Architectural Review and Historic Preservation Board Agenda Report

Meeting Date 9/16/2020

DATE: August 31, 2020

File: AR 20-05

TO: Architectural Review and Historic Preservation Board

FROM: Dexter O'Connell, Associate Planner
530-879-6810, dexter.oconnell@chicoca.gov

RE: Architectural Review 20-05 (Bloom Energy)
1531 Esplanade, APN 003-024-005 and 003-023-024, et al
Revised Plans

RECOMMENDATION

Staff recommends that the Architectural Review and Historic Preservation Board adopt the required findings contained in the agenda report and approve the project as revised, subject to the recommended conditions.

Proposed Motion

I move that the Architectural Review and Historic Preservation Board adopt the required findings contained in the agenda report and approve Architectural Review 20-05 (Bloom Energy) as revised, subject to the recommended conditions.

BACKGROUND

The applicant proposes construction of a set of natural gas fuel cells consisting of four blocks of equipment on an approximately 4,700 square foot portion of the Enloe Hospital campus, west of the main building and parking lot, and east of Enloe Park, along West 5th Avenue (see **Attachment A**, Location Map). Proposed along with the fuel cells are grading, a retaining wall, and new bollards, along with appropriate gas and electrical equipment to operate the fuel cells. The site is designated Public Facilities and Services (PFS) on the City's General Plan Land Use Diagram and zoned PQ (Public and Quasi-Public Facilities) with the SD4 (Special Design Considerations - West Avenue Neighborhood Area) overlay.

It is true that pursuant to Chico Municipal Code (CMC) section 19.18.030.D, new construction on existing, partially developed parcels is generally considered a "minor project" not requiring Board review. In this case, the aesthetic implications of the grading, removal of open space, and installation of the large, tall fuel cells are sufficiently meaningful to refer the project to the ARHPB.

The proposed fuel cells would be set back approximately eleven feet from West 5th Avenue and would not alter the parking area or the formal garden portion of Enloe Park (see **Attachment B**, Site Plan). The fuel cells require no additional parking.

The proposed fuel cells would have a sleek, hypermodern appearance (see **Attachment C**, Revised Rendering and **Attachment D**, Color and Materials Sample Panel). They would be set within an area partially screened by a cement retaining wall on three of their four sides, and would be screened by a living fence on all four sides. Revisions demonstrate alterations in response to comments by the board as detailed below and in **Attachment I**, the revised

site detail. Revisions respond to both aesthetic and noise concerns raised by neighbors and included as supplemental materials in **Attachment H** and would support compatibility with the neighborhood.

Due to the proposed living fence the applicant has added as part of their plan revisions, some new landscaping is proposed, along with minor tree removal. Proposed Condition #4 would require all new landscaping received final review by staff to ensure correct installation in line with the Board's votes, as well as AB 1881 compliance.

PRIOR REVIEW

The Board heard this project at their regular meeting of August 19, 2020. The Board voted to continue the item pending additional or new design details that adequately address the noise and screening concerns.

In response, the applicant provided revised plans. The revised plans extend a living fence around the entire installation of the fuel cells, which would serve to minimize both aesthetic and noise impacts.

DISCUSSION

The revised proposal would still result in the most visible installation of the proposed fuel cells anywhere in the City. The applicant claims that the fuel cells, which combine fuel and air in the presence of heat and a catalyst to produce electrical energy, produce less greenhouse gasses than other fossil fuel methods of energy production. They provide on-site electricity production to supplement grid-based power, similar to solar panels or a personal wind turbine.

The applicant's plans explicitly state on their cover page that the proposed fuel cells "do not provide life safety power" and that "if utility power is lost for any reason the fuel cells will also stop producing power."

The proposal is consistent with several General Plan policies. While it is rarely the case that a fossil fuel technology is compatible with any of the renewable energy policies in the Sustainability Element of the General Plan, this proposed fuel cell project is technically consistent with Policy SUS-6.1, which calls for a generalized reduction in greenhouse gas emissions. If Enloe's existing energy mix includes electricity derived from fossil fuel sources, the fuel cells will represent a reduction in greenhouse gasses if they substitute for that energy.

The noise of the proposed fuel cells is consistent with the Noise Contours of Enloe Hospital in the Noise Element of the General Plan and Policy N-3.1, which establishes the basis for the City's more specific noise standards. Condition #4 will enhance project consistency with Action N-2.1.1 encouraging noise attenuation measures that support the goals of the General Plan. Finally, the project is consistent with Goal PPFS-7, which supports health facilities and services to enhance the local quality of life, and Policy PPFS-7.2, which pledges the city to support efforts to improve and expand health and social services for all segments of the

community. A reduction of Enloe's electricity costs is likely to result in a reinvestment of that funding into care.

Consistency with the Enloe Hospital Master Plan and development agreement is analyzed in great depth in **Attachment G**, the Applicant's Project Description. Generally speaking, the applicant draws attention to Enloe's ability to alter portions of the property in order to support the provision of medical services in Section 2.1 of the Development Agreement, and it is true that this project would help support the hospital's mission, in part by significantly reducing their electricity costs and in part by helping to increase energy efficiency consistent with state regulations and the Enloe Master Plan. The proposed fuel cells are not within the "Enloe Park" portion of the property, which is not impacted by the proposal.

The project is consistent with the City's adopted Design Guidelines (DGs) as conditioned. Condition #4 and the applicant's revisions ensure consistency with DG 5.1.54. It is not possible to underground or architecturally incorporate the utility equipment. This would also build consistency with DG 5.1.46 by reducing the available space for potential graffiti vandalism through planting and screening. As revised and conditioned, the project is also consistent with DG 1.1.13 because it sustains a pedestrian-friendly environment and DG 1.2.12 and 1.2.13 by responding to surrounding context of well-screened and leafy uses.

The proposed project meets all applicable setback, parking, and landscaping requirements. Some removal of small trees is proposed, but none would require mitigation.

PROJECT REVISIONS

The applicant's revisions address two key issues raised by the Board and by neighbors. The first is the issue of the visibility of the units. The living fence will screen the majority of the units from view and will make them far less evident at street level or at a distance.

The second is the issue of noise. Though the living fence will not be solid or opaque, it will have noise-reducing properties inherent to any structure due to noise's inherently physical properties. Condition #5 requiring sound-attenuating material to be installed on the retaining wall behind the units has been added to contribute to noise reduction.

The living fence would pass through a utility easement, so Condition #6 requires the applicant to repair any portion of the fence that might have to be removed within 30 days of completion of any relevant utility work.

The applicant's revised plans show openings in order to service the fuel cells. Condition #7 requires appropriate gates that match or compliment the living fence to be installed in order to ensure a consistent fence line which provides noise attenuation.

REQUIRED FINDINGS FOR APPROVAL

Environmental Review

The project has been determined to be categorically exempt under Section 1.40.220 of the Chico Municipal Code, and pursuant to the California Environmental Quality Act (CEQA)

Guidelines Section 15332 (Infill Development Projects). This exemption applies to infill projects which are consistent with the general plan and zoning; are on sites less than five acres in size within the City limits; are substantially surrounded by urban uses; have no value as habitat for endangered, rare, or threatened species; would not create any significant effects relating to traffic, noise, air quality, or water quality; and can be adequately served by all required utilities and public services.

Architectural Review

According to Chico Municipal Code Section 19.18.060, the Architectural Review and Historic Preservation Board shall determine whether or not a project adequately meets adopted City standards and design guidelines, based upon the following findings:

1. *The proposed development is consistent with the General Plan, any applicable specific plan, and any applicable neighborhood or area plans.*

   The proposal is consistent with several General Plan policies, particularly those that encourage Noise compatibility (N-2.1.1 and N-3.1) and health services in a broad spectrum of the community (PPFS-7.2). The project is consistent with the Enloe Hospital Master Plan.

2. *The proposed development, including the character, scale, and quality of design are consistent with the purpose/intent of this chapter and any adopted design guidelines.*

   The project, as conditioned, is consistent with the City's adopted Design Guidelines. The design would be of good quality, as discussed above. The applicant has revised the screening to encompass the whole site.

3. *The architectural design of structures, including all elevations, materials and colors are visually compatible with surrounding development. Design elements, including screening of equipment, exterior lighting, signs, and awnings, have been incorporated into the project to further ensure its compatibility with the character and uses of adjacent development.*

   The project, as conditioned, would be compatible both visually and aurally with surrounding development, as discussed above. No new exterior lighting is proposed, and landscaping would be designed specifically to enhance visual screening.

4. *The location and configuration of structures are compatible with their sites and with surrounding sites and structures, and do not unnecessarily block views from other structures or dominate their surroundings.*

   As revised and conditioned, this project would have adequate screening on all sides. The project would not block any views. The screening, as conditioned, ensures compatibility with surrounding sites.

5. *The general landscape design, including the color, location, size, texture, type, and coverage of plant materials, and provisions for irrigation and maintenance, and protection*

of landscape elements, have been considered to ensure visual relief, to complement structures, and to provide an attractive environment.

New landscaping is proposed only as a screening component, but as revised and conditioned the living fence would provide visual relief and promote an attractive environment, as discussed above.

RECOMMENDED CONDITIONS OF APPROVAL

1. All approved building plans and permits shall note on the cover sheet that the project shall comply with AR 20-05 (Bloom Energy). The approval documents for this project are date stamped August 31, 2020.

2. All wall-mounted utilities and roof or wall penetrations, including vent stacks, utility boxes, exhaust vents, gas meters and similar equipment, shall be screened by appropriate materials and colors. Adequate screening shall be verified by Planning staff in the field prior to the operation of the Fuel Cells.

3. Proposed project signage shall be permitted through a separate sign permit in compliance with CMC 19.74 (Signs).

4. Prior to permit final the applicant shall install the living fence as shown on revised plans. Staff shall field-verify such an installation, including compliance with AB 1881 requirements, prior to the operation of the Fuel Cells.

5. Building plans shall include and prior to permit final the applicant shall install on all sides of the concrete retaining wall that face the fuel cells noise-attenuating acoustic material such as baffles or panels or outdoor acoustic tiling. Staff shall field-verify such an installation prior to the operation of the Fuel Cells.

6. Applicant shall maintain the living fence at applicant's expense, and if removal to access the utility easement is required applicant shall replace at applicant's expense removed portions of the fence within 30 days of completion of utility work.

7. Applicant shall install at applicant's expense appropriate gate structures designed to match or architecturally compliment the living fence at the openings shown on the revised plans, with final approval by City of Chico staff prior to the operation of the Fuel Cells.

8. The applicant shall defend, indemnify, and hold harmless the City of Chico, its boards and commissions, officers and employees against and from any and all liabilities, demands, claims, actions or proceedings and costs and expenses incidental thereto (including costs of defense, settlement and reasonable attorney's fees), which any or all of them may suffer, incur, be responsible for or pay out as a result of or in connection with any challenge to or claim regarding the legality, validity, processing or adequacy associated with: (i) this requested entitlement; (ii) the proceedings undertaken in connection with the adoption or approval of this entitlement; (iii) any subsequent approvals or permits relating to this entitlement; (iv) the processing of

occupancy permits and (v) any amendments to the approvals for this entitlement. The City of Chico shall promptly notify the applicant of any claim, action or proceeding which may be filed and shall cooperate fully in the defense, as provided for in Government code section 66474.9.

PUBLIC CONTACT

A notice was published in the Chico Enterprise Record 10 days prior to the meeting date, notices were mailed out to all property owners and tenants within 500 feet of the project site, and a notice was placed on the project site. The meeting agenda was posted at least 10 days prior to the Architectural Review and Historic Preservation Board meeting.

ATTACHMENTS

A. Location Map
B. Site Plan
C. Revised Rendering
D. Color Board
E. Revised Architectural Elevation
F. Revised Noise Study
G. Applicant's Project Description
H. Supplemental Materials – Neighborhood Comments
I. Revised Site Detail
J. Applicant's Project Summary

DISTRIBUTION

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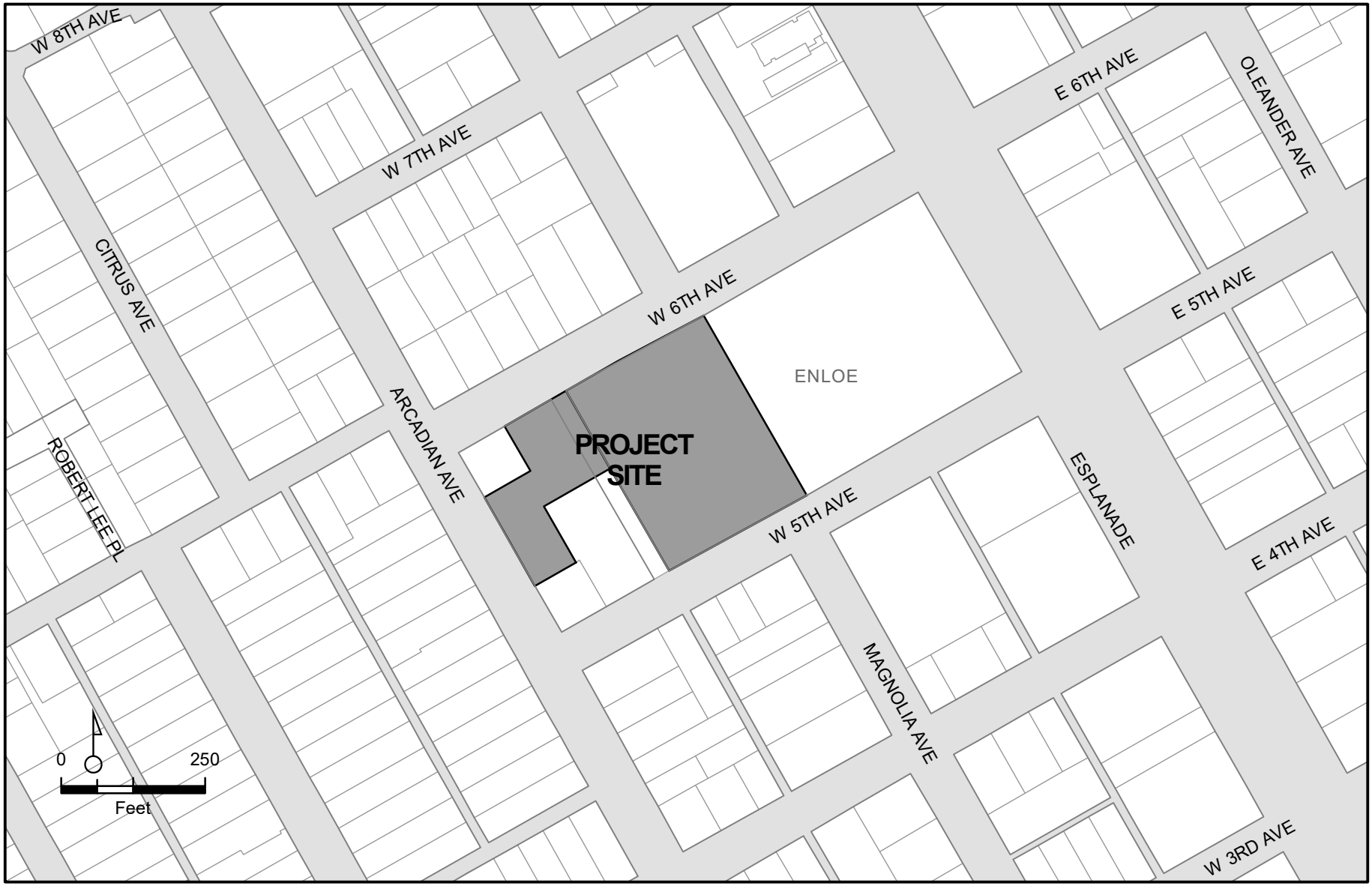
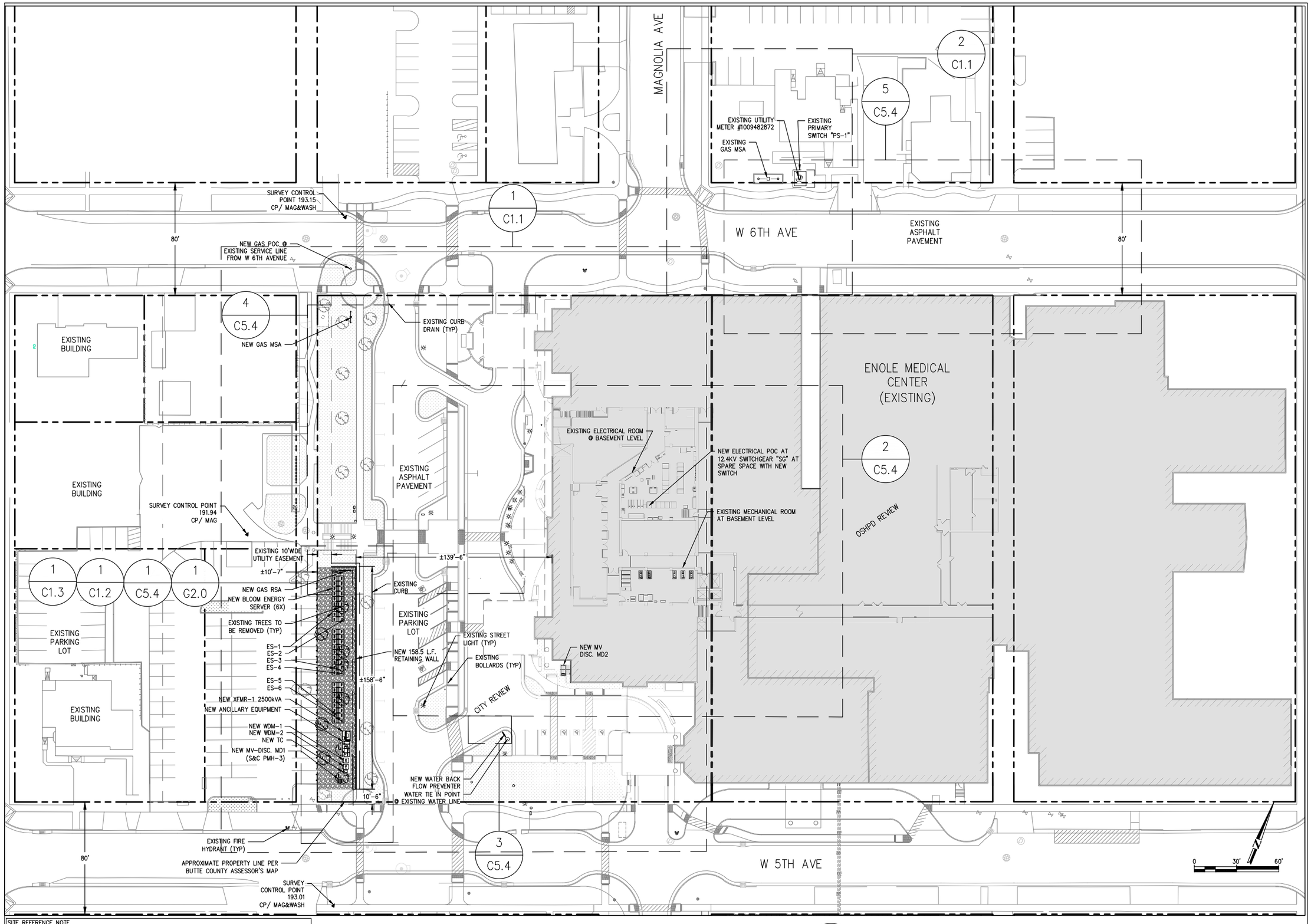
PP Ambo
SP Sawley
File: AR 20-05



AR 20-05 (Bloom Energy)
1531 Esplanade
APN 003-023-005-000, 003-023-024-000

Attachment A



SITE REFERENCE NOTE
EXISTING SITE CONDITION TAKEN FROM PLAN ENTITLED "GRADING ALTERNATE NUMBER 1 ENLOE MEDICAL CENTER CHICO, CA" ASBUILT DATED 09/12/13 AND PLAN ENTITLED "TOPOGRAPHIC SURVEY FOR ENLOE MEDICAL CENTER, A PORTION OF SECTION22, T.22 N, R.1E., M.D.B. & M, BUTTE COUNTY, C.A. PREPARED BY ANDREGG PSOMAS AND LAST REVIEW DATED 09/24/2019.

OVERALL SITE PLAN

SCALE: 1" = 30'

1 G1.1

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ANTHONY E. FARMAND, PE
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CUSTOMER SITE
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1531 ESPLANADE
CHICO, CA 95926

ENLOE MEDICAL CENTER

REVISION HISTORY

REV	REVISION ISSUE	DATE
–	INITIAL RELEASE	05/15/2020

DESIGNED BY CARSON TURNER	REVIEWED BY CARSON TURNER
DRAWN BY THEODORE SIMMONS	APPROVED BY EBI CONSULTING

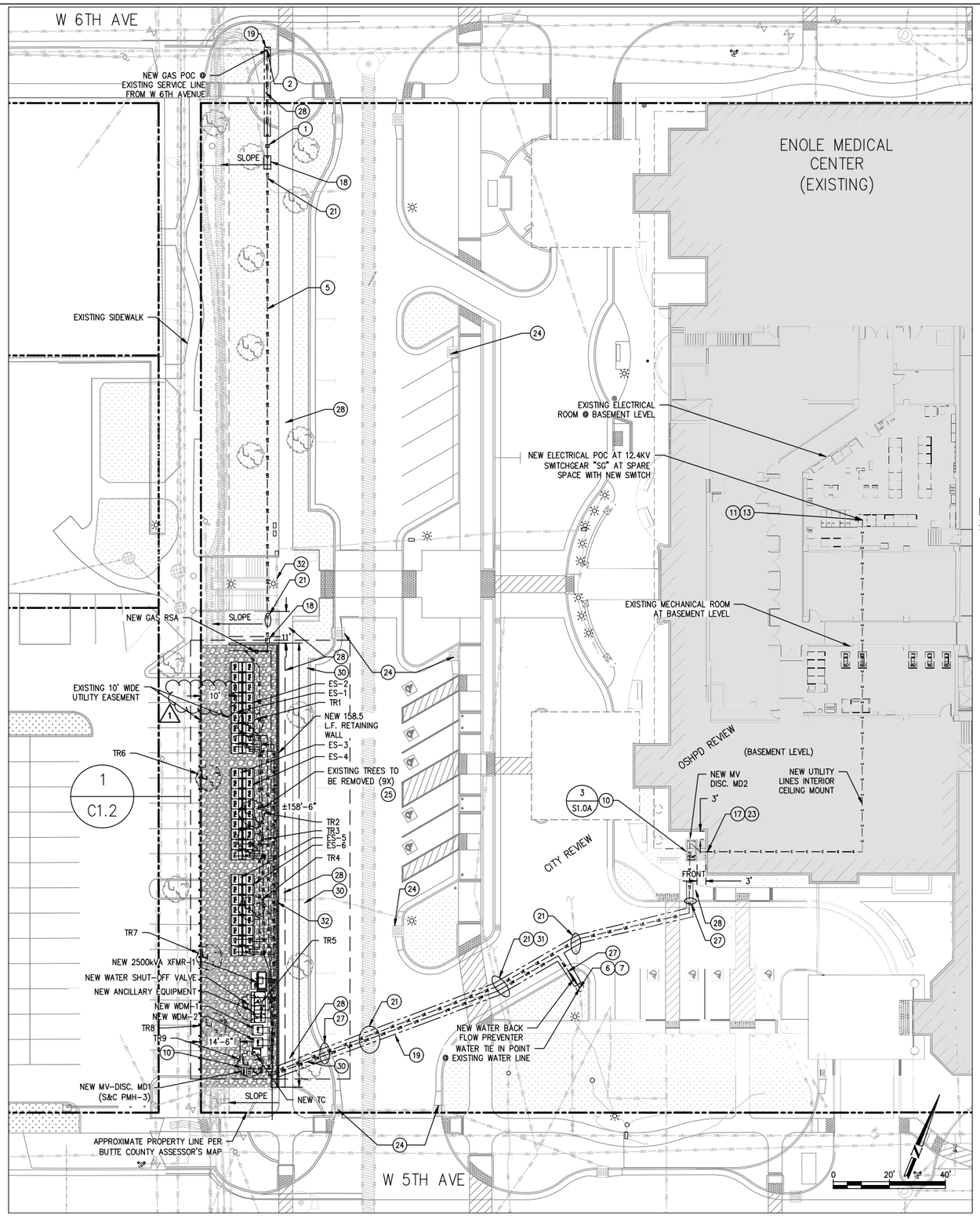
SHEET TITLE
OVERALL SITE PLAN

DRAWING NUMBER
G1.1

BLOOM DOCUMENT
DOC-1012061

THIS DRAWING IS 24" X 36" AT FULL SIZE

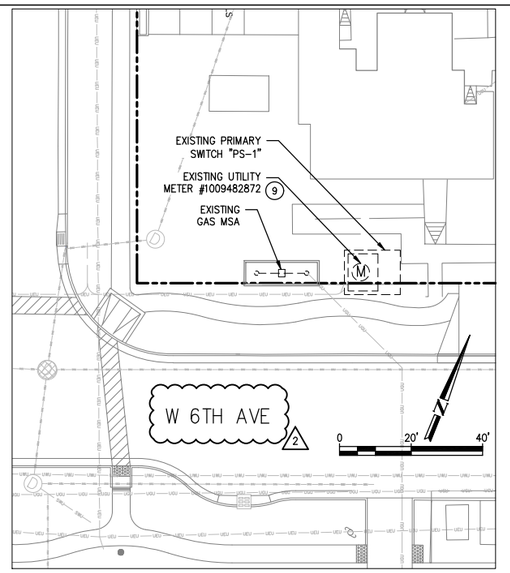
SITE ID: ENL000.0 | SHEET 03 OF 20



DETAILED SITE PLAN

SCALE: 1" = 20'

1 / C1.1



DETAILED SITE PLAN

SCALE: 1" = 20'

2 / C1.1

TREE REMOVE TABLE

TREES TO BE REMOVED	TREES SPECIES TO BE REMOVED	REMOVED TREES TRUNK SIZE
TR1	CREPE MYRTLE	7 TRUNKS, 1" DIA. EA @ 5'
TR2	CREPE MYRTLE	5 TRUNKS, 2" DIA. EA @ 5'
TR3	CREPE MYRTLE	5 TRUNKS, 1.5" DIA. EA @ 5'
TR4	CREPE MYRTLE	3 TRUNKS, 1" DIA. EA @ 5'
TR5	CREPE MYRTLE	4 TRUNKS, 1" DIA. EA @ 5'
TR6	CREPE MYRTLE	1" DIA. EA @ 5'
TR7	CREPE MYRTLE	1" DIA. EA @ 5'
TR8	CREPE MYRTLE	7 TRUNKS, 2.5" DIA. EA @ 5'
TR9	CREPE MYRTLE	3 TRUNKS, 3" DIA. EA @ 5'

GENERAL NOTES

1. CLEAN AND PRIME ALL NEW WALL MOUNTED PIPING AND CONDUIT. PIPING AND CONDUIT SHALL BE PAINTED WITH EXTERIOR GRADE PAINT TO MATCH EXISTING.
2. CONDUITS AND PIPES MOUNTED TO BUILDING WALL SHALL BE SUPPORTED AS PER LOCAL CODE, RUN AT HEIGHT ABOVE DOORWAYS, AND STAND OFF WALL TO AVOID EXISTING CONDUITS AND PIPES.
3. SLOPE LINES SHOWN ARE APPROXIMATE AND INTENDED TO SHOW THE GENERAL DIRECTION OF WATER RUN OFF; SLOPE LINES ARE DRAWN PER VISUAL SURVEY OF SURROUNDING AREA.
4. SEE BLOOM ENERGY PRODUCT INSTALLATION DRAWINGS FOR UTILITY CONNECTIONS TO ANCILLARY EQUIPMENT AND ENERGY SERVER.

REFERENCE SHEET NOTES

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

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

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

(6) TAP EXISTING WATER LINE AT NEAREST ACCESSIBLE LOCATION IN LANDSCAPE AREA OF PARKING LOT AS SHOWN WITH A LOCAL SHUT-OFF VALVE. REFER TO DOMESTIC WATER CONNECTION DETAIL FOR ADDITIONAL REQUIREMENTS.

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

(9) EXISTING UTILITY ELECTRIC METER. REFER TO ELECTRICAL SINGLE LINE DIAGRAM FOR ADDITIONAL REQUIREMENTS.

(10) NEW BLOOM ENERGY FURNISHED, CONTRACTOR INSTALLED, DISCONNECT SWITCH. MOUNT TO PAD PER MANUFACTURER AND UTILITY SPECIFICATIONS.

(11) CONTRACTOR SHALL TERMINATE ELECTRIC FEEDER AS SHOWN. REFER TO ELECTRICAL SINGLE LINE DIAGRAM FOR ADDITIONAL REQUIREMENTS.

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

(17) CONTRACTOR SHALL CORE CONDUIT AND/OR PIPE THROUGH WALL. SCAN WALL PRIOR TO CORING TO AVOID COLLATERAL DAMAGE TO EXISTING PLUMBING AND WIRING. REFER TO WALL PENETRATION DETAIL FOR ADDITIONAL REQUIREMENTS.

(18) CONTRACTOR SHALL INSTALL CONDUIT AND/OR PIPE BY HORIZONTAL DIRECTIONAL DRILLING (HDD) AS NOTED ON DRAWING. PROVIDE HDD PIT AT START AND END OF HDD. PROVIDE POTHOLE AT ALL LOCATIONS WHERE HDD CROSSES EXISTING UTILITIES PRIOR TO STARTING HDD OPERATIONS. PATCH BACK TO MATCH EXISTING. REFER TO UNDERGROUND/TRENCH CONDUIT AND PIPING DETAIL FOR ADDITIONAL REQUIREMENTS.

(19) CONTRACTOR SHALL PROVIDE SAWCUT TRENCH FOR UNDERGROUND UTILITIES IN THIS LOCATION AND HAND DIG TRENCHES WHERE THEY CROSS EXISTING UTILITIES. REFER TO UNDERGROUND/TRENCH CONDUIT AND PIPING DETAIL FOR ADDITIONAL REQUIREMENTS.

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

(23) CONTRACTOR SHALL TRANSITION ALL ABOVEGROUND NEW LINES TO UNDERGROUND TOWARD ANCILLARY EQUIPMENT. ABOVE GROUND UTILITIES SHALL BE PROTECTED AS NECESSARY, THEN ROUTED UNDERGROUND TO EQUIPMENT STUB-UP LOCATIONS PER MECHANICAL DETAIL.

(24) PROVIDE "DANDY SACK" OR EQUAL WITH OUTFLOW PORTS AT STORM DRAIN INLET. REFER TO EROSION CONTROL DETAIL FOR ADDITIONAL REQUIREMENTS.

(25) CONTRACTOR SHALL REMOVE EXISTING TREE.

(27) CONTRACTOR SHALL UNDER-CUT EXISTING CURB FOR TRENCHING UTILITY LINES AND BACKFILL WITH CONCRETE SLURRY. IF CURB IS DAMAGED, REPAIR TO MATCH EXISTING.

(28) CONTRACTOR SHALL REMOVE AND REPLACE CONCRETE SIDEWALK TO THE NEAREST JOINT AS REQUIRED TO COMPLETE THE WORK. REFER TO CONCRETE SIDEWALK DETAIL FOR ADDITIONAL REQUIREMENTS.

(30) CONTRACTOR SHALL REMOVE AND REPLACE ALL LANDSCAPING WITHIN EXCAVATION AREA FOR NEW RETAINING WALL. CONTRACTOR SHALL SAFE OFF EXISTING IRRIGATION AS NEEDED AND REPAIR AND REPLACE IRRIGATION MATCHING EXISTING AFTER COMPLETION OF THE RETAINING WALL WORK.

(32) THE CONTRACTOR SHALL REMOVE AND RELOCATE EXISTING STREET LIGHT CONDUIT AND CONDUCTORS FROM WORK AREA AS NEEDED. COORDINATE ALL WORK WITH OWNER REPRESENTATIVE. CONDUCTORS SHALL BE PLACED FROM TERMINATION TO TERMINATION, NO SPLICING, TYP.

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

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ENLOE MEDICAL CENTER

REVISION HISTORY

REV	REVISION ISSUE	DATE
–	INITIAL RELEASE	05/15/2020
1	REVISION PER PLAN REVIEW	03/31/2020
2	REVISION PER PLAN REVIEW	06/10/2020

DESIGNED BY CARSON TURNER	REVIEWED BY CARSON TURNER
DRAWN BY THEODORE SIMMONS	APPROVED BY EBI CONSULTING

SHEET TITLE
DETAILED SITE PLAN – 1

DRAWING NUMBER
C1.1

BLOOM DOCUMENT
DOC-1012061

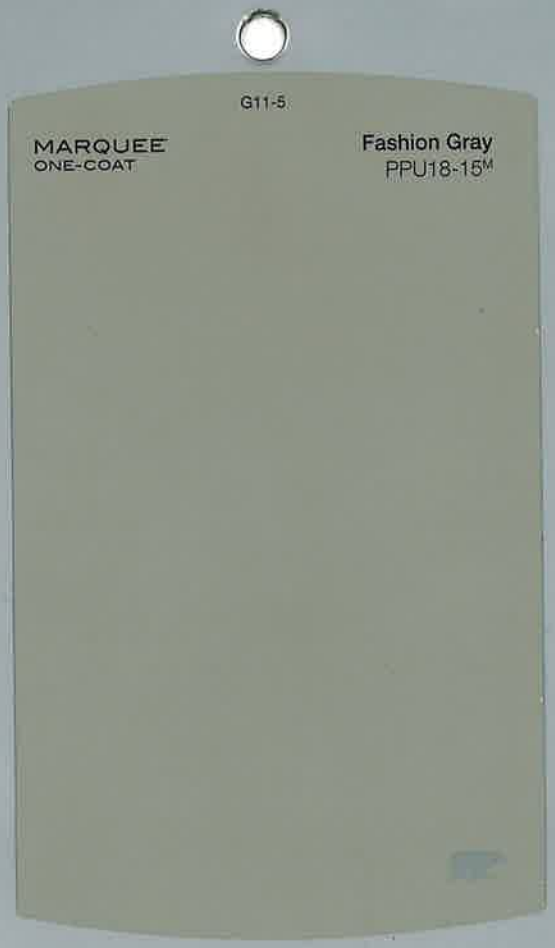
THIS DRAWING IS 24" X 36" AT FULL SIZE

SITE ID: ENL000.0 | SHEET 08 OF 20

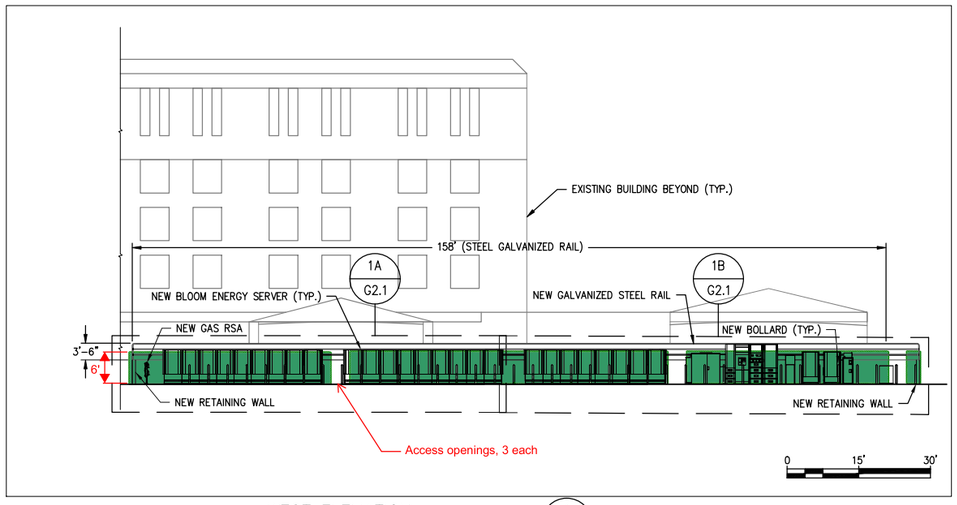
Attachment B

Attachment C

Attachment C



Attachment D
*physical samples will be available at meeting.



WEST ELEVATION
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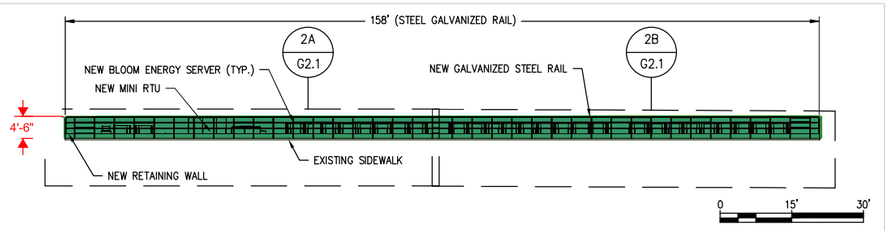

EAST ELEVATION
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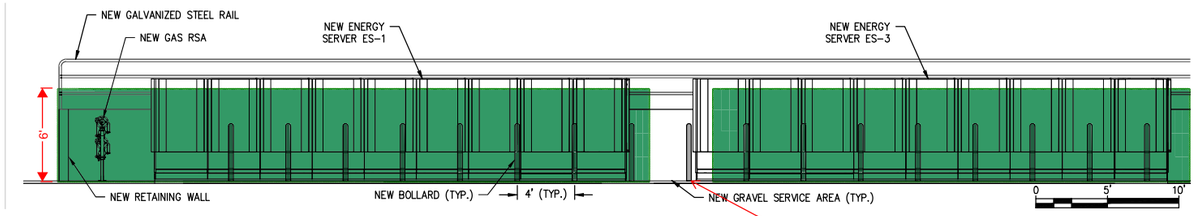
2 G2.1



WEST ELEVATION
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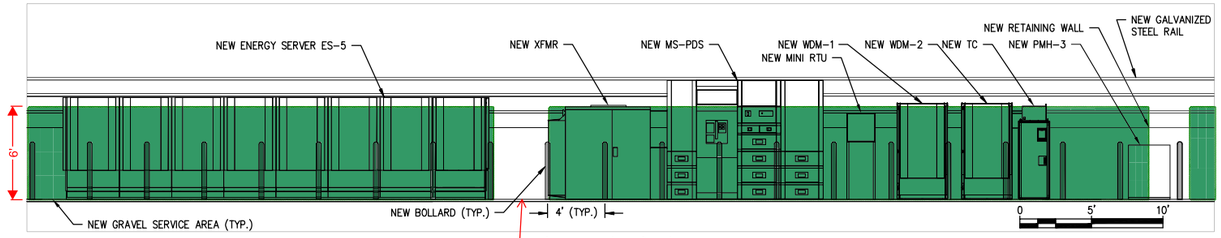
1A G2.1

Access openings, 3 each



WEST ELEVATION
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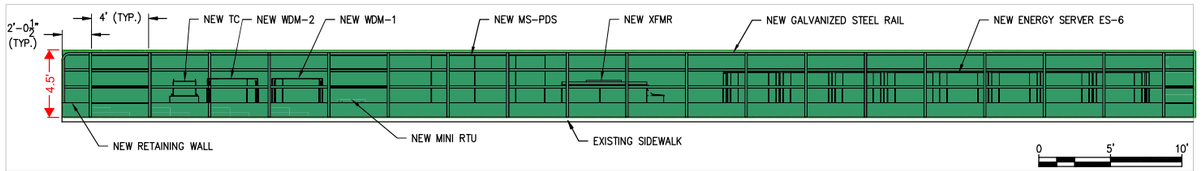
1B G2.1



EAST ELEVATION
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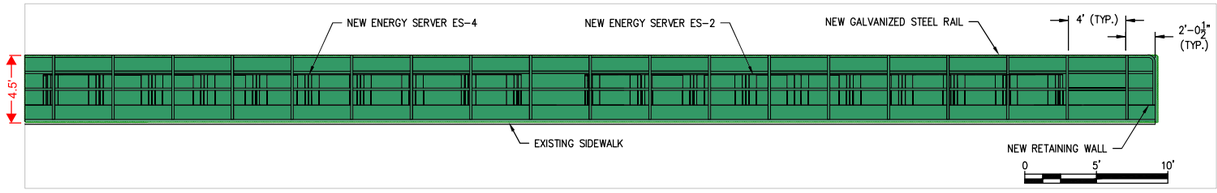
2A G2.1



EAST ELEVATION
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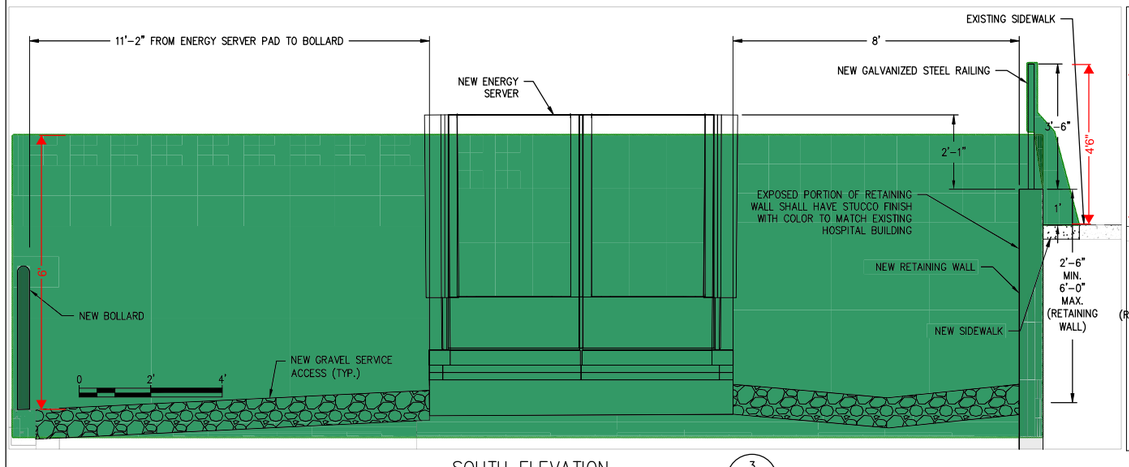
2B G2.1



SOUTH ELEVATION
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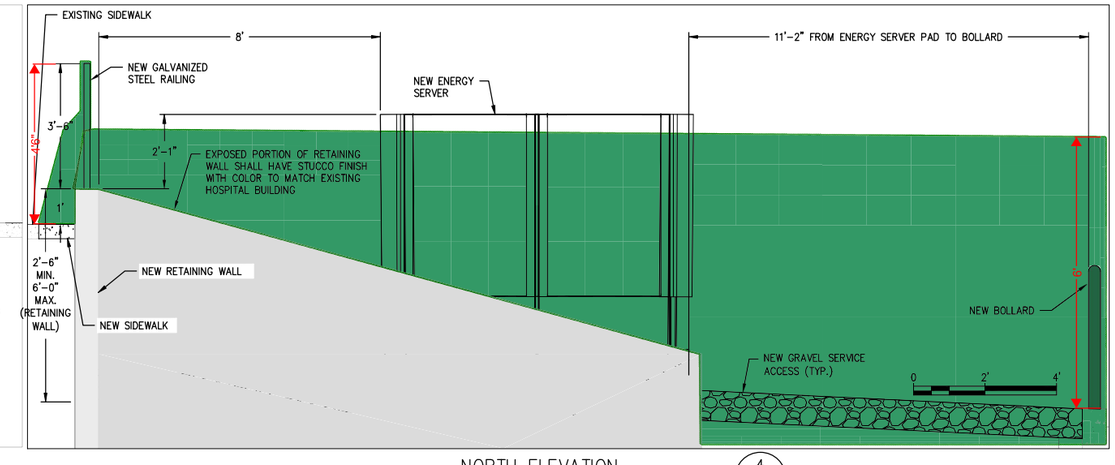
3 G2.1



NORTH ELEVATION
SCALE: 1/2" = 1'-0"
4 G2.1

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ENLOE MEDICAL CENTER

REVISION HISTORY		
REV	REVISION ISSUE	DATE
–	INITIAL RELEASE	05/15/2020

DESIGNED BY CARSON TURNER	REVIEWED BY CARSON TURNER
DRAWN BY THEODORE SIMMONS	APPROVED BY EBI CONSULTING

SHEET TITLE
ELEVATION VIEWS

DRAWING NUMBER
G2.1

BLOOM DOCUMENT
DOC-1012061

THIS DRAWING IS 24" X 36" AT FULL SIZE

SITE ID: ENL000.0 | SHEET 05 OF 20

Attachment E

Veneklasen Associates
Consultants in Acoustics | Noise | Vibration | AV | IT

August 27, 2020

Bloom Energy
4353 North 1st Street
San Jose, California 95134

Attention: **Cheryl Bullock | Supply Chain Commodity Manager**

Subject: **Enloe Medical Center**
Chico, California
Fuel Cell Community Noise Assessment Report Addendum 1 Report Addendum 1
Veneklasen Project No. 4631-004

Dear Cheryl:

Veneklasen Associates, Inc. (Veneklasen) was contracted to evaluate noise impact of the proposed fuel cell banks for the subject project in Chico, California. A previous Veneklasen report, Report1 dated July 10, 2020, assessed the fuel cell noise levels at various property lines and showed compliance with the City of Chico Noise Ordinance. This report analyzes the expected fuel cell noise levels at various sensitive residential receptors nearby the Enloe Medical Center property and compares these levels to existing ambient noise levels in order to assess the potential impact fuel cell installation will have on these properties. This report is meant to be a supplement to the property line noise report providing further clarity and documents our assessments of noise impact to nearby properties.

PARTITIONS

Veneklasen visited the site on Tuesday October 8, 2019 and placed a sound level meter on the first level roof of the Enloe Medical Center building to capture the hourly sound levels of the site for a 24-hour period. Veneklasen also performed short-term noise measurements. These measurements are also summarized in Report1. Table 1 and Figure 1 show the location and summary of the noise measurements.

In addition to the measured values, Veneklasen utilized 24-hour noise contour data from both the long-term monitor placed at the site as well as data from similar road types measured on other projects to calculate the average daytime ambient noise level at each receptor. These calculated values appear in green in Table 1 below.

Table 1. Sound Level Measurement Summary

Location	Daytime Average Hourly Level, dBA	Nighttime Quietest Hourly Level, dBA
Long-Term 1	55	44
Short-Term 1	56	45
Short-Term 2	54	43
Short-Term 3	59	48
Short-Term 4	52	42

Figure 1. Sound Level Measurement Locations

Fuel Cell Damping Compound Noise Mitigation

Veneklasen understands that the current fuel cell installation method includes a foam dampening material that is installed in the doors and exhaust to the fuel cells. This modification to installation method was made after the 2016 sound power measurements, summarized in Appendix A below, were conducted. Previous property line noise analyses conducted by Veneklasen were conducted using the pre-damping compound sound power data. The installation of this material reduces the radiated noise levels from fuel cell units by approximately 5 decibels. Using measured data of the damping compound, predictions of the acoustical performance were revised and the computer model updated.

The calculated noise levels in the following section utilize reduced fuel cell source levels with the foam dampening compound planned for installation at the Enloe Medical Center. The results of these calculations are also summarized in Appendix A.

Sensitive Receptor Noise Analysis

Drawings dated March 31, 2020 indicate the proposed fuel cell units are installed toward the southern boundary of the project, shown in green in the figure above. Using the dampening compound-modified sound power level data for the fuel cell units, Veneklasen calculated the expected sound levels at several sensitive receptor locations adjacent to the project site, labeled as Noise Assessment Locations (NAL). Acoustical modelling was completed using Bruel & Kjaer's Predictor V.12.9 computer software program. The Noise Assessment Locations and fuel cell locations are both shown in Figure 2.

Figure 2. Noise Assessment Location Map

The updated receiver noise levels as well as the daytime and nighttime ambient noise levels for each NAL are summarized in Table 2 below. The reported distances in the table are taken from the middle of the nearest fuel cell unit to the closest NAL. The sound contribution from each fuel cell was independently calculated (distance taken at the center of the particular fuel cell to the NAL) and the reported level in Table 2 below is the cumulative level of all fuel cells operating. Details of how property line noise levels were calculated, how sound attenuates over distance and the effects of the adjacent retaining wall are all described in Appendix B.

Table 2. Noise Assessment Location Analysis

Sensitive Receptor	Receptor Address	Approximate Distance from Nearest Fuel Cell, ft	Ambient Hourly Level, dBA		Fuel Cell Noise Level, dBA
			Daytime Average Level	Quietest Nighttime Level	
NAL1	226 W 6th Ave	330	56	45	36
NAL2	1600 Arcadian Ave	390	56	45	37
NAL3	1569 Arcadian Ave	390	56	45	25
NAL4	1531 Arcadian Ave	280	53	42	39
NAL5	1501 Arcadian Ave	280	53	42	26
NAL6	1462 Arcadian Ave	150	59	48	29

Receptor Noise Discussion

Traditionally, a human can perceive a just noticeable difference in the sound when the level is increased by a minimum of 3 dBA meaning that a human listener will state that a 43 dBA sound with an ambient noise level of 40 dBA is just noticeable. For this reason, most environmental noise conditions allow for small increases or equal noise to the ambient as the perception of increase is small. When a particular noise source (e.g. fuel cell noise) is compared to an

existing ambient noise level (e.g. traffic noise), this noise is said to be considered "inaudible" above the existing ambient if the level is less than the ambient.

When compared to the average hourly daytime noise level, all of the NAL-calculated fuel cell noise levels are at least 14 dB less than the ambient noise level. Therefore, fuel cell noise levels during the daytime hours would be considered "inaudible" at the NAL locations shown.

When compared to the quietest nighttime noise level (this occurs at approximately 3AM according to the conducted ambient noise level measurements), all of the NAL-calculated fuel cell noise levels are at least 8 dB less than the ambient noise level, with the exception of NAL4, which is 3 dB less than the ambient. For these locations where the level is 8 dB below the ambient, fuel cell noise levels at night will be "inaudible" to most of the human population and have little effect on the prevailing ambient meaning that the ambient noise level will not change with the presence of the fuel cells.

The fuel cell noise level at NAL4 was calculated to be approximately 3 dB less than the quietest nighttime ambient noise level. At the exterior, this would be considered "slightly" to "barely" audible. The fuel cell noise level would likely not be measurable over the ambient noise level.

Summary

Veneklasen has reviewed the noise impact of the proposed fuel cell banks on surrounding noise sensitive receptors. In a previous report (Report1 dated July 10, 2020), fuel cell noise levels have been shown to satisfy the City of Chico Noise Ordinance requirements. In this study with the modeling of the damping scheduled to be installed, the fuel cell noise levels were shown to be lesser than what was reported in previous reports and remain *compliant with the City of Chico Noise Ordinance*.

Mitigated fuel cell noise levels were calculated at the various sensitive receptor locations and compared to measured and calculated ambient noise levels. *All calculated noise levels of the fuel cells are predicted to be below the prevailing ambient noise levels meaning that the effect on the community is very small. In all locations shown in Figure 2, noise is predicted to be "inaudible" in the daytime. All locations, except NAL-4, remain "inaudible" at night. NAL-4 will be "barely audible" outside at the quietest hour of 3 a.m. In Veneklasen's professional opinion, the effect of the fuel cell operation meets the requirements of the Chico Municipal Code and actually delivers noise levels that are well below the requirements meaning the impact to the community is significantly reduced from that required by law.*

Therefore, Veneklasen has determined that noise levels from fuel cells will not significantly impact the surrounding neighborhood.

If you have any questions, please do not hesitate to call.

Sincerely,
Veneklasen Associates, Inc.

Kevin Patterson
Associate

John LoVerde, *FASA*
Principal

Appendix A – Sound Power Levels

Sound power data was taken from MWA Report titled "Bloom Energy – ES5 Linear Sound Power Measurement", dated June 21, 2016. These reported levels were measured without the sound dampening foam described above.

Table 3. Fuel Cell Measured Sound Power Level

Dampening Product Installed?	Measured Sound Power Level [dB] – 1/1 Octave Bands							
	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	LwA
No	77.9	80.9	84.1	82.3	80.5	76.9	69.4	84.9
Yes	77.9	80.9	81	77.9	73.7	67.2	64.8	79.3

In a study conducted at an existing installation of the fuel cell systems, measurements were taken of the fuel cell banks with and without the dampening product. The Noise Reduction (NR) of the dampening product was calculated by taking the difference of these measured values at octave band frequencies. Note that no significant reduction was shown at the 63Hz and 125Hz bands. The modified sound levels for the fuel cells that were utilized in calculations shown in this report are reported in Table 3.

Table 4. Measured Sound Dampening Foam Mitigation

Condition	Measured Sound Pressure Level [dB] @10ft – 1/1 Octave Bands				
	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz
No Foam	70.8	66.8	65.5	62.4	53.6
Foam	67.8	62.5	58.7	52.8	49.0
Difference (NR)	3.1	4.4	6.8	9.7	4.6

Appendix B – Calculation Methods

Sound level attenuates over distance by a factor of -6 dB per doubling of distance. For example, if a sound source was measured to be 60 dBA at a distance of 10 feet, the measured sound level at 20 feet would be 54 dBA. Sound level reduction due to distance is calculated according to the following equation:

$$L_p = L_w + 10\log Q - 20\log d - 0.7$$

Where:
d = The distance between the center of the fuel cell unit to the property line in feet.
L_p = The sound pressure level at a distance *d* in decibels.
L_w = The sound power level from the fuel cell. Sound power levels are reported above in Appendix A in decibels.
Q = The directivity factor which dictates how sound radiates outward from the source. See Figure 3 below from the 2015 American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) Handbook, Chapter 48 describing *Q* factors and their associated sound radiation patterns.

Figure 3. ASHRAE Handbook: Q Factor Sound Radiation Patterns

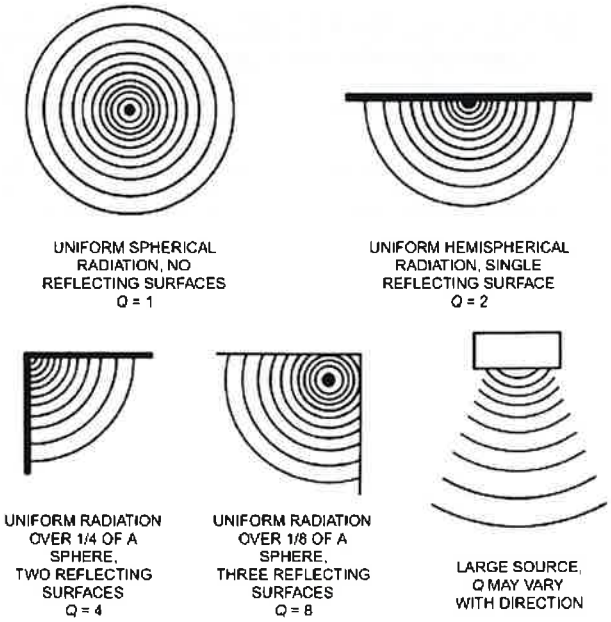

Fig. 30 Directivity Factors for Various Radiation Patterns

In the equation above, the greater the distance away from the sound source (*d*), the lower the sound level. This is intuitive and most people would consider this common knowledge.

In general, the more reflecting surfaces there are adjacent to a noise source, the more sound will bounce off of these surfaces and radiate outward. In other words, larger *Q* factors will increase the noise level. For the north and south property line noise level calculations, a *Q* factor of 2 was used because the ground that the fuel cell units are sitting on act as a single reflecting surface. For the west property line noise calculation, the retaining wall to the east of the fuel cells is close enough to the equipment to act as a second reflecting source. Therefore, a *Q* factor of 4 was used. A doubling of the *Q* factor increases the receiver noise level, L_p, by 3 dB.

Veneklasen Associates
Consultants in Acoustics | Noise | Vibration | AV | IT

July 10, 2020

Bloom Energy
4353 North 1st Street
San Jose, California 95134

Attention: **Cheryl Bullock | Supply Chain Commodity Manager**

Subject: **Enloe Medical Center**
Chico, California
Fuel Cell Banks Property Line Noise Analysis
Veneklasen Project No. 4631-004

Dear Cheryl:

Veneklasen Associates, Inc. (Veneklasen) was contracted to evaluate noise impact of the proposed fuel cell banks for the subject project in Chico, California. This report includes the predicted noise levels at the adjacent property lines and an evaluation of necessary mitigation, if warranted, to comply with the local noise ordinance in the surrounding community. This report documents our findings.

Noise Criteria

The Chico Code of Ordinances, Chapter 9.38 "Noise" Section 9.38.040 "Commercial and industrial property noise limits" states the following:

> *No person shall produce, suffer or allow to be produced by human voice, machine, animal, or device, or any combination of same, on commercial or industrial property, a noise level at any point outside of the property plane that exceeds seventy (70) dBA.*

Veneklasen assumes that the proposed fuel cells will run 24-hours a day.

Measurements

Veneklasen visited the site on Tuesday October 8, 2019 and placed a sound level meter on the first level roof of the Enloe Medical Center building to capture the hourly sound levels of the site for a 24-hour period. Veneklasen also performed short-term noise measurements. Table 1 and Figure 1 show the location and summary of the noise measurements.

Table 1. Sound Level Measurement Summary

Location	Daytime Average Hourly Level, dBA	Nighttime Quietest Hourly Level, dBA
Long-Term 1	55	44
Short-Term 1	-	45
Short-Term 2	-	43
Short-Term 3	-	48
Short-Term 4	52	-

Figure 1. Sound Level Measurement Locations

Property Line Analysis

Drawings dated March 31, 2020 indicate several of the proposed fuel cell units installed toward the southern boundary of the project, shown in green in the above figure. Using the sound power data of the fuel cell units, Veneklasen calculated the expected sound levels at the north, south, and west edges of the Enloe property as shown in yellow in Figure 1 above. Fuel cell equipment sound power levels are reported in Appendix A below. The reported distances to the property line are taken from the middle of the nearest fuel cell unit to the closest Enloe property edge. The sound contribution from each fuel cell was independently calculated (distance taken at the center of the particular fuel cell to the property edge) and the reported level in Table 2 below is the cumulative level of all fuel cells. Details of how property line noise levels were calculated, how sound attenuates over distance, and the effects of the adjacent retaining wall are all described in Appendix B.

While there is no code requirement, the expected noise level at the west façade of the Enloe Medical Center building is also presented. The results of these calculated noise levels are shown in Table 2.

Table 2. Enloe Property Line Noise Analysis: No Mitigation

Property Line	Distance to Property Line, ft	Calculated Fuel Cell Noise Level, dBA	Noise Code Compliant
North	255	43	Yes
South	70	53	Yes
Enloe Building Façade	145	43	N/A
West	235	50	Yes

The calculated noise levels at all of the Enloe property lines are all below the required 70 dBA and are therefore compliant with the City of Chico Noise Code.

Veneklasen also calculated the expected noise levels produced by the proposed fuel cells at adjacent residential property lines. Reported distances were taken the same way as described above and noise level calculations were conducted in the same way as the above results. The results of these calculated noise levels with the locations shown in Figure 2 are reported in Table 3 below.

Table 3. Property Line Noise Analysis: No Mitigation

Property Line	Distance to Property Line, ft	Calculated Fuel Cell Noise Level, dBA	Noise Code Compliant
North Residential	335	41	Yes
South Residential	147	50	Yes
West Residential	280	49	Yes

Figure 2. Residential Property Line Locations

Summary

Veneklasen has reviewed the noise impact on the north, south, and west Enloe property lines resulting from the noise generated by proposed fuel cells on the Enloe Medical Center property. Veneklasen calculated the noise levels at each of these property lines and has determined that no mitigation will be required to comply with the City of Chico Noise Code. Calculation methods are summarized in Appendix B.

Veneklasen has also calculated the expected noise levels at the adjacent residential property lines. The nearest

residential receptors are to the north (along 6th Ave), to the south (along 5th Ave) and next to the west (along Arcadian Ave) of the medical center property. These calculated noise levels are comparable to existing nighttime ambient noise levels measured by Veneklasen.

If there are any questions with regard to the information within this report, please do not hesitate to contact us.

Sincerely,
Veneklasen Associates, Inc.

Kevin Patterson
Associate

John LoVerde, *FASA*
Principal

Appendix A – Sound Power Levels

Sound power data was taken from a Mei Wu Acoustics Report titled "Bloom Energy – ES5 Linear Sound Power Measurement", dated June 21, 2016.

Table 4. Fuel Cell Measured Sound Power Level

Measured Sound Power Level [dB] – 1/1 Octave Bands							
63 Hz	**125 Hz**	**250 Hz**	**500 Hz**	**1000 Hz**	**2000 Hz**	**4000 Hz**	**LwA**
77.9	80.9	84.1	82.3	80.5	76.9	69.4	84.9

Appendix B – Calculation Methods

Sound level attenuates over distance by a factor of -6 dB per doubling of distance. For example, if a sound source was measured to be 60 dBA at a distance of 10 feet, the measured sound level at 20 feet would be 54 dBA. Sound level reduction due to distance is calculated according to the following equation:

$$L_p = L_w + 10\log Q - 20\log d - 0.7$$

Where:
d = The distance between the center of the fuel cell unit to the property line in feet.
L_p = The sound pressure level at a distance *d* in decibels.
L_w = The sound power level from the fuel cell. Sound power levels are reported above in Appendix A in decibels.
Q = The directivity factor which dictates how sound radiates outward from the source. See Figure 3 below from the 2015 American Society of Heating, Refrigerating and Air-Conditioning Engineers (ASHRAE) Handbook, Chapter 48 describing *Q* factors and their associated sound radiation patterns.

Figure 3. ASHRAE Handbook: Q Factor Sound Radiation Patterns

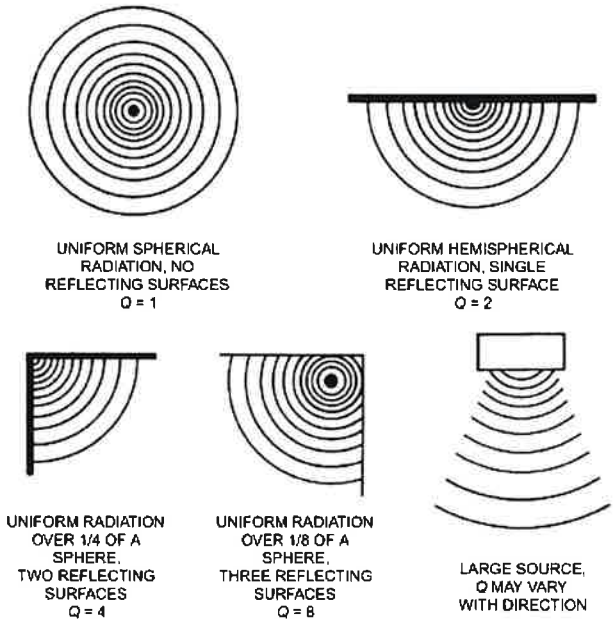

Fig. 30 Directivity Factors for Various Radiation Patterns

In the equation above, the greater the distance away from the sound source (*d*), the lower the sound level. This is intuitive and most people would consider this common knowledge.

In general, the more reflecting surfaces there are adjacent to a noise source, the more sound will bounce off of these surfaces and radiate outward. In other words, larger *Q* factors will increase the noise level. For the north and south property line noise level calculations, a *Q* factor of 2 was used because the ground that the fuel cell units are sitting on act as a single reflecting surface. For the west property line noise calculation, the retaining wall to the east of the fuel cells is close enough to the equipment to act as a second reflecting source. Therefore, a *Q* factor of 4 was used. A doubling of the *Q* factor increases the receiver noise level, L_p, by 3 dB.

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Project Description

July 10, 2020

City of Chico
Planning Division
411 Main St
Chico CA 95928

RE: Bloom Energy fuel cells at Enloe Medical Center - 1531 Esplanade – AR20-05

To Whom It May Concern:

We are proposing to construct and install clean technology, solid oxide fuel cell generation systems (a.k.a., the "Bloom Energy Servers") and associated ancillary equipment and retaining walls at the Enloe Medical Center campus at 1531 Esplanade. The proposed system is a 1.7 MW grid-parallel system. The system will provide baseload power to the facility but will not replace nor interfere with backup/life safety generation existing at the hospital.

The purpose of the generators is to provide clean base load power generated "at the site, for the site" as an alternative to solely pulling power from the existing energy grid. Compared to grid power, Bloom delivers enhanced sustainability benefits in many ways: high efficiency, greenhouse gas emissions reductions, avoided air pollutants, small physical footprint, and reduced water use. Our aim at Bloom is to be a leader in the environmentally friendly, 21st century energy revolution by creating highly customizable and adaptable, at-site energy solutions for our customers as opposed to the present energy grid which is troubled by aging infrastructure, pollution, fire risk and transmission loss over miles and miles of unsightly power lines. The Energy Server is able to work by converting fuel directly into electricity *without the need of combustion* as a conventional electrical generator would. The process is a quiet application involving a chemical reaction-natural gas and air, heating tiles to produce clean energy. Bloom Energy is a leader in fuel cell technology with hundreds of Energy Servers installed throughout California and beyond.

Unlike often unsightly mechanical equipment, we screen Bloom Energy fuel cells in an attractive steel casing, designed to be aesthetically pleasing and to showcase our brand and thus, our customers' commitment to the environment. The location proposed is in a landscaped area to the west of the main entrance and adjacent parking area. The area where we are proposing is currently sloped. The architectural/design concept idea here is we more subtly fit into that slope via the installation of retaining walls in order to keep a lower overall profile while looking panoramically at the installation (colored renderings of this proposal are included in this submittal). We consider this a passive design of an active energy conservation system consistent with Chico's Community Design Objectives and Guidelines.

The incorporation of this new technology is compatible with the previously approved master plan as it applies to Energy Efficiency Design Features and Central Plant Noise Attenuation Features and with the recitals and general provisions of the Development Agreement dated March 28, 2006.

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- Section 2.1 of the Development Agreement "Development of the Property. …In addition to the development expressly shown in the Project Description, Enloe shall, during the life of the Development Agreement, be permitted to change the use of any portion of the Property, including but not limited to the remodeling or reconstruction of existing building owned by Enloe provided that the nature of the use remains the provision of medical services, or support thereof, and the intensity and density of the use is consistent with that of the preexisting use"
    - The location of the proposed project is within a landscaped berm that transitions from a parking area to Magnolia Ave. The proposed accessory use development is directly related to supporting the hospital's ability to provide high quality health care for our community. The proposed development does not create any additional traffic or impact on the area and is immediately adjacent to a parking lot.
- The Project Description does not specifically call out Fuel Cells as one of the items in either the Energy Efficient Design Features or the Utilities section because in 2006 when this was approved, Fuel Cells were not an approved part of the California Electric Code (CEC). Fuels Cells were first specifically listed in the CEC in article 517.30 as being an allowable source of independent power. In reviewing the codes of 2013 and 2016 this same section does not list fuel cells. The NFPA 99 which governs Health Care Facilities does not include fuel cells until its 2015 edition (article 6.4.1.1.7). While this technology was not specifically called out, the Project Description clearly notes that areas of Energy Efficiency (pages 3 & 4) and Utility Relocations (page 3) will be an integral part of the Master Plan.
- The original landscaping plan of the hospital (Figure 1), approved by the city, and the Park plan (Figure 2), approved after numerous design review and revision meetings with the neighborhood and the city have been included. The area identified for the proposed Fuel Cells is not part of the approved area of the Park that was designed through collaboration with CANA and the City. The proposed area is a landscaped berm that transitions between parking areas.
- Recital D of the development Agreement "Development Agreement Goals. The City and Enloe desire to enter into the Agreement relating to the Property in order to facilitate the implementation of the Enloe Medical Center Master Plan which provides for appropriate ongoing and future care of the residents and visitors to the Chico community.
    - The costs to provide high quality care to our community are increasing exponentially, and our largest fixed expense is the cost of utilities. By implementing this along with other energy efficient programs we will reduce our power costs by an average of $453,000 yearly. Allowing us to continue to reinvest in the critical support facilities and services that our community needs.
- For the reasons outlined above, we believe that this application is compatible with the previously approved Enloe Hospital Master Plan.

We look forward to working with your agency to see our clean energy solutions come to fruition for this community hospital. Please let me know if you should have any questions! Regards,

James Matthews
West Coast Manager, Planning and Permitting Specialist
Bloomenergy
Cell: (408) 394-1628
James.Matthews@bloomenergy.com

August 10, 2020 Date was auto-updated by MS Word. Original date was 3/8/2020 -D. O'Connell

Bill Seguine,

After reviewing, at our February 19th meeting, information you provided the CANA Board regarding the installation of fuel cells adjacent to the Enloe Park and parking lot directly west of the hospital the Board has authorized the following statement.

We strongly object to the installation of fuel cells west of Magnolia adjacent to Enloe Park.

1) The placement of fuel cells would eliminate existing landscaping.

2) The fuel cells would reduce the size of Enloe Park.

3) The installation and maintenance of fuel cells would permanently encroach into Enloe Park.

4) Table 2 Property Line Noise Mitigation lists the estimated noise level to the Enloe Building facade, 145 feet away, at 58 dBA. The noise mitigation table does not include estimated noise levels inside Enloe Park.

The proposed fuel cells would be installed inside a "concrete basin." (See attached 6th Avenue picture.) This concrete structure would bounce sound into Enloe Park. The noise level inside Enloe Park would exceed the noise level at the Enloe Building facade, 145 feet away.

Directly in front of the proposed fuel cells are children's playground equipment and Donation Plaza. High noise levels would destroy the usefulness and enjoyment of these areas.

5) High noise levels will diminish the attractiveness of Enloe Park. Non-stop noise is a nuisance to the residential neighborhood.

Sincerely,

John Whitehead

President, CANA BOD

Date 5/8/2020
-D. O'Connell

Dexter O'Connell,

Enloe Park provides an important buffer between Enloe Hospital and the surrounding neighborhood. Between the park and the hospital is Magnolia Avenue. To the best of my knowledge, this block of Magnolia Avenue is a private street, owned by the Enloe Hospital. Both fuel cells and Magnolia Ave are within parcel #4 as shown on the boundary line modification 17-03 from April, 2018.

The fuel cells would represent a new industrial expansion of Enloe Hospital. The proposed location is approximately 145 feet west of the nearest hospital wall, on the west side of Magnolia Avenue. Noise levels generated by the fuel cells would exceed current hospital noise levels, be 145 feet closer to the surrounding neighborhood, and be present 24 hours a day, seven days a week.

In the City of Chico Community Development letter to Bloom Energy, dated March 27, 2020:

a) Planning Comment 7 states that the noise analysis be done per Sec. 9.38.040 of the Chico Municipal Code: "No person shall produce, suffer, or allow to be produced by human voice, machine, animal, or device, or any combination of same, on commercial or industrial property, a noise level at any point outside of the property plane that exceeds seventy (70) dB."

For this project, where is the boundary of the property plane? Property lines of the new parking lot (Parcel 2) and Enloe Park (Parcel 1) were set forth in the City of Chico BLM 17-03. Do these parcels share the same zoning as Enloe Hospital (Parcel 4)? We propose that Enloe Park be considered outside the property plane.

b) Planning Comment 9 reads "This project appears to be incompatible with the approved Enloe Hospital Master Plan and related previously-approved items..."

c) The sound levels produced by the fuel cells would be spread over a wide area from West 5th to 6th Avenues or in the revised design along the east side of the valet parking lot. Does the sound study take into consideration the fact the noise source is so widely dispersed?

We do not support the fuel cell project at this time because there are too many unanswered questions.

Sincerely,

Chico Avenues Neighborhood Association

Dexter O'Connell

From: John Whitehead <jockbaw@sbcglobal.net>
Sent: Friday, April 24, 2020 4:17 PM
To: Dexter O'Connell
Cc: Bill Seguine; James.Matthews@bloomenergy.com; Donna Wallace
Subject: Re: Enloe Fuel Cell Proposal

Thanks Dexter,

I found the Bloom Energy Server ES5 data sheets on the company's website. It appears that all models produce a noise level of 70 dB at 6 feet. I'll look forward to the updated noise report.

Sincerely,
John Whitehead
CANA BOD
530-680-4505

On Apr 24, 2020, at 3:34 PM, Dexter O'Connell <dexter.o'connell@chicoca.gov> wrote:

> John,
>
> We have requested some adjustments to the Noise report, when we receive it I will forward it directly to you.
>
> Thanks,
> Dexter
>
> Dexter N. O'Connell
> Associate Planner
> (530) 879-6810
> <image001.png>
>
> **From:** John Whitehead <jockbaw@sbcglobal.net>
> **Sent:** Friday, April 24, 2020 3:25 PM
> **To:** Bill Seguine <bill.seguine@enloe.org>; Dexter O'Connell <dexter.o'connell@Chicoca.gov>; James.Matthews@bloomenergy.com
> **Cc:** Donna Wallace <donna91105@gmail.com>
> **Subject:** Enloe Fuel Cell Proposal

Bill or Dexter,

Do you have a model number of the proposed fuel cells or a specification sheet for them? I'm interested in the actual noise level that each fuel cell produces.
Thanks for you assistance,
John Whitehead
CANA BOD
530-680-4505 cell

Dexter O'Connell

From: John Whitehead <jockbaw@sbcglobal.net>
Sent: Tuesday, July 14, 2020 6:59 AM
To: Dexter O'Connell
Cc: Marv Davidson; Betty Nopel; M Vasquez; Ken Fleming; Charles Withuhn; Hey Jann; Chuck Nelson; Kirk Monfort; Donna Wallace; Nancy Ostrom; Lee Laney
Subject: Re: AR 20-05 (Bloom Energy)

Dexter,

I'm out of town and will not be able to fully go through the new noise study until Friday. However one concern is Bloom treats Enloe as one parcel of property when it fact the fuel cells are on a different parcel then the park or parking lot or two house which are all on separate parcels. I thought noise levels were measured from the property line and their impact on Enloe Park is still a major concern.

Sincerely,
John Whitehead
530-680-4505

On Jul 13, 2020, at 7:52 AM, Dexter O'Connell <dexter.o'connell@chicoca.gov> wrote:

> Good Morning John,
>
> I wanted to let you know that we received a resubmittal from Bloom Energy on Friday, and that my preliminary review and the applicant's responses to my letter both suggest that it is likely complete. I have not formally made that determination, because I need to review some of the items in more depth, but barring unforeseen circumstances I expect to make that determination today. I will, of course, be in touch with you whichever way the decision falls.
>
> I have attached the revised Noise Study and Project Description. Those were the two items requiring major revision, as the other items required were plan clarifications and the one clarification about the location of the exhaust.
>
> Thanks,
> Dexter
>
> Dexter N. O'Connell
> Associate Planner
> (530) 879-6810
> <image001.png>
>
> <AR20-05 Project Description 7 10 20.pdf>
>
> <AR20-05 Noise Study Rev 7 10 20.pdf>

Dexter O'Connell

From: John Whitehead <jockbaw@sbcglobal.net>
Sent: Friday, July 24, 2020 11:24 AM
To: Dexter O'Connell; Donna Wallace
Subject: Fw: Project Description AR 20-05 (Bloom Energy)
Attachments: AR20-05 Project Description 7 10 20.pdf

Dexter,
I received this from one of the CANA BOD members. It points out the the ground beneath the proposed fuel cells was in fact Magnolia Avenue between 5th and 6th Avenues at the time of the Development Agreement.
Sincerely,
John Whitehead
530-680-4505 cell

----- Forwarded Message -----
From: Donna <donna91105@gmail.com>
To: John Whitehead <jockbaw@sbcglobal.net>
Sent: Thursday, July 23, 2020, 04:47:30 PM PDT
Subject: Project Description AR 20-05 (Bloom Energy)

Hi John,

I also take issue with the Project Description by Bloom Energy:

(Top of page 2) Section 2.1 of the Development Agreement (dated March 28, 2006) 'Development of the Property. ...In Addition to the development expressly show in the Project Description, Enloe shall, during the life of the Development Agreement, be permitted to change the use of any portion of the Property.'

Comment: On March 28, 2006, the land beneath the proposed fuel cells was not owned by Enloe Hospital. It was the relocated Magnolia Avenue and owned by the City of Chico. It was the intent of the Development Agreement that this land remain a public city street. Therefore, Section 2.1 of the Development Agreement does not apply to the proposed fuel cells.

Donna Wallace

On 7/13/2020 7:52 AM, Dexter O'Connell wrote:

Good Morning John,

I wanted to let you know that we received a resubmittal from Bloom Energy on Friday, and that my preliminary review and the applicant's responses to my letter both suggest that it is likely complete. I have not formally made that determination,

because I need to review some of the items in more depth, but barring unforeseen circumstances I expect to make that determination today. I will, of course, be in touch with you whichever way the decision falls.

I have attached the revised Noise Study and Project Description. Those were the two items requiring major revision, as the other items required were plan clarifications and the one clarification about the location of the exhaust.

Thanks,

Dexter

Dexter N. O'Connell

Associate Planner

(530) 879-6810

Dexter O'Connell

From: John Whitehead <jockbaw@sbcglobal.net>
Sent: Friday, August 7, 2020 11:16 AM
To: Dexter O'Connell; Donna Wallace
Subject: Fw: Fuel Cells
Attachments: Panoramic View.jpg

Dexter,
Below are some additional comments from the CANA BOD and a jpg of the fuel cells behind Home Depot which has been expanded to about the size of the proposed Enloe installation.
Is the staff report complete and will the ARHPB meet in person taking comments from the audience?
Thanks,
John Whitehead
530-680-4505 cell

----- Forwarded Message -----
From: Donna <donna91105@gmail.com>
To: John Whitehead <jockbaw@sbcglobal.net>; Marv Davidson <davidson.marv@gmail.com>; wanderboy517@gmail.com <wanderboy517@gmail.com>; kenplan@pacbell.net <kenplan@pacbell.net>; Ken Fleming <kenplan67@gmail.com>; Charles & Sally Withuhn <cswithuhn@yahoo.com>; heyjann@gmail.com <heyjann@gmail.com>; cnelson880@gmail.com <cnelson880@gmail.com>; kmonfort@csuchico.edu <kmonfort@csuchico.edu>; Laneyhogs <laneyhogs@aol.com>; Donna <donna91105@gmail.com>; nostrom@csuchico.edu <nostrom@csuchico.edu>; joneill57@comcast.net <joneill57@comcast.net>; kbultema@chicousd.org <kbultema@chicousd.org>; sandychico@gmail.com <sandychico@gmail.com>; Ken Dickson <ken.dickson.ca@gmail.com>; rgitelson@csuchico.edu <rgitelson@csuchico.edu>; pam.chico@sbcglobal.net <pam.chico@sbcglobal.net>; mail@jimfaulbaum.com <mail@jimfaulbaum.com>
Sent: Sunday, August 2, 2020, 07:40:36 PM PDT
Subject: Fuel Cells

Hi John and CANA Board,

I offer the following comments to John's comments dated 07/31:

A. Exhibit "D", item 6 of the Development Agreement dated June 1, 2006, Project Approval reads: "The acceptance by the City of the dedication of right-of-way for the realigned segment of Magnolia Avenue;"

If the City had accepted the realigned segment of Magnolia Avenue, this project would be not be possible. The proposed fuel cell location is inside the realigned area of Magnolia Avenue.

B. From the Project Description by Bloom Energy: "The architectural/design concept here is we more subtly fit into that slope via the installation of retaining walls in order to keep a lower overall profile while looking panoramically at the installation."

The fuel cells cells will be largely hidden from Enloe Hospital and completely visible to residential neighborhood on Arcadian Avenue. We, the neighbors, strongly prefer the existing landscaping over a panoramic view of industrial fuel

cells.

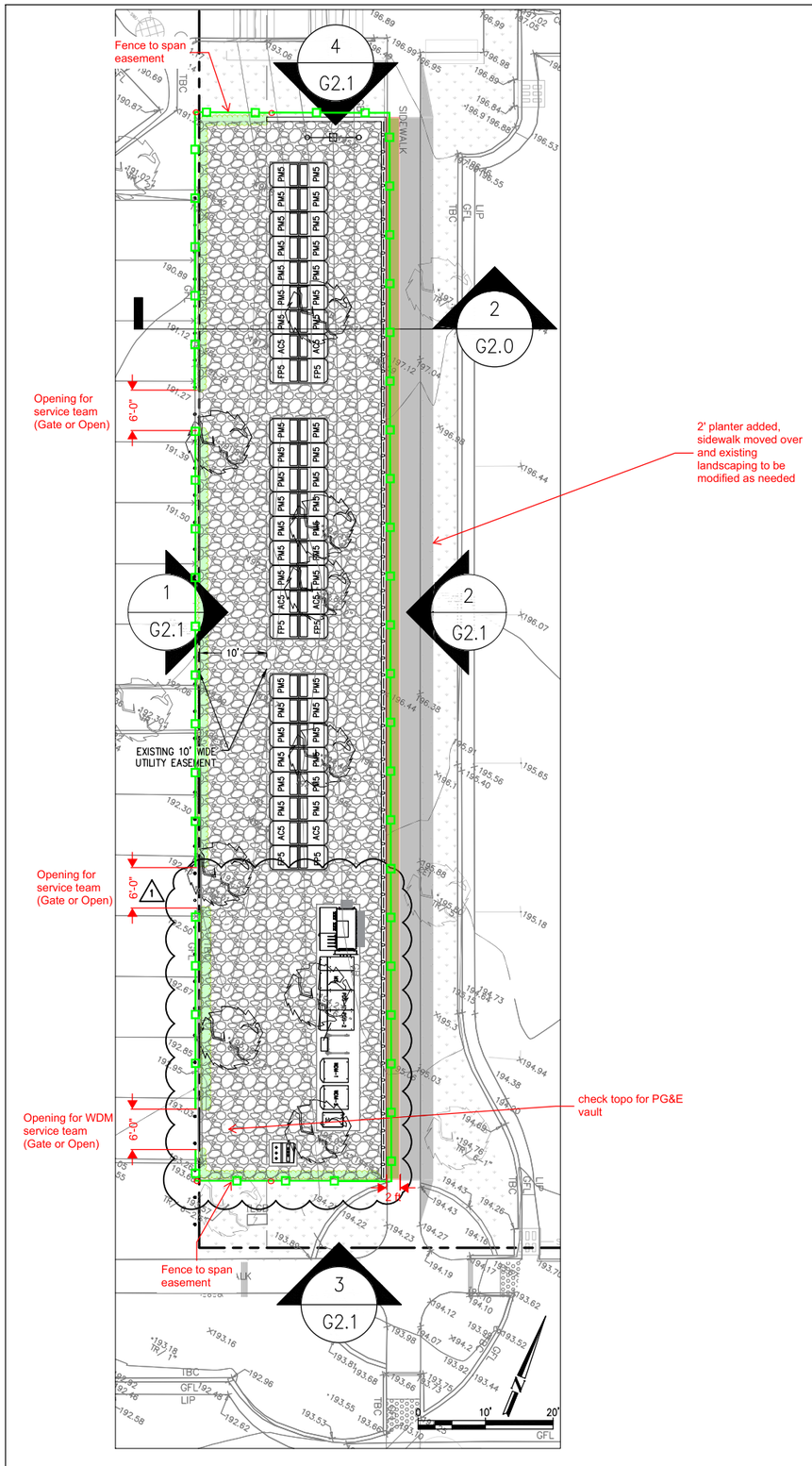
The fuel cell installation will have three banks of fuel cells. Using John's picture from 07/31, I created a "panoramic view" of the what the fuel cells would look like. See the attached jpg.

The removed landscaping will cover an area of approximately 4984 square feet (28' x 178'). Also, the landscaping in the berm north of the concrete staircase to West 6th Avenue will be damaged by the trench required for the new natural gas line.

C. The generation of electricity is a manufacturing use. According to Section 19.50 of the Chico Municipal Code, a use permit is required for manufacturing uses.

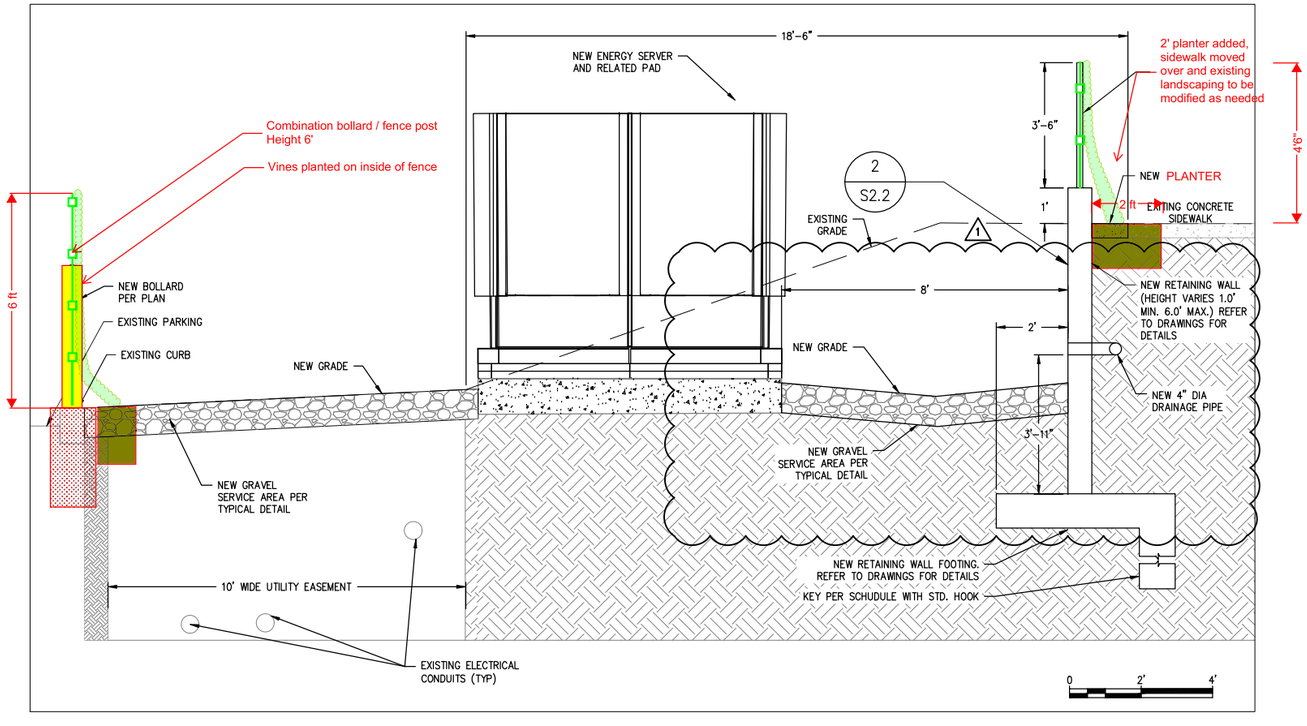
Donna Wallace

Attachment H



DETAILED SITE PLAN
SCALE: 1" = 10'

1
G2.0



CROSS SECTION VIEW
SCALE: 1/2" = 1'-0"

2
G2.0

Bloomenergy
4353 N 1ST STREET
SAN JOSE, CA 95134

EBI Consulting
environmental | engineering | due diligence
1501 QUAIL STREET #110
NEWPORT BEACH, CA 92660
t: (781) 273-2500

ENGINEER OF RECORD
ANTHONY E. FARMAND, PE
LICENSE #C62595

CUSTOMER SITE
ENLOE MEDICAL CENTER
1531 ESPLANADE
CHICO, CA 95926

ENLOE MEDICAL CENTER

REVISION HISTORY		
REV	REVISION ISSUE	DATE
–	INITIAL RELEASE	05/15/2020
1	REVISION PER PLAN REVIEW	07/16/2020

DESIGNED BY CARSON TURNER	REVIEWED BY CARSON TURNER
DRAWN BY THEODORE SIMMONS	APPROVED BY EBI CONSULTING

SHEET TITLE
SECTION DETAIL

DRAWING NUMBER
G2.0

BLOOM DOCUMENT
DOC–1012061

THIS DRAWING IS 24" X 36" AT FULL SIZE

SITE ID: ENL000.0 | SHEET 04 OF 20

Attachment I

Bloomenergy®

BLOOM ENERGY SERVERS AT ENLOE MEDICAL CENTER

1531 ESPLANADE

City reference AR20-05

Attachment J

WHO BLOOM ENERGY IS AND WHAT WE DO?

- Bloom Energy is a solid oxide fuel cell manufacturer headquartered in San Jose.
- We design and install clean technology Energy Servers for commercial use
- Bloom Energy Servers convert fuel into electricity without combustion
- Bloom Energy Servers produce electricity with minimal noise effects
- Bloom Energy Servers are some of the most reliable energy devices on the market today and have proven to be resilient through disruptive events.

CLEAN POWER WITH MINIMAL IMPACTS

- Because Bloom Energy Servers create power without combustion and minimal noise, they are often installed in close proximity to common areas at corporate offices. Samples from installations below

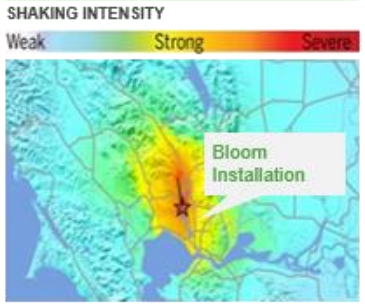
PROVEN THROUGH DISRUPTIVE EVENTS

Hurricanes

"Bloom Energy electrical project in New Castle was unaffected by Hurricane Sandy."

–Delmarva, Regional President

Earthquakes



Magnitude: 6.0 Earthquake

1 MW Bloom Unaffected

Utility outages

Bloom protects against major utility fault

Physical damage

Independent system architecture continues operations through disruptions

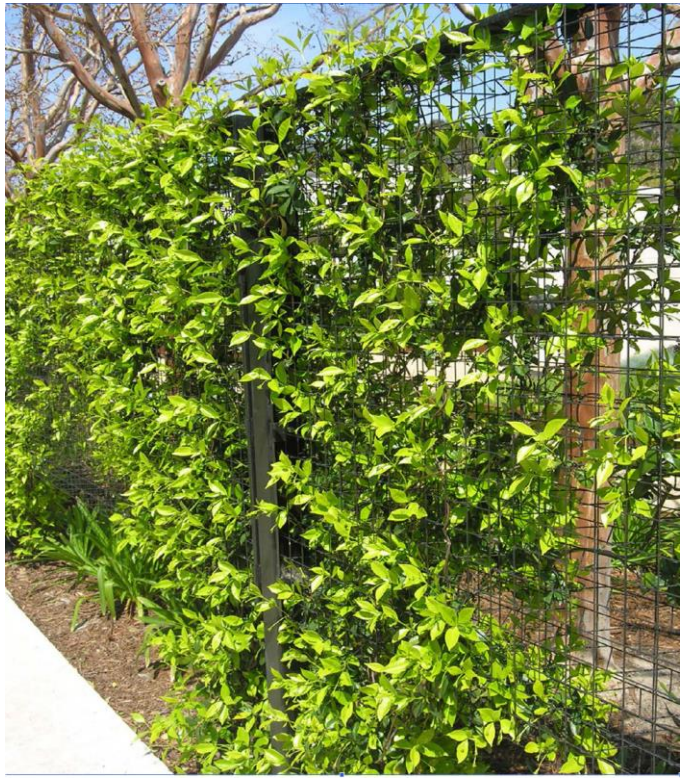
Fire damage

Resilient in face of historic Napa wildfire

Rising Risk of Cyber Attacks

SCREENING

Bloom Energy will screen the system with attractive Green-Screen Fencing



PROPOSED BLOOM ENERGY SERVERS AT ENLOE MEDICAL CENTER – LOOKING N FROM 5TH

Attachment J

PROPOSED BLOOM ENERGY SERVERS AT ENLOE MEDICAL CENTER – LOOKING E FROM PARKING LOT

SOUND

- The Bloom Energy Servers proposed meet all municipal sound criteria without mitigation
- Bloom Energy has added sound dampening materials to the Energy Server
- Bloom Energy is willing to condition the proposal to add sound compliance prior to final inspection of permit to prove its claims.
- The sound is less than ambient sound at neighboring residences at any hour of the day or night.

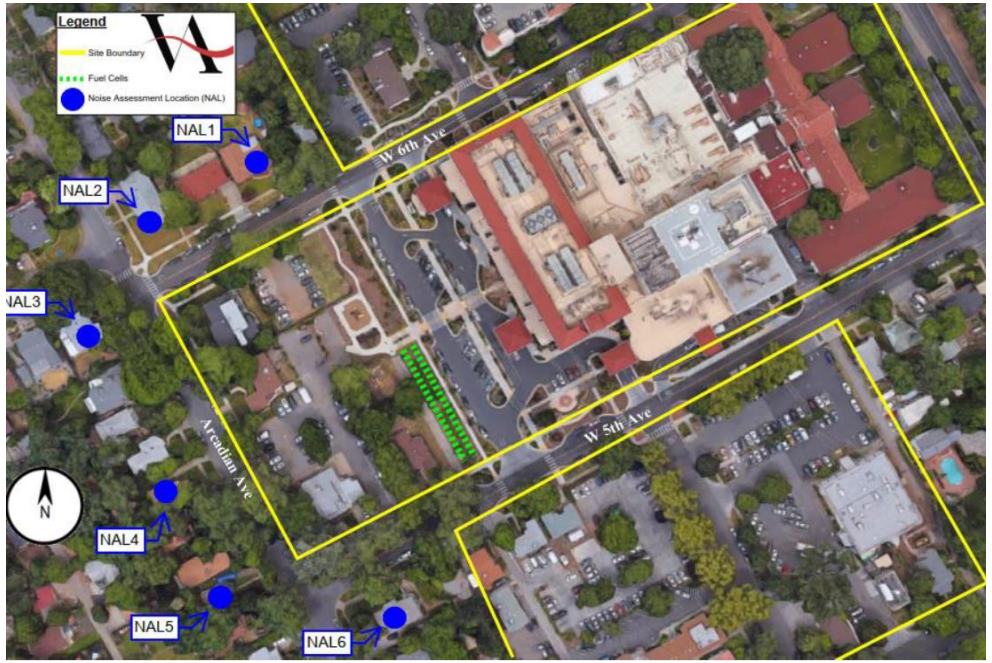


Table 2. Noise Assessment Location Analysis

Sensitive Receptor	Receptor Address	Approximate Distance from Nearest Fuel Cell, ft	Ambient Hourly Level, dBA		Fuel Cell Noise Level, dBA
			Daytime Average Level	Quietest Nighttime Level	
NAL1	226 W 6th Ave	330	56	45	36
NAL2	1600 Arcadian Ave	390	56	45	37
NAL3	1569 Arcadian Ave	390	56	45	25
NAL4	1531 Arcadian Ave	280	53	42	39
NAL5	1501 Arcadian Ave	280	53	42	26
NAL6	1462 Arcadian Ave	150	59	48	29