

ADDENDUM

January 14, 2021

ATTENTION ALL REQUEST FOR PROPOSAL (RFP) HOLDERS

RFP NO. 320026 - ADDENDUM NO. 1

FACILITIES EMERGENCY POWER

PROPOSALS DUE: TUESDAY, FEBRUARY 23, 2021, 2:00 PM. DUE DATE AND TIME ARE NOT CHANGED BY THIS ADDENDUM.

This Addendum is issued to modify, explain or clarify the original Request for Proposal (RFP) and is hereby made a part of the RFP. Please attach this Addendum to the RFP.

PLEASE MAKE THE FOLLOWING CHANGES:

1. Section 00 01 01 – Cover Page

Delete current Section 00 01 01; replace with new Section 00 01 01, issued with this Addendum.

The references to Performance/ Payment Bond & Bid Deposit have been removed since these are not required in the RFP process.

2. Section 00 24 16 - Scopes of Proposals

Delete current Section 00 24 16; replace with new Section 00 24 16, issued with Addendum.

Renumbering of items under 2.Scope of Work, B. phase 1 Study Phase - from 5 through 8 and making them 1 through 4.

Page 2 – Item 2. Scope of Work : C. Phase 2 – Design, Bidding Construction, Commissioning Phases

Remove Commissioning from subject line to read as follows: C Phase 2 –Design, Bidding, Construction Phases.

Add line 4. Develop systems startup procedure and checklist for functional testing to ensure proper system performance.

Page 3 – Item 5. Pricing. Replace language in item 5.B.2. with the following.

2.Phase 2 Design & Construction – a percentage of total construction costs for the selected design Option (C,D or E). This percentage shall hold through the duration of the project.

3. Section 00 52 98 – Sample Professional Services Agreement

Delete current Section 00 52 98, replace with new Section 00 52 98, issued with this Addendum.

Page 2: Table of Contents and replace with new page 2, issued with this Addendum.

Page 15 – Item 2.G : Delete this item – Commissioning Phase if total construction cost exceed \$1 million

Page 16- Article 4: Compensation. Replace language in items 4.A.2), 4.A.3) and 4.A.4).

4.A.2) Fee for services to be provided under this Agreement is fixed at [...] of total construction cost for Phase 2 Design Development through Construction Phases of this project, if Design Option C is selected at the end of Phase 1.

4.A.3) Fee for services to be provided under this Agreement is fixed at [...] of total construction cost for Phase 2 Design Development through Construction Phases of this project, if Design Option D is selected at the end of Phase 1.

4.A.4) Fee for services to be provided under this Agreement is fixed at [...] of total construction cost for Phase 2 Design Development through Construction Phases of this project, if Design Option E is selected at the end of Phase 1.

Page 19 –Item 4.E Payments to the A/E. Replace language in item 4.E.1).

4.E.1) Payments of the A/E’s Phase 1 & Phase 2 fees will be made monthly, in proportion to services performed as confirmed by COUNTY, to increase the compensation to the following percentages of the lump sum fee at the completion of each phase of the work.

<u>Phase 1: Study</u>	
Draft version of Study	50%
Final version of Study	100%
<u>Phase 2: Design & Construction</u>	
Design Development Phase	35%
Construction Documents Phase	65%
Bidding Phase	70%
Construction Phase	100%

Attachment A – Delete Items 5 and 6 from the Construction Phase Site Visits Agreement.

4. Dane County Generator Study Report – Mead & Hunt

Replace existing Study Report with revised copy issued with this Addendum.

If any additional information about this Addendum is needed, please call Todd Draper at 608/267-0119, draper@countyofdane.com.

Sincerely,
Todd Draper
Project Manager

- Enclosures:
- Section 00 01 01 – Cover Page
 - Section 00 24 16 – Scope of Proposals
 - Section 00 52 98 – Sample Professional Services Agreement
 - Dane County Generator Study Report – Mead & Hunt



RFP NO. 320026

DANE COUNTY DEPARTMENT OF PUBLIC WORKS,
HIGHWAY AND TRANSPORTATION

**PUBLIC WORKS
ENGINEERING DIVISION**
1919 ALLIANT ENERGY CENTER WAY
MADISON, WISCONSIN 53713

**REQUEST FOR PROPOSALS NO. 320026
ENGINEERING DESIGN SERVICES FOR
FACILITIES EMERGENCY POWER
CITY COUNTY BUILDING, DANE COUNTY COURTHOUSE
210 MARTIN LUTHER KING JR. BLVD., 215 S. HAMILTON ST.
MADISON, WISCONSIN**

Due Date / Time: **TUESDAY, FEBRUARY 23, 2021 / 2:00 P.M.**

Location: **PUBLIC WORKS OFFICE**

FOR INFORMATION ON THIS REQUEST FOR PROPOSALS, PLEASE CONTACT:

TODD DRAPER, PROJECT MANAGER
TELEPHONE NO.: 608/267-0119
FAX NO.: 608/267-1533
E-MAIL: DRAPER@COUNTYOFDANE.COM

SECTION 00 24 16

SCOPES OF PROPOSALS

1. GENERAL INFORMATION

- A. Dane County is inviting proposals for professional engineering, design and construction services for the Facilities Emergency Power project for the Dane County Courthouse and City County Buildings.
- B. The Dane County Courthouse is located at 215 S. Hamilton St. and the City County Building at 210 Martin Luther King Jr. Blvd., Madison, Wisconsin. Current emergency power for each facility is provided by onsite generators. A revised backup generator infrastructure and the incorporation of additional critical loads onto the emergency power system is needed to allow for operations of multiple City and County Departments / Divisions to function in the event of a major utility outage. Details of current infrastructure and general loads to be considered are detailed in the Dane County Generator Study Report included in this RFP.
- C. To be considered for this project, the Consultant must meet or exceed the following criteria:
 - 1. Have more than one registered professional engineer as lead responsible members of the firm or project team.
 - 2. Have been in business for a period of not less than five (5) years.
 - 3. Must have been responsible for the design and completion of at least three (3) critical operations emergency power production and distribution projects. Critical spaces include but are not limited to law enforcement, property storage, court functions and data processing & infrastructure.
 - 4. Consideration may be given to joint ventures consisting of two or more firms organized for the purpose of furnishing professional services as a single entity, providing the assignment of and provisions for continuity of the various responsibilities within the joint venture are approved by the County, and further providing that either of the individual firms constituting the joint venture meets the eligibility requirements listed above.

2. SCOPE OF WORK

- A. Project deliverables and specific tasks are detailed in the *Professional Services Agreement*.
- B. Phase 1 - Study Phase
 - 1. Prepare a report consisting of text, drawings, and other documents that further develop Options C, D and E from the Final Generator Study Report and provide recommendations / options for design and construction..
 - 2. A re-polling of Courthouse and facilities staff to further define the equipment list for the courthouse will be required. Revised list will be used for loading of existing generator.
 - 3. Confirmation of existing generator loads as listed in Section 6. Considerations and Limitations of Study Report will be necessary.
 - 4. Study shall contain the following sections at a minimum:

- a. Executive Summary
- b. Introduction
- c. Analysis
- d. Options/ opinion of probable cost
- e. Recommendations

C. Phase 2 - Design, Bidding, Construction, Phases

1. Dane County shall select the project from the options / recommendations presented in the Phase 1 Study for each annual construction cycle. The engineering design team shall develop Construction Documents as directed by Dane County.
2. Dane County will review, provide input & make modifications throughout the design process.
3. Develop & refine opinions of probable cost.
4. Develop systems startup procedure and checklist for functional testing to ensure proper system performance.

D. In-person meetings shall be limited & shall follow current *Public Health - Madison & Dane County* procedures & recommendations (see publichealthmdc.com/documents/office_space_checklist.pdf and publichealthmdc.com/coronavirus/forward-dane/current-order). Whenever possible, meetings shall be held via teleconference or videoconference, to be hosted by the consultant. Dane County reserves right to mandate safe physical distancing & use of face masks by all personnel while inside any County facility or on any County grounds.

3. PROPOSAL CONTENT

A. Interested consultants are requested to submit the following information in their proposal, in eight distinct sections or divisions:

1. Proposal Form, Fair Labor Practices Certification and Proposer's cover letter.
2. Description of firm's qualifications, related experience organization and resources. Give special attention to experience with new & renovated emergency power plants or facilities including planning, design, construction, developing standards, regulations or codes.
3. Brief list (min. of three, max. of five) of similar completed projects previously completed with the project details, name, address and telephone number of the client for whom the work was done. Specific reference shall be made to projects involving public facilities as is being proposed. You may separately list additional professional references.
4. Description of planning and design techniques to be used in approaching the project.
5. List of staff that will be committed to the Work with their professional resumes. Actual consultant project engineer / architect will be interviewed if firm is short-listed. Include listing of other consultants who may participate in this project and their area of expertise.
6. Indicate staff availability and tentative timetable with project tasks for the Work, including all project phases.
7. Two (2) fees for services:

- a. Stated as fixed fee for Site/ Facility Study Phase; and
 - b. Stated as percentage of total construction cost for design services for Design Development Phase through Start-Up / Troubleshooting Phase for each design option C, D and E.
8. State clearly any limitations you wish to include in *Professional Services Agreement* and advise of any conditions that you may have.

4. EVALUATION CRITERIA

A. Proposing consultants will be evaluated on this criteria:

Project Personnel	25%
Relative Experience	25%
Approach to Project	15%
Work Plan	25%
Pricing / Cost Proposal	<u>10%</u>
Total	100%

5. PRICING

- A. Additional details about project phases, pricing & payments are detailed in the *Professional Services Agreement*.
- B. Two prices shall be submitted in the Proposals:
 - 1. Phase 1 Study report - a fixed fee.
 - 2. Phase 2 Design & Construction - A percentage of total construction costs for the selected design Option (C, D or E). This percentage shall hold through the duration of the project.

6. SITE/ FACILITY TOUR

- A. A proposing company site/facility tour will be held on February 3, 2021 at 10 a.m. at the City-County Building, 210 Martin Luther King, Jr. Blvd., Madison, Wisconsin, starting in Room B-8. This cursory tour will go until approximately 11 a.m. Proposing companies are strongly encouraged to attend this tour, however attendance is optional.
- B. Safe distancing & face masks are required for all tour attendees. Tours will be limited to 10 people; please limit number of attending staff & subcontractors. If there are more than 10 people, group will be split & there will be two or more tours. Allow sufficient time if you do not make it in to first tour group

7. OWNER’S RESPONSIBILITY

- A. Dane County will provide all available building, site, architectural, structural, mechanical, electrical, plumbing, telecommunications, fire protection, and security drawings and specifications to selected A/E firm. These drawings and specifications may not be complete or in an as-built condition. A/E firm will need to confirm accuracy of drawings and specifications. Dane County will provide any necessary hazardous material protection or abatement.

8. TIMETABLE

- A. Listed below are specific and estimated dates and times of events related to this RFP. The events with specific dates must be completed as indicated unless otherwise changed by Dane County. In the event that Dane County finds it necessary to change any of the specific dates and times in the calendar of events listed below, it will do so by issuing an addendum to this RFP. There may or may not be a formal notification issued for changes in the estimated dates and times.

<u>DATE</u>	<u>EVENT</u>
January 12, 2021	RFP issued
February 3, 2021 10 a.m.	Facility tour
February 9, 2021 - 2:00 p.m.	Written inquiries due
February 11, 2021	Latest addendum (if necessary)
February 23, 2021 - 2:00 p.m.	Proposals due
April 16, 2021 (estimated)	Notification of intent to award sent out
April 19, 2021 (estimated)	Agreement start date
April – September (estimated +TBD)	Study/ Design Phases
• May 28, 2021 (estimated)	Study Report deliverables due
• July 23, 2021 (estimated)	Design Development Phase deliverables due
• September 13, 2021 (estimated)	Construction Documents Phase deliverables due
September 2021 - May 2021 (estimated)	Bidding-Construction-Start Up

9. ADDITIONAL INFORMATION

- A. Dane County Department of Public Works, Highway & Transportation, 1919 Alliant Energy Center Way, Madison, Wisconsin 53713, will receive your Proposal.
- B. Information regarding this project may be obtained from Todd Draper, Public Works Project Manager, 608/267-0119, draper@countyofdane.com.
- C. Since RFP documents are obtained from the Dane County web site, proposing company is responsible to check back there regularly for Addenda.
- D. All Proposals must be submitted by 2:00 p.m., Tuesday, February 23, 2021.
- E. Dane County reserves the right to accept or reject any Proposal submitted.
- F. Information submitted by consultants will be reviewed and candidates may be scheduled to appear before an interview panel. Those appearing for an interview shall be prepared to discuss their approach for the design of this work, methodology, project team, a timetable, the basis of their fee schedule and answer questions from our staff.
- G. Dane County reserves the right to negotiate an Agreement after the successful firm is selected. Selection will be based only on the proposal submitted and subsequent interviews. Therefore, the proposals must be complete. Submission of a proposal shall constitute a valid offer, which may be accepted by the County for a period of ninety (90) calendar days following the proposal due date.
- H. Dane County is an Equal Opportunity Employer.

END OF SECTION

COUNTY OF DANE
PROFESSIONAL SERVICES AGREEMENT
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1. ARTICLE 1: SCOPE OF AGREEMENT

- 1.A. This Agreement between COUNTY and the person or firm, duly licensed under the laws and in accordance with the regulations of the State of Wisconsin, hereinafter referred to as the "A/E" shall be governed by the following Terms and Conditions.
- 1.B. The A/E shall provide technical and professional services under this Agreement. The Terms and Conditions of this Agreement shall apply to modifications made to this Agreement and shall apply to both the services rendered in the creation of the design and to the additional services called for in carrying out the design.
- 1.C. The A/E shall serve as the professional technical advisor and consultant to COUNTY in matters arising out of or incidental to the performance of this Agreement and in that capacity, the A/E shall not have a contractual duty or responsibility to any other person or party or individual regarding the services under this Agreement, except as that duty may arise under the laws of the State of Wisconsin. The A/E is not an agent of the COUNTY within the meaning of s. 893.80 or 895.46, Wis. Stats.
- 1.D. Professional services performed or furnished under this Agreement shall be based on the care and skill ordinarily used by members of the profession involved, who practice under the authority of and who are governed by the license issued under the Wisconsin Statutes and the Wisconsin Administrative Code. The standard of care for architectural and engineering services under this Agreement shall include designing buildings, structures and / or related infrastructural systems that comply with all applicable building and safety codes.
- 1.E. By accepting this Agreement, the A/E represents possession of the necessary skill and other qualifications to perform work under this Agreement and is familiar with the practices in the locality where such services and work shall be performed.
- 1.F. The A/E shall review and become familiar with the current Division 00 & 01 requirements utilized by COUNTY in construction contracts and shall provide services and work, consistent with such requirements, so that the Contractor's schedule is not negatively impacted.
- 1.G. The A/E shall be professionally responsible for work performed under this Agreement. Upon written approval of COUNTY, the A/E may subcontract work to an approved consultant under this Agreement, to the specific extent authorized by COUNTY. The authorization to subcontract shall not relieve the A/E of professional or contractual responsibility for any work performed or delivered under this Agreement. The authorization to subcontract shall not be construed to create any contractual relationship between COUNTY and such consultant.
- 1.H. Subcontracts for services under this Agreement shall provide that work performed under such subcontract, shall be subject to provisions of this Agreement and shall also provide that any professional duty or responsibility pertaining thereto shall be accomplished to the benefit of COUNTY. Upon request, an electronic copy of each such subcontract for which COUNTY approval is granted shall be furnished to COUNTY.
- 1.I. The A/E may substitute consultants or professional staff under this Agreement only to the specific extent authorized by COUNTY in writing.
- 1.J. In the performance of this Agreement, the A/E shall become familiar with and perform such services in accordance with the specifications set forth in the Request for Proposals document. The COUNTY reserves the right to update County Master Specifications Division 00 and Division 01 at any time, including after the signing date of this Agreement.

The A/E shall use and conform to the most current County Master Specifications Division 00 and Division 01 available at the time of Final Review Documents and the A/E shall not be eligible for a change order based upon alterations to said County Master Specifications Division 00 and Division 01 occurring after the date of Agreement signing.

2. ARTICLE 2: SCOPE OF THE SERVICES TO BE PROVIDED

2.A. General:

2.A.1) Services are to be provided by the A/E in each of the following phases:

Study Phase
Design Development Phase
Construction Documents Phase
Bidding Phase
Construction Phase

2.A.2) An assigned COUNTY Public Works Project Manager will be the A/E's contact in securing COUNTY direction and for arranging the necessary meetings with COUNTY or other County Departments and obtaining the approvals required by COUNTY.

2.A.3) The A/E shall create a log of all COUNTY and A/E generated design changes resulting from meetings and communications from COUNTY. This log shall be kept throughout the entire design process and submitted to COUNTY every two (2) months.

2.A.4) The term "written" or "in writing" may be either electronic or hard copy documentation, unless otherwise stated or directed by COUNTY.

2.B. Study Phase:

2.B.1) The A/E shall obtain from COUNTY information and materials necessary to ascertain scope of the Project and shall verify with COUNTY program and functional requirements of the Project. This shall include gathering information from building users subject to approval by the COUNTY Public Works Project Manager.

2.B.2) Based on information, materials and requirements as verified by COUNTY, A/E shall prepare a Summary and Study consisting of text, drawings and other documents illustrating scale and relationship of the Project components. Draft version of Study shall be submitted to COUNTY for review, modifications and written approval before submitting Final version.

2.B.3) The A/E shall submit to COUNTY in the Summary and Study, a construction cost estimate based on information provided by COUNTY and gathered by A/E for Final version of Study.

2.B.4) Study Phase deliverables shall be:

2.B.4) a. Draft Study, electronic copies of:

- (1) Word 2016 (or earlier version);
- (2) Any other files (e.g., AutoCAD 2019, Excel 2016, PowerPoint 2016, etc. (or earlier versions)) included in Study; and

- (3) Adobe Acrobat 2020 (or earlier version) (PDFs converted from Word, AutoCAD, or other programs; minimize pdf file size by converting files rather than scanning printouts).

2.B.4) b. Final Study:

- (1) Original unbound, hard copy in 8½ x 11 and / or 11 x 17 format prints;
- (2) Four (4) bound, hard copies in 8½ x 11 and / or 11 x 17 format;
- (3) Electronic version of all documents delivered on a USB flash drive or compact disk:
 - (a) Word 2016 (or earlier version);
 - (b) Any other files (e.g., AutoCAD 2019, Excel 2016, PowerPoint 2016, etc. (or earlier versions)) included in Study; and
 - (c) Adobe Acrobat 2020 (or earlier version) (PDFs converted from Word, AutoCAD, or other programs; minimize pdf file size by converting files rather than scanning printouts).

2.C. Design Development Phase:

2.C.1) The A/E shall review the program and functional requirements, plans and specifications of record, (to the extent that such documents are reasonably available), and applicable COUNTY standards and guides or other written direction by COUNTY. The A/E shall establish the limiting parameters of the design as defined by the instructions issued to it by COUNTY, to determine if the design concept is achievable within the schedule and budget proposed by COUNTY.

2.C.2) To the extent necessary, the A/E shall facilitate investigation of the site for existing conditions which differ from those indicated in the record drawings or which could have a detrimental impact on the achievement of the work called for under the project.

2.C.3) Within seven (7) calendar days of receipt of the program and functional requirements, plans and specifications of record, the A/E and COUNTY shall schedule a meeting to review the A/E's design concept and such other matters as are necessary to establish that at this preliminary point, the proposed design concept is consistent with the requirements of COUNTY.

2.C.4) The A/E shall document the results of design meetings, including design factors agreed to, with any instructions furnished by COUNTY to carry out such factors, including, but not limited to:

- Program clarification
- Scheduling concerns
- Existing site conditions
- Project cost estimates
- Cost-value trade offs
- Quality requirements
- Special material requirements
- Communications requirements
- Engineering requirements

2.C.5) The A/E shall furnish a copy of the documentation produced under this Phase to each participant attending a design concept meeting.

2.C.6) In agreements which involve renovation or remodeling of or additions to existing facilities, the A/E shall evaluate the suitability of existing building elements, materials and equipment for reuse in the renovated project. Reasonably accessible areas shall also be observed by the A/E or its consultants to evaluate existing major mechanical, plumbing and electrical systems. Any of the foregoing considered to be economically reusable shall be reported to COUNTY and may be reused unless directed otherwise by COUNTY.

2.C.7) The A/E shall provide sufficient, alternative design solutions on major design features to allow COUNTY to ascertain that the recommended design achieves a practical programmatic and economic solution, within the limitations of the authorized program, schedule and budget. Include staffing and occupancy considerations provided by COUNTY.

2.C.8) The major design features, equipment and systems that must be evaluated include, but are not limited to:

- Building configuration
- Life safety systems
- Heating, ventilating and air conditioning & associated controls
- Electrical & associated controls
- Lighting systems & associated controls

2.C.9) The analysis of major design features and systems shall include initial and life cycle cost comparisons. The A/E shall utilize the Uniform Guide of Life Cycle Cost Factors provided by COUNTY in the calculation of life cycle costs.

2.C.10) The A/E shall provide a working analysis of each major design feature included in the selected design concept, with constraints and dependencies that is sufficiently complete to allow commencement of the Construction Documents Phase:

2.C.10) a. The A/E shall prepare preliminary drawings, specifications and other data tailored to the project that fix and describe the size and character of the entire project as to major design features and systems and such other essentials outlined by COUNTY:

- (1) The preliminary drawings shall include plans, elevations, sections and details at a scale which is sufficient to fully illustrate the design concepts, materials and finishes to be employed. Drawings shall be in format as approved by COUNTY.
- (2) The outline specifications shall include relevant specific information for Division 01 - Bidding and Contract Requirements and a list of the applicable technical divisions.

2.C.10) b. The A/E shall prepare a Design Report that includes:

- (1) A time estimate for completion of each separate phase of the work (Design, Construction Documents, Bidding, Construction and Commissioning).
- (2) A detailed estimate of project cost based on the preliminary design concept, which indicates that the project budget limitations will not be exceeded. Factors influencing the cost feasibility of each major division of the specification and related drawings shall be identified.
- (3) An analysis of the biddability and constructability of the project within the time allowed by COUNTY.

- (4) An identification of any part of the work that might require special monitoring or consideration during construction to prevent quality control problems, delays, or cost escalation. Include any long lead time equipment or materials, items which interface with difficulty, areas of work requiring significant care, sequencing or precision in installation and full or partial User occupancy during construction.
- (5) As a safeguard against unforeseen bidding conditions, the A/E may recommend appropriate alternate bids for COUNTY's consideration. Such alternates shall be identified and developed at no additional cost to this Agreement.

2.C.11) Upon determination by the A/E that the final design is represented by the preliminary drawings and specifications, those documents along with a final Design Report shall be submitted to COUNTY for review and concurrence prior to commencement of Construction Documents.

2.C.11) a. The A/E shall provide COUNTY with up to four (4) sets and one (1) electronic file of the Design Report with appendix, preliminary drawings and outline specifications for review and coordination purposes. Electronic documents shall be in a format approved by COUNTY.

2.C.11) b. COUNTY will issue a list of recommended changes / corrections to be incorporated into the documents. Within seven (7) calendar days of receipt, the A/E shall transmit written replies to review comments issued by COUNTY. Directions by COUNTY shall be incorporated into the design, unless the A/E shall have explained objections to COUNTY and obtained prior written approval of noncompliance from COUNTY before proceeding with related work.

2.C.11) c. The A/E or COUNTY may call a further preliminary review meeting, when necessary to finalize the design concept. Written replies to additional COUNTY comments shall be made before proceeding to the Construction Documents Phase.

2.C.11) d. Approval of these documents by COUNTY will complete the Design Development Phase, whereupon COUNTY will issue written instruction to the A/E to proceed to the Construction Documents Phase.

2.C.12) Design Development Phase deliverables shall be:

2.C.12) a. Four (4) bound, hard copies of drawings (full size-typical of all submissions) & specifications (in 8½ x 11 format-typical of all submissions); and

2.C.12) b. Electronic version of all documents delivered on a USB flash drive or compact disk:

- (1) Drawings in AutoCAD 2019 (or earlier version);
- (2) Specifications in Word 2016 (or earlier version); and
- (3) Adobe Acrobat 2020 (or earlier version) of drawings and specifications (PDFs converted from Word, AutoCAD, or other programs; minimize pdf file size by converting files rather than scanning printouts).

2.D. Construction Documents Phase:

2.D.1) Upon receipt of written instructions from COUNTY, the A/E shall prepare Construction Documents for bidding, construction and commissioning of the project. The Construction Documents shall provide the detailed requirements for the successful construction of the entire project.

2.D.2) Construction Documents shall comply with the COUNTY Master Specifications Division 00 and Division 01.

2.D.3) The Construction Documents shall be internally consistent in terms of coordination between:

2.D.3) a. Work of the A/E and its consultants.

2.D.3) b. Requirements of various divisions or trades.

2.D.3) c. Drawings and specifications.

2.D.4) During this phase, the A/E shall develop and provide documents for the systems designed under this Agreement which will achieve a biddable and constructible project, compliant with all applicable building and safety codes and within the assumption of professional responsibility set forth in this Agreement. These services shall include, but not be limited to:

2.D.4) a. Coordination, to protect the integrity of the design and facilitate construction with:

(1) Manufacturers: Ensure that manufactured items called for in the documents are currently available and will fit, interface and perform as required to achieve design intent.

(2) Consultants: Ensure that information necessary to their work is provided in a timely manner and that consultants exchange information with each other and the A/E.

(3) Utility Companies: Determine the standard operating procedures and time requirements for obtaining the services and the cooperation of the utility companies involved in the execution of the project. Provide this information in writing to interested parties as needed.

(4) Occupying Agency: Ensure that program-required furniture, fixtures and equipment (FF&E) layout is suitable so as to be compatible but not interfere with access to, placement or operation of the mechanical, electrical or plumbing appurtenances.

(a) The A/E shall work with Occupying Agency & Purchasing Division on the FF&E program & develop an FF&E Report to be submitted for COUNTY approval.

(5) Governmental authorities having jurisdiction over the work:

(a) The A/E shall submit documents for approval to public agencies having jurisdiction over the project and after obtaining such approval of those agencies, the A/E shall file two (2) copies of such approval with COUNTY.

(6) Such other agencies, boards, associations or individuals whose activities could impact or interfere with the successful completion of the project.

2.D.4) b. Inclusion in the Construction Documents of:

- (1) Plans, elevations and sections at a scale which is sufficient to give a full and complete understanding of the construction, dimensions thereof, materials to be employed, location of utilities and any other pertinent data.
- (2) Details, diagrams, schedules, photo reproductions and other graphic methods appropriate to define work required to be performed to accomplish the purposes of the project.
- (3) Description of existing conditions of site and / or structures with sufficient clarity to permit their use without ambiguity in the bidding, construction and commissioning process.

2.D.4) c. Inclusion in the specifications documents of bidding and contract requirements, special provisions and / or appendices, and technical sections. Unless otherwise agreed to by COUNTY in writing, the format shall generally follow the divisions of the Construction Specifications Institute. If approved by COUNTY in writing, short form specifications for limited scope work may be included on the drawings in lieu of Construction Specifications Institute format specification sections.

- (1) The technical sections of the specifications shall completely and concisely describe the materials and services to be employed or installed by the construction contractor(s) in the work. These specifications shall describe the work to be done and shall be arranged by work or material in appropriate divisions with suitable cross-references for clarity and continuity
- (2) The technical sections of the specifications shall be carefully worded to allow a clear understanding of the work required by each of the construction contractors and their subcontractors, and to describe the responsibility for the work required to be performed by such contractor(s), individually and collectively, for the performance of work required to deliver the project complete, without ambiguity as to which technical sections of the specifications cover each element of work.
- (3) The technical sections of the specifications shall clearly state the minimum grade, quality, and type of materials and workmanship required. These specifications shall not restrict competition, where it is available, but shall state a level of quality, which can be objectively determined by persons normally engaged in the type of trade or practice described.
- (4) When two (2) or more manufacturers offer on the open market materials, equipment or devices of equal quality and usability needed for the project, each such known manufactured product shall be specified for potential use on the project.
- (5) The professional judgment of the A/E or the direction of the COUNTY may limit competition to a brand name, process, or technique of manufacture.
- (6) The A/E shall compile and include in the construction contract documents a summary listing of all submittals required for the project from the construction contractor(s). Included shall be shop drawings, samples, cuts, catalogs, models, mockups and other preliminary information needed from the contractors to describe how they will fulfill their responsibilities under their contracts.

2.D.5) Upon determination by the A/E that the final project design is represented by completed Construction Documents, those documents shall be submitted to COUNTY for review and concurrence prior to release for bidding.

2.D.5) a. The A/E shall provide COUNTY with review sets in a format and standard specified by the COUNTY.

2.D.5) b. COUNTY will issue a list of recommended changes / corrections to be incorporated into the next review set or final documents. The A/E shall within seven (7) calendar days transmit written replies from the A/E and its sub-consultants to review comments issued by COUNTY or for which clarification requests were identified or for which changes were authorized at the final design review meeting and communicated to the A/E. Directions by COUNTY shall be incorporated into the documents.

2.D.6) Prior to submission of the final documents, the A/E shall call for a final review meeting with COUNTY, if needed, to finalize and prepare for publication of the final bidding documents, with any conditions required by COUNTY.

2.D.7) A/E shall affix to both the cover sheet of Drawings and & inside cover of Project Manual current State of Wisconsin registration seal, number & signature. These shall be applied by registered architect and each professional engineer responsible for project design.

2.D.8) At the time of delivery of the final documents, the A/E shall report to COUNTY, in writing with updated estimates of project costs and schedules.

2.D.9) Upon receipt of the Construction Documents Phase deliverables, updated Design Report & FF&E Report, the COUNTY shall evaluate these documents & indicate to the A/E in writing when & how to proceed.

2.D.10) Construction Documents Phase deliverables shall be:

2.D.10) a. 60% Construction Documents:

- (1) Four (4) bound, hard copies of Drawings & Specifications; and
- (2) Electronic version of all documents delivered on a USB flash drive or compact disk:
 - (a) Drawings in Adobe Acrobat 2020 (or earlier version; PDFs); and
 - (b) Specifications in Word 2016 (or earlier version).

2.D.10) b. 95% Construction Documents:

- (1) Four (4) bound, hard copies of Drawings & Project Manual; and
- (2) Electronic version of all documents delivered on a USB flash drive or compact disk:
 - (a) Drawings in Adobe Acrobat 2020 (or earlier version; PDFs); and
 - (b) Specifications in Word 2016 (or earlier version).

2.D.10) c. Final Construction Documents:

- (1) Original unbound, hard copy of Drawings and Project Manual in full size, paper format;
- (2) Four (4) hard, bound copies of Drawings and Project Manual;

- (3) One (1) bound, hard copy of Drawings and Project Manual to be submitted by A/E to City of Madison for stamped approval; and
- (4) Electronic version of all documents delivered on a USB flash drive or compact disk:
 - (a) Drawings (.dwg files) in AutoCAD 2019 (or earlier version):
 1. Each drawing sheet shall be complete with x-refs or base plan sheets included and attached;
 2. All external data from non-AutoCAD programs (e.g., Excel or Word) shall be included and attached; and
 3. Include copy of Plot Style Table (ctb file) used to print drawings.
 - (b) Drawings in Adobe Acrobat 2020 (or earlier version; minimize pdf file size by converting files from AutoCAD or other programs);
 - (c) Project Manual in Word 2016 (or earlier version); and
 - (d) Project Manual in Adobe Acrobat 2020 (or earlier version; minimize pdf file size by converting files from Word or other programs, rather than scanning printouts).

2.E. Bidding Phase:

- 2.E.1) The Bidding Phase shall commence with the publication of the Invitation to Bid and shall conclude with the award of the number of contracts necessary to achieve the purposes of construction.
- 2.E.2) The A/E shall serve as the professional technical consultant and advisor to COUNTY during the bidding process, including the preparation for and participation in Pre-Bid Conferences.
- 2.E.3) The A/E shall answer all pre-bid questions from contractors in an addendum and prepare any additional addenda necessary, for COUNTY to authorize, print and distribute as appropriate.
- 2.E.4) The A/E shall assist COUNTY by evaluating and making recommendations to COUNTY on the qualifications of prospective construction contractors and subcontractors.
- 2.E.5) The A/E shall assist COUNTY in analyzing bids and negotiating with the lowest, qualified, responsible bidders as deemed appropriate by COUNTY.
- 2.E.6) If the low bids submitted by qualified, responsible bidders exceed construction cost estimate approved at Construction Documents Phase by five percent (5%) or more, the A/E shall revise and change the Construction Documents for a project rebidding, as approved by and without additional cost to COUNTY that will permit a proper award of the contract(s) within the approved estimate of project cost or other funding limitation. If the low bid exceeds construction cost estimate approved at Construction Documents Phase by less than five percent (5%), at the COUNTY's option, the A/E shall revise and change the Construction Documents for a project rebidding, as approved by COUNTY, but shall be compensated for revisions per negotiated amendment to this Professional Services Agreement.
- 2.E.7) In the event that there is a reduction in scope to keep the project within budget and this results in low bid(s) which total less than the construction budget, then the A/E shall, at no additional fee, prepare construction bulletin(s) to add deleted program work back into the project.

2.E.8) Upon construction contract offer, the A/E shall immediately prepare construction documents which incorporate the bid documents, addenda issued, alternate bids accepted and negotiated contract deductions, all of which are incorporated in the Construction Documents. Such work shall be completed in a timely fashion, but no later than seven (7) calendar days, so that construction is not delayed.

2.F. Construction Phase:

2.F.1) An assigned COUNTY Project Manager will be responsible for arranging and conducting construction-related meetings as required and act as the point of contact for the construction contractors. A COUNTY approved A/E representative shall attend, take notes, publish and distribute COUNTY approved minutes of job meetings.

2.F.2) After the award of the construction contract(s), the A/E shall become an on-site technical and professional advisor to COUNTY. In this capacity the A/E will have continuous access to the site. The A/E, through COUNTY's Project Representative, will have access to data in the construction contractor(s) files or offices pertaining to the quality or time requirements of the construction contract(s), in the same mode, manner and extent that such data would be available to COUNTY.

2.F.2) a. When requested and specifically contracted for by COUNTY, the A/E shall provide a full-time, on-site representative who shall be qualified in construction administration and subject to the approval of COUNTY. On projects for which COUNTY does not authorize full-time, on-site representation, the A/E shall provide, in accordance with ATTACHMENT A - CONSTRUCTION PHASE SITE VISITS AGREEMENT, a COUNTY-approved person, with suitable experience in the construction process to visit the site in order to monitor and report the progress, quality, and timely performance of the work relative to the Construction Documents, as such work is being performed by the construction contractor(s). The A/E shall keep COUNTY informed of the progress and quality of the work based on on-site observations and shall endeavor to protect COUNTY against defects and deficiencies in the work.

2.F.3) Immediately following the pre-construction meeting and prior to the start of construction, the A/E shall review the proposed schedule for submittals from the construction contractor(s). The A/E shall assess the timing feasibility of such submittals relative to the construction schedule and review needed, and advise COUNTY in writing accordingly.

2.F.3) a. The A/E shall be responsible for the professional review and approval or rejection of shop drawings, samples and other submittals from the construction contractor(s) to determine conformance with the specific portions of the Construction Documents under which the submittal was made. Deviation from the Construction Documents as noted by the contractor on submittals or otherwise observed by the A/E shall be brought to the attention of COUNTY's Project Representative and concurrence received from COUNTY before any approval is given to a contractor. Review of the submittals which have priority status as determined by COUNTY's Project Representative, must be completed within five (5) business days of receipt. Review of other submittals shall be completed within ten (10) business days of receipt, or in accordance with the submittal schedule prepared by the General Contractor and as approved by

COUNTY and A/E at the start of construction. The A/E is responsible for submittal activity conducted by its consultants in the same manner as if such review were made by the A/E.

2.F.3) b. The A/E shall also review the results of all testing conducted during or after construction and report to COUNTY whether these results meet the design intent and the requirements of the Construction Documents.

2.F.4) The A/E's site representative shall observe the construction process to evaluate the adequacy and completeness of the construction contractor(s) compliance with the Construction Documents, and shall immediately report any noncompliance to the COUNTY Project Manager in writing.

2.F.4) a. The A/E shall be responsible for the coordination and performance of on-site services performed by consultants employed by the A/E and shall review reports and other data submitted by such consultants. The A/E and each consultant engaged under Article 1.G. and ATTACHMENT B. - A/E / CONSULTANT AGREEMENT shall visit the job site as delineated in ATTACHMENT A. - CONSTRUCTION PHASE SITE VISITS AGREEMENT. The A/E shall provide in each consultant agreement, a requirement for consultant visits to the site and a schedule for such visits for professional evaluation of the work monitored by each consultant and a reporting system to inform COUNTY. Site visits shall coincide with crucial times of the construction for the specialty area involved.

2.F.4) b. Following construction site visits, the A/E shall make routine, written status reports detailing observations and activities on the project, at such intervals as is elsewhere herein established and in a format approved by COUNTY. The A/E shall submit the reports within three (3) business days of the site visit by the A/E's representative. Reporting requirements for full-time, on-site representation shall be established by each Agreement for such professional services.

2.F.4) c. The A/E's site representative will receive copies of reports submitted by the General Contractor and shall provide site observation to evaluate the reports. Discovered construction variances shall immediately be reported to COUNTY.

2.F.4) d. If it becomes necessary during construction, to interpret, construe, clarify or to otherwise determine the reasonable meaning, application or implementation of the Construction Documents, the A/E acting in good faith, based upon the facts made known to it at the time, shall recommend to COUNTY in writing, a reasonable course of conduct in connection with the issues involved. Such recommendation(s) may be considered for further contractual action by COUNTY.

2.F.4) e. Should the A/E become aware that the work of any contractor or subcontractor in place or underway does not conform to the work or quality required by the Construction Documents, the COUNTY Project Manager shall be immediately notified in writing. It is appropriate for the A/E to also immediately advise the contractors of substantial deficiencies, and that notification of these deficiencies will be made to COUNTY. The A/E shall furnish such data as necessary to inform COUNTY of the degree of the noncompliance with the Construction Documents, the cause thereof,

the impact on schedule and cost, if known, and a recommended course of conduct. COUNTY shall be solely responsible for implementation of the A/E's recommendation. This assumption of responsibility by COUNTY shall not relieve the A/E or its consultants for negligence in the discovery of the condition, which was or should have been discovered.

- 2.F.4) f. If the A/E considers suspension of construction work appropriate, the A/E shall notify COUNTY in writing and state the reasons, which, in the professional opinion of the A/E, justify such action.
- 2.F.5) Necessary professional services or construction required to repair or overcome problems caused by errors, omissions, ambiguities or changes not authorized by COUNTY in the preparation of the documents or design shall be the responsibility of the A/E or its consultants, without additional cost to COUNTY.
- 2.F.6) The A/E shall review requests for information (RFIs) and shall respond within five (5) business days.
- 2.F.7) The A/E shall develop and issue appropriate construction bulletins (CBs) at the direction of the COUNTY Project Manager. The A/E shall then evaluate the CB proposals received from the construction contractors and provide COUNTY with a written recommendation regarding the appropriateness of the proposals. The evaluation and recommendation shall be completed within five (5) business days of receipt, or in accordance with another schedule approved by COUNTY. The evaluation shall consider the necessity for such change, the reasonableness of the proposed change, and an analysis of the cost proposed for effecting the change.
- 2.F.8) The A/E shall assist in the preparation of applications for energy incentive programs, when applicable.
- 2.F.9) Upon contractor's written notification and the COUNTY Project Manager's confirmation that Substantial Completion has taken place, the A/E shall observe the construction and provide a written punchlist to the COUNTY Project Manager. The COUNTY Project Manager will schedule the punchlist inspection in conjunction with the User and contractors involved. The punchlist shall contain items found not to be complete, in need of correction, replacement or otherwise not in accordance with the Construction Documents. As part of the Substantial Completion verification, the A/E shall perform or witness and document functional testing and review the testing and balance report prepared by others for all plumbing, HVAC, fire protection and electrical systems to verify installation and operation meet the intent of their design. The A/E shall forward the results of the functional testing and provide written recommendations for corrective measures where systems do not meet the intent of their design. The A/E shall prepare and distribute the Certificate of Substantial Completion when appropriate.
- 2.F.10) COUNTY will provide a set of Construction Documents to General Contractor on which daily records of changes and deviations shall be recorded. At completion of the project, General Contractor will submit its marked-up as-built documents to the A/E who shall, based on these marked up as-built documents, revise the original documents, including the electronic files, showing changes in the work made during the construction process to produce a set of Record Documents. Electronic documents shall be in a format and on a medium required by COUNTY. This work shall be completed and submitted to COUNTY within thirty (30) calendar days of receipt of the last marked up prints. The consequences of addenda, change orders

and other circumstances known by the A/E to have caused change shall be included in the production of the Record Documents. The marked-up as-built documents shall be turned over to the COUNTY at the same time as the Record Documents.

2.F.10) a. Record Documents deliverables shall be:

- (1) Original unbound, hard copy of Drawings and Project Manual in full size, paper format;
- (2) Four (4) hard, bound copies of Drawings and Project Manual; and
- (3) Electronic version of all documents delivered on a USB flash drive or compact disk:
 - (a) Drawings (.dwg files) in AutoCAD 2019 (or earlier version):
 1. Each drawing sheet shall be complete with x-refs or base plan sheets included and attached;
 2. All external data from non-AutoCAD programs (e.g., Excel or Word) shall be included and attached; and
 3. Include copy of Plot Style Table (ctb file) used to print drawings.
 - (b) Drawings in Adobe Acrobat 2020 (or earlier version; minimize pdf file size by converting files from AutoCAD or other programs);
 - (c) Project Manual in Word 2016 (or earlier version); and
 - (d) Project Manual in Adobe Acrobat 2020 (or earlier version; minimize pdf file size by converting files from Word or other programs, rather than scanning printouts).

2.F.11) The A/E shall obtain from the General Contractor, and review for compliance with design intent, an Operating and Maintenance Manual for building systems and operable mechanical and electrical equipment on the project, both powered and manual. Two (2) copies of the Manuals shall be provided to COUNTY's Project Representative. These manuals shall include:

2.F.11) a. Manufacturer's Instruction for Maintenance and Operation of Equipment and Systems, including a Spare Parts List; and

2.F.11) b. Temperature Control Record Drawings and Equipment Data Sheets including recommended maintenance procedures.

2.F.12) It is not intended by this Agreement to impose upon the A/E the duty of a guarantor of the construction contractor(s). It is, however, the intent of the Agreement to impose upon the A/E the duty of the faithful fulfillment, in accordance with the standard of care ordinary to the profession, of the performance of the duties specifically enumerated herein and for the close monitoring of the work of its consultants as if the work were performed by the A/E. As such, this shall not preclude the entitlement to COUNTY of reasonable expectation that systems as designed by the A/E or their consultants will operate as anticipated by COUNTY upon faithful completion of construction.

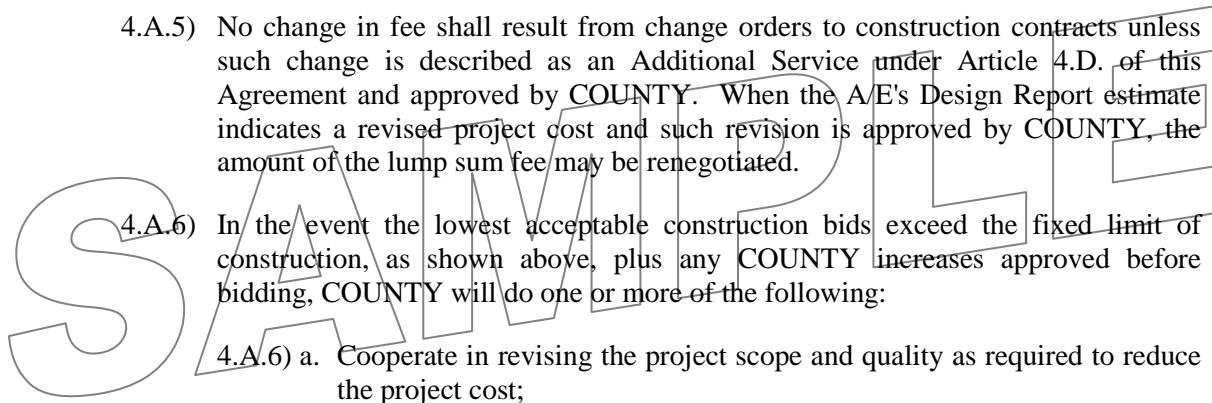
3. Commissioning Phase If total construction cost exceeds \$1 million. **ARTICLE 3: COUNTY'S RESPONSIBILITIES**

3.A. COUNTY will determine the project scope for which the professional design services are required and will fully cooperate in achieving completion of that work.

- 3.B. COUNTY will establish an internal operating procedure for timely and proper performance of any COUNTY duty required to fulfill the needs of the project.
- 3.C. COUNTY will provide available information regarding the requirements for the project, which set forth COUNTY's objectives for program, schedule and overall budget. COUNTY will make available to the A/E data known to COUNTY or requested by the A/E, which may be needed for the fulfillment of the professional responsibility of the A/E. This data may include, but is not limited to, prints of existing buildings or record drawings and COUNTY standards and guides. Such documents will be the most recent and accurate available. The use of any such data by the A/E shall be without contractual or legal significance unless otherwise established elsewhere in this Agreement. However, providing of documents by COUNTY shall not relieve the A/E from the responsibility for conducting a field survey to verify existing conditions as specified herein.
- 3.D. COUNTY will communicate to the A/E the format of the documents required to be submitted.
- 3.E. COUNTY will examine documents submitted by the A/E and will render decisions regarding them promptly, to avoid unreasonable delay in the progress and sequence of the A/E's work. COUNTY will coordinate review comments from the User agency and COUNTY staff prior to issuance to the A/E.
- 3.F. COUNTY will distribute Construction Documents and any necessary addenda to prospective bidders, and conduct the bid opening for the project.
- 3.G. COUNTY will prepare and process the Agreements between COUNTY and A/E, and between COUNTY and construction contractor(s).
- 3.H. Unless otherwise specified in this Agreement, COUNTY will arrange for services of a testing laboratory to furnish structural, chemical, mechanical and other laboratory tests, inspections and reports as required by law or deemed necessary by COUNTY.

4. ARTICLE 4: COMPENSATION

- 4.A. A/E fees for basic services will be compensated by COUNTY in accordance with the Terms and Conditions of this Agreement as follows:
- 4.A.1) COUNTY will pay the A/E a lump sum fee of \$[] for Phase 1 Study.
- 4.A.2) Fee for services to be provided under this Agreement is fixed at [] % of total construction cost for the Design through Commissioning Phases of this project for Design Option C if Design Option C is selected at the end of Phase 1.
- 4.A.3) Fee for services to be provided under this Agreement is fixed at [] % of total construction cost for the Design through Commissioning Phases of this project for Design Option D if Design Option D is selected at the end of Phase 1.
- 4.A.4) Fee for services to be provided under this Agreement is fixed at [] % of total construction cost for the Design through Commissioning Phases of this project for Design Option E if Design Option E is selected at the end of Phase 1.
- 4.A.4) a. Initial payments will be made based on cost estimates developed for the Project's current Phase; and



- 4.A.4) b. Final payments will be made based on actual total construction cost plus / minus all COUNTY initiated change orders.
- 4.A.4) c. If COUNTY reduces scope after A/E has completed services, fees will be reduced for future services, not for services already completed.
- 4.A.4) d. The A/E fee for professional services shall be in accordance with the terms of this Agreement and based on the scope of services contained in the Scope of Work document dated January 12, 2021, including any subsequent Addenda.
- 4.A.4) e. The A/E is authorized to proceed through completion of the Design Documents Phase. The A/E shall not proceed into Construction Documents Phase until written instructions to proceed are provided by COUNTY.
- 4.A.4) f. The construction budget for this project is to be determined based on which design option is selected after Study Phase deliverables are reviewed. This amount excludes all construction costs of contingency and unless stated otherwise in this Agreement, hazardous materials abatement or remediation.

4.A.5) No change in fee shall result from change orders to construction contracts unless such change is described as an Additional Service under Article 4.D. of this Agreement and approved by COUNTY. When the A/E's Design Report estimate indicates a revised project cost and such revision is approved by COUNTY, the amount of the lump sum fee may be renegotiated.

4.A.6) In the event the lowest acceptable construction bids exceed the fixed limit of construction, as shown above, plus any COUNTY increases approved before bidding, COUNTY will do one or more of the following:

- 4.A.6) a. Cooperate in revising the project scope and quality as required to reduce the project cost;
- 4.A.6) b. Authorize the rebidding of the project within a reasonable time; and / or
- 4.A.6) c. Give written approval of an increase in such fixed limit.

4.A.7) Compensation for any revisions of project scope & necessary rebidding based lowest acceptable construction bids exceeding the construction cost estimate approved at Construction Documents Phase shall be as described in "2.F. Bidding Phase" section above.

4.B. The A/E's Compensation for Additional Services, as described in Article 4.D., will be computed as follows:

4.B.1) Principals' time at a fixed rate of \$[] per hour, unless separate amounts are provided for each Principal. For the purposes of this Agreement, the Principals are:

[_____]

[_____]

1

4.B.2) Other design staff shall be billed at these fixed rates:

Senior design architect / engineer: \$[] per hour

Junior design architect / engineer: \$[] per hour

Senior designer: \$[] per hour

Junior designer: \$[] per hour

Drafting: \$[] per hour

Clerical: \$[] per hour

4.B.3) Employee's time shall be computed using the employee's basic hourly salary and include overhead costs for clerical support and mandatory and customary benefits such as statutory employee benefits, insurance, sick leave, holidays and vacations, pensions and similar benefits for persons in consultation, research and design in producing drawings, specifications and other documents pertaining to the project and for services during construction at the site.

4.C. Reimbursable Expenses:

4.C.1) Reimbursable Expenses are actual, incidental expenses incurred by the A/E, its employees or consultants, in the interest of the project and are not included in overhead costs for the Fees for Basic Services (4.A.) and Additional Services (4.D.). Reimbursable Expenses shall be incurred or contracted for only with PRIOR written approval from COUNTY. Such approval shall be based on a written proposal delineating the nature of the services, the time involved, the estimated cost thereof, and the individuals or firms involved. Payment Requests from consultants and construction contractors providing these Reimbursable Expenses shall be reviewed by the A/E to check the accuracy of and entitlement to the sums requested. Reimbursable Expenses may include, but are not limited to, the following incidental expenses:

4.C.1) a. Expense of reproduction of drawings and specifications, excluding the review sets required in Article 2.

4.C.1) b. Expense of a site survey when needed.

4.C.1) c. Expense of a geotechnical investigation and soils and material testing when required.

4.C.1) d. Expense of State and / or City review fees when required.

4.C.2) Expenses not eligible for reimbursement shall include, but are not limited to, indirect project overhead costs associated with the Fees for Basic Services (4.A.) and Additional Services (4.D.) such as mileage, travel, lodging, replication of drawings for the design development meetings and subsequent design meetings, preliminary and final review document printing, handling and postage, cost of correspondence

transmittals, telephone expenses, and CAD / electronic graphic services. Such expenses shall be included as part of the Lump Sum fee.

4.D. Additional Services:

4.D.1) The following services are in addition to but are not covered in Article 4.A. These services may be identified as part of the A/E's fee proposal and included with the lump sum fee as such. Compensation for these additional services or other services must be requested by the A/E, and subsequently approved by COUNTY PRIOR to proceeding with the work. If the additional services are requested after the Agreement has been issued, such authorization shall be based on a written proposal delineating the nature of the services, the time involved, the estimated cost thereof, the effect on the project schedule and the individuals or firms involved. When authorized, an Agreement Change Order will be used to modify the A/E's Agreement.

4.D.1) a. Providing planning surveys, program revision, site feasibility, or comparative studies of prospective sites.

4.D.1) b. Revising previously approved drawings, specifications or other documents after written approval of Design Development Phase, to accomplish changes not initiated by the A/E other than record documents and revisions normally to be expected or required to correct deficiencies in the approved drawings and specifications.

4.D.1) c. Preparing detailed models, perspective or renderings.

4.D.1) d. Preparing documents for alternate bids or petitions for waiver when requested by COUNTY and, requiring significant additional time and expense on the part of the A/E or its consultants.

4.D.1) e. Obtaining or participating in third party Value Engineering / Enhancement of the project when directed by COUNTY.

4.D.1) f. Providing services other than corrective design work and record documents, after final payment to the construction contractor(s).

4.D.1) g. Providing services requested by COUNTY for or in connection with the selection of specific movable furniture, fixtures and equipment (FF&E) by the occupying agency during the Construction Phase.

4.D.1) h. Providing services as expert witness in connection with any public hearings, arbitration proceeding, or the proceedings of a court of record except when the A/E is party thereto.

4.D.1) i. Providing historical preservation research or documentation.

4.D.1) j. Providing specialized design services, including, but not limited to Sustainability design or LEED certification, vibration, wind or acoustical analysis, energy modeling.

4.D.1) k. Participation in post-project evaluations.

4.D.1) l. Preparing multiple bid packages.

4.E. Payments to the A/E:

- 4.E.1) Payments of the A/E's lump sum fee will be made monthly, in proportion to services performed as confirmed by COUNTY, to increase the compensation to the following percentages of the lump sum fee at the completion of each phase of the work.

<u>Phase 1: Study</u>	
Draft version of Study	50%
Final version of Study	100%

<u>Phase 2: Design & Construction</u>	
Design Development Phase	35%
Construction Documents Phase	65%
Bidding Phase	70%
Construction Phase	100%

- 4.E.2) No more than ninety percent (90%) of the A/E's lump sum fee shall be paid out prior to substantial completion of the project. When COUNTY confirms that development of punch lists, review of Operating & Maintenance Manuals, submittal of record documents, has been satisfactorily completed by the A/E, COUNTY will determine how and when the remaining lump sum fee is disbursed.
- 4.E.3) Payments for COUNTY-approved Reimbursable Expenses as defined in Article 4.C. and Additional Services of the A/E as defined in Article 4.D., will be made monthly upon request.
- 4.E.4) An A/E whose work is found deficient or fails to conform to the requirements set forth in the Agreement, is not entitled to further payments, until corrected to the satisfaction of COUNTY.
- 4.E.4)/a. Payments to the A/E may be withheld for damages sustained by COUNTY due to error, omission, unauthorized changes or negligence on the part of the A/E. COUNTY will notify the A/E in writing of the alleged, specific damages and amounts involved, on a timely basis.
- 4.E.5) Payments to the A/E will not be withheld due to disputes between construction contractor(s) and COUNTY.
- 4.E.6) If the project is suspended for more than three (3) months in whole or in part, the A/E will be paid fees for services performed prior to receipt of written notice from COUNTY of the suspension, together with Reimbursable Expenses then due and reasonable expenses resulting from this suspension, as approved by COUNTY. If the project is resumed after being suspended for more than three (3) months, the A/E's compensation will be subject to renegotiation.

5. ARTICLE 5: ACCOUNTING RECORDS

- 5.A. Records of the A/E's direct personnel, consultants, and reimbursable expenses pertaining to the project shall be kept in accordance with Generally Accepted Accounting Principles (GAAP) and shall be available to COUNTY or an authorized representative throughout the term of this Agreement and for at least three (3) years after final payment to the A/E.

6. ARTICLE 6: TERMINATION OF AGREEMENT

- 6.A. This Agreement may be terminated by COUNTY without cause upon ten (10) calendar days written notice to the A/E. In the event of termination, the A/E will be paid fees for services performed to termination date, reimbursable expenses then due, and termination expenses as

approved by COUNTY. Work performed prior to the date of termination shall be in accordance with the terms and conditions of this Agreement. Upon termination, the results of such work shall immediately be turned over to the COUNTY Project Manager and is a condition precedent to further payment by COUNTY.

- 6.B. In the event the Agreement between the A/E and any consultant on this project is terminated, the results of work by that consultant shall immediately be turned over to the A/E.

7. ARTICLE 7: OWNERSHIP OF DOCUMENTS

- 7.A. All drawings and specifications, renderings, models, scale details, approved copies of shop drawings and other such documents prepared by the A/E or any consultant pursuant to this Agreement shall become the property of COUNTY on completion and acceptance of any of the A/E's work, or upon termination of the Agreement, and shall be delivered to COUNTY upon request.
- 7.B. Documents prepared under this Agreement may be used by COUNTY for informational purposes without additional compensation to the A/E.
- 7.C. Specifications and isolated, detail drawings inherent to the engineering design of the project, whether provided by the COUNTY or generated by the A/E, shall be available for future use by the parties to this Agreement and other parties, each at their own risk.

8. ARTICLE 8: LIABILITY- HOLD HARMLESS AND INDEMNIFICATION

- 8.A. A/E shall indemnify, hold harmless and defend COUNTY, its boards, commissions, agencies, officers, employees and representatives against any and all liability, loss (including, but not limited to, property damage, bodily injury and loss of life), damages, costs or expenses which COUNTY, its officers, employees, agencies, boards, commissions and representatives may sustain, incur or be required to pay by reason of A/E furnishing the services required to be provided under this Agreement, provided, however, that the provisions of this paragraph shall not apply to liabilities, losses, charges, costs, or expenses caused or resulting from the acts or omissions of COUNTY, its agencies, boards, commissions, officers, employees or representatives. The obligations of A/E under this paragraph shall survive the expiration or termination of this Agreement.

9. ARTICLE 9: PROFESSIONAL LIABILITY INSURANCE

- 9.A. The A/E and its consultants retained under the terms of this Agreement shall procure and maintain a professional liability insurance policy with at least \$1,000,000 in coverage that provides for payment of the insured's liability for errors, omissions or negligent acts arising out of the performance of the professional services required under this Agreement. The A/E shall provide up-to-date, accurate professional liability information on the A/E's Data Record, including amount of insurance, deductible, carrier and expiration date of coverage. Upon request by COUNTY, the A/E shall furnish COUNTY with a Certificate of Insurance showing the type, amount, deductible, effective date and date of expiration of such policy. Such certificate shall also contain substantially the following statement: "The insurance covered by this certificate shall not be canceled, the coverage changed or reduced by endorsement, by the insurance company, except after thirty (30) calendar days written notice has been received by COUNTY." The A/E shall not cancel or materially alter this coverage without prior written approval by COUNTY. The A/E shall be responsible for consultants maintaining professional liability insurance during the life of their Agreement.

10. ARTICLE 10: OTHER INSURANCE

10.A. The A/E and its consultants retained under terms of this Agreement shall:

10.A.1) Maintain Worker's Compensation Insurance:

10.A.1) a. Procure and maintain Worker's Compensation Insurance as required by State of Wisconsin Statutes for all of the A/E's and consultant's employees engaged in work associated with the project under this Agreement.

10.A.1) b. Maintain Employer's Liability Insurance with a policy limit of not less than \$1,000,000 per occurrence and \$2,000,000 in the aggregate.

10.A.2) Procure and maintain during the life of this Agreement, and until one year after the completion of this Agreement, Commercial General Liability Insurance, including Products and Completed Operations for all claims that might occur in carrying out the Agreement. Minimum coverage shall be \$1,000,000 per occurrence, \$1,000,000 general aggregate, combined single limit for bodily injury, personal injury, and property damage. Such coverage shall be of the "occurrence" type form and shall include the employees of the A/E as insureds.

10.A.3) Procure and maintain Commercial Automobile Liability Insurance for all owned, non-owned, and hired vehicles that are used in carrying out the Agreement. Minimum coverage shall be \$1,000,000 per occurrence combined single limit for bodily injury and property damage.

10.A.4) Provide an insurance certificate indicating the above Commercial Liability Insurance and property damage coverage, countersigned by an insurer licensed to do business in Wisconsin, covering and maintained for the period of the Agreement. Upon request by COUNTY, the insurance certificate is to be presented on or before execution of the Agreement.

11. ARTICLE 11: MISCELLANEOUS PROVISIONS

11.A. A/E warrants that it has complied with all necessary requirements to do business in the State of Wisconsin, that the persons executing this Agreement on its behalf are authorized to do so.

11.B. Legal Relations. The A/E shall comply with and observe federal and state laws and regulations and local zoning ordinances applicable to this project and in effect on the date of this Agreement.

11.C. Approvals or Inspections. None of the approvals or inspections performed by COUNTY shall be construed or implied to relieve the A/E from any duty or responsibility it has for its professional performance, unless COUNTY formally assumes such responsibility in writing from COUNTY so stating that the responsibility has been assumed.

11.D. Successors, Subrogees and Assigns. COUNTY and A/E each bind themselves, their partners, successors, subrogees, assigns, and legal representatives to the other party to this Agreement and to the partners, successors, subrogees, assigns and legal representatives of such other party with respect to covenants of this Agreement.

11.E. Claims. The A/E's project manager will meet with COUNTY's Project Manager to attempt to resolve claims, disputes and other matters in question arising out of, or relating to, this Agreement or the breach thereof. Issues not settled are to be presented in writing to the COUNTY Deputy Director of Public Works for review and resolution. The decision of the Deputy Director of Public Works shall be final. Work shall progress during the period of any

dispute or claim. Unless specifically agreed between the parties, venue will be in Dane County, Wisconsin.

11.F. Amendment of Agreement. This Agreement may be amended in writing by both COUNTY and A/E.

11.G. It is expressly understood and agreed to by the parties hereto that in the event of any disagreement or controversy between the parties, Wisconsin law shall be controlling. Venue for any legal proceedings shall be in the Dane County Circuit Court.

11.H. This Agreement is intended to be an agreement solely between the parties hereto and for their benefit only. No part of this Agreement shall be construed to add to, supplement, amend, abridge or repeal existing duties, rights, benefits or privileges of any third party or parties, including but not limited to employees of either of the parties.

11.I. The entire agreement of the parties is contained herein and this Agreement supersedes any and all oral agreements and negotiations between the parties relating to the subject matter hereof. The parties expressly agree that this Agreement shall not be amended in any fashion except in writing, executed by both parties.

12. ARTICLE 12: NONDISCRIMINATION IN EMPLOYMENT

12.A. During the term of this Agreement, A/E agrees not to discriminate on the basis of age, race, ethnicity, religion, color, gender, disability, marital status, sexual orientation, national origin, cultural differences, ancestry, physical appearance, arrest record or conviction record, military participation or membership in the national guard, state defense force or any other reserve component of the military forces of the United States, or political beliefs against any person, whether a recipient of services (actual or potential) or an employee or applicant for employment. Such equal opportunity shall include but not be limited to the following: employment, upgrading, demotion, transfer, recruitment, advertising, layoff, termination, training, rates of pay, and any other form of compensation or level of service(s). A/E agrees to post in conspicuous places, available to all employees, service recipients and applicants for employment and services, notices setting forth the provisions of this paragraph. The listing of prohibited bases for discrimination shall not be construed to amend in any fashion state or federal law setting forth additional bases and exceptions shall be permitted only to the extent allowable in state or federal law.

12.B. Civil Rights Compliance:

12.B.1) If A/E has twenty (20) or more employees and receives \$20,000 in annual contracts with COUNTY, the A/E shall submit to COUNTY a current Civil Rights Compliance Plan (CRC) for Meeting Equal Opportunity Requirements under Title VI of the Civil Rights Act of 1964, Section 504 of the Rehabilitation Act of 1973, Title VI and XVI of the Public Service Health Act, the Age Discrimination Act of 1975, the Omnibus Budget Reconciliation Act of 1981 and Americans with Disabilities Act (ADA) of 1990. A/E shall also file an Affirmative Action (AA) Plan with COUNTY in accordance with the requirements of Chapter 19 of the Dane County Code of Ordinances. A/E shall submit a copy of its discrimination complaint form with its CRC/AA Plan. The CRC/AA Plan must be submitted prior to the effective date of this Agreement and failure to do so by said date shall constitute grounds for immediate termination of this Agreement by COUNTY. If an approved plan has been received during the previous calendar year, a plan update is acceptable. The plan may cover a two-year period. If A/E has less than twenty (20) employees, but receives more than \$20,000 from the COUNTY in annual contracts, it may be required to submit a CRC Action Plan to correct any problems discovered as the

result of a complaint investigation or other Civil Rights Compliance monitoring efforts set forth herein below. If A/E submits a CRC/AA Plan to a Department of Workforce Development Division or to a Department of Health and Family Services Division that covers the services purchased by COUNTY, a verification of acceptance by the State of A/E's Plan is sufficient.

12.B.2) A/E agrees to comply with the COUNTY's civil rights compliance policies and procedures. A/E agrees to comply with civil rights monitoring reviews performed by the COUNTY, including the examination of records and relevant files maintained by the A/E. A/E agrees to furnish all information and reports required by the COUNTY as they relate to affirmative action and non-discrimination. A/E further agrees to cooperate with COUNTY in developing, implementing, and monitoring corrective action plans that result from any reviews.

12.B.3) A/E shall post the Equal Opportunity Policy, the name of A/E's designated Equal Opportunity Coordinator and the discrimination complaint process in conspicuous places available to applicants and clients of services, applicants for employment and employees. The complaint process will be according to COUNTY's policies and procedures and made available in languages and formats understandable to applicants, clients and employees. A/E shall supply to COUNTY's Contract Compliance Specialist upon request a summary document of all client complaints related to perceived discrimination in service delivery. These documents shall include names of the involved persons, nature of the complaints, and a description of any attempts made to achieve complaint resolution.

12.B.4) A/E shall provide copies of all announcements of new employment opportunities to COUNTY's Contract Compliance Specialist when such announcements are issued.

SAMPLES

ATTACHMENT A

PROFESSIONAL SERVICES AGREEMENT

CONSTRUCTION PHASE SITE VISITS AGREEMENT

Project No.: 320026

Agreement No.: [No.]

Project Name: Facilities Emergency Power Project

Construction phase services, for the Project referenced above, shall be provided by either the A/E or its Consultants as follows and in compliance with Article 2.G.:

1. The A/E shall visit the site a minimum of [] times during the construction phase (or [] times per month or [] times per week) and attend the pre-construction meeting, [weekly, bi-weekly, monthly] progress meetings and final inspection to determine if work has been completed according to plans and specifications. Site visits shall be conducted at essential times during the construction phase. To be considered a site visit, close-up observation of the current building elements in process of being constructed must be performed. Additional site visits necessitated by A/E error, omission, unauthorized changes or negligence, shall be accomplished without additional cost to COUNTY. Additional site visits necessitated by significant failure on the part of the lead or other prime construction contractors to perform, will be given consideration as additional services, reimbursable by the responsible construction contractor(s) through COUNTY. Where specialty work is performed "in-house" or by an outside Consultant, the minimum number of separate site visits by that specialist shall be as indicated below.
2. The Structural Consultant shall visit the site a minimum of [] times during the construction phase (or [] times per month).
3. The Mechanical Consultant shall visit the site a minimum of [] times during the construction phase (or [] times per month).
4. The Electrical Consultant shall visit the site a minimum of [] times during the construction phase (or [] times per month).



Dane County Generator Study Report-Final

December 15, 2020

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APPENDICES:

- Appendix 1: One Line Diagrams
- Appendix 2A: CCB Garage Floor; Proposed Generator Power Markups
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- Appendix 3: Photographs of Existing Generators/Cabinets
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Executive Summary

An electrical utility outage in July of 2019 revealed shortcomings in the various existing Emergency Power Supply Systems (EPSS) that serve several Dane County buildings in downtown Madison. The existing systems are of varying vintages, arrangement, and capacity. A single comprehensive answer to each circumstance is unlikely and solving the system shortcomings will require a variety of approaches because of the diversity of arrangements and available physical space.

1. Study Impetus

On Friday July 19, 2019 a 138-kilovolt transformer owned by American Transmission Company (ATC) at Madison Gas and Electric's (MGE) Blount substation on East Main Street in Madison failed catastrophically due to failed voltage regulator. The subsequent fire was reported about 7:40 AM. That day the high temperature was 93 deg F; the hottest day of 2019. Shortly after the fire began, MGE de-energized the Blount Street substation to allow firefighters access. That shut off power to about 13,000 customers in the downtown and Isthmus areas. Power was out to the County buildings for approximately 8 hours. Some of the County's generators overheated and failed. All three buildings internal temperatures rose greatly making it extremely uncomfortable for those that were not allowed to leave.

The County 911 Center experienced equipment failure and needed to activate its backup offsite center. Shortly after the fire at the Blount substation, a second fire occurred in the ATC portion of the East Campus substation near the Kohl Center.

This failure of utility power caused the above mentioned operational problems for affected Dane County facilities and prompted the request for analysis of the existing backup power systems and how they can be revised to serve more loads with longer fuel storage and improved to better serve the operational needs.

2. Facilities Included

The Dane County Courthouse (Courthouse) located at 215 S Hamilton Street, the Public Safety Building (PSB) located at 115 West Doty Street, and the City County Building (CCB) located at 210 Martin Luther King Jr. Boulevard all lost electrical utility power as a result of these events and are included in the study scope.

A. Dane County Courthouse (Courthouse)

The Courthouse is a 10-story building (LL1, LL2 and floors 1-8) completed in 2005. It includes 18 courtrooms, denoted 1A on the first floor, and 4A to 8D on floors 4 through 8. There are 10 commissioner hearing rooms on the second floor, denoted 2A to 2J.

B. Public Safety Building (PSB)

The PSB is a 6-story building (Sub-basement, Basement, and floors 1-4) with a fifth floor mechanical penthouse.

C. City County Building (CCB)

The CCB is a 9-story building (Garage, Ground, and floors 1-7 plus a penthouse). The Dane County Sheriff's Office (DCSO) operates jail facilities on the 6th and 7th floors of the CCB and within the PSB. The PSB also contains the booking facility for processing new inmates into the jail and is the centralized location for releases from the jail facilities. All property, financial, and administrative offices for the DCSO are located at the PSB.

3. Existing Generators and Emergency/Standby Power Distribution Systems (Existing EPSS)

The Courthouse has a single 500 kW natural gas generator located on LL2 in room LL2003. This generator serves both emergency and standby loads through a 1200 amp (A) switchboard MDP-GEN. There are three (3) automatic transfer switches (ATS) plus the fire pump controller served from MDP-GEN. The 200A switch for life safety serves MDP-LS, a 600A switch (fused at 350A) serves MDP-ELEV for elevators A through G, and a 260A switch serves the other standby loads through MDP-EMSB. In addition, a 250A feed is connected directly to the fire pump controller. Refer to drawings in Appendix for further details.

The PSB has two generators. A 900 kW diesel generator feeds a 1600A ATS serving unsegregated loads for emergency (NEC 700), legally required standby (NEC 701) and optional standby loads (NEC 702). A 50KW diesel generator serves a single 200A ATS for emergency loads related to the Emergency Management Department. Both units are in the basement generator room, which is accessed through the mechanical room. Refer to drawings in Appendix for further details.

The CCB has five generators. A 50 kW diesel generator that serves primarily egress lights, a 200 kW diesel generator that serves the 911 center and a 150 kW diesel generator that serves Juvenile Detention are located in a Sub-basement mechanical room. A 280 kW diesel generator that serves the jail life safety loads and elevator #7 and a 250 kW natural gas generator that serves City-County IT loads are located in a mechanical room in the Penthouse. Refer to drawings in Appendix for further details.

4. Information Gathering

A kickoff meeting on October 2, 2019 was held to establish the scope and gather initial information. Chris Harp and Scott Lind from Mead & Hunt met the following representatives from Dane County:

- Amanda DePagter, Director of Facilities and Services
- Todd Draper, Public Works Deputy Director
- Nathan Tuggle, Electrician
- Mike Collins, Facility Manager

Amanda presented data on the existing generators and initial thoughts on which additional loads and building areas would be desirable to have on backup power. Follow up correspondence in November and December further clarified the loads to be added to the EPSS systems in CCB and the scope of loads to be added in the Courthouse.

Drawings, insofar as they exist, and subsequent site visits have been used to understand the general

arrangements of the various systems. Those drawings were used in the Courthouse to determine the scope of mechanical equipment that will need to be added to the EPSS to allow operation of floors LL2-2. **NOTE:** Subsequent to the meetings in November and December of 2019 the COVID 19 pandemic occurred. This pandemic led to the Courthouse staff working from home and conducting virtual web based meetings, hearings, trials, etc. The remote courthouse functions appear to have been somewhat effective, so Dane County would like to re-evaluate the items that need to be added to the Courthouse generator. Included in the scope of the Request for Proposal that Dane County will prepare and issue for the design phase of a generator improvement project, the Courthouse staff will be re-polled, and a new equipment list will be created. Given what was learned during the pandemic, floors LL2 through 2 may not need to operate fully in the event of a power outage, as some functions could possibly operate remotely.

5. Application of Codes and Standards

The installation and maintenance of backup power systems are covered by an array of building codes, electrical codes, National Fire Protection Association (NFPA) standards and other standards related to specific occupancy types. These include:

- International Existing Building Code (IEBC) as adopted and amended by Wisconsin SPS 366
- National Electrical Code (NEC) as adopted and amended by Wisconsin SPS 316
- NFPA 37 – Standard for the Installation and Use of Stationary Combustion Engines and Gas Turbines
- NFPA 101 – Life Safety Code
- NFPA 110 – Standard for Emergency and Standby Power Systems
- Generator operating ratings (Standby or Prime) and the permissible loading under each rating – e.g. 70% average loading in a 24 hour period
- Fuel storage codes and standards
- Air permit requirements for generator exhaust

6. Considerations and Limitations

- I. Existing generator/ATS load readings are listed below. Refer to the one line diagrams in Appendix for the generator and ATS (Automatic Transfer Switch) labels. **NOTE: Two of the load readings do not correlate to the generator/ATS sizes. Those readings require confirmation as part of the scope of the RFP for design of the generator improvement project.**

a. Courthouse Generator 1:

1. LS-ATS – 283 kVA – 340A (note that this reading does not correlate to the ATS rating)

2. SB-ATS – 71 kVA – 85A


3. ELEV-ATS – 84 kVA – 100A

4. TOTAL Generator 1 load – 393 kVA – 473A

b. PSB Generator 2:

1. ATS-MDP-LS – 37 kVA – 103A (Note - The load on this generator will be removed for the PSB. The Emergency Management department is moving out of the PSB in early 2021.)



- c. PSB Generator 3:
 - 1. ATS-PSB – 213 kVA – 256A
- d. CCB Generator 4: 
 - 1. ATS-EMD – AT – 123 kVA – 342A (note that this reading does not correlate to the Generator rating)
- e. CCB Generator 5:
 - 1. ATS-PNL B – 21kVA – 59A
 - 2. ATS-MDP-A – 216kVA – 260A
- f. CCB Generator 6:
 - 1. ATS-2E – 216 kVA – 260A
- g. CCB Generator 7:
 - 1. ATS-JUV DET – 93 kVA – 112A
- h. CCB Generator 8:
 - 1. ATS-IT – 193kVA – 232A (assuming 480V)

II. Additional loads requested to be on the Courthouse generator:

- 1. AHU-1 SF-1
- 2. AHU-1 RF-1
- 3. AHU-2 SF-2
- 4. AHU-2 RF-2
- 5. CHILLER #1
- 6. CHILLER #1 OIL PUMP
- 7. CT-1
- 8. P-1
- 9. P-3
- 10. P-5
- 11. P-6
- 12. EF-6 through EF-11
- 13. KEF-1
- 14. WHR-1
- 15. WHR-4
- 16. CP-1
- 17. SCF-1
- 18. SCF-2
- 19. SPF-1
- 20. SPF-2A
- 21. SPF-2B
- 22. AC-1
- 23. AC-2
- 24. AC-6

Prior to the pandemic and remote working conditions, the courthouse staff requested the ability to operate the following floors normally under an electrical utility outage condition: LL2, LL1, 1 and 2. There are numerous loads that will have to be added to the generator to accomplish this goal. The Courthouse 500 kW generator is currently loaded to approximately 250 kW. It has approximately 250 kW of spare capacity if loaded to 100%. At a minimum, the loads that need to

be on the generator to accommodate the initial requested courthouse operational capability are listed below. Only a small percentage of these are currently on the generator. Additional loads like more lighting, receptacles and other miscellaneous loads have yet to be identified in detail. This initial equipment list would add approximately 600 kW of connected load to the generator. The existing generator cannot accommodate that much additional connected load even if diversity factors are similar to the service diversity. The remainder of the EPSS distribution system cannot accommodate the requested loads in its present form. It is anticipated that a revised list would add less load to the existing 500kW generator. The design phase of the generator improvement project will determine the revised list and how much of the equipment on the revised list can be accommodated by the existing generator

- III. The existing PSB generators will be replaced by a set of two parallel generators as part of the Jail Consolidation Project. These generators will be sized based on the operational requirements of the consolidated facility. Code-required emergency and legally required standby loads as well as optional standby loads are being evaluated as part of the design development process.
- IV. The CCB loads that have been requested to be on generator backup are listed below. The extent of these loads will most certainly require an extensive reworking and upgrading of the multiple EPSS systems within the building.

a. HVAC

- 1. Large Chiller
- 2. Chilled Water Pump
- 3. Condenser Pump
- 4. 2 Tower Fans
- 5. AHU 3 Pump and S-27 Pump
- 6. Controls
- 7. AHU 3 (6/7 West)
- 8. AHU S-27 (6/7 East)
- 9. Cooling Tower Pumps
- 10. MPD Supply Fan
- 11. MPD Return Fan
- 12. MPD Control Panel
- 13. 9-1-1 Heat Exchanger Pumps



b. Fire Safety

- 1. **Fire Panel and Devices**
- 2. Fire Pumps

c. Emergency Lighting


- 1. **Egress Lighting**
- 2. **EXIT Signs**



d. Elevator Equipment

- 1. Car 1 – Controlled Descent
- 2. Car 2 – Controlled Descent
- 3. Car 3 - Controlled Descent
- 4. Car 4 – Operational
- 5. **Car 5 – Operational**



- 6. Car 6 – Controlled Descent
 - 7. Car 7 – Operational
 - 8. Car 8 – Controlled Descent
 - 9. Elevator Cooling Equipment
- e. Computer Equipment
- 1. City IT – Refer to the Appendices for requested additions shown on plans
 - 2. County IT – Refer to the Appendices for requested additions shown on plans
- f. Additional Power Needs
- 1. Sewer Ejector
 - 2. Triplex and Duplex Booster Pumps 
 - 3. 9-1-1 Communication Center
 - 4. Juvenile Detention Center
 - 5. FM Office

V. Existing Operational Problems are:

- a. Overheating of the generators in the basement of the CCB. This is most likely due to an inadequate HVAC air distribution system.
- b. Difficulty of fuel delivery for the diesel generators in CCB and Courthouse. Ease of access to fuel filling and the physical space needed for larger fuel tanks will be resolved on the PSB as part of the Dane County Jail Consolidation project. The fuel delivery and physical space issues will need to be addressed in the design of any new generators for the Courthouse and CCB.

VI. Age of Existing Equipment

- a. Generator 1 – Installed in 2005.
- b. Generator 2 – Installed in 1995.
- c. Generator 3 – Installed in 1995.
- d. Generator 4 – Installed in 2001.
- e. Generator 5 – Installed in 2001.
- f. Generator 6 - installed in 1983.
- g. Generator 7 – installed in 2007.
- h. Generator 8 - installed in 2009.

VII. Fuel Sources and Storage Capacities

- a. The goal is 72 hours of on-site fuel storage for the diesel generators. Single-fuel natural gas generators are also an option.

VIII. Complexity of Reconfiguring Existing EPSS Systems due to:

- a. Space for new equipment.
- b. Routing new conduits through existing spaces.
- c. Current codes with different requirement than codes when systems were originally installed such as load segregation and isolation of distribution equipment for each.
- d. Limited ability to take systems offline for construction work.

7. Options Evaluated

A. Add load to existing EPSS with no change to generator configuration where capacity exists.

- (1) For the Courthouse the requested loads to be added would certainly exceed the existing generator capacity so this option is not viable.
- (2) The PSB generator is being replaced as part of the Jail Consolidation Project and generator(s) for that building will incorporate required loads as part of the reconfiguration.
- (3) The CCB generators are not an interconnected system and with the magnitude of additional loads requested there is no feasible way to add those loads without reconfiguring the generators and EPSS.

B. Consolidating all EPSS into a central plant serving all three buildings.

- (1) This is the optimal solution from the standpoint of redundancy and flexibility. An interconnected system would consist of multiple generators in parallel serving each level of emergency and standby power subdivided not by building but by load criticality. It also has the advantage of allowing complete construction of the EPSS and majority of the associated distribution without disturbing the existing systems. Individual systems could then be scheduled and brought online in a piecemeal fashion, minimizing disruptions. The largest, and likely insurmountable, hurdle to this option is a lack of an available central location, limitations also include cost. The PSB Jail Consolidation Project is nearing design completion with a separate dedicated EPSS system for the PSB only – located in the new Tower adjacent to the PSB.

C. Increase the size of the existing EPSS systems in situ to carry additional loads without reconfiguring the generator arrangements.

- (1) This option would increase the size of the generators and add distribution capacity where needed to accommodate the added loads. This would not help with correcting the reported overheating problems in CCB. An adequate HVAC air distribution system for new CCB generators as well as a correctly designed generator room would address the overheating problems. Fuel storage also needs to be addressed both because the larger generators will use more fuel and because of the desire is to increase running time to 72 hours. This option has constructability issues with limited permissible outages. Space will be a limiting factor in many locations. This is being incorporated in the design for the PSB Jail Consolidation Project. The Courthouse and CCB EPSS system sizes may be increased requiring more physical space for the generators and fuel tanks.

D. Reconfigure or consolidate EPSS within a building as needed to carry additional loads and to address run-time and overheating problems.

- (1) Depending on implementation this option could also lead to some redundancy for the most critical loads. Available space will also be the major factor limiting this option. Unless completely new physical locations are identified the same constructability issues with limited permissible outages is a concern. This option is being incorporated in the design for the PSB Jail Consolidation Project. This is an option for the Courthouse and CCB as well.

E. Provide portable generator connection cabinets for the CCB.

- (1) This is the least expensive option for the CCB given the complexity of the CCB's emergency distribution system and the lack of physical space in the CCB for new electrical equipment. This could also be an option for the Courthouse, however consolidating and reconfiguring the Courthouse emergency system would be more straight forward than the CCB.

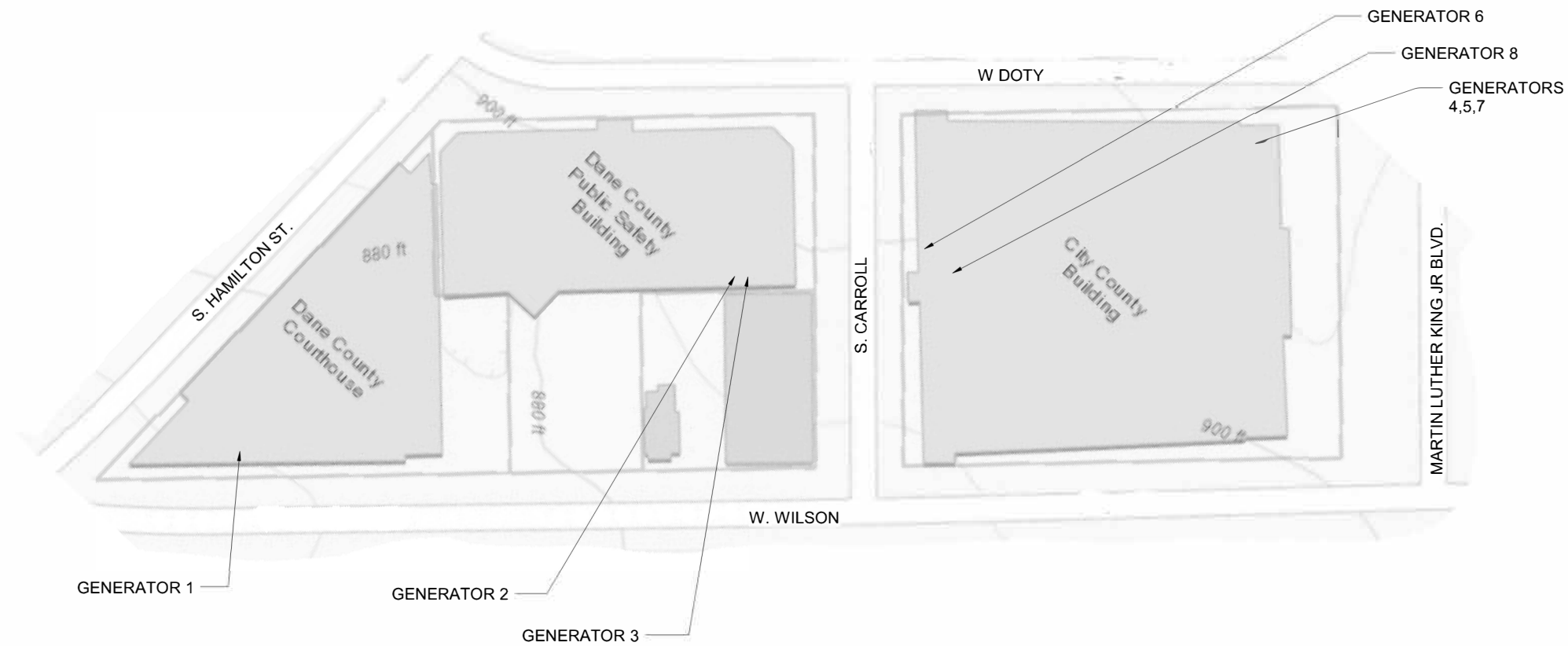
8. Recommendations

- I. The initial recommendation was to load bank test each generator to establish current operating condition. Load bank tests allow evaluation of existing operational condition. Running generators with the intended EPSS loads connected and recording operating data to help establish peak demand on the generators is also recommended if such a test can be coordinated to minimize disruptions. The generators were load bank tested by Wolter Power systems between 2018 through 2020. The reports provided to Mead & Hunt were brief and did not note any issues with the performance of the generators.
- II. Evaluate available space in the Courthouse for a new EPSS that would have enough capacity to serve the requested loads and provide for segregated (emergency, legally required standby and optional standby) branches. Utilizing a portion of the existing parking area in LL2 may be the most feasible option. At the size needed to carry the currently requested loads a single generator would be most cost effective as a diesel-powered unit so a location for on-site fuel storage for 72 hours would also need to be identified. A better approach would be to provide a minimum of two new natural gas generators operating in parallel. But this comes at a cost and space premium. The existing generator and portions of the EPSS distribution would then be removed. An alternative would be to retain the existing generator and add a second natural-gas generator, but this is not recommended because it has all the operational costs of multiple generators without the benefit of redundancy. The generator size required for the added Courthouse loads will have to be confirmed after the Courthouse staff has re-evaluated their needs.
- III. Evaluate available space in the CCB for a new EPSS with multiple, paralleled natural-gas generators. The generator size and count should be selected to permit the required loads to operate with one generator out of service. Install a new EPSS distribution system to meet current codes and standards and serve all the generator-backed load from this new system. The five existing generators and a majority of the existing EPSS distribution systems would then be removed.

IV. Portable generator option. The CCB currently has one exterior portable generator connection cabinet for the 911 Center. A new portable generator connection cabinet would be installed at the same location. The generator cabinet would then serve either an exterior weatherproof distribution board or interior distribution board (depending upon physical space) that would house breakers of the quantity and size required to serve downstream panels from which the equipment that the County wants to add to a generator system would be served. The Courthouse could be also be provided with the same type of system.

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APPENDIX 1

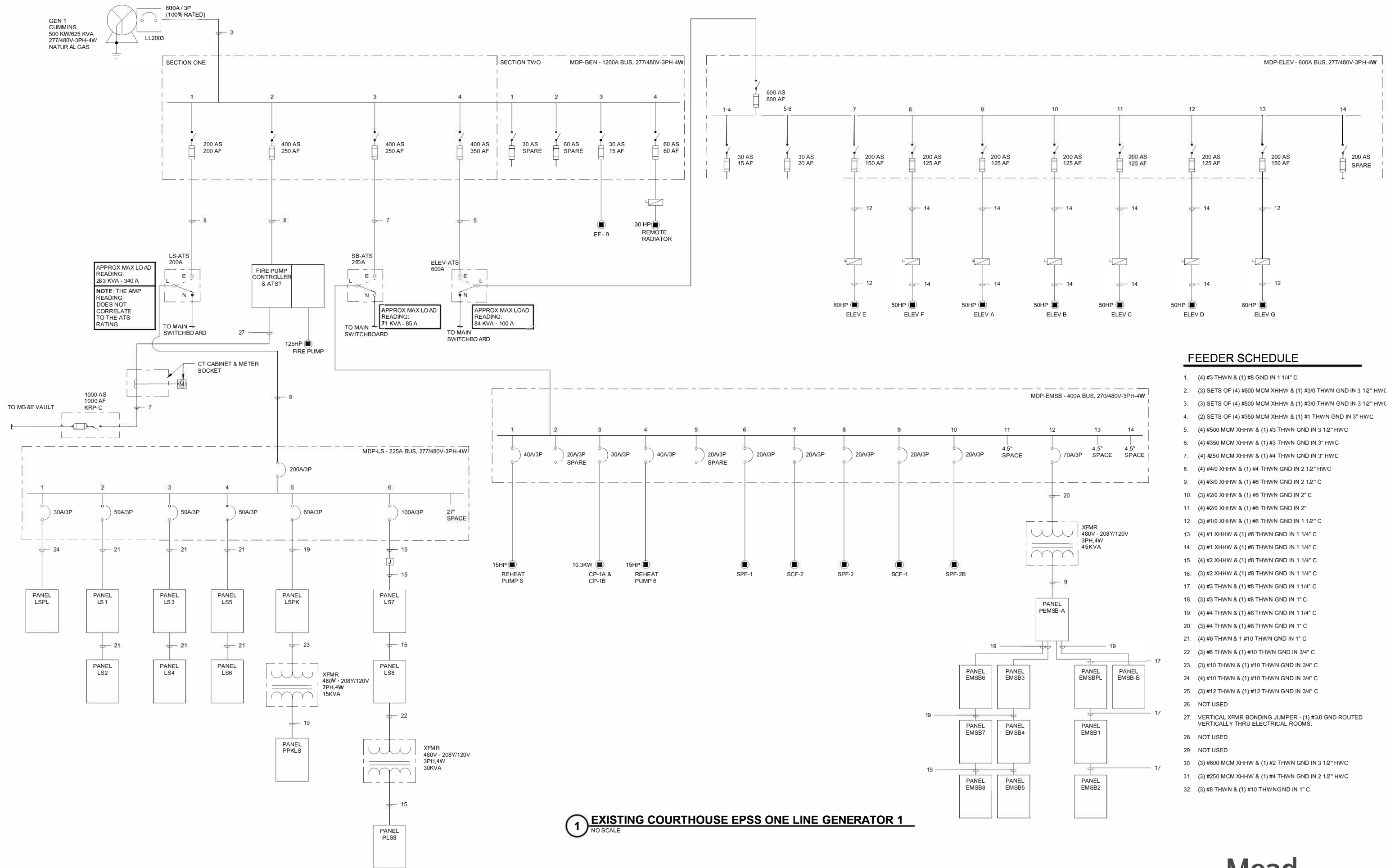


EXISTING GENERATORS SUMMARY TABLE

	GEN ID	LOCATION	RATINGS (AT 0.8 PF)	MODEL	DUTY	VOLTAGE	LOAD READINGS	NOTE
DANE COUNTY COURTHOUSE	1	LL2 (GEN RM)	500 KW/ 625 KVA/ 752 FLA	GTA28	STANDBY	277/480	438 KVA/525 A	REFER TO ONE LINE DIAGRAM FOR MORE INFORMATION
DANE COUNTY PUBLIC SAFETY BUILDING	2	SUB BASEMENT (GEN RM)	50 KW/ 62.5 KVA/ 173 FLA	50 DGCA	STANDBY	120/208	37 KVA/103 A	
	3	SUB BASEMENT (GEN RM)	900 KW/ 1125 KVA/ 1353 FLA	900DFJC	STANDBY	277/480	213 KVA/256 A	
CITY COUNCIL BUILDING	4	SUB BASEMENT (MECH RM)	50 KW/ 62.5 KVA/ 173 FLA	60DGCB	STANDBY	120/208	123 KVA/342 A	REFER TO ONE LINE DIAGRAM FOR MORE INFORMATION
	5	SUB BASEMENT (MECH RM)	200 KW/ 250 KVA/ 300 FLA	200.0DFP -17R/ 29820M	STANDBY	277/480	216 KVA/260 A	
	6	WEST PENTHOUSE (MECH RM)	260 KW/ 325 KVA/ 391 FLA	DMT-280C	STANDBY	277/480	216 KVA/260 A	
	7	SUB BASEMENT (MECH RM)	150 KW/ 187.5 KVA/ 225 FLA	150REO ZJD	STANDBY	277/480	93 KVA/112 A	
	8	WEST PENTHOUSE (MECH RM)	250 KW/ 312.5 KVA/ 376 FLA	96909 70200	STANDBY	277/480	193 KVA/232 A	VOLTAGE ASSUME TO BE 480V, 3 PHASE

1 OVERALL SITE WITH EXISTING GENERATOR LOCATIONS AND GENERATOR SUMMARY
NO SCALE

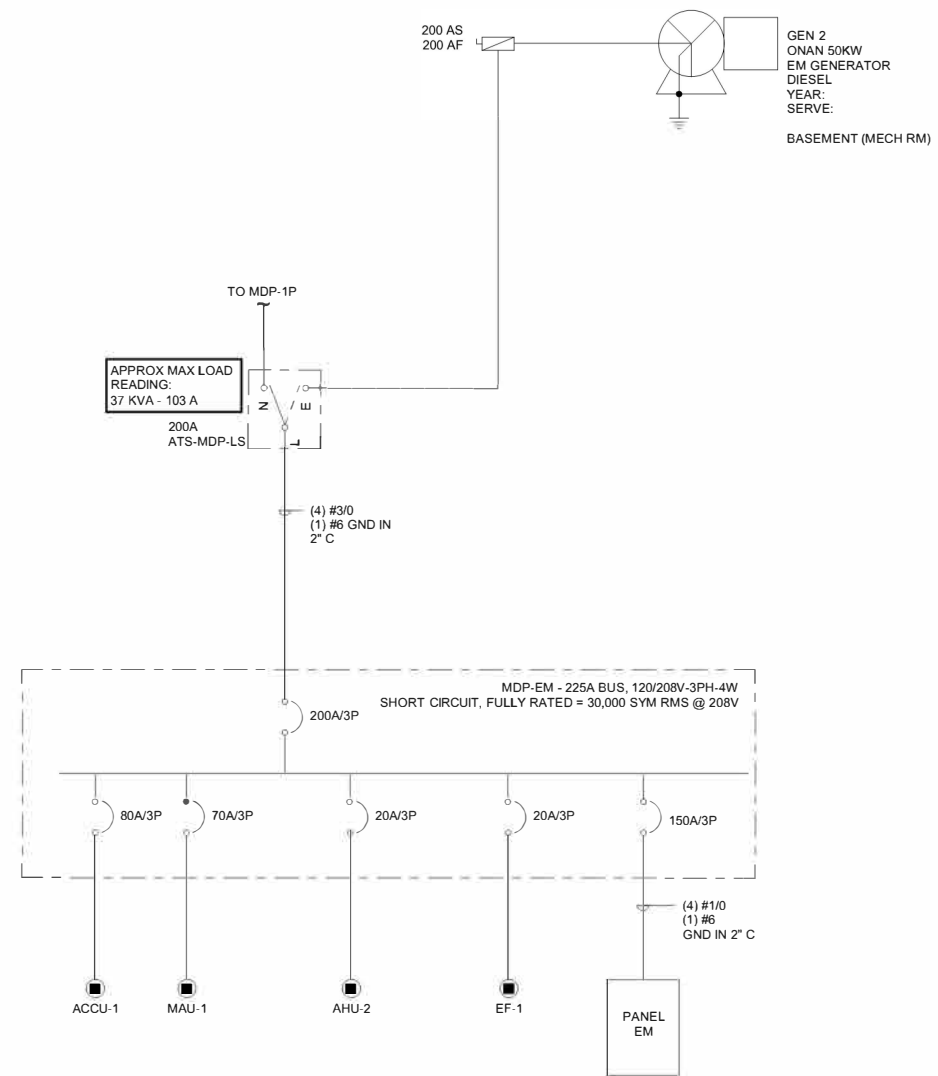
GEN 1
CUMMINS
500 KW/625 KVA
277/480V-3PH-4W
NATURAL GAS



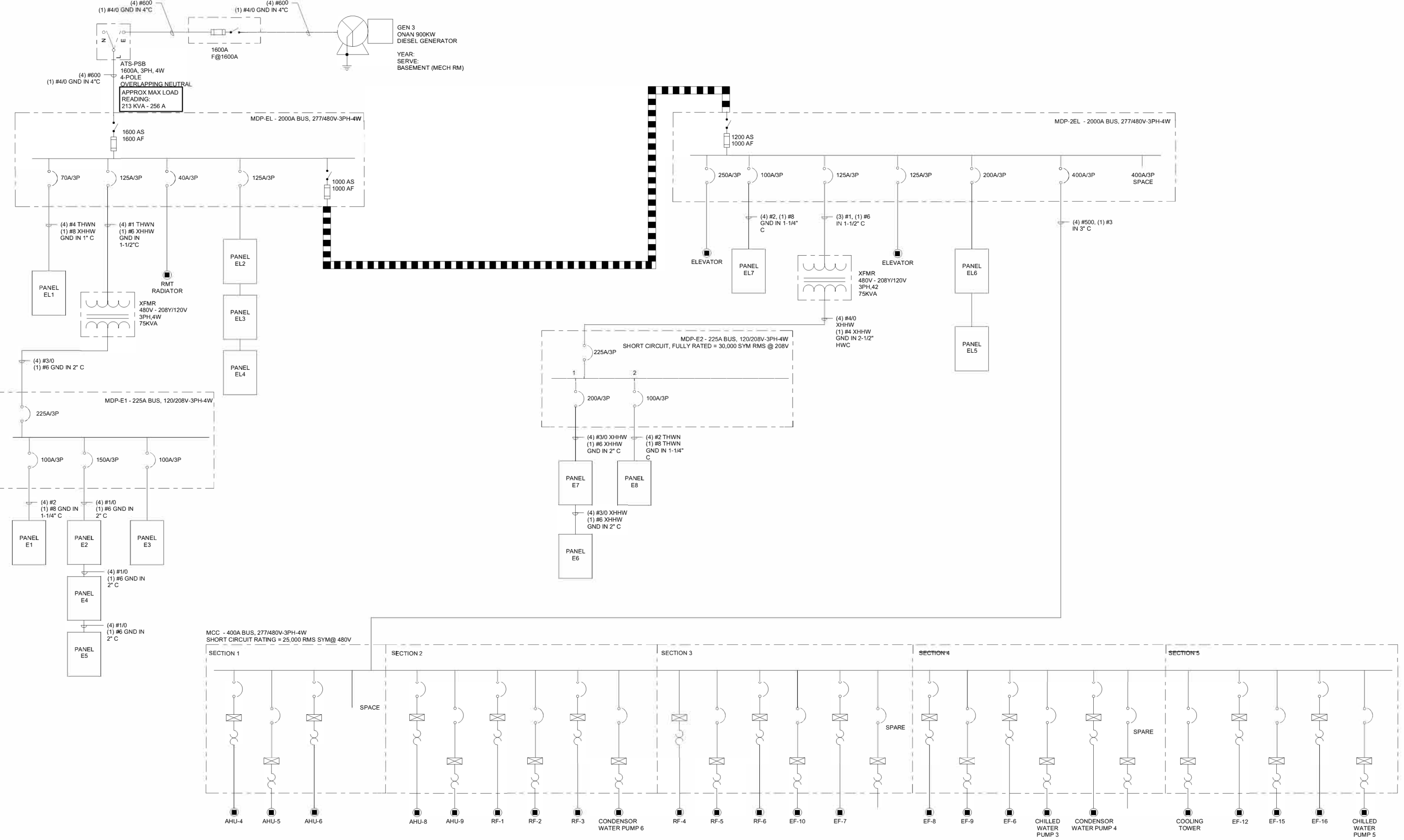
FEEDER SCHEDULE

1. (4) #3 THWN & (1) #8 GND IN 1 1/4" C
2. (3) SETS OF (4) #600 MCM XHHW & (1) #3/0 THWN GND IN 3 1/2" HWC
3. (3) SETS OF (4) #500 MCM XHHW & (1) #3/0 THWN GND IN 3 1/2" HWC
4. (2) SETS OF (4) #350 MCM XHHW & (1) #1 THWN GND IN 3" HWC
5. (4) #500 MCM XHHW & (1) #3 THWN GND IN 3 1/2" HWC
6. (4) #350 MCM XHHW & (1) #3 THWN GND IN 3" HWC
7. (4) #250 MCM XHHW & (1) #4 THWN GND IN 3" HWC
8. (4) #4/0 XHHW & (1) #4 THWN GND IN 2 1/2" HWC
9. (4) #3/0 XHHW & (1) #6 THWN GND IN 2 1/2" C
10. (3) #2/0 XHHW & (1) #6 THWN GND IN 2" C
11. (4) #2/0 XHHW & (1) #6 THWN GND IN 2"
12. (3) #1/0 XHHW & (1) #6 THWN GND IN 1 1/2" C
13. (4) #1 XHHW & (1) #6 THWN GND IN 1 1/4" C
14. (3) #1 XHHW & (1) #6 THWN GND IN 1 1/4" C
15. (4) #2 XHHW & (1) #8 THWN GND IN 1 1/4" C
16. (3) #2 XHHW & (1) #8 THWN GND IN 1 1/4" C
17. (4) #3 THWN & (1) #8 THWN GND IN 1 1/4" C
18. (3) #3 THWN & (1) #8 THWN GND IN 1" C
19. (4) #4 THWN & (1) #8 THWN GND IN 1 1/4" C
20. (3) #4 THWN & (1) #8 THWN GND IN 1" C
21. (4) #6 THWN & 1 #10 THWN GND IN 1" C
22. (3) #6 THWN & (1) #10 THWN GND IN 3/4" C
23. (3) #10 THWN & (1) #10 THWN GND IN 3/4" C
24. (4) #10 THWN & (1) #10 THWN GND IN 3/4" C
25. (3) #12 THWN & (1) #12 THWN GND IN 3/4" C
26. NOT USED
27. VERTICAL XFMR BONDING JUMPER - (1) #3/0 GND ROUTED VERTICALLY THRU ELECTRICAL ROOMS.
28. NOT USED
29. NOT USED
30. (3) #600 MCM XHHW & (1) #2 THWN GND IN 3 1/2" HWC
31. (3) #250 MCM XHHW & (1) #4 THWN GND IN 2 1/2" HWC
32. (3) #8 THWN & (1) #10 THWNGND IN 1" C

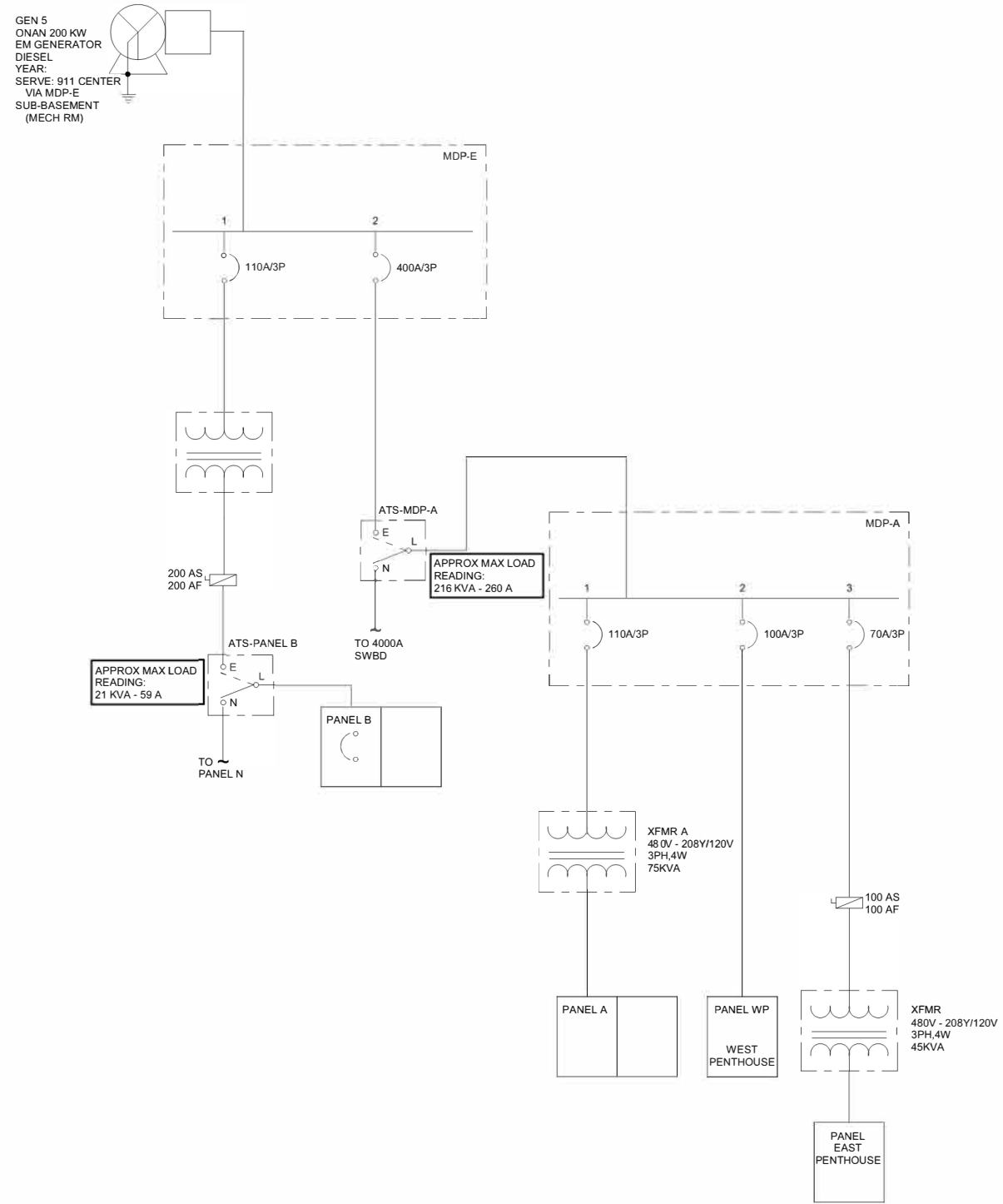
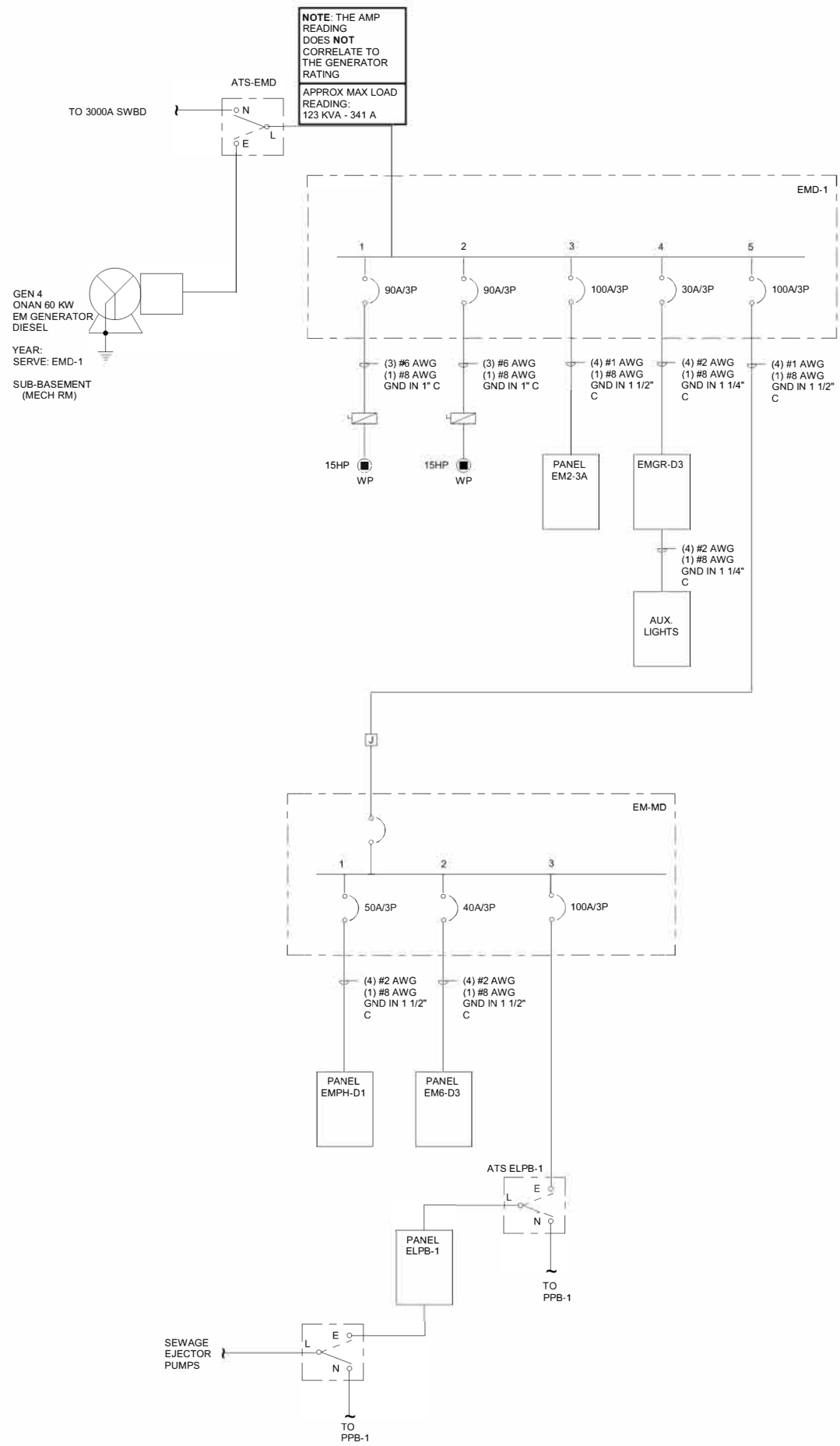
1 EXISTING COURTHOUSE EPSS ONE LINE GENERATOR 1
NO SCALE



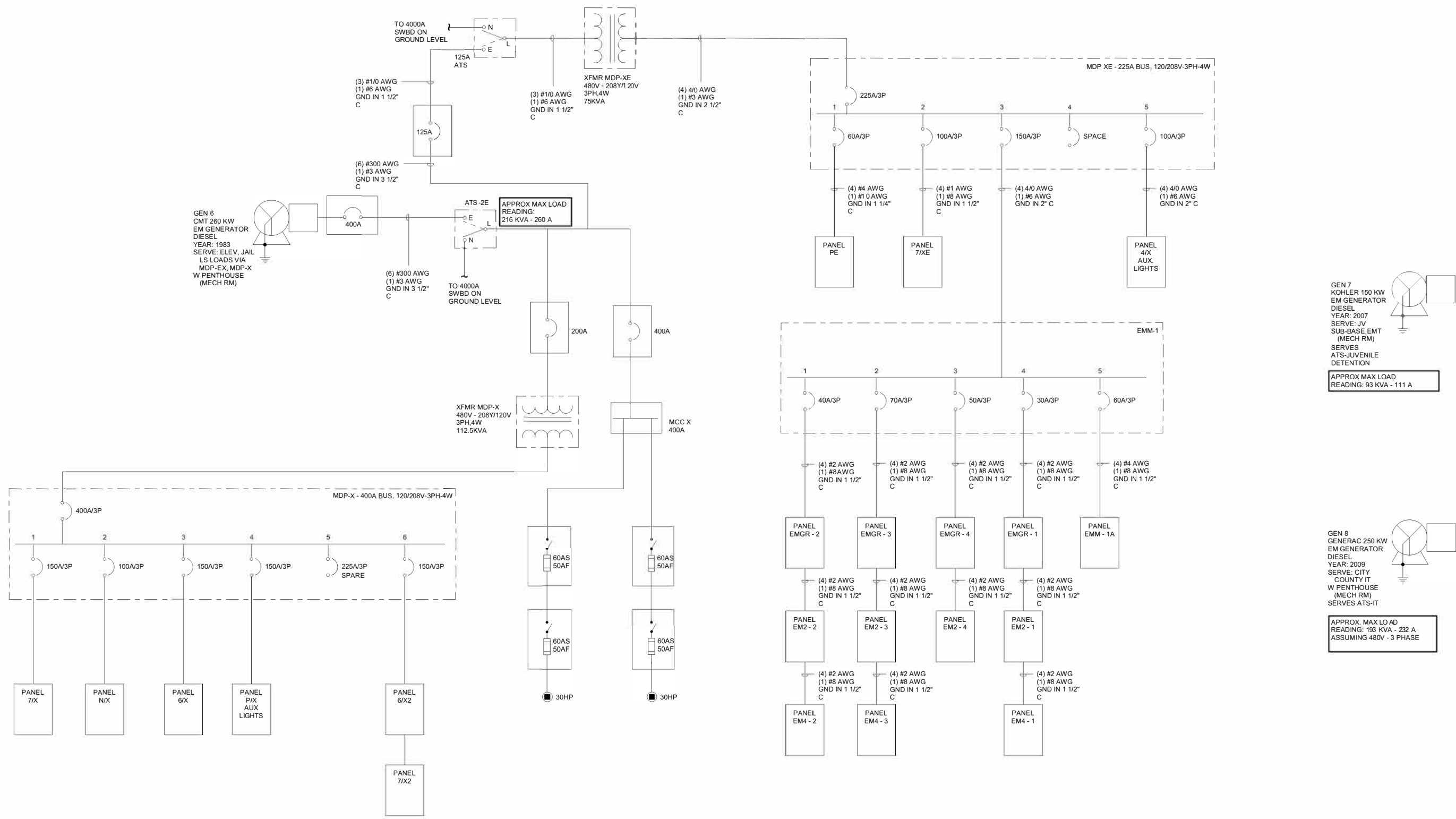
1 EXISTING PUBLIC SAFETY BUILDING (PSB) EPSS ONE LINE GENERATOR 2
NO SCALE



1 EXISTING PUBLIC SAFETY BUILDING (PSB) EPSS ONE LINE GENERATOR 3
NO SCALE

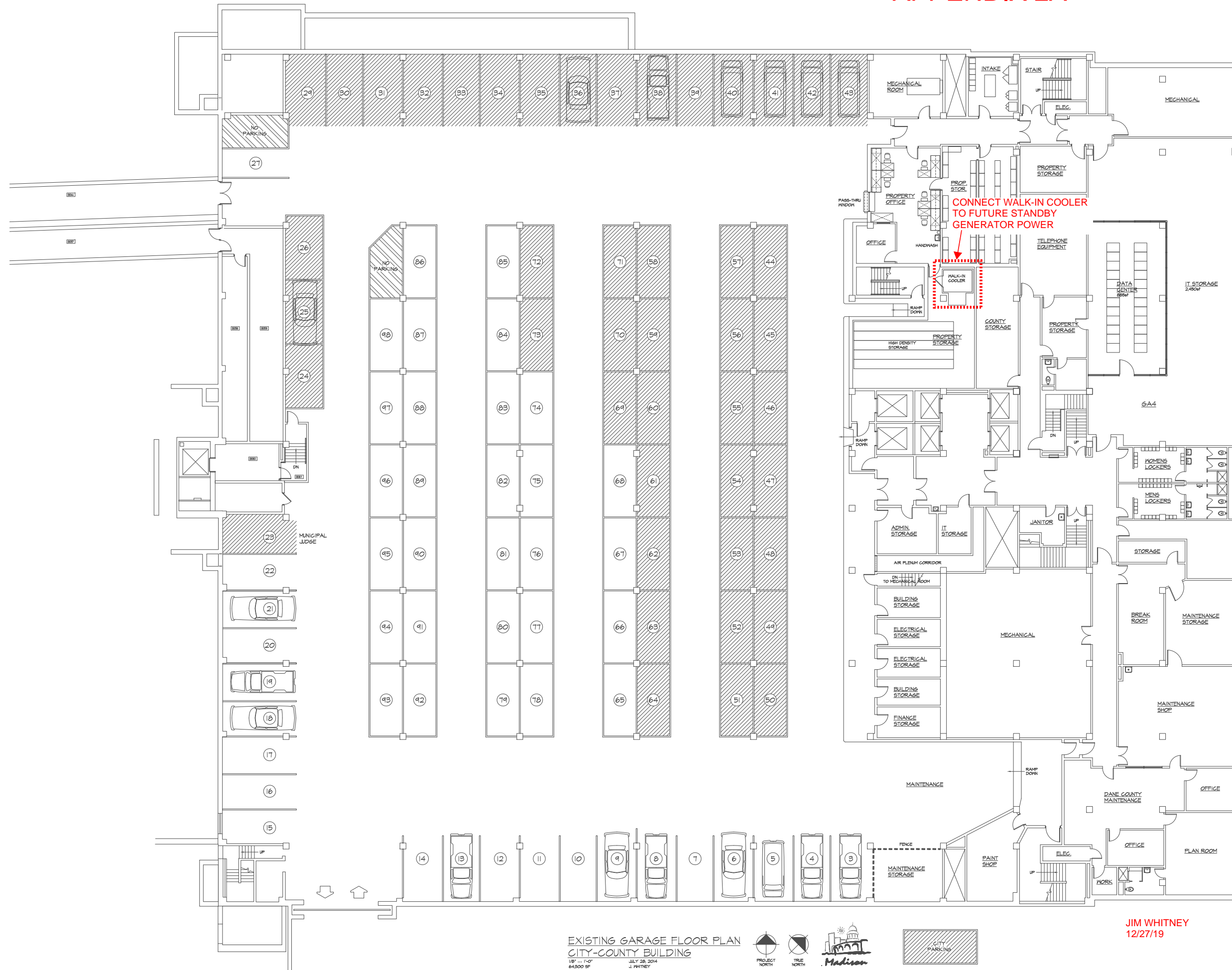


1 EXISTING CITY COUNTY BUILDING (CCB) EPSS ONE LINE GENERATORS 4 AND 5
NO SCALE



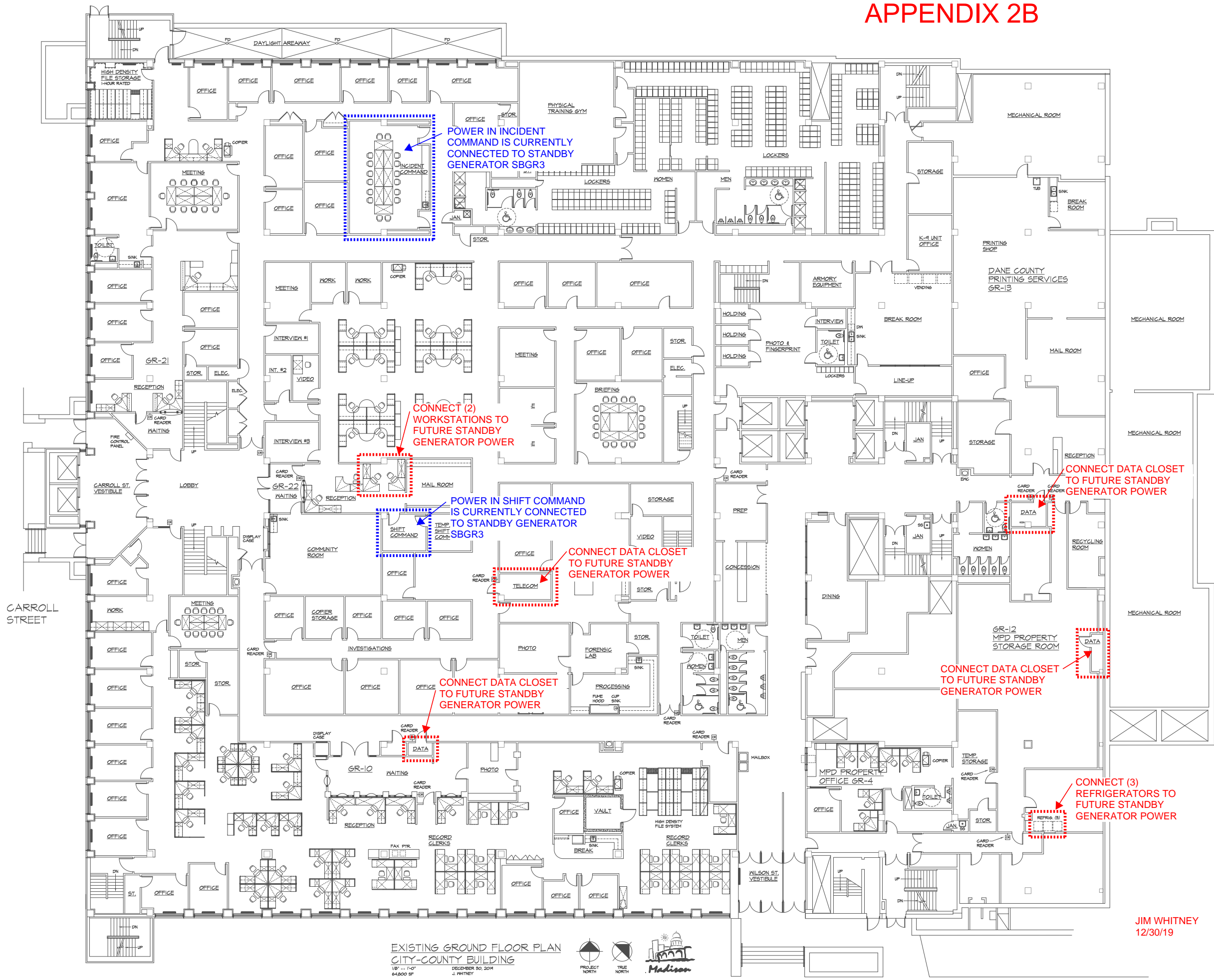
1 EXISTING CITY COUNTY BUILDING (CCB) EPSS ONE LINE GENERATORS 6, 7, AND 8
NO SCALE

APPENDIX 2A



JIM WHITNEY
12/27/19

APPENDIX 2B



POWER IN INCIDENT COMMAND IS CURRENTLY CONNECTED TO STANDBY GENERATOR SBGR3

CONNECT (2) WORKSTATIONS TO FUTURE STANDBY GENERATOR POWER

POWER IN SHIFT COMMAND IS CURRENTLY CONNECTED TO STANDBY GENERATOR SBGR3

CONNECT DATA CLOSET TO FUTURE STANDBY GENERATOR POWER

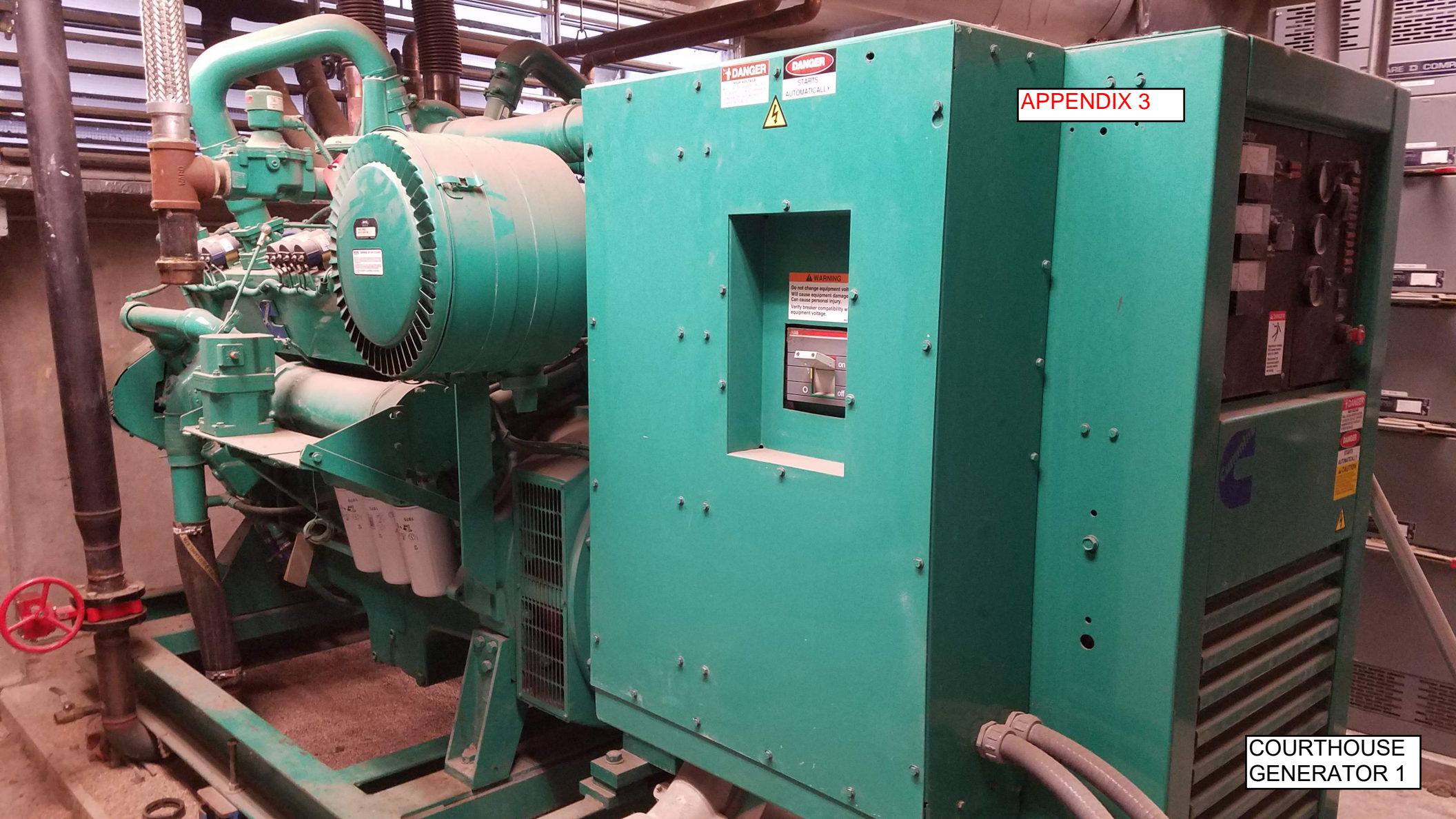
CONNECT DATA CLOSET TO FUTURE STANDBY GENERATOR POWER

CONNECT DATA CLOSET TO FUTURE STANDBY GENERATOR POWER


CONNECT DATA CLOSET TO FUTURE STANDBY GENERATOR POWER

CONNECT (3) REFRIGERATORS TO FUTURE STANDBY GENERATOR POWER

APPENDIX 3



COURTHOUSE
GENERATOR 1

A teal-colored generator unit is the central focus, mounted on a concrete base. It features a control panel on the left side and a large engine on the right. The engine is connected to various pipes and hoses. The unit is situated in a room with a white tiled wall and a concrete floor. To the left, there is a green electrical cabinet and a grey panel with the number '1170'.

PUBLIC SERVICE BUILDING
GENERATOR 2

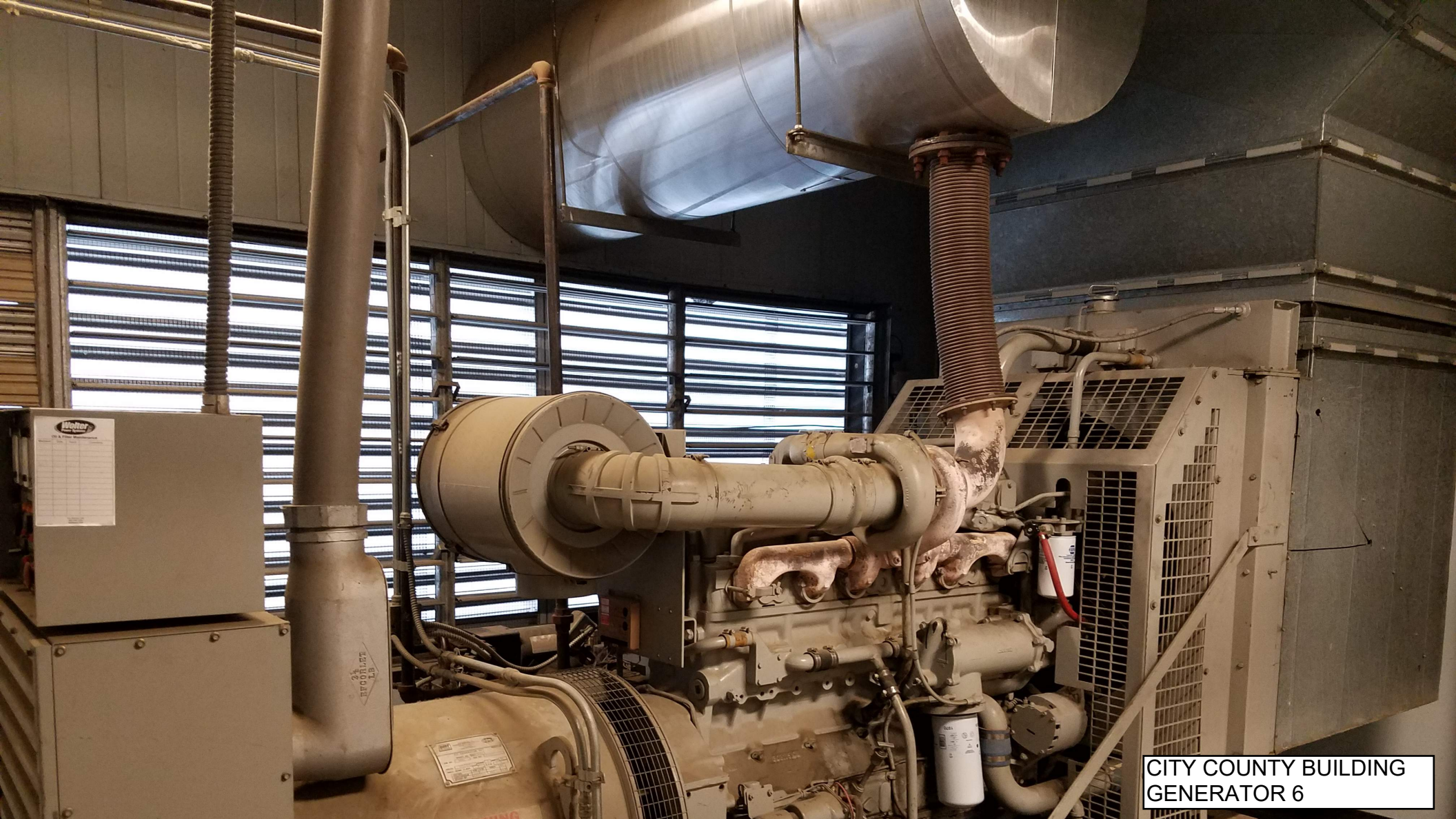


PUBLIC SERVICE
BUILDING GENERATOR 3

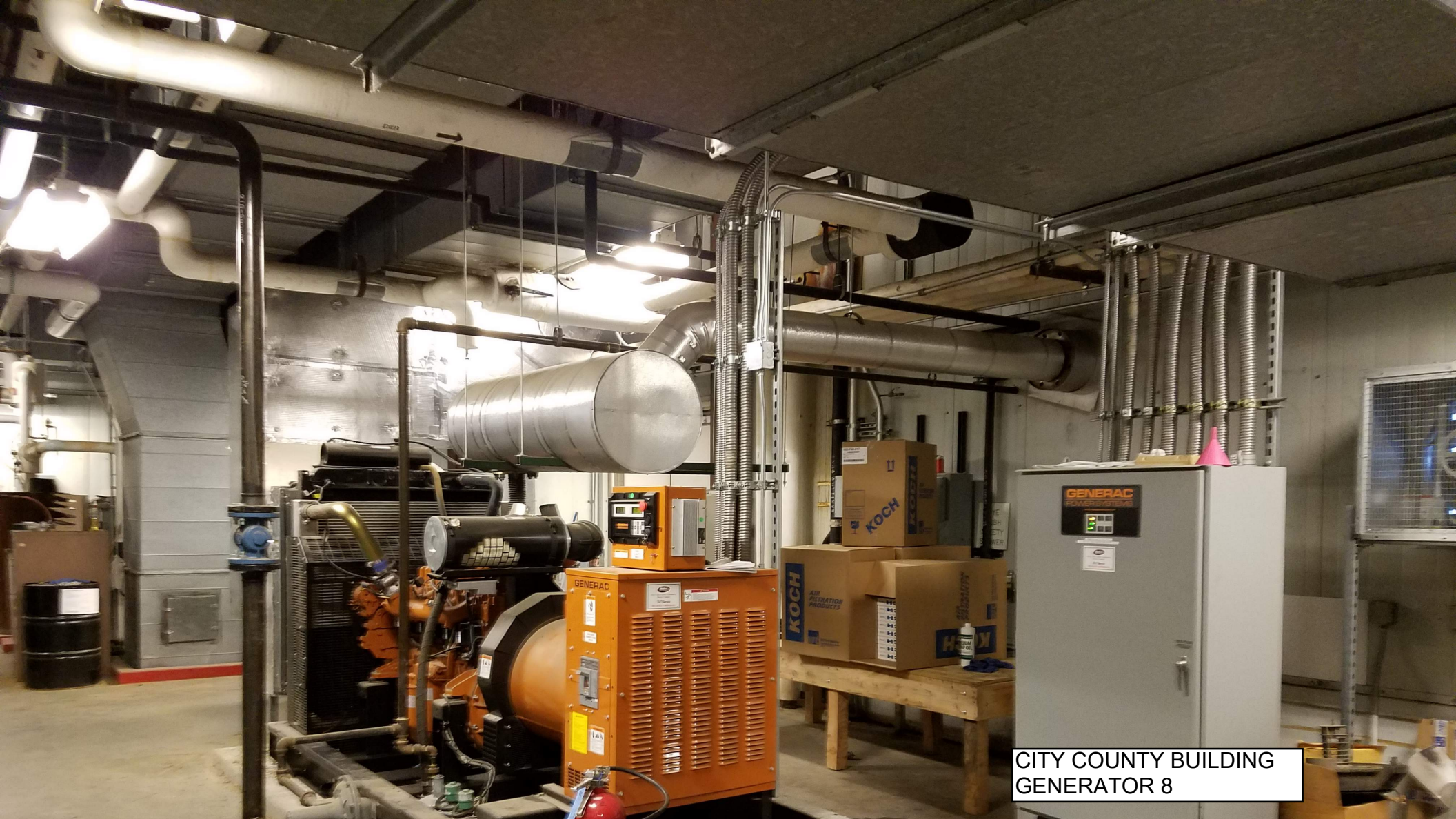


CITY COUNTY BUILDING
GENERATORS 4, 5 AND 7

**2nd FLOOR
JUVENILE DETENTION**
KOHLER POWER SYSTEMS
150



CITY COUNTY BUILDING
GENERATOR 6



CITY COUNTY BUILDING
GENERATOR 8



CCB - EXISTING INSTALLED
PORTABLE GENERATOR CABINET

**COURTHOUSE
GENERATOR NO.1 -
LS-ATS**

APPENDIX 4

Instrument Information

Model Number	X
Serial Number	N/A
Firmware Revision	N/A

Software Information

Power Log Version	2.9
FLUKE 345 DLL Version	11.20.2006
FLUKE 430 DLL Version	1.7.0.0

General Information

Recording location
Client
Notes

Measurement Summary

Application mode	Power
First recording	6/3/2020 7:51:49 AM 0msec
Last recording	6/11/2020 5:01:49 AM 0msec
Recording interval	0h 10m 0s 0msec
Nominal Voltage	230 V
Nominal Current	52 A
Nominal Frequency	50 Hz

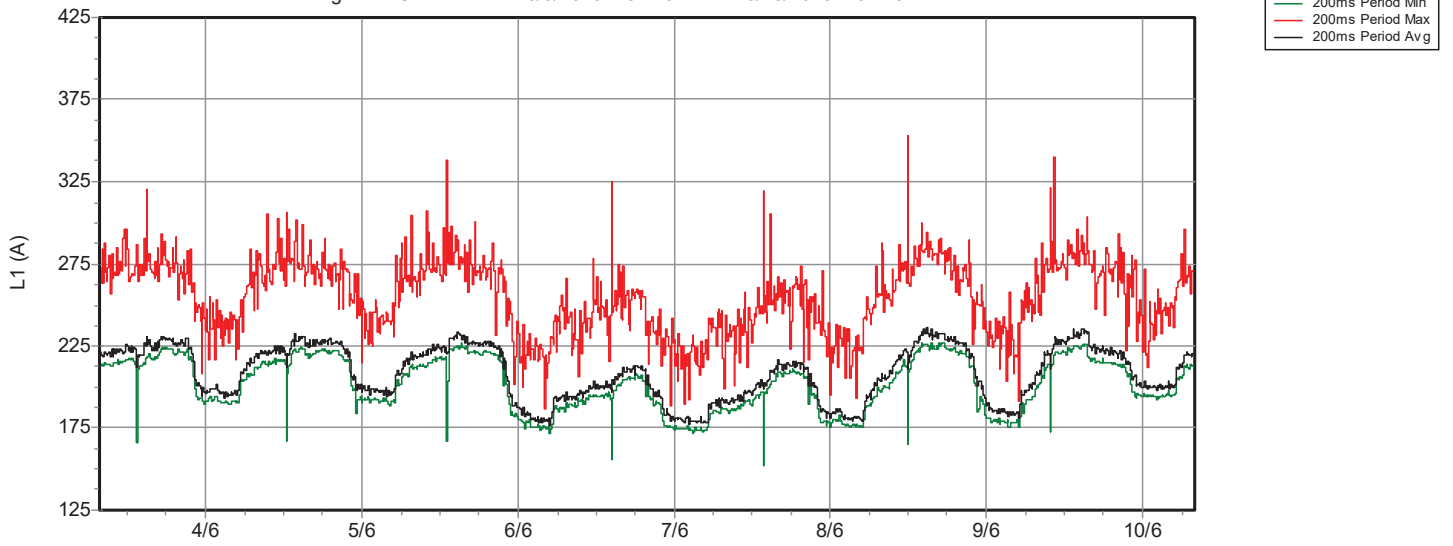
Recording Summary

RMS recordings	1136
DC recordings	0
Frequency recordings	1136
Unbalance recordings	0
Harmonic recordings	0
Power harmonic recordings	0
Power recordings	1136
Energy recordings	1136
Flicker recordings	0
Mains signaling recordings	0

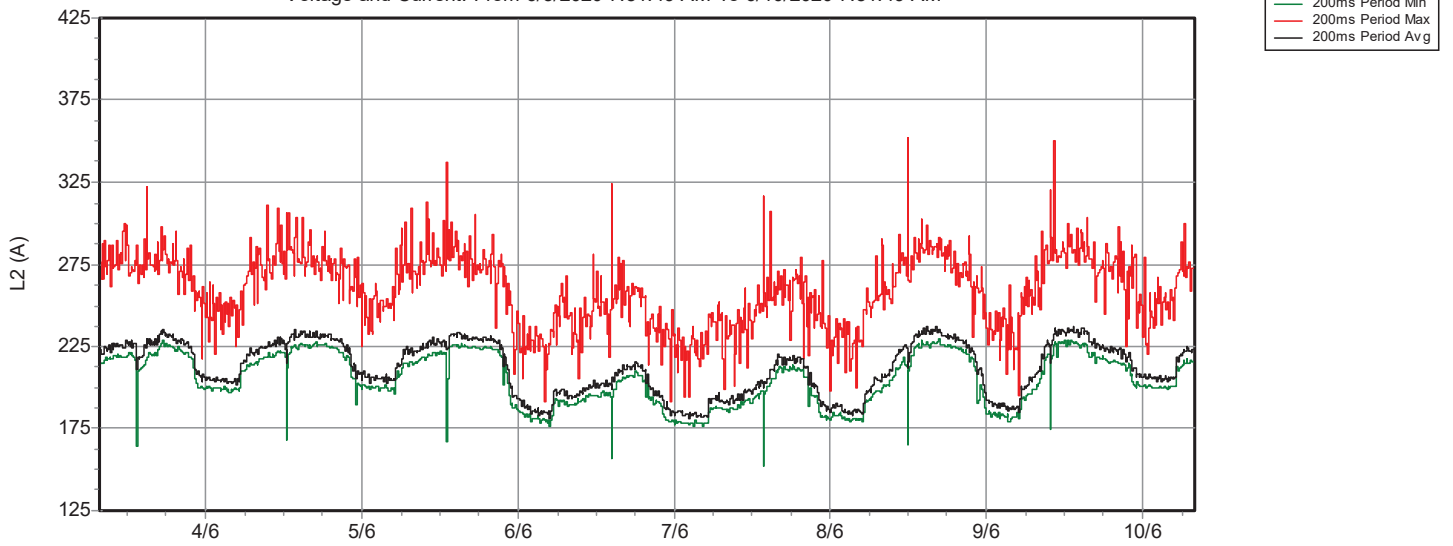
Events Summary

Dips	0
Swells	0
Transients	0
Interruptions	0
Voltage profiles	0
Rapid voltage changes	0
Screens	8
Waveforms	0
Intervals without measurements	0
Inrush current graphics	0

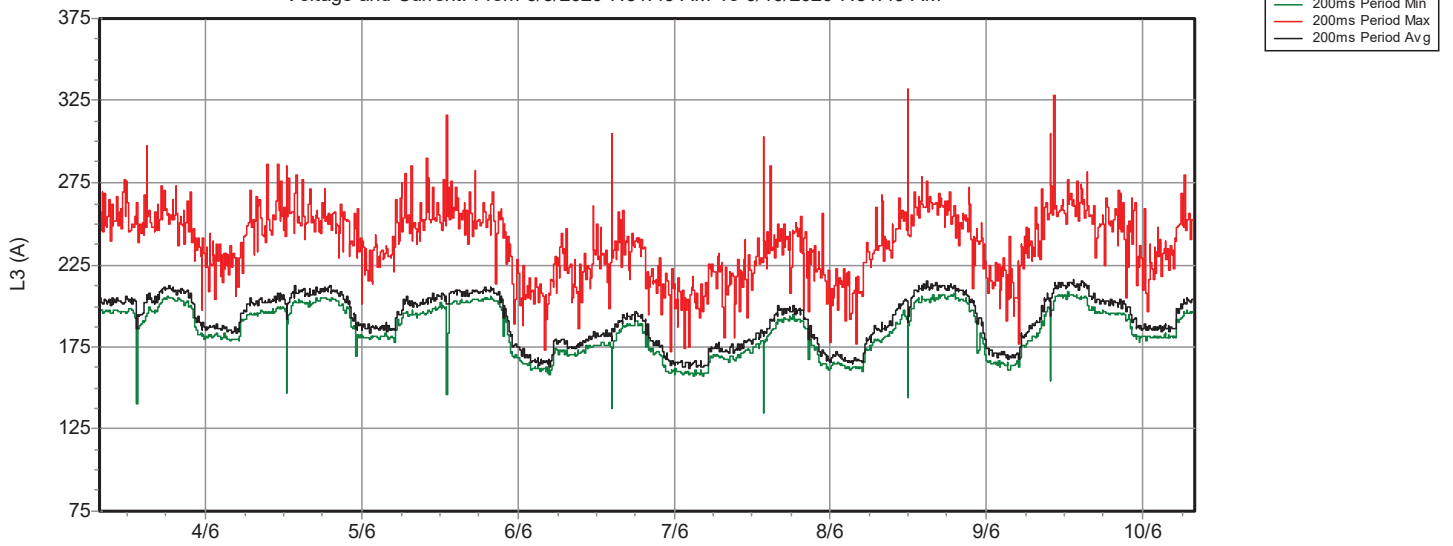
Voltage and Current. From 6/3/2020 7:51:49 AM To 6/10/2020 7:51:49 AM



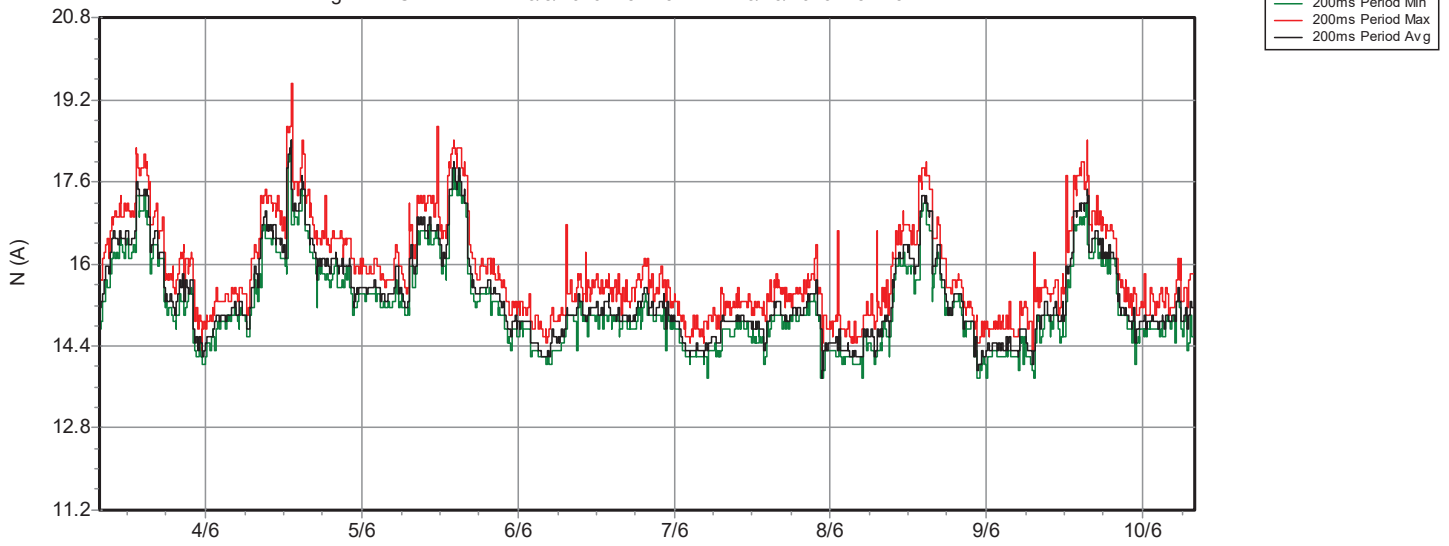
Voltage and Current. From 6/3/2020 7:51:49 AM To 6/10/2020 7:51:49 AM



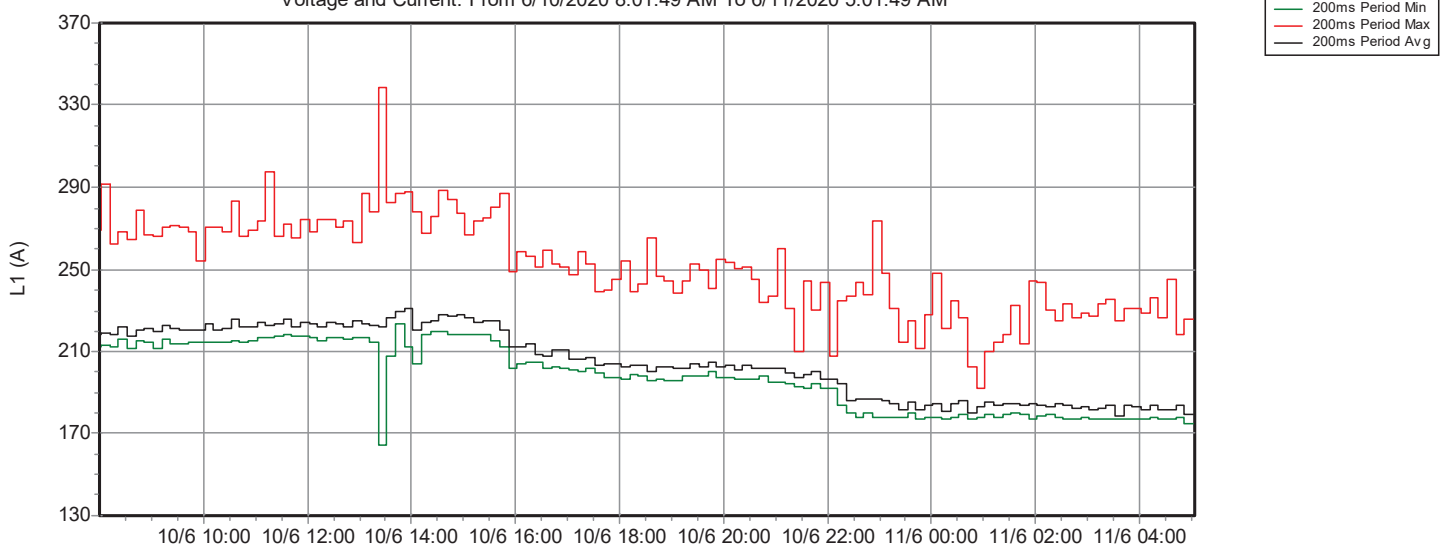
Voltage and Current. From 6/3/2020 7:51:49 AM To 6/10/2020 7:51:49 AM



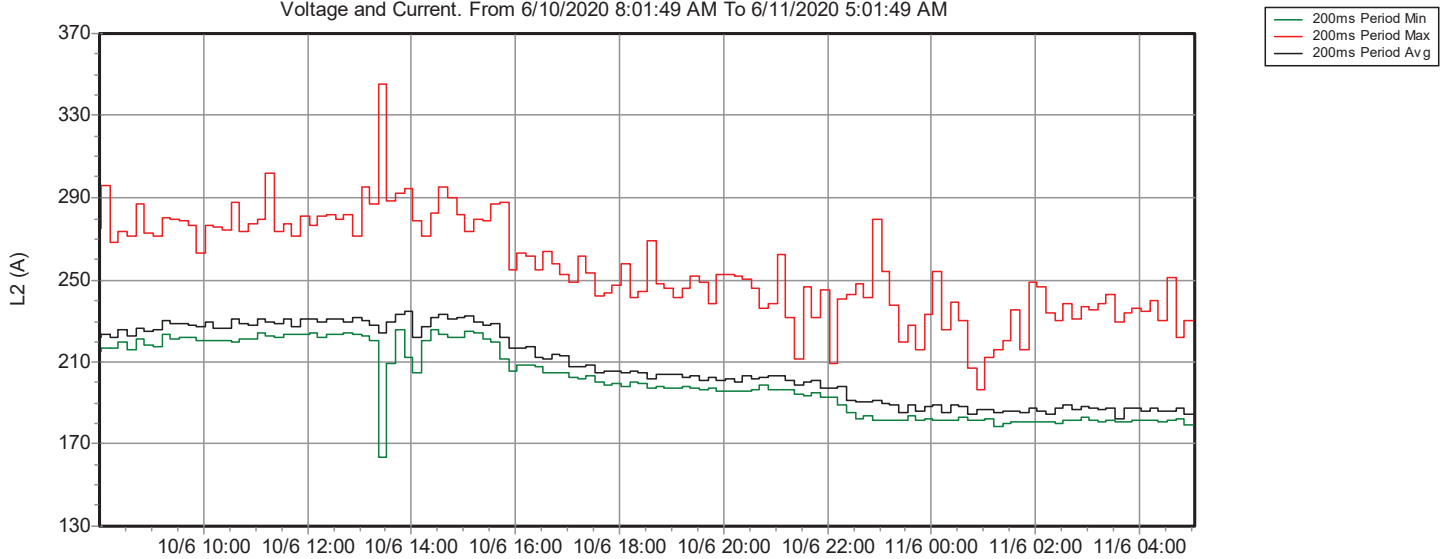
Voltage and Current. From 6/3/2020 7:51:49 AM To 6/10/2020 7:51:49 AM



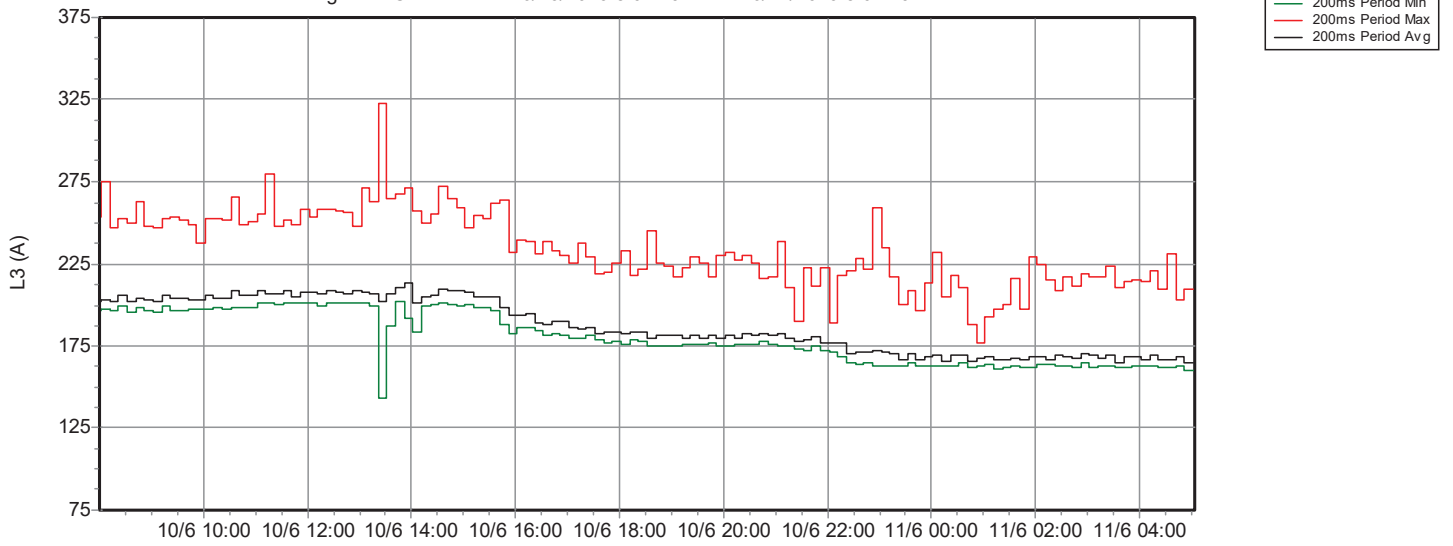
Voltage and Current. From 6/10/2020 8:01:49 AM To 6/11/2020 5:01:49 AM



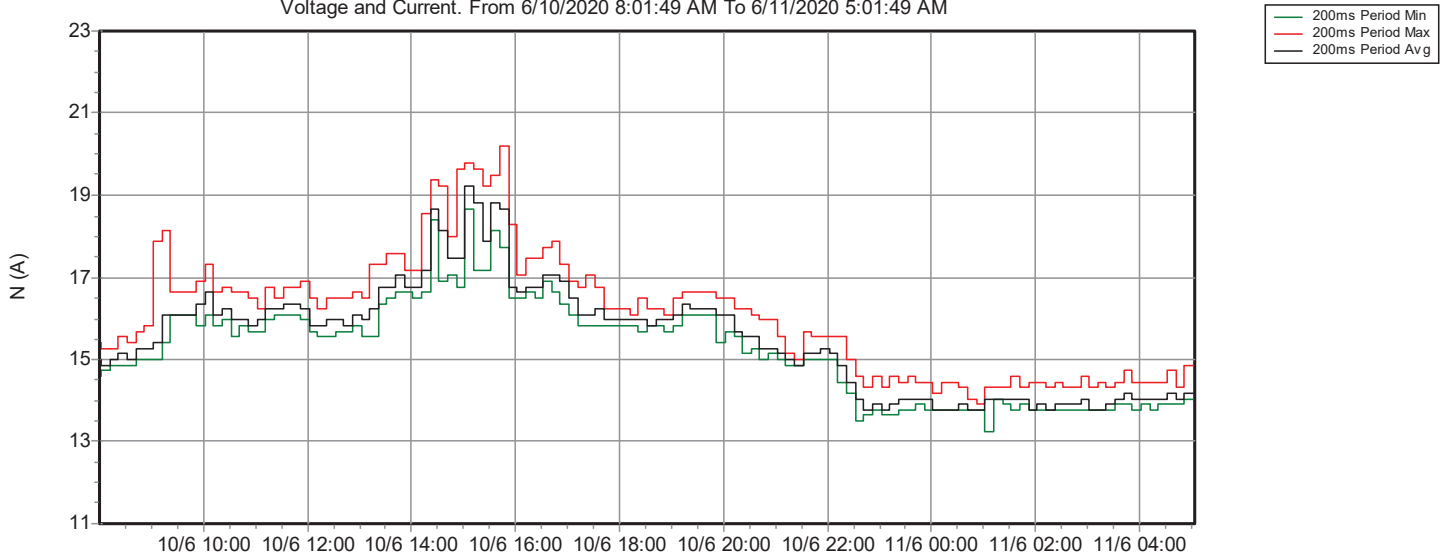
Voltage and Current. From 6/10/2020 8:01:49 AM To 6/11/2020 5:01:49 AM



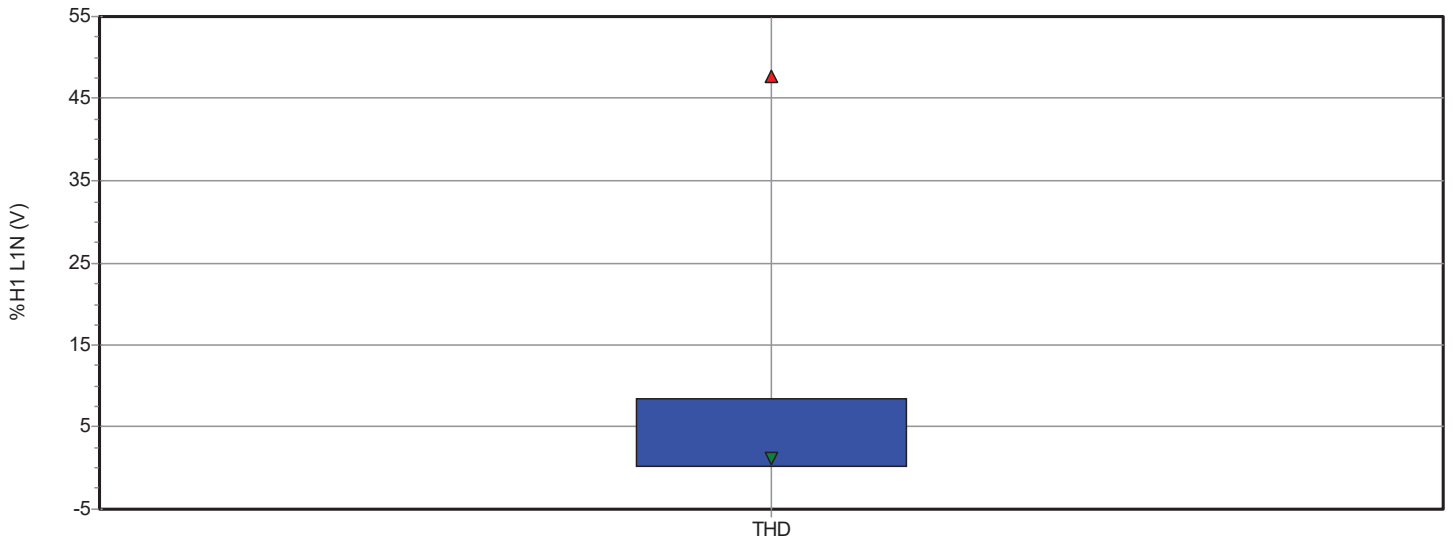
Voltage and Current. From 6/10/2020 8:01:49 AM To 6/11/2020 5:01:49 AM



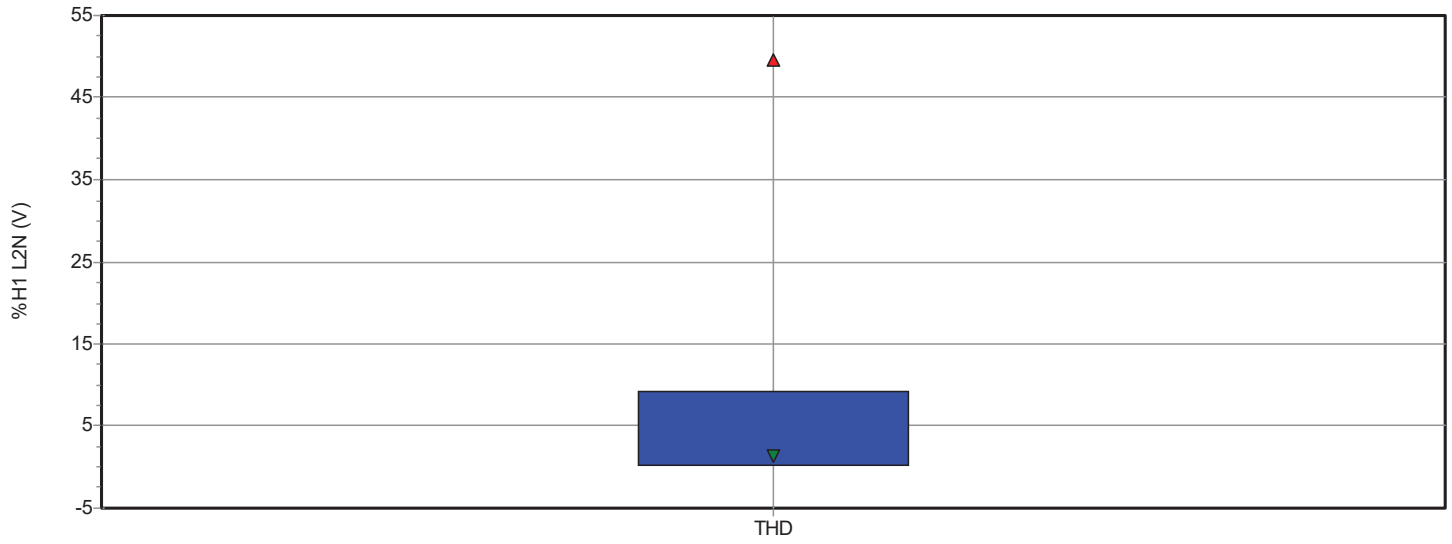
Voltage and Current. From 6/10/2020 8:01:49 AM To 6/11/2020 5:01:49 AM



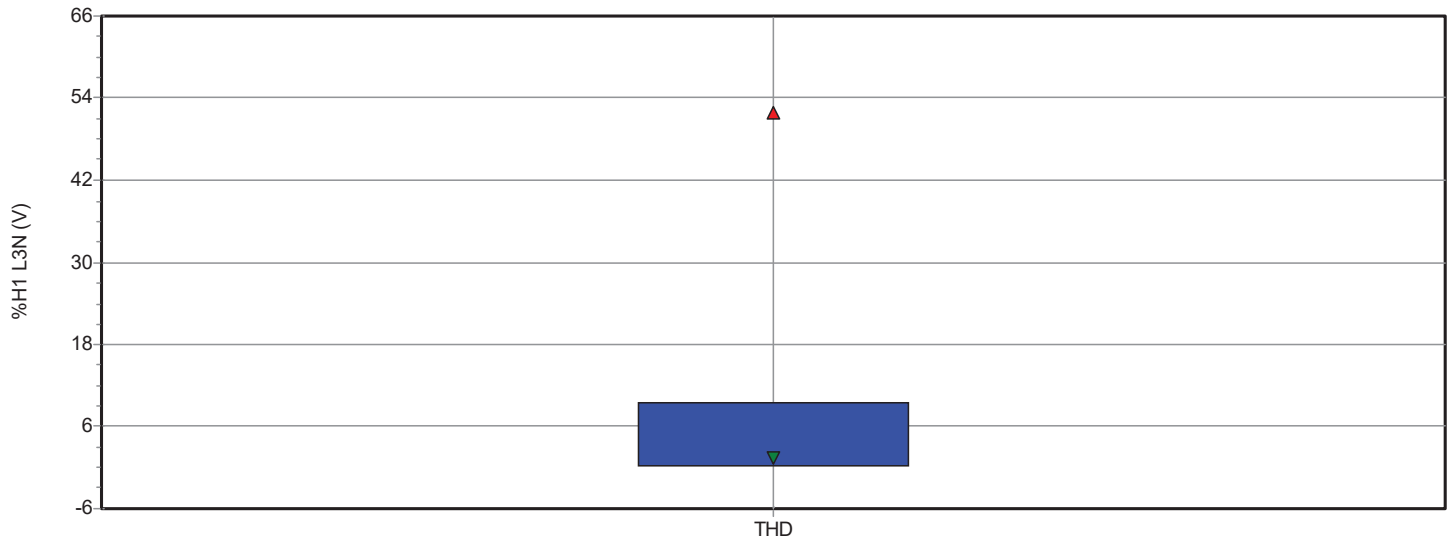
Harmonics. From 6/3/2020 7:51:49 AM To 6/10/2020 7:51:49 AM



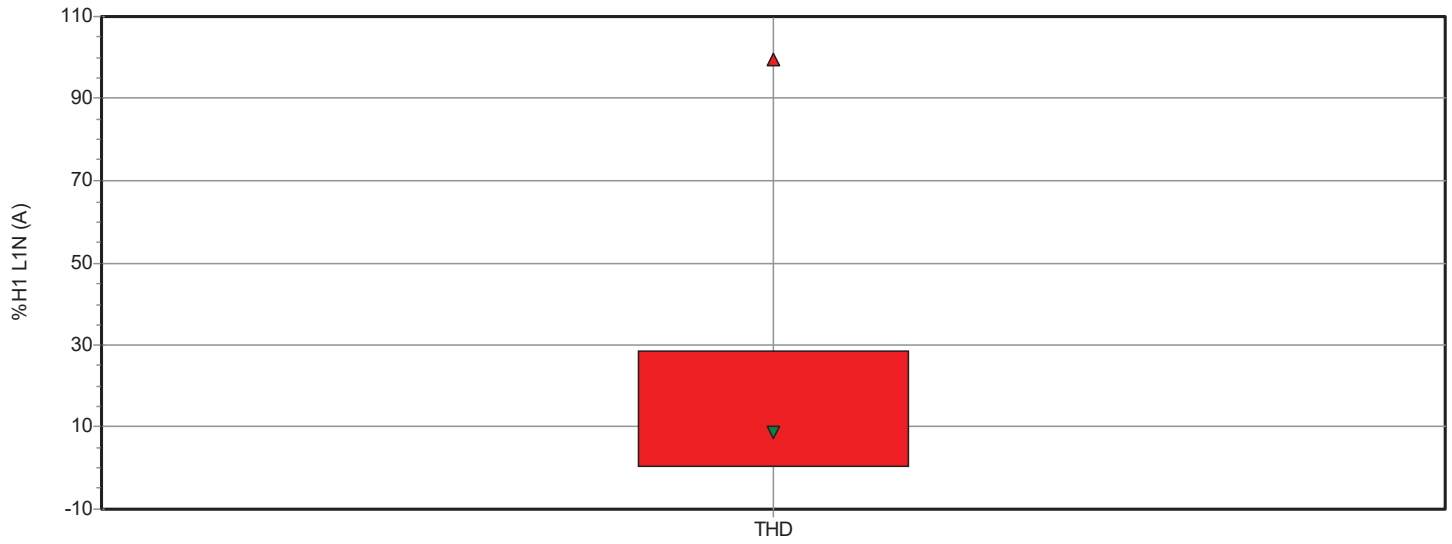
Harmonics. From 6/3/2020 7:51:49 AM To 6/10/2020 7:51:49 AM



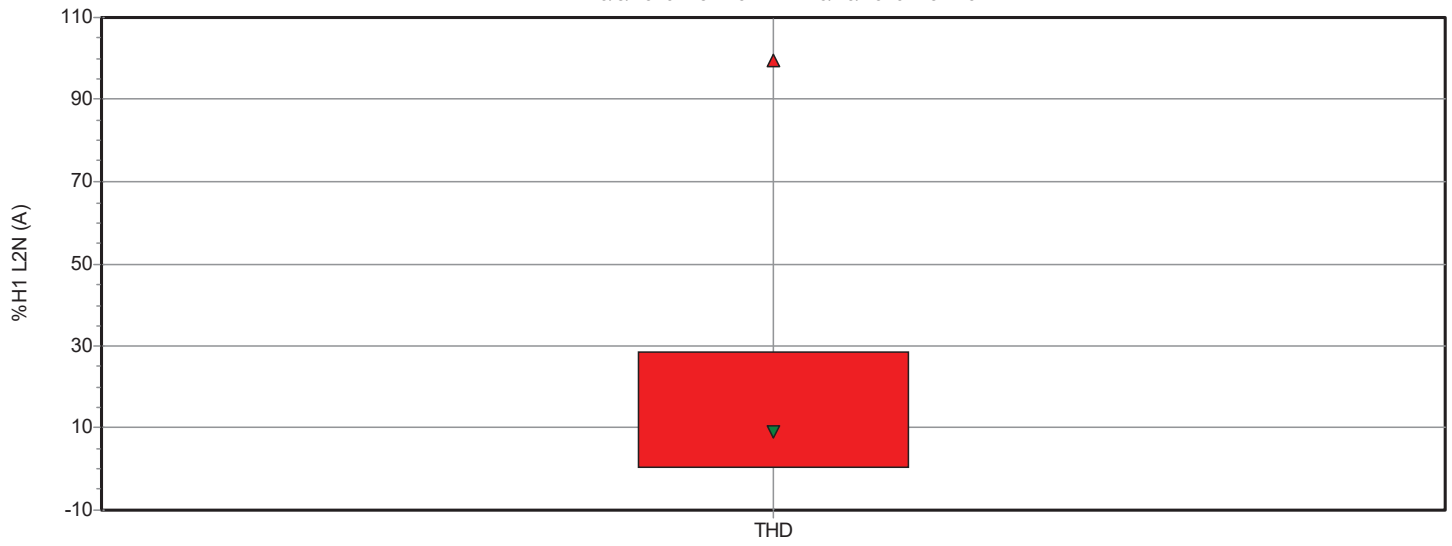
Harmonics. From 6/3/2020 7:51:49 AM To 6/10/2020 7:51:49 AM



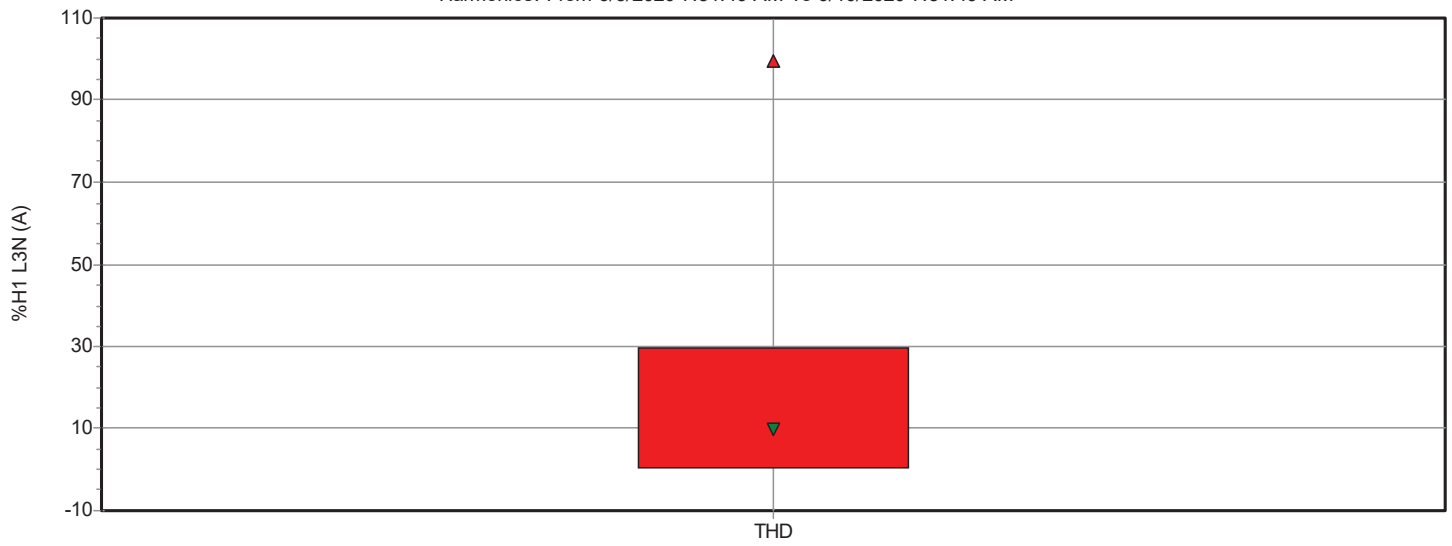
Harmonics. From 6/3/2020 7:51:49 AM To 6/10/2020 7:51:49 AM



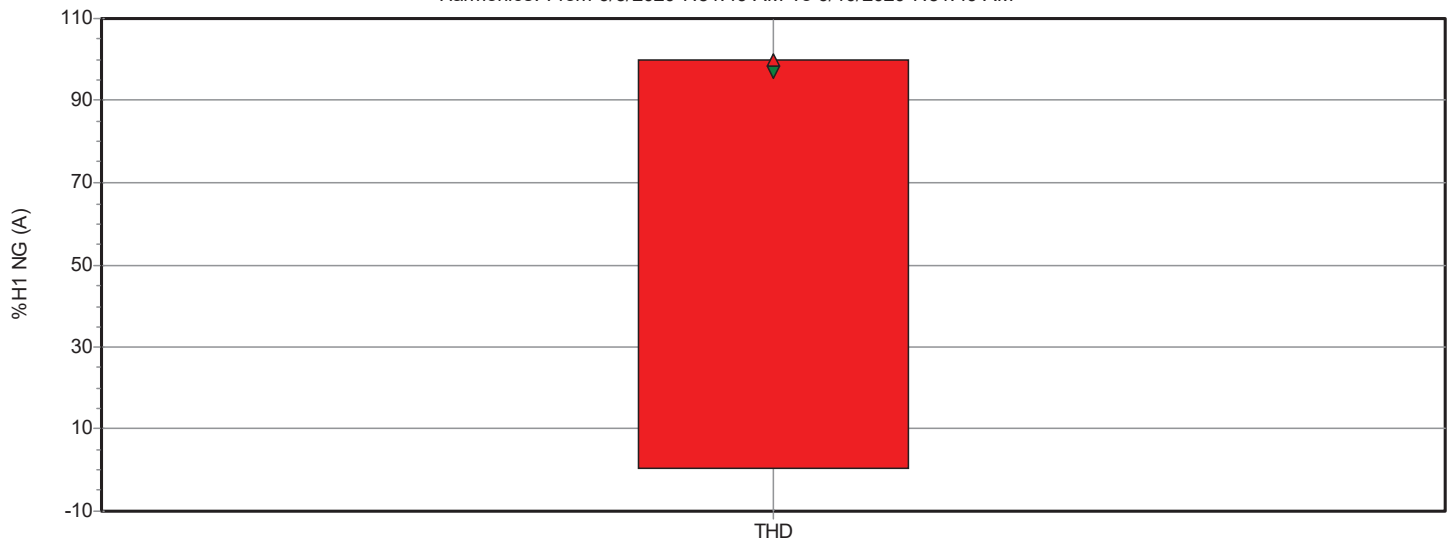
Harmonics. From 6/3/2020 7:51:49 AM To 6/10/2020 7:51:49 AM



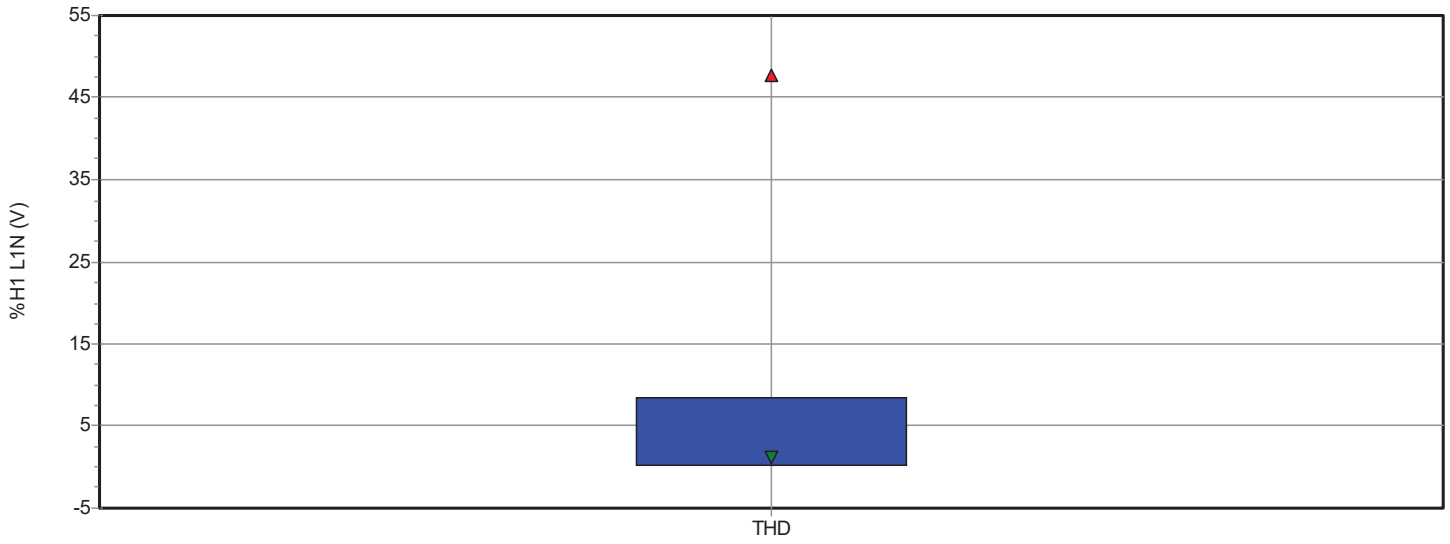
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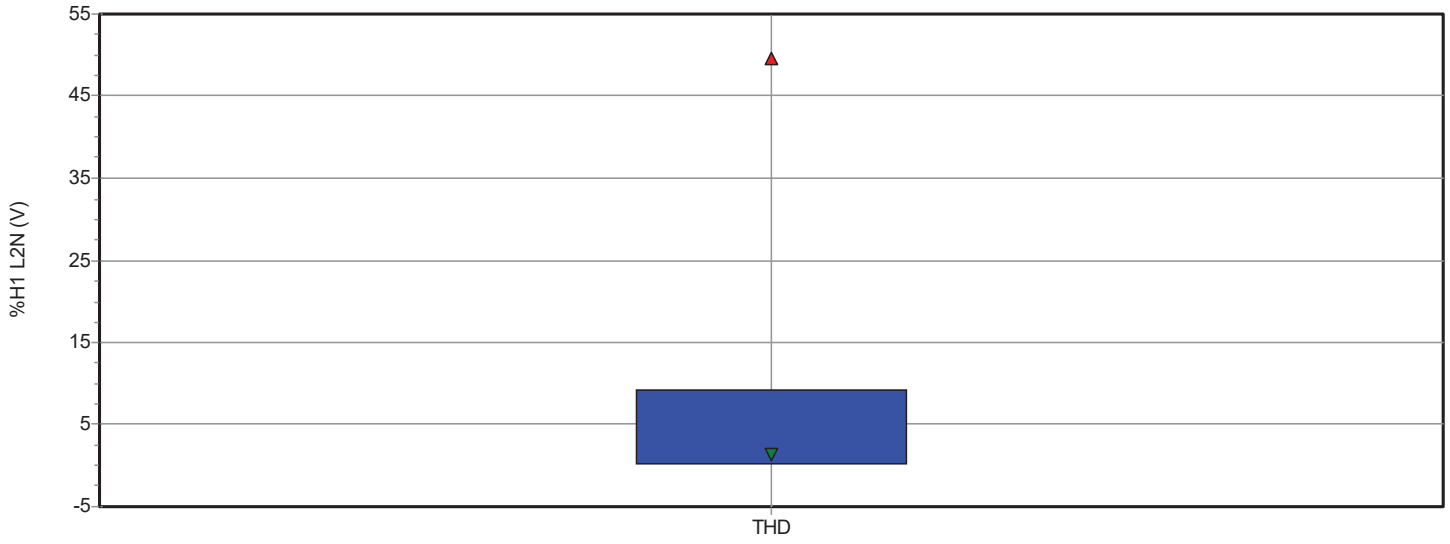
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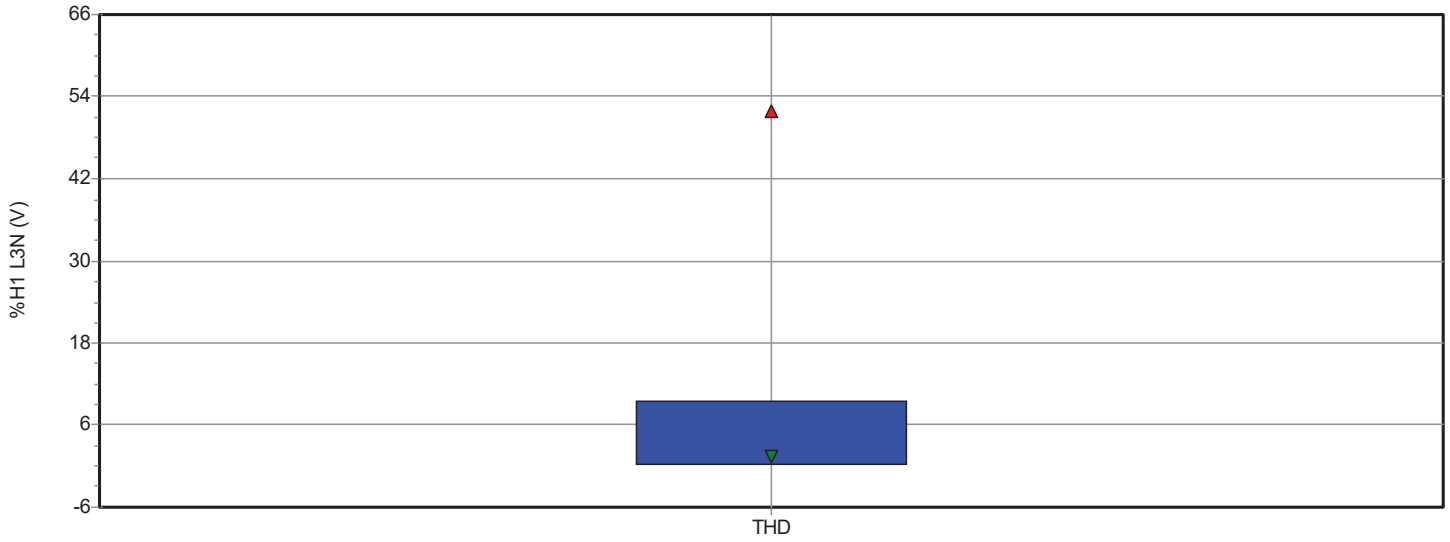
Harmonics. From 6/10/2020 8:01:49 AM To 6/11/2020 5:01:49 AM



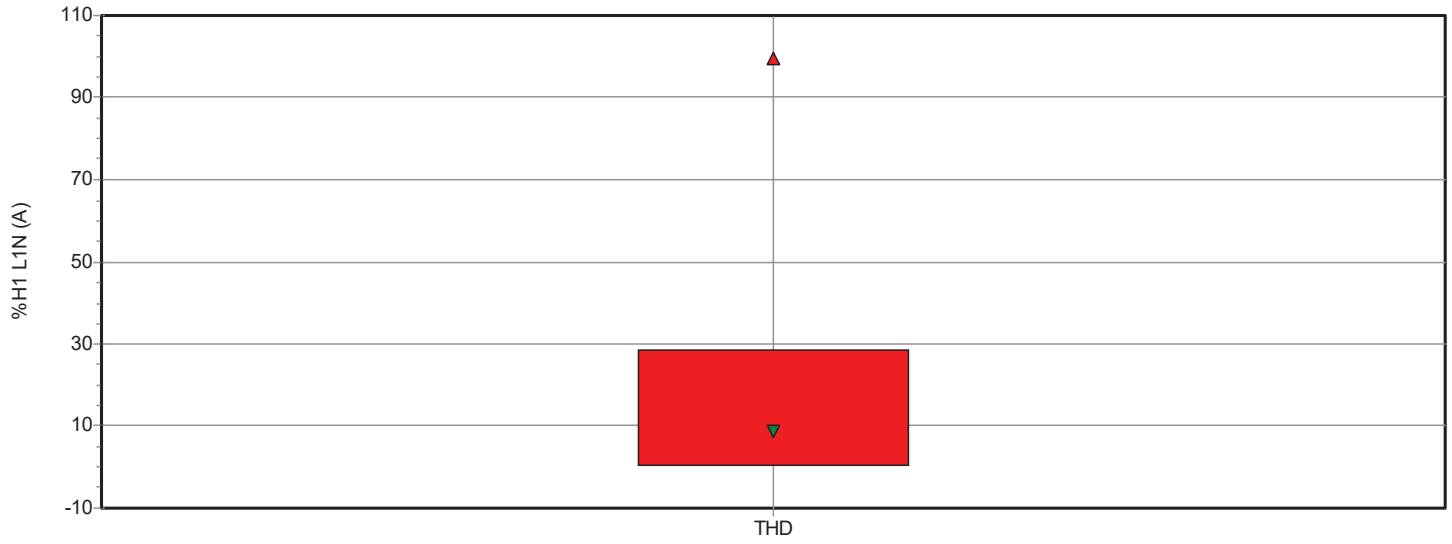
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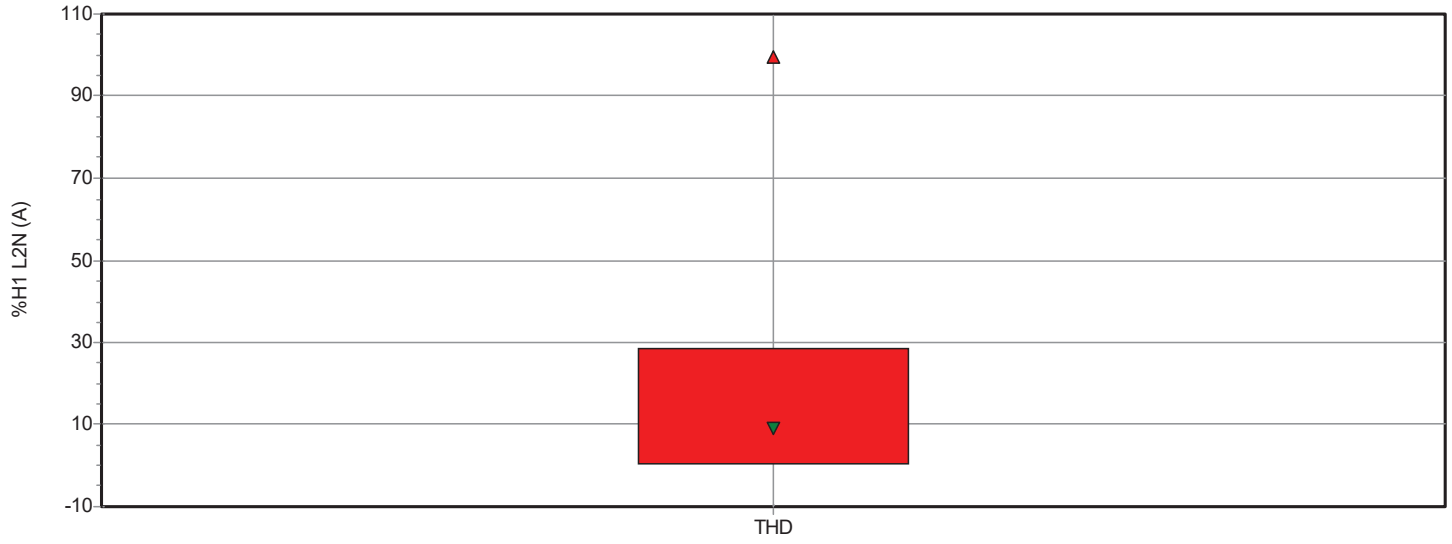
Harmonics. From 6/10/2020 8:01:49 AM To 6/11/2020 5:01:49 AM



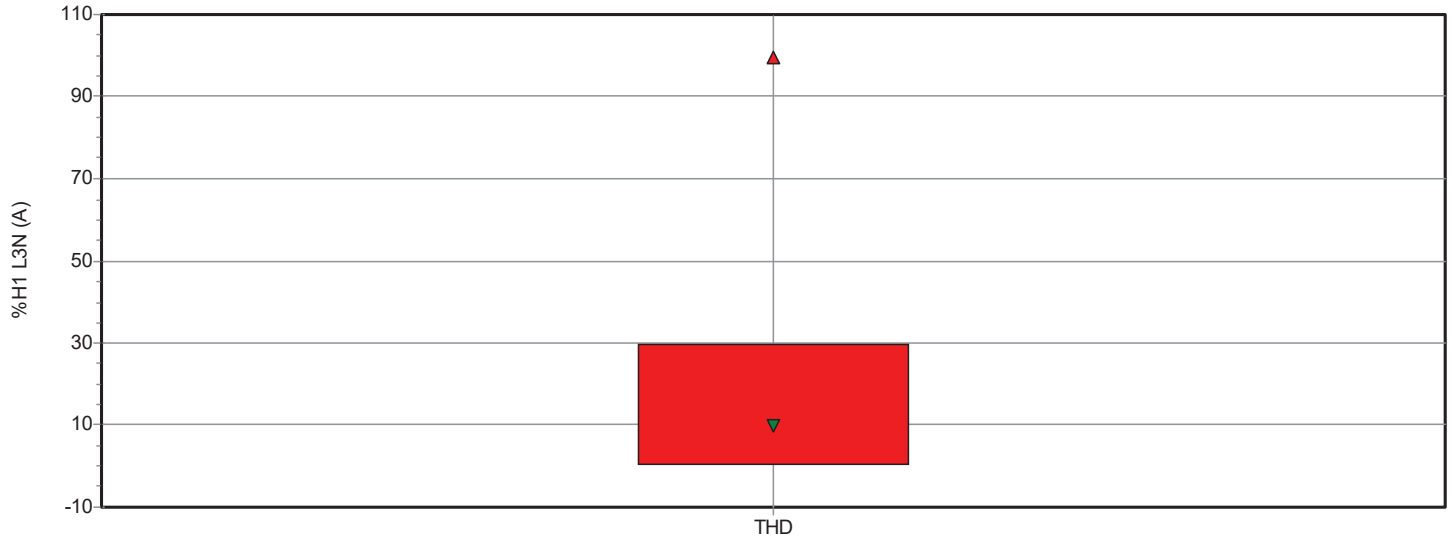
Harmonics. From 6/10/2020 8:01:49 AM To 6/11/2020 5:01:49 AM



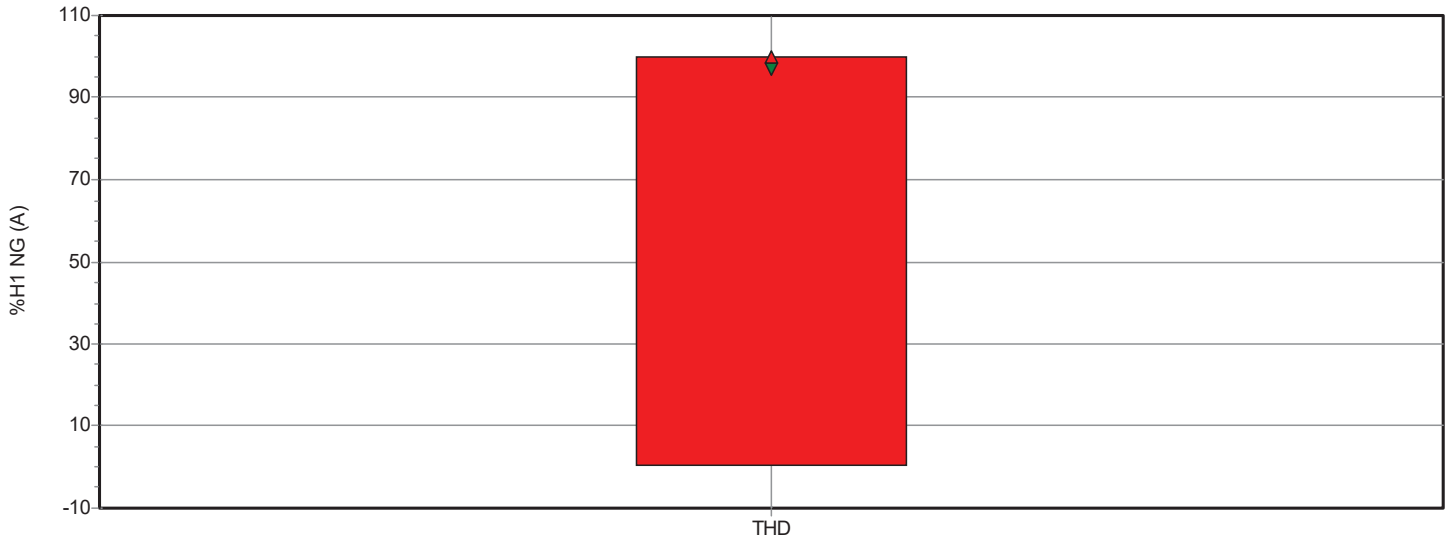
Harmonics. From 6/10/2020 8:01:49 AM To 6/11/2020 5:01:49 AM



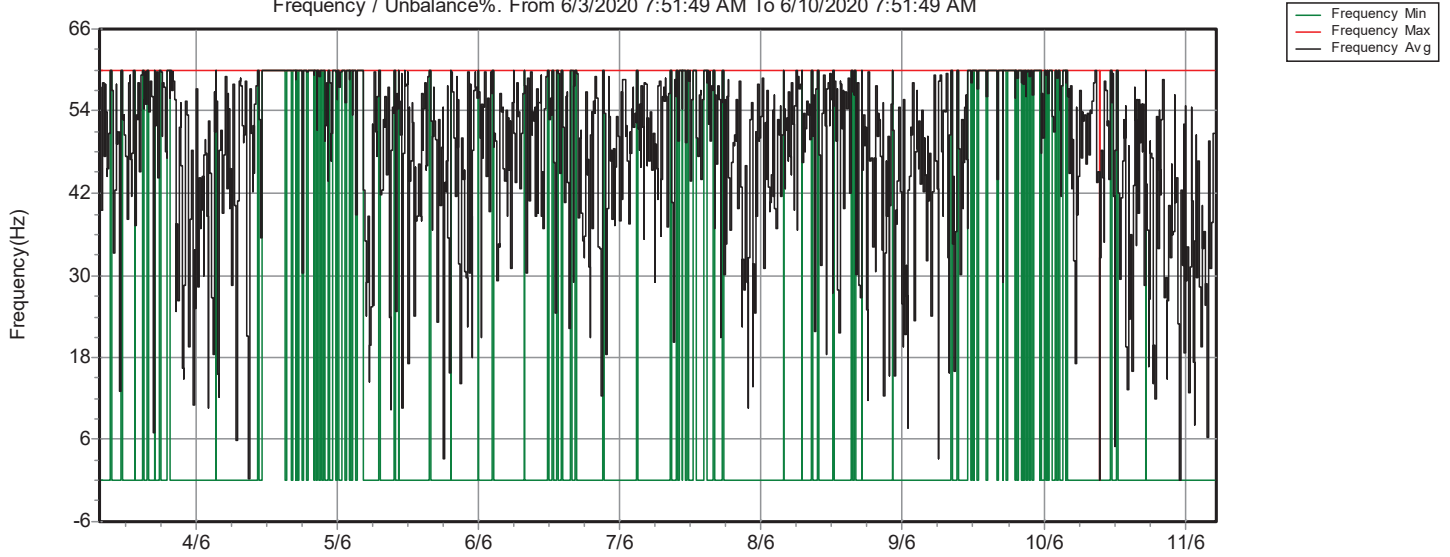
Harmonics. From 6/10/2020 8:01:49 AM To 6/11/2020 5:01:49 AM



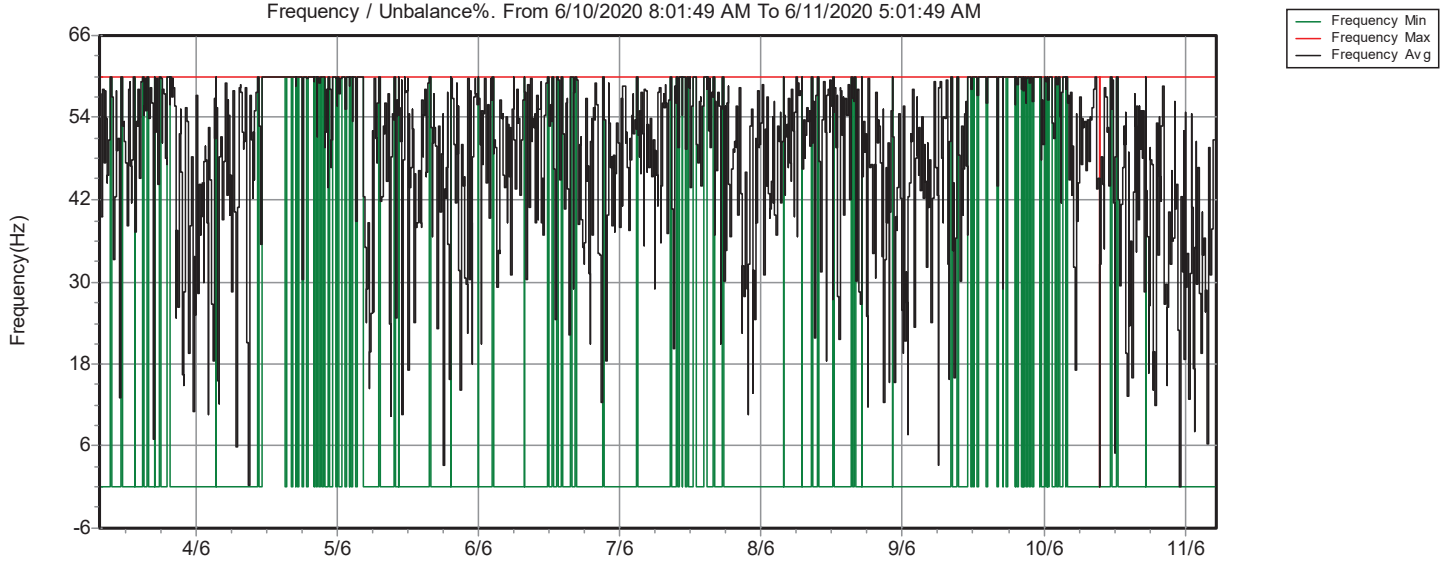
Harmonics. From 6/10/2020 8:01:49 AM To 6/11/2020 5:01:49 AM



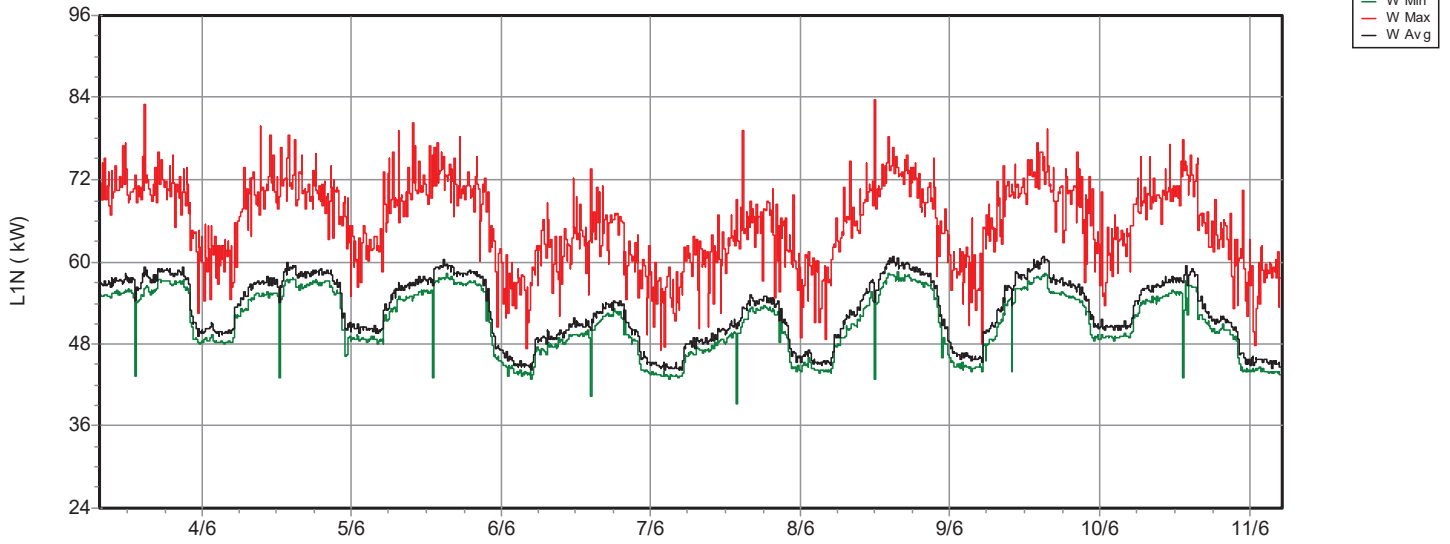
Frequency / Unbalance%. From 6/3/2020 7:51:49 AM To 6/10/2020 7:51:49 AM



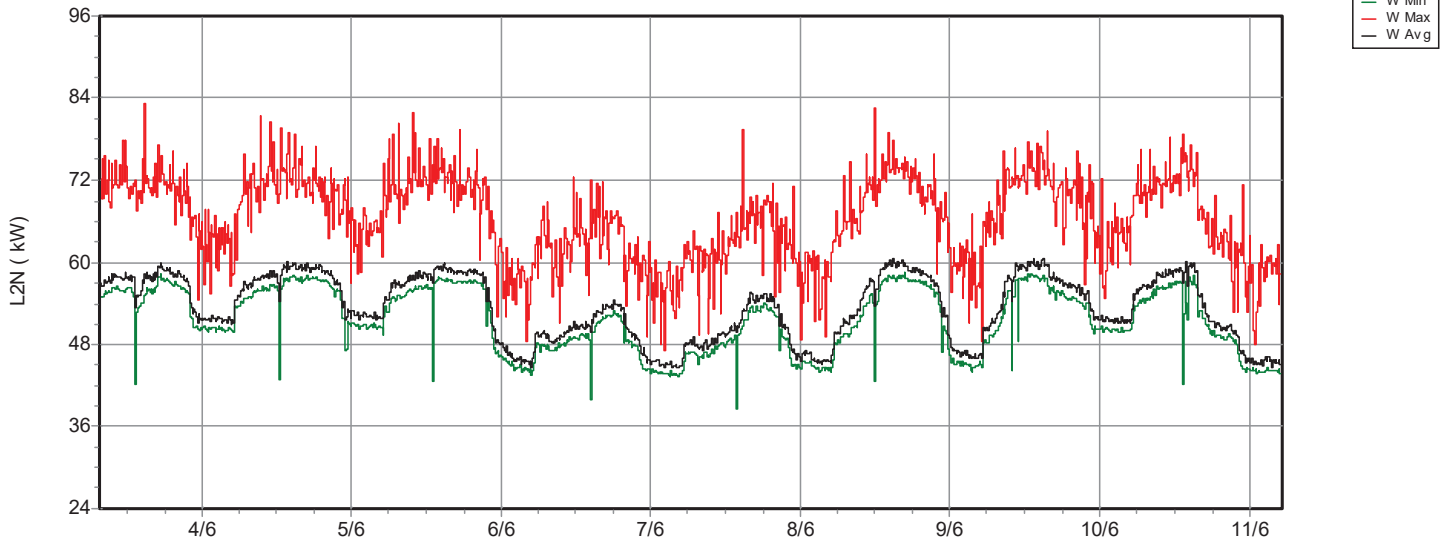
Frequency / Unbalance%. From 6/10/2020 8:01:49 AM To 6/11/2020 5:01:49 AM



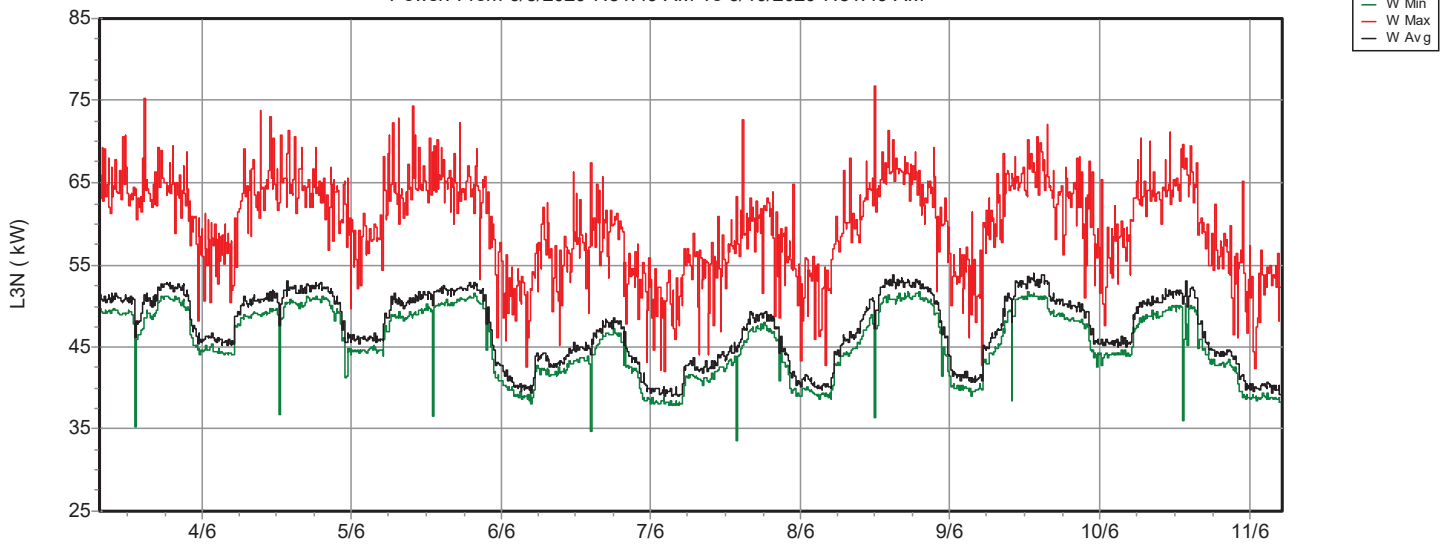
Power. From 6/3/2020 7:51:49 AM To 6/10/2020 7:51:49 AM



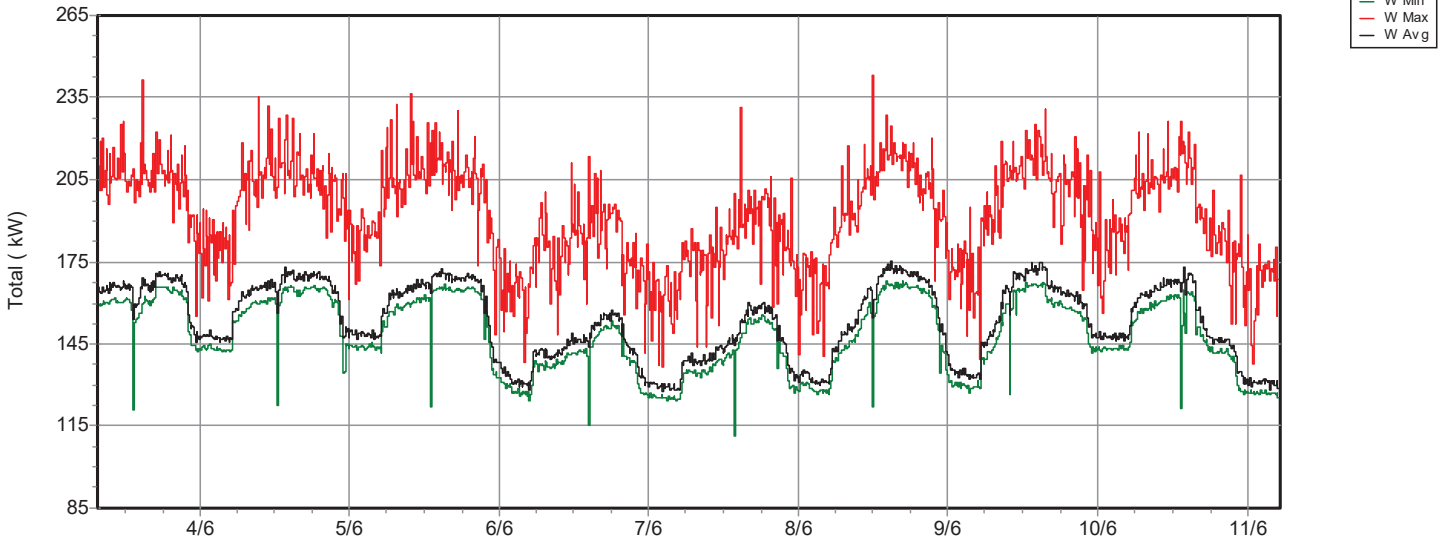
Power. From 6/3/2020 7:51:49 AM To 6/10/2020 7:51:49 AM



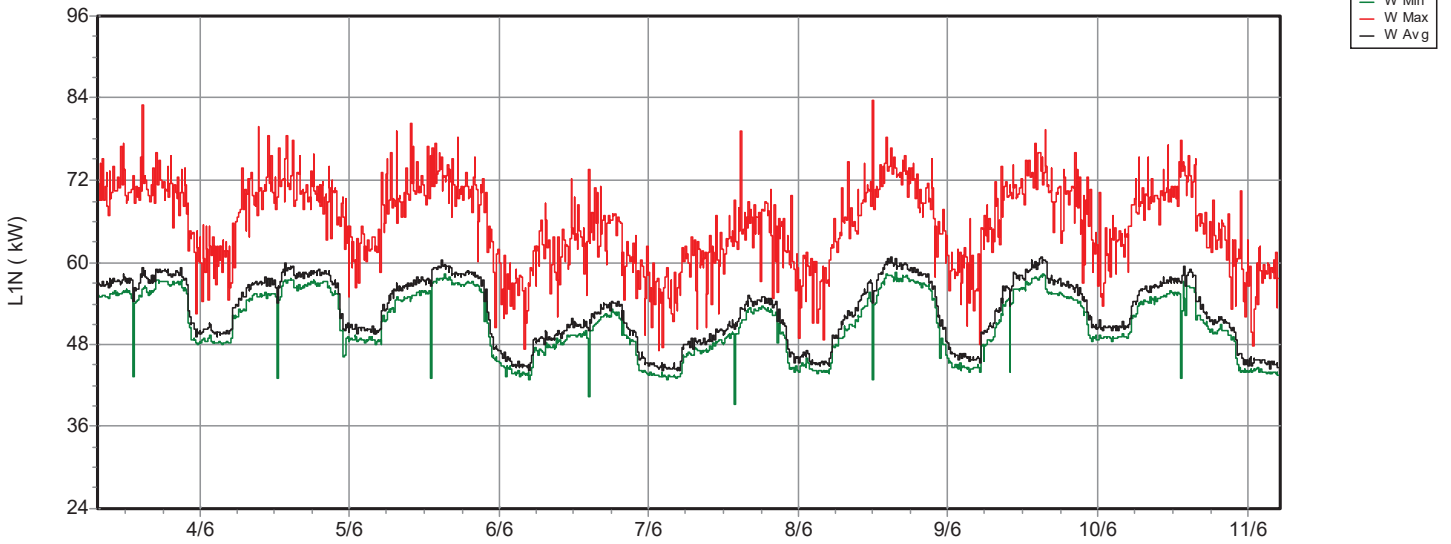
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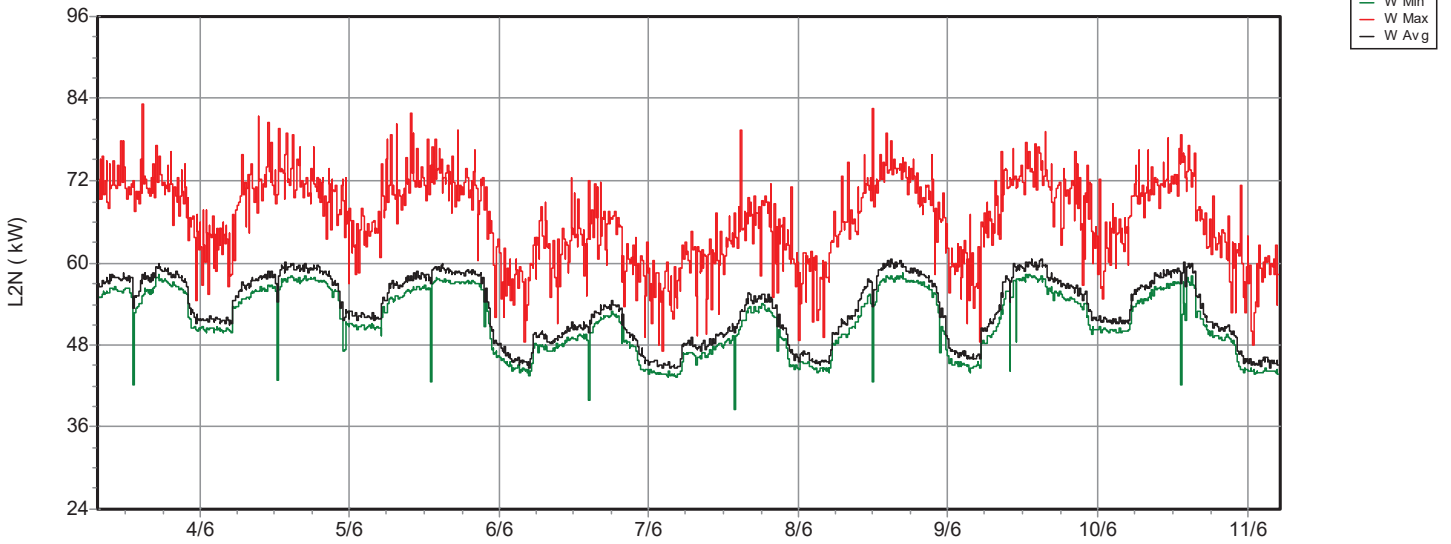
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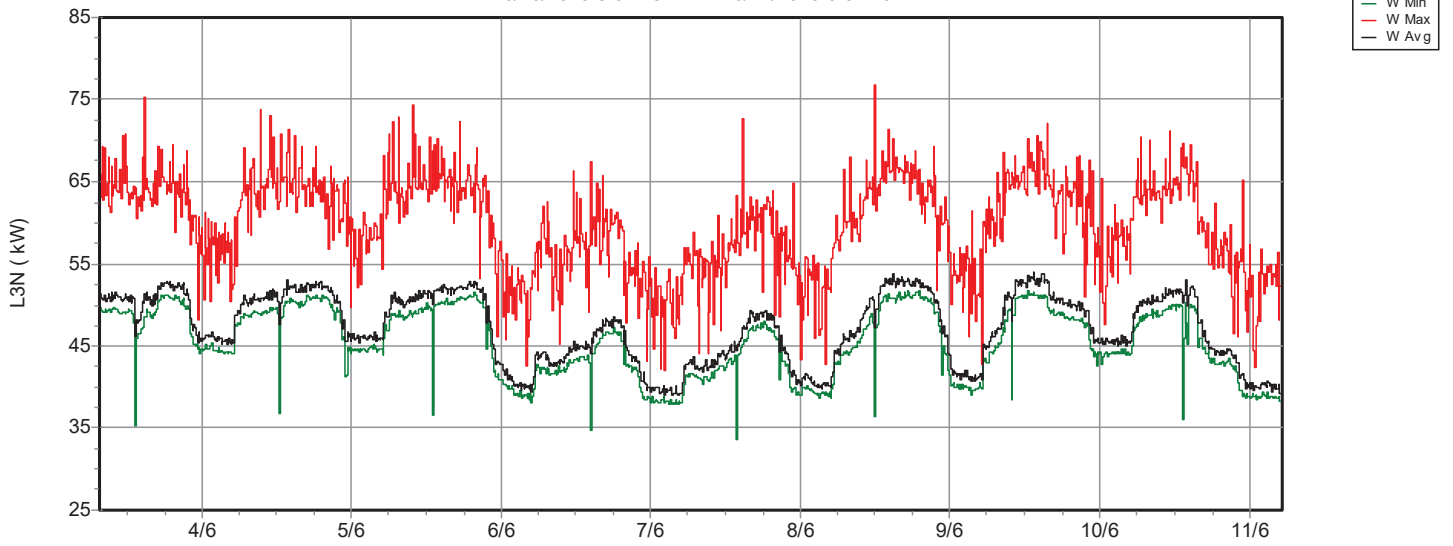
Power. From 6/10/2020 8:01:49 AM To 6/11/2020 5:01:49 AM



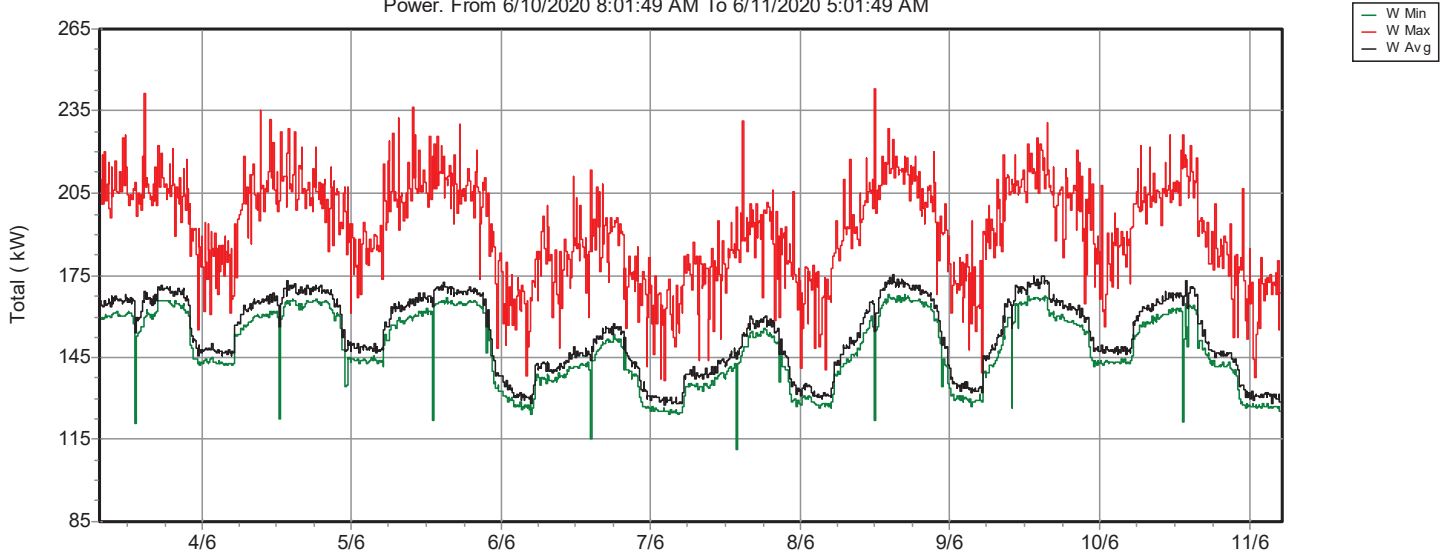
Power. From 6/10/2020 8:01:49 AM To 6/11/2020 5:01:49 AM



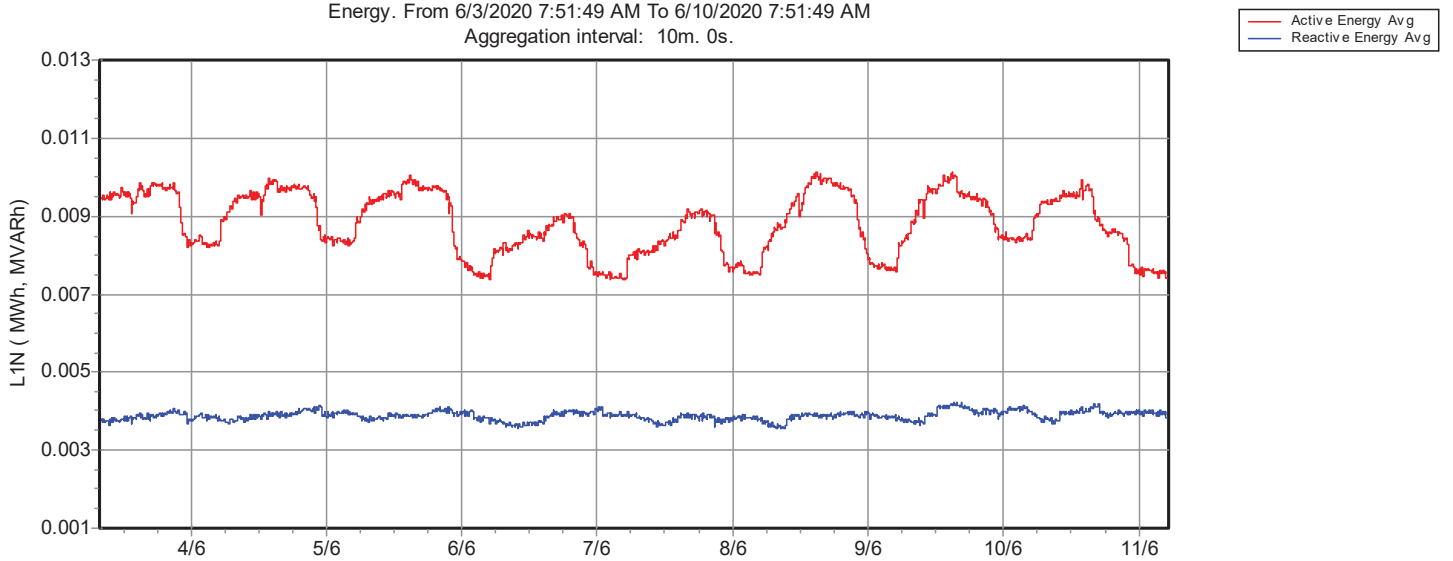
Power. From 6/10/2020 8:01:49 AM To 6/11/2020 5:01:49 AM



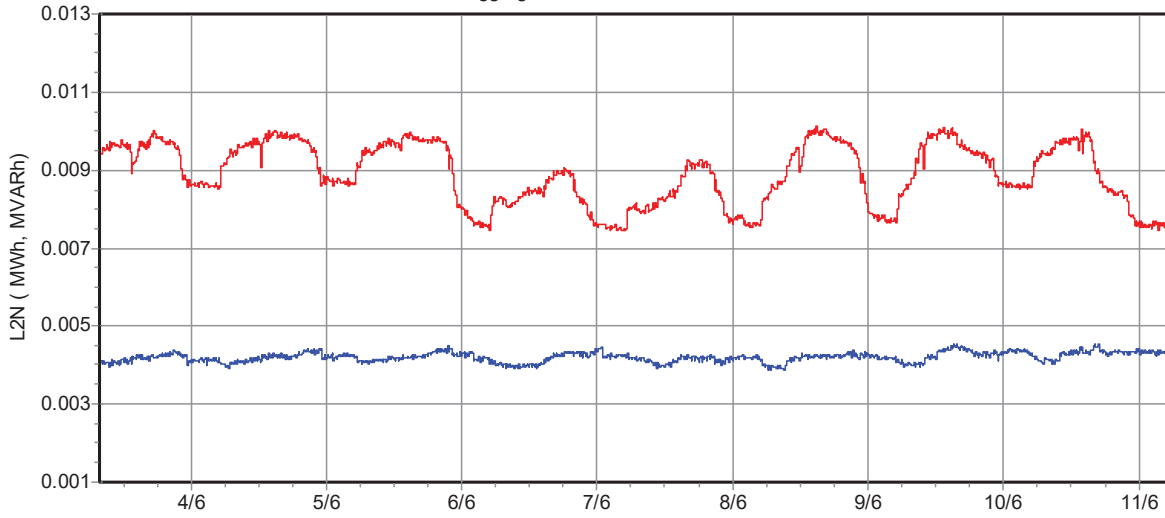
Power. From 6/10/2020 8:01:49 AM To 6/11/2020 5:01:49 AM



Energy. From 6/3/2020 7:51:49 AM To 6/10/2020 7:51:49 AM
Aggregation interval: 10m. 0s.

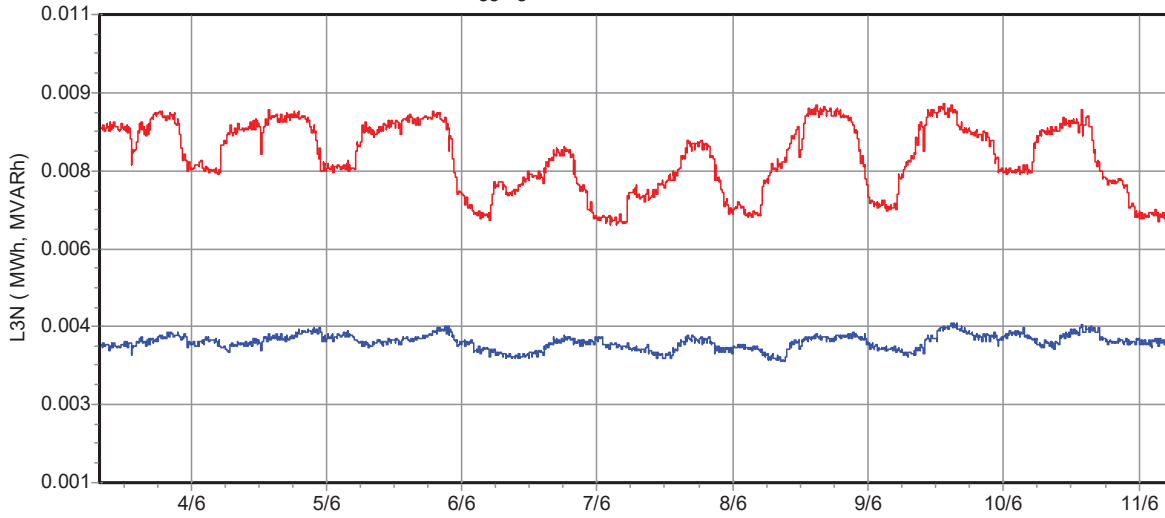


Energy. From 6/3/2020 7:51:49 AM To 6/10/2020 7:51:49 AM
Aggregation interval: 10m. 0s.



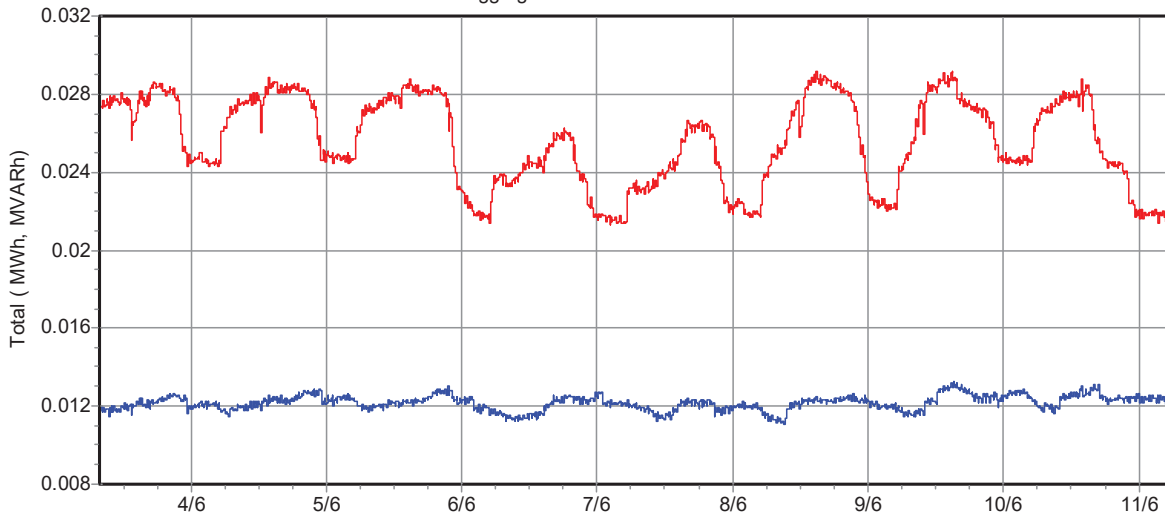
Active Energy Avg
Reactive Energy Avg

Energy. From 6/3/2020 7:51:49 AM To 6/10/2020 7:51:49 AM
Aggregation interval: 10m. 0s.



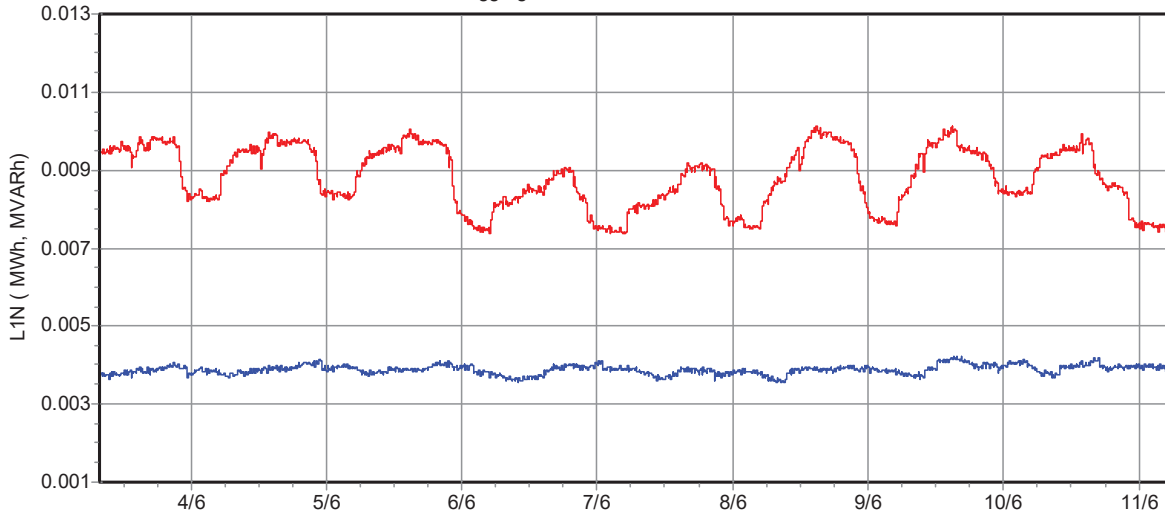
Active Energy Avg
Reactive Energy Avg

Energy. From 6/3/2020 7:51:49 AM To 6/10/2020 7:51:49 AM
Aggregation interval: 10m. 0s.



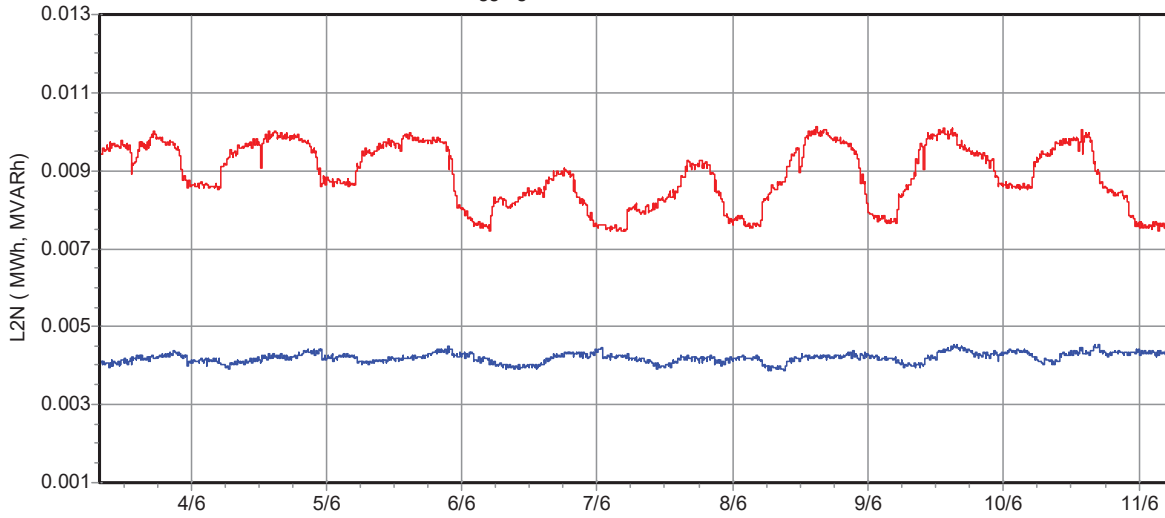
Active Energy Avg
Reactive Energy Avg

Energy. From 6/10/2020 8:01:49 AM To 6/11/2020 5:01:49 AM
Aggregation interval: 10m. 0s.



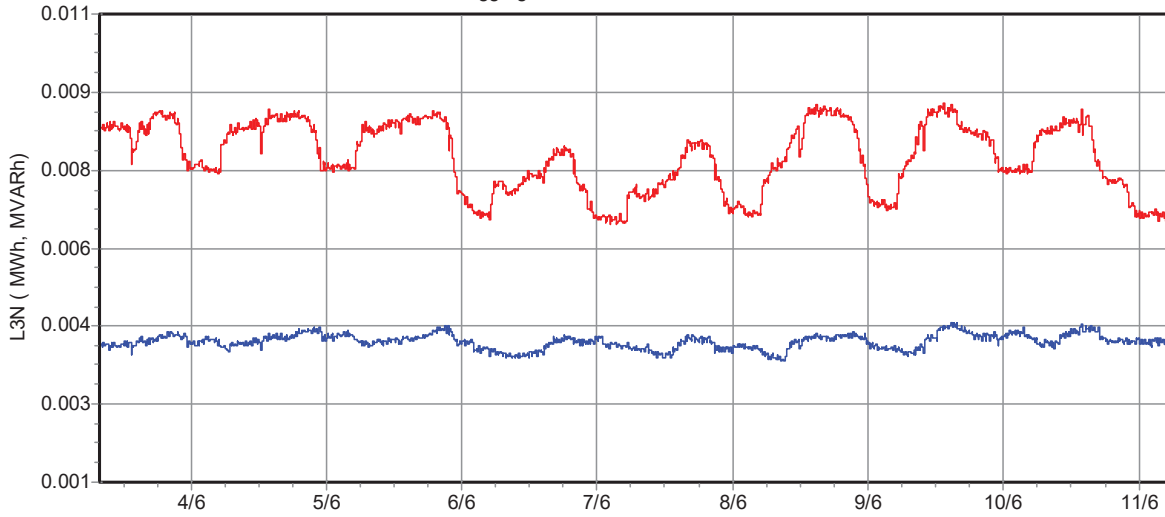
Active Energy Avg
Reactive Energy Avg

Energy. From 6/10/2020 8:01:49 AM To 6/11/2020 5:01:49 AM
Aggregation interval: 10m. 0s.



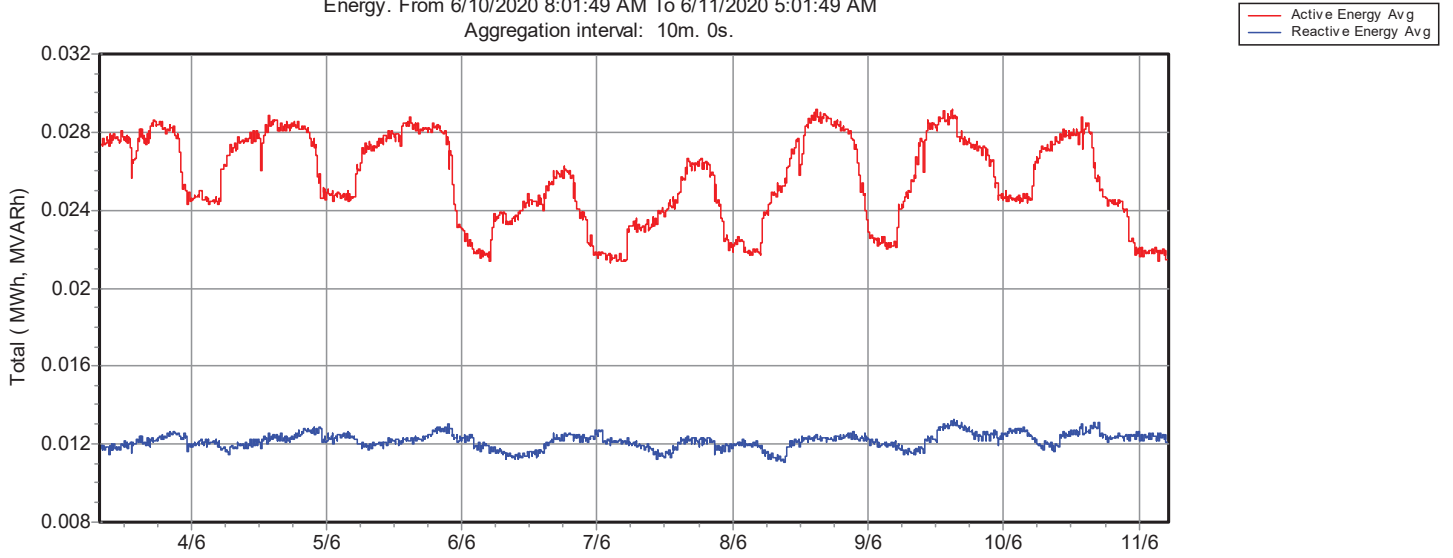
Active Energy Avg
Reactive Energy Avg

Energy. From 6/10/2020 8:01:49 AM To 6/11/2020 5:01:49 AM
Aggregation interval: 10m. 0s.

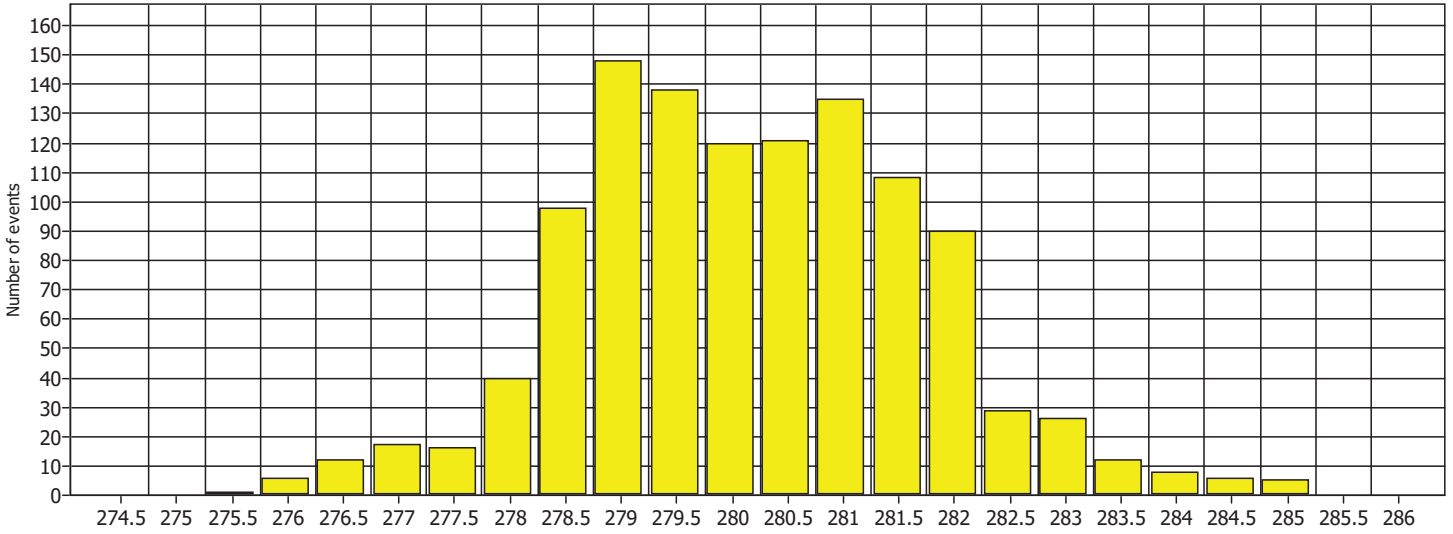


Active Energy Avg
Reactive Energy Avg

Energy. From 6/10/2020 8:01:49 AM To 6/11/2020 5:01:49 AM
Aggregation interval: 10m. 0s.



200ms Period Voltage - L1N - Average





A, Hz, THD overview table

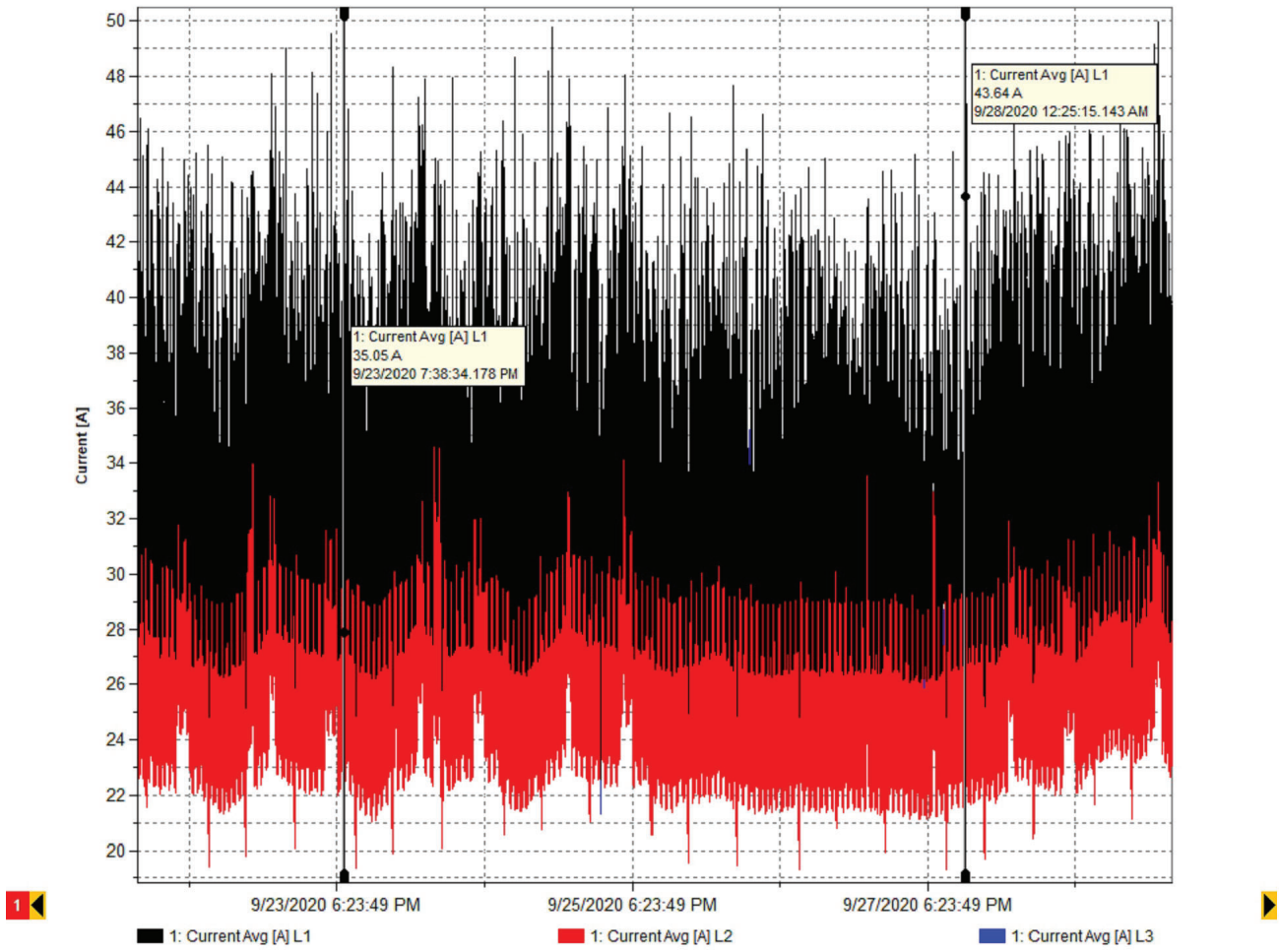
LS.018					Logging Information
Current [A]	L1	L2	L3	N	
Max	84.42 A 9/29/2020 7:53:22 AM	77.07 A 9/25/2020 5:07:15 PM	77.53 A 9/28/2020 5:08:19 PM	0.20 A 9/24/2020 7:50:28 AM	Study type: Load study
Avg	31.89 A	24.06 A	25.86 A	0.092 A	Topology: 3-ph Wye
Min	21.91 A 9/25/2020 1:14:25 PM	18.73 A 9/26/2020 8:07:01 AM	20.00 A 9/26/2020 9:36:08 PM	0.057 A 9/24/2020 3:36:24 AM	Start date: 9/22/2020 10:02:53 AM
Frequency [Hz]	L1				End date: 9/29/2020 10:02:53 AM
Max	60.52 Hz 9/23/2020 9:34:40 PM				Duration: 7d 0h 0m 0s
Avg	60.00 Hz				Averaging interval: 1sec
Min	58.92 Hz 9/26/2020 8:23:28 PM				Number of averaging intervals:
A THD [%]	L1	L2	L3	N	

Averaging interval:

	Configured Interval length
ATS-SB	1sec



A, Hz, THD graph



Graph Options:

Logging Sessions	ID
LS.018	1

Left Scale Options	L1 (A)	L2 (B)	L3 (C)	N	Total	Min/Max
Curr [A]	X	X	X			



A, Hz, THD overview table

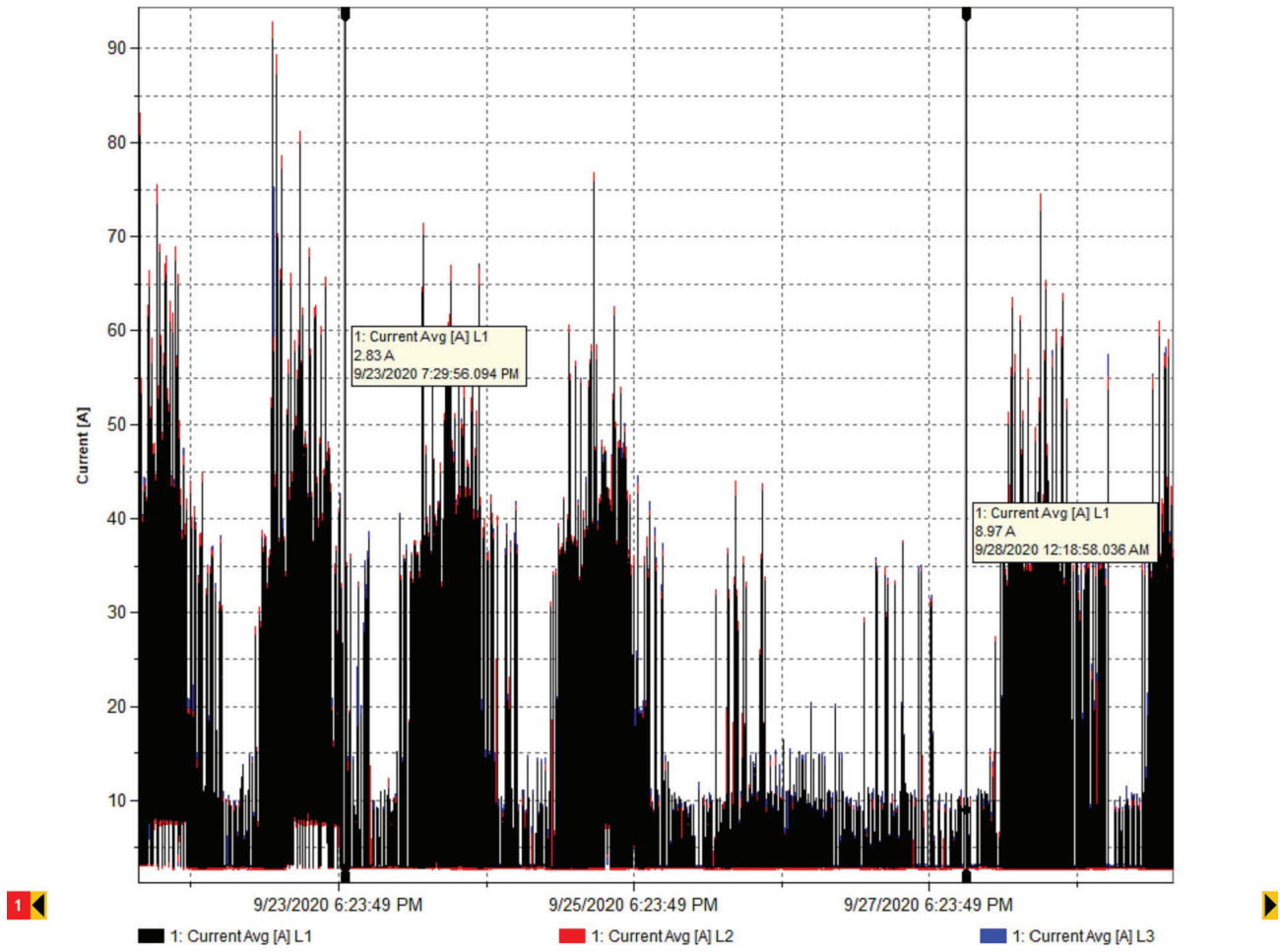
ATS ELEV					Logging Information
Current [A]	L1	L2	L3	N	
Max	97.54 A 9/23/2020 7:42:39 AM	99.72 A 9/23/2020 7:42:39 AM	98.38 A 9/23/2020 7:42:39 AM	0.55 A 9/22/2020 9:54:31 AM	Study type: Load study
Avg	8.61 A	8.61 A	8.77 A	0.024 A	Topology: 3-ph Wye
Min	2.22 A 9/26/2020 7:59:07 AM	2.20 A 9/26/2020 7:59:07 AM	2.71 A 9/27/2020 9:46:35 AM	0.0000 A 9/22/2020 9:54:42 AM	Start date: 9/22/2020 9:54:30 AM
Frequency [Hz]	L1				End date: 9/29/2020 9:54:30 AM
Max	60.82 Hz 9/23/2020 10:26:28 AM				Duration: 7d 0h 0m 0s
Avg	59.98 Hz				Averaging interval: 1sec
Min	14.67 Hz 9/26/2020 3:39:26 PM				Number of averaging intervals:
A THD [%]	L1	L2	L3	N	

Averaging interval:

	Configured Interval length
ATS-ELEV	1sec



A, Hz, THD graph



Graph Options:

Logging Sessions	ID
ATS ELEV	1

Left Scale Options	L1 (A)	L2 (B)	L3 (C)	N	Total	Min/Max
Curr [A]	X	X	X			



A, Hz, THD overview table

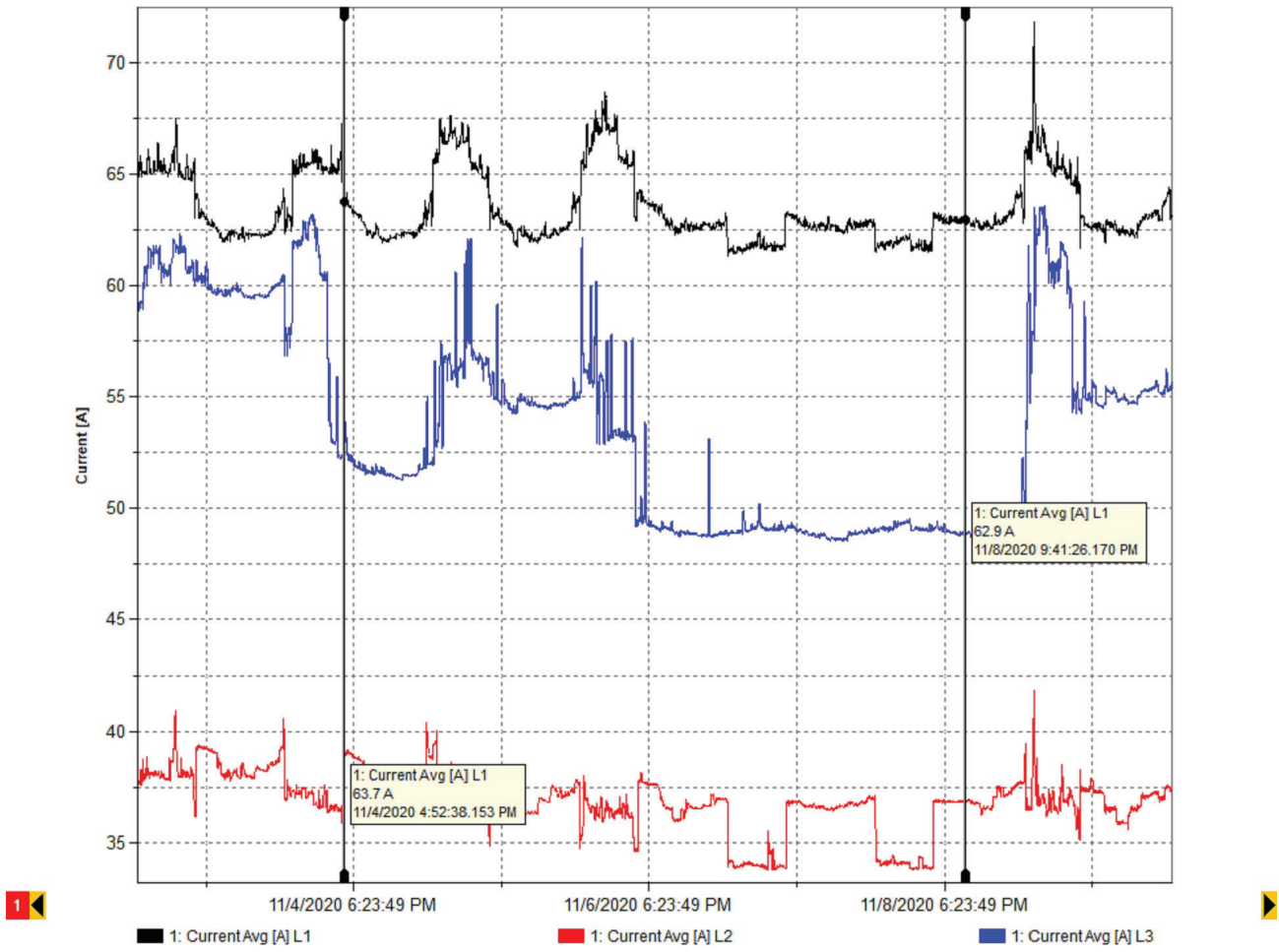
MDP-LS					Logging Information
Current [A]	L1	L2	L3	N	
Max	102.7 A 11/3/2020 4:33:45 PM	54.5 A 11/3/2020 4:40:33 PM	78.5 A 11/5/2020 1:09:53 PM	69.1 A 11/3/2020 4:33:45 PM	Study type: Load study
Avg	63.5 A	36.9 A	54.0 A	25.2 A	Topology: 3-ph Wye
Min	59.8 A 11/8/2020 12:44:45 PM	33.7 A 11/8/2020 1:01:38 PM	48.3 A 11/8/2020 2:33:57 AM	22.2 A 11/4/2020 7:05:47 AM	Start date: 11/3/2020 7:15:55 AM
Frequency [Hz]	L1				End date: 11/10/2020 7:15:55 AM
Max	60.06 Hz 11/4/2020 4:49:31 AM				Duration: 7d 0h 0m 0s
Avg	60.00 Hz				Averaging interval: 1sec
Min	59.93 Hz 11/6/2020 2:42:32 AM				Number of averaging intervals:
A THD [%]	L1	L2	L3	N	

Averaging interval:

	Configured Interval length
ATS-MDP-LS	1sec



A, Hz, THD graph



Graph Options:

Logging Sessions	ID
MDP-LS	1

Left Scale Options	L1 (A)	L2 (B)	L3 (C)	N	Total	Min/Max
Curr [A]	X	X	X			



A, Hz, THD overview table

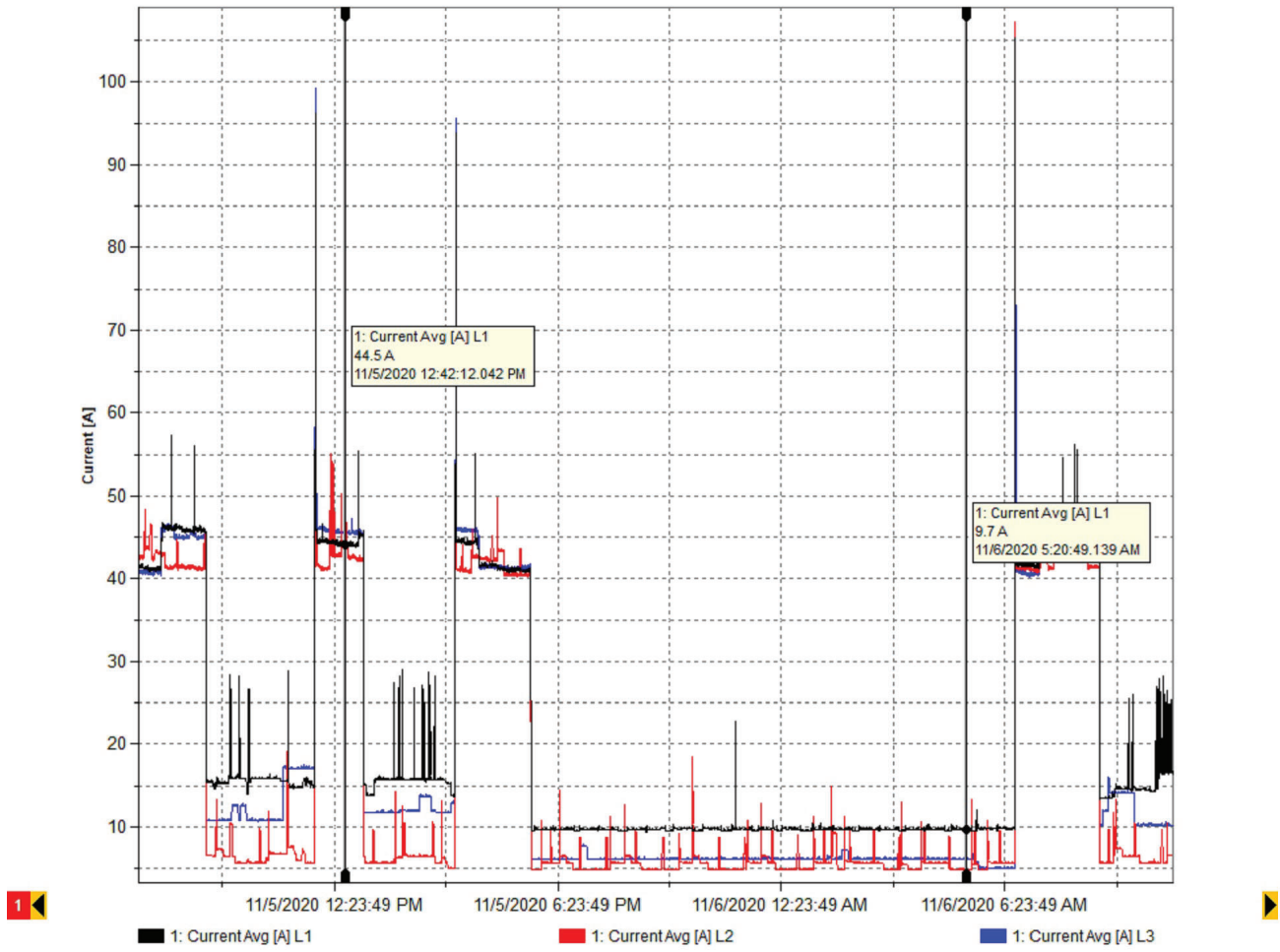
200A ATS PSB					Logging Information
Current [A]	L1	L2	L3	N	
Max	230.6 A 11/5/2020 11:53:53 AM	245.7 A 11/6/2020 6:40:13 AM	255.4 A 11/5/2020 11:53:53 AM	0.25 A 11/5/2020 7:09:18 AM	Study type: Load study
Avg	25.0 A	22.5 A	24.0 A	0.038 A	Topology: 3-ph Wye
Min	9.3 A 11/5/2020 6:51:31 PM	4.7 A 11/6/2020 5:41:05 AM	4.8 A 11/6/2020 6:40:06 AM	0.011 A 11/5/2020 6:48:30 PM	Start date: 11/5/2020 7:09:16 AM
Frequency [Hz]	L1				End date: 11/6/2020 10:53:41 AM
Max	61.08 Hz 11/5/2020 5:41:22 PM				Duration: 1d 3h 44m 25s
Avg	60.00 Hz				Averaging interval: 1sec
Min	57.76 Hz 11/6/2020 6:40:06 AM				Number of averaging intervals:
A THD [%]	L1	L2	L3	N	

Averaging interval:

	Configured Interval length
ATS-PSB	1sec



A, Hz, THD graph



Graph Options:

Logging Sessions	ID
200A ATS PSB	1

Left Scale Options	L1 (A)	L2 (B)	L3 (C)	N	Total	Min/Max
Curr [A]	X	X	X			



A, Hz, THD overview table

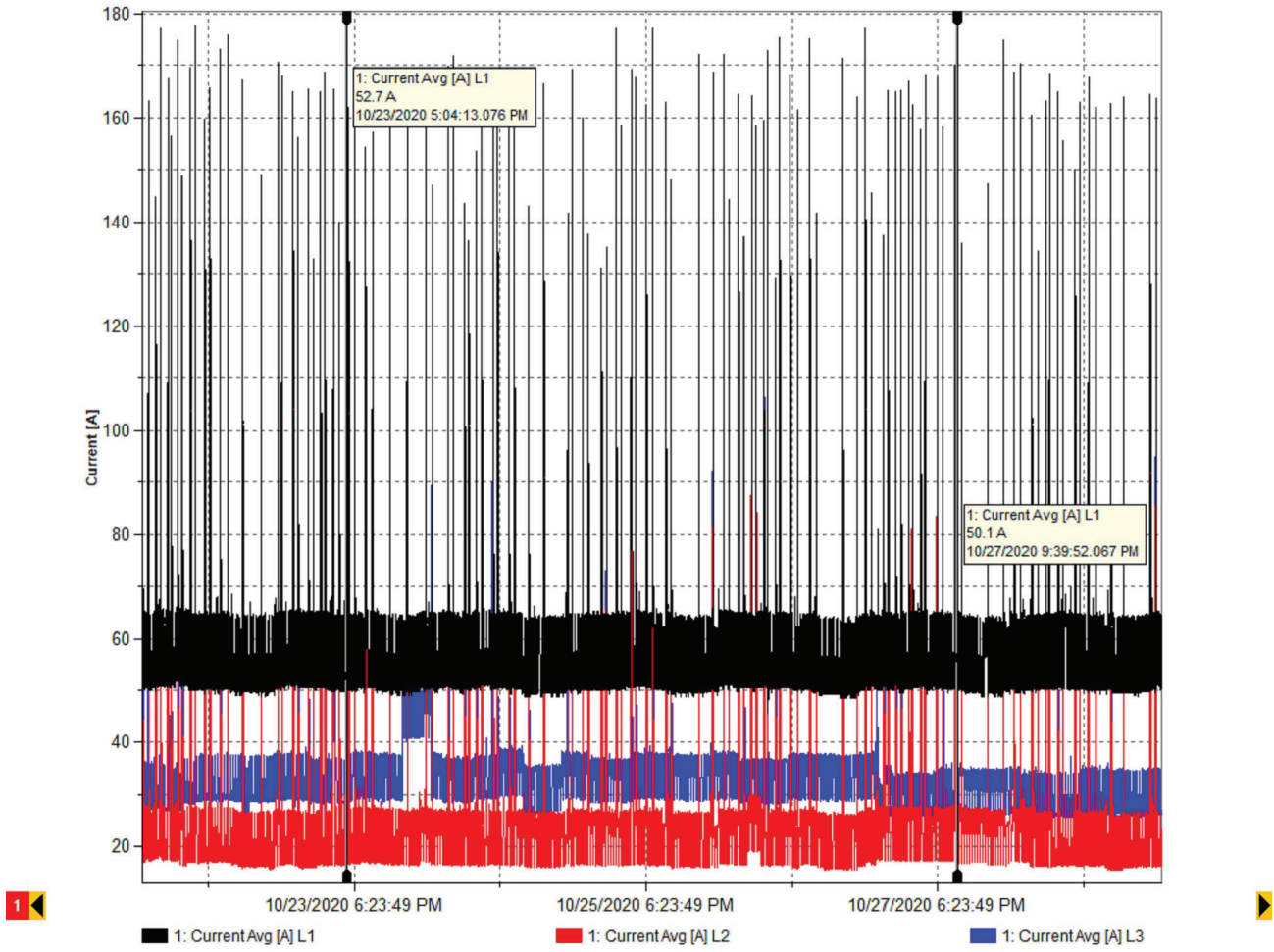
ATS-EMD					Logging Information
Current [A]	L1	L2	L3	N	
Max	340.6 A 10/25/2020 1:33:09 AM	309.1 A 10/23/2020 12:02:40 AM	315.0 A 10/26/2020 10:21:14 PM	0.46 A 10/24/2020 3:01:13 AM	Study type: Load study
Avg	58.4 A	26.6 A	37.0 A	0.064 A	Topology: 3-ph Wye
Min	45.6 A 10/26/2020 2:22:26 PM	14.3 A 10/26/2020 3:37:32 PM	23.5 A 10/27/2020 8:48:09 AM	0.039 A 10/29/2020 3:14:25 AM	Start date: 10/22/2020 7:30:58 AM
Frequency [Hz]	L1				End date: 10/29/2020 7:10:54 AM
Max	60.51 Hz 10/27/2020 9:04:06 PM				Duration: 6d 23h 39m 56s
Avg	60.00 Hz				Averaging interval: 1sec
Min	58.04 Hz 10/27/2020 6:12:51 PM				Number of averaging intervals:
A THD [%]	L1	L2	L3	N	

Averaging interval:

	Configured Interval length
ATS-EMD	1sec



A, Hz, THD graph



Graph Options:

Logging Sessions	ID
ATS-EMD	1

Left Scale Options	L1 (A)	L2 (B)	L3 (C)	N	Total	Min/Max
Curr [A]	X	X	X			



A, Hz, THD overview table

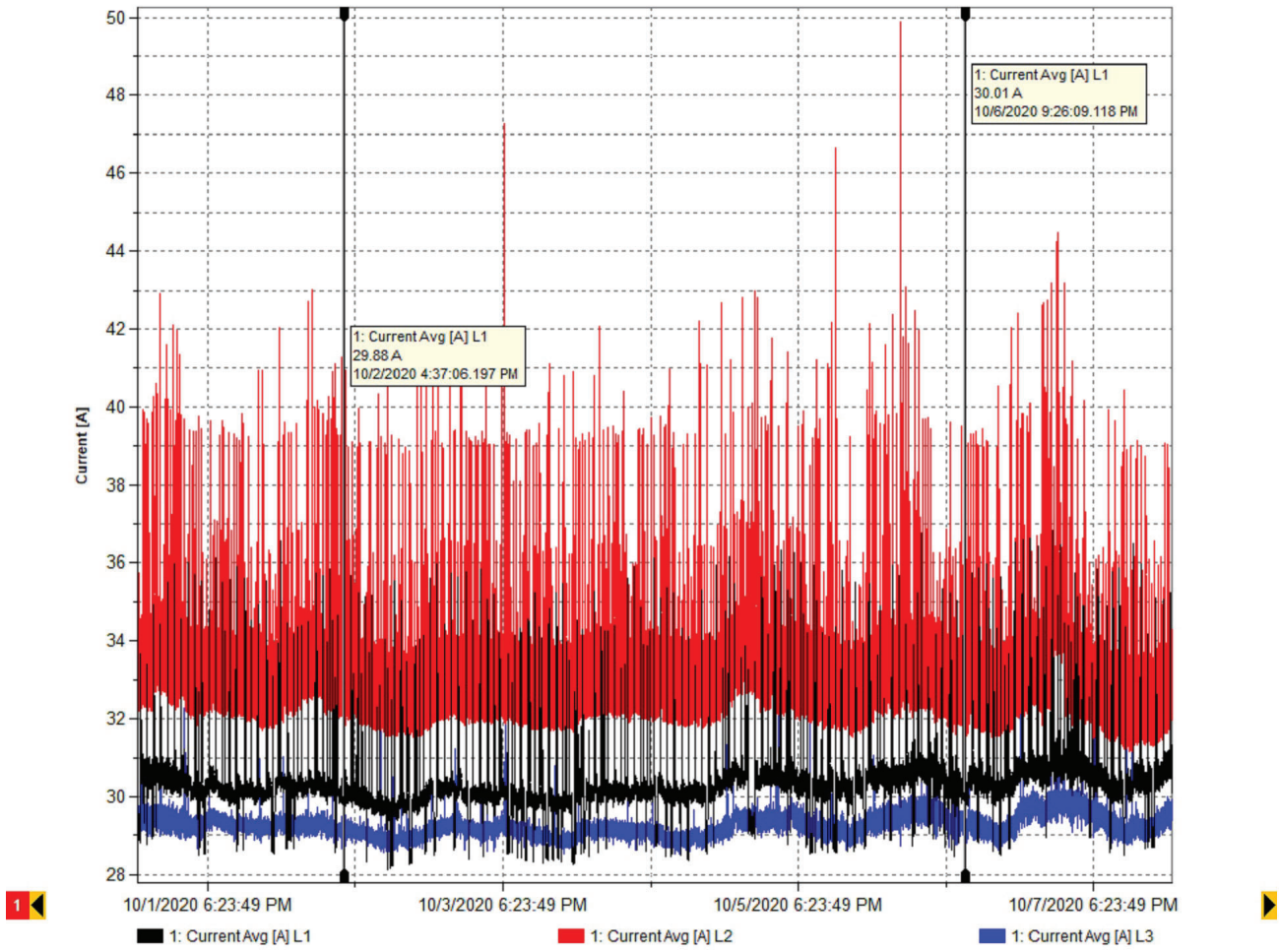
LS.019					Logging Information
Current [A]	L1	L2	L3	N	
Max	43.33 A 10/6/2020 6:04:07 AM	58.92 A 10/7/2020 12:19:48 PM	36.49 A 10/6/2020 10:41:44 AM	0.24 A 10/7/2020 12:19:48 PM	Study type: Load study
Avg	30.18 A	32.49 A	29.28 A	0.058 A	Topology: 3-ph Wye
Min	27.42 A 10/2/2020 11:43:28 PM	30.08 A 10/4/2020 5:46:31 AM	26.96 A 10/7/2020 6:56:21 PM	0.029 A 10/1/2020 8:22:15 PM	Start date: 10/1/2020 7:02:21 AM
Frequency [Hz]	L1	L2	L3	N	
Max	60.19 Hz 10/2/2020 5:02:20 AM				End date: 10/8/2020 7:02:21 AM
Avg	60.00 Hz				Duration: 7d 0h 0m 0s
Min	59.50 Hz 10/3/2020 3:06:58 AM				Averaging interval: 1sec
A THD [%]	L1	L2	L3	N	Number of averaging intervals:

Averaging interval:

	Configured Interval length
ATS Panel B	1sec



A, Hz, THD graph



Graph Options:

Logging Sessions	ID
LS.019	1

Left Scale Options	L1 (A)	L2 (B)	L3 (C)	N	Total	Min/Max
Curr [A]	X	X	X			



A, Hz, THD overview table

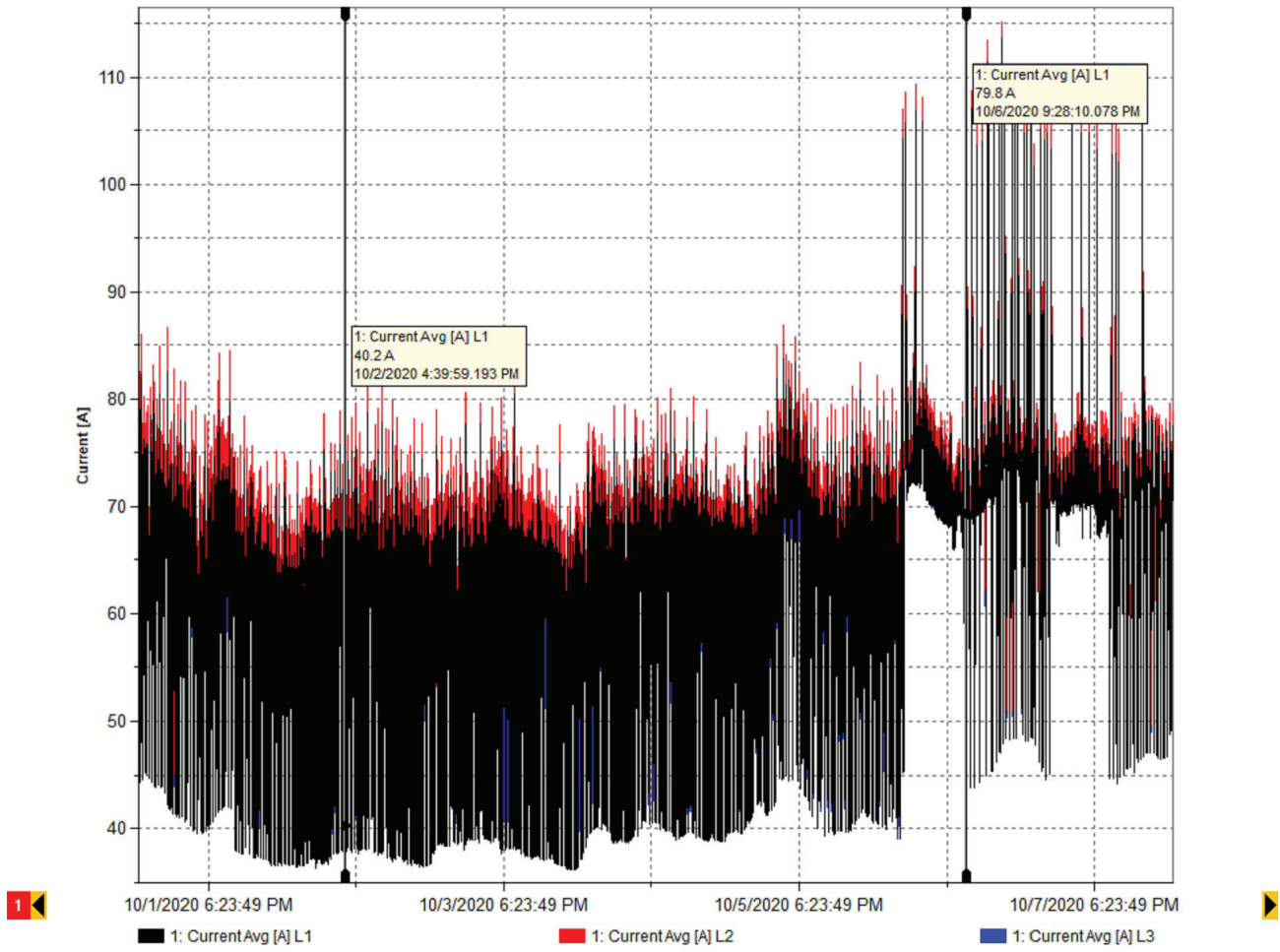
911- 480V					Logging Information
Current [A]	L1	L2	L3	N	
Max	259.9 A 10/7/2020 5:55:33 AM	258.4 A 10/7/2020 9:43:50 PM	240.3 A 10/6/2020 11:35:36 AM	0.0000 A 10/1/2020 7:02:50 AM	Study type: Load study
Avg	63.4 A	66.2 A	63.8 A	0.0000 A	Topology: 3-ph Wye
Min	33.9 A 10/2/2020 1:49:26 AM	36.7 A 10/4/2020 5:30:00 AM	36.1 A 10/2/2020 8:57:16 AM	0.0000 A 10/1/2020 7:02:50 AM	Start date: 10/1/2020 7:02:49 AM
Frequency [Hz]	L1	L2	L3	N	
Max	60.43 Hz 10/4/2020 5:49:24 AM				End date: 10/8/2020 7:02:49 AM
Avg	60.00 Hz				Duration: 7d 0h 0m 0s
Min	57.75 Hz 10/2/2020 1:07:53 AM				Averaging interval: 1sec
A THD [%]	L1	L2	L3	N	Number of averaging intervals:

Averaging interval:

	Configured Interval length
ATS-MDP-A	1sec



A, Hz, THD graph



Graph Options:

Logging Sessions	ID
911- 480V	1

Left Scale Options	L1 (A)	L2 (B)	L3 (C)	N	Total	Min/Max
Curr [A]	X	X	X			



A, Hz, THD overview table

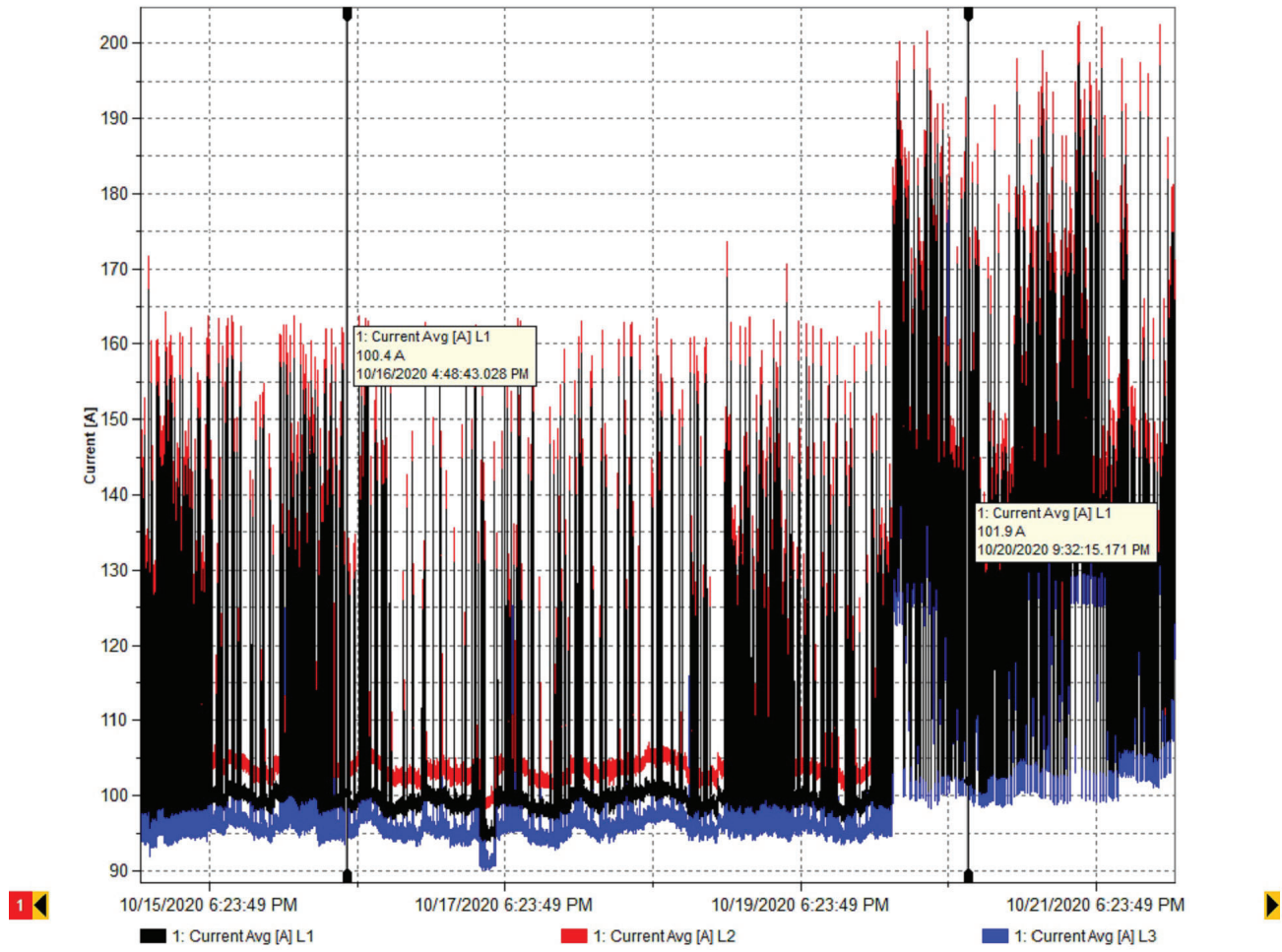
ATS 2 OLD PENT HOUSE					Logging Information
Current [A]	L1	L2	L3	N	
Max	253.9 A 10/21/2020 7:59:55 AM	259.8 A 10/22/2020 2:08:27 AM	248.3 A 10/20/2020 11:08:41 PM	0.0000 A 10/15/2020 7:14:11 AM	Study type: Load study
Avg	109.6 A	114.0 A	106.0 A	0.0000 A	Topology: 3-ph Wye
Min	91.7 A 10/17/2020 3:55:05 PM	96.2 A 10/17/2020 3:47:26 PM	87.8 A 10/17/2020 2:26:00 PM	0.0000 A 10/15/2020 7:14:11 AM	Start date: 10/15/2020 7:14:10 AM
Frequency [Hz]	L1				End date: 10/22/2020 7:07:07 AM
Max	60.41 Hz 10/22/2020 3:25:13 AM				Duration: 6d 23h 52m 57s
Avg	60.00 Hz				Averaging interval: 1sec
Min	59.61 Hz 10/19/2020 6:25:13 AM				Number of averaging intervals:
A THD [%]	L1	L2	L3	N	

Averaging interval:

	Configured Interval length
ATS-2E	1sec



A, Hz, THD graph



Graph Options:

Logging Sessions	ID
ATS 2 OLD PENT HOUSE	1

Left Scale Options	L1 (A)	L2 (B)	L3 (C)	N	Total	Min/Max
Curr [A]	X	X	X			

CITY COUNTY
BUILDING (CCB)
GENERATOR NO.7 -
ATS-JUVENILE
DETENTION



A, Hz, THD overview table

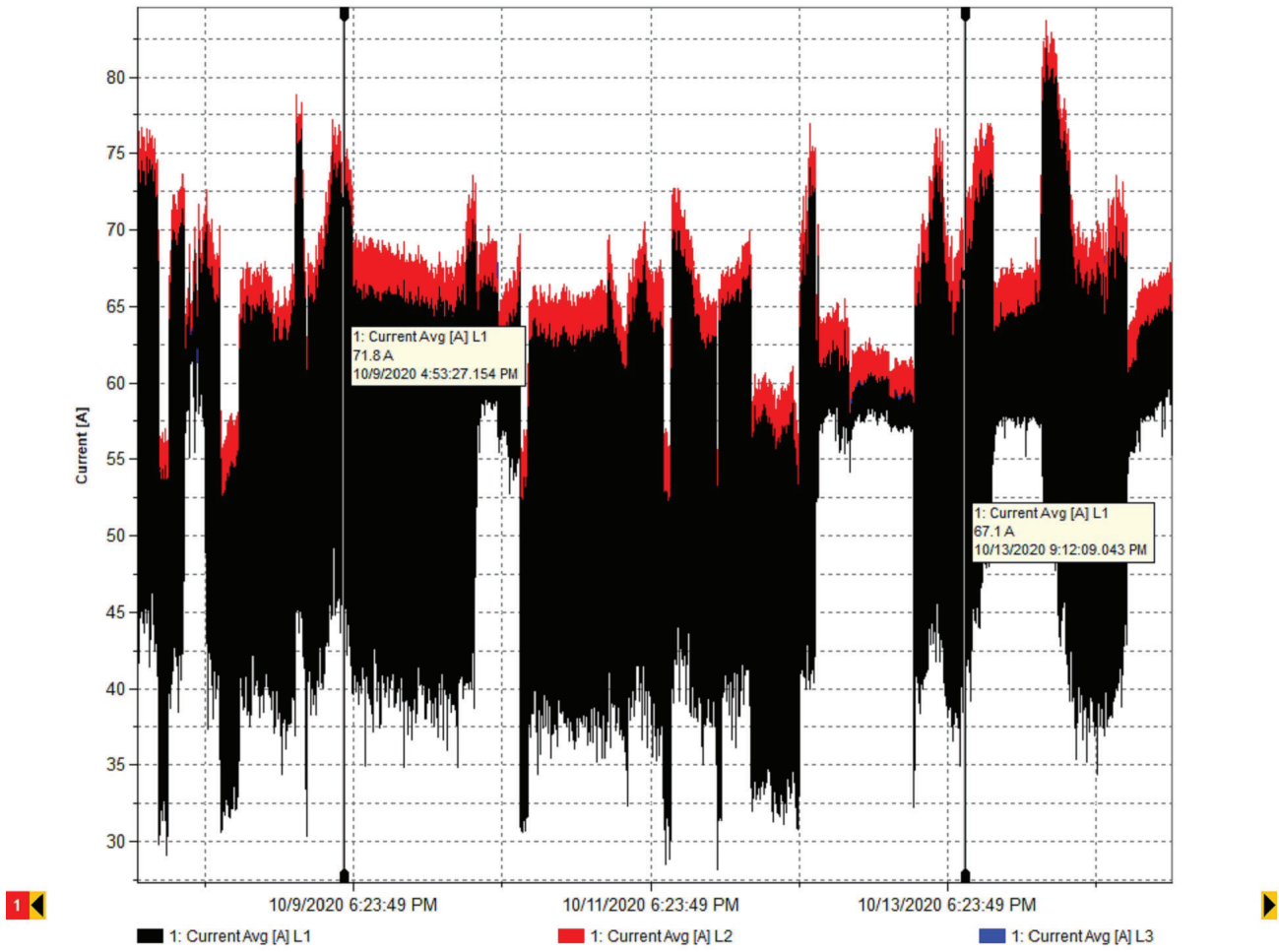
ATS JUVY DET					Logging Information
Current [A]	L1	L2	L3	N	
Max	109.0 A 10/14/2020 10:55:04 AM	110.3 A 10/14/2020 10:55:04 AM	110.4 A 10/14/2020 11:21:20 AM	0.0000 A 10/8/2020 7:24:24 AM	Study type: Load study
Avg	56.9 A	59.5 A	58.6 A	0.0000 A	Topology: 3-ph Wye
Min	22.2 A 10/12/2020 5:14:33 AM	23.8 A 10/12/2020 5:14:33 AM	23.5 A 10/12/2020 5:14:33 AM	0.0000 A 10/8/2020 7:24:24 AM	Start date: 10/8/2020 7:24:23 AM
Frequency [Hz]	L1				End date: 10/15/2020 6:39:39 AM
Max	60.09 Hz 10/13/2020 7:36:18 PM				Duration: 6d 23h 15m 16s
Avg	60.00 Hz				Averaging interval: 1sec
Min	59.88 Hz 10/10/2020 9:18:09 AM				Number of averaging intervals:
A THD [%]	L1	L2	L3	N	

Averaging interval:

	Configured Interval length
ATS JUVENILE DETENTION	1sec



A, Hz, THD graph



Graph Options:

Logging Sessions	ID
ATS JUVY DET	1

Left Scale Options	L1 (A)	L2 (B)	L3 (C)	N	Total	Min/Max
Curr [A]	X	X	X			



A, Hz, THD overview table

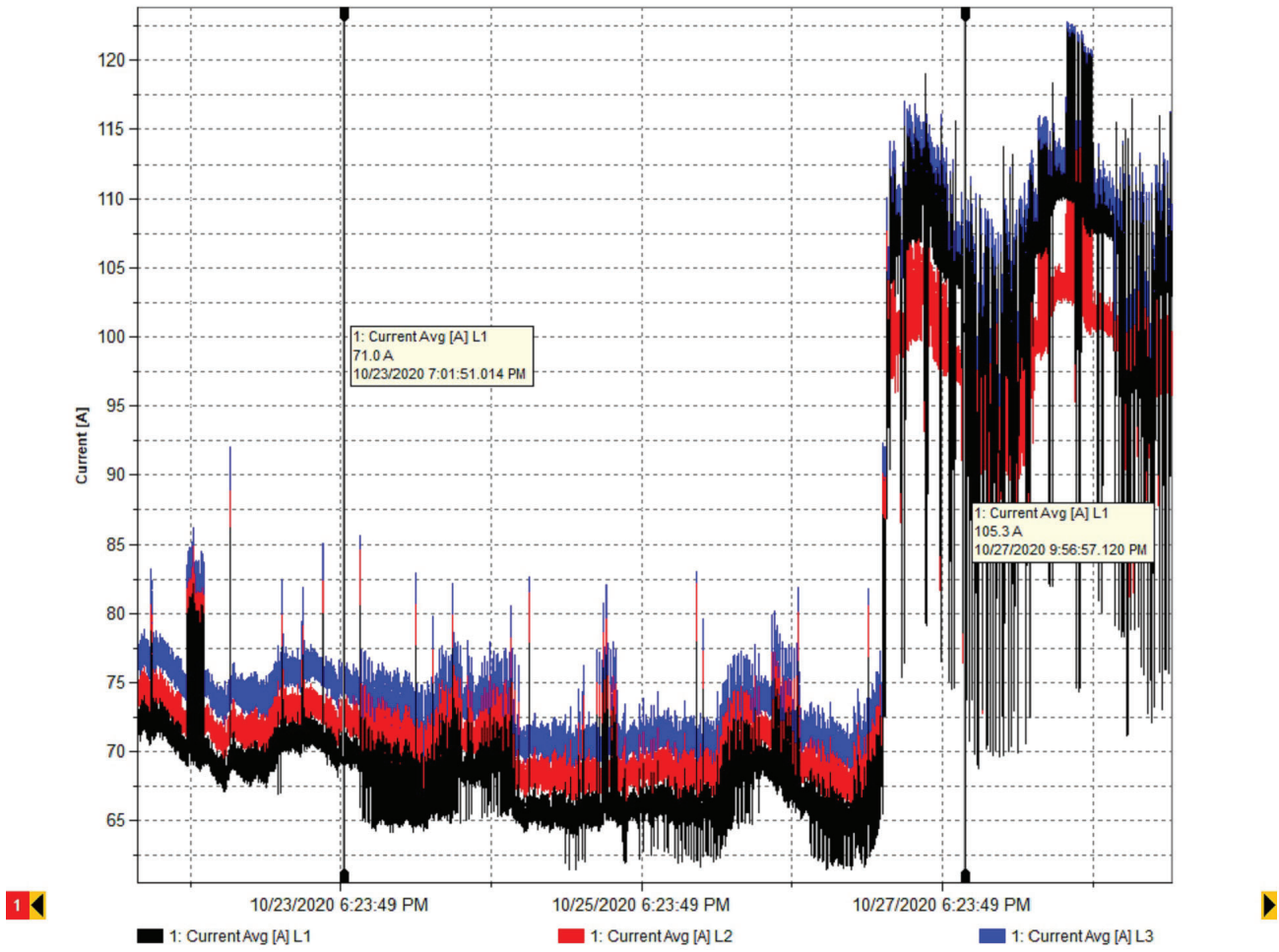
ATS-IT					Logging Information
Current [A]	L1	L2	L3	N	
Max	231.9 A 10/28/2020 2:38:23 PM	221.7 A 10/28/2020 2:27:45 PM	219.6 A 10/28/2020 4:03:13 PM	0.42 A 10/22/2020 10:01:35 AM	Study type: Load study
Avg	78.8 A	78.7 A	82.8 A	0.051 A	Topology: 3-ph Wye
Min	58.0 A 10/26/2020 11:46:52 PM	61.2 A 10/26/2020 4:02:44 AM	63.3 A 10/27/2020 6:08:16 AM	0.0000 A 10/22/2020 10:01:33 AM	Start date: 10/22/2020 10:01:32 AM
Frequency [Hz]	L1	L2	L3	N	
Max	60.38 Hz 10/28/2020 2:26:43 AM				End date: 10/29/2020 6:55:57 AM
Avg	60.00 Hz				Duration: 6d 20h 54m 25s
Min	59.35 Hz 10/26/2020 3:06:01 AM				Averaging interval: 1sec
A THD [%]	L1	L2	L3	N	Number of averaging intervals:

Averaging interval:

	Configured Interval length
ATS-IT	1sec



A, Hz, THD graph



Graph Options:

Logging Sessions	ID
ATS-IT	1

Left Scale Options	L1 (A)	L2 (B)	L3 (C)	N	Total	Min/Max
Curr [A]	X	X	X			