Project Site.

The Project Site occupies less than one acre and, as such, a DEEP general permit construction stormwater pollution prevention plan is not required. Groundwater in the Site vicinity will not be impacted by the installation and operation of the Project. Limited excavation of soils will be required for installation of the Project and no wastewaters will be discharged on-Site. To the extent necessary, the small number of personnel periodically operating and/or maintaining the Project will use existing sanitary facilities at the Facility or at FCE's headquarters, which is in close proximity.

The fuel cell to be installed as part of this Project will not consume raw City water during normal operation. During startups, 4,000 gallons per day ("gpd") of raw water will be used. However, it will discharge approximately 1,440 gpd of wastewater during normal operation

startup and 2,000 gpd during each four (4) day startup period. Water will be obtained from the municipal water supply and the wastewater will be discharged to the City sanitary sewer system. The Project will register under DEEP's Miscellaneous Sewer Compatible Discharges general permit. Thus, adequate water supply and infrastructure are available to supply the Project and no substantial adverse environmental effect will occur from the Project's water use and wastewater disposal.

G. Fish and Wildlife

A request was made with the Connecticut DEEP for a review of the Natural Diversity Data Base Map. In response, DEEP indicated that there are no known extant populations of State Special Concern in the vicinity of the Site. *See* Correspondence attached as Exhibit F.

H. Summary

Overall, the proposed installation will have an incremental visual impact and will not cause any significant change or alteration in the physical or environmental characteristics of the Facility or the surrounding area. In fact, as discussed in Section IV.E above, the Project will actually provide an environmental benefit to the State of Connecticut by reducing CO_2 emissions by approximately 6191 tpy.

V. CONCLUSION

For all the foregoing reasons, TRS respectfully requests that the Council issue a determination, in the form of a declaratory ruling, that the proposed installation as described above is not one that would have a substantial adverse environmental effect and, therefore, that a Certificate is not required.

Respectfully submitted,

TRS FUEL CELL, LLC

By _____

Jennifer D. Arasimowicz, Esq.
Vice President, Managing Counsel

Henry Sire
Associate Counsel[1]

c/o FuelCell Energy, Inc.
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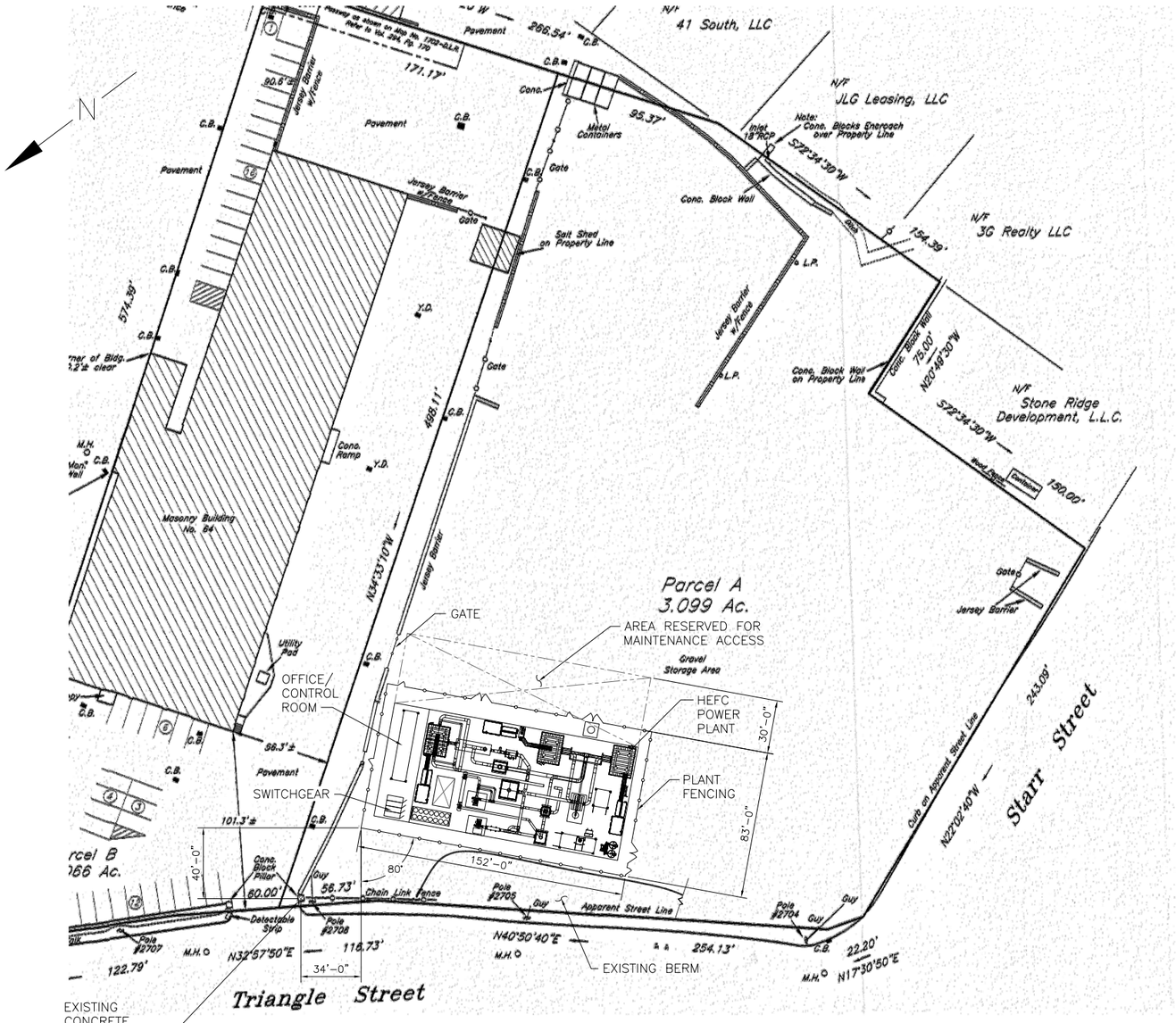
Danbury, CT 06810
Phone: (203) 825-6070
Fax: (203) 825-6069
E-mail: jarasimowicz@fce.com

Its Attorney

[1] Authorized CT House Counsel status pending

Petition of TRS Fuel Cell, LLC
July 21, 2016
Exhibit A

REVISION HISTORY				
REV	DESCRIPTION	BY	APPROVED	DATE
1	ISSUED FOR REVIEW	MHB	L. ERNST	06/02/16
2	ADDED SHEETS 2, 3 & 4	MHB	L. ERNST	06/08/16



SITE LAYOUT

20' 0 25' 50' 75'

GRAPHIC SCALE

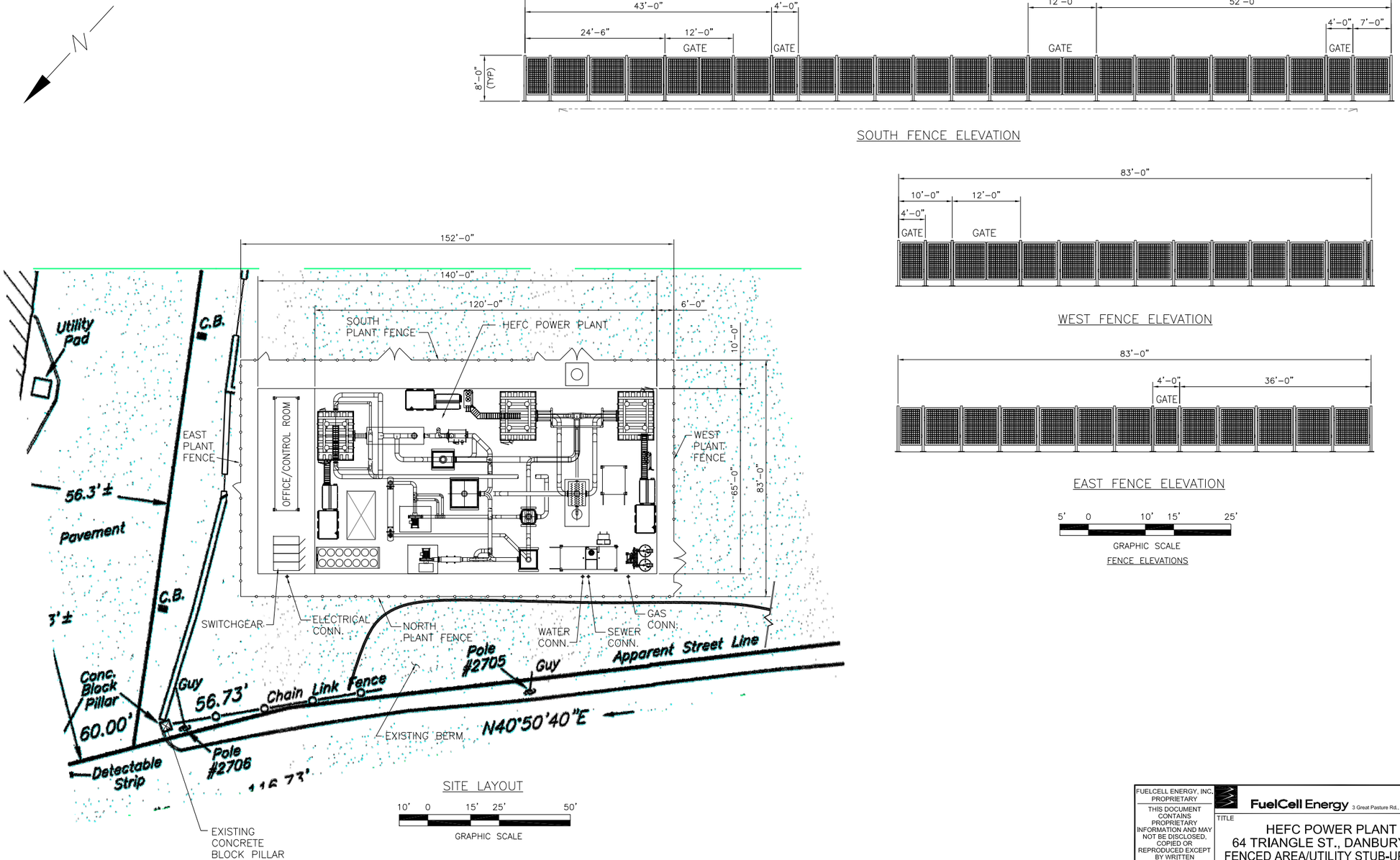
REFERENCE SHEETS – THIS DRAWING

SHEET 2 – FENCED AREA/UTILITY STUB-UP PLAN
SHEET 3 – EXIT PATHWAYS & UTILITY SHUTOFFS
SHEET 4 – AREA CLASSIFICATION PLAN

PRELIMINARY

FUELCELL ENERGY, INC. PROPRIETARY THIS DOCUMENT CONTAINS PROPRIETARY INFORMATION AND MAY NOT BE DISCLOSED, COPIED OR REPRODUCED EXCEPT BY WRITTEN PERMISSION FROM FUELCELL ENERGY INC. CAGE CODE 63131	SIGNATURES DRAWN: M. BAUMANN 06/02/16 ENGINEER: L. ERNST 06/02/16 APPROVED: RELEASED: UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE ±1/16" REVISION INDICATOR FLAG NOTE	FuelCell Energy 3 Great Pasture Rd., Danbury, CT 06813 TITLE: HEFC POWER PLANT 64 TRIANGLE ST., DANBURY, CT SITE LAYOUT PLAN SIZE D | Location SITE | DWG NO 16-0014-02 | REV 2 SCALE AS NOTED | SHEET 1 OF 4

Petition of TRS Fuel Cell, LLC
July 21, 2016
Exhibit A



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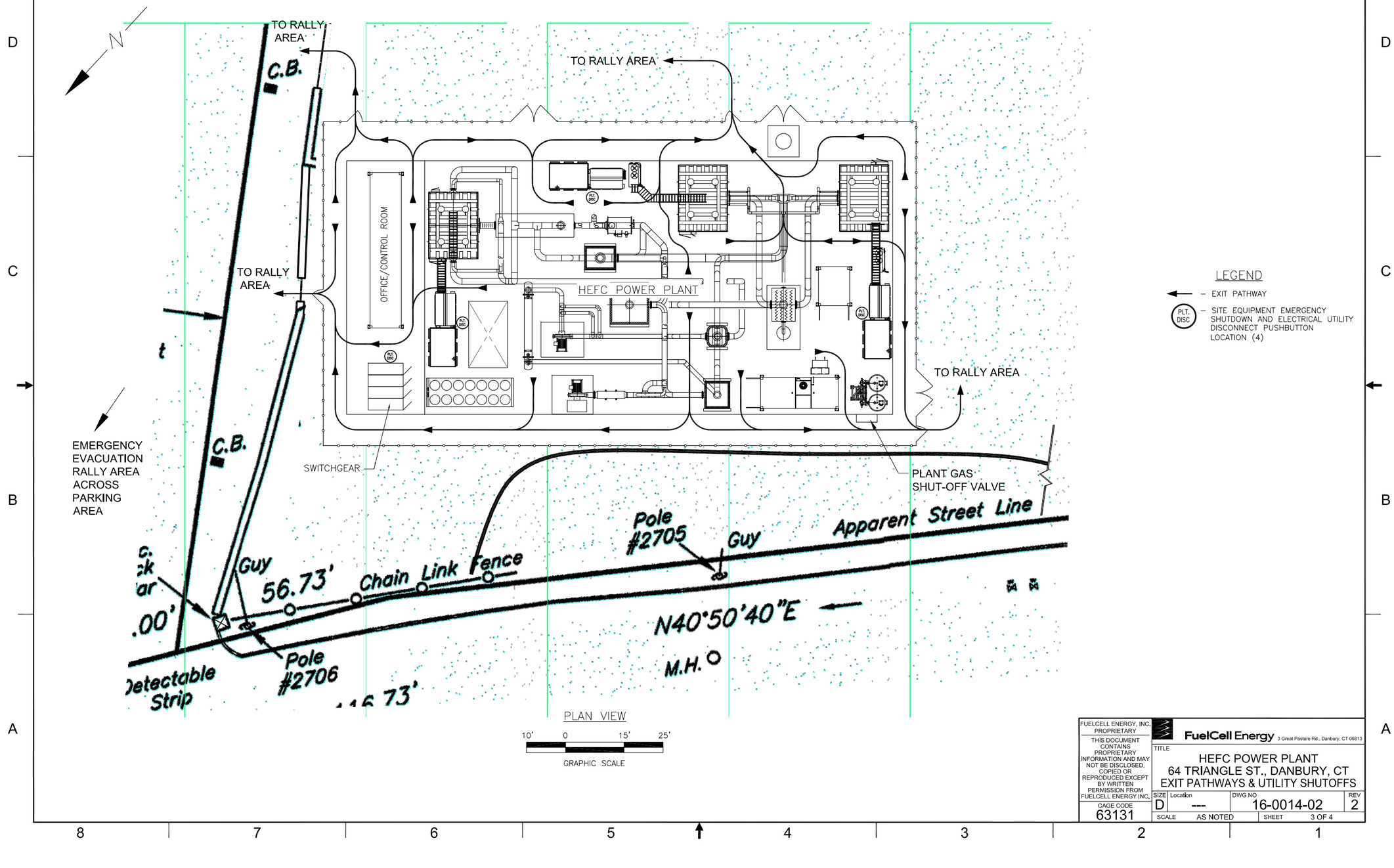
CAGE CODE 63131

FuelCell Energy 3 Great Pasture Rd., Danbury, CT 06813

TITLE
HEFC POWER PLANT
64 TRIANGLE ST., DANBURY, CT
FENCED AREA/UTILITY STUB-UP PLAN

SIZE	Location	DWG NO	REV
D	---	16-0014-02	2

SCALE AS NOTED SHEET 2 OF 4



PLAN VIEW

10' 0 15' 25'

GRAPHIC SCALE

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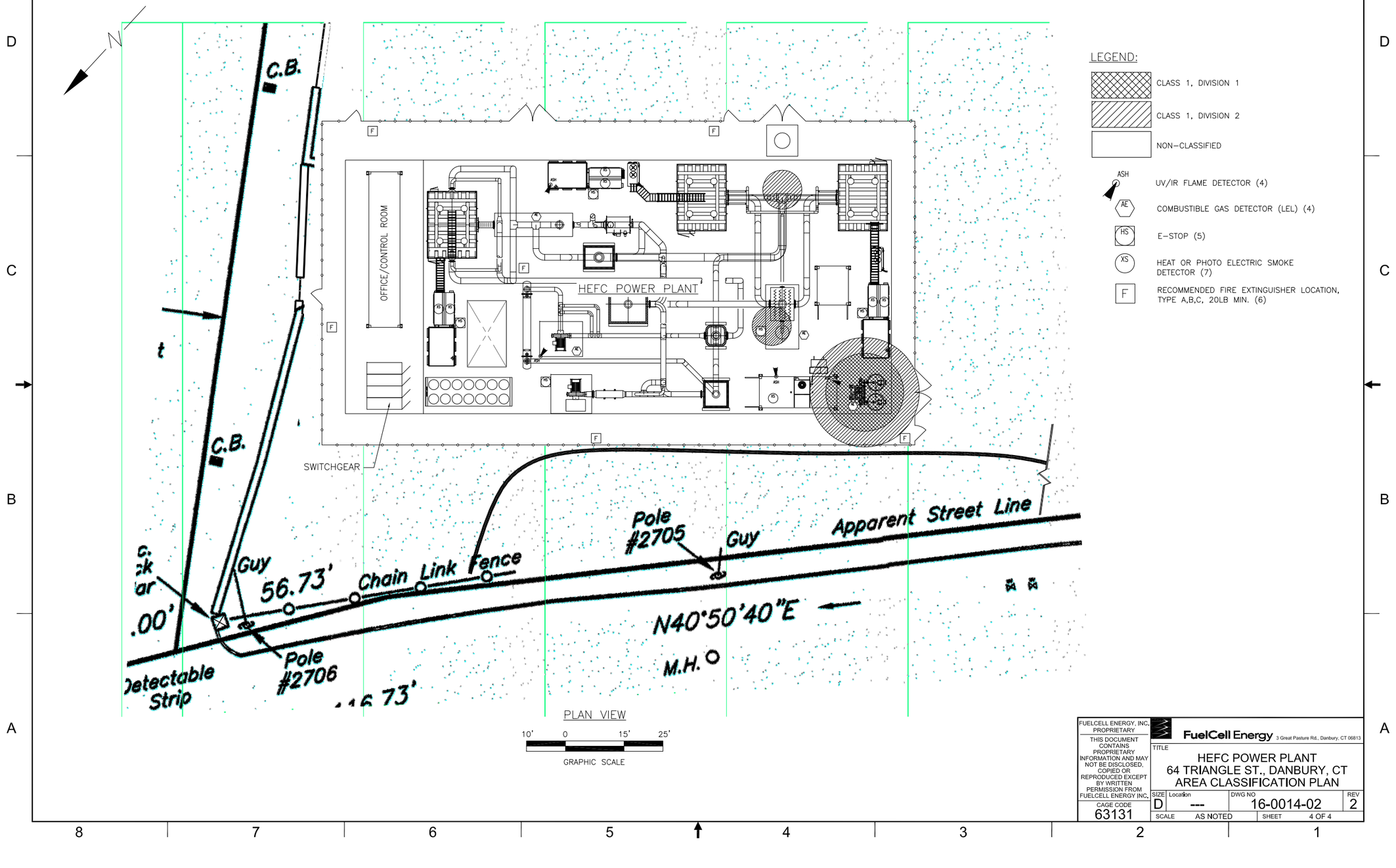
FuelCell Energy 3 Great Pasture Rd., Danbury, CT 06813

TITLE
HEFC POWER PLANT
64 TRIANGLE ST., DANBURY, CT
EXIT PATHWAYS & UTILITY SHUTOFFS

SIZE	Location	DWG NO	REV
D	---	16-0014-02	2

SCALE AS NOTED SHEET 3 OF 4



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CAGE CODE 63131

FuelCell Energy 3 Great Pasture Rd., Danbury, CT 06813

TITLE
HEFC POWER PLANT
64 TRIANGLE ST., DANBURY, CT
AREA CLASSIFICATION PLAN

SIZE	Location	DWG NO	REV
D	---	16-0014-02	2

SCALE AS NOTED SHEET 4 OF 4

Petition of TRS Fuel Cell, LLC
July 21, 2016
Exhibit B

CERTIFICATION

PARCEL #	LOCATION	OWNER OF RECORD
J152270000	Starr St.	3G Realty P. O. Box 543 Brookfield, CT 06804
K151110000	41 South St.	41 South LLC c/o JAR Associates 64 Triangle St., Ste 1 Danbury, CT 06810
J152220000	55 Triangle St.	BPH Inc. c/o Republic Foil Inc. 55 Triangle St. Danbury, CT 06810
J142750000	63-79 Triangle St.	C G & J LLC 23 Deerfield Rd. Brookfield, CT 06804
J152310000	12 Starr St.	Laurie B. Czudak 12 Starr St. Danbury, CT 06810-6928
J152730000	Starr St.	Fagioli LLC 4 Starr St. Danbury, CT 06810
J152280000	Starr St.	Huizinga Properties LLC 3 Starr St. Danbury, CT 06810
K150050000	Shelter Rock Rd.	J.A.R. Associates 64 Triangle St., Ste 1 Danbury, CT 06810
J142810000	Triangle	JAR Associates 64 Triangle St., Ste 1 Danbury, CT 06810
K150090000	41 South St.	JLG Leasing LLC P. O. Box 543 Brookfield, CT 06804-0543
J152340000	14 Starr St.	Kevin F. Murphy 14 Starr St. Danbury, CT 06810
K150080000	Shelter Rock Rd.	One Shelter Rock Rd LLC 3 White Birch Dr. New Fairfield, CT 06812

J152320000	8 Starr St.	Elizabeth Polyak 8 Starr St. Danbury, CT 06810
J152330000	10 Starr St.	Norma Starling 10 Starr St. Danbury, CT 06810
J152260000	7 Starr St.	Stone Ridge Development LLC 43 Turkey Plain Rd. Bethel, CT 06810

MUNICIPAL OFFICIAL/AGENCY	NAME/ADDRESS
City of Danbury Chief Elected Official	Mayor Mark D. Boughton City of Danbury 155 Deer Hill Avenue Danbury, CT 06810
City of Danbury Planning & Zoning Department	Sharon Calitro, Director City of Danbury Planning & Zoning Department 155 Deer Hill Avenue Danbury, CT 06810
City of Danbury Environmental Impact Commission	Bernard P. Gallo, Chairman City of Danbury Environmental Impact Commission 155 Deer Hill Avenue Danbury, CT 06810 Phoe38nix@aol.com
City of Danbury Conservation Commission	Kim Botelho, Chair City of Danbury 155 Deer Hill Avenue Danbury, CT 06810
City of Danbury Corporation Counsel	Robert J. Yamin, Esq. Corporation Counsel 155 Deer Hill Road Danbury, CT 06810
Western CT Council of Governments	Francis Pickering, Executive Director fpickering@westcog.org
State Senator, District S24	Senator Michael A. McLachlan Legislative Office Building 300 Capitol Avenue Hartford, CT 06106

State Representative, District 110	Representative Bob Godfrey Legislative Office Building, Room 4107 Hartford, CT 06106
U. S. Senator	Senator Richard Blumenthal 90 State House Square – 10th Floor Hartford, CT 06103
U. S. Senator	Senator Christopher Murphy One Constitution Plaza, 7th Fl. Hartford, CT 06103
U. S. Congresswoman, 5th District	Congresswoman Elizabeth Esty 1 Grove Street, Suite 600 New Britain, CT 06053

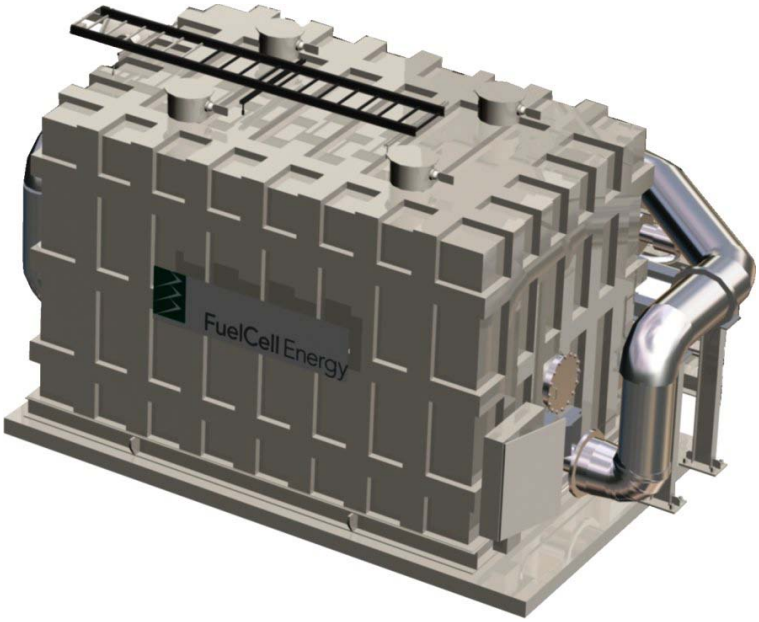
STATE OFFICIAL AGENCY	NAME/ADDRESS
Connecticut Attorney General	Attorney George Jepsen Office of the Attorney General State of Connecticut 55 Elm Street Hartford, CT 06106
State Department of Energy of Environmental Protection	Robert Klee, Commissioner Department of Energy and Environmental Protection 79 Elm Street Hartford, CT 06106-5127 Robert.klee@ct.gov
State Public Utilities Regulatory Authority	Arthur House, Chairman Public Utilities Regulatory Authority 10 Franklin Square New Britain, CT 06051 Arthur.house@ct.gov
State Department of Public Health	Dr. Raul Pino, Commissioner Department of Public Health 410 Capitol Avenue P. O. Box 340308 Hartford, CT 06134 dph.commissioner@ct.gov
State Council on Environmental Quality	Susan D. Merrow, Chair Council on Environmental Quality 79 Elm Street Hartford, CT 06106 Karl.wagener@ct.gov

State Department of Agriculture	Steven K. Reviczky, Commissioner Department of Agriculture 165 Capitol Avenue Hartford, CT 06106 steven.reviczky@ct.gov
Office of Policy and Management	Benjamin Barnes, Secretary Office of Policy and Management 450 Capitol Avenue Hartford, CT 06106 Ben.Barnes@Ct.gov
State Department of Economic and Community Development	Catherine Smith, Commissioner Department of Economic and Community Development 505 Hudson Street Hartford, CT 06106 Catherine.Smith@ct.gov
State Department of Transportation	James P. Redeker, Commissioner Department of Transportation 2800 Berlin Turnpike P. O. Box 317546 Newington, CT 06131-7546 james.redeker@ct.gov
State Department of Emergency Services and Public Protection	Dora B. Schriro, Commissioner Department of Emergency Services and Public Protection 1111 Country Club Road Middletown, CT 06457 dora.schriro@ct.gov
State Department of Consumer Protection	Jonathan A. Harris, Commissioner Department of Consumer Protection 165 Capitol Avenue Hartford, CT 06106 jonathan.harris@ct.gov
State Department of Labor	Scott D. Jackson, Commissioner Department of Labor 200 Folly Brook Boulevard Wethersfield, CT 06109

State Department of Emergency Management & Homeland Security	William P. Shea, Deputy Commissioner Department of Emergency Management & Homeland Security 25 Sigourney Street, 6th Floor Hartford, CT 06106 william.shea@ct.gov
State Department of Administrative Services	Melody A. Currey, Commissioner Department of Administrative Services 165 Capitol Avenue Hartford, CT 06106

Jennifer D. Arasimowicz

Facility Sound Assessment



High Efficiency Fuel Cell Project

Triangle Street

Danbury, Connecticut

June 18, 2016

Prepared For:

FuelCell Energy, LLC
3 Great Pasture Road
Danbury, CT 06813

Prepared By:

Modeling Specialties
30 Maple Road
Westford, MA 01886

Environmental Sound Assessment
Danbury HEFC Triangle Street Project

Background

A High Efficiency Fuel Cell (HEFC) Project is proposed at an existing industrial property on Triangle Street in Danbury, Connecticut. The Fuel Cell process combines Connecticut Class I Renewable Energy resources, uses proven commercial technologies, is ultra-clean, and is more efficient than any other electricity generating technology in its size range. The proposed facility harvests additional energy from the Fuel Cell waste gases making this process even more energy efficient than recent Fuel Cell projects. The equipment configuration is designed and provided by FuelCell Energy, Inc. ("FuelCell Energy"). The following assessment is based on the criteria provided by the Connecticut Department of Energy & Environmental Protection (CDEEP). Sound levels from the proposed equipment were estimated based on vendor design and measured sound from similar equipment configurations. Sound level modeling techniques were used to estimate the potential impacts at receiving locations. What follows is a complete analysis of the facility sound using measured ambient data, detailed proposed equipment configuration and using 3 dimensional noise modeling software package CadnaA by Datakustic.

Overview of Project and Site Vicinity

The Project is located at an existing commercial/industrial property on Triangle Street. The busy Connecticut Department of Motor Vehicles on Lee Mac Avenue is near the site to the east. Other area parcels are used for retail, manufacturing, office and bus storage. To the south of the proposed site the land use transitions into residential. Figure 1 shows an aerial view of the site and surrounding area. Existing sources of sound in the area include traffic along Triangle Street and Lee Mac Avenue, building mechanical equipment along with residential and commercial activities in the area. Since one purpose of this study is to identify the background sound level, significant effort was made to exclude sound from short term or infrequent sources that might temporarily elevate sound levels.

Some of the industrial properties in the area are currently not in use. The manufacturing facility opposite the site is currently unoccupied, and has common ownership with the proposed site. This is important to the study in that current ambient levels can be expected to be lower than when these area facilities are in full operation. In this way, the study is believed to represent quiet conditions for the area.

The host site includes a large building and an open area where equipment and components are stored. There is a berm surrounding the storage area that is approximately 6 feet above the site level. The berm provides limited visibility to the site from surrounding roadways. But because the receivers are elevated or distant from the sources, the berm will not be a major benefit in shielding sound propagation. While it is noted, it is not included in the 3-dimensional modeling of sound.

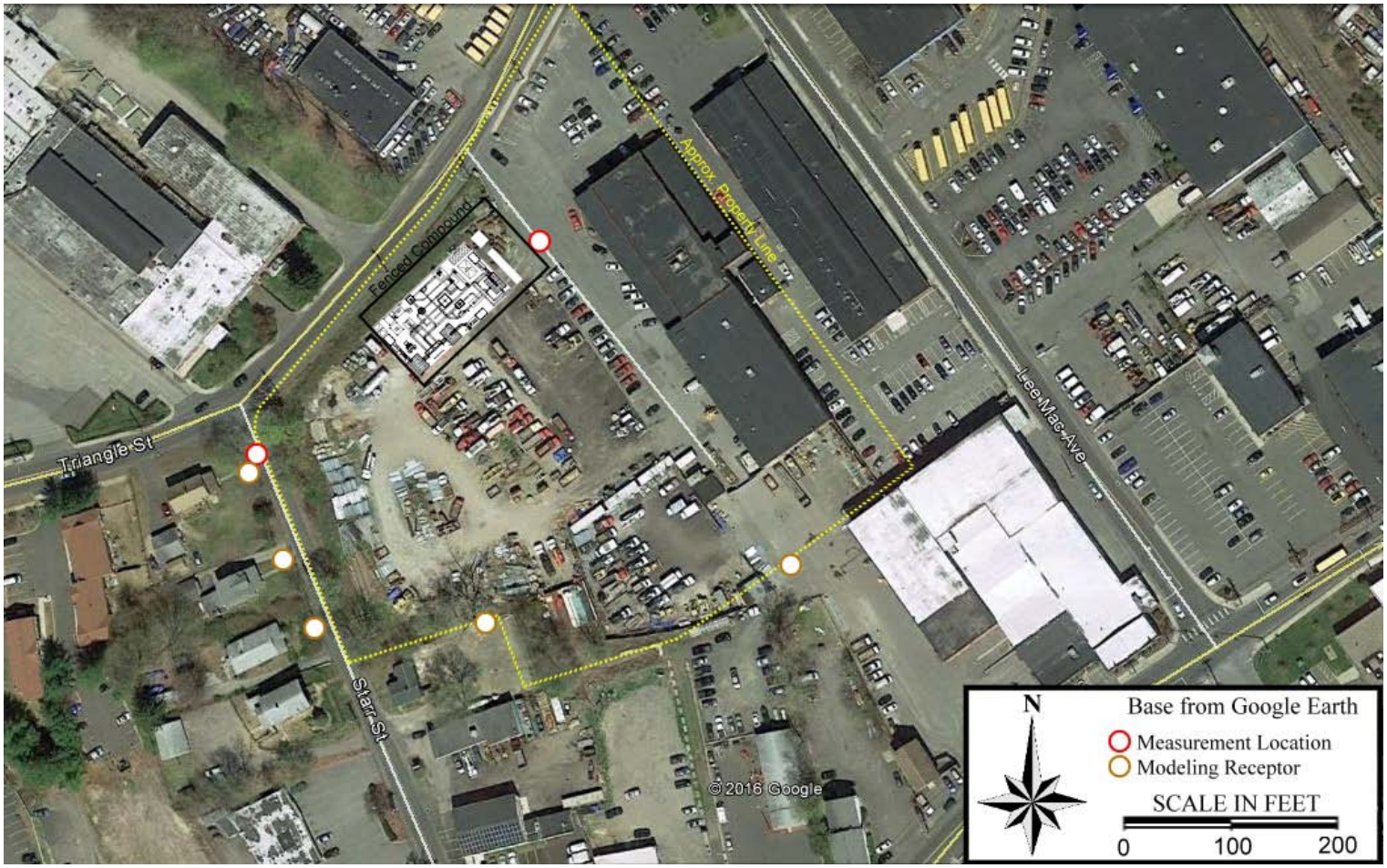


Figure 1: **Aerial Overview of the Site, Measurement Locations, Receptors and Surrounding Area**

Noise Analysis: Discussion of Analysis Methods

There are a number of ways in which sound (noise) levels are measured and quantified. All of them use the logarithmic decibel (dB) scale. Following is a brief introduction to the noise measurement terminology used in this assessment.

Noise Metrics

The Sound Level Meter used to measure noise is a standardized instrument.[1] It contains "weighting networks" to adjust the frequency response of the instrument to approximate that of the human ear under various circumstances. One of these is the *A-weighting* network. A-weighted sound levels emphasize the middle frequency sounds and de-emphasize lower and higher frequency sounds; they are reported in decibels designated as "dBA." Figure 2 illustrates typical sound levels produced by sources that are familiar from everyday experience.

The sounds in our environment usually vary with time so they cannot simply be described with a single number. Two methods are used for describing variable sounds. These are *exceedance levels* and *equivalent levels.* Both are derived from a large number of moment-to-moment A-weighted sound level measurements. Exceedance levels are designated L_n, where "n" can have any value from 0 to 100 percent. For example:

- L_{90} is the sound level in dBA exceeded 90 percent of the time during the measurement period. The L_{90} is close to the lowest sound level observed. It is essentially the same as the *residual* sound level, which is the sound level observed when there are no loud, transient noises.
- L_{50} is the median sound level; the sound level in dBA exceeded 50 percent of the time during the measurement period.
- L_{10} is the sound level in dBA exceeded only 10 percent of the time. It is close to the maximum level observed during the measurement period. The L_{10} is sometimes called the *intrusive* sound level because it is caused by occasional louder noises like those from passing motor vehicles. By using exceedance levels, it is possible to separate prevailing, steady noises (L_{90}) from occasional, louder noises (L_{10}) in the environment.

[1] *American National Standard Specification for Sound Level Meters*, ANSI S1.4-1983, published by the Standards Secretariat of the Acoustical Society of America, Melville, NY.

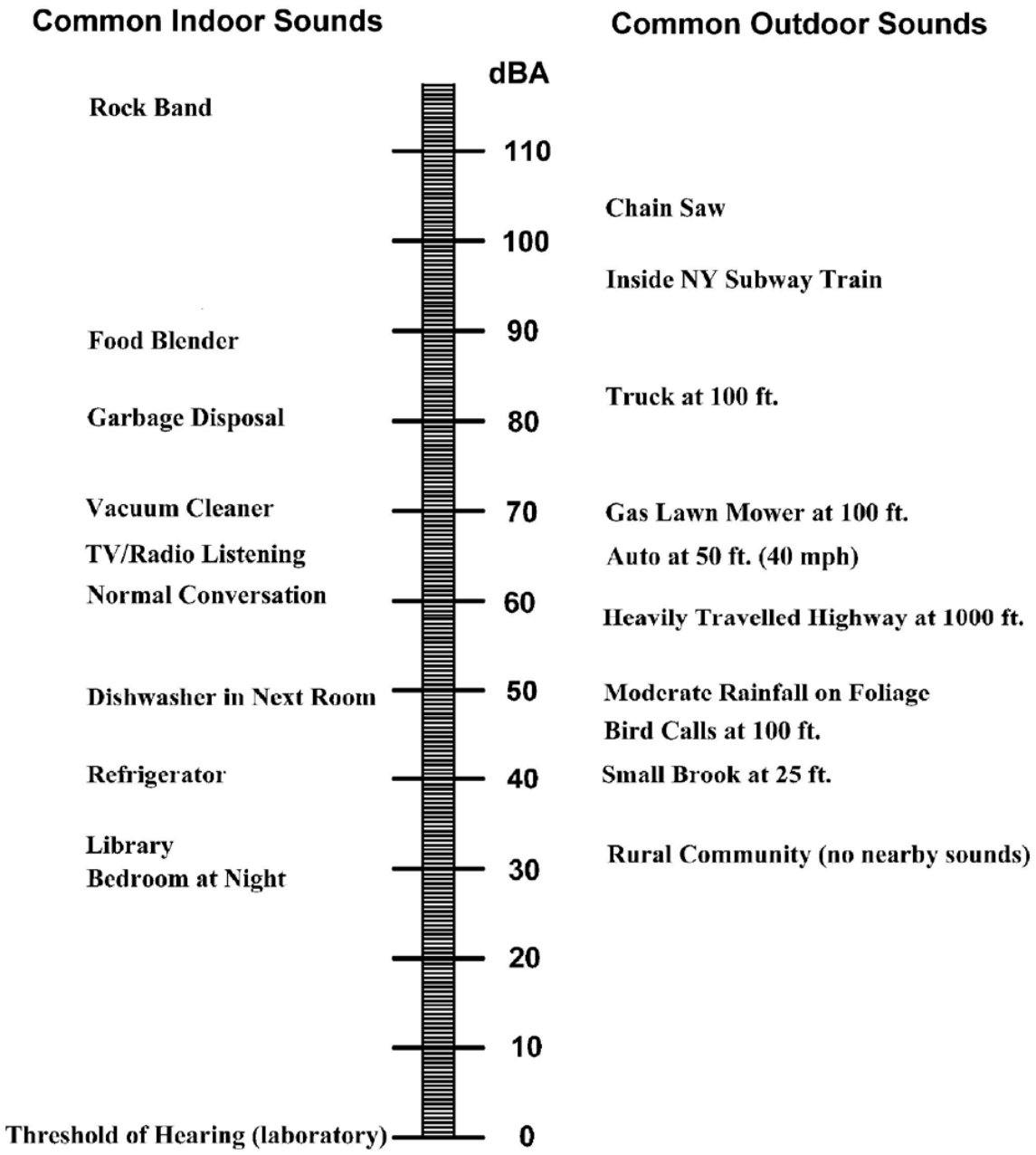


Figure 2: **Typical Sound Levels from Everyday Experience**

- The *equivalent level* is the level of a hypothetical steady sound that has the same energy as the actual fluctuating sound observed. The equivalent level is designated L_{eq}, and is also A-weighted. The equivalent level is strongly influenced by occasional loud, intrusive noises.

When a steady sound is observed, all of the L_n and L_{eq} are equal. This analysis is based on the background or L_{90} metric. All broadband levels represented in this study are weighted using the A-weighting scale.

In the design of noise control treatments, it is essential to know something about the frequency spectrum of the sound of interest. Noise control treatments do not function like the human ear, so simple A-weighted levels are not useful for noise-control design or the identification of tones. The frequency spectra of sounds are usually stated in terms of *octave band sound pressure levels*, in dB, with the octave frequency bands being those established by standard.[2] The sounds in the community were measured in 1/3 octave band levels. The sounds expected as a result of this project have been evaluated with respect to the octave band sound pressure levels as well as the A-weighted equivalent sound level. For simplicity (and by Danbury Ordinance requirement) they are summarized in this report in terms of the combined A-weighted level.

Noise Regulations and Criteria

Sound compliance is judged on two bases: the extent to which Federal and State regulations or guidelines are met, and the extent to which it is estimated that the community is protected from excessive sound levels. The governmental regulations that may be applicable to sound produced by activities at the Site are summarized below.

- ***Federal***

Occupational noise exposure standards: 29 CFR 1910.95. This regulation restricts the noise exposure of employees at the workplace as referred to in Occupational Safety and Health Administration requirements. The facility will emit only occasional sounds of modest levels, as demonstrated by this study.

- ***State***

The state of Connecticut (Connecticut Department of Energy & Environmental Protection or CDEEP) regulates noise at Regulation Title 22a, Sections 69-1 through 69-7.4, Control of Noise. The project is a Class C (Industrial) emitter. Some adjacent properties are zoned residential and were evaluated as Class A Noise Receptors. The corresponding CDEEP performance criteria are shown in the following table based on the source and receiving land uses.

[2] *American National Standard Specification for Octave, Half-octave and Third-octave Band Filter Sets*, ANSI S1.11-1966 (R1975).

Table 1: Connecticut DEEP Noise Standards, by Zoning District

	Receptor's Zone			
Emitter's Zone	Industrial	Commercial	Residential/Day	Residential/Night
Residential	62 dBA	55 dBA	55 dBA	45 dBA
Commercial	62 dBA	62 dBA	55 dBA	45 dBA
Industrial	70 dBA	66 dBA	61 dBA	51 dBA

Adjustments for high background noise levels or impulse noises.

1. In those individual cases where the background noise levels caused by sources not subject to these regulations exceed the standards contained in this chapter, a source shall be considered to cause excessive noise if the noise emitted by such source exceeds the background noise levels by five dBA, provided that no source subject to the provisions of this chapter shall emit noise in excess of eighty (80) dBA at any time, and provided that this section does not decrease the permissible levels of other sections of this chapter.

2. No person shall cause or allow the emission of impulse noise in excess of eighty (80) dB peak sound pressure level during the nighttime to any residential noise zone.

3. No person shall cause or allow the emission of impulse noise in excess of one hundred (100) dB peak sound pressure level at any time to any zone.

- ***Local Danbury Requirements***

Electrical generation projects are generally regulated at the State level. In this study, Modeling Specialties has evaluated the site based on the CDEEP criteria at sensitive locations. A review of the Danbury Code of Ordinances has identified Section 12-14 to regulate noise. The Danbury Ordinance Section (e) states that it is intended to conform to the regulations of the State of Connecticut Regulations Section 22a-69-3.5. In this way, addressing the CDEEP standards also addresses the Danbury noise standards.

Since the noise standards are based on the land use of both the emitter and the receiver, the current land use in the area is important to the study. Figure 3 shows the land use map for the area near the project site. The site and properties nearest the site are industrial in use. The zoned land use as well as the observed land use was considered in the selection of relevant noise receptor locations.

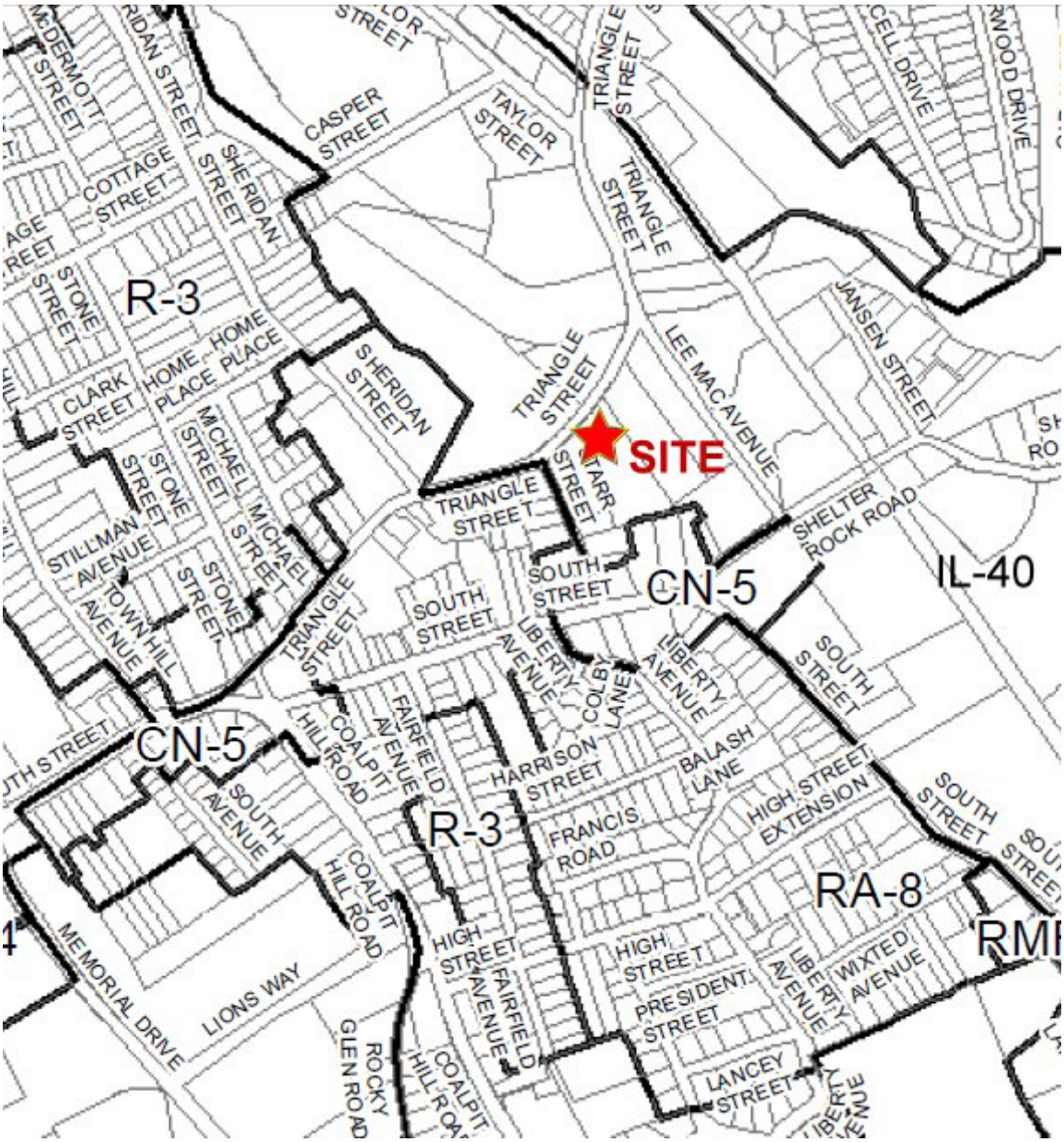


Figure 3: **Excerpt of the Danbury Zoning Map for the Project Area**

Existing Community Sound Levels

A site survey and noise measurement study was conducted for the facility on May 6, 2016. While the ambient sound fluctuates through the day and night, the sound from the proposed facility is expected to be very steady. However, the local ambient level was temporarily affected by daytime construction activities at the host facility. Because of this, the survey was postponed a half hour so the sound could be measured during a break in most of the construction activities.

Attended sound level measurements were made using Rion NA-28 sound level meters. The measurements create a baseline community sound level and captured the frequency-specific character of the sound. The meters were mounted on tripods approximately 5 feet above the ground. The microphones were fitted with factory recommended foam windscreens. The meters were programmed to take measurements for 20 minutes and then to store processed statistical levels. All meters meet the requirements of ANSI S1.4 Type 1 – Precision specification for sound level meters. The meters were calibrated in the field using a Larsen Davis Cal-250 acoustical calibrator before and after the measurement session. The field calibrations indicated that the meters did not drift during the study. The two spectrum analyzers comply with the requirements of the ANSI S1-11 for octave band filter sets.

The L_{90} characterizes the residual or background sound level. The sound from short term or infrequent sources is statistically excluded from the sample. Much of the sound measured is from passing vehicles which momentarily elevate the Leq levels, but which are screened from the results. The only nighttime sound source noted at the existing site (or parcels under common ownership) is a roof top air handler. Because the unit was shielded from site by the rooflines, it was not clear from which building the sound was emitted.

Sources Excluded from the Ambient Survey

During both surveys, the sound field is dominated by traffic on Triangle Street and Lee Mac Avenue. Daytime construction in the area included air tools, circular saws and some powered lift equipment. Since construction activities tend to be short lived and change based on the phase of construction, it is typical to avoid including them in the survey. A field image in Figure 4 shows the construction activities on the existing building on the proposed site.

The building directly across Triangle Street from the site appeared to be unoccupied during the survey. On the front of the manufacturing facility is a cooling tower shown in Figure 5, which was also not operating during the survey, effectively excluding it from the study.

Most of the proposed site is used for storage of construction material or equipment shown in a field image as Figure 6. Managing this material requires powered lift equipment to load or carry it to and from the site. No lifting or moving of the equipment took place during the survey so it was also screened from the study.

Figure 4: **Field Image Showing the Construction Activities at the Host Site**

Figure 5: **Field Image Showing the Cooler Immediately Across the Street from the Site**

Figure 6: **Field Image Showing the Materials Stored at the Proposed Site**

Results of the Ambient Survey

The results of the ambient sound level measurements are summarized in Table 2. The community sensitivity is usually based on the lower background levels. Comparing the Leq levels (including all sounds) to the L90 levels (quietest 10% of samples) offers a baseline of the sound in the existing area. Baseline levels are affected by community conditions, meteorology, seasons, insects and traffic patterns. Because the measured levels are dominated by area traffic, they can be expected to be relatively consistent. They show that the existing community meets the target levels in the Connecticut DEEP standards.

Table 2: Ambient Sound Levels Measured on May 6, 2016

Location	Time	Period	L_{eq}	L_{90}
Site	12:15 AM	Night	48 dBA	41 dBA
Site	11:30 AM	Day	55 dBA	49 dBA
Starr Street	12:15 AM	Night	52 dBA	41 dBA
Starr Street	11:30 AM	Day	62 dBA	47 dBA

Consistent with most residential communities, the daytime is affected by elevated traffic volumes on the roadways. Nighttime levels tend to be lower because of lower traffic volumes and neighborhood activities.

Expected Sounds from the Proposed Installation

The proposed installation has been designed with significant attention to protecting the community sound environment. Most of the equipment associated with the Fuel Cell facility produces no significant sound. The fuel cell technology does not require many of the mechanical sources of noise that are typical of power generation facilities. This analysis represents the most likely sound levels to be expected as a result of the normal operation of the facility using manufacturer's data and measurements of similar equipment at other fuel cell installations.

A computer model was developed for the facility's sound levels based on conservative sound propagation principles prescribed in the acoustics literature. Most of the equipment sources will produce gentle sound of a continuous nature. Each of the potential sources during routine operation of the facility was identified. The sound from each facility-related source is estimated at the source and at the community receptors. The sum of the contributing sources is used to represent the predicted sound level at the modeled location. Identifying specific receiving locations is a key element of the noise modeling, since sound levels decrease exponentially with increasing distance. The distances used in this study represent the distance between the sources and the nearest representative sensitive property. The results of the modeling show that the steady sound from the proposed equipment will meet the CDEEP standards during the daytime and also at night.

Sources of Project Sound

There are several sources of modest sound at the facility. Under normal conditions, the few noise sources will produce consistent sound through the day and night. At least one source, the cooling unit on the Water Processing Skid, will cycle on and off based on the cooling requirement. The dry cooler is equipped with multiple fan pairs which will be activated as needed to provide necessary cooling. Since it is designed for operation under all feasible conditions, it will almost never operate with all fans together. But in this conservative study, all sources are analyzed as continuous full time sources.

The fuel cell equipment is manufactured in Connecticut by FuelCell Energy, Inc. The high efficiency fuel cell facility will include the components of a standard DFC-3000 fuel cell plant, along with an additional fuel cell module and other supporting elements. The design of the facility is based on the proposed equipment layout shown in Figure 7. The primary source of equipment sound is from the fresh air blower and piping to deliver it to the modules. The blower has been installed in a carefully designed acoustical enclosure. Air is drawn into the enclosure while sound is prevented from escaping. The blower output pipe is treated with a silencer to prevent the blower sound from being transmitted downstream. Because this layout also includes a bottoming module, a second blower is employed to boost pressure. The booster blower is also enclosed in an acoustical enclosure. Gas flow sources are lagged. This collection of sound control features are incorporated into what is termed the low acoustical profile (LAP) configuration. This configuration was developed specifically for Fuel Cell installations to reduce the potential to affect sensitive community receptors. However, the mitigated process will still emit some sound energy, which is quantified and modeled at sensitive areas.

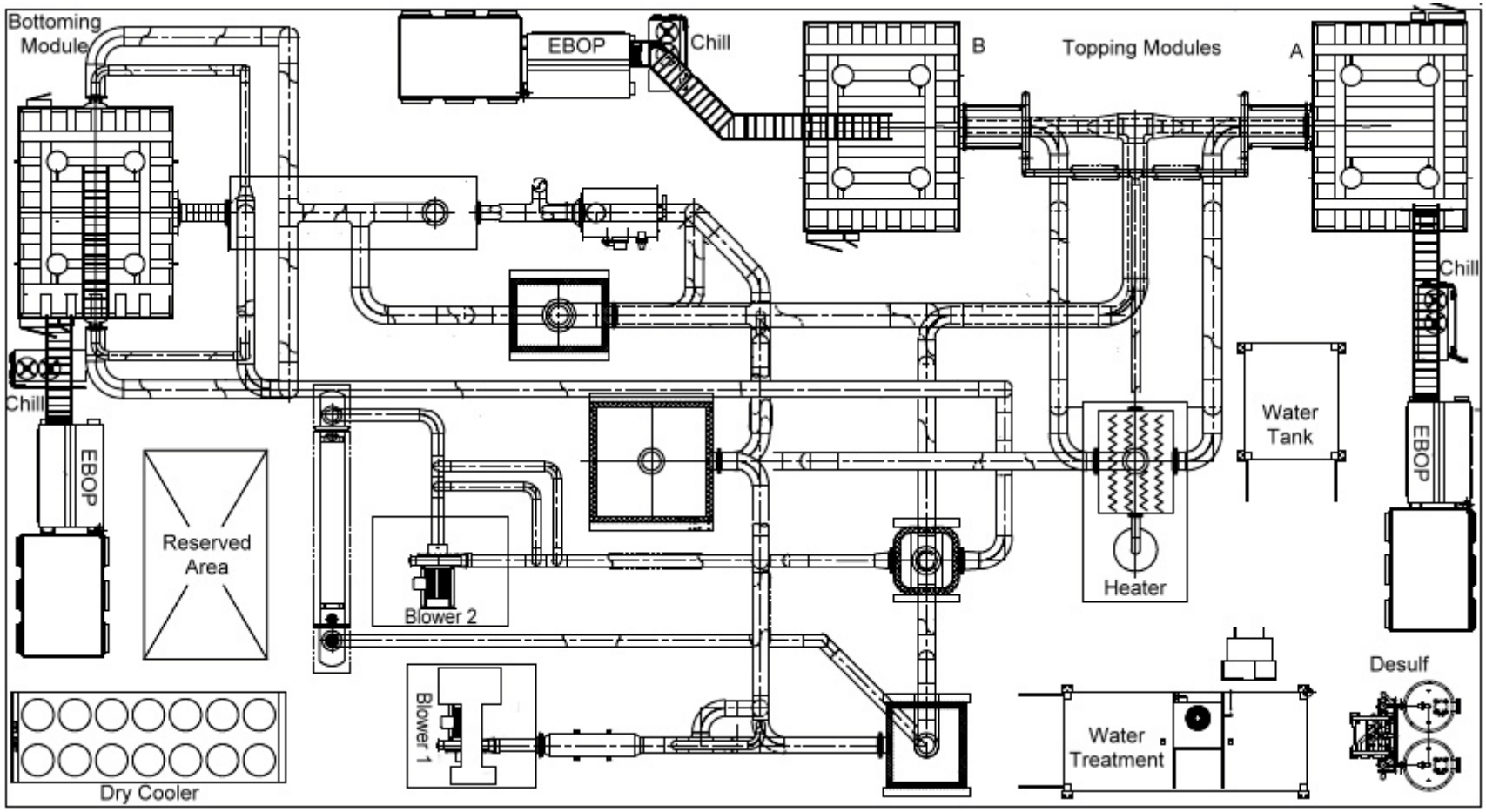


Figure 7: **Layout of the HEFC facility Showing Major Groups of Equipment**

The analysis of sound is based on the contributions of individual sources and propagation losses to the analyzed receptors in general directions from the facility. The modeling accounts for the worst case equipment sound under quiet ambient conditions consistent with the regulatory criteria. Results of the modeling are shown in Table 3 and are provided in graphic form in Figure 8. Note that, the distance and modeled levels are provided at the nearest property in each potentially exposed direction. Modeling is not provided in other directions because those parcels have common ownership with the site. The model accounts for the shielding that is provided by buildings to the southeast of the equipment, which will shield receptors in the area of the Department of Motor Vehicles. The site is surrounded by a berm which provides visual screening from neighboring roadways. Because the residential receptors to the west are elevated, the berm was not included in this conservative analysis.

Table 3: Summary of Noise Modeling Results

Receptor	Distance (ft)	Project Sound (dBA)	Criterion (dBA)
Residence, West1	200	49	51
Residence, West2	220	48	51
Residence, West2	240	44	51
Commercial, South	240	45	66
Industrial SE	290	44	70

Mitigation Measures

The proposed fuel cell equipment is inherently quiet compared to other forms of electrical generation. The DFC is configured with an engineered enclosure around its primary sources (fresh air blowers and outlets), in what the manufacturer calls LAP or Low Acoustical Profile. This package also includes lagging on many of the pipes that would otherwise produce gas flow sound. This configuration addresses all the significant sources within the DFC package.

Conclusions

The proposed fuel cell equipment package inherently lacks the heavy mechanical equipment that is commonly associated with electrical generation. There will be several sources of modest sound such as blowers, pumps, condenser and fans. The size of the equipment and character of the sound is more typical of commercial building mechanical equipment than of typical electrical generating sources. Mitigation measures are engineered into the equipment configuration to keep the cumulative sound from the Fuel Cell facility at or near the ambient level.

The existing sound levels were established by direct measurements that do not include short term ambient sounds. So this study represents quiet conditions for the area. The potential sources of sound at the facility were identified and quantified. Sound level modeling techniques were employed to estimate the sound levels at the property lines and nearest receptor locations. Since sound decreases with distance, the sound will be even less at more distant locations. The results of the modeling indicate that the facility levels will meet the CDEEP noise criteria at all nearby receptors.

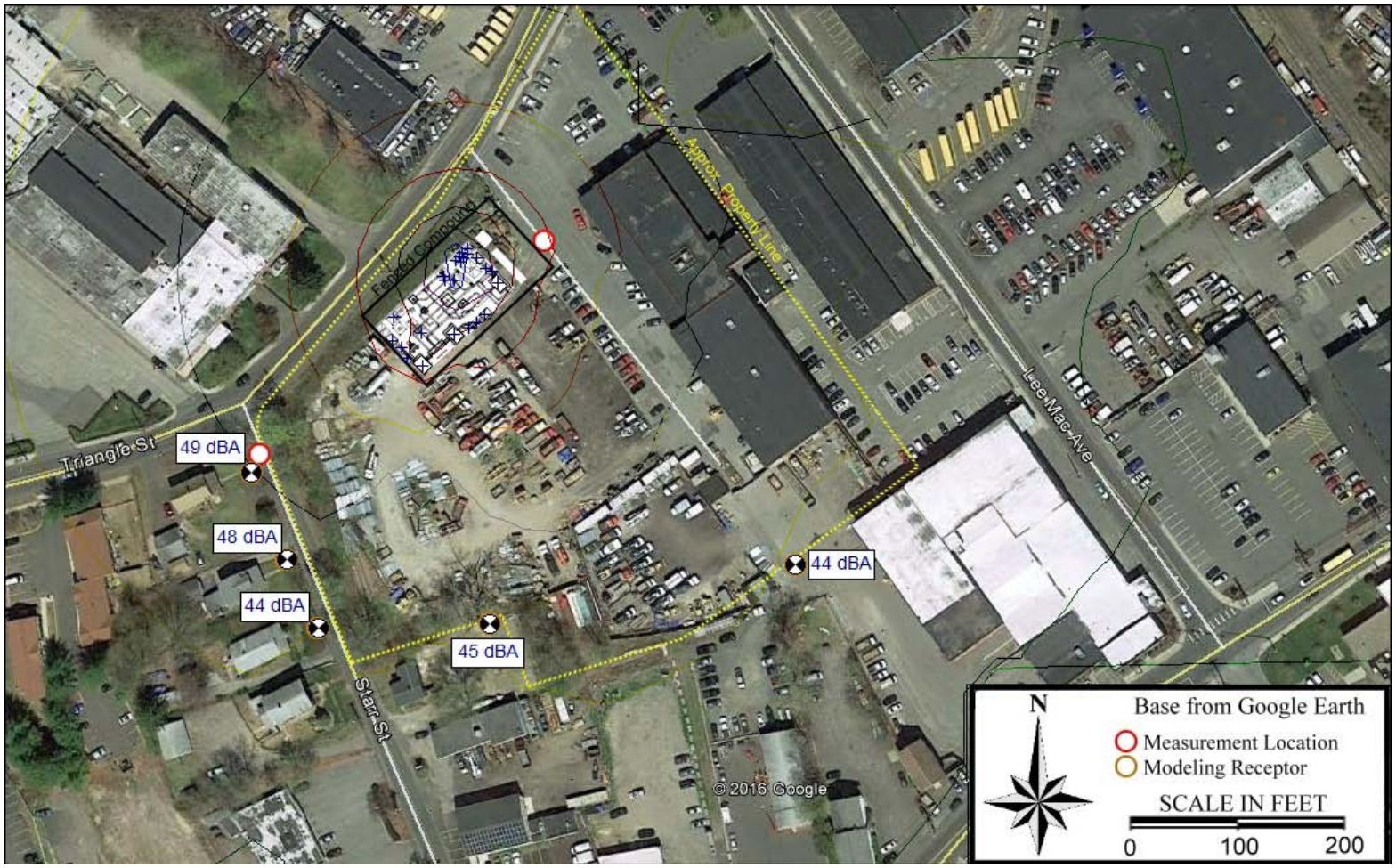


Figure 8: Graphical Summary of the HEFC Predicted Sound Levels

FuelCell Energy

EMERGENCY RESPONSE/SAFETY PLAN

Prepared for:

Triangle Street High Efficiency Fuel Cell Project

Located at:
64 Triangle Street
Danbury, CT 06810

Owned by:
FuelCell Energy, Inc.
3 Great Pasture Road
Danbury, CT 06810

Prepared by:
FuelCell Energy, Inc.
3 Great Pasture Road
Danbury, CT 06813

Submitted to:
Connecticut Siting Council
10 Franklin Square
New Britain, CT 06051

July 2016

A current copy of this Plan is to remain in an accessible location on-site at all times

Document Number: SHE_Eng-111
Revision: 1

Plan Contents

Appendices

1 INTRODUCTION

The Triangle Street High Efficiency Fuel Cell (HEFC) Project consists of a single high efficiency fuel cell power plant. The plant will be owned and operated by FuelCell Energy, Inc. The property is owned by J.A.R. Associates of Brookfield, CT and is leased to FCE to operate the plant. Power generated by the plant will be exported to the electric utility grid. The net generating capacity of the fuel cell power plant is 3.6 MW, nominal. This Emergency Response / Safety Plan has been prepared for submission to the Connecticut Siting Council in fulfillment of the requirements of the Decision and Order pursuant to Docket NT-2010. The NT-2010 order requirements for the preparation of an Emergency Response / Safety Plan are similar to the requirements imposed by other regulatory programs, namely, the Emergency Action Plan required by the Occupational Safety and Health Administration (OHSA) general industry standard, the Fire Prevention & Emergency Plan requirement of the National Fire Protection Agency Standard 853 and the development of safety programs required by OSHA. Accordingly, these plans, in addition to other information, are incorporated into this Plan in fulfillment of the NT-2010 requirements.

1.1 General

FCE Direct Fuel Cell ("DFC") plants are designed and operated as unmanned power generation facilities. The control system for the plant is designed for the system to "fail safe" in the event of a process upset. For any event or upset condition that has a potential safety consequence, the plant control system initiates an emergency shutdown ("ESD") sequence that isolates the external fuel source from the plant and trips the fuel cell inverters off the grid.

A DFC plant Emergency Shut Down event isolates the natural gas fuel supply from the plant through the use of dual fast-acting, spring-loaded block valves located at the fuel gas supply connection for each plant. An ESD event also triggers automatic isolation of the fuel desulfurizer vessels and initiates the purging of downstream fuel train components through the module using the onsite supply of inert nitrogen gas. Purging the residual fuel train contents out through the modules results in the fuel being oxidized to innocuous end products. An ESD event also results in the fuel cell modules and inverters being disconnected from the electric utility grid. Process upset or equipment operation malfunctions that can only cause equipment damage but no possible safety consequences can result in the fuel cell plant switching off the electric grid while remaining operational (islanding) so as to allow time for the electric grid or the fuel cell plant to stabilize, prior to resynchronizing with the grid. During any of these types of events, operators at FCE's 24/7/365-manned Global Monitoring and Control Center ("GMCC"), will immediately assess the operational condition of the plant and take appropriate actions to stabilize or recover the plant to operational status, whichever is appropriate for the situation. If any on-site response is appropriate for the situation, the GMCC operator will contact appropriate personnel, be they an FCE field service technician, or in the very unlikely event of a developing emergency response situation, local emergency response personnel.

Following, in Table 1, is an outline description of the fuel cell plant and other site equipment included in this project.

Table 1: Plant Descriptions

Plant Model: HEFC (High Efficiency Fuel Cell)
The HEFC plant consists of three (3) DFC modules, a Mechanical Balance-of-Plant (MBOP – 15 mechanical units, many or most skid mounted), and an Electrical Balance of Plant (EBOP – 7 electrical pieces consisting of 3 power conditioning units (PCU)/inverters with cooling chillers, 3 step-up transformers and a utility tie-breaker switchgear lineup.)

Number of Fuel Cell Plants: 1

Fuel Cell Power Output:	**3.6 MW, nominal**
Installation Location:	**Outdoors,** on concrete foundation pads
Fuel type:	**Pipeline Natural Gas** Utility supply pressure: 20 psig to fuel cell plant Plant reduced operating pressure: <15psig
Plant Output Voltage:	**13,800 VAC/3 Phase/60 Hz,** at project interconnection points
EBOP Manufacturer:	**Rockwell**

EBOP Transformer Type / Dielectric Fluid: Dry Type

Nitrogen Supply:	**Liquid microbulk tanks (~250 gal. liquid capacity, each plant)**

Additional Appurtenant Equipment

Fuel Cleanup Equipment: None

Ancillary Equipment: Office / Control Room Trailer

Project Equipment not in FCE scope:

Equipment not described above is not covered by this plan

2 EMERGENCY RESPONSE / SAFETY – PLANS

Employers are required by the Occupational Safety and Health Administration ("OSHA") Standard at 29 CFR 1910.38 to have a written Emergency Action Plan ("EAP") for workplaces. The EAP can serve to fulfill the requirements of an Emergency Response Plan when the plan for emergency response activities is to evacuate the premises and to allow professional emergency responders to perform the required emergency response activities. Due to the nature of FCE DFC power plants being unmanned, remotely operated, and fail-safe in operational philosophy and control, it is the practice and policy of FCE to instruct workers, through a workplace EAP, to evacuate the premises in emergency situations and to summon professional emergency responders to perform required emergency response activities.

NFPA 853 is the national standard for the installation of Stationary Fuel Cell Power Systems and requires the preparation of a written Fire Prevention and Emergency Plan for fuel cell installations. The Fire Prevention and Emergency Plan is to be prepared in accordance with the requirements of Section 8.2 of NFPA 853 and is to include descriptions of fire prevention procedures, inspections, housekeeping practices, flammable material storage, control of ignition sources, procedures for fire protection equipment impairment, fire emergency plans and other information.

The OSHA standards for General Industry (Part 1910) and Construction (Part 1926) at Title 29 of the Code of Federal Regulations require that employers comply with a host of health and safety standards. Such requirements are outlined in employer safety programs and policies. Summary statements of corporate health and safety policies are often prepared for employee quick reference on an individual plant or project-specific basis.

Copies of the Emergency Action Plan, Fire Prevention & Emergency Plan and Plant/Project Safety Plan for the Triangle Street HEFC Project follow.

2.1 Emergency Action Plan

Following is the Emergency Action Plan (EAP) for the subject plant. As the new plant is at the point of the start of construction, this EAP will serve as both a construction phase and an operation phase document. If required, it will be updated again as necessary to appropriately reflect specific site conditions and limitations, at final project completion.

Emergency Action Plan

Site Name: **Triangle Street HEFC Project**

Site Address: **64 Triangle Street**
Danbury, CT 06810

Plant Operator: FuelCell Energy, Inc.
3 Great Pasture Road
Danbury, CT 06810

Plant Owner: FuelCell Energy, Inc.
3 Great Pasture Road
Danbury, CT 06810

A. Emergency Plan Coordinator & Other Contacts

Emergency Plan Coordinator –

Name: **Global Monitoring and Control Center (GMCC)**
Company: FuelCell Energy, Inc. **(FCE)**
Description: 24 hour / 365 day Plant Monitoring
Telephone No: **(800) 326-3052**

Additional Contact information –

Site Operator Contacts: *(NOTE: private telephone numbers redacted from public report to protect privacy)*

Name: Valerie Hoffman
Co./Dept./Title: FCE / Field Service / Eastern Region Manager
Telephone No: (203) 825-6071 (FCE)
(XXX) XXX-XXXX (work cell) *(redacted for public copy)*
(XXX) XXX-XXXX (personal cell) *(redacted for public copy)*

Name: Steve Brown
Co./Dept./Title: FCE / Field Service / Director of Field Operations
Telephone No: (203) 205-2449 (FCE)
(XXX) XXX-XXXX (Home) *(redacted for public copy)*
(203) XXX-XXXX (Cell) *(redacted for public copy)*

Name: Mark Benedict
Co./Dept./Title: FCE / Process Engineering /Principal Engineer, Product EHS
Telephone No: (203) 830-7429 (FCE)
(XXX) XXX-XXXX (Home & Cell) *(redacted for public copy)*

Name: Gordon Brookes
Co./Dept. /Title: FCE / FuelCell Energy Corporate EHS Director
Telephone No: (860) 496-2207 (FCE)
(XXX) XXX-XXXX (Cell) *(redacted for public copy)*

Additional Site Contacts:

Name: John Doe
Co./Dept.: J. A. R. Inc.
Telephone No: (XXX) XXX-XXXX

Site Utility Contacts:

Company: **Yankee Gas Services Company (Eversource)**
Name/Dept./Title: Gas Leaks or Emergency 24-hr contact
Telephone No: (877) 944-5325 (24-hour)

Company: **Eversource (Electricity)**
Name/Dept./Title: Electric Utility Emergency, 24-hr contact
Telephone No: (800) 286-2000 (24-hour)

Company: **Danbury Water Pollution Control Plant**
Name/Dept./Title: Veolia Water North America (Contract Operator)
Telephone No: (203) 748-9116 (24 Hours, Business or Emergency Number)

Company: **Danbury Public Utilities Division (water, sewer)**
Name/Dept./Title: 24 Hours, Business or Emergency Number
Telephone No: (203) 797-4615

Company: **Airgas (Nitrogen)**
Name/Dept /Title: Mike Gieralt / Bulk Gas Manager/Southern New England
Telephone No: (203) 258-2616 (cell)
(800) 242-0105 (24/7 Technical Service and Bulk Deliveries)

Government Official Contacts:

(Note: Government officials are only to be contacted by designated FCE personnel, per established FCE policy/procedure, described later in this Plan)

City of Danbury

Mayor (City of Danbury) – Mark D. Boughton – (203) 797-4511
City Police Department – (203) 797-4614 (Chief, Alan D. Baker; non-emergencies)
City of Danbury Fire Department – (203) 796-1550 (Chief – TJ Wiedl; non-emergencies)
Danbury Fire Marshall's office – (203) 796-1541(Marshal James Russell; non-emergency)

State Legislators –

State House Rep. – Robert Godfrey (District 110); (860) 240-8500 (aide); (800) 842-1902
State Senator – Michael A. McLachlan (District S24); (800) 842-1421 (aide Amanda Zavagnin)

Private Residences/Establishments requesting notification of emergency response incidents (per formal request):

Neighboring Resident or Establishment Name	Neighbor Street Address	Contact Information – Phone and/or email
none		

B. *Preferred Means of Reporting Emergencies*

GMCC is to contact local Emergency Responders in accordance with this Plan, if required, or when requested to do so by on-site personnel.

Emergency	Make Initial Notification to:
Fire / Explosion	**9-1-1** **(for any calls originating in Danbury, [site or from GMCC])**
Flammable/Hazardous Material Release	
Medical Emergency	
Threat / Violence	
Severe Weather	Coordinate with FCE GMCC (800) 326-3052

GMCC is to then contact a FCE Field Service Management representative and then make any additional utility / owner / community resident contacts as directed to by FCE F.S. Management representative.

C. Emergency Action Plan Elements

- **Emergency Escape Procedures and Routes**

  Emergency escape routes, exits and rally areas are depicted in the Exit Pathways & Utility Shutoffs drawing provided in Appendix A.

  Upon discovery of the need for an evacuation (either self-initiated or in response to an evacuation call), all personnel on site shall immediately proceed to the nearest safe site exit and then proceed immediately to the designated rally area. Non-FCE contractors and guests shall be escorted by their host FCE employee to the nearest safe exit. The FCE standard lock combination is known by operating /maintenance personnel for any exits that may be secured at times when the plant is occupied.

  In the course of evacuation, ***a call shall immediately be placed to GMCC with a request/instruction for the second GMCC operator to immediately call local Emergency Responders*** *(See Emergency Action Plan, Section B)* to initiate action by the local emergency response organization(s). The caller is to stay on the line and provide all information requested, including name, location and nature of emergency and additional contact information, as may be requested.

  With the exception of small 'incidental' spills (as defined by OSHA and per FCE employee training), FCE employees are not to perform chemical spill response activities. Emergency or private spill response contractors are to be retained for the cleanup of non-incidental spills.

  All releases of ANY material are to be reported to the FCE Product EHS Principal Engineer and to the FCE EHS department as soon as practical, who will in turn advise/report to the site owner and governmental authorities, if required.

- **Procedures for Employees who Remain to Operate Critical Operations Before Escape**

  All employees are expected to proceed immediately to the designated primary or backup rally location during any call for site evacuation.

- **Employee Accountability Procedures after Evacuation**

  The Triangle Street High Efficiency Fuel Cell Project is a normally unmanned site; however, one or several FCE, owner or visiting personnel may be present on site at any time to perform operating, maintenance or other tasks. Per established site work/visitation procedure, all FCE and other personnel present on-site will be known by both the senior FCE Field Service employee present at the site as well as by the off-site GMCC operator. Upon the implementation of an evacuation, cell phone

contact is to be established immediately with GMCC to update or confirm the list of on-site personnel. Accounting of all on-site personnel is to then be made at the rally area, or backup rally area, wherever the situation dictates that assembly occur.

- **Rescue and Medical Duties**

  FCE employees are not routinely provided with rescue or in-depth medical training, and as such are not required or expected to perform rescue or medical duties. FCE employees are NOT to reenter the site following an evacuation prior to an 'all-clear' call being made from the professional first responder person in charge.

- **Alarm System**

  FuelCell Energy plants are normally unmanned sites, with only a small number of workers present on site at any given time. Typically one, sometimes two, and on rare occasions more than two workers are present on site when work is being performed. When multiple workers are on site, they will typically be working together.

  The employee alarm system to be used at the Triangle Street High Efficiency Fuel Cell Project site is direct voice communication. *The OSHA standard for employee alarm systems at 29 CFR 1910.165 allows the use of direct voice communication as an acceptable procedure for sounding an alarm system for workplaces of 10 or fewer employees, provided all employees can hear the alarm.*

  Upon discovery of a situation requiring evacuation, the discovering employee shall directly communicate the evacuation requirement to his/her fellow employees. Any non-employee guests on-site will be escorted by their host employee to the nearest clear exit at that time. It is envisioned that all employees present on site at any time will be capable of hearing a call for evacuation under foreseeable circumstances.

- **Training**

  All employees and contractors working at, and visitors to, FCE fuel cell power plants are to be trained in the elements, policies and procedures of this Emergency Action Plan prior to, or at the time of their first visit. All persons present at FCE plant sites are expected to comply with all elements of this plan in emergency situations.

D. ***Emergency ShutDown (ESD) Procedures***

ESD Pushbuttons located throughout the site can be used to shut down the operation of site equipment.

1. **Site Electrical Disconnect pushbutton:** The following ESD pushbuttons will ***disconnect the DFC plants causing a de-energization of the plant controls and shut down of the plants and the opening of the plant utility grid Tie-Breakers*** *(present on each plant)**:***

    - 1 Switchgear Lineup ESD Pushbutton

Note that some Mechanical Balance of Plant electrical devices are also UPS (uninterruptable power supply) fed, so some low voltage equipment may temporarily remain energized even after engaging an ESD pushbutton. Note also that a hot DFC module may contain hazardous voltage, even when not operating.

2. **DFC ESD pushbuttons:** The following ESD pushbuttons will stop the operation of the DFC equipment:

    - 1 pushbutton on the Fresh Air Blower Skid
    - 1 pushbutton on the Instrumentation & Controls Skid
    - 1 pushbutton on the each of the three Power Conditioning Units (3 total)

NOTE: Fuel Cell Plant Electrical Balance of Plant switchgear, PCU and transformer equipment will remain energized even after depressing one of these ESD pushbuttons. Note also that some Mechanical Balance of Plant electrical devices are also UPS (uninterruptable power supply) fed, so some low voltage equipment may temporarily remain energized even after engaging an ESD pushbutton. Note also that a hot DFC module may contain hazardous voltage, even when not operating.

The locations of the plant ESD pushbuttons are depicted in the Exit Pathways and Utility Shutoffs Drawing in Appendix A.

E. ***Special Training***

FuelCell Energy personnel who work at fuel cell plants receive Hazcomm training in the chemical hazards that are present on site. Operating personnel also receive training in other occupational safety and health (OSHA) standards, as appropriate for the tasks to which they are assigned.

F. Personnel Accounting Following Evacuation

In order to be accounted for, all personnel present on site at the time of an evacuation are to proceed to the designated rally area, depicted on the drawing in Appendix A. Contact will be made with GTAC and the ranking supervisor on site will determine if all personnel are accounted for or if any personnel are missing. The results of the accounting determination will be reported to the professional first responder in charge of the emergency response.

G. Rescue And Medical Duties

All rescue and medical duties required at any FCE fuel cell plant will be performed by professional emergency response personnel.

2.2 Fire Prevention & Emergency Plan

Following is the Fire Prevention & Emergency Plan for the subject plant. As the plant has not been constructed to date, this Fire Prevention & Emergency Plan will be updated as necessary to appropriately reflect specific site conditions and limitations, as FCE becomes aware and construction is completed.

Fire Emergency Plan

Purpose:

This document provides information specific to FuelCell Energy's Direct FuelCell (DFC) power plant, as described in the Plant Description section earlier in this Plan (Table 1). The document has been prepared in accordance with the requirements of Section 8.2 of NFPA 853-2015.

A. Response to Fire or Other Emergency Condition

- **Overview of fire hazards present**

  Natural gas (odorized) at a nominal pressure of 20 psig is supplied to the fuel cell power plant connection points from the fuel gas supply train located at the northwest corner of the fenced enclosure. The aboveground gas train is installed on a concrete pad and consists of a gas meter, pressure reducing regulator(s) and manual shutoff valves and is located just outside the fence enclosure surrounding the fuel cell plants. Fuel piping runs underground from the shutoff valve/metering station to where it emerges above grade and connects to the plants. The fuel cell plants immediately reduce the fuel gas pressure to less than 15 psig and direct the gas flow to the plant desulfurization equipment.

  Natural gas is de-odorized by flowing through the two desulfurizer vessels of the fuel cell power plant. The desulfurizer vessels are each equipped with a pressure safety (relief) valve (PSV), sized for both a failed pressure reducing valve and a fire exposure condition. The PSVs discharge to a vent termination approximately 25' above grade over the desulfurizer vessels. Any flow through a PSV is immediately detected by an in-line flow sensor, which in turn immediately initiates a plant ESD. De-odorized fuel flows through the fuel cell power plant equipment, including the fuel humidifier and the preconverter and then into the fuel cell modules. The air heater also operates on an intermittent basis on de-odorized fuel. All fuel gas is confined within code complying process piping and vessels. All fuel sample valve taps are small bore and "double blocked" by virtue of tethered caps.

  The fuel cell power plant operates at high internal temperatures. Temperatures inside the insulated fuel cell module are approximately 1200^{o}F and the fuel fired air heater also operates at temperatures of up to 1200^{o}F. The fuel humidifier and connecting pipes also operate at high temperature. Insulation or guards are provided to maintain external skin surfaces at safe temperatures.

  Ancillary pieces of electrical equipment are provided with or are appurtenant to the fuel cell power plant. Some electrical equipment may operate at high current and/or medium voltage (>500V) and therefore generate appreciable heat. All electrical

equipment are designed to applicable codes, including provisions for adequate heat dissipation.

- **Notifications and coordination**

  Upon discovery of a fire or other emergency condition, or acknowledgement of a fire alarm associated with the fuel cell power plant, the discovering or acknowledging person shall make notifications to the appropriate persons as outlined in the site Emergency Action Plan.

  An on-site discovering person who is trained in the operation and maintenance of the fuel cell power plant and who has evacuated the site for an emergency situation shall remain stationed in proximity to the site and accessible to emergency responders through the emergency response time frame in order to assist and support responders with technical expertise as they may request or require.

  An on-site discovering person who is a representative of the plant/facility owner shall remain on-site through the emergency response time frame to assist and support responders with plant/facility owner information and resources, including access to required resources and traffic control as emergency responders may request or require.

- **Plant security**

  Public access to the fuel cell equipment is first restricted by its location on private property. Additional security is maintained by a locked, eight foot high twist selvage chain link fence enclosure surrounding each plant. The enclosure is equipped with personnel and equipment doors or gates for necessary access. All doors/gates are kept locked when facility or operating personnel are not present. Emergency Fire Department access to the site in the absence of attending personnel would be obtained by cutting the lock chain with a bolt cutter.

- **Evacuation and restriction of non-response personnel**

  Upon discovery of a fire or other emergency condition associated with the fuel cell power plant, the plant area shall be immediately evacuated of all non-response personnel to a minimum distance of 100 feet. Plant host facility representatives and qualified plant operating personnel shall identify themselves to Emergency Response personnel and remain nearby and available to assist in response activity support, as necessary. Notifications of nearby residents as required by the Emergency Responses Person in Charge, shall be undertaken as directed, per the EAP.

- **Operator activities**

  On-site personnel:

  - Upon discovery of a fire or other plant emergency condition with the plant still running, while immediately evacuating the area of self and others, depress any Emergency ShutDown (ESD) pushbutton, if it is safe to do so. ESD buttons are situated at several locations around the plant as indicated in Appendix A (pending), and as can be identified by their red mushroom caps and labeling, as depicted in photos later in this plan.
  - Upon discovery of a fire or other emergency condition with a plant that has experienced an Emergency ShutDown (ESD), immediately evacuate others and self.
  - Contact GMCC and instruct GMCC to in turn contact local Emergency Responders. As an emergency situation, advise GMCC to make other required notifications to management personnel, owner, and others, per Emergency Action Plan.
  - Remain on-site at a safe distance to assist and support responding personnel, including providing plant access, restricting access of non-responding personnel, or controlling traffic.

  Remote GMCC (Global Monitoring and Control Center) operators:

  - Upon advisement or acknowledgement of a *fire-related* Emergency Shutdown or knowledge of other emergency condition, make Emergency Responder and all other required notifications as described in Emergency Action Plan.
  - If not already present, dispatch field service personnel to the site to assist and support response personnel with fuel cell technical expertise.

B. Fire Extinguishment / Emergency Plant Shutdown

- **Fire water application concerns**

  FIRE WATER SHALL NOT BE APPLIED TO COMPONENTS OF THE FUEL CELL POWER PLANT AT ANY TIME. Certain fuel cell components may remain electrically energized with either alternating current or direct current voltage even after a system shutdown via one of the Emergency ShutDown (ESD) pushbutton switches.

- **Appropriate extinguishing media**

  Only fire extinguishing medias appropriate for live electrical equipment shall be applied to fuel cell power plant components. Only listed fire extinguishers for Class A:B:C type fires are provided inside the plant enclosed area.

Upon Emergency ShutDown (ESD) of the fuel cell power plant, all fuel supplies to the plant are automatically shut off via two in-line fast-acting spring-loaded isolation valves.

Following an ESD, **ELECTRICAL ISOLATION IS NOT ASSURED**. Substantial AC and/or DC voltages may still remain for significant durations following an Emergency ShutDown event.

FOLLOWING AN ESD SOME NATURAL GAS WILL REMAIN ISOLATED WITHIN THE FUEL DESULFURIZER VESSELS, however, these vessels are protected from overpressurization by pressure safety valves sized for fire exposure conditions. Following an ESD, nitrogen gas supplied from an on-site liquid source will flow through the fuel cell plant equipment. As with the desulfurizers, the nitrogen source supply is protected against overpressurization by a safety relief valve provided by the gas supplier.

A Plant Layout drawing is provided in Appendix A. The locations of key utility shutoffs (fuel gas, electricity) are indicated on the Exit Pathways & Utility Shutoff Drawing.

- **Other Emergencies**

  Hazardous material spills – Hazardous materials that may be temporarily present on-site other than natural gas are typically solids, and usually only in small quantities. Trained hazardous material operations and response personnel are on-site for any operations or maintenance activities that involve the handling of bulk or containerized hazardous materials. Small quantities of water treatment chemicals are contained in the water treatment (Skid 1) enclosure.

  Personnel injuries – For injuries requiring medical attention, the injured party or his/her companion shall seek appropriate medical attention for the injured. For serious injuries, call GMCC to summon local Emergency Responders per the Emergency Action Plan. For less serious injuries that require medical attention the injured shall obtain medical treatment at the nearest emergency medical care facility. All accidents and injuries (and near misses) shall be reported to FCE EHS.

C. Plan Validation

The executable elements of this Fire Emergency Plan consist of the manual activation of an Emergency ShutDown, evacuation of the power plant area, and notifications. ESD buttons are all hard-wired in a fail-safe circuit. All fuel cell operating personnel are trained and regularly re-trained in a complete suite of safety programs.

Fire Prevention Plan

A. ***Egress***

A Plant Layout drawing depicting emergency exit pathways is provided in Appendix A.

B. ***Emergency alarms and ShutDowns***

The fuel cell power plant is provided with Emergency ShutDown (ESD) pushbuttons. ESD pushbuttons have red mushroom caps and are clearly labeled. ESD pushbutton locations are indicated on the drawings in Appendix A. Photos of typical ESD pushbuttons are shown in Figure 1. Depressing an ESD pushbutton will immediately shut down fuel flow to the respective power plant as well as shut down the respective mechanical balance of plant equipment. **HOWEVER, THE ESD DOES NOT OPEN THE ELECTRICAL GRID TIE BREAKER, SO ELECTRICAL BALANCE OF PLANT COMPONENTS WILL REMAIN ENERGIZED. ADDITIONALLY, UNINTERRUPTABLE POWER SUPPLIES (UPS) WILL PROVIDE POWER TO A NUMBER OF MECHANICAL BALANCE OF PLANT COMPONENTS AND THE FUEL CELL MODULE WILL RETAIN SIGNIFICANT DC VOLTAGE POTENTIAL ENERGY IF OPERATING OR HOT PRIOR TO THE ESD.** (exception – the switchgear lineup ESD button *does* open the electric grid tie-breaker; however, hazardous voltage may still remain.)

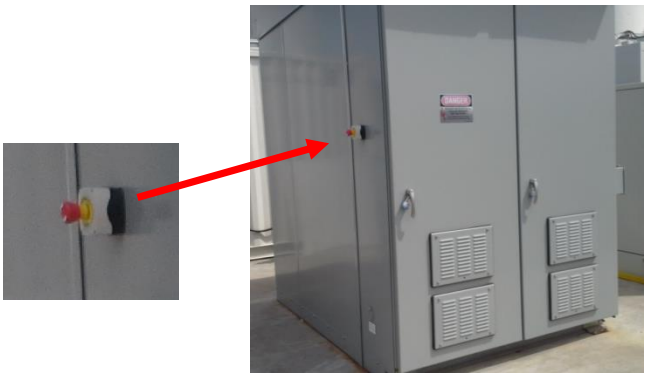
The following types of automatic acting emergency sensors are provided with the fuel cell power plant:

- Combustible gas detectors
- UV/IR Flame detectors
- Smoke detectors

In addition process flows, temperatures, pressures and voltages are continuously monitored for deviations from expected values. Process sensors are used to verify proper operation of the process and will quickly sense and shutdown the process upon severe deviations, such as would occur in the case of excessive seismic activity. Emergency sensors have either supervisory signals or are wired to alarm on sensor failure such that the plant will ESD on the loss of any one of these devices. Emergency sensors are calibrated in accordance with an established schedule as described in the maintenance manual. Sensor locations (pending), as well as Classified hazardous areas, are depicted in the drawings provided in Appendix A.

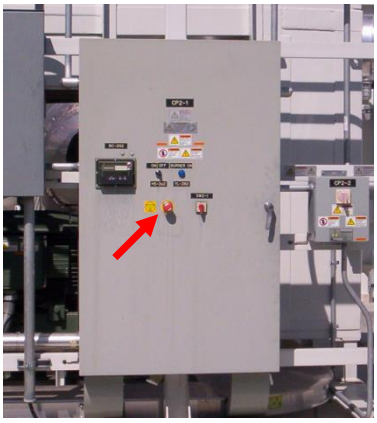
Sensor detection of flame, MBOP smoke, or presence of excessive combustible gas concentration (45% of Lower Explosive Limit [LEL]) will result in an Emergency

ShutDown (ESD) of the fuel cell plant. In the case of combustible gases, detection of a concentration of approximately 25% LEL will result in a high LEL warning alarm. EBOP smoke detectors provide an alarm function only as other performance shutdowns protect the equipment in case of actual fire.



Tie Breaker Switchgear
(Typical, Site Electrical Disconnect)

Electrical Balance of Plant



Skid 2, Main Process Skid Control Panel

Figure 1: Typical Emergency ShutDown (ESD) Pushbuttons

Fuel cell plant operating personnel are provided with portable gas detectors for use in operating and maintenance tasks including surveillance for gas leaks should such be necessary.

C. Fire prevention

The fire prevention strategy for the fuel cell power plant consists of the following Plan elements:

- **Housekeeping**

  The area around the fuel cell power plant shall be kept orderly and free of combustible and flammable materials, including combustible and flammable liquids, flammable gases and combustible and flammable solid materials. Trash shall not be allowed to accumulate. The water treatment system container shall not be used for general material storage.

- **Storage and Handling of flammables/combustibles**

  STORAGE OF FLAMMABLE AND COMBUSTIBLE MATERIALS IS PROHIBITED WITHIN THE PLANT ENCLOSURE WITHOUT PRIOR WRITTEN PERMISSION FROM THE LOCAL AUTHORITY HAVING JURISTICTION. Transient flammables and combustibles may include gases, small containers of flammable liquids such as solvents, trash and virgin and spent consumables used in the fuel cell process. These materials are to always be stored in packaging appropriate for their material properties and retained on site for as short of a duration as feasible. Flammable and combustible materials are to be kept separated from sources of ignition, fuel piping and processing equipment and electrical equipment and shall be protected from weather. Appropriate packaging materials for consumable materials are as follows:

  - Catalysts, virgin or spent – closed/sealed steel drums
  - Desulfurizer media, virgin – manufacturer's original packaging
  - Desulfurizer media, spent – closed/sealed steel drums

- **Flammable/combustible materials and potential ignition sources**

  The following are flammable/combustible materials *potentially* present at the fuel cell power plant:

  - Natural gas (present in piping and desulfurizer vessels only - no on-site storage)
  - Electrical equipment
  - Plastics
  - Insulation jacketing
  - Desulfurizer media (activated carbon)
  - 50% aqueous solution Propylene Glycol EBOP chiller coolant and heat transfer medium
  - Misc. new and used filter elements, PPE, packaging, etc.
  - Granular nickel based catalyst (DOT Div. 4.2, PG II/III; transient storage only, never long-term)

Natural gas piping within the plant security fencing is identified with yellow “Natural Gas” pipe markers, complying with ANSI A13.1 requirements.

The following are potential ignition sources present at the fuel cell power plant:

- Heat from process
- Electrical equipment
- Catalysts
- Hot work
- Unauthorized Smoking or open flame
- Internal combustion equipment/vehicles

The fuel cell power plant design and procedures established to operate and maintain the plant have been formalized to minimize any potential for fire.

- The entire plant has been designed to and complies with the provisions of the ANSI/CSA safety code FC-1 (2004).
- The plant is equipped with automatic safety sensors to safely shut down the process in cases of leaking fuel or fire (Section B.)
- All fuel is pipeline supplied with minimal fuel holdup within the process.
- Desulfurizer vessels have been provided with pressure safety relief valves sized for fire emergencies.
- All of the plant piping has been designed in accordance with ASME B31.3 standard for process piping code. Piping is marked in accordance with ANSI A13.1.
- Areas of potential hazardous (classified) atmospheres have been identified and sources of potential ignition have been removed and any electrical equipment within complies with the area classification designation.
- Electrical equipment is designed to and complies with the provisions of UL1741.
- Smoking is NOT allowed within the fuel cell plant area.
- Hot Work within the fuel cell plant area is by Permit only, with potential sources of flammable materials removed from the area of potential ignition when hot work is conducted. Hot Work Permits are to be issued by the plant owner/operator. Additionally, any hot work conducted under the supervision of FuelCell Energy will also be permitted under the FCE Hot Work Permit program.

- **Portable Fire Extinguisher**

  Sufficient type A:B:C portable fire extinguishers (20 lb. minimum), depicted in the drawing in Appendix A (pending), are installed at the plant such that the travel distance to nearest extinguisher does not exceed 50 feet. Portable fire extinguishers required for specific maintenance procedures are brought to site by service personnel as special equipment for that procedure.

- **Inspections of plant area and fire prevention equipment**

  All inspections and maintenance of fuel cell components and systems are to be performed in accordance with the latest revision of the plant maintenance manual. Operating personnel also conduct an informal "walk around" inspection every time they visit the plant site. As the plant operates remotely without the presence of operators, the walk around inspection is simply to check for any out of the ordinary situations or accumulated materials. FuelCell Energy operators log any negative findings into a Computerized Maintenance Management System (CMMS) database. Sensors are calibrated or replaced in accordance with an established maintenance schedule based on equipment manufacturer's instructions; with work orders scheduled and records maintained by the database.

  If, during an operator site visit or walkaround inspection a fuel leak is discovered, an immediate evaluation and disposition shall be undertaken. For sizeable leaks, an immediate plant shutdown may be necessary, while leaks of a very minor nature may be able to be addressed by such remedies as flange bolt retorquing or other measures. FCE operators are equipped with portable fuel gas (LEL) meters to assist in the evaluation of leak severity. Any discovered leak and its corrective measures shall be recorded in the CMMS database.

  UV/IR flame detectors, combustible gas (LEL) sensors and smoke detector automatic sensors shall be tested, calibrated, maintained and/or replaced at the frequency provided in the DFC1500B/B5 plant maintenance manual. A summary of these requirements is provided below:

Automatic Sensor	Frequency	Maintenance Action
Skid 1 Smoke Detectors	18 mos.	Test & replace if required
EBOP Smoke Detectors	18 mos.	Test & replace if required
Combustible Gas Detectors	6 mos.	Clean, test & calibrate, if req'd.
UV/IR Flame Detectors	18 mos.	Clean & Test

- **Fire protection system/equipment impairment**

  Unintended impairment of any fire protection sensor system will automatically ESD the plant. Manual short-term sensor impairment for the purpose of on-site maintenance occurs only at times when maintenance personnel are on-site and vigilant for signs of fire or potential fire. As a policy, extended system impairment is not permitted with rare exceptions and only when alternative monitoring methods can be implemented by remote monitoring and for as short of a duration as possible.

- **Incident investigation and reporting**

  Any fire-related incident shall be immediately reported to the Local Fire Department as “lead investigator.” Plant owner representatives as well as FuelCell Energy qualified personnel will be called upon to assist the Department in the site and technical aspects of the investigation. Such incidents will also be investigated by the fuel cell operator/manufacturer (FCE) as required by the manufacturer’s Certifying Agency. Results/conclusions of the investigation will be reported to the plant owner. External reporting to other agencies will be as directed by the responding Department commanders and as required by regulation, as established at the time of incident.

2.3 Plant/Project Safety Plan

Following is the Safety Plan for the subject plant. This Safety Plan will be updated as necessary to appropriately reflect specific site conditions and limitations, as FCE becomes aware and as construction progresses.

Safety Plan

FCE will address site security and personnel safety as the highest priority to ensure a safe and healthy work environment. Minimum safety requirements and policies have been identified and will be provided and enforced on all levels and for all organizations performing work at the facility during both the construction and operation phases of the project.

In addition, all contractors and subcontractors will be required to provide, adhere to, enforce, and report on their own safety policies and practices. Such policies, procedures and/or handbook will be provided to FCE prior to contract execution for FCE's review and consideration.

A. Site Supervision

FCE, or their prime construction subcontractor, will provide a construction/safety manager to be present while any work is being performed on site at any time. FCE Project Management representatives and EHS professionals will perform additional on-site review and inspections to further enforce all safety policies and practices.

Further, contractors and subcontractors will be required to have their own safety supervisor on site at all times when work is being performed. The safety supervisor is responsible for their personnel's adherence to all required and prudent safety policies and practices. The supervisor is to be responsible for:

- Enforcing safety policies and practices,
- Providing safety orientation for any new personnel onsite,
- Daily safety “toolbox” meetings covering daily activities and associated risks, by trade,
- Recording the daily safety meetings,
- Weekly safety status meetings and discussion topics,
- Performing and reporting on weekly safety audits,
- Maintaining a daily personnel attendance log (for personnel accounting),
- Site walks with FCE’s safety and construction managers on request, and
- Monthly formal reports including labor hours worked, incidents (including near misses, recordable events, and reportable events) along with a detailed description of corrective actions, audit results, and a summary of any site walks that occurred during that period.

At any time, FCE or subcontractor’s safety or construction management personnel can enforce a stop work directive to correct any safety infractions.

B. FCE Safety Program Policies

Construction contractor and plant operator shall plan and conduct all work to safeguard persons and property from injury and will direct performance of work in compliance with reasonable safety and work practices and with applicable federal, state and local laws, rules, and regulations including but not limited to "Occupational Safety and Health Standards" promulgated by the U.S. Department of Labor. Work in areas adjacent to electrically energized equipment and/or operating natural gas equipment shall be performed in accordance with said practices, laws, rules, and regulations.

As part of FCE’s continuing efforts to provide a safe and healthy workplace, it is required that all work activities be performed in accordance with all applicable regulatory requirements. While impossible to foresee all potential circumstances, the below list of Environmental, Health and Safety requirements constitutes the minimum basic elements to be followed during both the construction and operation phases of the fuel cell power plant project.

- SIGN IN: All individuals must sign in/out at the office each day that they are on site.
- ACCIDENT, ILLNESS & INJURY: All accidents and injuries occurring on the premises shall be reported immediately to the Construction Manager in charge of the work being performed, or during operation phase of plant, to the FCE EHS department as soon as possible.
- CHEMICAL RELEASE OR SPILL: Any release of chemicals on site, regardless of volume, must be immediately reported to the Construction Manager, or during operation phase of plant, to the FCE EHS department as soon as possible.
- COMPRESSED GAS MANAGEMENT: The management and use of compressed gas is to be performed in accordance with OSHA standard 29 CFR 1910.101 "Compressed Gasses, General Requirements."
- CONFINED SPACES: All work in "confined spaces" is to be managed in accordance with OSHA standard 29 CFR 1910.146.
- CRANE HOIST & SLING SAFETY: The operation of cranes and hoists is to be performed in accordance with OSHA standard 29 CFR 1910.179; and the use of slings is to be in accordance with OSHA standard 29 CFR 1910.184.
- ELECTRICAL SAFETY: All work involving electricity is to be performed in accordance with OSHA standards 29 CFR 1910 Subpart S, "Electrical Safety"; 1910.269 "Electric Power Generation, Transmission & Distribution; and NFPA 70E-2004 "Electrical Safety In The Workplace" as applicable.
- EYE PROTECTION: During all times that ANY work is being performed anywhere on the facility, all personnel at the facility must be wearing eye protection.
- FALL PROTECTION: All work performed at heights of six feet or greater must be provided with at least one form of fall protection that will either prevent a fall from occurring, or properly arrest a person's fall once the event has occurred. However, platforms, or other surfaces designed primarily for walking, shall be provided with an approved guardrail system when they are either; >4' above the adjacent floor or ground level, or, above dangerous equipment (conveyor belts, chemical baths, exposed rebar, etc…) regardless of height. In all cases, work at height must be performed in accordance with OSHA standards 29 CFR 1910.23, 132, and 503.
- HAND & PORTABLE POWER TOOL SAFETY: Hand and portable power tools are to be used in accordance with OSHA standard 29 CFR 1910 Subpart P.
- HAZARD COMMUNICATION; RIGHT to KNOW: 29 CFR OSHA standard 29 CFR 1910.1200: Employees shall not be exposed to Hazardous Chemicals without first receiving training on the associated physical and health hazards and the measures needed to protect the employee from these hazards.
    - FCE utilizes green on white Target Organ Labels identifying the Name and the Physical & Health hazards of a material; these labels shall be

used for all containers not otherwise adequately labeled by the manufacturer.

- Hazardous materials brought on site shall be labeled and a Material Safety Data Sheet (MSDS) supplied to the Environmental Health and Safety (EHS) Department prior to working with the chemical.
- An MSDS station detailing all chemicals currently onsite is available for review.

- HAZARDOUS MATERIALS: FCE EHS is to be notified in advance of all hazardous materials to be brought on site. Storage, use and off-site transportation of these materials shall be performed in accordance with applicable requirements of the Connecticut General Statutes, the Regulations of Connecticut State Agencies and Titles 29 (OSHA), 40 (EPA), 49 (DOT) of the Code of Federal Regulations.
- HOT WORK PERMIT SYSTEM: A formal “Hot Work Permit” program is used as part of FCE’s overall Fire Prevention Program. Hot work is any operation that introduces a potential ignition source, which in the presence of combustible or flammable materials can result in a fire. HOT WORK includes, but is not limited to, operations such as brazing, cutting, grinding, soldering, torching, and welding. The use of a Hot Work Permit is required for all hot work operations outside of designated hot work areas. Hot work can be performed without a permit only in areas specifically designated and posted as a "Hot Work" area.
- LADDER SAFETY: The use of ladders is to be done in compliance with the following OSHA standards:
  - 29 CFR 1910.25 - PORTABLE WOOD LADDERS
  - 29 CFR 1910.26 - PORTABLE METAL LADDERS
  - 29 CFR 1910.27 - FIXED LADDERS
  - 29 CFR 1910.29 - MANUALLY PROPELLED MOBILE LADDER STANDS & SCAFFOLDS

- LOCKOUT TAGOUT PROGRAM: All servicing and maintenance of equipment is to be performed in accordance with the requirements of OSHA standard 29 CFR 1910.147 or 269 as applicable. These standards require locking out all potential energy sources prior to the performance of work.
- PERSONAL PROTECTIVE EQUIPMENT: In accordance with OSHA standard 29 CFR 1910.132-138 and Subpart I, work is to be performed using all necessary PPE. Hazard Assessments and Training in the use of required PPE are to be performed and documented prior to performance of work. PPE shall be removed before leaving the work area and disposed of according to waste management procedures to ensure that contaminants are not spread to personnel, through the facility(s), and/or to the environment.
- POWERED INDUSTRIAL TRUCKS: Forklifts and other industrial lift trucks are to be operated only by personnel trained in accordance with OSHA standard 29 CFR 1910.178.
- POWERED PERSONAL LIFT TRUCKS: Powered personal lift trucks are to be operated only by personnel trained in accordance with OSHA standard 29 CFR 1910.67 and 29 CFR 1926.453.
- SAFETY DEVICES: Equipment safety devices are not to be removed, bypassed or otherwise modified without review and approval by FCE EHS Dept.
- SCAFFOLDING: All use of scaffolding shall be in accordance with the following OSHA standards:
    - 29 CFR 1910.28 – "Safety Requirements for Scaffolding"
    - 29 CFR 1910.29 – "Manually Propelled Mobile Ladder Stands & Scaffolds"
- STORMWATER POLLUTION PREVENTION: In accordance with the Connecticut Department of Environmental Protection (CTDEP) "General Permit for the Discharge of Stormwater Associated with Industrial Activity"; activities which will directly or indirectly release hazardous or non-hazardous materials into the storm water system are not permitted. All site practices will be to prevent or minimize pollution of stormwater. Operation of the fuel cell plant in and of itself does not invoke stormwater permitting requirements. If stormwater compliance requirements apply to the host facility and must legally flow down to operations on the leased property, then the fuel cell plant would comply with such requirements.
- WASTE MANAGEMENT: FCE is to be notified in advance of all waste to be generated. Under state and federal rules, FCE, as the site operator, is the "Generator" of all waste generated/created on site(s). As such, FCE is responsible for the proper Management, Storage, Transportation and Disposal of all wastes generated at site. This is to be done in accordance with all applicable

requirements of the Connecticut General Statutes, the Regulations of Connecticut State Agencies and Titles 29 (OSHA), 40 (EPA) and 49 (DOT) of the Code of Federal Regulations.

- WORKING ALONE: Working alone can introduce additional hazards not necessarily present during the course of performing work with other personnel. The biggest risk in working alone is during the occurrence of an incapacitating injury to the lone employee; a lack of timely medical attention could exacerbate the injury leading to greater harm. To prevent this, tasks must be assessed for hazards before assigning the employee(s) to perform them alone. If hazards do exist, either periodic monitoring, assignment of additional personnel, or re-scheduling of the work must be done. Further, it is important that task limitations be clear in order that new hazards are not introduced during any work performed alone. Employees performing work alone shall always contact GTAC by cell phone upon entering the facility site and upon leaving.
- GENERAL DUTY CLAUSE: The General Duty Clause of the Occupational Safety and Health Act requires that employers provide a place of employment that is free of recognized health or safety hazards to employees. It is FCE policy to provide such a workplace. Employees are encouraged to discuss any known or perceived health or safety issues or concerns with FCE management or EHS associates.

3 SITE SECURITY & ACCESS

Public access to the fuel cell equipment is first restricted by their location on the campus of a private, round-the-clock secured facility. Additional security is maintained by a locked, eight foot high twist selvage chain link fence enclosure surrounding the plants. The enclosure is equipped with personnel and equipment doors or gates for necessary access. All doors/gates are kept locked when facility personnel are not present. Emergency Fire Department access to the site would be obtained by removing the lock with a bolt cutter.

All FCE power plants are remotely monitored 24 hours per day, 7 days per week, year round by FCE's GMCC personnel. Any tampering or unauthorized manipulation of fuel cell components that would result in any significant performance change for the plant will be immediately detected by the GTAC operator and/or result in an Emergency ShutDown of the plant, restoring the plant to a safe condition. All FCE fuel cell power plants are designed for "fail-safe" operation, where all foreseeable process deviations have been considered and the consequences minimized, through a hazard and operability (hazop) analysis.

4 EMERGENCY RESPONDER / LOCAL COMMUNITY COORDINATION & NOTIFICATION SYSTEM

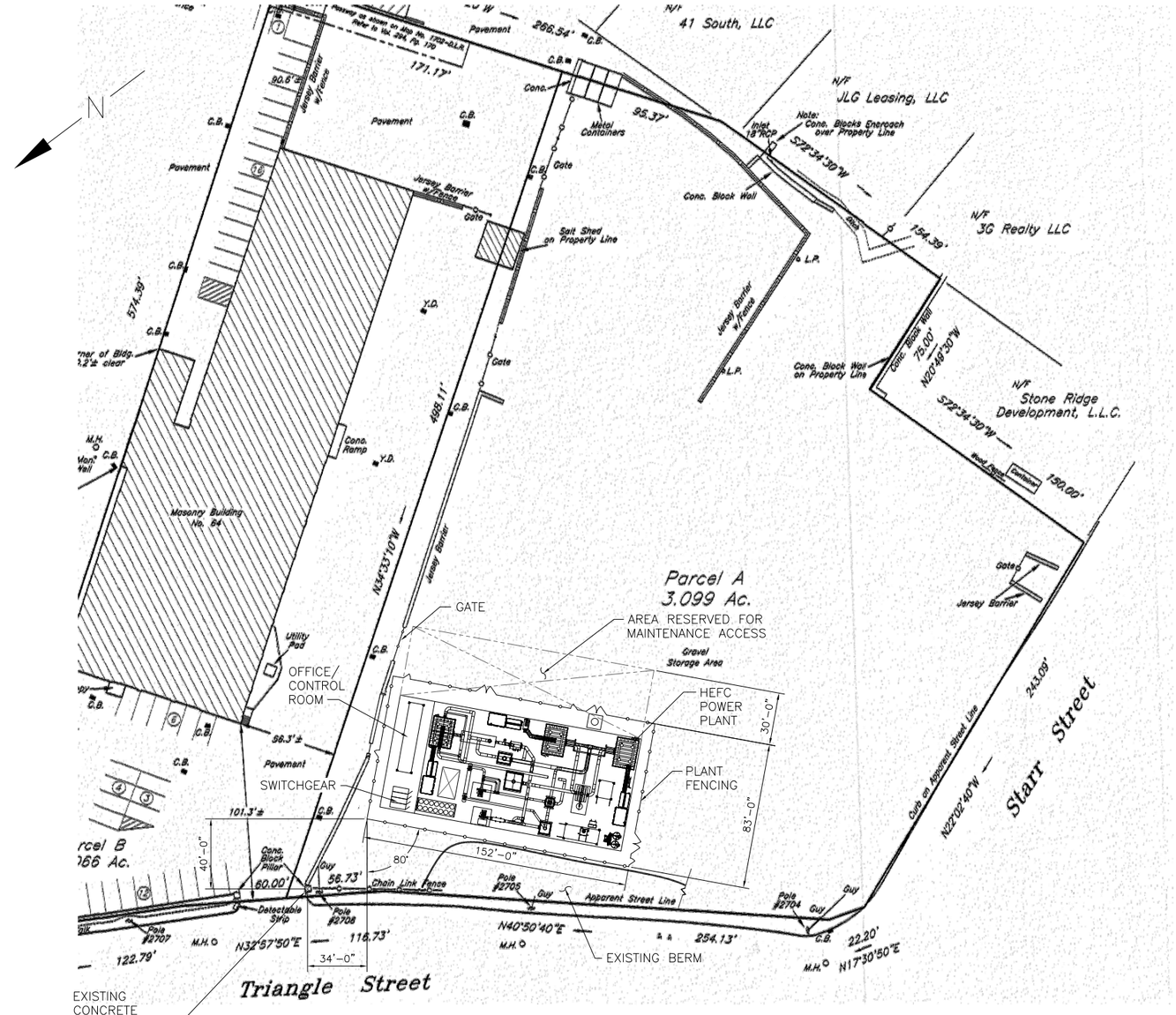
FCE will coordinate with local emergency response departments to familiarize personnel with the operations and equipment installed at the site. At a point prior to plant mechanical completion, FuelCell Energy will contact the Local Fire Department to schedule a walk around tour and training event for the near-completed installation. Either prior to or at this time, a compilation of Safety Data Sheets for chemicals used on the site can be provided to the Fire Department. It is not anticipated that any chemical quantities on-site will exceed Emergency Planning and Community Right-to-know Act (EPCRA) notification or reporting thresholds at any time, so therefore Tier II notifications and reporting will not be required.

During the construction phase, prior to a scheduled delivery of any piece of major equipment, the local police department will be notified to manage local traffic, as required. Prior to connecting or making natural gas available at the facility, FCE will coordinate with the local fire department, provide training regarding the facility equipment and facility safety features, tour Department personnel and provide description of how the plant facility will respond should a fire, smoke, or volatile gas release occur.

FuelCell Energy will record the names and contact information of those local residents that request to be informed of any actual emergency response situation that may develop at the subject power plant which may affect them. The names and contact information of the local residents will be incorporated into the Emergency Action Plan in the table provided for notification in an emergency response situation that could potentially affect these residents. Responsibility for making such notifications will be the on-site manager during the construction phase of the project, and GMCC during the operation phase of the project.

Petition of TRS Fuel Cell, LLC
July 21, 2016
Exhibit D

REVISION HISTORY				
REV	DESCRIPTION	BY	APPROVED	DATE
1	ISSUED FOR REVIEW	MHB	L. ERNST	06/02/16
2	ADDED SHEETS 2, 3 & 4	MHB	L. ERNST	06/08/16



SITE LAYOUT

20' 0 25' 50' 75'

GRAPHIC SCALE

REFERENCE SHEETS – THIS DRAWING

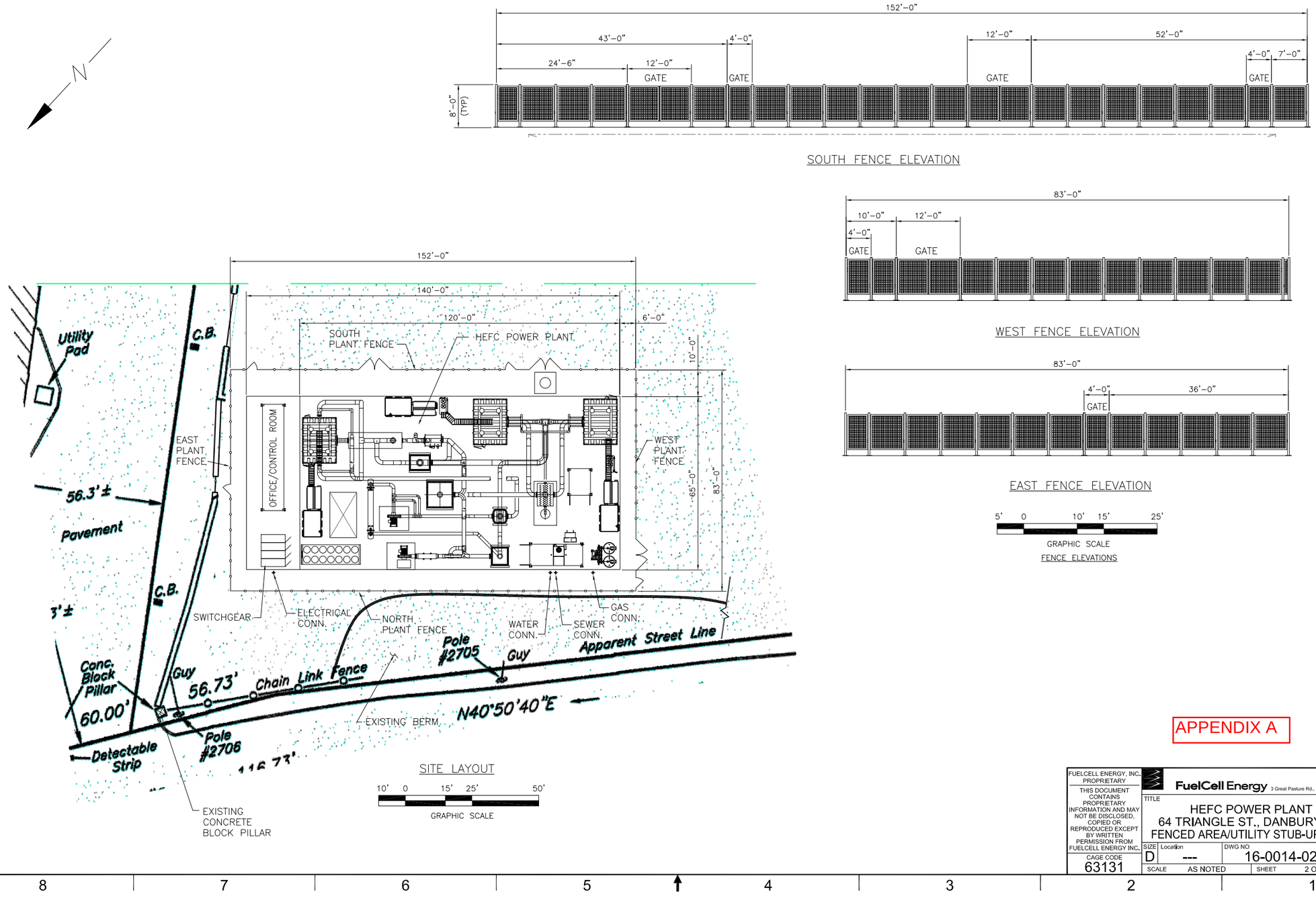
SHEET 2 – FENCED AREA/UTILITY STUB-UP PLAN
SHEET 3 – EXIT PATHWAYS & UTILITY SHUTOFFS
SHEET 4 – AREA CLASSIFICATION PLAN

APPENDIX A

PRELIMINARY

FUELCELL ENERGY, INC. PROPRIETARY THIS DOCUMENT CONTAINS PROPRIETARY INFORMATION AND MAY NOT BE DISCLOSED, COPIED OR REPRODUCED EXCEPT BY WRITTEN PERMISSION FROM FUELCELL ENERGY INC. CAGE CODE 63131	SIGNATURES DRAWN: M. BAUMANN 06/02/16 ENGINEER: L. ERNST 06/02/16 APPROVED: RELEASED: UNLESS OTHERWISE SPECIFIED, ALL DIMENSIONS ARE ±1/16" REVISION INDICATOR FLAG NOTE	FuelCell Energy 3 Great Pasture Rd., Danbury, CT 06813 TITLE: HEFC POWER PLANT 64 TRIANGLE ST., DANBURY, CT SITE LAYOUT PLAN SIZE D | Location SITE | DWG NO 16-0014-02 | REV 2 SCALE AS NOTED | SHEET 1 OF 4

Petition of TRS Fuel Cell, LLC
July 21, 2016
Exhibit D



APPENDIX A

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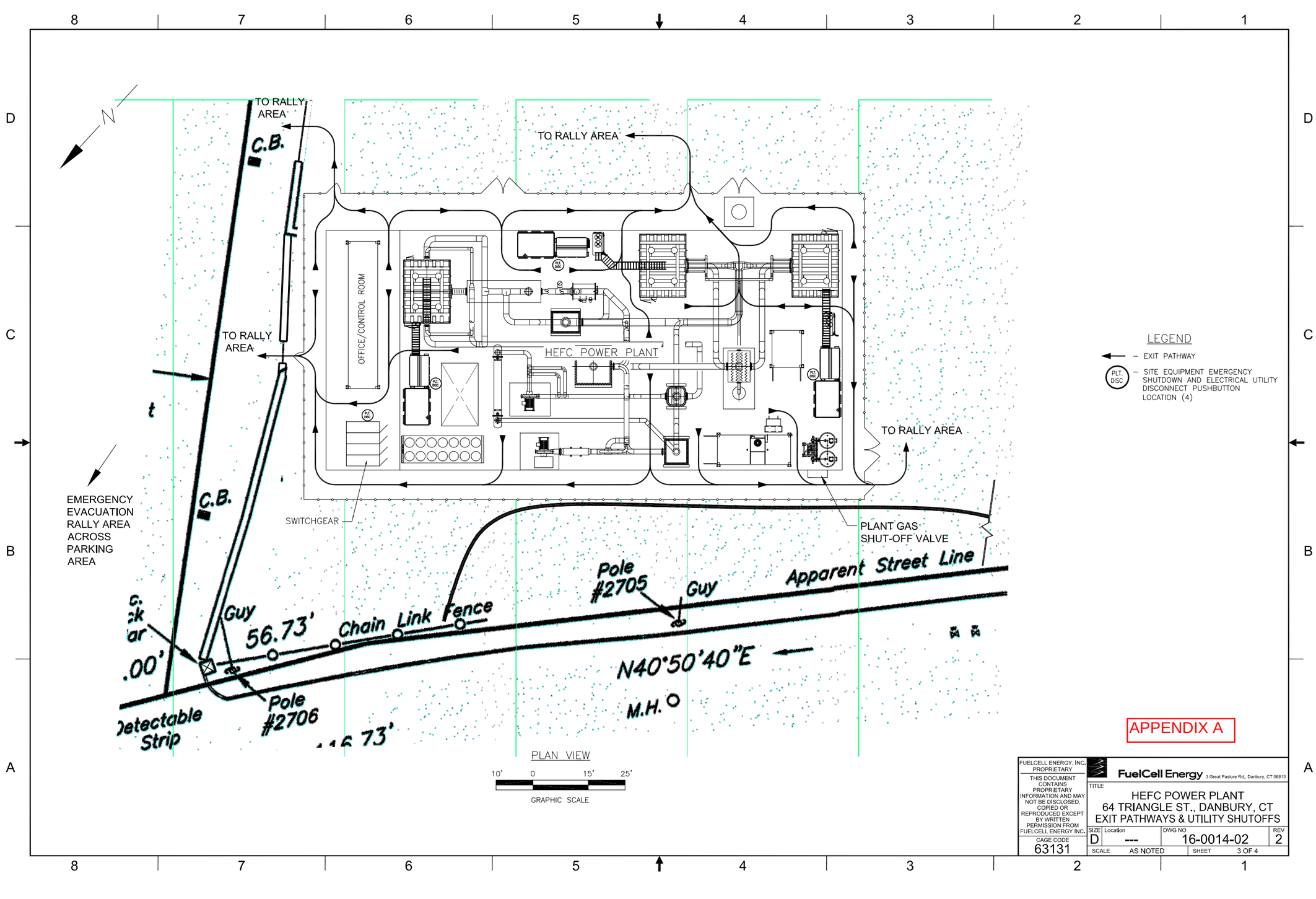
CAGE CODE 63131

FuelCell Energy 3 Great Pasture Rd., Danbury, CT 06813

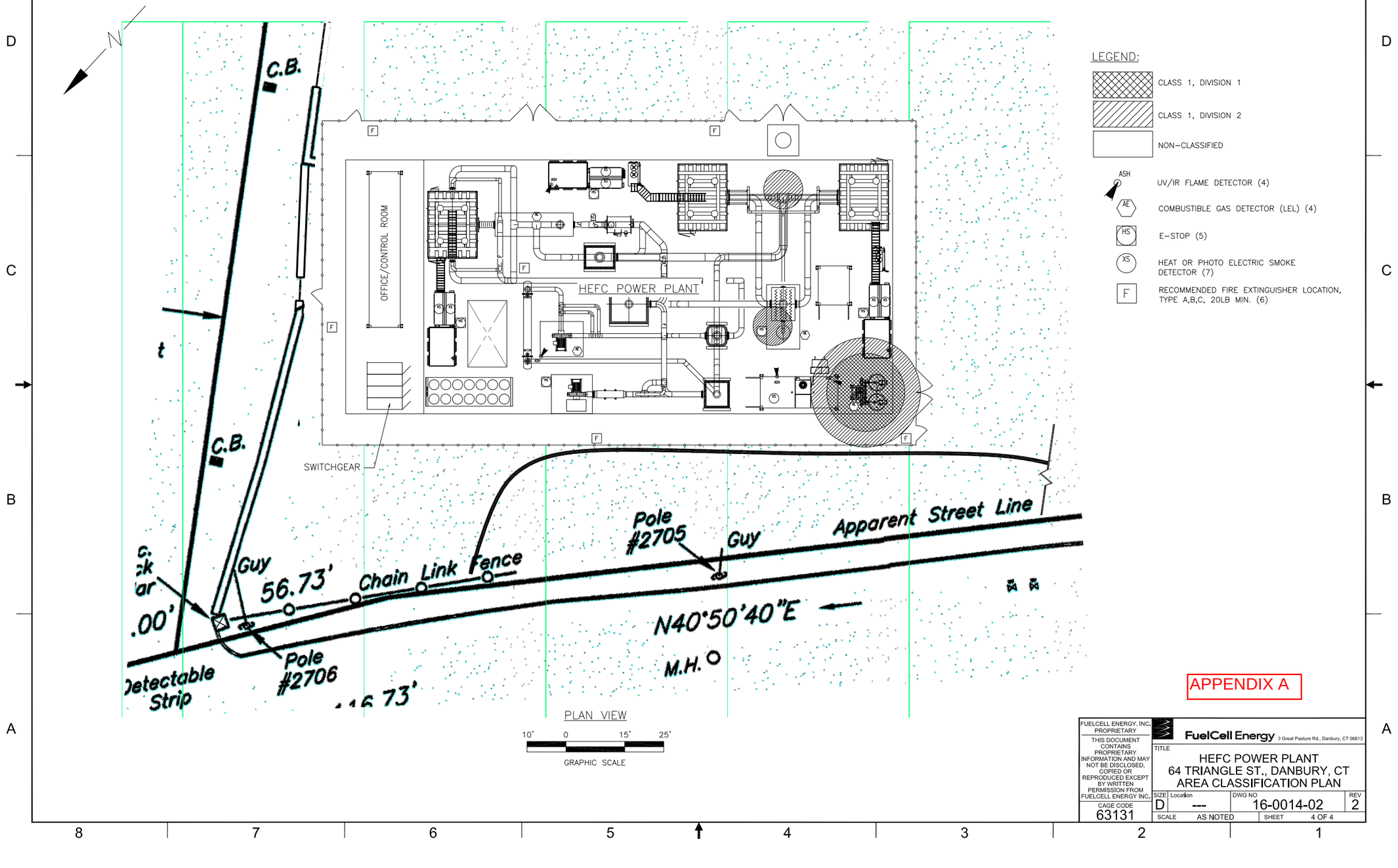
TITLE
HEFC POWER PLANT
64 TRIANGLE ST., DANBURY, CT
FENCED AREA/UTILITY STUB-UP PLAN

SIZE	Location	DWG NO	REV
D	---	16-0014-02	2
SCALE	AS NOTED	SHEET	2 OF 4



APPENDIX A

FUELCELL ENERGY, INC. PROPRIETARY	FuelCell Energy 3 Great Pasture Rd., Danbury, CT 06813
THIS DOCUMENT CONTAINS PROPRIETARY INFORMATION AND MAY NOT BE DISCLOSED, COPIED OR REPRODUCED EXCEPT BY WRITTEN PERMISSION FROM FUELCELL ENERGY INC.	TITLE: HEFC POWER PLANT 64 TRIANGLE ST., DANBURY, CT EXIT PATHWAYS & UTILITY SHUTOFFS
CAGE CODE 63131	SIZE D · Location --- · DWG NO 16-0014-02 · REV 2
	SCALE AS NOTED · SHEET 3 OF 4



APPENDIX A

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CAGE CODE 63131

FuelCell Energy 3 Great Pasture Rd., Danbury, CT 06813

TITLE
HEFC POWER PLANT
64 TRIANGLE ST., DANBURY, CT
AREA CLASSIFICATION PLAN

SIZE	Location	DWG NO	REV
D	---	16-0014-02	2

SCALE AS NOTED SHEET 4 OF 4

Department of Economic and Community Development
Connecticut still revolutionary

State Historic Preservation Office
One Constitution Plaza | Hartford, CT 06103 | 860.256.2800 | Cultureandtourism.org

Triangle Street Fuel Cell Project
64 Triangle Street, Danbury, CT

PROJECT REVIEW COVER FORM

1. This information relates to a previously submitted project. ☐ You do not need to complete the rest of the form if you have been previously issued a SHPO Project Number. Please attach information to this form and submit

SHPO Project Number _____
(Not all previously submitted projects will have project numbers)

Project Address _____
(Street Address and City or Town)

2. This is a new Project. [X] If you have checked this box, it is necessary to complete ALL entries on this form .

Project Name: Triangle Street Fuel Cell Project

Project Location: 64 Triangle Street
Include street number, street name, and or Route Number. If no street address exists give closest intersection.

City or Town: Danbury
In addition to the village or hamlet name (if appropriate), the municipality must be included here.

County: Fairfield
If the undertaking includes multiple addresses, please attach a list to this form.

Date of Construction (for existing structures): N/A

PROJECT DESCRIPTION SUMMARY (include full description in attachment):
Installation of a fuel cell generation facility comprised of a single 3.7 MW fuel cell power plant providing Class 1 Renewable Energy and Capacity. The Project will be located on a 10,000 square foot portion of an industrial site at 64 Triangle Street in Danbury.

TYPE OF REVIEW REQUESTED

a. Does this undertaking involve funding or permit approval from a State or Federal Agency?

[X] Yes [ ] No

Agency Name/Contact	Type of Permit/Approval	State	Federal
Connecticut Siting Council	Petition of TRS Fuel Cell, LLC for a	[X]	[ ]
	Declaratory Ruling that a Certificate of	[ ]	[ ]
	Environmental Compatibility and Public	[ ]	[ ]
	Need is Not Required for the Installation of a Fuel Cell at 64 Triangle Street, Danbury, CT		

	Yes	No
b. Have you consulted the SHPO and UCONN Dodd Center files to determine the presence or absence of previously identified cultural resources within or adjacent to the project area?	[ ]	[X]
If yes: Was the project site wholly or partially located within an identified archeologically sensitive area?	[ ]	[ ]
Does the project site involve or is it substantially contiguous to a property listed or recommended for listing in the CT State or National Registers of Historic Places?	[ ]	[ ]
Does the project involve the rehabilitation, renovation, relocation, demolition or addition to any building or structure that is 50 years old or older?	[ ]	[ ]

Department of Economic and Community Development

Connecticut
still revolutionary

Triangle Street Fuel Cell Project
64 Triangle Street, Danbury, CT

State Historic Preservation Office

One Constitution Plaza | Hartford, CT 06103 | 860.256.2800 | Cultureandtourism.org

PROJECT REVIEW COVER FORM

The Historic Preservation Review Process in Connecticut Cultural Resource Review under the National Historic Preservation Act – Section 106 http://www.achp.gov/106summary.html involves providing technical guidance and professional advice on the potential impact of publicly funded, assisted, licensed or permitted projects on the state's historic, architectural and archaeological resources. This responsibility of the State Historic Preservation Office (SHPO) is discharged in two steps: (1) identification of significant historic, architectural and archaeological resources; and (2) advisory assistance to promote compatibility between new development and preservation of the state's cultural heritage.

Project review is conducted in two stages. First, the SHPO assesses affected properties to determine whether or not they are listed or eligible for listing in the Connecticut State or National Registers of Historic Places. If so, it is deemed "historic" and worthy of protection and the second stage of review is undertaken. The project is reviewed to evaluate its impact on the properties significant materials and character. Where adverse effects are identified, alternatives are explored to avoid, or reduce project impacts; where this is unsuccessful, mitigation measures are developed and formal agreement documents are prepared stipulating these measures. For more information and guidance, please see our website at: http://www.cultureandtourism.org/cct/cwp/view.asp?a=3933&q=293820

ALL PROJECTS SUBMITTED FOR REVIEW MUST INCLUDE THE FOLLOWING MATERIALS*:

[X] **PROJECT DESCRIPTION** Please attach a full description of the work that will be undertaken as a result of this project. Portions of environmental statements or project applications may be included. The project boundary of the project should be clearly defined**

[X] **PROJECT MAP** This should include the precise location of the project – preferably a clear color image showing the nearest streets or roadways as well as all portions of the project. Tax maps, Sanborn maps and USGS quadrangle maps are all acceptable, but Bing and Google Earth are also accepted if the information provided is clear and well labeled. The project boundary should be clearly defined on the map and affected legal parcels should be identified.

[X] **PHOTOGRAPHS** Clear, current images of the property should be submitted. Black and white photocopies will not be accepted. Include images of the areas where the proposed work will take place. May require: exterior elevations, detailed photos of elements to be repaired/replaced (windows, doors, porches, etc.) All photos should be clearly labeled.

For Existing Structures	Yes	N/A	Comments
Property Card	☐	☒	
For New Construction	**Yes**	**N/A**	**Comments**
Project plans or limits of construction (if available)	☒	☐	
If project is located in a Historic District include renderings or elevation drawings of the proposed structure	☐	☒	not in historic district
Soils Maps http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm	☐	☒	
Historic Maps http://magic.lib.uconn.edu/	☐	☒	
For non-building-related projects (dams, culverts, bridge repair, etc)	**Yes**	**N/S**	**Comments**
Property Card	☐	☒	
Soils Map (see above)	☐	☒	
Historic Maps (see above)	☐	☒	

PROJECT CONTACT

Name Jennifer D. Arasimowicz, Esq. Title Vice President, Managing Counsel
Firm/Agency TRS Fuel Cell, LLC c/o FuelCell Energy, Inc.
Address 3 Great Pasture Road
City Danbury State CT Zip 06810
Phone 203-825-6070 Cell 860-213-0592 Fax 203-825-6069
Email jarasimowicz@fce.com

*Note that he SHPO's ability to complete a timely project review depends largely on the quality of the materials submitted.
** Please be sure to include the project name and location on *each page* of your submission.

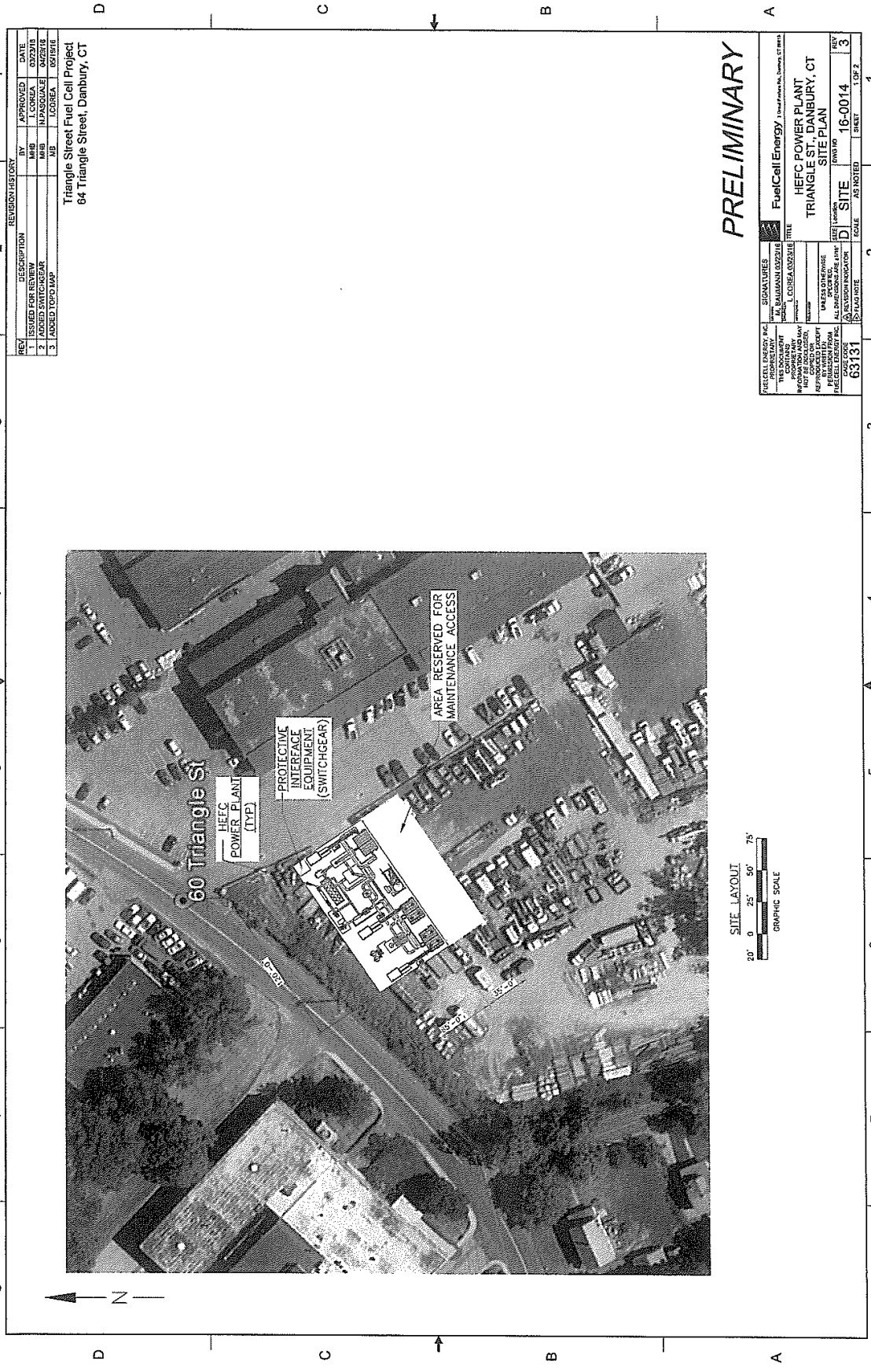
Triangle Street Fuel Cell Project
64 Triangle Street, Danbury, CT

PROJECT DESCRIPTION

TRS Fuel Cell, LLC, a wholly-owned subsidiary of FuelCell Energy, Inc. ("FCE") shall install, own and operate a fuel cell generation facility comprised of a single 3.7 MW fuel cell power plant providing Class I Renewable Energy and Capacity. The Project will employ the latest configuration of FCE's DFC® fuel cell technology with electrical efficiency approaching 60%. The Project will be located on a 10,000 square foot portion of an industrial site at 64 Triangle Street in Danbury. The Project has filed an application for interconnection to the Eversource Triangle Street substation less than 1 mile from the proposed site via a 13.8 interconnection. The fuel cell plant will be fueled by natural gas provided from the Eversource Gas distribution system at 15 psi.

The FCE DFC® technology is a large stationary carbonate fuel cell. The technology generates electricity with unparalleled near zero criteria emissions and high fuel to electricity efficiency. The higher efficiency configuration of the DFC® to be employed in the Project will operate stacks in series to yield an electric efficiency approaching 60%. The technology is designed to operate on a natural gas feedstock or other methane fuels and offers criteria pollutant reductions of up to 99.99% when compared to conventional fossil power generation systems.

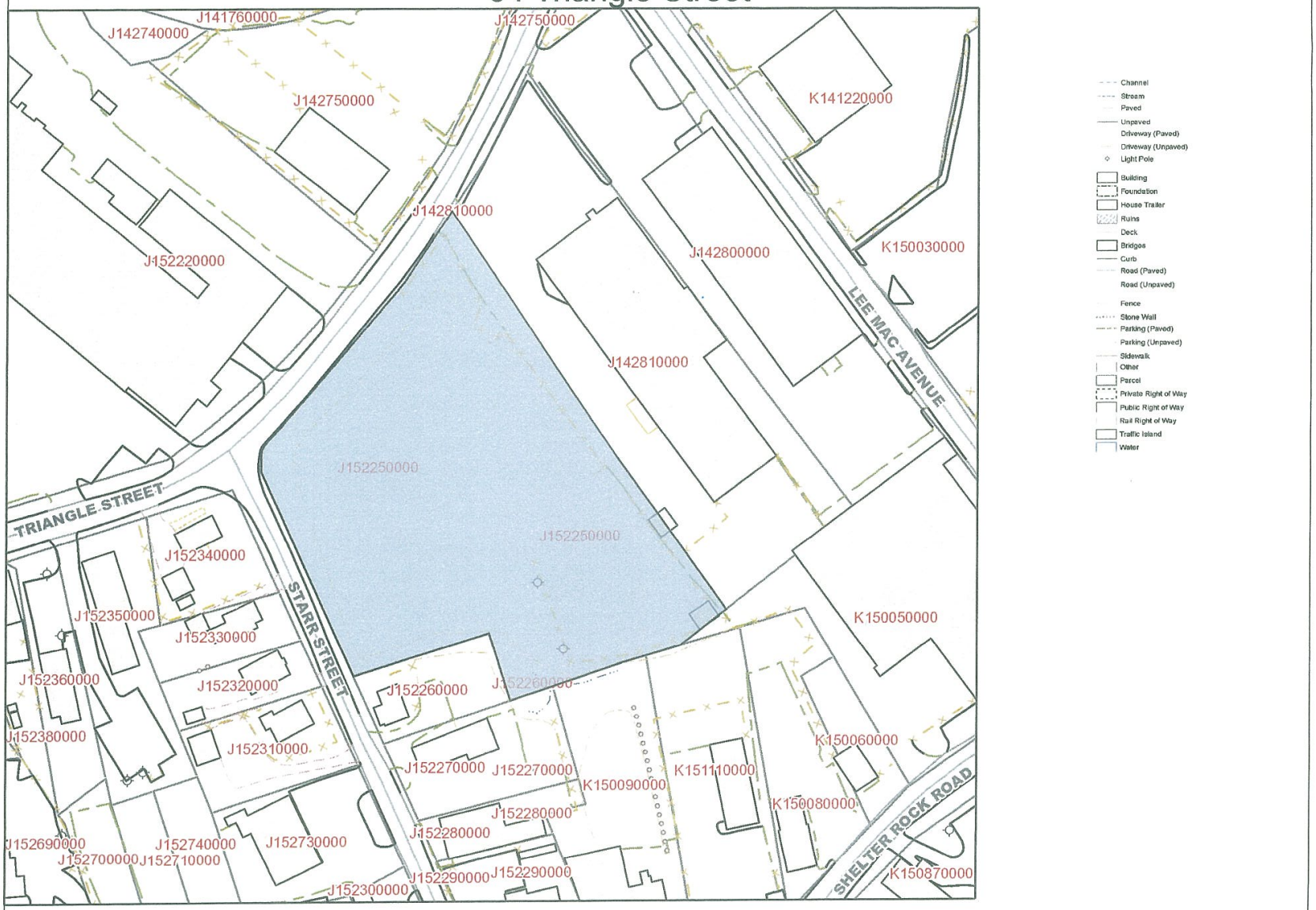
The main component of each of the fuel cell plant is the fuel cell modules that perform the electrochemical operations, gas desulphurization equipment, water treatment equipment, electric blowers, start-up equipment and electrical equipment including an inverter, a transformer, and a switchgear station.


PRELIMINARY
Triangle Street Fuel Cell Project
64 Triangle Street, Danbury, CT
REVISION HISTORY
REV | DESCRIPTION | BY | APPROVED | DATE
1 | ISSUED FOR REVIEW | MHB | I. COREA | 03/23/16
2 | ADDED SWITCHGEAR | MHB | N.PASQUALE | 04/28/16
3 | ADDED TOPO MAP | NB | I.COREA | 05/19/16
FUELCELL ENERGY, INC. SIGNATURES
PREPARED BY: M.BAMANIA 03/23/16
CHECKED: I. COREA 03/23/16
APPROVED:
FuelCell Energy
HEFC POWER PLANT
TRIANGLE ST., DANBURY, CT
SITE PLAN
SIZE: D | SITE | DWG NO: 16-0014 | REV: 3
SCALE: AS NOTED | SHEET: 1 OF 2
CAGE CODE: 63131
60 Triangle St
HEFC POWER PLANT (TYP)
PROTECTIVE INTERFACE EQUIPMENT (SWITCHGEAR)
AREA RESERVED FOR MAINTENANCE ACCESS
N
SITE LAYOUT
GRAPHIC SCALE
20' 0 25' 50' 75'

Triangle Street Fuel Cell Project
64 Triangle Street, Danbury, CT

City of Danbury Tax Map

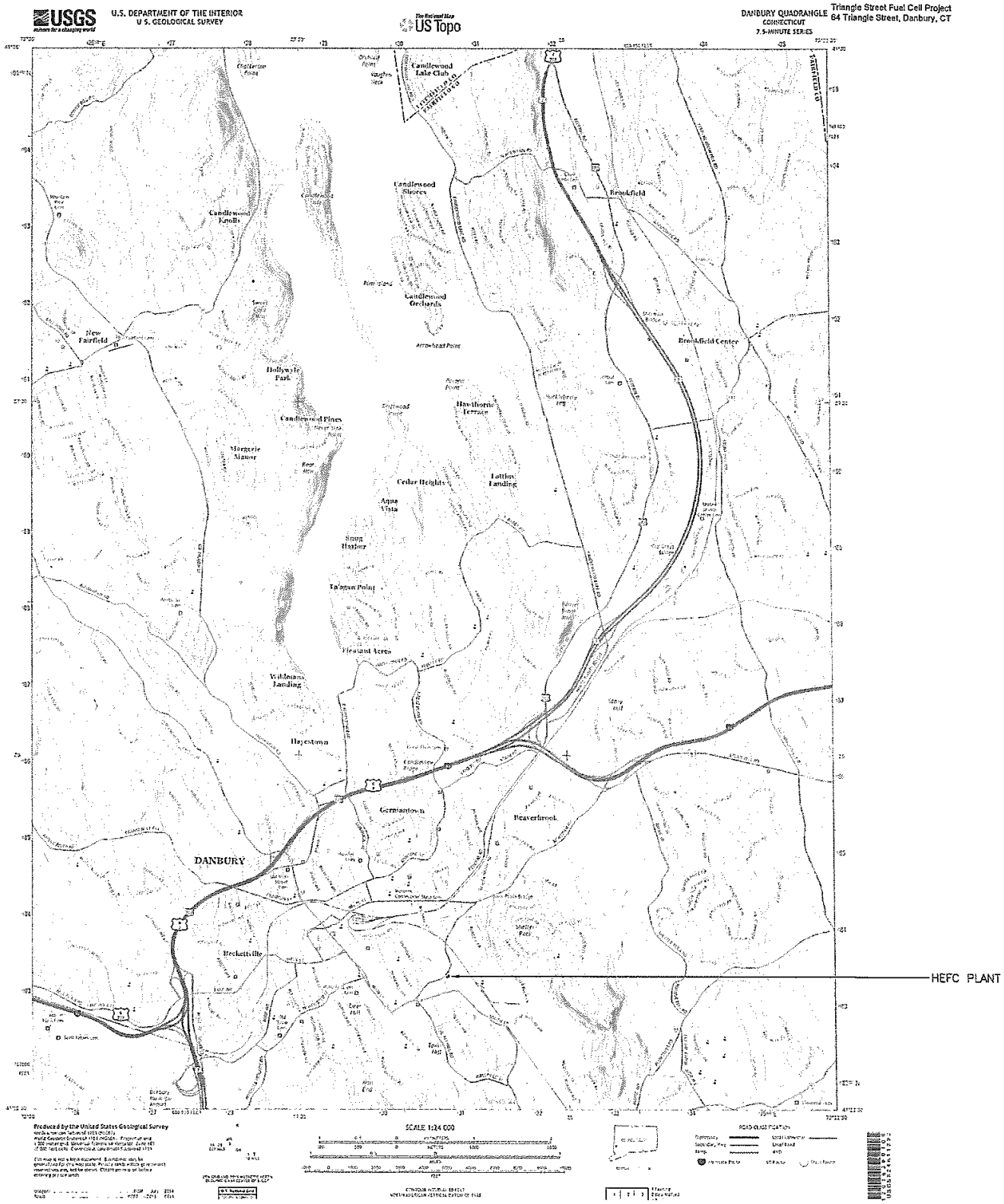
64 Triangle Street

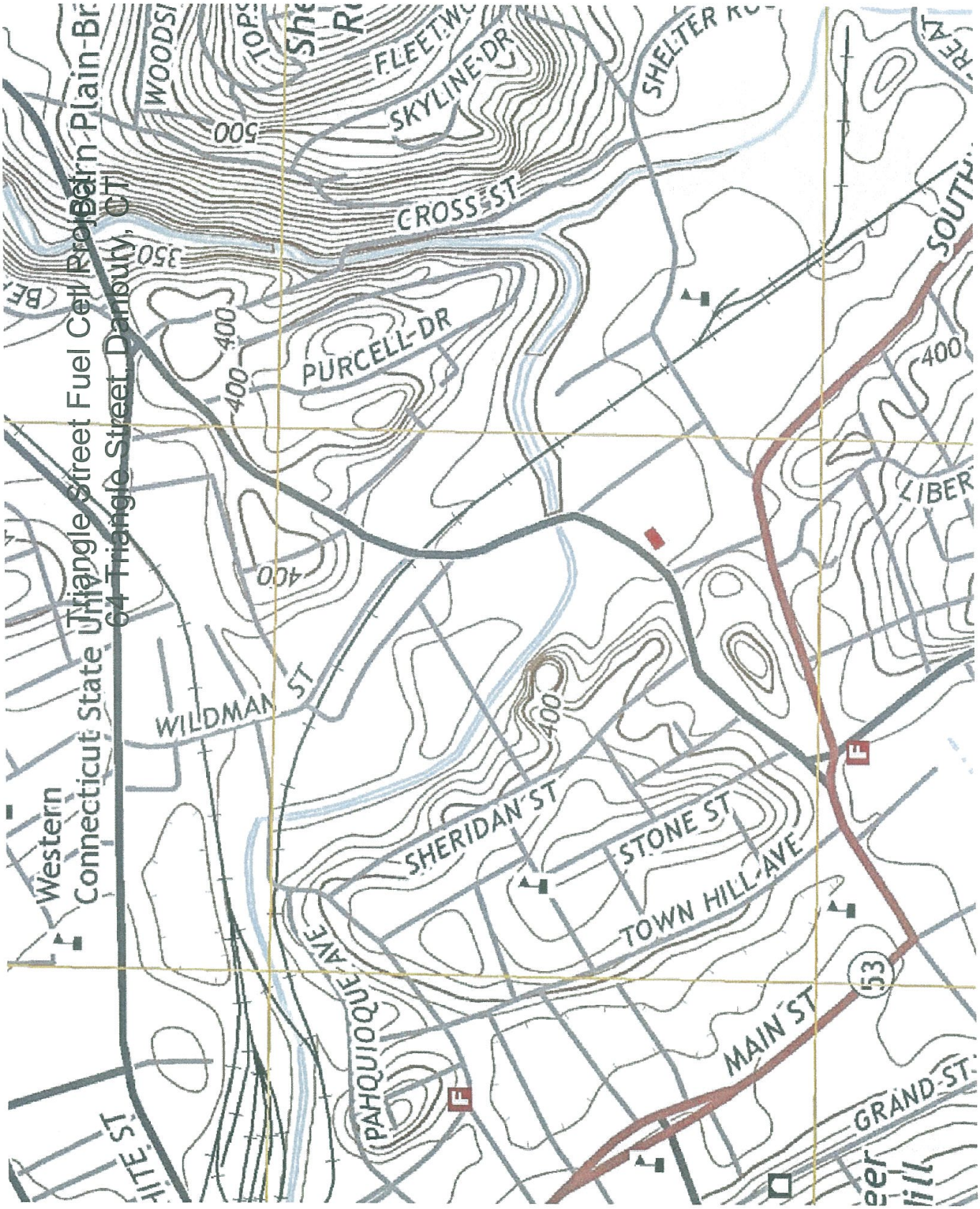


Not a legal survey.

Petition of TRS Fuel Cell, LLC
July 21, 2016
Exhibit E

Petition of TRS Fuel Cell, LLC
July 21, 2016
Exhibit E



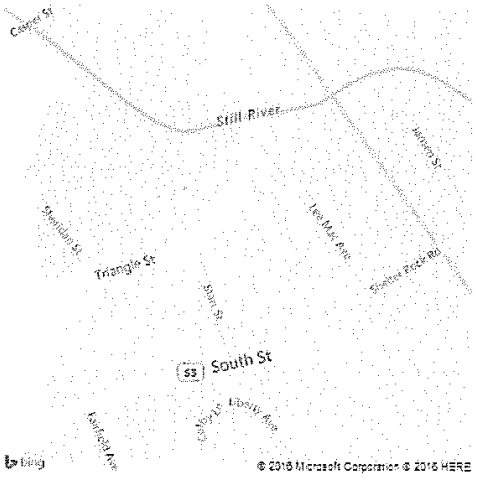

Triangle Street Fuel Cell Project
64 Triangle Street, Danbury, CT
Western Connecticut State University
FLEET WOODS
SKYLINE DR
SHELTER RD
CROSS ST
PURCELL DR
WILDMAN ST
SHERIDAN ST
STONE ST
TOWN HILL AVE
PAHQUIOQUE AVE
MAIN ST
GRAND ST
500
400
350
53

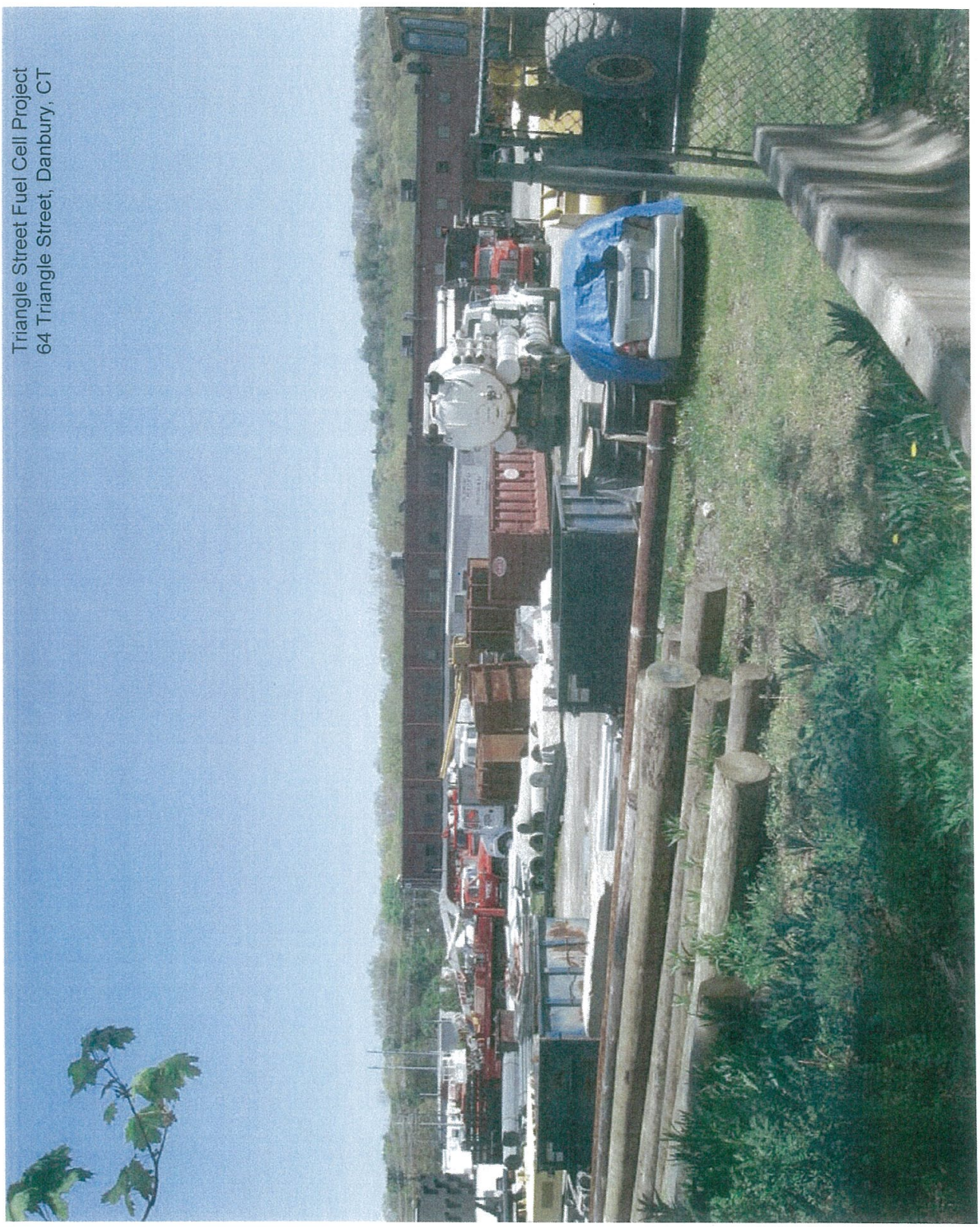
Bing Maps - Directions, trip planning, traffic cameras & more

Triangle Street Fuel Cell Project
64 Triangle Street, Danbury, CT

bing maps

Notes




Triangle Street Fuel Cell Project
64 Triangle Street, Danbury, CT


Triangle Street Fuel Cell Project
64 Triangle Street, Danbury, CT
PRIVATE PROPERTY
NO TRESPASSING


Triangle Street Fuel Cell Project
64 Triangle Street, Danbury, CT


Triangle Street Fuel Cell Project
64 Triangle Street, Danbury, CT

Connecticut Department of
ENERGY &
ENVIRONMENTAL
PROTECTION

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

June 16, 2016

Jennifer D. Arasimowicz
Fuelcell Energy, Inc.
3 Great Pasture Road
Danbury, CT 06810
Jarasimowicz@fce.com

Project: Connecticut Siting Council Petition for TRS Fuel Cell, LLC for the Construction of a Fuel Cell Generation Facility Comprised of a Single 3.7 MW Fuel Cell Power Plant Located at 64 Triangle Street in Danbury
NDDB Determination No.: 201607289

Dear Jennifer D. Arasimowicz,

I have reviewed Natural Diversity Data Base (NDDB) maps and files regarding the area delineated on the map provided for the proposed Connecticut Siting Council Petition for TRS Fuel Cell, LLC for the Construction of a Fuel Cell Generation Facility Comprised of a Single 3.7 MW Fuel Cell Power Plant Located at 64 Triangle Street in Danbury, Connecticut. I do not anticipate negative impacts to State-listed species (RCSA Sec. 26-306) resulting from your proposed activity at the site based upon the information contained within the NDDB. The result of this review does not preclude the possibility that listed species may be encountered on site and that additional action may be necessary to remain in compliance with certain state permits. This determination is good for two years. Please re-submit a new NDDB Request for Review if the scope of work changes or if work has not begun on this project by June 16, 2018.

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 Natural History Survey and cooperating units of DEEP, private conservation groups and the scientific community. This information is not necessarily the result of comprehensive or site-specific field investigations. Consultations with the Data Base should not be substitutes 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 into the Data Base as it becomes available.

Please contact me if you have further questions at (860) 424-3592, or dawn.mckay@ct.gov . Thank you for consulting the Natural Diversity Data Base.

Sincerely,

Dawn M. McKay

Dawn M. McKay
Environmental Analyst 3