



REQUEST FOR PROPOSALS

(C3) RFP E21-084

DESIGN and CONSTRUCTION ADMINISTRATION SERVICES for the CBJ TRANSIT SYSTEM ELECTRIC BUS CHARGING SYSTEM

Issued by:  Date: 12/15/2020
Greg Smith, Contract Administrator

**DESIGN and CONSTRUCTION ADMINISTRATION SERVICES
for the
CBJ TRANSIT SYSTEM ELECTRIC BUS CHARGING SYSTEM
(C3) RFP E21-084**

SCOPE OF SERVICES: The City and Borough of Juneau (CBJ) is requesting proposals from qualified consultants to provide design and construction administration services for the CBJ Transit System Electric Bus Charging System.

PRE-PROPOSAL MEETING: A non-mandatory pre-proposal meeting will be held via conference call, at **10:00 a.m., Alaska time on December 23, 2020.** Persons interested in submitting proposals are encouraged to attend. Proposers intending to participate via teleconference shall request the call-in information by emailing contracts@juneau.org by 4:30 p.m., on December 22, 2020.

QUESTIONS REGARDING THIS RFP: Greg Smith, Contract Administrator, phone 907-586-0873, fax 907-586-4530, greg.smith@juneau.org is the sole point of contact for all issues pertaining to this procurement.

DEADLINE FOR PROPOSALS: 2 printed copies of the proposal and an Adobe PDF copy of the proposal on a disc or Thumb Drive shall be provided in a ***sealed envelope***. Sealed envelope containing the proposal must be received by the Purchasing Division prior to 2:00 p.m. Alaska Time on January 8, 2021, or such later time as the Contract Administrator may announce by addendum to planholders at any time prior to the submittal date. Proposals will be time-stamped by the Purchasing Division, which will establish the official time of receipt of proposals. Late proposals will not be accepted and will be returned unopened. Faxed or emailed proposals will not be accepted.

Note: Mailing/delivery times to Alaska may take longer than other areas of the U.S.

Proposal documents delivered in person* or by courier services must be delivered to:

PHYSICAL LOCATION:

City and Borough of Juneau, Purchasing Division
105 Municipal Way, Room 300
Juneau, AK 99801

Proposal documents delivered by the U.S. Postal Service must be mailed to:

MAILING ADDRESS:

City and Borough of Juneau, Purchasing Division
155 South Seward Street
Juneau, AK 99801

The CBJ Purchasing Division's phone number is 907-586-5258, and fax number 907-586-4561.

* A face covering must be worn in the 105 Municipal Way building per the CBJ Emergency Ordinance No. 2020-45

Please affix the label below to the outer envelope in the lower left hand corner.

IMPORTANT NOTICE TO PROPOSER
<p>To submit your proposal:</p> <ol style="list-style-type: none">1. Print your company name and address on the upper left corner of your envelope.2. Complete this label and place it on the lower left corner of your envelope
<div><p>RFP NUMBER: <u>E21-084</u></p><p>SUBJECT: <u>CBJ TRANSIT SYSTEM ELECTRIC</u> <u>BUS CHARGING SYSTEM</u></p><p>DATE OF OPENING AT 2:00 P.M. ALASKA TIME</p><p>_____</p></div>
SEALED PROPOSAL

Disadvantaged Business Enterprises are encouraged to respond.

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1.0 GENERAL INFORMATION

This Class 3 Request for Proposals (RFP) defines the scope of the project, explains the procedures for selecting a firm to provide the requested services, and defines the documents required to respond to the RFP.

1.1 Purpose

The purpose of this document is to solicit proposals from qualified consultants to provide design and construction administration services for the CBJ Transit System Electric Bus Charging System.

The Class 3 process is used for acquisition of professional service contracts estimated to be more than \$50,000.

1.2 Scope of Services –REISSUE VERSION FOR FTA SOURCE FUNDING (Design)

The Consultant shall perform all necessary professional design and construction administration services for upgrades to the electrical supply and distribution system at the Capital Transit Bus Barn facility. Interested proposers are informed that this project utilizes Federal funds and the selected consultant will comply with all Federal requirements

Key services to be provided by the Consultant include but are not limited to the following tasks:

TASK 1- DESIGN & INSTALLATION OF ELECTRICAL UPGRADES TO SUPPORT EIGHT (8) ADDITIONAL ELECTRIC BUSES BY April 2022. 100% Bid ready Deliverables due on APRIL 1, 2021.

- Review advances in electric bus and charging technology and provide a technical memo that compares Proterra's with competing manufacturers and design approaches.
- Design electrical distribution upgrades including a new outdoor transformer, associated conduits and cabling, with dual dispenser chargers to support eight new Proterra electric buses. Delivery is anticipated by July, 2022.
- Study costs and suitability of a new backup electrical generator and examine alternative electrical storage devices, such as a battery bank.
- Using performance data obtained during initial operations with Capital Transit's 40' Proterra bus in fall 2020, or from Proterra's data for comparable cities, prepare a technical report with findings, graphs and comparisons showing driving range achieved during various weather conditions and routes, compare range performance, reliability and costs with existing Diesel buses, and identify the optimal use on select bus routes.
- Study the costs, advantages and disadvantages of locating alternate overnight or a quick 'top off' charging station located at the Downtown Transit Center or the new Valley Transit Center, and prepare a technical memo with recommendations.
- Attend four (4) design meetings with Capital Transit staff and CBJ Project Manager at the Pre-Design, Schematic, 65% and 95% design levels.
- Attend and present project information and findings at one (1) CBJ public meeting, date and time to be determined.
- Prepare Construction cost estimates at the 65% and 95% design levels.
- Prepare 95% design documents including drawings, specifications, and detailed construction cost estimate for Owner review by **March 1, 2021**.

- Provide 100% Bid Ready design documents including drawings and specifications by **April 1, 2021.**

Bidding Services- (Estimated Bid Opening in May 2021)

- Attend Pre-Bid Meeting and answer Bidders questions. Provide written responses Addenda.
- Provide conformed construction documents incorporating all addenda.
- Provide written clarifications and answers to Contractor's questions.
- Review Contractor submittals for conformance with design specifications.
- Assist the Owner with questions relating to the Electrical or Building Permit review as required.

Construction Administration Services-

- Review and respond to Contactor RFIs.
- Participate in weekly progress meetings as required.
- Prepare RFP's to the Contractor as required.
- Evaluate change order cost proposals as required.
- Provide periodic site observations of work to ensure compliance with the Contract Documents.
- Generate Notice of Deficient Work reports when Contractor work deviates from Contract Documents.
- Evaluate Contractor Applications for Payment.
- Substantial completion inspection and final completion inspections with reports. .
- Review and respond to Contractor closeout submittals.

TASK 2- MASTER PLAN DOCUMENT FOR FLEET TRANSITION FROM DIESEL TO ELECTRIC BUSES

Deliverables due on October 1, 2021.

- Meet with Capital Transit staff to prepare a master plan to transition to an all-electric bus fleet of 18 buses by 2030. Plan should factor existing bus routes, daily mileage covered, and an optimized charging scheme for the Capital Transit facility. Prepare a load study, energy cost analysis and estimated construction costs. Document will include bus parking and charging drawing, electrical distribution schematic plans, detailed electrical equipment materials lists, building modifications as required, and a projected total construction cost estimate.
- Write position papers and produce data driven technical reports to support CBJ's position in the event that AEL&P begins Regulatory cancellation of Rate 91, the overnight charging discount rate.
- Attend and present master plan document at two (2), CBJ stakeholder committee meetings in either private or public forums, Exact dates and times to be determined.

1.3 Completion

Task 1 100% Bid ready documents due **April 1, 2021.**
Task 2 100% Master Plan Report due on **October 1, 2021.**

1.4 CBJ CAPITAL TRANSIT FACILITY: General Information and 1st Proterra bus.

The Capital Transit Bus Barn is located at 10099 Bentwood Place in Juneau and includes indoor heated bus storage adequate for eighteen (18), 35' length buses. A 2017 renovation and addition added 13,000 square feet. The electrical service with new distribution panels were installed but sized for new additions only. Also, the existing 25 kW backup diesel generator is undersized for the existing facility. One 40 foot long Proterra electric bus is scheduled to be delivered in October, 2020 and required electrical upgrades and installation of the initial dual dispenser charging unit is in process.

The Owner will provide the Design Consultant with existing building plans and reference information in .pdf, jpeg and AutoCad as required to support the design.

1.5 Questions

Questions regarding this proposal should be directed to:

Greg Smith, Contract Administrator
City and Borough of Juneau
ENGINEERING DEPARTMENT
Marine View Center – 3rd Floor
230 South Franklin Street
Juneau, Alaska 99801

email: Greg.Smith@juneau.org
Telephone: (907) 586-0873
Fax: (907) 586-4530

Office hours are 8:00 a.m. to 4:30 p.m. local time, Monday through Friday.

1.6 Standard Contract Language

Attached to this RFP is the CBJ's standard contract (Attachment 1) which should be carefully reviewed by proposers, as it is the form of agreement that the CBJ intends that the selected Consultant sign in the event of acceptance of its proposal.

2.0 Rules Governing Competition

2.1 Pre-Proposal

Proposers should carefully examine the entire RFP and any addenda thereto, and all related materials and data referenced in the RFP. Proposers should become fully aware of the nature of the services requested and the conditions likely to be encountered in performing the services.

2.2 Proposal Development

The content of proposals will be kept confidential until the selection of the Consultant is publicly announced. All materials submitted in response to this RFP will become the property of the CBJ. One copy shall be retained for the official files of the Engineering Department and will become public record after announcement of the successful Proposer. The CBJ will not return proposals to the Proposer. The CBJ reserves the right to reject any or all proposals. Proposals are to be prepared in such a way as to provide a straightforward, concise delineation of the Proposer's capabilities to satisfy the requirements of this RFP. Emphasis should be

concentrated on conformance to the RFP instructions, responsiveness to the RFP requirements, and on completeness and clarity of content.

This solicitation does not commit CBJ to select any Consultant(s) for the requested services. All costs associated with the respondents' preparations, submission and oral presentations (if applicable) shall be the responsibility of the Proposer.

All proposals must be signed. Proposals must be received in the number of copies stated in the RFP no later than the date and time specified in the cover letter. All copies of the proposals must be under sealed cover and plainly marked. Proposals not received by the date and time specified in the cover letter will not be considered.

2.3 Disclosure of Proposal Contents.

The City and Borough of Juneau, a municipal corporation and political subdivision of the State of Alaska, is subject to the Alaska Public Records Act codified at AS 40.25.100-220, and the public records provisions in the CBJ Charter, section 15.7. The contents of proposals submitted in response to this RFP will be kept confidential until the top ranked proposer is announced. Immediately following announcement, all proposals become public information. Trade secrets and other proprietary data contained in a proposal may be held confidential, to the extent allowed by law, by the Purchasing Officer, upon request in writing by a proposer. Material considered confidential by the proposer must be clearly identified and marked (page, section, etc) by the proposer, and the proposer must include a brief statement that sets out the reasons for confidentiality. Marking the entire proposal confidential is not acceptable and may be cause for the City to reject your proposal as non-responsive.

3.0 PROPOSAL CONTENT REQUIREMENTS

Proposals are limited to a maximum of 12 numbered pages excluding personal resumes and licenses. Professional licenses and resumes are to be attached to proposal and are also limited to 12 pages. To achieve a uniform review process and obtain the maximum degree of comparability for the Selection Committee, proposals should be organized in the manner specified below:

3.1 Title Page

Show the RFP subject, the name of the firm, address, telephone numbers, and name of contact person and date of submission.

3.2 Table of Contents

Clearly identify the materials by selection and page number.

3.3 Letter of Transmittal

Limit to one or two printed pages.

3.3.1 Briefly state the firm's understanding of the proposal requirements and summarize your capability to meet same.

- 3.3.2 Give names of the person(s) who will be authorized to represent the firm, their title(s), address(es) and telephone number(s).
- 3.3.3 The transmittal letter must be signed by a representative who has authority to bind the firm. Name and title of the individual signing the proposal must be printed below or adjacent to the signature.
- 3.3.4 ***Acknowledge receipt of all addenda.*** Failure of to acknowledge addenda may result in the proposal being considered non-responsive and subject to rejection.

3.4 Scope of Services an Work Plan

- 3.4.1 Discuss the Scope of Services and how the firm will provide the desired services. Include a statement of approach and methodology for accomplishing the requested services.
- 3.4.2 Provide a work plan which includes a proposed project schedule. This schedule should identify major tasks and critical components of the project. If the Consultant's team anticipates delays or problems with the design schedule, describe these issues in detail.
- 3.4.3 Discuss the incorporation of this project into the firm's current workload and the ability of the Consultant's team to meet the project schedule. Provide a staff schedule, identifying primary personnel and subconsultants and their proposed work schedule during different phases of the project. How much priority can/will this project be given?

3.5 History and Experience

- 3.5.1 Provide company names, individual contacts, and telephone numbers of references for at least two similar projects which are of the same general concept requested in this RFP.
- 3.5.2 Provide general background information on the firm including specialized experience, capabilities, and unique qualifications in the field. This should include information outlining the firm's experience in the specific professional services requested.

3.6 Proposer's organization and Personnel Qualifications

- 3.6.1 Describe the organizational structure of the Consultant team for this project with an organizational chart or other diagrammatic explanation. Describe how this project fits into the firm's over-all organization.
- 3.6.2 Specify the project manager and other personnel who will be directly providing services for the CBJ in various areas of the described project and state their position. The names, titles and resumes of listed personnel should be provided. Please indicate the experience of each member specifically as it applies to this type of project.

3.7 Licenses

Professional registration (Engineer/Architect/Land Surveyor/Landscape Architect) in the State of Alaska at the time of proposal submission is required (Alaska Statute 08-48-281).

If a corporate license is held, the professional licensed in the State of Alaska (in order to obtain a corporate license) must be in responsible charge of the project, as well as the professional stamping the work.

All survey work involving property or boundary surveys must be stamped by a Professional Land Surveyor licensed in the State of Alaska.

All reports prepared by a registered professional licensed in the State of Alaska must be stamped by the registered professional.

The proposal must include a statement indicating that all required corporate, all required professional occupational licenses and all other necessary licenses/certifications are currently held. License/certification numbers must be provided.

4.0 EVALUATION OF PROPOSALS

4.1 Criteria

Proposals will be evaluated and scored, using the criteria on the EVALUATION/RANKING page, found at the end of this document, in order to ascertain which proposal best meets the needs of the CBJ. The items to be considered during the evaluation and the associated point values are located on the EVALUATION/RANKING sheet at the end of this RFP.

4.2 Evaluation Data

The evaluation Data discussed below is presented in an effort to delineate what criteria will be used to score proposals. Please do not include a separate section in your proposal for Evaluation Data. Much of the information discussed and requested below should be included in the proposal as part of the Proposal Content Requirements discussed in SECTION 3.0 of this RFP.

4.2.1 Proposed Method to Accomplish the Project

- a. Work schedule and methodology will be evaluated according to budget sensitivity, efficiency, completeness and pertinence of the tasks submitted by the Proposer, as well as the creativity and logic of the overall approach. The proposal should show interest and insight about this project.

4.2.2 Organization, Capacity of Firm and Personnel Qualifications

- a. Evaluation will be made of the Proposer's organization and the ability to perform the desired services within the established schedule.
- b. Evaluation will be made based on proposed personnel, their relevant qualifications and experience, and their proposed scale of involvement.

4.2.3 Relevant Experience and Past Record of Performance

Evaluation will be made of the Proposer's experience with projects of similar scope and scale, as well as other projects with the CBJ, other government agencies and private industry.

4.2.4 Quality of the Proposal

Is proposal clear and concise? Is proposal responsive to the needs of the project? Evaluation will include the clarity and professional quality of the document(s) submitted.

4.3 **Evaluation Process**

Evaluation of the proposals will be performed by a committee selected by the City and Borough of Juneau. The intent of the CBJ is to make award based on written proposals.

5.0 **SELECTION AND AWARD**

An evaluation committee will review, evaluate, score and rank proposals, in accordance with criteria identified below and the Evaluation/Ranking sheet located at the end of this RFP. Clarification of submitted material may be requested during the evaluation process. Interviews by telephone with top ranked Proposers may also be conducted at the discretion of the evaluation committee. If necessary, in-person interviews will be conducted. Finalists will be notified and informed of interview requirements. In the event of a tie in the ranking totals, only the raw scores of the Proposers who are tied will be totaled to determine the appropriate ranking. The successful Proposer will be invited to enter into contract negotiations with CBJ. Upon conclusion of successful negotiations and compliance with any pre-award obligations, award will be made in the form of a contract and a purchase order, if appropriate, will be sent to the Consultant. If an agreement cannot be reached during the negotiation process, the City will notify the Proposer and terminate the negotiations. Negotiations may then be conducted with the next Proposer in the order of its respective ranking.

6.0 **INSURANCE REQUIREMENTS**

The insurance requirements for this project are specified in Attachment 1 – Sample Contract, under Appendix C.

7.0 **PROTESTS**

The protest period begins with the posting of a notice of apparent successful proposer, in the CBJ Purchasing Division.

Protests shall be executed in accordance with CBJ Ordinance 53.50.062 PROTESTS and 53.50.080 ADMINISTRATION OF PROTEST. Copies of the ordinances describing protest procedures are available from the CBJ Purchasing Division, 155 South Seward Street, Juneau, Alaska. Questions concerning protests or protest procedures should be directed to the CBJ Purchasing Officer at 907-586-5258. CBJ Ordinance 53.50 can be viewed electronically at the following internet address: www.juneau.org/law.

8.0 CONSULTANT'S GOOD STANDING WITH CBJ FINANCE DEPARTMENT

Consultants must be in good standing with the CBJ prior to award, and prior to any contract renewals, and in any event no later than **seven business days** following notification by the CBJ of intent to award. **Good standing** means: all amounts owed to the CBJ are current and the Consultant is not delinquent with respect to any taxes, fees, assessment, or other monies due and owed the CBJ, or a Confession of Judgment has been executed and the Consultant is in compliance with the terms of any stipulation associated with the Confession of Judgment, including being current as to any installment payments due; and Consultant is current in all CBJ reporting obligations (such as sales tax registration and reporting and business personal property declarations). Failure to meet these requirements may be cause for rejection of your proposal. To determine if your business is in good standing, or for further information, contact the CBJ Finance Department's Sales Tax Division at (907) 586-5265 for sales tax issues, Assessor's Office at (907)586-0930 for business personal property issues, or Collections Division at (907) 586-5268 for all other accounts.

PROPOSAL EVALUATION FORM

CONSULTING FIRM: _____

Section	Criteria - Per SECTION 4.2 of RFP	Weight (%)	Outstanding (10 points)	Adequate To Good (6 7 or 8 points)	Marginally Acceptable (3 or 4 points)	Unacceptable (0 or 1 point)	Sub Total
4.2.1	Proposed Method to Accomplish the Project.	25					
4.2.2	Organization, Capacity of Firm and Personnel Qualifications						
a.	Organization and ability to perform services within desired schedule	20					
b.	Experience of proposed personnel and scale of involvement.	30					
4.2.3	Relevant Experience and Past Record of Performance	20					
4.2.5	Quality of Proposal	5					
GRAND TOTAL							

Scoring

No scores using 2, 5, 9

Outstanding = 10

Adequate to Good = 6, 7, 8

Marginally Acceptable = 3 or 4

Unacceptable or Poor = 0 or 1

Juneau Proposer Points awarded by Contracts Division = 10 or 0 points

Maximum Score Achievable = 1,000

Evaluator _____ Rank _____ Date _____

Capital Transit System Electric Bus Charging System
 Design and Construction Administration
 Contract No. RFPE21-084



ATTACHMENT 1

**PROFESSIONAL SERVICES CONTRACT
DESIGN and CONSTRUCTION ADMINISTRATION SERVICES
for the CBJ TRANSIT SYSTEM ELECTRIC BUS CHARGING SYSTEM
Contract No. RFP E21-084**

This Agreement is entered into by and between the City and Borough of Juneau, Alaska ("City"), and _____ company name _____ whose address is _____ phone and fax _____ ("Consultant").

Witnesseth:

Whereas, the City desires to engage the Consultant for the purpose of rendering certain professional services, and

Whereas, the Consultant represents that it is in all respects licensed and qualified to perform such services;

Now, Therefore, the parties agree as follows:

1. CONTRACTUAL RELATIONSHIP. The parties intend that an independent Consultant/City relationship will be created by this Contract. City is interested only in the results to be achieved, and the conduct and control of the work will lie solely with the Consultant. Consultant is not considered to be an agent or employee of City for any purpose, and the employees of Consultant are not entitled to any benefits that City provides for City's employees. It is understood that the City does not agree to use the Consultant exclusively. It is further understood that the Consultant is free to contract for similar services to be performed for others while it is under contract with the City.

2. SCOPE OF SERVICE. The Consultant shall carry out in a professional and prudent manner all of the services required by the Contract. These services include all of the services described in Appendix A. Consultant will diligently proceed with the Scope of Services, and will provide such services in a timely manner.

3. PERSONNEL, EQUIPMENT, SUPPLIES, AND LICENSES.

- (A) Except as noted in Appendix A, the Consultant represents that it has or will secure at its own expense all personnel, equipment, and supplies required in performing the services under this Contract.
- (B) All of the services required hereunder will be performed by the Consultant or under its supervision.
- (C) None of the work or services covered by this Contract shall be subcontracted without prior written approval of the Contract Administrator.
- (D) Consultant warrants that it is fully licensed under all applicable local, state, and federal laws to perform the services to be provided hereunder.

4. TIME OF PERFORMANCE. The services of the Consultant are to commence after the execution of the Contract and issuance of Notice to Proceed and Purchase Order. All work shall be completed no later than the time specified in Appendix A. Amendment to this Contract may be made upon mutual, written agreement prior to the contract expiration date.

5. REPORTING. Except as authorized within Appendix A, the City's primary representative for this Contract shall be Steve Tada. The City Manager shall be an alternate representative. The City shall not be liable for Consultant's expenses incurred in reliance on directions received from any other municipal officer or employee. The Consultant's representative shall be _____.

6. COMPENSATION. The City agrees to pay the Consultant according to the schedule attached as Appendix B. The Consultant's estimated fee schedule is attached to Appendix B.

7. TERMINATION OF CONTRACT FOR CAUSE. If, through any cause, except causes beyond the control of the Consultant, the Consultant shall fail to fulfill in a timely and proper manner its obligations under this Contract; or if the Consultant shall violate any of the covenants, agreements, or stipulations of this Contract, the City shall have the right to terminate this Contract by giving written notice to the Consultant of such termination and specifying the effective date thereof, at least ten days before the effective date of such termination. In that event, all finished or unfinished documents, or other data, in whatever form, prepared by the Consultant under this Contract shall, at the option of the City, become its property, and the Consultant shall be entitled to receive just and equitable compensation for any satisfactory work completed on such documents and materials, not to exceed the Contract amount.

8. TERMINATION FOR CONVENIENCE OF CITY. The City may terminate this Contract at any time by giving written notice to the Consultant of such termination and specifying the effective date thereof, at least thirty days before the effective day of such termination. In that event, all finished or unfinished documents and other materials as described in paragraph 7 above shall, at the option of the City become its property, and the Consultant will be paid an amount not to exceed the sum set forth in Appendix B for work satisfactorily completed on or before the date of termination, less payments of compensation previously made.

9. CONTRACT AGREEMENT. All parties mutually agreed to the terms of this Contract. The Contract should not be construed in favor of or against any party. This Contract contains the entire agreement between the parties; there are no other promises, terms, conditions, or obligations other than those contained herein; and this Contract shall supersede all previous communications, representations or agreements, either oral or written, between the parties.

10. CHANGES. The City may, from time to time, require changes in the scope of services to be performed under this Contract. Such changes, including any increase or decrease in the amount of the Consultant's compensation, must be mutually agreed upon in writing before they will be regarded as part of this Contract.

11. EQUAL EMPLOYMENT OPPORTUNITY. The Consultant will not discriminate against any employee or applicant for employment because of race, color, religion, sex, or national origin.

12. CONFLICTS OF INTEREST. Consultant agrees that no employee of the City who has exercised or will exercise any authority over the specifications, procurement, supervision or payment for this Contract, and no member of the employee's immediate family, has had or will have any direct or indirect financial interest in this Contract. If the Consultant learns of any such

interest, the Consultant shall without delay inform the City Attorney or one of the officers specified in Paragraph 5.

13. ETHICS. Consultant shall discharge its duties fairly, impartially and maintain a standard of conduct that competently serves the City and the interests of the City. Consultant shall at all times exercise unbiased judgment when performing its duties under this contract.

14. PUBLIC RELATIONS. Consultant shall issue press releases, respond to press inquiries, make public speeches, appear on broadcast media or otherwise engage in public relations regarding the project only with the specific approval of the CBJ Project Manager.

15. ELECTED OFFICIALS. The Consultant shall respond to project-related inquiries from elected officials by providing impartial, factual information, but shall not initiate contact or attempt to persuade an elected official to agree with any viewpoint or to take any official action. The Consultant will promptly notify the Project manager of any request by an elected official for project-related information.

16. ASSIGNABILITY. The Consultant shall not assign any interest in this Contract and shall not transfer any interest in the same without the prior written consent of the City; however, claims for money due or to become due to the Consultant from the City under this Contract may be assigned to a bank, trust company, or other financial institution without approval. Notice of any such assignment or transfer shall be furnished promptly to the City.

17. FINDINGS CONFIDENTIAL. Any information given to or prepared by the Consultant under this Contract which the City requests to be kept as confidential shall not be made available to any individual or organization by the Consultant without the prior written approval of the City.

18. IDENTIFICATION OF DOCUMENTS. All reports, maps, and other documents completed as a part of this Contract, other than documents exclusively for internal use within the City, shall carry a City notation or logo as directed by the City.

19. PUBLICATION, REPRODUCTION, AND USE OF MATERIALS. No services, information, computer program elements, reports or other deliverables which may have a potential patent or copyright value produced in whole or in part under this Contract shall be subject to copyright in the United States or any other country.

If a copyright applies by law to the work produced under this Contract, that copyright will either be signed over to the City or the City will be given unrestricted license to the copyright. The City shall have unrestricted license to publish, disclose, distribute, and otherwise use, in whole or in part, any reports, data, or other materials prepared under this Contract. If this Contract includes architectural and/or engineering design services, any use of the design features or details produced under this Contract on other City facilities will be at the City's risk.

20. RECORDS. During performance and after termination of this Contract, each party shall make available to the other party for inspection and copying, all records, whether external or internal, having any relevance to this Contract.

21. INSURANCE REQUIREMENTS. Consultant has secured and agrees to keep and maintain in full force and effect, at its own expense, the insurance approved by CBJ Risk Management as outlined in Appendix C. At least 30 days prior to the cancellation, non-renewal

22. INDEMNIFICATION AND HOLD HARMLESS. The Consultant agrees to defend, indemnify, and hold harmless CBJ, its employees, and authorized representatives, with respect to any action, claim, or lawsuit arising out of or related to the Consultant's negligent performance of this contract without limitation as to the amount of fees, and without limitation as to any damages, cost or expense resulting from settlement, judgment, or verdict, and includes the award of any attorney's fees even if in excess of Alaska Civil Rule 82. This indemnification agreement applies to the fullest extent permitted by law, meaning that if there is a claim of, or liability for, a joint act, error, or omission of the consultant and the CBJ, the indemnification, defense, and hold harmless obligation of this provision shall be apportioned on a comparative fault basis. This agreement is in full force and effect whenever and wherever any action, claim, or lawsuit is initiated, filed, or otherwise brought against CBJ relating to this contract. The obligations of Consultant arise immediately upon actual or constructive notice of any action, claim, or lawsuit. CBJ shall notify Consultant in a timely manner of the need for indemnification, but such notice is not a condition precedent to Consultant's obligations and may be waived where the Consultant has actual notice.

24. SUCCESSORS. This Contract shall be binding upon the successors and assigns of the parties.

25. PRECEDENCE OF DOCUMENTS. In the event of a conflict between the provisions of this document and its appendices, the order of precedence shall be this document, Appendix A, Appendix B and Appendix C.

CITY AND BOROUGH OF JUNEAU

Company name

Approved as to content:

Greg Smith
Contract Administrator

Date

**APPENDIX A: SCOPE OF SERVICES
DESIGN and CONSTRUCTION ADMINISTRATION SERVICES
for the CBJ TRANSIT SYSTEM ELECTRIC BUS CHARGING SYSTEM
Contract No. RFP E21-084**

See Scope of Services in RFP.

PERSONNEL: The Consultant's primary personnel for this work will be:

The completion date for this project is July 1, 2021

This contract expires on December 31, 2021, unless an amendment changing this date is fully executed prior to December 31, 2021.

**APPENDIX B: COMPENSATION
DESIGN and CONSTRUCTION ADMINISTRATION SERVICES
for the CBJ TRANSIT SYSTEM ELECTRIC BUS CHARGING SYSTEM
Contract No. RFP E21-084**

Amount of Payment

Lump Sum

Consultant shall be compensated a lump sum amount of \$_____ for satisfactory performance of all [or specific services] services described in this contract.

Time and Materials

Consultant shall be compensated based on time and materials, a not-to-exceed amount of \$_____ for satisfactory performance of _____ services described in this contract.

Hourly rates shall remain the same for the life of this contract including all amendments, unless the Consultant requests a rate increase. Hourly rate increases may be negotiated on a yearly basis and shall not exceed the percentage increase of the Anchorage Consumer Price Index.

The total Contract amount shall be \$_____

Method of Payment

Monthly Payable within 30 days of receipt of an invoice approved by the project manager and progress report stating the amount of services completed.

Consultant Invoice Requirements

- Itemized invoices must be submitted that indicate the services performed.
- Invoices for this contract must be submitted separately from invoices for services performed under any other contract(s).
- Invoices must include the CBJ Contract Number and Purchase Order numbers.

Compensation Based on Time and Materials

If compensation is based on time and materials, the following shall apply:

Compensation shall be computed based on the hourly billing rates, approved by the CBJ Project Manager, times the actual number of hours spent in the performance of services. The hourly billing rate for each employee is the amount to be paid to the Consultant, and is full compensation for all salary, benefits, taxes, overhead and profit. There shall be no additional compensation for overtime, weekend, or holiday work.

Compensation for subconsultants shall be equal to the amounts actually paid to sub-consultants hereunder plus a negotiated mark-up percentage.

Compensation for expenses shall be an amount equal to reimbursable expenses approved in

Attachment 1 – Standard Contract

Contract No. RFP E21-084 for Design & CA for the CBJ Transit System Electric Bus Charging System

with _____

advance by the CBJ Project Manager, necessary and reasonably incurred and actually paid by the Consultant in the performance of the services hereunder. No markup allowance is allowed. Reimbursable expenses are expenses that are unique to the performance of the services under the Contract and generally contemplate the purchase of outside ancillary services, such as mailing and delivery charges for submittal of drawings, specifications and reports, long distance telephone calls, rentals of equipment, travel and local transportation, meals and lodging on overnight trips.

Reimbursable expenses do not include expenses that are usually and customarily included as part of the Consultant's overhead. For the purposes of this Agreement reimbursable expenses do not include amounts for typing, utilization of computer systems, computer aided design and drafting (CADD), cameras, recording or measuring devices, flashlights and other small, portable equipment, safety supplies, phones, telephone calls, electronic messaging including FAX, Telex and telegrams, or expendable office supplies. Unless otherwise indicated, required insurance is not a reimbursable expense.

The Consultant shall obtain the CBJ Project Manager's written approval prior to making expenditures for reimbursable expenses in excess of \$500 per specific expenditure and for all overnight trips which are reimbursable expenditures as set forth above. The Consultant shall substantiate all billings for reimbursable expenses in excess of \$25 with receipted bills and provide said receipts with the appropriate billing.

The Consultant shall keep, and cause any sub-consultants to keep, daily records of the time spent in the performance of services hereunder by all persons whose billing rates will be the basis for compensation as well as records and receipts of reimbursable expenditures hereunder. Failure to do so shall be a conclusive waiver of any right to compensation for such services or expenses as are otherwise compensable hereunder.

The CBJ shall have the right to inspect all records of the Consultant, and of any sub-consultants, pertaining to this project. Records shall be maintained by the Consultant and sub-consultants for a period of three years after completion of services.

When travel is necessary as part of the professional services to be provided, the following shall be followed:

- ◆ Airline tickets should be purchased at the 14 day advanced purchase price. The CBJ will not pay for First Class travel. Any deviation shall be approved in writing in advance by the CBJ Project Manager.
- ◆ Per diem meal allowance shall be: \$60.00 (\$12.00 for breakfast, \$16.00 for lunch and \$32.00 for dinner).
- ◆ The Consultant shall stay at the hotel with a daily rate not to exceed \$150.00.
- ◆ Travel agent fees, tips, alcohol or bar tabs shall not be paid by the CBJ.
- ◆ Car rental, parking, and taxi fees shall be reasonable and not excessive. This reimbursement is for services in Juneau only. Parking fees, etc. outside of Juneau will not be reimbursed.

APPENDIX C: INSURANCE REQUIREMENTS
DESIGN and CONSTRUCTION ADMINISTRATION SERVICES
for the CBJ TRANSIT SYSTEM ELECTRIC BUS CHARGING SYSTEM
Contract No. RFP E21-084

The Consultant must provide certification of proper insurance coverage and amendatory endorsements or copies of the applicable policy language affecting coverage required in this agreement to the City and Borough of Juneau. Failure of the City to demand such certificate or other evidence of full compliance with these insurance requirements or failure of the City to identify a deficiency from evidence that is provided shall not be construed as a waiver of the obligation of the Consultant to maintain the insurance required by this contract.

Consultant agrees to maintain insurance as follows at all times while the contract is in effect, including during any periods of renewal.

Commercial General Liability Insurance. The Consultant must maintain Commercial General Liability Insurance in an amount it deems reasonably sufficient to cover any suit that may be brought against the Consultant. This amount must be at least one million dollars (\$1,000,000.00) per occurrence, and two million dollars (\$2,000,000.00) aggregate.

This insurance policy is to contain, or be endorsed to contain, additional insured status for the CBJ, its officers, officials, employees, and volunteers. If Additional insured status is provided in the form of an endorsement to the Contractor's insurance, the endorsement shall be at least as broad as ISO Form CG 20 10 11 85 or **both** CG 20 10, CG 20 26, CG 20 33, or CG 20 38; **and** CG 20 37 forms if later revisions used).

Professional Liability Insurance. The Consultant must maintain Professional Liability Insurance in an amount not less than one million dollars (\$1,000,000.00) aggregate to protect the Consultant from any claims or damages for any error, omission, or negligent act of the Consultant, the Consultant's firm and employees. This requirement applies to the Consultant's firm, the Consultant's subcontractors and assignees, and anyone directly or indirectly employed to perform work under this contract.

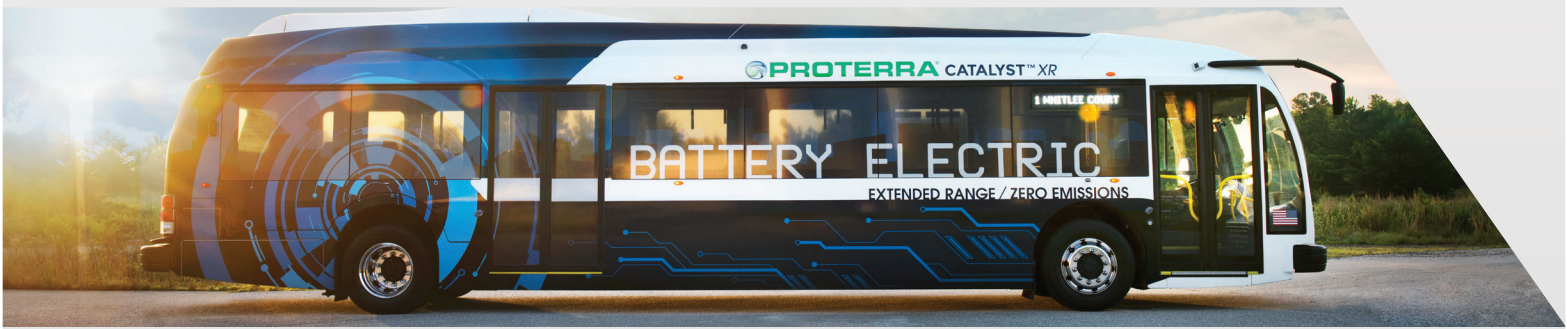
Workers Compensation Insurance. The Consultant must maintain Workers Compensation Insurance to protect the Consultant from any claims or damages for any personal injury or death which may arise from services performed under this contract. This requirement applies to the Consultant's firm, the Consultant's subcontractors and assignees, and anyone directly or indirectly employed to perform work under this contract. The Consultant must notify the City as well as the State Division of Workers Compensation immediately when changes in the Consultant's business operation affect the Consultant's insurance status. Statutory limits apply to Workers Compensation Insurance. The policy must include employer's liability coverage of one hundred thousand dollars (\$100,000.00) per injury, and five hundred thousand dollars (\$500,000.00) policy limits. **If the Consultant is exempt from Alaska Statutory Requirements, the Consultant will provide written confirmation of this status in order for the City to waive this requirement. The policy shall be endorsed to waive subrogation rights against the City.**

Comprehensive Automobile Liability Insurance. The coverage shall include all owned, hired, and non-owned vehicles to a one million dollar (\$1,000,000.00) combined single limit coverage.

ATTACHMENT 2

PROTERRA BUS MANUFACTURER'S BUS CHARGING SYSTEMS PRODUCT INFORMATION SHEETS

THE PROTERRA® CATALYST™ PLATFORM



The Proterra Catalyst™ electric transit vehicle platform delivers unrivaled flexibility and proven performance. Built from the ground-up to be completely optimized as an electric vehicle, the Catalyst is the only purpose-built electric bus on the market. The combination of advanced carbon-composite materials, highest-efficiency electric drivetrain technology and proven battery systems results in the lightest and most efficient vehicle in its class.

The Catalyst offers a flexible, technology-centric approach, with interchangeable battery packs that enable easy upgrades to enhance performance throughout the vehicle's life. The vehicles can be configured to maximize the needs of any urban route and can be easily updated as these needs change. The Catalyst platform is now available in two vehicle sizes, 35 or 40 feet. Both models utilize the same standard, proven components, minimizing spare parts inventory and operational training for our customers.

Proterra's modular approach offers energy storage and charging flexibility. Customers can choose Fast Charge (FC) technology, recharging in less than 10 minutes, with a nominal range of up to 50 miles between charge events, or Extended Range (XR), with a nominal range of up to 180 miles per charge, recharging in about 90 minutes. Collectively, Proterra Catalyst buses offer the longest range per kWh of available energy storage of any bus on the market.

**THE PROTERRA
CATALYST IS THE MOST
VERSATILE ELECTRIC
TRANSIT VEHICLE IN
THE WORLD.**

35 & 40-FOOT PROTERRA® CATALYST™

STANDARD VEHICLE SPECIFICATIONS




DIMENSIONS	40-FOOT CATALYST VEHICLE	35-FOOT CATALYST VEHICLE
• Length (incl. bumpers)	42' 6"	36' 2"
• Height	11' 2"	11' 2"
• Wheelbase	24' 8"	19' 9.2"
• Approach Angle	8.6°	8.6°
• Breakover Angle	7°	8.8°
• Departure Angle	8.7°	9.25°
• Turning Radius	41.9'	36'
• Curb Weight*	27,000 lbs*	26,000 lbs*
• Gross Vehicle Weight*	39,050 lbs*	37,000 lbs*
• FC Battery Pack Weight	524 lbs	524 lbs
• XR Battery Pack Weight	770 lbs	770 lbs
*Will vary based on energy storage configuration. Based on 8 FC battery packs.		
PERFORMANCE		
• Fuel Economy	1.7 kWh/mile (w/ full passenger load and HVAC)	
• Speed	Top Speed: 65 mph	Validation in Progress
• Acceleration (20 mph)	6.8	
INTERIOR		
• Standing Capacity	37	32
• Seating Capacity	40	28
• Door Width	Front 43.2", rear 49.1"	43.3"
• Lighting	LED interior lighting system	
• Handles	Stainless-steel stanchion system	
• Stop Request	ADA pull cord or touch tape stop request	
• Doors	Sensitive edges on both front and rear door	
• Wipers	Electric wipers & washers	
• HVAC	Overhead integrated system	
EXTERIOR		
• Tires	Michelin 305/70R22.5	
• Exterior Lights	LED Exterior Lights	
• Charging	FC and Front Manual Charge	
BRAKES/SUSPENSION		
• Braking System	Front & rear air disk brakes	
• Traction	4-wheel ABS with optional traction control	
• Suspension	Multi Link Air Ride rear suspension	
ELECTRICAL SYSTEM		
• High Voltage	FC: Advanced Lithium Titanate fast-charge energy storage system XR: NMC extended range energy storage system	
• Battery System	Integrated battery management system	
• Low Voltage	Two, Group 31 700 CCA 12v batteries	
DRIVE TRAIN		
• Motor	220 kW peak permanent magnet drive motor	
• Transmission	Proterra 2-speed auto-shift EV transmission	
• Cooling System	Roof-mounted cooling system	
ADA		
	Two ADA locations; one on each side of the aisle directly behind the front wheel wells	
	ADA securement system	
	Front ADA power wheelchair ramp (4:1, 6:1 slope)	
	Rear door modesty panels	
	Employs new APAT seating system	
	Aisle width: 35.5"	
WARRANTY		
	Complete Bus - 1 year or 50,000 miles	
	6 year Battery Warranty	
	Extended warranties and service contracts available upon request	

60KW POWER CONTROL SYSTEM

SPECIFICATION




General		
Model	60 kW Power Control System	
Part Number	031738	
Required system components	Proterra Dispenser CCS Type 1 Cable	
Electrical Input		
Nominal Power – Continuous	66 kVA	
Input Voltage	480VAC, 5-Wire WYE (L1, L2, L3, Neutral, Ground)	
Input Current	79A @ 480VAC, 60Hz	
Input Frequency	60 Hz	
Power Factor	>0.995	
Maximum Efficiency	>95%	
THD – Full Power	<3%	
Electrical Output		
Output Power Capability – Continuous	60 kW	
Output Voltage	270 – 870 VDC	
Output Current	± 200ADC	
Charging Module	Remote dispenser with vehicle interface	
Mechanical		
Cooling	Air cooling	
Weight	1400 lb	
Dimensions	Width	31.5 inches
	Depth	23.6 inches
	Height	70.8 inches
Environmental Rated	NEMA 3R	
Wall Clearance	Side	6 inches
	Back	1 inch
Adjacent Unit Clearance	Side	1 inch gap
	Back	1 inch gap
Door Clearance	Facing open space	36 inches
	Facing another door	48 inch gap
Environmental		
Operational Temperature Range	-35°C to 55°C	
Humidity	0% to 95%	
Altitude	De-rates over 2000m above sea level	
Communications Protocols		
Remote management	OCPP 1.6 via 4G Cellular	
Vehicle Communication	SAE J1772 CCS	
Certifications		
UL	2202, 2231	

125KW POWER CONTROL SYSTEM

SPECIFICATION



General		
Model	125 kW Power Control System	
Part Number	033713	
Required system components	Proterra Dispenser CCS Type 1 Cable	



Electrical Input		
Nominal Power – Continuous	138 kVA	
Input Voltage	480VAC, 5-Wire WYE (L1, L2, L3, Neutral, Ground)	
Input Current	166A @ 480VAC, 60Hz	
Input Frequency	60 Hz	
Power Factor	>0.995	
Maximum Efficiency	>90%	
THD – Full Power	<3%	
Electrical Output		
Output Power Capability – Continuous	125 kW	
Output Voltage	500-1000VDC	125kW
	270-499VDC	60kW
Output Current	± 200ADC	
Charging Module	Remote dispenser with vehicle interface	
Mechanical		
Cooling	Liquid cooled – closed loop, exchanger integrated	
Weight	2500 lb	
Dimensions	Width	39.5 inches
	Depth	29.75 inches
	Height	115 inches
Environmental Rated	NEMA 3R	
Wall Clearance	Side	6 inches
	Back	1 inch
Adjacent Unit Clearance	Side	1 inch gap
	Back	1 inch gap
Door Clearance	Facing open space	36 inches
	Facing another door	48 inch gap
Environmental		
Operational Temperature Range	-35°C to 55°C	
Humidity	0% to 95%	
Altitude	De-rates over 2000m above sea level	
Communications Protocols		
Remote management	OCPP 1.6 via 4G Cellular	
Vehicle Communication	SAE J1772 CCS	
Certifications		
UL	2202, 2231	

ATTACHMENT 2

ATTACHMENT 3

FEDERAL TRANSIT ADMINISTRATION

PROVISIONS

FOR

PROFESSIONAL SERVICES CONTRACTS

FEDERAL TRANSIT ADMINISTRATION PROVISIONS FOR **PROFESSIONAL SERVICES CONTRACTS**

No Federal Government Obligations to Third Parties. The Consultant acknowledges and agrees that, notwithstanding any concurrence by the Federal Government in or approval of the solicitation or award of the underlying Agreement, absent the express written consent by the Federal Government, the Federal Government is not a party to this Agreement and shall not be subject to any obligations or liabilities to the Consultant or any other party (whether or not a party to that contract) pertaining to any matter resulting from the underlying Agreement.

The Consultant agrees to include the above clause in each contract financed in whole or in part with Federal assistance provided by the FTA. It is further agreed that the clause shall not be modified, except to identify the subcontractor who will be subject to its provisions.

Program Fraud and False or Fraudulent Statements or Related Acts. The Consultant acknowledges that the provisions of the Program Fraud Civil Remedies Act of 1986, as amended, 31 U.S.C. § 3801 et seq. and U.S. DOT regulations, "Program Fraud Civil Remedies," 49 C.F.R. part 31, apply to its actions pertaining to this project. Upon execution of the underlying Agreement, the Consultant certifies or affirms the truthfulness and accuracy of any statement it has made, it makes, it may make, or causes to be made, pertaining to the underlying Agreement or the FTA assisted project for which this Agreement work is being performed. In addition to other penalties that may be applicable, the Consultant further acknowledges that if it makes, or causes to be made, a false, fictitious, or fraudulent claim, statement, submission, or certification, the Federal Government reserves the right to impose the penalties of the Program Fraud Civil Remedies Act of 1986 on the Consultant to the extent the Federal Government deems appropriate.

The Consultant also acknowledges that if it makes, or causes to be made, a false, fictitious, or fraudulent claim, statement, submission, or certification to the Federal Government under a contract connected with a project that is financed in whole or in part with Federal assistance originally awarded by FTA under the authority of 49 U.S.C. chapter 53, the Government reserves the right to impose the penalties of 18 U.S.C. § 1001 and 49 U.S.C. § 5323(l) on the Consultant, to the extent the Federal Government deems appropriate.

The Consultant agrees to include the above two clauses in each subcontract financed in whole or in part with Federal assistance provided by FTA. It is further agreed that the clauses shall not be modified, except to identify the subcontractor who will be subject to the provisions.

Access to Records and Reports.

a. Record Retention. The Consultant will retain, and will require its subcontractors of all tiers to retain, complete and readily accessible records related in whole or in part to the Agreement, including, but not limited to, data, documents, reports, statistics, sub-agreements, leases, subcontracts, arrangements, other third-party agreements of any type, and supporting materials related to those records.

b. Retention Period. The Consultant agrees to comply with the record retention requirements in accordance with 2 C.F.R. § 200.333. The Consultant shall maintain all books, records, accounts and reports required under this Contract for a period of at not less than three (3) years after the date of

termination or expiration of this Contract, except in the event of litigation or settlement of claims arising from the performance of this Contract, in which case records shall be maintained until the disposition of all such litigation, appeals, claims or exceptions related thereto.

c. Access to Records. The Consultant agrees to provide sufficient access to FTA and its contractors to inspect and audit records and information related to performance of this Agreement as reasonably may be required.

d. Access to the Sites of Performance. The Consultant agrees to permit FTA and its contractors access to the sites of performance under this Agreement as reasonably may be required.

Federal Changes. The Consultant agrees to comply with all applicable federal requirements and federal guidance. All the standards or limits included in this agreement are minimum requirements. The federal requirements and guidance that applied at the time of the award this Agreement may be modified from time to time, and the modifications will apply to the Consultant.

Civil Rights and Equal Opportunity. Under this Agreement, the Consultant shall at all times comply with the following requirements and shall include these requirements in each subcontract entered into as part thereof.

1. Nondiscrimination. In accordance with Federal transit law at 49 U.S.C. § 5332, the Consultant agrees that it will not discriminate against any employee or applicant for employment because of race, color, religion, national origin, sex, disability, or age. In addition, the Consultant agrees to comply with applicable Federal implementing regulations and other implementing requirements FTA may issue.

2. Race, Color, Religion, National Origin, Sex. In accordance with Title VII of the Civil Rights Act, as amended, 42 U.S.C. § 2000e et seq., and Federal transit laws at 49 U.S.C. § 5332, the Consultant agrees to comply with all applicable equal employment opportunity requirements of U.S. Department of Labor (U.S. DOL) regulations, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor," 41 C.F.R. chapter 60, and Executive Order No. 11246, "Equal Employment Opportunity in Federal Employment," September 24, 1965, 42 U.S.C. § 2000e note, as amended by any later Executive Order that amends or supersedes it, referenced in 42 U.S.C. § 2000e note. The Consultant agrees to take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, religion, national origin, or sex (including sexual orientation and gender identity). Such action shall include, but not be limited to, the following: employment, promotion, demotion or transfer, recruitment or recruitment advertising, layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. In addition, the Consultant agrees to comply with any implementing requirements FTA may issue.

3. Age. In accordance with the Age Discrimination in Employment Act, 29 U.S.C. §§ 621634, U.S. Equal Employment Opportunity Commission (U.S. EEOC) regulations, "Age Discrimination in Employment Act," 29 C.F.R. part 1625, the Age Discrimination Act of 1975, as amended, 42 U.S.C. § 6101 et seq., U.S. Health and Human Services regulations, "Nondiscrimination on the Basis of Age in Programs or Activities Receiving Federal Financial Assistance," 45 C.F.R. part 90, and Federal transit law at 49 U.S.C. § 5332, the Consultant agrees to refrain from discrimination against present and prospective employees for reason of age. In addition, the Consultant agrees to comply with any implementing requirements FTA may issue.

4. Disabilities. In accordance with section 504 of the Rehabilitation Act of 1973, as amended, 29 U.S.C. § 794, the Americans with Disabilities Act of 1990, as amended, 42 U.S.C. § 12101 et seq., the Architectural Barriers Act of 1968, as amended, 42 U.S.C. § 4151 et seq., and Federal transit law at

49 U.S.C. § 5332, the Consultant agrees that it will not discriminate against individuals on the basis of disability. In addition, the Consultant agrees to comply with any implementing requirements FTA may issue.

Access Requirements for Persons with Disabilities. Consultant shall comply with 49 USC 5301(d), stating Federal policy that the elderly and persons with disabilities have the same rights as other persons to use mass transportation services and facilities and that special efforts shall be made in planning and designing those services and facilities to implement that policy. Consultant shall also comply with all applicable requirements of Sec. 504 of the Rehabilitation Act (1973), as amended, 29 USC 794, which prohibits discrimination on the basis of handicaps, and the Americans with Disabilities Act of 1990 (ADA), as amended, 42 USC 12101 et seq., which requires that accessible facilities and services be made available to persons with disabilities, including any subsequent amendments thereto.

Prompt Payment. Alaska Statute 36.90.210 (a) states: The prime contractor and a subcontractor on a public construction or public works contract shall include in a subcontract between the prime contractor and subcontractor for the public construction or public works a clause that requires the prime contractor to pay (1) the subcontractor for satisfactory performance under the subcontract within eight working days after receiving payment from which the subcontractor is to be paid. (b) states: A subcontractor on a public construction or public works contract shall include in each subcontract under which a person agrees to provide the subcontractor with services, other than as an employee, or supplies to be used in the public construction or public works project a clause that requires the subcontractor to pay (1) the person for satisfactory performance under the subcontract within eight working days after receiving payment from which the person is to be paid This clause applies to both DBE and non-DBE subcontracts.

Incorporation of FTA Terms. Provisions of this Agreement include, in part, certain standard terms and conditions required by the U.S. DOT. All contractual provisions required by the U.S. DOT, as set forth in FTA Circular 4220.1, as amended, are incorporated by reference. Anything to the contrary herein notwithstanding, all FTA-mandated terms shall be deemed to control in the event of a conflict with other provisions contained in this Agreement. The Consultant shall not perform any act, fail to perform any act, or refuse to comply with any CBJ request, which would cause CBJ to be in violation of FTA terms and conditions, as referenced in the current [FTA Master Agreement](#) shall prevail and be the instrument governing the receipt of Federal assistance from the Federal Transit Administration.

Energy Conservation. The Consultant agrees to comply with mandatory standards and policies relating to energy efficiency, which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act.

Debarment, Suspension, Ineligibility and Voluntary Exclusion. The Consultant shall comply and facilitate compliance with U.S. DOT regulations, "Nonprocurement Suspension and Debarment," 2 C.F.R. part 1200, which adopts and supplements the U.S. Office of Management and Budget (U.S. OMB) "Guidelines to Agencies on Governmentwide Debarment and Suspension (Nonprocurement)," 2 C.F.R. part 180. As such, the Consultant shall verify that its principals, affiliates, and subcontractors are eligible to participate in this federally funded Agreement and are not presently declared by any Federal department or agency to be:

- a) Debarred from participation in any federally assisted Award;
- b) Suspended from participation in any federally assisted Award;
- c) Proposed for debarment from participation in any federally assisted Award;

- d) Declared ineligible to participate in any federally assisted Award;
- e) Voluntarily excluded from participation in any federally assisted Award; or
- f) Disqualified from participation in any federally assisted Award.

By signing and submitting to this Agreement, Consultant certifies as follows:

The certification in this clause is a material representation of fact relied upon by CBJ. If it is later determined by CBJ that the Consultant knowingly rendered an erroneous certification, in addition to remedies available to CBJ, the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment. The Consultant agrees to comply with the requirements of 2 C.F.R. part 180, subpart C, as supplemented by 2 C.F.R. part 1200, throughout the period of this Agreement. The Consultant further agrees to include a provision requiring such compliance in its lower tier covered transactions. These provisions apply to each contract at any tier of \$25,000 or more, and to each contract at any tier for a federally required audit (irrespective of the contract amount), and to each contract at any tier that must be approved by an FTA official irrespective of the contract amount.

Clean Air Act and Federal Water Pollution Control Act. The Clean Water requirements apply to each contract and subcontract which exceeds \$100,000. The Clean Water requirements flow down to FTA recipients and sub recipients at every tier. The Consultant agrees:

- 1) It will not use any violating facilities;
- 2) It will report the use of facilities placed on or likely to be placed on the U.S. EPA "List of Violating Facilities;"
- 3) It will report violations of use of prohibited facilities to FTA; and
- 4) It will comply with the inspection and other requirements of the Clean Air Act, as amended, (42 U.S.C. §§ 7401 – 7671q); and the Federal Water Pollution Control Act as amended, (33 U.S.C. §§ 1251-1387).
- 5) The Consultant also agrees to include these requirements in each subcontract exceeding \$100,000 financed in whole or in part with Federal assistance provided by FTA.

Seismic Safety. Consultant agrees that any new building or addition to an existing building shall be designed and constructed in accordance with the standards required in USDOT Seismic Safety Regulations 49 CFR 41 and shall certify compliance to the extent required by the regulation. Consultant shall also ensure that all work performed under this contract, including work performed by subcontractors, complies with the standards required by 49 CFR 41 and the certification of compliance issued on the project.

Responsibility for Settlement of Contract Issues/Disputes. CBJ alone will be responsible in accordance with good administrative practice and sound business judgment for the settlement of all contractual and administrative issues arising out of procurements. These issues include, but are not limited to, source evaluation, protests, disputes, and claims. These standards do not relieve any contractual responsibility under its contracts. Neither the Alaska Department of Transportation and Public Facilities nor FTA will substitute its judgment for that of CBJ, unless the matter is primarily a Federal concern. Violations of the law will be referred to the local, State, or Federal authority having proper jurisdiction. The City & Borough of Juneau will attempt to settle disputes through a process of mutual negotiations between the Contract Administrator and the vendor. If the dispute cannot be settled in this manner, the City Manager will be provided with an analysis of the dispute and the negotiations. The City Manager will make a final settlement determination after consultation with and approval from the governing board. Any litigation by the vendor of the City Manager determination

must be pursued in a court of the agency's local jurisdiction.

Buy America. This construction of the infrastructure will be funded in part with Federal Transit Administration funds. Therefore, the construction of the facility must comply with 49 U.S.C. 5323(j) (the Surface Transportation Assistance Act of 1982, "Buy America") in accordance with the regulations of 49 CFR, Part 661, except as provided in §661.7 and §661.11, no funds may be obligated unless all iron, steel, and manufactured products used in the project are produced in the United States. The consultant will ensure that any iron, steel, or manufactured projects specified for the project are produced in the United States.

Notification Related to Fraud, Waste, Abuse, or Other Legal Matters

If a current or prospective legal matter that may affect the Federal Government emerges, the Contractor must promptly notify [recipient] so that it can notify the Federal Government. The Contractor must include a similar notification requirement in its Third-Party Agreements and must require each Third-Party Participant to include an equivalent provision in its subagreements at every tier, for any agreement that is a "covered transaction" according to 2 C.F.R. §§ 180.220 and 1200.220. The types of legal matters that require notification include, but are not limited to, a major dispute, breach, default, litigation, or naming the Federal Government as a party to litigation or a legal disagreement in any forum for any reason. Matters that may affect the Federal Government include, but are not limited to, the Federal Government's interests in the Award, the accompanying Underlying Agreement, and any Amendments thereto, or the Federal Government's administration or enforcement of federal laws, regulations, and requirements.

Certification Regarding Lobbying

The Consultant certifies, to the best of his or her knowledge and belief, that:

- (1) No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of an agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
- (2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
- (3) The Consultant shall require that the language of this certification be included in the award documents for all subawards at all tiers (including subcontracts, subgrants, and contracts under grants, loans, and cooperative agreements) and that all subrecipients shall certify and disclose accordingly.

This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by section 1352, title 31, U.S. Code. Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

Consultant's Authorized Representative: _____

Title: _____

Date: _____

Bidder/Proposer:_____

**Buy America Certificate
For Compliance With Title 49 USC § 5323(J)(1)
(For Procurement of Steel, Iron, or Manufactured Products)**

The Bidder/Proposer hereby certifies that it will comply with the requirements of Title 49 USC § 5323(j)(1) and the applicable regulations in 49 CFR Part 661.

Executed on _____, 20_____, at _____, _____,
(Date) (City) (State)

_____ Typewritten or Printed Name	_____ Signature of Authorized Official	_____ Title
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BUY AMERICA CERTIFICATE FOR NON-COMPLIANCE WITH TITLE 49 USC §. 5323(J)(1)

The Bidder/Proposer hereby certifies that it cannot comply with the requirements of Title 49 USC § 5323(j)(1), but it may qualify for an exception pursuant to Title 49 USC § 5323(j)(2)(B) or (j)(2)(D) and the regulations in 49 CFR 661.7.

Executed on _____, 20_____, at _____, _____,
(Date) (City) (State)

_____ Typewritten or Printed Name	_____ Signature of Authorized Official	_____ Title
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ATTACHMENT 4

**ELECTRICAL AS-BUILT DRAWINGS:
RENOVATION & ADDITION AT CAPITAL TRANSIT
BUS MAINTENANCE FACILITY- COMPLETED IN 2017**

SHEET INDEX	
SHEET	TITLE
E100	SHEET INDEX, LEGEND, GENERAL NOTES
E101	DEMOLITION SITE PLAN
E102	OVERALL FIRST FLOOR DEMOLITION PLAN – ELECTRICAL
E103	ENLARGED DEMOLITION FLOOR PLAN – ELECTRICAL
E104	ENLARGED DEMOLITION FLOOR PLAN – ELECTRICAL
E105	ENLARGED DEMOLITION BUS WASH PLAN – ELECTRICAL
E201	OVERALL FIRST FLOOR ELECTRICAL POWER PLAN
E202	ADMIN AREA ENLARGED FLOOR PLAN – POWER
E203	ADMIN AREA ENLARGED FLOOR PLAN – POWER
E204	ENLARGED FLOOR PLAN – POWER
E205	MEZZANINE FLOOR PLAN – POWER
E206	SINGLE LINE DIAGRAM
E207	PANEL SCHEDULES – PANEL LA AND PANEL LA1
E208	PANEL SCHEDULES – PANEL LN AND PANEL LC1
E209	MECHANICAL EQUIPMENT SCHEDULE
E210	SCHEMATICS
E211	SCHEMATICS
E212	ROOF HEAT TRACE DRAIN ASSEMBLY DETAIL AND PANEL HN
E301	OVERALL FIRST FLOOR ELECTRICAL PLAN – LIGHTING
E302	ADMIN AREA ENLARGED FLOOR PLAN – LIGHTING
E303	ADMIN AREA ENLARGED FLOOR PLAN – LIGHTING
E304	ENLARGED FLOOR PLAN – LIGHTING
E305	LUMINAIRE SCHEDULE
E401	OVERALL FIRST FLOOR ELECTRICAL PLAN – SIGNAL
E402	ADMIN AREA ENLARGED FLOOR PLAN – SIGNAL
E403	ADMIN AREA ENLARGED FLOOR PLAN – SIGNAL
E404	ENLARGED FLOOR PLAN – SIGNAL
E405	FIRE ALARM RISER DIAGRAM
E406	DATA AND TELEPHONE RISER DIAGRAM









































GENERAL NOTES – APPLICABLE TO ALL SHEETS:

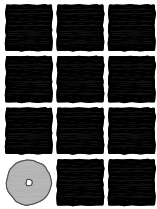
- EXISTING CIRCUITING IS NOT SHOWN UNLESS IT HAS BEEN FIELD VERIFIED. HOWEVER, CONTRACTOR SHALL FIELD VERIFY ALL WIRING ASSOCIATED WITH THEIR WORK.
- ALL EXISTING DEVICE LOCATIONS ON DRAWINGS WERE FIELD VERIFIED. HOWEVER, SOME EXISTING DEVICES MAY BE CONCEALED AND NOT SHOWN ON DRAWINGS. CONTRACTOR RESPONSIBLE FOR DEMOLITION OF ALL DEVICES (INCLUDING ASSOCIATED ELECTRICAL EQUIPMENT, CONDUIT, AND WIRING BACK TO PANEL) SCHEDULED FOR DEMOLITION. DEMOLITION OF CONCEALED CONDUIT, WIRES, AND DEVICES SHALL BE INCLUDED IN BASE BID SCOPE OF WORK. HOWEVER EXISTING CONDUIT MAY BE REUSED IN PLACE WHERE PRACTICAL. EXISTING CONDUIT MAY BE ABANDONED WHERE ABOVE ADMIN AREA CEILING THAT IS TO REMAIN. SEE ARCHITECTURAL.
- LIGHTING EQUIPMENT TYPE TO BE REMOVED HAS BEEN FIELD VERIFIED.
- ALL WORK IS NEW UNLESS OTHERWISE NOTED.
- ALL WIRING SHALL BE CONCEALED AND ALL DEVICES FLUSH MOUNTED UNLESS NOTED OTHERWISE. WIRING AND DEVICES SHALL BE SURFACE MOUNTED IN MECHANICAL SPACES, MEZZANINE, BUS STORAGE, BUS WASH AND BUS MAINTENANCE AREAS. LIGHTING, CONDUIT AND MC CABLE SHALL BE SURFACE MOUNTED IN THE ADMIN AREA CORRIDOR AND IN SOME ROOMS WHERE CEILING IS TO REMAIN. SEE ARCHITECTURAL FOR LOCATIONS WHERE CEILING SHEETROCK IS TO REMAIN. PAINT ALL SURFACE MOUNTED CONDUIT AND MC CABLE IN ADMIN AREA TO MATCH CEILING IN ADMIN AREA.

- ALL POWER WIRING SHALL BE CONDUCTORS IN CONDUIT, UNLESS OTHERWISE NOTED. MC CABLE MAY BE USED WHERE CONCEALED, SURFACE MOUNTED IN MEZZANINE, IN MECHANICAL ROOMS, AND IN BUS MAINTENANCE BAY.
- ALL LIGHTING WIRING SHALL BE CONDUCTORS IN CONDUIT, UNLESS OTHERWISE NOTED. MC CABLE MAY BE USED WHERE CONCEALED, SURFACE MOUNTED IN MEZZANINE, IN MECHANICAL ROOMS, AND IN BUS MAINTENANCE BAY.
- ALL SIGNAL WIRING SHALL BE CONDUCTORS OR CABLE IN CONDUIT. ALL SIGNAL DEVICES SHALL BE INSTALLED IN JUNCTION BOXES. FIRE ALARM WIRING SHALL BE IN CONDUIT.
- SEE ARCHITECTURAL DRAWINGS FOR ELECTRICAL EQUIPMENT AND WIRING ON BUILDING EXTERIOR THAT IS AFFECTED BY REPLACEMENT OF BUILDING SIDING. REMOVE AND REINSTALL THIS EQUIPMENT AND WIRING AS NEEDED FOR SIDING REPLACEMENT. INSPECT THE BUILDING PRIOR TO BID TO UNDERSTAND THE ELECTRICAL WORK.
- PROVIDE SCHEDULE 40 PVC CONDUIT AND BOXES IN BUS STORAGE AND BUS WASH AREAS. PROVIDE NM FLEXIBLE CONDUIT AND STAINLESS STEEL OR NM CONNECTORS AND HARDWARE. PROVIDE SCHEDULE 80 PVC BELOW 8’ AFF. THIS ALSO APPLIES TO THE BUS WASH MECHANICAL ROOM.
- THERE ARE MANY ELECTRICAL PIECES OF ELECTRICAL EQUIPMENT AND MUCH CONDUIT AND CABLE THAT IS NOT SHOWN ON THE DRAWINGS. INSTALL NEW EQUIPMENT AND CONDUIT AROUND THE EXISTING EQUIPMENT MAKING ADJUSTMENTS AS REQUIRED.

- THE BUILDING IS A METAL BUILDING. THERE ARE VERY FEW SURFACES TO MOUNT EQUIPMENT AND CONDUIT TO. PROVIDE ALL NECESSARY BACKING, SUPPORT CHANNEL, ALL THREAD ROD AND OTHER SUPPORTS AS REQUIRED TO MOUNT DEVICES AND CONDUIT. SPAN BEAMS AND OTHER STRUCTURES AS NECESSARY WITH SUPPORT CHANNEL AND BUILD UNISTRUT RACKS FROM FLOOR TO CEILING AS REQUIRED.
- SEE ARCHITECTURAL FOR REMOVAL OF GYPSUM BOARD IN PROJECT AREA.
- REVIEW THE NEW BUS WASH EQUIPMENT SHOP DRAWINGS AND PROVIDE ALL ELECTRICAL WORK REQUIRED TO PROVIDE AN OPERATIONAL BUS WASH SYSTEM. NO WIRING AND DEVICES ARE SHOWN FOR THIS WORK. IT IS UP TO THE CONTRACTOR TO DETERMINE WHAT IS NEEDED FOR THIS WORK.
- CUT AND PATCH SHEETROCK (GYPSUM BOARD) AS REQUIRED TO PERFORM THE WORK. PAINT TO MATCH ADJACENT SURFACES.
- ALL RECEPTACLES IN BUS STORAGE, BUS WASH MECH, AND BUS WASH SHALL BE GFI WITH WEATHER PROOF COVERS.
- THE BUS MAINTENANCE AREA IS A CLASS 1, DIV 2 AREA FROM THE FLOOR UP TO 18” AFF. ALL WIRING IN THIS AREA SHALL COMPLY WITH APPLICABLE SECTIONS OF NEC FOR CLASSIFIED AREAS. THE AREA BELOW THE FLOOR IS CLASS 1, DIV 1.
- THE BUS MAINTENANCE, BUS MAINTENANCE AREA, BUS SHOP, AND MAINTENANCE SHOP ALL REFER TO THE SAME SPACE.
- PROVIDE NEW CIRCUIT BREAKERS IN EXISTING PANELS AS REQUIRED.

THIS AS BUILT DRAWING WAS PREPARED FROM CONTRACTOR PROVIDED RED LINE DRAWINGS WHICH MAY NOT BE CORRECT.

	TAMPER SWITCH	S	SINGLE POLE SWITCH		TEMPERATURE SENSOR
	FLOW SWITCH (PRESSURE) (BOTH HI & LOW)	C	CONDUIT		THERMOSTAT
	AMPERE METER	S ₃	THREE WAY SWITCH		ELECTRIC MOTOR
	METER		JUNCTION BOX		PULL STATION
	DOOR CONTROLLER	CKTS	CIRCUITS		HORN STROBE
WP	WEATHERPROOF		FLEXIBLE CONDUIT		HORN ONLY
	0–10V DIMMER SWITCH FOR LED LIGHTING. LV WIRING FOR DIMMING NOT SHOWN. PROVIDE WIRING AS REQUIRED.		DUPLEX RECEPTACLE		STROBE ONLY
	WALL MOUNT LUMINAIRE	NEC	NATIONAL ELEC CODE		DATA JACK
	EXTERIOR CEILING LUMINAIRE	AFF	ABOVE FINISHED FLOOR		TELEPHONE
	LETTER INDICATES TYPE, "EM" INDICATES EMERGENCY BALLAST	BLDG	BUILDING		FUSE
	EMERGENCY EXIT SIGN	GND	GROUND		BELL
	WIREMOLD PLUG MOLD	REC	RECEPTACLE		MAGNETIC STARTER
	WIREMOLD RACEWAY WITH DUPLEX OUTLETS	TYP	TYPICAL		COMBINATION STARTER DISCONNECT
	POWER PANEL	W/	WITH		DISCONNECT
	SPECIAL USE RECEPTACLE		HOME RUN		POLE MOUNT LUMINAIRE
	ELECTRICAL BASEBOARD HEATER		CIRCUITING HATCHES SHOW NUMBER OF CONDUCTORS WHERE MORE THAN 2. EACH LARGE TIC INDICATES A NEUTRAL CONDUCTOR AND EACH SMALL TIC INDICATES A PHASE CONDUCTOR. EQUIPMENT GROUND NOT SHOWN BUT IS REQUIRED ON ALL CIRCUITS. ALL CONDUIT SHALL BE 1/2” MIN. PROVIDE THE CORRECT CONDUIT SIZE, CONDUCTOR SIZE, CONDUCTOR QUANTITY AS REQUIRED AND PER NEC. INCREASE CONDUCTOR SIZE AS REQUIRED PER CODE FOR MORE THAN 3 CONDUCTORS IN CONDUIT. WIRING FOR CONTROLS NOT SHOWN. MODIFY SIZE OF CONDUIT SIZE AND QUANTITY OF CONDUCTOR FROM WHAT IS SHOWN AS REQUIRED.		SMOKE DETECTOR
					MANUAL STARTER
					WALL MOUNTED OCCUPANCY SENSOR WITH BUILT IN OVERRIDE SWITCH
					FIXED TEMPERATURE HEAT DETECTOR
					OCCUPANCY SENSOR CEILING MOUNT DUAL TECHNOLOGY



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City & Borough of Juneau
**CAPITAL TRANSIT FACILITY
RENOVATION & ADDITION**
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CBJ Project No. E16-016

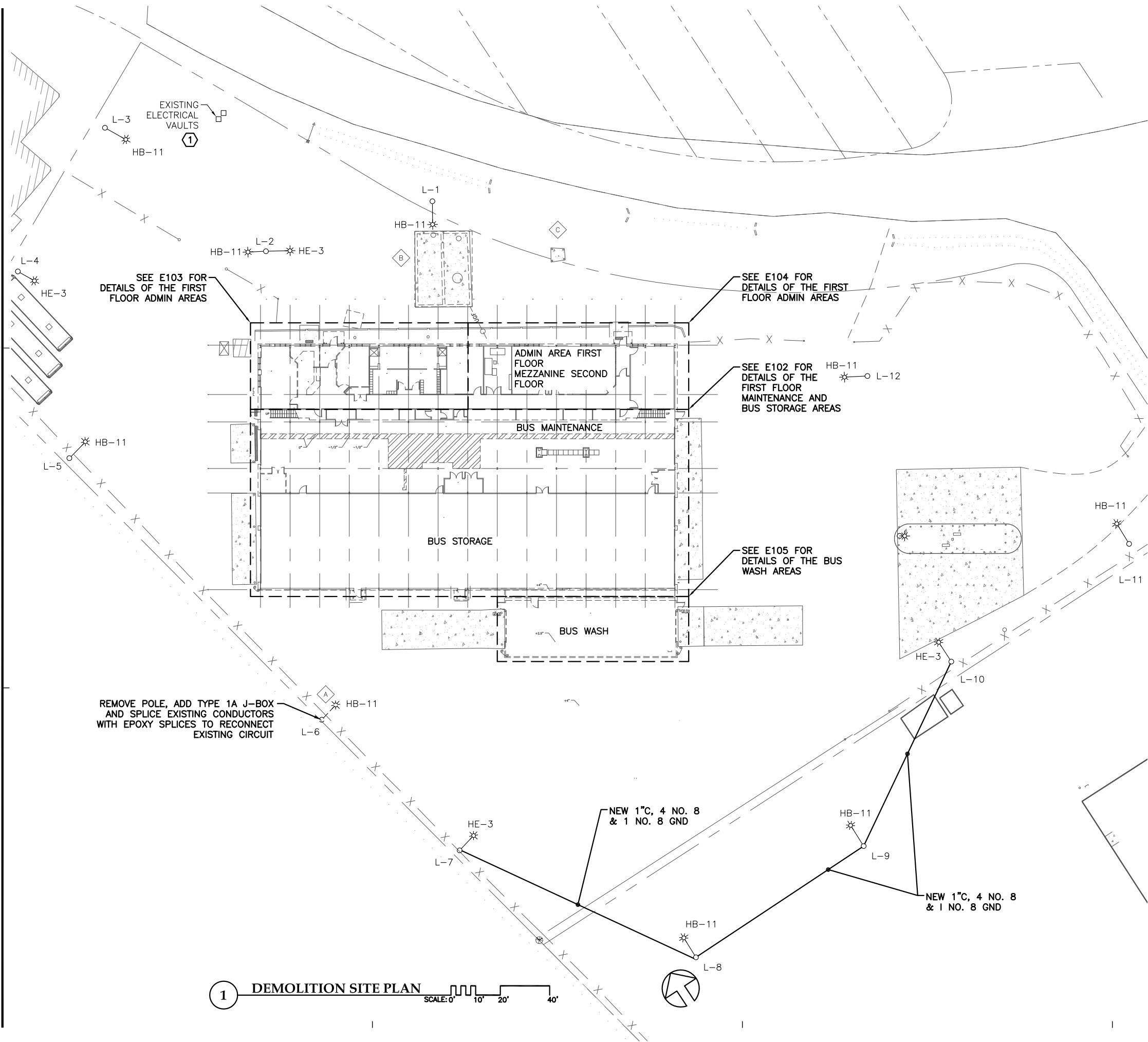
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SHEET TITLE
SHEET INDEX,
LEGEND,
GENERAL NOTES

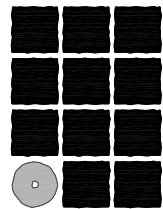
DATE: November 2017
FILE: 15019

E100



NOTES:

1. COORDINATE WITH AEL&P TO ALLOW THEM TO REPLACE THEIR EXISTING VAULT LIDS.
2. REMOVE ALL ELECTRICAL SYSTEMS INCLUDING CONDUIT, CABLING, EQUIPMENT, AND DEVICES FROM EXTERIOR OF BUILDING AND TEMPORARILY SUPPORT THESE SYSTEMS WHILE EXISTING SIDING IS REMOVED, BLOCKING IS ADDED BETWEEN STRUCTURAL WALL MEMBERS, AND NEW SIDING IS INSTALLED. REINSTALL ELECTRICAL SYSTEMS ON NEW SUPPORT CHANNEL (UNISTRUT) AND ALL OTHER NECESSARY NEW SUPPORT HARDWARE AS REQUIRED TO SECURE ELECTRICAL SYSTEM TO BUILDING EXTERIOR. SECURE SUPPORT CHANNEL AND OTHER HARDWARE TO NEW BLOCKING BEHIND SIDING. BLOCKING SHALL CONSIST OF SUPPORT CHANNEL SPANNING BETWEEN BUILDING STRUCTURE, WOOD, AND OTHER ACCEPTABLE MEANS APPROVED BY THE ARCHITECT. COORDINATE WITH GENERAL CONTRACTOR TO PERFORM THIS WORK. IF EQUIPMENT OPERATION MUST BE MAINTAINED, MODIFY WIRING AS REQUIRED TO OBTAIN ENOUGH SLACK TO SUPPORT EQUIPMENT FAR ENOUGH OFF THE WALL TO ALLOW NEW SIDING TO BE INSTALLED. USE SCAFFOLDING OR OTHER TEMPORARY SUPPORTING METHODS TO SUPPORT EQUIPMENT. SEE ARCHITECTURAL DRAWINGS FOR EQUIPMENT LOCATIONS ON EXTERIOR OF BUILDING. CONTRACTOR TO INSPECT BUILDING PRIOR TO BID TO SEE FULL SCOPE OF WORK. REPLACE WIRING AND CONDUIT AS REQUIRED.
3. PERFORM PRIVATE LOCATES OF ENTIRE SITE AND PROVIDE INFORMATION TO GENERAL AND THEIR SUBS SO THAT NO EXISTING UNDERGROUND ELECTRICAL IS DAMAGED DURING THEIR WORK. REPLACE ALL ELECTRICAL DAMAGED DURING WORK ON THIS PROJECT.
4. COORDINATE ANY NECESSARY UTILITY OUTAGES WITH OWNER. OUTAGES SHALL NOT OCCUR DURING CRITICAL OPERATIONAL PERIODS FOR OWNER.
5. CIRCUIT NUMBERS ARE SHOWN FOR EXISTING SITE LIGHT POLES. NOTE POLES NUMBER 8 AND 9 WERE RELOCATED.



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AS-BUILT

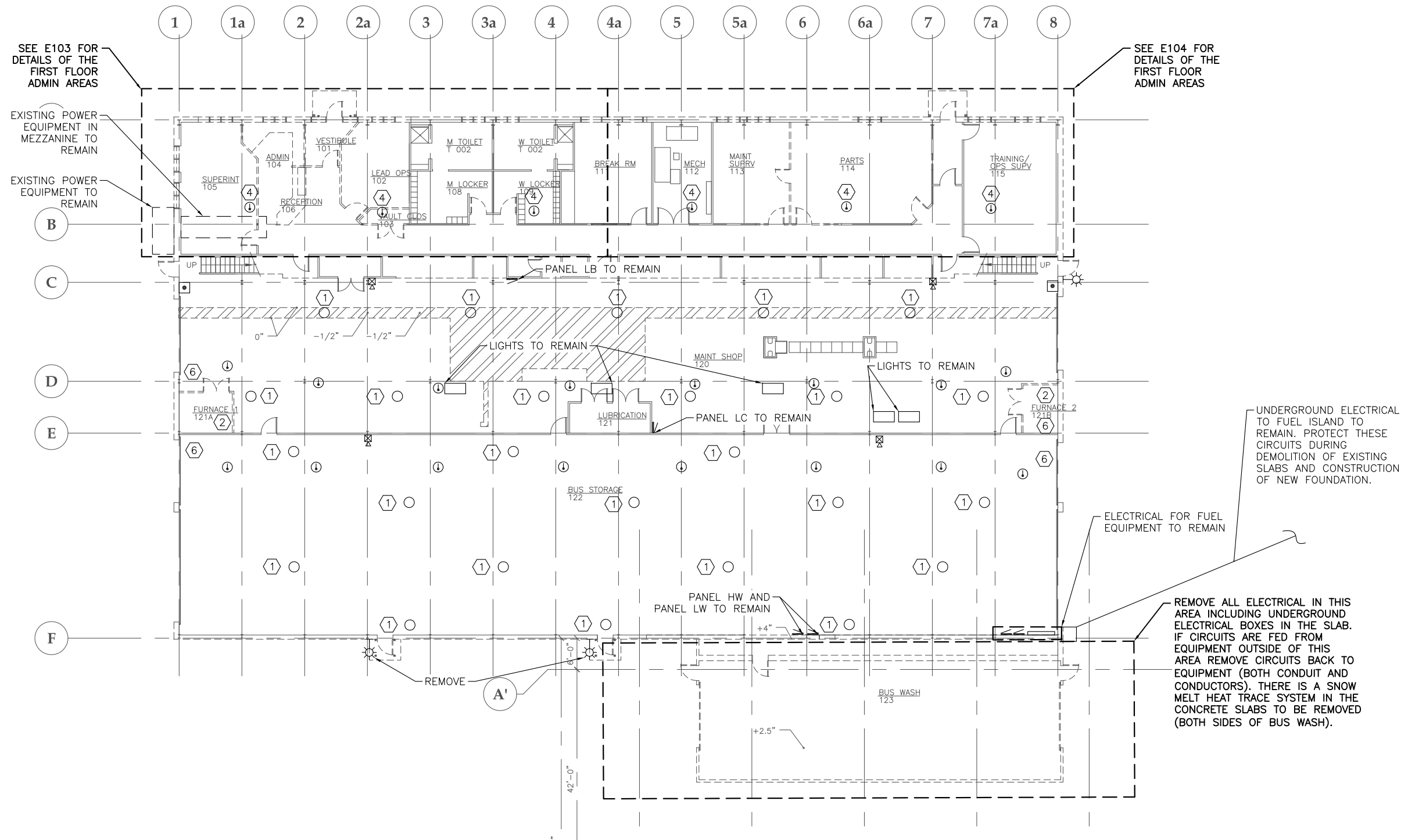


SHEET TITLE
DEMOLITION
SITE PLAN

DATE: November 2017
FILE: 15019

E101

THIS AS BUILT DRAWING WAS PREPARED FROM CONTRACTOR PROVIDED RED LINE DRAWINGS WHICH MAY NOT BE CORRECT.



THIS AS BUILT DRAWING WAS PREPARED FROM CONTRACTOR PROVIDED RED LINE DRAWINGS WHICH MAY NOT BE CORRECT.

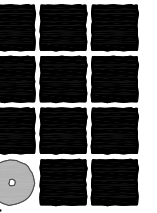
1 OVERALL FIRST FLOOR DEMOLITION PLAN - ELECTRICAL

SCALE: 0 4' 8' 16' 32'



NOTES:

- 1 REMOVE AND REPLACE LUMINAIRE IN SAME LOCATION. DISCONNECT POWER FROM EXISTING LUMINAIRE AND CONNECT TO NEW LUMINAIRE. PROVIDE ADDITIONAL MOUNTING SUPPORTS, JUNCTION BOXES, CONDUIT AND CONDUCTORS AS REQUIRED.
- 2 REMOVE ALL ELECTRICAL EQUIPMENT ASSOCIATED WITH EXISTING FURNACES AND ASSOCIATED EQUIPMENT TO BE REMOVED IN MAINTENANCE SHOP 120, FURNACE 1 121A, FURNACE 2 121B, INCLUDING WIRING AND CONDUIT BACK TO PANEL. SEE MECHANICAL FOR ADDITIONAL EQUIPMENT TO BE REMOVED.
3. NOT ALL EXTERIOR ELECTRICAL EQUIPMENT IS SHOWN. REMOVE AND REINSTALL ELECTRICAL EQUIPMENT ON OUTSIDE OF BUILDING AS DESCRIBED IN NOTE 2 ON SHEET E101 UNLESS NOTED OTHERWISE.
- 4 HEAT DETECTORS LOCATED IN 2ND FLOOR MEZZANINE (STORAGE 201) TO BE REPLACED WITH NEW. REUSE WIRING AS PRACTICAL. REPLACE WIRING AS NEEDED.
5. REPLACE ALL FIRE ALARM DEVICES IN BUS MAINTENANCE SHOP, BUS STORAGE, AND BUILDING EXTERIOR. REUSE WIRING AS PRACTICAL. REPLACE WIRING AS NEEDED. PROVIDE CONDUIT AS NEEDED. EXTEND CIRCUIT TO NEW PANEL.
- 6 REMOVE ALL ELECTRICAL ASSOCIATED WITH EXHAUST FAN TO BE REMOVED. INCLUDING CONDUIT AND WIRING BACK TO PANEL.
7. REMOVE ALL ELECTRICAL ASSOCIATED WITH ALL MECHANICAL EQUIPMENT TO BE REMOVED. SEE MECHANICAL DRAWINGS FOR MECHANICAL EQUIPMENT TO BE REMOVED IN THE ENTIRE BUILDING. REMOVE ALL CONDUIT AND WIRING BACK TO THE PANEL.



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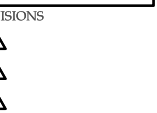
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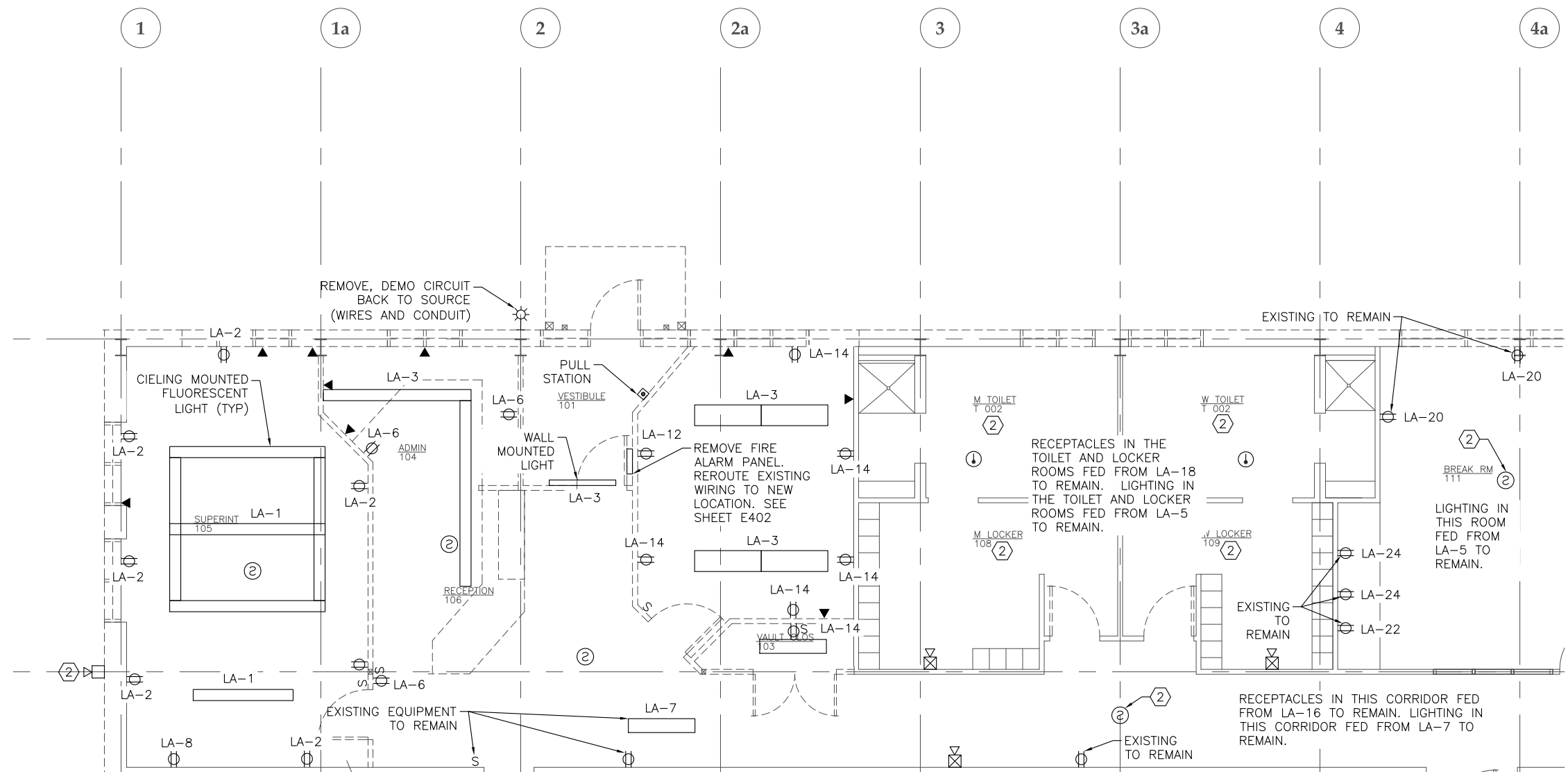
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SHEET TITLE
OVERALL
FIRST FLOOR
DEMO PLAN -
ELECTRICAL

DATE: November 2017
FILE: 15019

E102



1 ENLARGED DEMOLITION FLOOR PLAN - ELECTRICAL

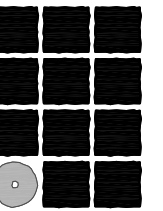
SCALE: 0 2' 4' 8'



NOTES:

1. REMOVE ALL ELECTRICAL EQUIPMENT SHOWN UNLESS NOTED OTHERWISE. REMOVE WIRING BACK TO PANEL AND REMOVE CONDUIT BACK TO PANEL. REUSE CONDUIT IF PRACTICAL.
2. REMOVE AND REPLACE FIRE ALARM DEVICE. REUSE EXISTING CONDUIT AND WIRING BETWEEN DEVICES UNLESS UPSTREAM DEVICE IS LOCATED IN A ROOM BEING REMODELED. IN THIS CASE, REMOVE WIRING BACK TO PANEL AND CONNECT NEW DEVICE TO NEW FIRE ALARM CONTROL PANEL.

THIS AS BUILT DRAWING WAS PREPARED FROM CONTRACTOR PROVIDED RED LINE DRAWINGS WHICH MAY NOT BE CORRECT.



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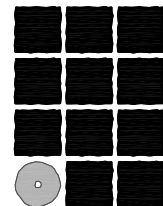
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SHEET TITLE
ENLARGED
DEMOLITION
FLOOR PLAN -
ELECTRICAL
DATE: November 2017
FILE: 15019

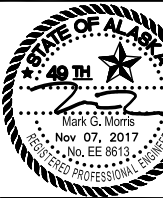
E103



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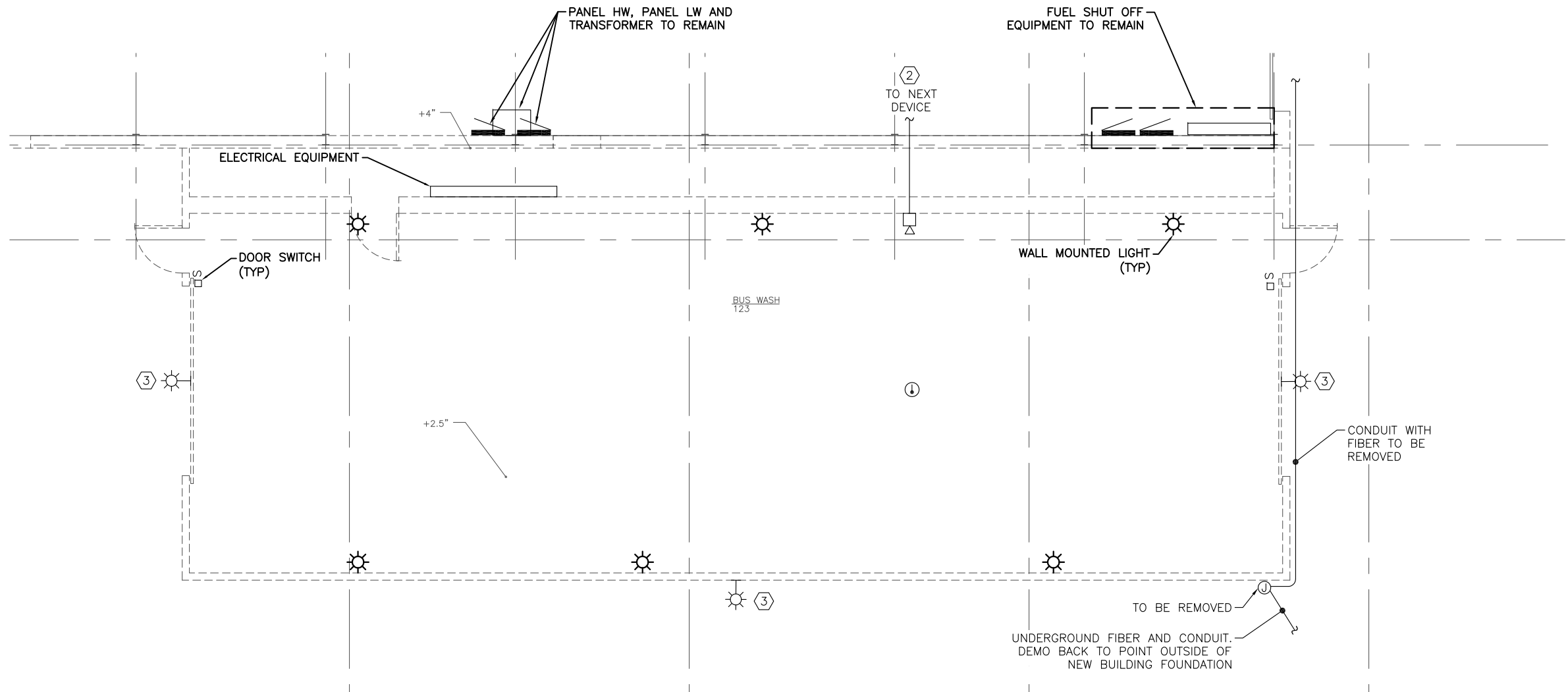
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CBJ Project No. E16-016

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SHEET TITLE
**ENLARGED
DEMOLITION
BUS WASH PLAN -
ELECTRICAL**
DATE: November 2017
FILE: 15019

E105



NOTES:

1. REMOVE ALL ELECTRICAL IN THE EXISTING BUS WASH. IF CIRCUITS ARE FED FROM EQUIPMENT OUTSIDE OF THIS AREA REMOVE CIRCUITS BACK TO EQUIPMENT (CONDUIT AND CONDUCTORS).
- ② REMOVE CONDUCTORS AND CONDUIT BACK TO NEXT DEVICE IN BUS STORAGE. PROVIDE EOL AT DEVICE.
- ③ EXTERIOR LIGHTS ON BUS WASH TO BE REMOVED. DEMO CONDUCTORS AND CONDUIT BACK TO EQUIPMENT OUTSIDE THE BUS WASH AREA.
4. THERE ARE IN-GROUND BOXES FOR A HEATED SLAB SNOW MELT SYSTEM. REMOVE THIS SYSTEM. REMOVE CONDUIT AND CONDUCTORS BACK TO THE PANEL THAT FEEDS THEM. PERFORM THIS WORK PRIOR TO GENERAL REMOVING THE SLAB. VERIFY THE ELECTRICAL CABLES IN THE SLAB ARE NOT POWERED PRIOR TO THE SLAB BEING DEMOLISHED.

THIS AS BUILT DRAWING WAS PREPARED
FROM CONTRACTOR PROVIDED RED LINE
DRAWINGS WHICH MAY NOT BE CORRECT.

1 ENLARGED DEMOLITION BUS WASH PLAN - ELECTRICAL

SCALE: 0 2' 4' 8'



NOTES:

- ① 1HP, 120V, 1Ø ROLLUP DOOR OPERATOR. OVERHEAD DOOR WAYNE DALTON TS200. PROVIDE WITH PHOTO SENSOR AND SAFETY EDGE SENSOR. LOCATE DEVICES PER ARCHITECTURAL NEAR ROLLUP DOOR. POWER FROM DISCONNECT ON WALL. PROVIDE A 3 BUTTON CONTROL STATION TO CONTROL OPERATOR. PROVIDE CONTROL CIRCUITING AS REQUIRED. FEED MOTOR WITH FLEXIBLE CONDUIT FROM ADJACENT JUNCTION BOX. MOUNT OPERATOR AND DISCONNECT TOGETHER ON STRUCTURAL COLUMN OR SUPPORT CHANNEL. CONNECT PHOTO SENSOR AND BOTTOM SAFETY EDGE SENSOR.
- ② PROVIDE POWER TO CARBON MONOXIDE CONTROLLERS TOX-1, TOX-2, AND TOX-3. WIRE TOX SYSTEM PER SCHEMATICS AND AS REQUIRED.
- ③ ROOF DRAIN HEAT TRACE ASSEMBLY. INSTALL PER DETAILS ON SHEET E212. LOCATE PER MECHANICAL.
- ④ PROVIDE CONDUIT BETWEEN DISCONNECT AND INSIDE OF LIFT CONTROL MODULE. MOUNT DISCONNECT ON WALL OR COLUMN WITHIN SIGHT OF LIFT CONTROL CONSOLE WHICH EVER IS CLOSER. COORDINATE WITH GENERAL TO SAW CUT AND PATCH THE CONCRETE FLOOR TO ROUTE CONDUIT UNDERGROUND BETWEEN DISCONNECT AND LIFT CONTROL MODULE. INSTALL SEALOFF AT DISCONNECT AND AT LIFT CONTROL MODULE ABOVE 18" AFF. USE RIGID STEEL CONDUIT (GRS).

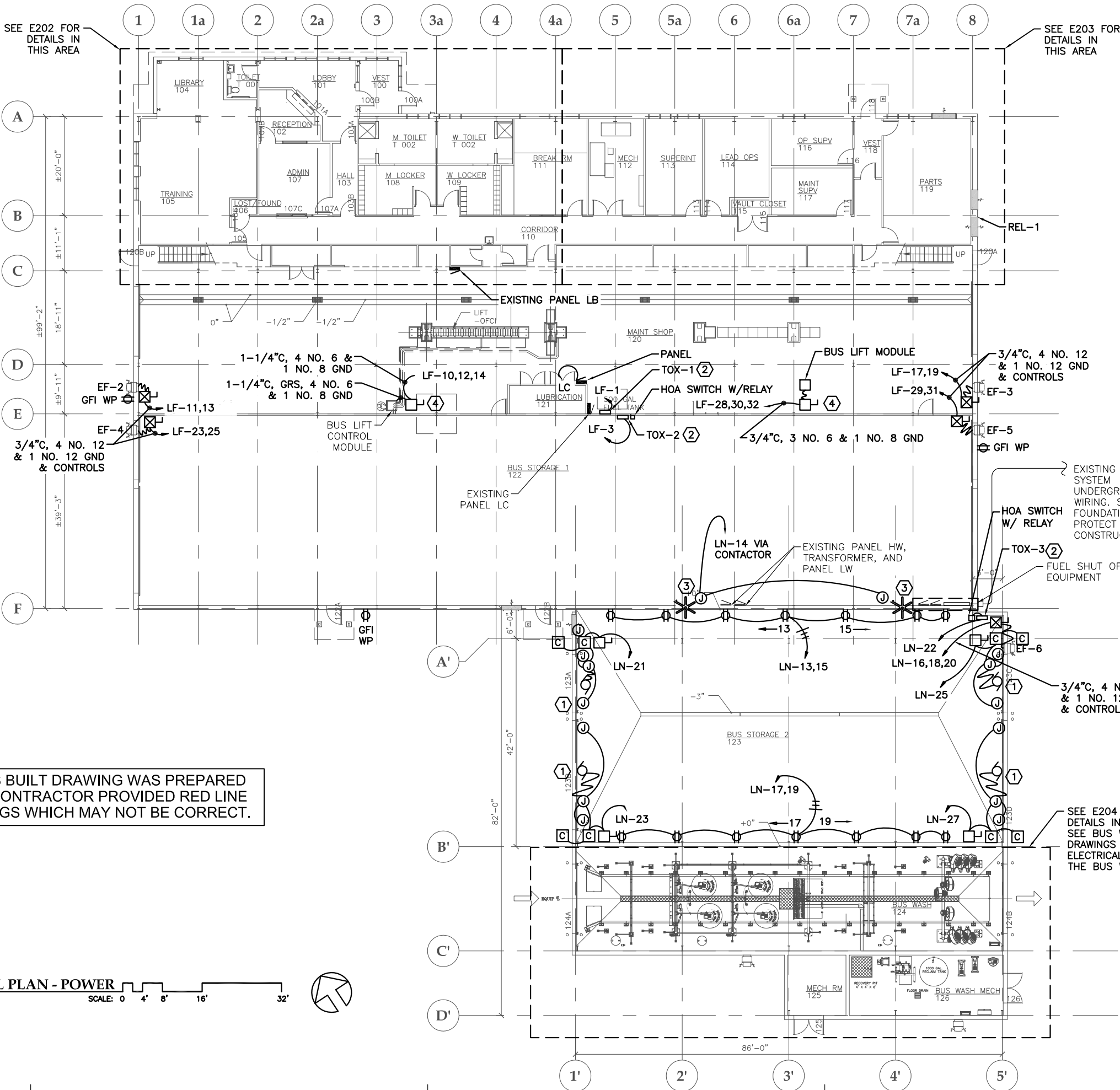
PROVIDE THE FOLLOWING CONDUIT BETWEEN LIFT CONTROL CONSOLE AND LIFT PER MANUFACTURER SHOP DRAWINGS AND MANUFACTURER INSTALLATION INSTRUCTIONS:

- (1) 3/4" GRS 18" AFF INSIDE LIFT CONTROL CONSOLE. ROUTE UNDERGROUND TO LIFT FOR AUTOMATIC WHEEL BASE POSITIONING POTENTIOMETER CABLE.
- (1) 3/4" GRS 18" AFF INSIDE LIFT CONTROL CONSOLE. ROUTE UNDERGROUND TO LIFT FOR LIQUID DETECTION SENSOR.
- (2) 4" SCHEDULE 40PVC STUB UP 3" INTO LIFT CONTROL CONSOLE. ROUTE TO LIFT FOR HYDRAULIC/AIR LINES.

SEE SHOP DRAWINGS FOR CONDUIT LOCATIONS AND ROUTING. STUB UP CONDUIT IN CONTROL CONSOLE IN AREA SHOWN ON SHOP DRAWINGS. PROVIDE ALL ELECTRICAL AND CONTROL WIRING AS REQUIRED FOR A FULLY OPERATIONAL AND FUNCTIONAL LIFT SYSTEM. PROVIDE SEALOFFS ON ALL RIGID STEEL CONDUIT WITH WIRING PER NEC AND PER SHOP DRAWINGS. SEE ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR THIS AREA.

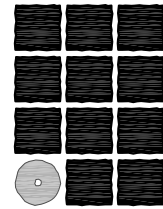
SEE E202 FOR DETAILS IN THIS AREA

SEE E203 FOR DETAILS IN THIS AREA



THIS AS BUILT DRAWING WAS PREPARED FROM CONTRACTOR PROVIDED RED LINE DRAWINGS WHICH MAY NOT BE CORRECT.

1 OVERALL FIRST FLOOR ELECTRICAL PLAN - POWER
SCALE: 0 4' 8' 16' 32'



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CBJ Project No. E16-016

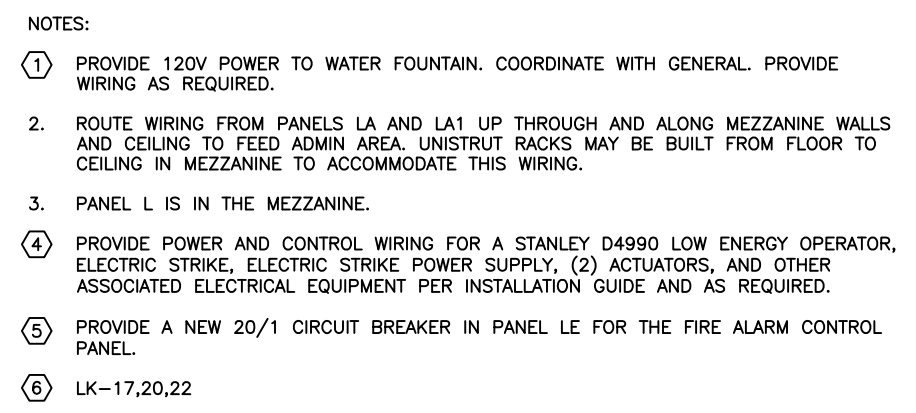
AS-BUILT



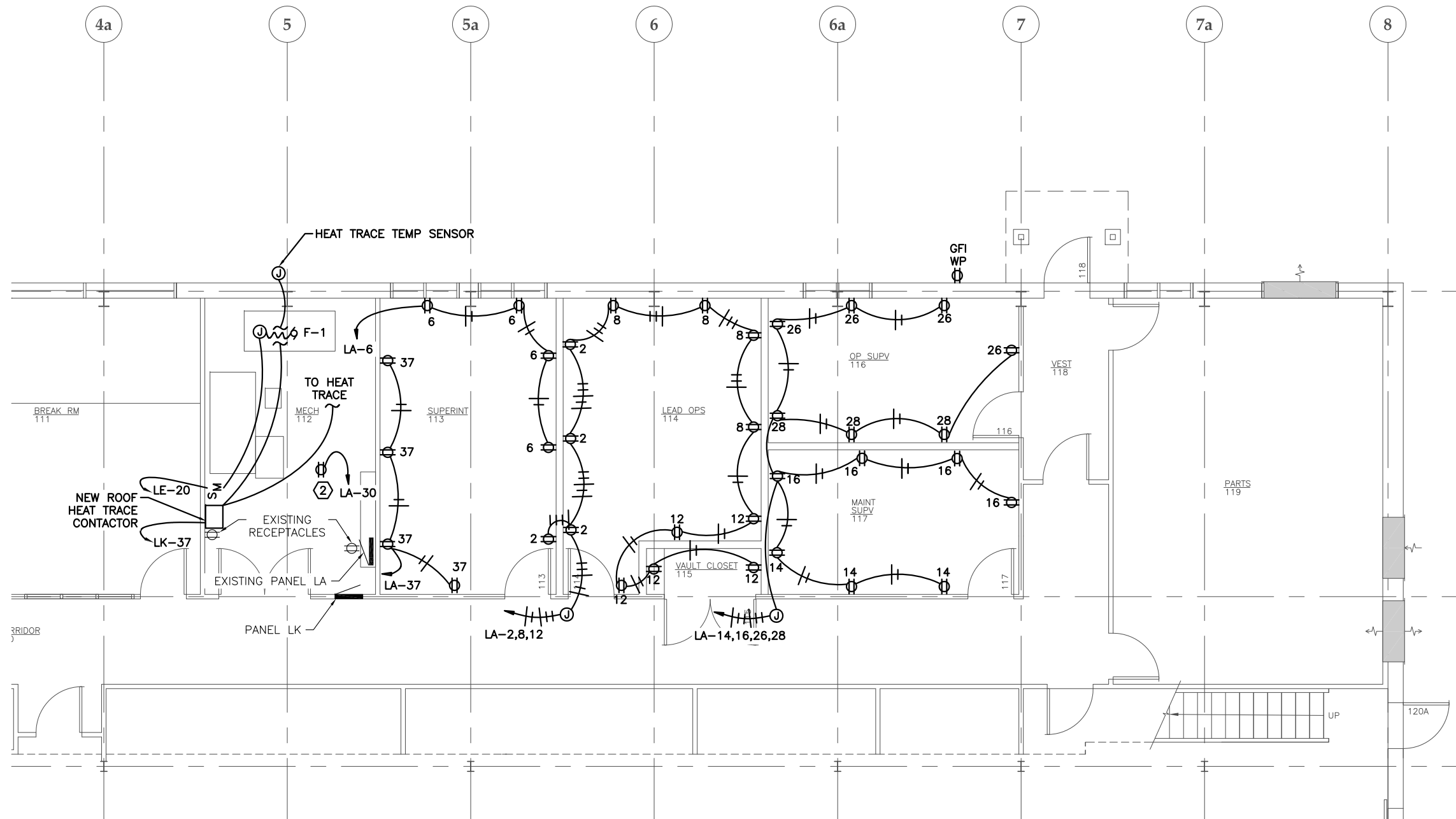
SHEET TITLE
OVERALL
FIRST FLOOR
ELECTRICAL
PLAN - POWER

DATE: November 2017
FILE: 15019

E201



E202



1 ADMIN AREA ENLARGED FLOOR PLAN - POWER

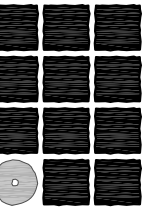
SCALE: 0 2' 4' 8'



NOTES:

1. ROUTE WIRING FROM PANELS LA AND LA1 UP THROUGH AND ALONG MEZZANINE WALLS AND CEILING TO FEED ADMIN AREA. UNISTRUT RACKS MAY BE BUILT FROM FLOOR TO CEILING ON MEZZANINE TO ACCOMMODATE THIS WIRING.
2. MOUNT RECEPTACLE ON BACK OF DATA RACK. USE WIREMOLD ON RACK WITH FLEX TO CONDUIT ON CEILING.

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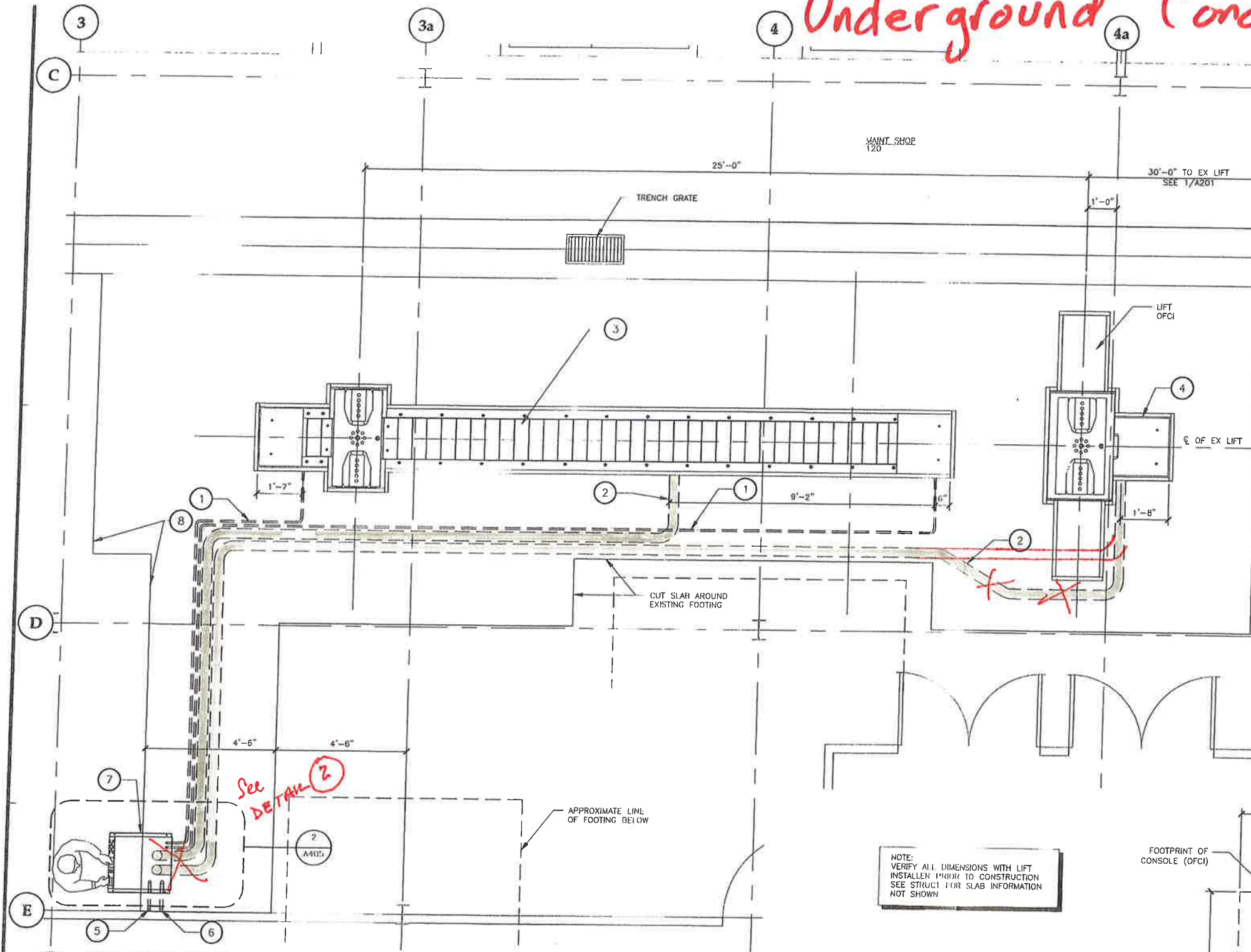
SHEET TITLE
**ADMIN AREA
ENLARGED
FLOOR PLAN-
POWER**

DATE: November 2017
FILE: 15019

E203

G:_Proj\019\CAD\Conformed\Arch\A405.dwg, 29 A405, 6/3/2016 11:53:08 AM, Dan, DWG To PDF.pc3, ANSI B (17.00 x 11.00 Inches), 1:2

Underground Conduits



1 ENLARGED FIRST FLOOR PLAN

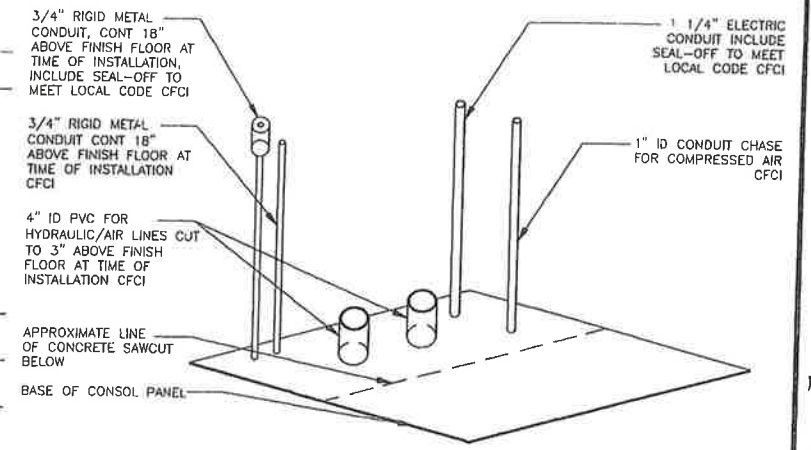
KEY NOTES:

- | | |
|--|--|
| 1 3/4" RMC W/ FISH CORDS, CFCI | 6 1 1/4" RMC, CFCI |
| 2 4" PVC CONDUIT CHASE W/ FISH CORDS, CFCI | 7 CONSOL. OFCI |
| 3 MOVABLE LIFTING UNIT, OFCI | 8 EDGE OF CONCRETE SAWCUT - SEE STRUCT |
| 4 STATIONARY LIFTING UNIT, OFCI | 9 INSTALL CONDUITS IN FOOTPRINT OF CONSOL USING TEMPLATE PROVIDED BY LIFT MFR. |
| 5 1" STEEL PIPE CONDUIT FOR COMPRESSED AIR, CFCI | |

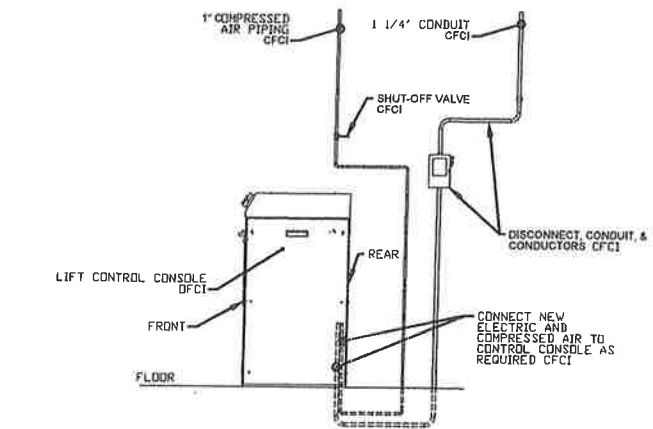
LIFT GENERAL NOTES:

OWNER SHALL PROVIDE LIFTS (MOVABLE AND STATIONARY UNITS) & CONSOL. CONTRACTOR TO PLACE LIFTS & CONSOL WHERE DIRECTED BY OWNER'S SEPARATE LIFT CONTRACTOR. FINAL LEVELING & INSTALLATION OF ANCHOR BOLTS & OTHER HARDWARE BY OWNER'S SEPARATE LIFT CONTRACTOR. CONTRACTOR SHALL CONNECT LINE VOLTAGE POWER TO CONSOL. OWNER'S SEPARATE CONTRACTOR SHALL MAKE ALL CONNECTIONS BETWEEN CONSOL AND LIFT.

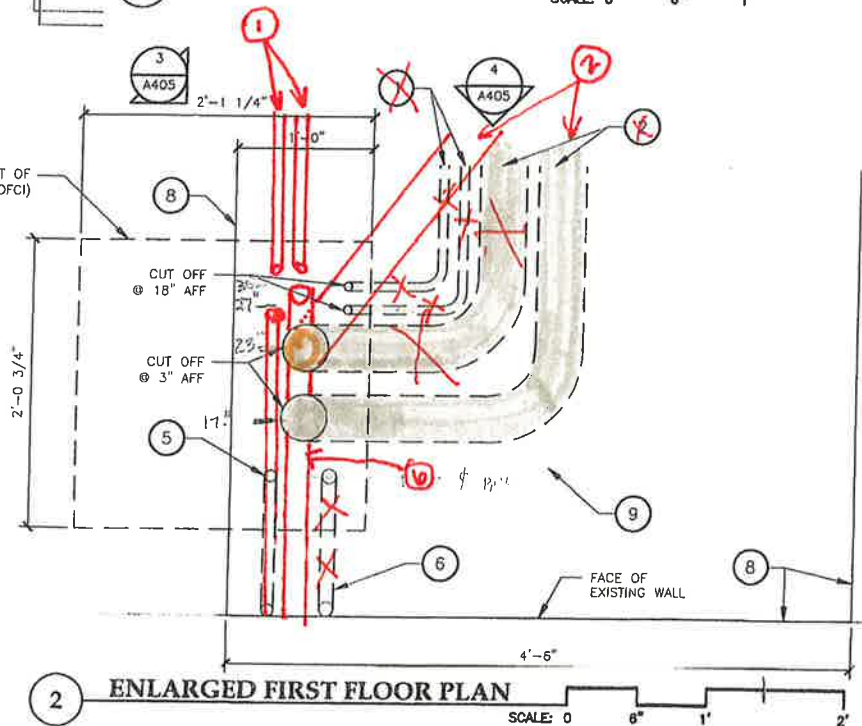
Contractor provided redlines included in set for clarity.



3 ISOMETRIC VIEW



3 ELEVATION VIEW



2 ENLARGED FIRST FLOOR PLAN



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CBJ Contract No. E16-016

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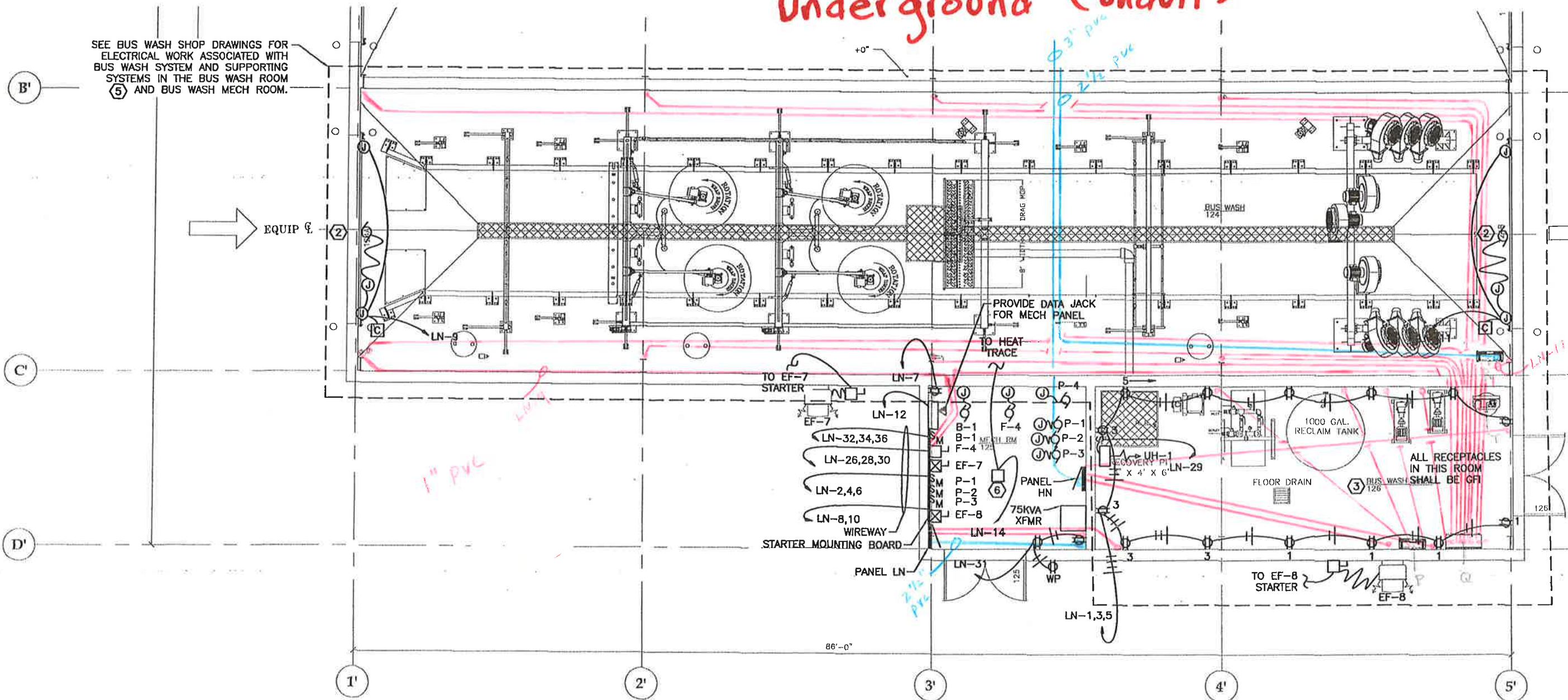
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SHEET TITLE
**ENLARGED
FLOOR PLAN
& DETAILS**

DATE: June 2016
FILE: 15019

A405

Underground Conduits



1 ENLARGED FLOOR PLAN - POWER SCALE: 0 2' 4' 8'

NOTES:

- SEE MECHANICAL EQUIPMENT LIST SHEET E207. ELECTRICAL EQUIPMENT FOR MECHANICAL EQUIPMENT F-4 IS ONLY IN THE BASE BID AND IS IDENTIFIED AS "BASE ONLY" IN THE MECHANICAL EQUIPMENT LIST. IT WILL NOT BE A PART OF THE ALTERNATE IF THE ALTERNATE IS AWARDED.
- 1HP, 120V, 1Ø ROLLUP DOOR OPERATOR. OVERHEAD DOOR WAYNE DALTON TS200. PROVIDE WITH PHOTO SENSOR AND SAFETY EDGE SENSOR. POWER FROM DISCONNECT ON WALL. PROVIDE A 3 BUTTON CONTROL STATION TO CONTROL OPERATOR. PROVIDE CONTROL CIRCUITING AS REQUIRED. FEED MOTOR WITH FLEXIBLE CONDUIT FROM ADJACENT JUNCTION BOX. MOUNT OPERATOR AND DISCONNECT TOGETHER ON STRUCTURAL COLUMN ABOVE RECEPTACLE. CONNECT PHOTO SENSOR AND BOTTOM SAFETY EDGE SENSOR. CONTROLLER AND DISCONNECTS FOR OVERHEAD DOORS IN BUS WASH ROOM 124 ARE SHOWN IN MECH ROOM 125. COORDINATE WITH CBJ FOR LOCATION OF OVERHEAD DOOR CONTROLLERS. MOUNT DOOR CONTROLLERS IN NEMA 4X STAINLESS STEEL ENCLOSURE WITH CLEAR WINDOW OR PROVIDE NEMA 4X WATERTIGHT DOOR CONTROLLER WITH WATERTIGHT NEMA 4X PUSH BUTTONS.
- ALL EQUIPMENT IN BUS WASH MECH ROOM 126 SHALL BE RATED FOR USE IN DAMP LOCATIONS.
- SQUARE KEYNOTES REFERENCE MECHANICAL DRAWINGS. SEE MECHANICAL DRAWINGS.

- PROVIDE ALL ELECTRICAL EQUIPMENT, WIRING, INCLUDING CONTROLS, AS REQUIRED TO PROVIDE A FULLY OPERATIONAL BUS WASH SYSTEM. FEED THE BLOWER SYSTEM CONTROL PANEL (ITEM NO. R) FROM A NEW 175/3 CIRCUIT BREAKER IN THE EXISTING MDP IN THE MEZZANINE WITH 2-1/2"Ø, 4 NO. 4/0, AND 1 NO. 6 GND. FEED THE MAIN CONTROL PANEL (ITEM NO. Q) FROM A 60/3 CIRCUIT BREAKER IN PANEL HN WITH 1-1/2"Ø, 4 NO. 4, AND 1 NO. 10 GND. FEED THE RECLAIM CONTROL PANEL (ITEM NO. P) FROM A 50/3 CIRCUIT BREAKER IN PANEL HN WITH 1-1/2"Ø, 4 NO. 6, AND 1 NO. 10 GND. FEED THE AIR COMPRESSOR (ITEM NO. T) FROM A 15/3 CIRCUIT BREAKER IN PANEL HN WITH 3/4"Ø, 4 NO. 12 & 1 NO. 12 GND VIA A 30/3 HEAVY DUTY SAFETY SWITCH MOUNTED NEXT TO THE COMPRESSOR. FEED THE COMPRESSOR WITH FLEXIBLE CONDUIT FROM THE SAFETY SWITCH. SEE THE BUS WASH SHOP DRAWING NO. 9329-EQUIP FOR THE LOCATIONS OF THE EQUIPMENT. SEE THE BUS WASH SHOP DRAWING NO. 9329-ELEC FOR THE BUS WASH ELECTRICAL REQUIREMENTS. PROVIDE ALL WIRING SHOWN ON THE BUS WASH SHOP DRAWINGS. PROVIDE ALL DISCONNECTS SHOWN ON THE BUS WASH SHOP DRAWINGS AND AS REQUIRED PER NEC. PROVIDE HEAVY DUTY, 600V RATED DISCONNECTS FOR ALL THREE PHASE MOTORS. PROVIDE 120V, 20A, SINGLE POLE SWITCHES WITH WEATHER PROOF COVERS FOR ALL 120V, SINGLE PHASE MOTORS. PROVIDE ALL BUS WASH WIRING IN CONDUIT. PROVIDE DEDICATED HOME RUNS FROM ALL BUS WASH EQUIPMENT TO THE BUS WASH PANEL THAT FEEDS IT. INCREASE CONDUIT SIZE AND CONDUCTOR SIZE FROM WHAT IS SHOWN TO MEET NEC AND AS REQUIRED. COMPLY WITH ALL PROJECT REQUIREMENTS (COPPER CONDUCTORS WITH XHHW INSULATION, PVC CONDUIT, FLEXIBLE NON-METALLIC CONDUIT, 316 STAINLESS STEEL DISCONNECTS, ETC.) FOR BUS WASH ELECTRICAL. ALL OF THE BUS WASH CONTROL WIRING IS 120V, THEREFORE PROVIDE ALL BUS WASH CONTROL WIRING.

- MOUNT HEAT TRACE CONTACTOR ON STARTER MOUNTING BOARD WIRE TO HEAT TRACE, SEE E212.
- NOT ALL WIRING SHOWN FOR CLARITY. PROVIDE ALL CONDUIT AND WIRING AS REQUIRED.

EXHIBIT "B"

Contractor provided redlines included in set for clarity.

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City & Borough of Juneau
CAPITAL TRANSIT FACILITY RENOVATION & ADDITION
 Juneau, Alaska
 CBJ Project No. E16-016

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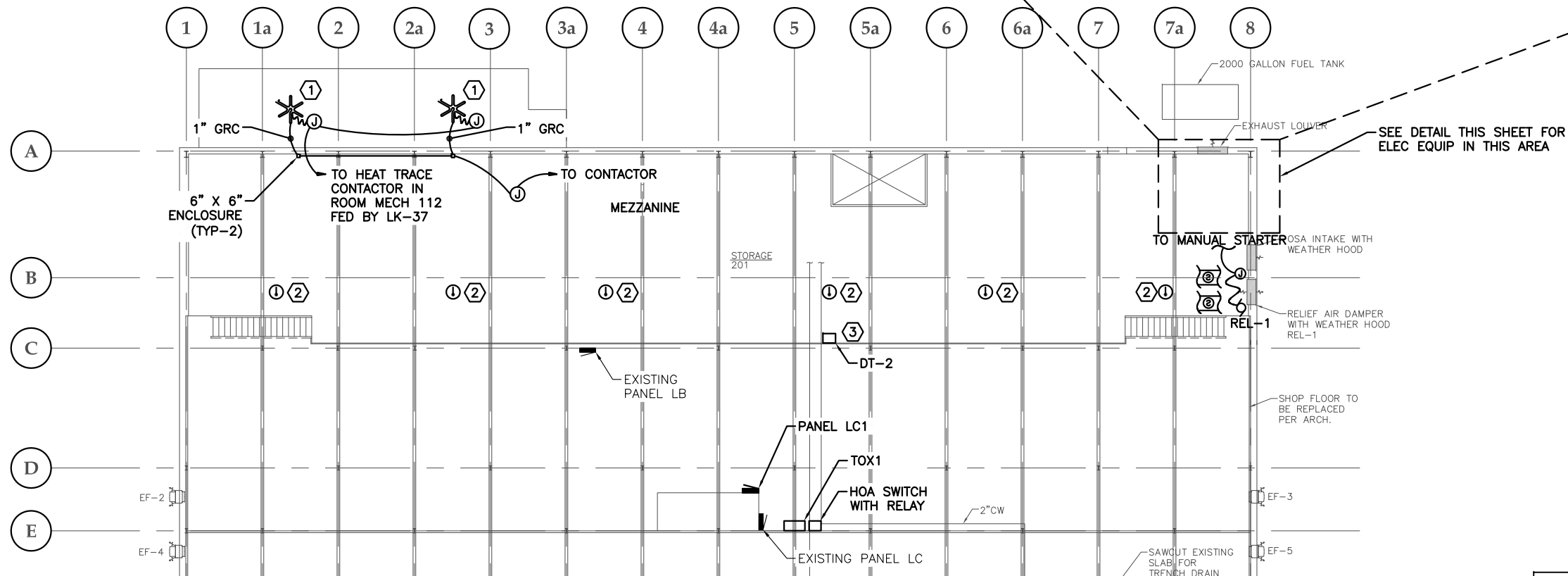
SHEET TITLE
 ENLARGED FLOOR PLAN - POWER

DATE: June 2016
 FILE: 15019

E204

NOTES:

- ① ROOF DRAIN HEAT TRACE ASSEMBLY. INSTALL PER DETAILS ON SHEET E212. LOCATE PER MECHANICAL.
- ② NEW HEAT DETECTOR.
- ③ REMOVE POWER TO EXISTING GENERATOR DAY TANK AND CONNECT TO NEW DAY TANK FOR GENERATOR LABELED DT-2. PROVIDE A SINGLE-POLE SWITCH AS A DISCONNECT FOR DT-2. PROVIDE ALL NECESSARY CONDUIT AND WIRING.
4. PROVIDE DATA AND FIRE ALARM DEVICES AS SHOWN ON THIS SHEET.



1 MEZZANINE FLOOR PLAN - POWER

SCALE: 0 4' 8' 16' 32'



PROVIDE NEW DATA AND POWER TO THE NEW MECHANICAL CONTROL PANEL IN THE MEZZANINE. LOCATE NEW DATA JACK NEXT TO NEW CONTROL PANEL. SEE MECHANICAL DRAWINGS, M SERIES.

NEW MECHANICAL CONTROL PANEL

LC1-2

LCI-16, 18,20

3/4" C, 4 NO. 12 & 1 NO. 12 GND & CONTROLS

LCI-22, 24,26

LCI-4

72"W X 48"H X 3/4"D PLYWOOD BOARD PAINTED GRAY FOR MOUNTING NEW ELECTRICAL EQUIPMENT. MOUNT TOP AT 6' AFF.

HOA SWITCH

LC1-5

F-3

F-2

TO RELIEF AIR DAMPER REL-1

SEE DETAIL THIS SHEET FOR ELEC EQUIP IN THIS AREA

ROSA INTAKE WITH WEATHER HOOD

REL-1 RELIEF AIR DAMPER WITH WEATHER HOOD

SHOP FLOOR TO BE REPLACED PER ARCH.

EF-3

EF-5

SAWCUT EXISTING SLAB FOR TRENCH DRAIN

2" CW

HOA SWITCH WITH RELAY

TOX1

PANEL LC1

DT-2

EXISTING PANEL LB

STORAGE 201

MEZZANINE

TO CONTACTOR

TO HEAT TRACE CONTACTOR IN ROOM MECH 112 FED BY LK-37

6" X 6" ENCLOSURE (TYP-2)

1" GRC

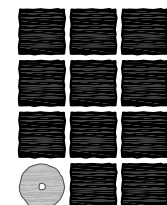
1" GRC

2000 GALLON FUEL TANK

EXHAUST LOWER

TO MANUAL STARTER

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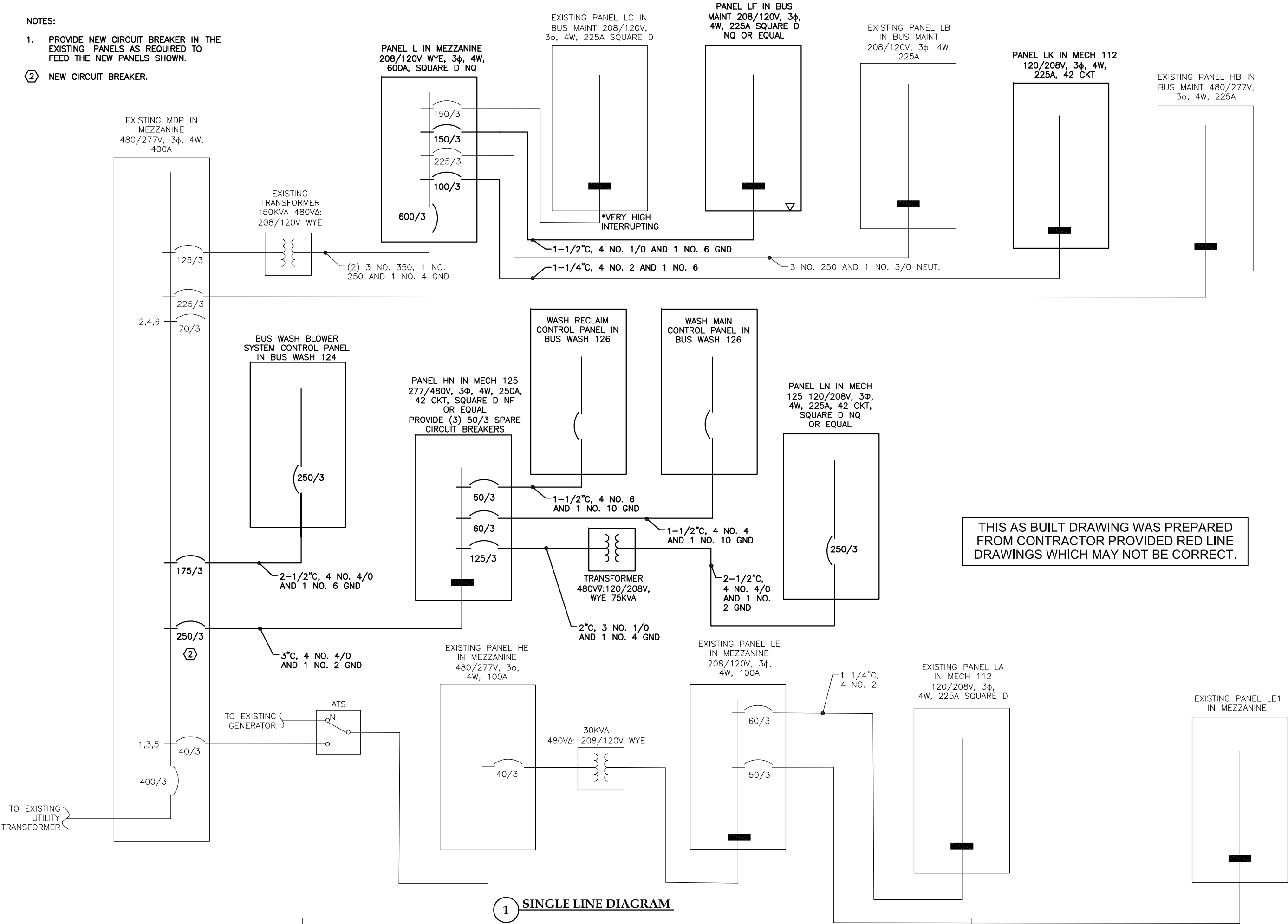
MEZZANINE
FLOOR PLAN -
POWER

DATE: November 2017

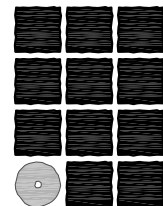
FILE: 15019

E205

- NOTES:
1. PROVIDE NEW CIRCUIT BREAKER IN THE EXISTING PANELS AS REQUIRED TO FEED THE NEW PANELS SHOWN.
- ② NEW CIRCUIT BREAKER.



① SINGLE LINE DIAGRAM



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SHEET TITLE
**SINGLE
LINE
DIAGRAM**

DATE: November 2017
FILE: 15019

E206

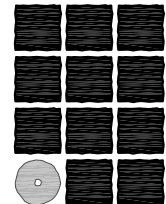
EXISTING PANEL LA NEW CONFIGURATION		SIZE	VOLTS, PHASE			MOUNTING		MAIN	LOCATION	
		225A	120/208V, 3ϕ, 4W			SURFACE		LUGS	MECH 112	
CKT NO	DESCRIPTION	C/B SIZE	KVA					C/B SIZE	DESCRIPTION	CKT NO
			CKT	Aϕ	Bϕ	Cϕ	CKT			
1	SPACE		0.0	0.7			0.7	20/1	RECEPTACLE SUPERINTENDENT & LEAD OPS	2
3	SPACE		0.0		0.0		0.0		RECEPTION/DISPATCH CENTER PLUGS	4
5	LOCKER RM/LUNCH ROOM LIGHTS		0.0			0.7	0.7	20/1	RECEPTACLE SUPERINTENDENT	6
7	CORRIDOR LIGHTS		0.0	0.7			0.7	20/1	RECEPTACLE LEAD OPS	8
9	MECH/MAINT ROOM LIGHTS		0.0		0.0		0.0		RECEPTION COMPUTER PLUG	10
11	PARTS ROOM LIGHT		0.0			0.9	0.9	20/1	RECEPTACLE VAULT CLOSET/LEAD OPS	12
13	UPHOLSTERY ROOM LIGHTS		0.0	0.5			0.5	20/1	RECEPTACLE MAINTENANCE SUPERVISOR	14
15	RECEPTACLE UNDER PANEL		0.0		0.7		0.7	20/1	RECEPTACLE MAINTENANCE SUPERVISOR	16
17	RECEPTACLE ACROSS ROOM		0.0			0.0	0.0		LOCKER ROOM GFI PLUGS	18
19	WATER BOOSTER PUMP		0.0	0.0			0.0		LUNCH ROOM	20
21	EXISTING		0.0		0.0		0.0		REFRIGERATOR LUNCH ROOM PLUG	22
23	EXISTING		0.0			0.0	0.0		COFFEE COUNTER LUNCH ROOM PLUG	24
25	RECEPTACLE TRAINING	20/1	0.7	1.4			0.7	20/1	RECEPTACLES OP SUPERVISOR	26
27	RECEPTACLE TRAINING	20/1	0.7		1.2		0.5	20/1	RECEPTACLES OP SUPERVISOR	28
29	RECEPTACLE TRAINING	20/1	0.7			0.7	0.0		SPACE	30
31	RECEPTACLE TRAINING	20/1	0.7	0.7			0.0		SPACE	32
33	RECEPTACLE TRAINING	20/1	0.7		0.7		0.0		UPHOLSTERY ROOM PLUGS	34
35	MECHANICAL CONTROL PANEL	20/1	0.1			0.1	0.0		UPHOLSTERY ROOM PLUGS	36
37	SPARE	20/1	0.0	4.6			4.6	150/3 ✱	PANEL LA1	38
39	SPARE	20/1	0.0		4.0		4.0	---	---	40
41	SPARE	20/1	0.0			5.5	5.5	---	---	42
TOTAL CONNECTED LOAD = 23.1 KVA/ 64 AMPS				8.6	6.6	7.9				

PROVIDE NEW CIRCUIT BREAKERS IN PANEL LA AS SHOWN
* VERY HIGH INTERRUPTING
ALL CIRCUIT BREAKERS SHOWN ARE NEW

PANEL LK		SIZE	VOLTS, PHASE			MOUNTING		MAIN	LOCATION	
		225A	120/208V, 3ϕ, 4W			SURFACE		LUGS	CORRIDOR 110	
CKT NO	DESCRIPTION	C/B SIZE	KVA					C/B SIZE	DESCRIPTION	CKT NO
			CKT	Aϕ	Bϕ	Cϕ	CKT			
1	RECEPTACLES VESTIBULE	20/1	0.7	2.0			1.3	20/1	LIGHTING VESTIBULE, LOBBY	2
3	RECEPTACLES LOBBY	20/1	0.7		1.9		1.2	20/1	LIGHTING TOILET, & TEF-1	4
5	RECEPTACLES LOBBY	20/1	0.7			1.6	0.9	20/1	LIGHTING TRAINING & LOST/FOUND	6
7	RECEPTACLES TOILET	20/1	0.4	0.5			0.1	20/1	SPARE	8
9	RECEPTACLES RECEPTION	20/1	0.5		0.6		0.1	20/1	SPARE	10
11	RECEPTACLES RECEPTION	20/1	0.7			1.7	1.0	20/1	LIGHTING ADMIN, HALL, RECEPTION	12
13	RECEPTACLES HALL	20/1	0.7	0.9			0.2	20/1	LIGHTING, MAINT & OPS OFFICES	14
15	RECEPTACLES ADMIN	20/1	0.5		0.5		0.0	20/1	RECEPTACLES 117	16
17	RECEPTACLES ADMIN	20/1	0.7			0.7	0.0	20/1	116/117 LIGHTING	18
19	HEAT LOBBY	20/1	0.2	0.6			0.4	20/2	COPIER	20
21	UNIT HEATER VEST UH-2	30/1	0.5		0.9		0.4	---	---	22
23	SPARE	20/1	0.0			0.4	0.4	20/1	SPARE	24
25	UNIT HEATER LOBBY UH-3	30/1	0.5	0.6			0.1	20/1	DOOR OPERATOR TO OUTSIDE	26
27	RECEPTACLES TRAINING	20/1	0.0		0.1		0.1	20/1	DOOR OPERATOR TO LOBBY	28
29	RECEPTACLES LIBRARY	20/1	0.7			0.8	0.1	20/1	SPARE	30
31	RECEPTACLES LOST & FOUND/TRAINING	20/1	0.0	0.0			0.0	20/1	SPARE	32
33	RECEPTACLES TRAINING	20/1	0.0		0.0		0.0	20/1	SPARE	34
35	SPARE	20/1	0.0			0.0	0.0	20/1	SPARE	36
37	NORTH HEAT TRACE	20/1	0.0	0.0			0.0	20/1	SPARE	38
39	SPARE	20/1	0.0		0.0		0.0	20/1	SPARE	40
41	SPARE	20/1	0.0			0.0	0.0	20/1	SPARE	42
TOTAL CONNECTED LOAD = 13.8 KVA/ 38 AMPS				4.6	4.0	5.2				

** PROVIDE 20/1 C/B WITH GFI PROTECTION

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SHEET TITLE

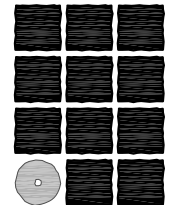
PANEL
SCHEDULES-
PANEL LA AND
PANEL LA1

DATE: November 2017
FILE: 15019

PANEL LN		SIZE	VOLTS, PHASE			MOUNTING		MAIN	LOCATION	
		225A	120/208V, 3ϕ, 4W			SURFACE		250/3	MECH RM 125	
CKT NO	DESCRIPTION	C/B SIZE	KVA					C/B SIZE	DESCRIPTION	CKT NO
			CKT	Aϕ	Bϕ	Cϕ	CKT			
1	RECEPTACLES BUS WASH MECH	20/1	0.7	0.9			0.2	15/3	EXHAUST FAN BUS WASH EF-7	2
3	RECEPTACLES BUS WASH MECH	20/1	0.7		0.9		0.2	---	---	4
5	RECEPTACLES BUS WASH MECH	20/1	0.9			1.1	0.2	---	---	6
7	RECEPTACLES MECH ROOM 125	20/1	0.9	1.3			0.4	20/1	EXHAUST FAN BUS WASH MECH EF-8	8
9	EAST OVERHEAD DOOR BUS WASH	20/1	0.8		1.0		0.2	15/1	BOILER B-1	10
11	WEST OVERHEAD DOOR BUS WASH	20/1	0.8			0.9	0.1	20/1	MECHANICAL CONTROL PANEL	12
13	NORTH RECEPTACLES BUS STORAGE 2	20/1	0.7	0.9			0.2	20/1	BUS STORAGE ROOF HEAT TRACE	14
15	NORTH RECEPTACLES BUS STORAGE 2	20/1	0.5		0.7		0.2	15/3	EXHAUST FAN BUS STORAGE 2 EF-6	16
17	SOUTH RECEPTACLES BUS STORAGE 2	20/1	0.7			0.9	0.2	---	---	18
19	SOUTH RECEPTACLES BUS STORAGE 2	20/1	0.5	0.7			0.2	---	---	20
21	WEST OVERHEAD DOOR BUS STORAGE 2	20/1	0.8		0.9		0.1	20/1	CD CONTROLLER TDX-3	22
23	WEST OVERHEAD DOOR BUS STORAGE 2	20/1	0.8			0.9	0.1	20/1	SPARE	24
25	EAST OVERHEAD DOOR BUS STORAGE 2	20/1	0.8	2.0			1.2	30/3	SPARE	26
27	EAST OVERHEAD DOOR BUS STORAGE 2	20/1	0.8		2.0		1.2	---	SPARE	28
29	UNIT HEATER BUS WASH MECH	20/1	0.1			1.3	1.2	---	SPARE	30
31	GEN RECEPTACLE	20/1	0.6	1.0			0.4	20/1	PUMP P-1	32
33	SPARE	20/1	0.0		0.4		0.4	20/1	PUMP P-2	34
35	SPARE	20/1	0.0			0.4	0.4	20/1	PUMP P-3	36
37	SPARE	20/1	0.0	0.0			0.0	20/1	SPARE OUTSIDE LTG CONTACTOR COIL	38
39	SPARE	20/1	0.0		0.0		0.0	20/1	SPARE	40
41	SPARE	20/1	0.0			0.0	0.0	20/1	SPARE	42
TOTAL CONNECTED LOAD = 18.2 KVA/ 51 AMPS				6.8	5.9	5.5				

PANEL LC1		SIZE	VOLTS, PHASE			MOUNTING		MAIN	LOCATION	
		225A	120/208V, 3φ, 4W			SURFACE		LUGS	BUS MAINTENANCE SHOP	
CKT NO	DESCRIPTION	C/B SIZE	KVA					C/B SIZE	DESCRIPTION	CKT NO
			CKT	Aφ	Bφ	Cφ	CKT			
1	CD CONTROLLER TOX-1, EF-2, EF-3 COIL	20/1	0.1	0.2			0.1	20/1	SPARE	2
3	CD CONTROLLER TOX-2, EF-4, EF-5 COIL	20/1	0.1		0.2		0.1	20/1	DAY TANK DT-1	4
5	SPARE	20/1	0.1			0.1	0.0	20/1	SPARE	6
7	SPARE	20/1	0.1	0.1			0.0	20/1	SPARE	8
9	WEST EXHAUST FAN MAINT SHOP EF-2	15/3	0.3		4.3		4.0	50/3	BUS LIFT/WEST	10
11	---	---	0.3			4.3	4.0	---	---	12
13	---	---	0.3	4.3			4.0	---	---	14
15	EAST EXHAUST FAN MAINT SHOP EF-3	15/3	0.3		1.7		1.4	30/3	FURNACE F-2	16
17	---	---	0.3			1.7	1.4	---	---	18
19	---	---	0.3	1.7			1.4	---	---	20
21	WEST EXHAUST FAN BUS STORAGE 1 EF-4	15/3	0.3		1.6		1.3	30/3	FURNACE F-3	22
23	---	---	0.3			0.6	1.3	---	---	24
25	---	---	0.3	0.6			1.3	---	---	26
27	EAST EXHAUST FAN BUS STORAGE 1 EF-5	15/3	0.3		0.3		0.0	50/3	BUS LIFT/EAST	28
29	---	---	0.3			0.3	0.0	---	---	30
31	---	---	0.3	0.3			0.0	---	---	32
33	SPARE	20/1	0.0		0.0		0.0	20/3	SPARE	34
35	SPARE	20/1	0.0			0.0	0.0	---	SPARE	36
37	SPARE	20/1	0.0	0.0			0.0	---	SPARE	38
39	SPARE	20/1	0.0		0.0		0.0	20/1	SPARE	40
41	SPARE	20/1	0.0			0.0	0.0	20/1	SPARE	42
TOTAL CONNECTED LOAD = 22.3 KVA/ 62 AMPS				7.2	8.1	7.0				

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City & Borough of Juneau
CAPITAL TRANSIT FACILITY
RENOVATION & ADDITION
Juneau, Alaska
CBJ Project No. E16-016

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SHEET TITLE
PANEL
SCHEDULES-
PANEL LN AND
PANEL LC1
DATE: November 2017
FILE: 15019

MECHANICAL EQUIPMENT SCHEDULE								
EQUIPMENT	LOCATION	HP/KW	VOLTS/ PH	STARTER TYPE/ NEMA SIZE	STARTER SWITCH	STARTER LOCATION	DISCONNECT AT MOTOR	REMARKS
EF-2	MAINT SHOP	3/4HP	208/3	MAGNETIC/φ	HOA	MAINT SHOP 120		SEE SCHEMATIC
EF-3	MAINT SHOP	3/4HP	208/3	MAGNETIC/φ	HOA	MAINT SHOP 120		SEE SCHEMATIC
EF-4	BUS STORAGE 1	3/4HP	208/3	MAGNETIC/φ	HOA	BUS STORAGE 1, 122		SEE SCHEMATIC
EF-5	BUS STORAGE 1	3/4HP	208/3	MAGNETIC/φ	HOA	BUS STORAGE 1, 122		SEE SCHEMATIC
EF-6	BUS STORAGE 2	3/4HP	208/3	MAGNETIC/φ	HOA	BUS STORAGE 2, 123		SEE SCHEMATIC
EF-7	BUS WASH	3/4HP	208/3	MAGNETIC/φ	HOA	MECH RM 125	HEAVY DUTY 30/3	PROVIDE STAINLESS STEEL DISCONNECT. SEE SCHEMATIC
EF-8	BUS WASH MECH	1/2HP	120/1	MAGNETIC/φ	HOA	MECH RM 125	HEAVY DUTY 30/3	SEE SCHEMATIC
CARBON MONOXIDE CONTROLLER, TOX-1	MAINT SHOP	0.5	120/1			MAINT SHOP 120		SEE SCHEMATIC
CARBON MONOXIDE CONTROLLER, TOX-2	BUS STORAGE 1	0.5	120/1			BUS STORAGE 1, 122		SEE SCHEMATIC
CARBON MONOXIDE CONTROLLER, TOX-3	BUS STORAGE 2	0.5	120/1			BUS STORAGE 2, 123		SEE SCHEMATIC
HEAT TRACE	ROOF, GRID-F 2 LOCATIONS	8W/FT	120/1					SEE SCHEMATIC
HEAT TRACE	ROOF ABOVE LOBBY 101	8W/FT	120/1					SEE SCHEMATIC
FURNACE, F-1	MECH 112	15A BREAKER	120/1	MANUAL	ON-OFF	MECH 112		SEE SCHEMATIC
FURNACE, F-2	MEZZANINE	12A	208/3	BY MANUFACTURER	ON-OFF	STORAGE 201 STARTER BOARD	HEAVY DUTY 30/3	SEE SCHEMATIC
FURNACE, F-3	MEZZANINE	10A	208/3	BY MANUFACTURER	ON-OFF	STORAGE 201 STARTER BOARD	HEAVY DUTY 30/3	SEE SCHEMATIC
BOILER, B-1	MECH RM 125	1/3HP	120/1	SWITCH	ON-OFF	MECH RM 125	STARTER	BASE BID ONLY
BOILER, B-1	MECH RM 125	1/3HP	120/1	SWITCH	ON-OFF	MECH RM 125	STARTER	ALTERNATE
DAY TANK, DT-1	STORAGE 201	3/4HP	120/1	BY MANUFACTURER	ON-OFF		STORAGE 201 STARTER BOARD	PROVIDE A SWITCH ON STARTER BOARD
(3) TAMPER SWITCHES	MECH/ELEC 117							REPLACE EXISTING VALVE AND TAMPER. CONNECT TO NEW FIRE ALARM SYSTEM
FLOW SWITCH	MECH/ELEC 117							RETAIN EXISTING ZONE FLOW VALVES. CONNECT TO NEW FIRE ALARM SYSTEM
POWER/DATA FOR CONTROL PANELS	MECH RM 112		120/1					POWER CONTROL PANEL
POWER/DATA FOR CONTROL PANELS	MECH RM 125		120/1					POWER CONTROL PANEL
POWER/DATA FOR CONTROL PANELS	MEZZANINE		120/1					NEW DATA IN THE MEZZANINE IS SHOWN ON THE "MEZZANINE FLOOR PLAN - POWER" SHEET E205
TEF-1	NEW TOILET	1/4HP	120/1	MANUAL	ON-OFF	TOILET 001	STARTER IN CEILING	
UH-1	BUS WASH MECH 126	16W	120/1	BY MANUFACTURER	ON-OFF	BUS WASH MECH 126		MOUNT WEATHERPROOF SWITCH ON WALL NEXT TO UNIT HEATER
OVERHEAD DOORS	SEE FLOOR PLANS	1HP	120/1	BY MANUFACTURER	ON-OFF		HEAVY DUTY 30/3	MOUNT DISCONNECT NEXT TO DOOR CONTROLLER PROVIDE ALL WIRING AS REQUIRED
VEHICLE LIFT	MAINT SHOP 120	40A	208/3		ON-OFF		50/3	PROVIDE WIRING PER MANUFACTURER PER NOTES ON PLANS AND AS REQUIRED
BASEBOARD HEATER	VEST 100	500W	120/1					30/1 C/B
BASEBOARD HEATER	LOBBY 101	500W	120/1					30/1 C/B
P-1	MECH 125	FRAC	120/1	MANUAL	ON-OFF	MECH 125	NONE	SEE SCHEMATIC
P-2	MECH 125	FRAC	120/1	MANUAL	ON-OFF	MECH 125	NONE	SEE SCHEMATIC
P-3	MECH 125	FRAC	120/1	MANUAL	ON-OFF	MECH 125	NONE	SEE SCHEMATIC

1 MECHANICAL EQUIPMENT SCHEDULE

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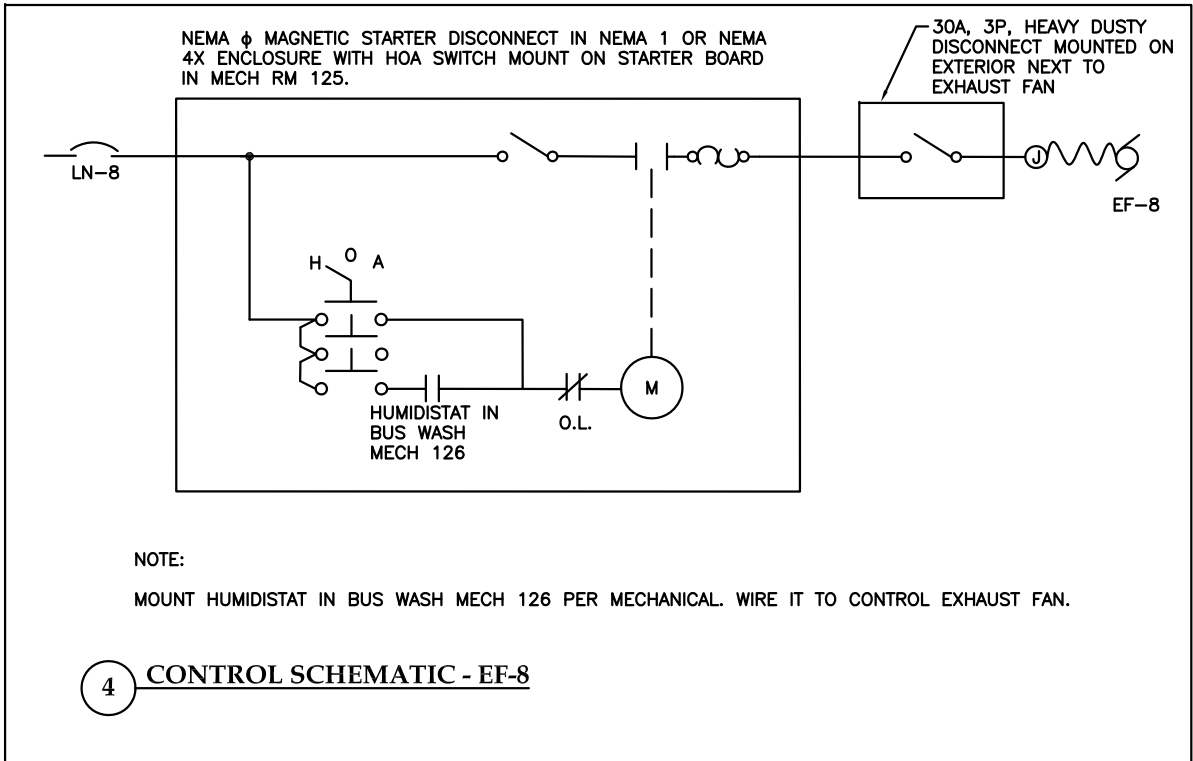
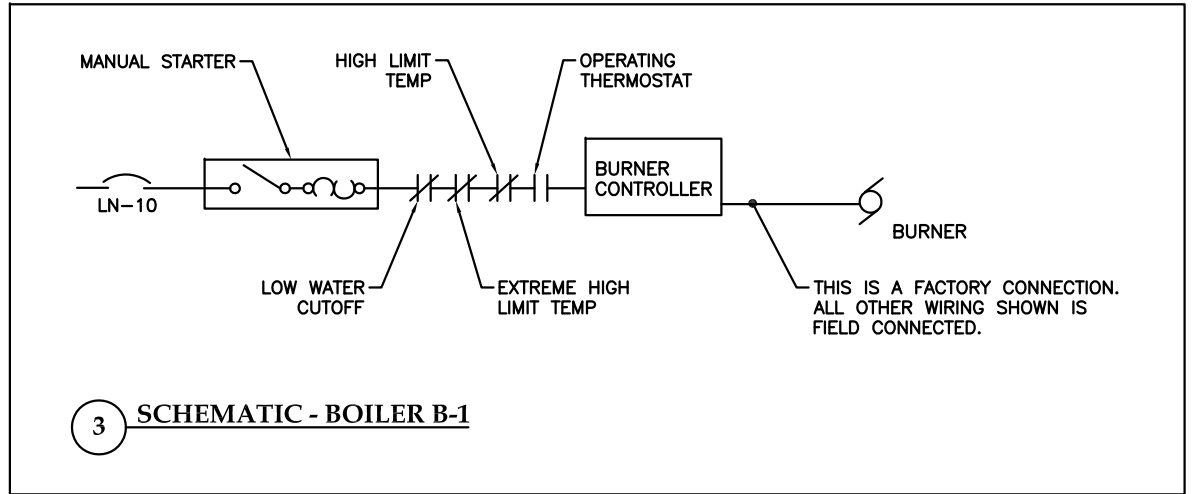
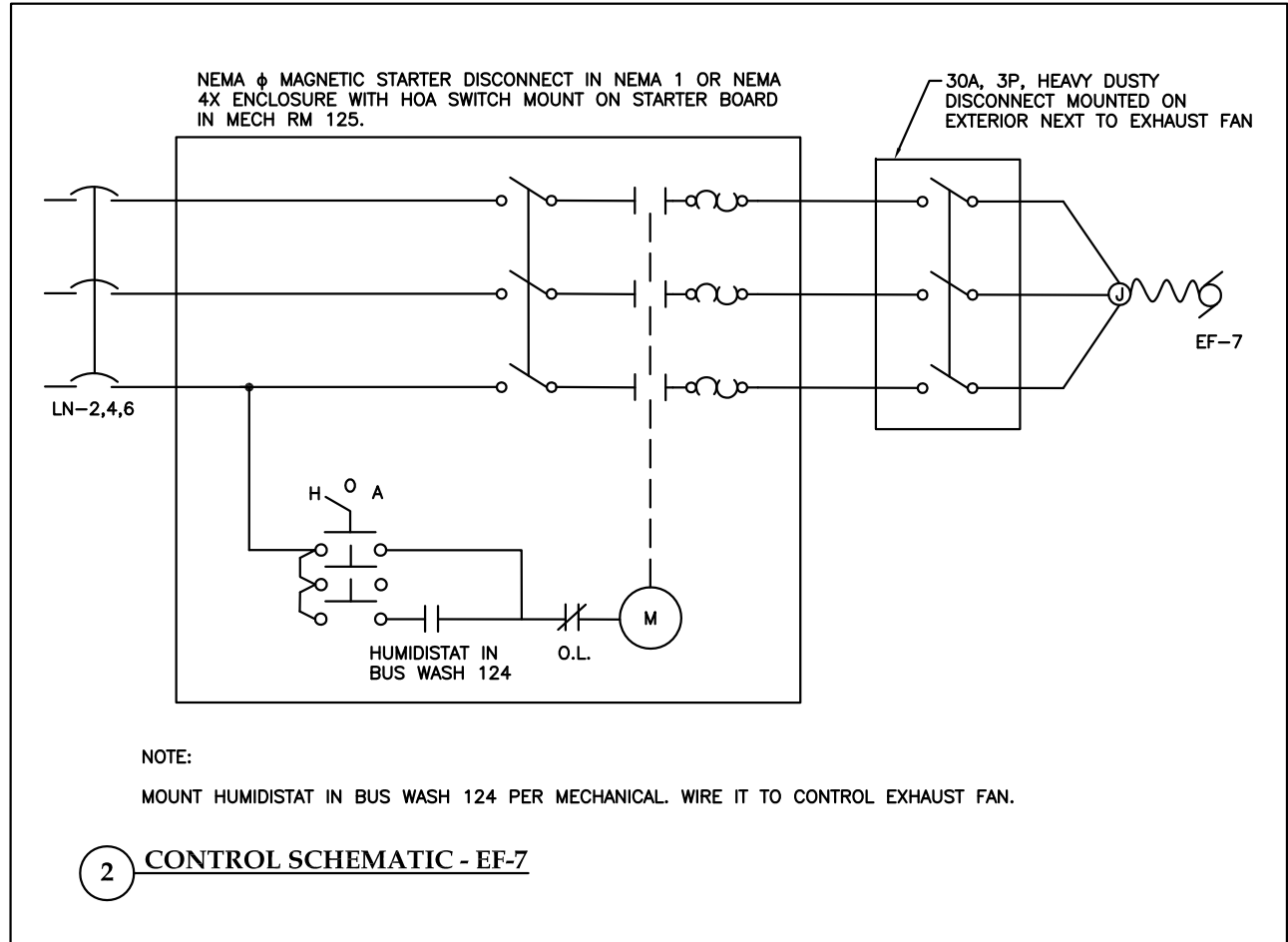
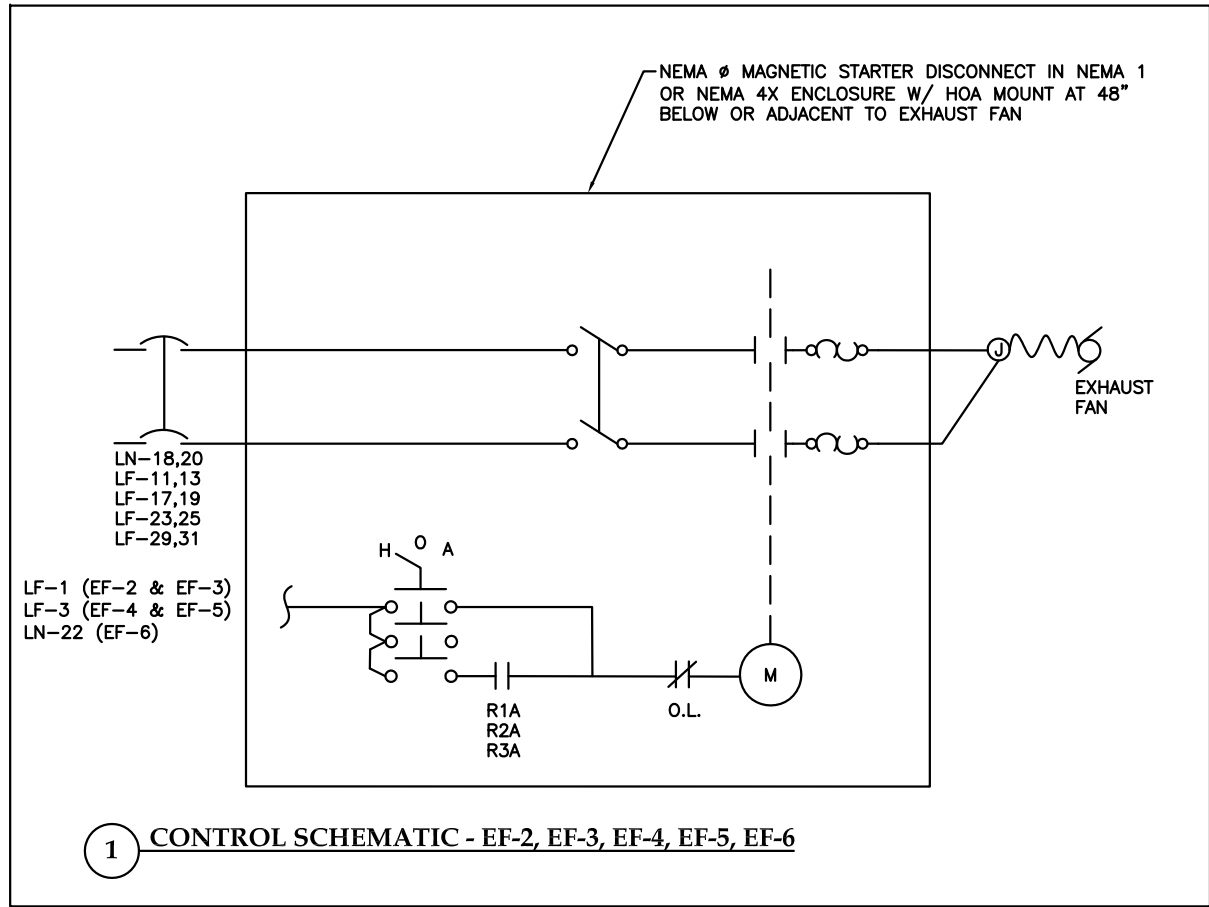
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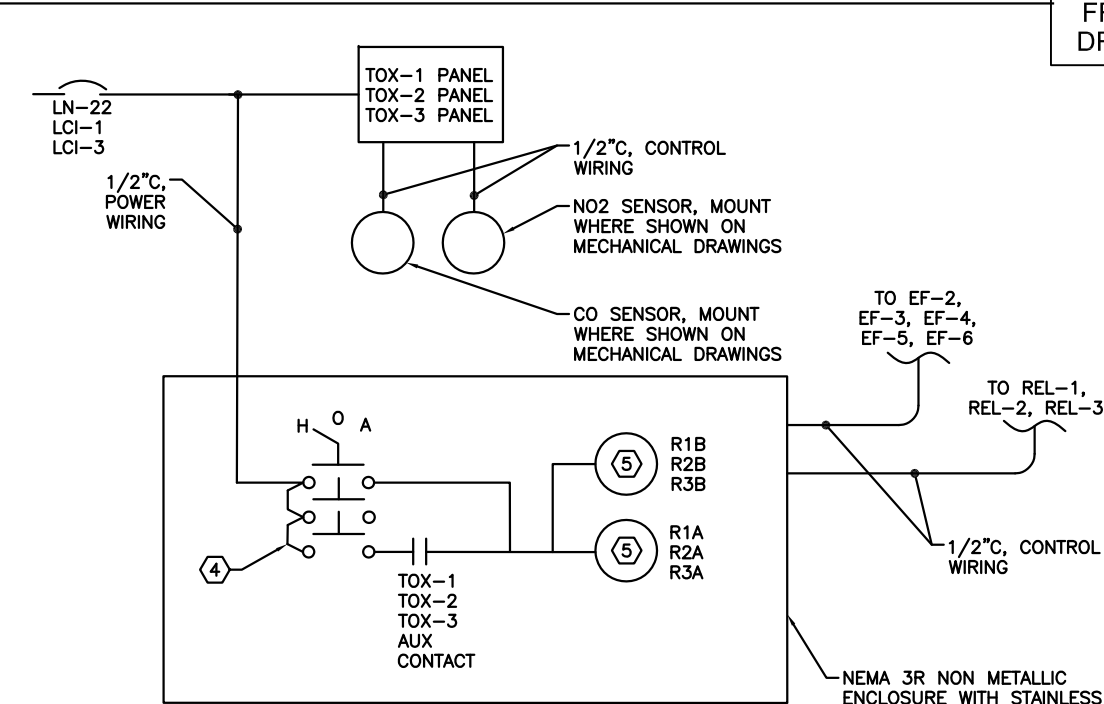
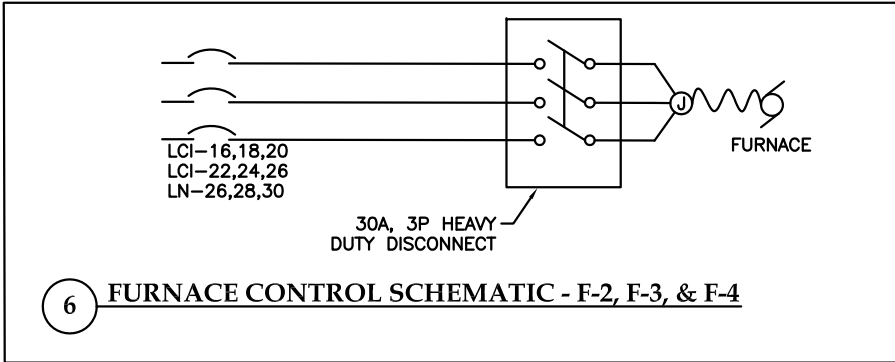
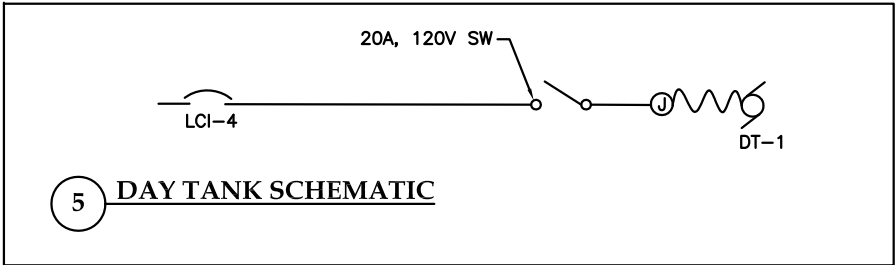
MECHANICAL
EQUIPMENT
SCHEDULE

DATE: November 2017
FILE: 15019



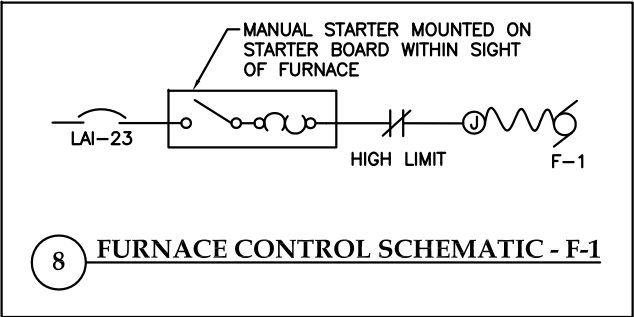
SHEET NOTE:
CONTROL CONDUIT AND CONDUCTORS ARE NOT SHOWN ON PLAN VIEWS. THE SCHEMATICS DON'T SHOW CONDUIT, WIRE SIZE, ETC. PROVIDE ALL CONDUIT AND WIRING AS REQUIRED.

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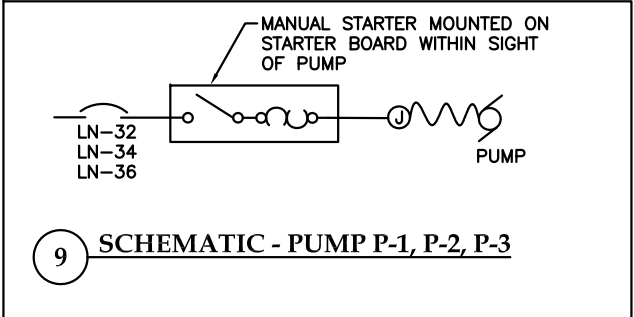


- NOTES:
- TOX-1 PANEL CONTROLS EF-2, EF-3, AND REL-1 WITH AUX CONTACTS FROM R1A AND R1B RELAYS.
 - TOX-2 PANEL CONTROLS EF-4, EF-5, AND REL-2 WITH AUX CONTACTS FROM R2A AND R2B RELAYS.
 - TOX-3 PANEL CONTROLS EF-6 AND REL-3 WITH AUX CONTACTS FROM R3A AND R3B RELAYS.
- ④ NON METALLIC, WATERTIGHT 30MM 3 POSITION SELECTOR SWITCH SQUARE D 900ISK.
- ⑤ INDUSTRIAL CONTROL RELAY IN NEMA 1 OR 4X ENCLOSURE WITH HOA SWITCH. MOUNT NEXT TO TOX PANEL ALLEN BRADLEY 700P SERIES.
- ⑥ WIRE TOX PANEL AND IT'S SENSORS PER INSTALLATION MANUAL, MECHANICAL AND AS REQUIRED.

7 TOX PANEL CONTROL SCHEMATIC (TOX-1, TOX-2, TOX-3)



8 FURNACE CONTROL SCHEMATIC - F-1

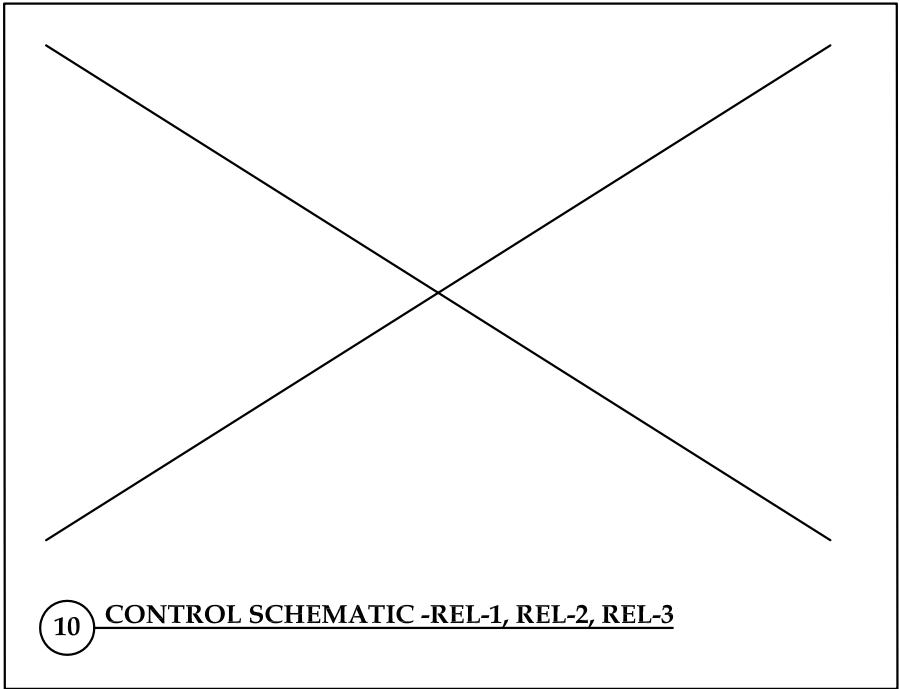


9 SCHEMATIC - PUMP P-1, P-2, P-3

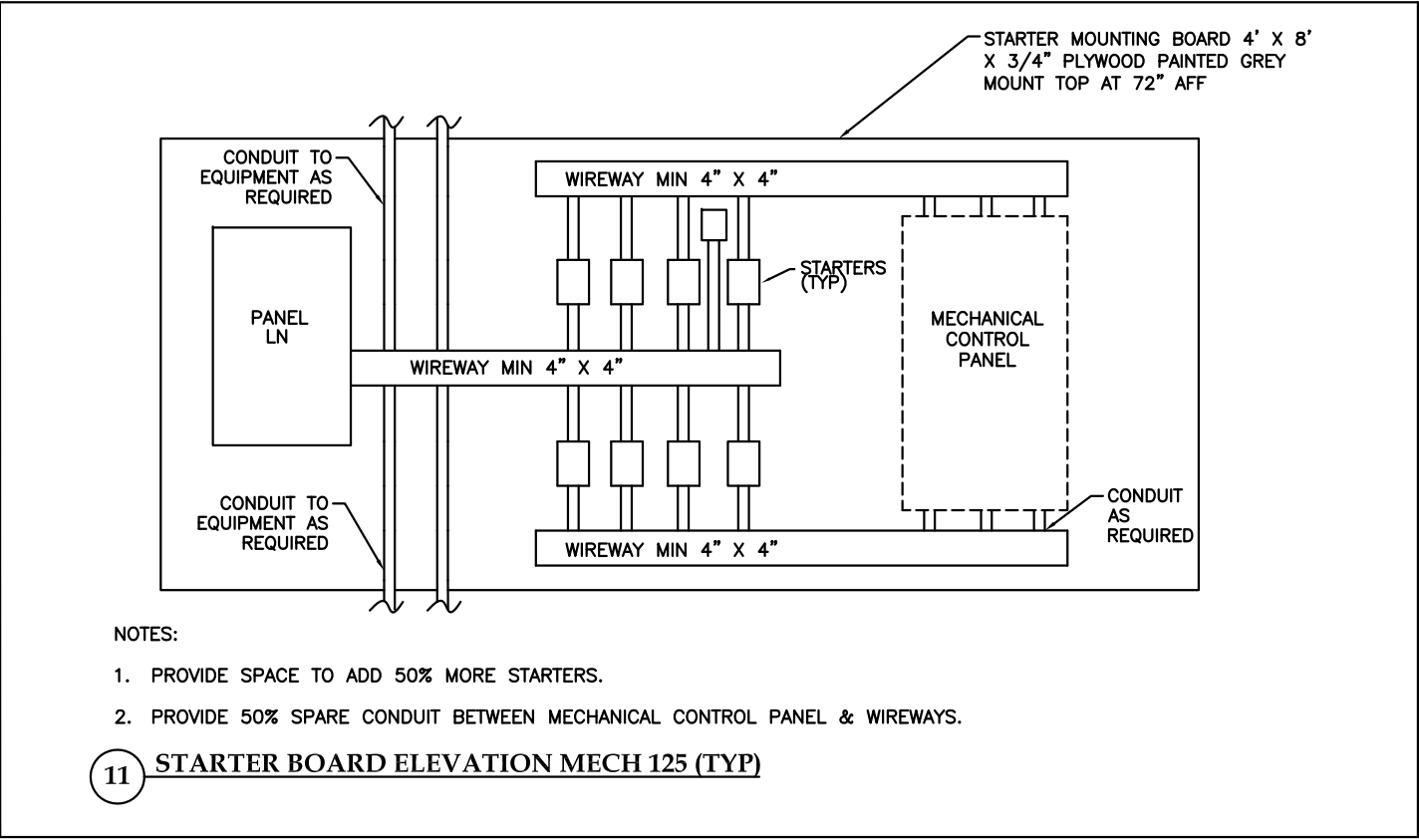
SHEET NOTE:

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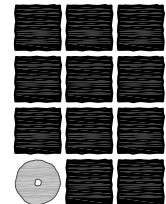


10 CONTROL SCHEMATIC -REL-1, REL-2, REL-3



- NOTES:
- PROVIDE SPACE TO ADD 50% MORE STARTERS.
 - PROVIDE 50% SPARE CONDUIT BETWEEN MECHANICAL CONTROL PANEL & WIREWAYS.

11 STARTER BOARD ELEVATION MECH 125 (TYP)



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CBJ Project No. E16-016

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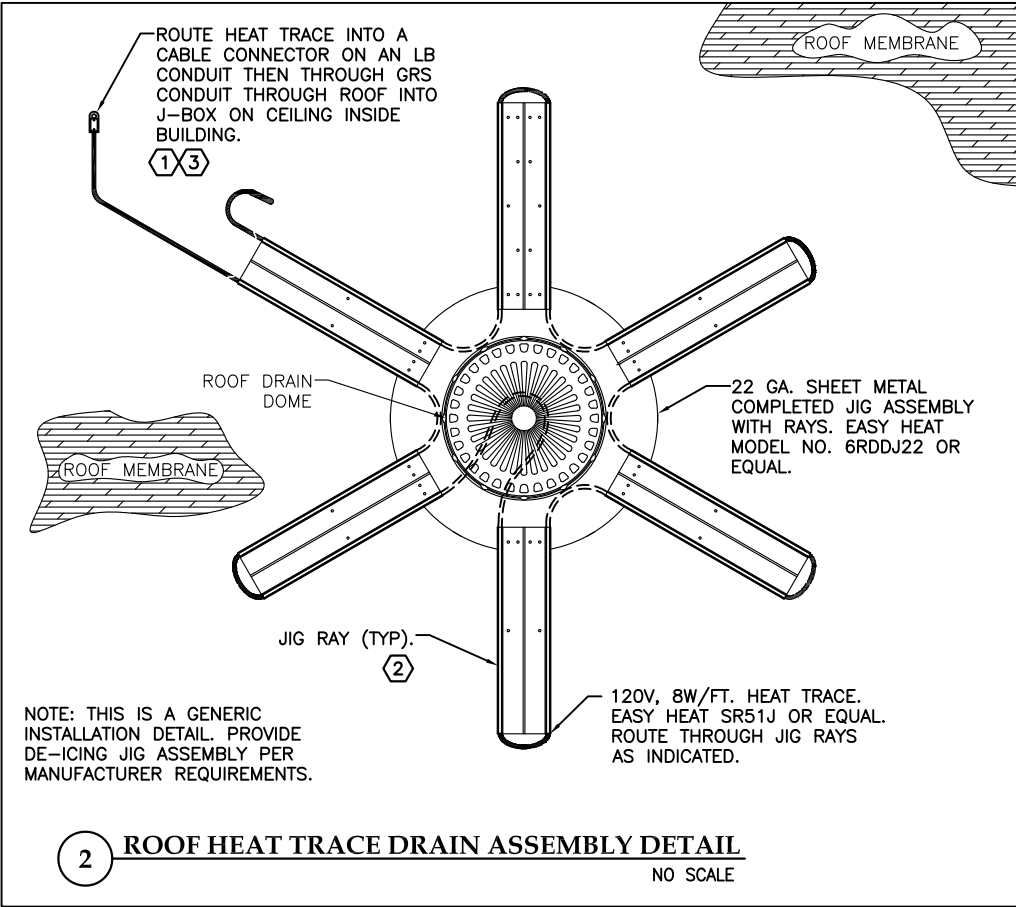
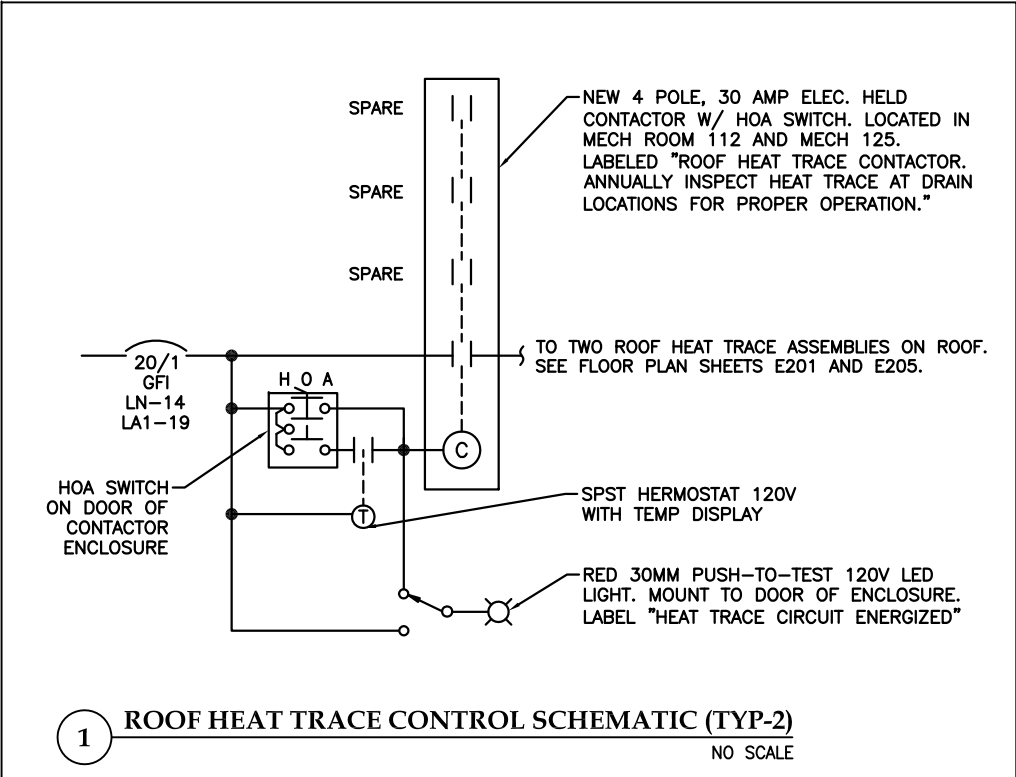


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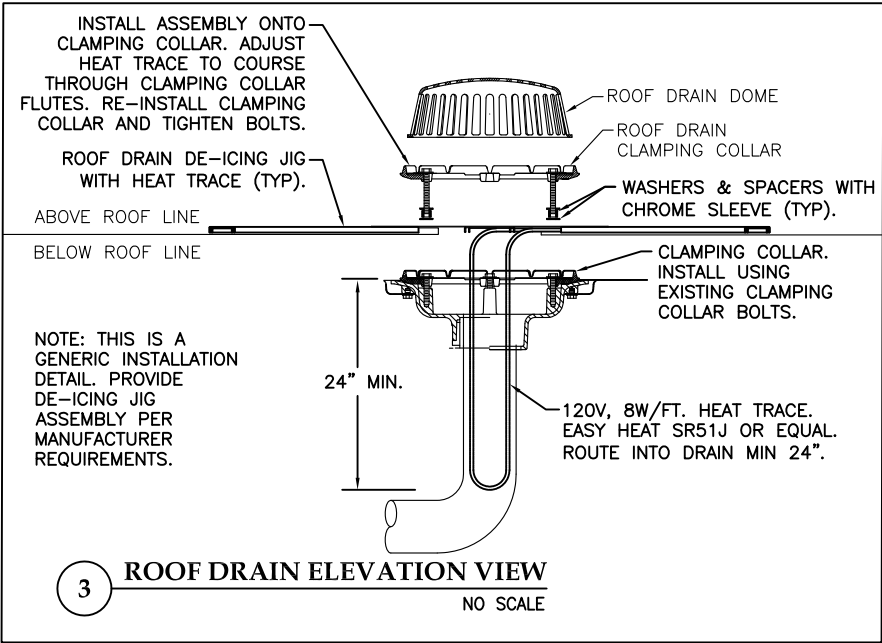
SCHEMATICS

DATE: November 2017
FILE: 15019

E211

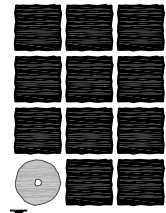


PANEL HN			SIZE	VOLTS, PHASE		MOUNTING		MAIN	LOCATION	
			225A	277/480V, 3φ, 4W		SURFACE		200/3	MECH RM 125	
CKT NO	DESCRIPTION	C/B SIZE	KVA					C/B SIZE	DESCRIPTION	CKT NO
			CKT	Aφ	Bφ	Cφ	CKT			
1	EXTERIOR LIGHTING	20/1	1.0	2.9			1.9	20/1	BUS STORAGE 2 LIGHTING	2
3	BUS WASH MECH LIGHTING	20/1	1.3		2.7		1.4	20/1	BUS WASH LIGHTING	4
5	MECH RM 125 LIGHTING	20/1	0.2			6.0	5.8	125/3	PANEL LN VIA TRANSFORMER	6
7	RECLAIM CONTROL PANEL	50/3	0.0	5.5			5.5	----	----	8
9	----	----	0.0		5.1		5.1	----	----	10
11	----	----	0.0			0.0	0.0			12
13	MAIN CONTROL PANEL	60/3	0.0	0.0			0.0			14
15	----	----	0.0		0.0		0.0			16
17	----	----	0.0			0.0	0.0			18
19	AIR COMP, MECH 126	15/3	0.0	0.0			0.0			20
21	----	----	0.0		0.0		0.0			22
23	----	----	0.0			0.0	0.0			24
25			0.0	0.0			0.0			26
27			0.0		0.0		0.0			28
29			0.0			0.0	0.0			30
31			0.0	0.0			0.0			32
33			0.0		0.0		0.0			34
35			0.0			0.0	0.0			36
37			0.0	0.0			0.0			38
39			0.0		0.0		0.0			40
41			0.0			0.0	0.0			42
TOTAL CONNECTED LOAD = 22.2 KVA/ 62 AMPS				8.4	7.8	6.0				



- NOTES:
- SPlice HEAT TRACE IN JUNCTION BOX ON POWER DIST. BLOCKS AND ROUTE TO JIG ASSEMBLY ON ROOF. MINIMIZE AND SEAL ALL ROOF PENETRATIONS PER ARCHITECTURAL. SIZE JUNCTION BOX AS REQUIRED. PROVIDE A MINIMUM 8" X 8" X 4" JUNCTION BOX.
 - SHORTEN OR REMOVE INDIVIDUAL JIG RAYS AS NECESSARY TO AVOID OBSTRUCTIONS. MAKE CUTS WITH 4" GRINDER W/CUTOFF WHEEL AND DE-BUR THE CUT.
 - FOR THE HEAT TRACE LOCATED ABOVE THE ADMIN AREA, INSTALL FLUSH MOUNT JUNCTION BOX IN GYPSUM CEILING. SPlice HEAT TRACE INSIDE JUNCTION BOX. SIZE AS REQUIRED.

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CBJ Project No. E16-016

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SHEET TITLE
**ROOF HEAT TRACE
DRAIN ASMBLY
DETAIL AND
PANEL HN**

DATE: November 2017
FILE: 15019

E212

NOTES:

1 PROVIDE CONDUIT BETWEEN DISCONNECT AND INSIDE OF LIFT CONTROL MODULE. MOUNT DISCONNECT ON WALL OR COLUMN WITHIN SIGHT OF LIFT CONTROL CONSOLE WHICH EVER IS CLOSER. COORDINATE WITH GENERAL TO SAW CUT AND PATCH THE CONCRETE FLOOR TO ROUTE CONDUIT UNDERGROUND BETWEEN DISCONNECT AND LIFT CONTROL MODULE. INSTALL SEALOFF AT DISCONNECT AND AT LIFT CONTROL MODULE ABOVE 18" AFF. USE RIGID STEEL CONDUIT (GRS).

PROVIDE THE FOLLOWING CONDUIT BETWEEN LIFT CONTROL CONSOLE AND LIFT PER MANUFACTURER SHOP DRAWINGS AND MANUFACTURER INSTALLATION INSTRUCTIONS:
(1) 3/4" GRS 18" AFF INSIDE LIFT CONTROL CONSOLE. ROUTE UNDERGROUND TO LIFT FOR AUTOMATIC WHEEL BASE POSITIONING POTENTIOMETER CABLE.
(1) 3/4" GRS 18" AFF INSIDE LIFT CONTROL CONSOLE. ROUTE UNDERGROUND TO LIFT FOR LIQUID DETECTION SENSOR.
(2) 4" SCHEDULE 40PVC STUB UP 3" INTO LIFT CONTROL CONSOLE. ROUTE TO LIFT FOR HYDRAULIC/AIR LINES.

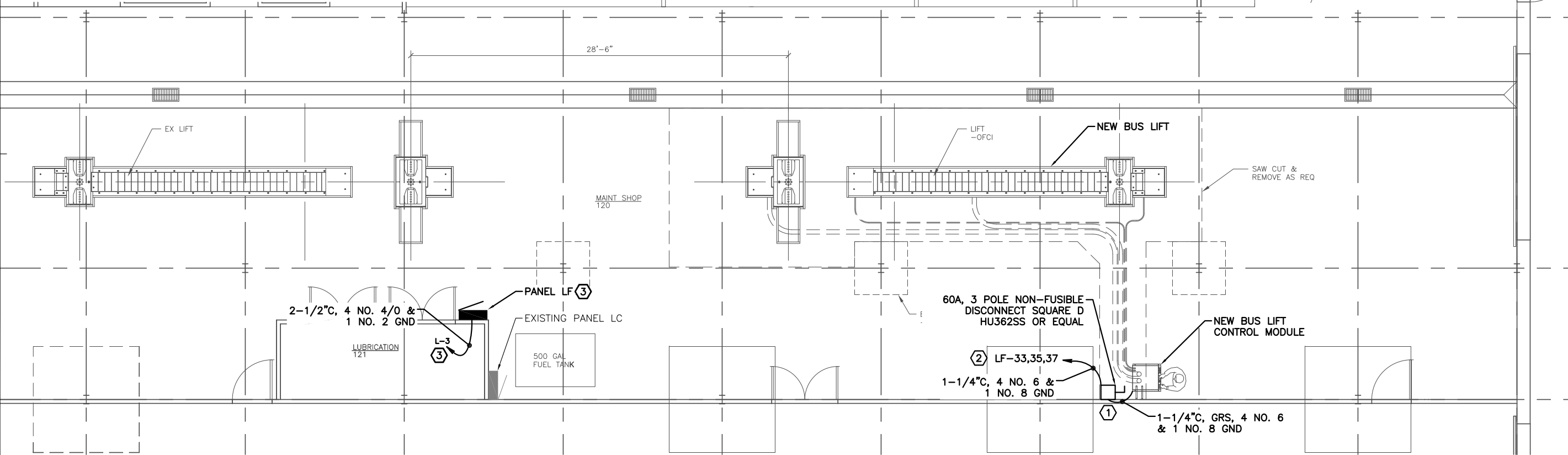
SEE SHOP DRAWINGS FOR CONDUIT LOCATIONS AND ROUTING. STUB UP CONDUIT IN CONTROL CONSOLE IN AREA SHOWN ON SHOP DRAWINGS. PROVIDE ALL ELECTRICAL AND CONTROL WIRING AS REQUIRED FOR A FULLY OPERATIONAL AND FUNCTIONAL LIFT SYSTEM. PROVIDE SEALOFFS ON ALL RIGID STEEL CONDUIT WITH WIRING PER NEC AND PER SHOP DRAWINGS. SEE ARCHITECTURAL AND STRUCTURAL DRAWINGS FOR THIS AREA.

2 REMOVE EXISTING CIRCUIT FEEDING OLD BUS LIFT FROM PANEL LC. INSTALL NEW 50/3 CIRCUIT BREAKER INTO PANEL LF TO FEED NEW BUS LIFT AS SHOWN.

3 INSTALL 150/3 CIRCUIT BREAKER ORIGINALLY INTENDED FOR PANEL LC INTO PANEL L LOCATED IN MEZZANINE. RELOCATE EXISTING SPARE 100/3 BREAKER AS REQUIRED. THE 150/3 CIRCUIT BREAKER TAKES UP SIX POSITIONS IN THE PANEL. PANEL LF SHALL BE THE NEW LABEL FOR THE PANEL PREVIOUSLY IDENTIFIED AS PANEL LC1. FEED PANEL LF FROM NEW 150/3 CIRCUIT BREAKER IN PANEL L.

4. ONLY ELECTRICAL WORK ASSOCIATED WITH THE NEW BUS LIFT IS SHOWN ON THIS SHEET. SEE ELECTRICAL E100, E200, E300, AND E400 SERIES FOR REMAINING WORK.

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1 BUS LIFT REPLACEMENT - ELECTRICAL

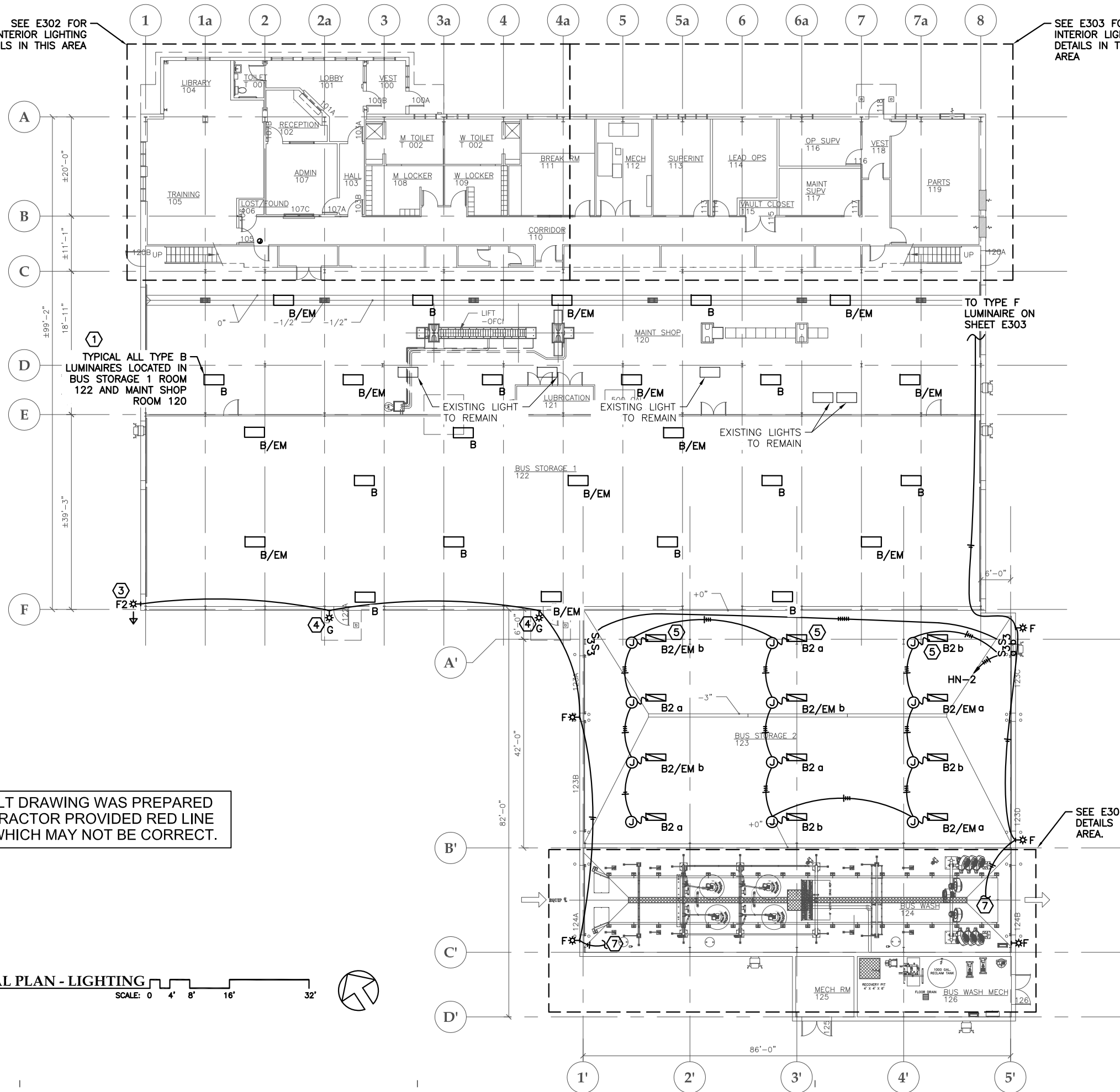
SCALE: 0 2' 4' 8'

NOTE:

1. DISCONNECT POWER FROM EXISTING LUMINAIRE AND CONNECT TO NEW LUMINAIRE IN SAME LOCATION. PROVIDE ADDITIONAL MOUNTING SUPPORTS, JUNCTION BOXES, CONDUIT AND CONDUCTORS AS REQUIRED. NEW LUMINAIRES IN THESE TWO ROOMS ARE AN ALTERNATE. SEE LUMINAIRE SCHEDULE, SHEET E305.
2. SEE LUMINAIRE SCHEDULE ON SHEET E305 FOR LUMINAIRE TYPE.
3. LUMINAIRE OF SAME TYPE AS TYPE F LUMINAIRE, BUT SHALL HAVE A CUSTOM DISTRIBUTION TYPE THAT WILL THROW ALL LIGHT TO THE LEFT. SEE LUMINAIRE SCHEDULE SHEET E305.
4. MOUNT NEW LUMINAIRE IN THE LOCATION OF THE DEMOLISHED LIGHT. POWER FROM NEW CIRCUIT AS SHOWN. PROVIDE NEW JUNCTION BOX, CONDUIT AND WIRE.
5. MOUNT TYPE B2 LUMINAIRES ON GRID LINE A AT 13' AFF.
6. MOUNT TYPE B2 LUMINAIRES AT 18' AFF UNLESS NOTED OTHERWISE.
7. TO LIGHTING CONTACTOR IN MECH RM 125. SEE SHEET E304.

SEE E302 FOR INTERIOR LIGHTING DETAILS IN THIS AREA

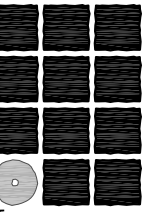
SEE E303 FOR INTERIOR LIGHTING DETAILS IN THIS AREA



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SEE E304 FOR DETAILS INSIDE THIS AREA.

1 OVERALL FIRST FLOOR ELECTRICAL PLAN - LIGHTING
SCALE: 0 4' 8' 16' 32'



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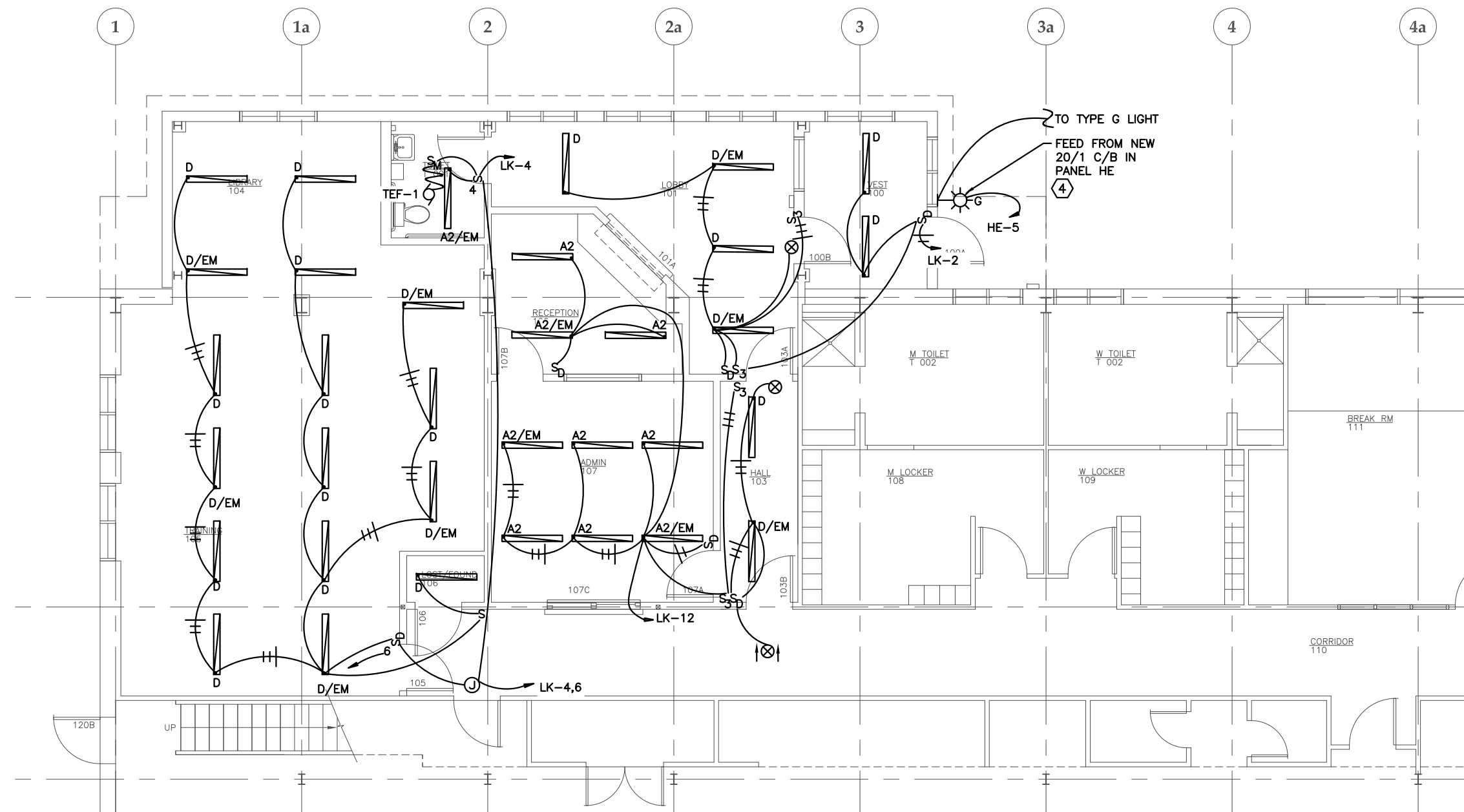
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SHEET TITLE
**OVERALL
FIRST FLOOR
ELECTRICAL
PLAN - LIGHTING**

DATE: November 2017
FILE: 15019

E301



NOTES:

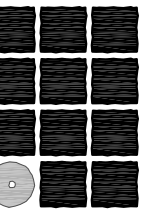
- SEE LUMINAIRE SCHEDULE ON SHEET E305 FOR LUMINAIRE TYPE.
- CONDUCTORS FOR DIMMER NOT SHOWN.
- ROUTE WIRING FROM PANELS LA AND LA1 UP THROUGH AND ALONG MEZZANINE WALLS AND CEILING TO FEED ADMIN AREA. UNISTRUT RACKS MAY BE BUILT FROM FLOOR TO CEILING IN MEZZANINE TO ACCOMMODATE THIS WIRING.
- THE EXISTING LIGHTING CONTACTOR IS IN THE MEZZANINE. PROVIDE A, 30A, 4 POLE LIGHTING CONTACTOR NEXT TO EXISTING CONTACTOR. PROVIDE AN HOA SWITCH WITH CONTACTOR. PROVIDE AN INDUSTRIAL CONTROL RELAY IN A NEMA 1 ENCLOSURE AND CONTROL RELAY FROM EXISTING CONTROLS. USE RELAY N.O. AUX CONTACTS TO CONTROL EXISTING LIGHTING CONTACTOR AND NEW LIGHTING CONTACTOR.

1 ADMIN AREA ENLARGED FLOOR PLAN - LIGHTING

SCALE: 0 2' 4' 8'



THIS AS BUILT DRAWING WAS PREPARED FROM CONTRACTOR PROVIDED RED LINE DRAWINGS WHICH MAY NOT BE CORRECT.



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City & Borough of Juneau
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Juneau, Alaska
CBJ Project No. E16-016

AS-BUILT

REVISIONS



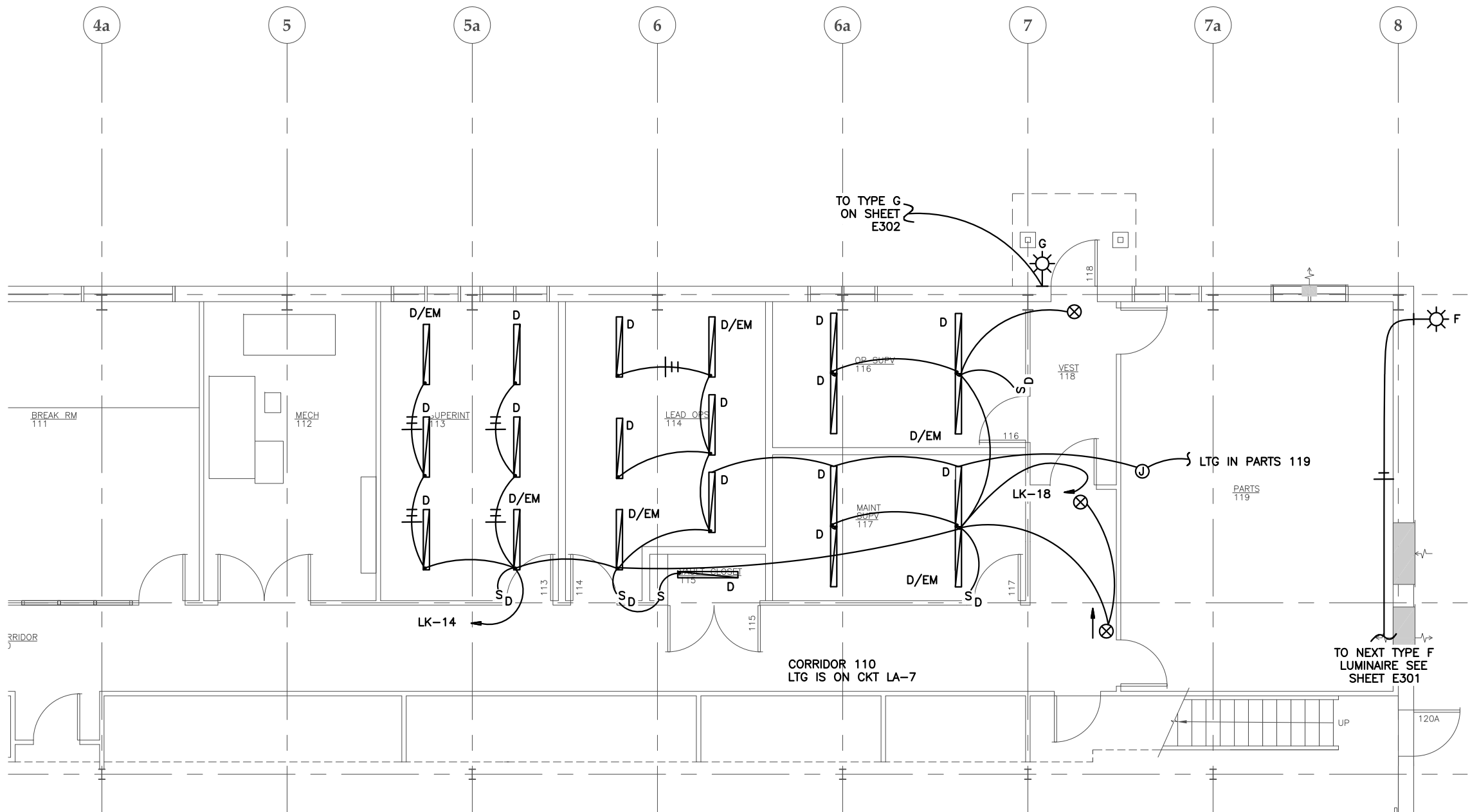
SHEET TITLE

ADMIN AREA
ENLARGED
FLOOR PLAN -
LIGHTING

DATE: November 2017

FILE: 15019

E302



1 ADMIN AREA ENLARGED FLOOR PLAN - LIGHTING

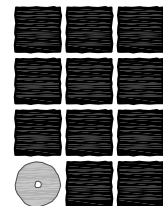
SCALE: 0 2' 4' 8'



NOTES:

1. SEE LUMINAIRE SCHEDULE ON SHEET E305 FOR LUMINAIRE TYPE.
2. ROUTE WIRING FROM PANELS LA AND LA1 UP THROUGH AND ALONG MEZZANINE WALLS AND CEILING TO FEED ADMIN AREA. UNISTRUT RACKS MAY BE BUILT FROM FLOOR TO CEILING ON MEZZANINE TO ACCOMMODATE THIS WIRING.

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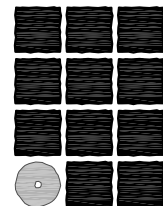
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SHEET TITLE
ADMIN AREA
ENLARGED
FLOOR PLAN-
LIGHTING

DATE: November 2017
FILE: 15019

E303



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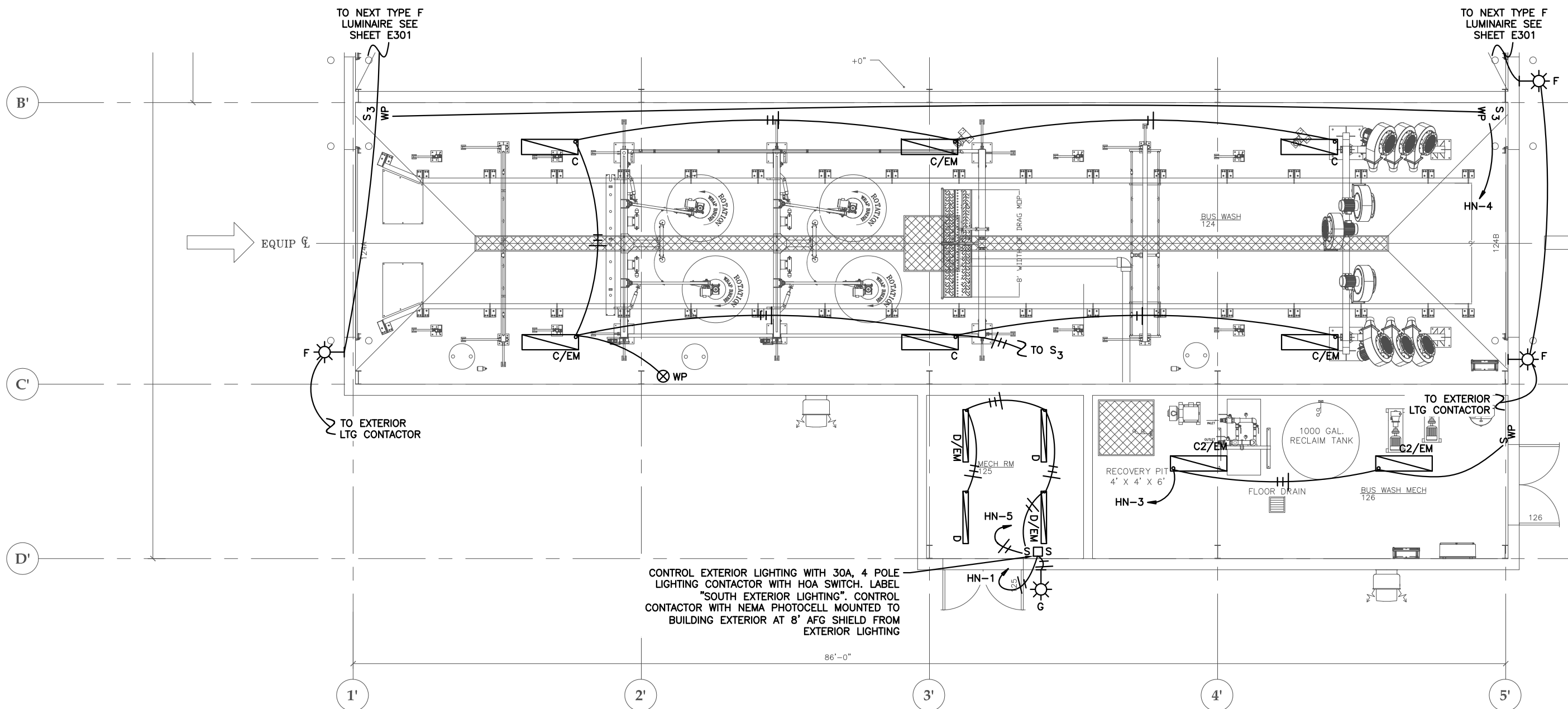
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SHEET TITLE
ENLARGED
FLOOR PLAN -
LIGHTING

DATE: November 2017
FILE: 15019

E304

BUS STORAGE 2
123



1 ENLARGED FLOOR PLAN - LIGHTING
SCALE: 0 2' 4' 8'

NOTE:
SEE LUMINAIRE SCHEDULE ON
SHEET E305 FOR LUMINAIRE TYPE.

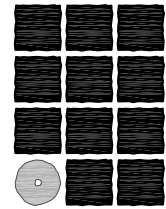
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LUMINAIRE SCHEDULE					
TYPE	DESCRIPTION	MANUFACTURER	LAMPS	SPARES	REMARKS
A	6" X 4' RECESSED, OPAL LENS, 3200 LUMENS.	ALERA LM6R435HLGRAOAED120ELL14	LED 3500K	0	1" REGRESSED ANGLED ALUMINUM. FLUSH MOUNT. SUPPORT TO CEILING JOISTS AND OTHER STRUCTURAL. PROVIDE EM BALLAST WHERE SHOWN. 0-10V DIMMING DRIVER, 120V. PROVIDE 0-10V DIMMER SWITCHES.
A2	6" X 4' RECESSED, OPAL LENS, 4000 LUMENS.	ALERA LM6R435VLGRAOAED120ELL14	LED 3500K	2	1" REGRESSED ANGLED ALUMINUM. FLUSH MOUNT. SUPPORT TO CEILING JOISTS AND OTHER STRUCTURAL. PROVIDE EM BALLAST WHERE SHOWN. 0-10V DIMMING DRIVER, 120V. PROVIDE 0-10V DIMMER SWITCHES.
B	4' SURFACE MOUNTED LED HIGH BAY, 15,500 LUMENS, WIDE DISTRIBUTION, SOLID TOP, FIXED OUTPUT, 480V.	COLUMBIA LLHV4-40M-WST-ED480-ELL14	LED 4000K	2	DISCONNECT POWER FROM EXISTING LUMINAIRE AND CONNECT TO NEW LUMINAIRE IN SAME LOCATION. PROVIDE ADDITIONAL MOUNTING SUPPORTS, JUNCTION BOXES, CONDUIT AND CONDUCTORS AS REQUIRED. CHAIN SUPPORTS ARE ACCEPTABLE TO FOUR SEPARATE POINTS IN THE EXISTING BUS STORAGE AND MAINTENANCE SHOP. MINIMUM OF FOUR CHAINS PER FIXTURE, MOUNT AT 19' AFF. PROVIDE EM BATTERY PACKS ON (12) LUMINAIRES. PROVIDE NON-SWITCHED POWER TO THESE LOCATIONS.
B2	4' SURFACE MOUNTED LED HIGH BAY, 15,500 LUMENS, WIDE DISTRIBUTION, SOLID TOP, FIXED OUTPUT, 480V.	COLUMBIA LLHV4-40M-WST-EDU-ELL14	LED 4000K	0	CHAIN SUPPORTS ARE ACCEPTABLE IN NEW BUS STORAGE 2, MINIMUM FOUR PER FIXTURE. SEE SHEET E301 FOR MOUNTING HEIGHT. PROVIDE EM BATTERY PACK WHERE SHOWN. PROVIDE ADDITIONAL SUPPORT CHANNEL AND OTHER SUPPORTS TO SECURE CHAINS AT FOUR SEPARATE POINTS.
C	4' SURFACE MOUNTED GASKETED LED HIGH BAY, 20,600 LUMENS, CLEAR IMPACT ACRYLIC, WIDE DISTRIBUTION.	COLUMBIA LXEW4-40H-CA-W-EU-F3C15W	LED 4000K	2	FIXED OUTPUT, NO DIMMING, 120-277V, 15' WET CORD. MOUNT TO CEILING STRUCTURE ON NM SUPPORT CHANNEL. USE NM OR STAINLESS HARDWARE AND SUPPORTS.
C2	4' SURFACE MOUNTED GASKETED LED HIGH BAY, 15,100 LUMENS, CLEAR IMPACT ACRYLIC, WIDE DISTRIBUTION.	COLUMBIA LXEW4-40M-CA-W-EU	LED 4000K	0	FIXED OUTPUT, NO DIMMING, 120-277V. SURFACE MOUNT TO CEILING.
D	4' CEILING MOUNTED LED WRAPAROUND, 4,850 LUMENS, 120-277V.	LITHONIA STL448LEZ1LP835EZ14L	LED 3500K	1	CEILING MOUNT. PROVIDE EM BATTERY PACK WHERE SHOWN. 1400 LUMENS FOR EMERGENCY LIGHTING. 0-10V DIMMING DRIVER. PROVIDE 0-10V DIMMER SWITCHES.
⊗	EMERGENCY EXIT SIGN, GREEN LETTERING.	LITHONIA LQM SW 3G 120/277 ELN	LED	0	
F	EXTERIOR AREA LIGHTING.	KIM ARWX16D44K65UVLG	LED 4000K	2	WALLMOUNT, DOWNLIGHT, TYPE 4 DISTRIBUTION, 4000K, 650MA, 120-277V, LIGHT GRAY, MOUNT AT 18.5 AFG, 16,000 LUMENS.
F2	EXTERIOR AREA LIGHTING.	KIM ARWX16DX4K65UVLG	LED 4000K	0	WALLMOUNT, DOWNLIGHT, CUSTOM DISTRIBUTION, 4000K, 650MA, 120-277V, LIGHT GRAY, MOUNT AT 18.5 AFG, 16,000 LUMENS. OBTAIN IES FILE FROM ENGINEER PRIOR TO ORDERING.
G	WALL MOUNT SCENCE LED WITH LIGHTLY DIFFUSED GLASS LENS, LIGHT GRAY PAINTED FINISH, 54 LED, UPLIGHT AND DOWN LIGHT.	ARCHITECTURAL AREA LIGHTING ES3-54LED-NWX-LG-LDL-FPP	LED 4000K	1	55W, 2000 LUMENS, 120-277V, MOUNT AT 7' AFG IN NEW LOCATIONS, SEE SHEET E304 AND E302.
NOTES: 1. ALL LUMINAIRE MOUNTING HEIGHTS ARE TO THE CENTERLINE OF THE FIXTURE UNLESS OTHERWISE NOTED. 2. THE PART NUMBERS IN THE LUMINAIRE SCHEDULE MAY NOT BE COMPLETE. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE ALL PARTS AND ACCESSORIES NECESSARY TO COMPLY WITH THE FEATURES SHOWN IN THE LUMINAIRE SCHEDULE (INCLUDING THE MOUNTING) AND AS SHOWN ON THE OTHER PLAN SHEETS, AND IN THE SPECIFICATIONS. 3. PROVIDE PASS AND SEYMOUR OR LEVITON 0-10VDC WALL MOUNT DIMMER SWITCHES WITH TYPE A, A2, AND D LUMINAIRES. PROVIDE SWITCHES WITH 3 WAY SWITCHING AND DIMMING OR PROVIDE 3 WAY SWITCHES TO ENERGIZE THE LUMINAIRE AND A SEPARATE DIMMER SWITCH TO CONTROL THE LIGHT OUTPUT WHEN ON. WIRING FOR DIMMING IS NOT SHOWN. PROVIDE AS REQUIRED. 4. ALL LUMEN OUTPUTS ARE MINIMUM.					

1

LUMINAIRE SCHEDULE

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CBJ Project No. E16-016

AS-BUILT



SHEET TITLE
LUMINAIRE
SCHEDULE

DATE: November 2017
FILE: 15019

E305

NOTES:

1. ALL WORK SHOWN IS NEW UNLESS NOTED OTHERWISE.
2. NEW DATA AND FIRE ALARM DEVICES IN THE MEZZANINE ARE SHOWN ON THE "MEZZANINE FLOOR PLAN - POWER" SHEET E205.
3. PROVIDE NEW FIRE ALARM DEVICES WHERE SHOWN. REUSE EXISTING WIRING AND CONDUIT WHERE PRACTICAL. EXTEND EXISTING CIRCUITS TO NEW FACP. NEW DEVICES, CONDUIT, AND WIRING IS REQUIRED IN BUS STORAGE 2, 123.
4. PROVIDE (5) DUCT DETECTORS WITH NEW FIRE ALARM SYSTEM. INSTALL IN DUCT WORK WHERE DIRECTED BY MECHANICAL.

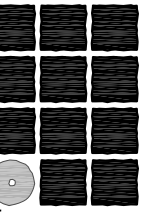
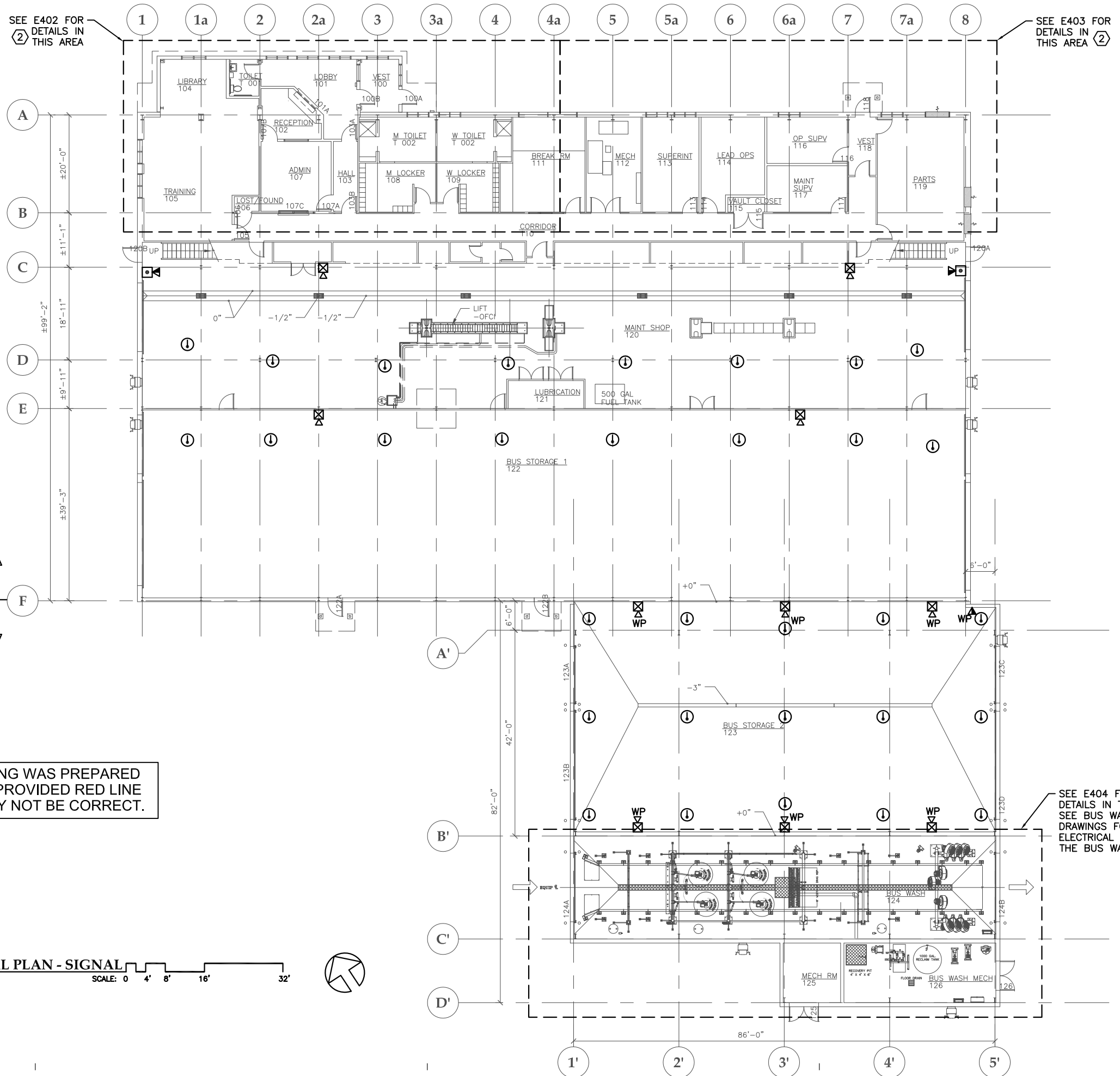
NEW FIRE ALARM DEVICES. REUSE WIRING. REPLACE CONDUIT AND WIRING AS NEEDED.

NEW FIRE ALARM DEVICES. NEW WIRING AND CONDUIT.

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1 OVERALL FIRST FLOOR ELECTRICAL PLAN - SIGNAL

SCALE: 0 4' 8' 16' 32'



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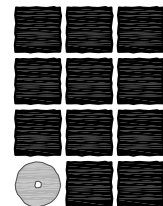
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SHEET TITLE
OVERALL
FIRST FLOOR
ELECTRICAL
PLAN - SIGNAL

DATE: November 2017
FILE: 15019

E401



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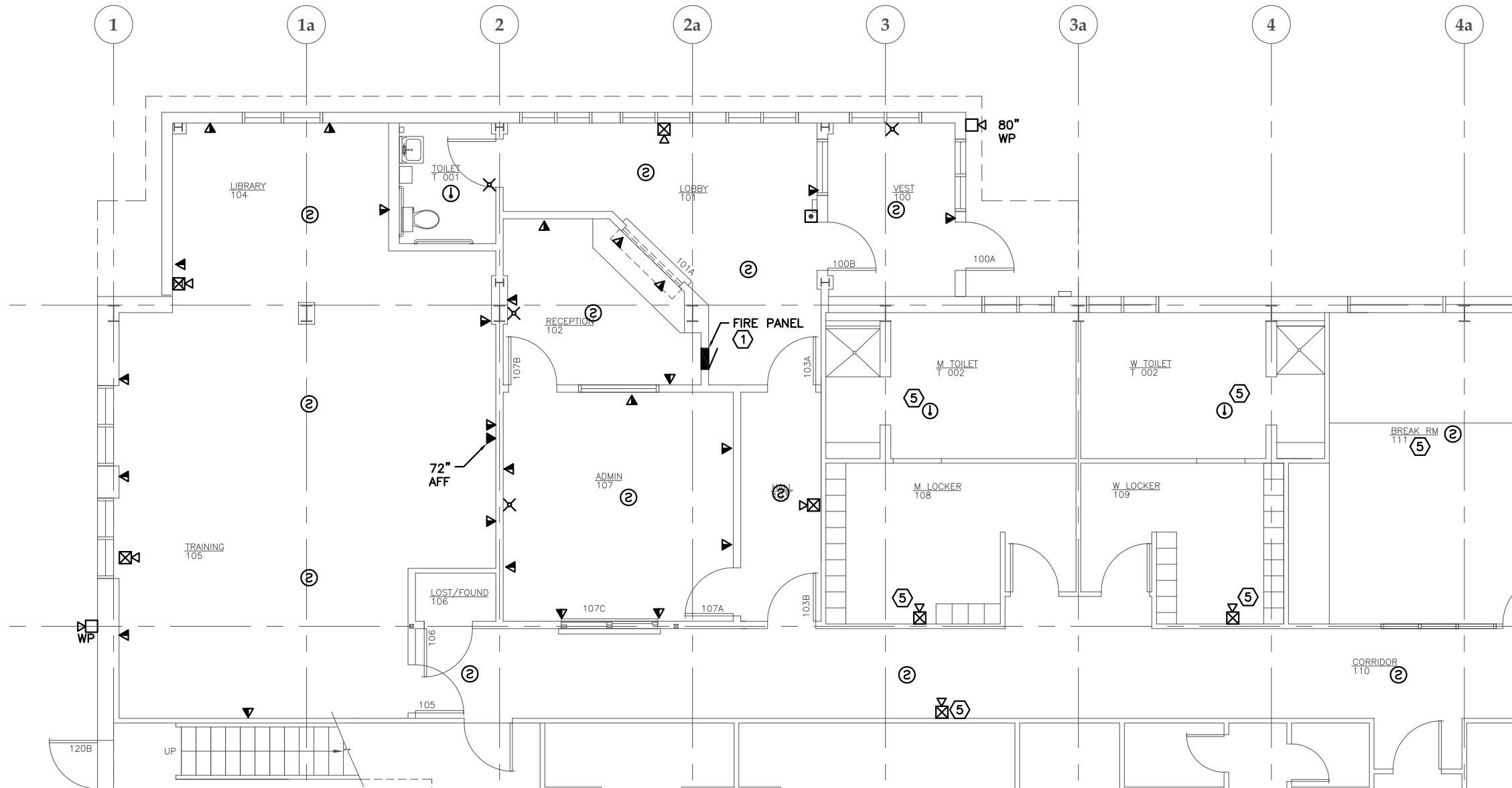
AS-BUILT



SHEET TITLE
**ADMIN AREA
ENLARGED
FLOOR PLAN -
SIGNAL**

DATE: November 2017
FILE: 15019

E402

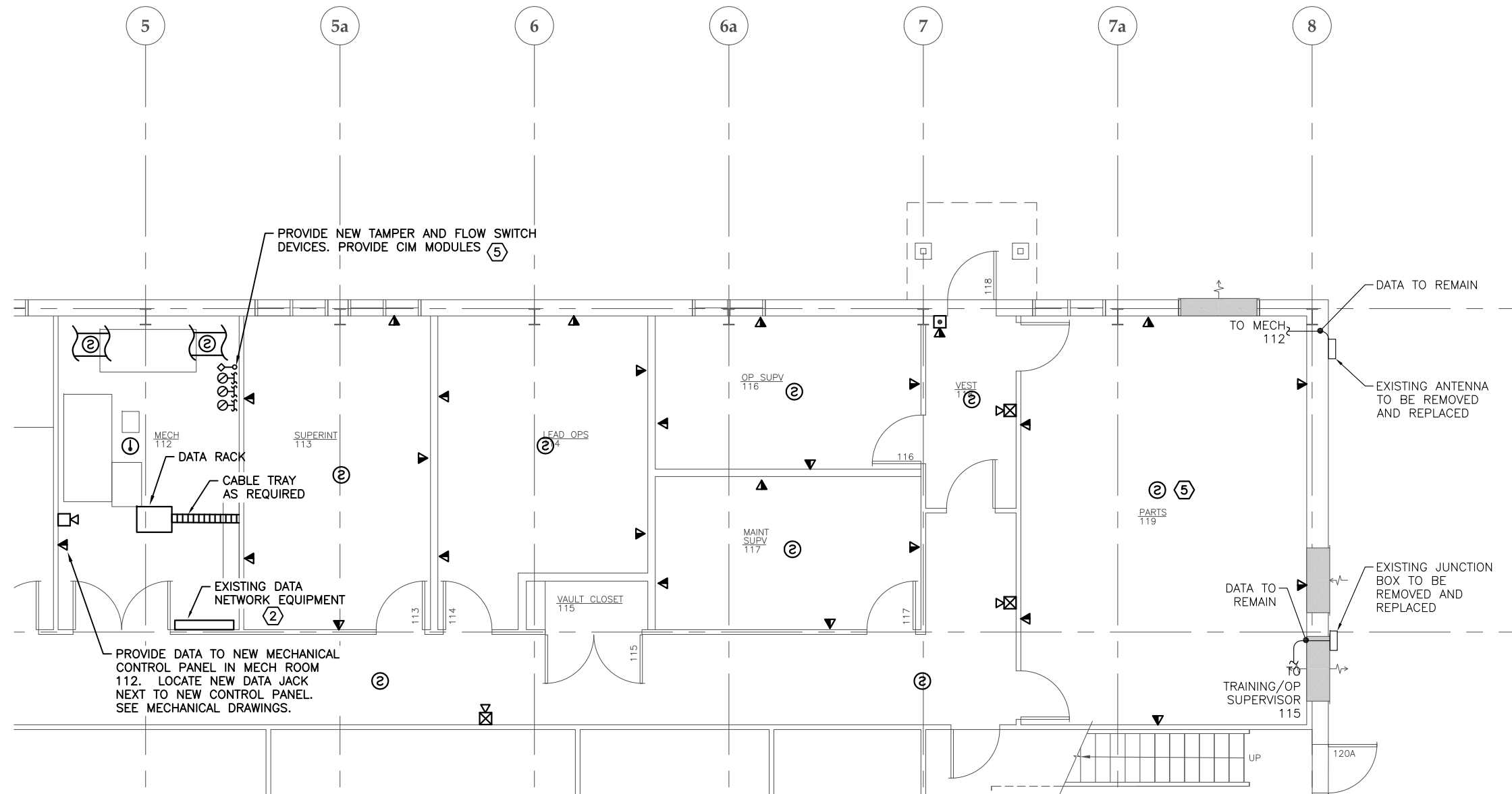


1 ADMIN AREA ENLARGED FLOOR PLAN - SIGNAL
SCALE: 0 2' 4' 8'

THIS AS BUILT DRAWING WAS PREPARED
FROM CONTRACTOR PROVIDED RED LINE
DRAWINGS WHICH MAY NOT BE CORRECT.

NOTES:

- ① REROUTE EXISTING WIRING TO NEW FIRE ALARM PANEL.
2. NEW FIRE ALARM DEVICES ARE BEING ADDED THROUGHOUT THE ADMIN AREA IN ADDITION TO REPLACING THE EXISTING DEVICES. PROVIDE NEW FIRE ALARM DEVICES WITH NEW CONDUIT AND WIRING FOR ALL DEVICE LOCATIONS, UNLESS OTHERWISE NOTED.
3. SEE SHEET E401 FOR SIGNAL WORK IN THE MAINTENANCE SHOP AND BUS STORAGE AREAS.
4. SEE SHEET E404 FOR SIGNAL WORK IN THE BUS WASH MECH ROOM AND NEW MECH ROOM.
- ⑤ PROVIDE NEW DEVICE AND REUSE EXISTING CONDUIT AND WIRING WHERE PRACTICAL, SEE DEMO SHEET E103. EXTEND EXISTING CIRCUIT TO NEW FIRE ALARM CONTROL PANEL.
6. ALL WORK SHOWN IS NEW UNLESS NOTED OTHERWISE.
7. ROUTE SIGNAL WIRING FROM RACK IN MECH 112 UP THROUGH AND ALONG MEZZANINE WALLS AND CEILING TO FEED ADMIN AREA.



1 ADMIN AREA ENLARGED FLOOR PLAN - SIGNAL

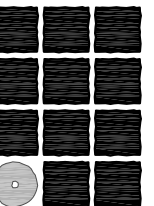
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NOTES:

1. NEW FIRE ALARM DEVICES ARE BEING ADDED THROUGHOUT THE ADMIN AREA IN ADDITION TO REPLACING THE EXISTING DEVICES. PROVIDE NEW FIRE ALARM DEVICES WITH NEW CONDUIT AND WIRING FOR ALL DEVICE LOCATIONS UNLESS OTHERWISE NOTED.
- (2) EXISTING DATA NETWORK EQUIPMENT TO REMAIN. JUMPER EXISTING DATA NETWORK TO NEW DATA RACK. PROVIDE CAT 6 CABLE CONNECTIONS BETWEEN EXISTING AND NEW DATA NETWORK EQUIPMENT.
3. SEE SHEET 401 FOR SIGNAL WORK IN THE MAINTENANCE SHOP AND BUS STORAGE AREAS.
4. SEE SHEET E404 FOR SIGNAL WORK IN THE BUS WASH MECH ROOM AND NEW MECH ROOM.
- (5) PROVIDE NEW DEVICE AND REUSE EXISTING CONDUIT AND WIRING WHERE PRACTICAL, SEE DEMO SHEET E103. EXTEND EXISTING CIRCUIT TO NEW FIRE ALARM CONTROL PANEL.
6. ALL WORK SHOWN IS NEW UNLESS NOTED OTHERWISE.



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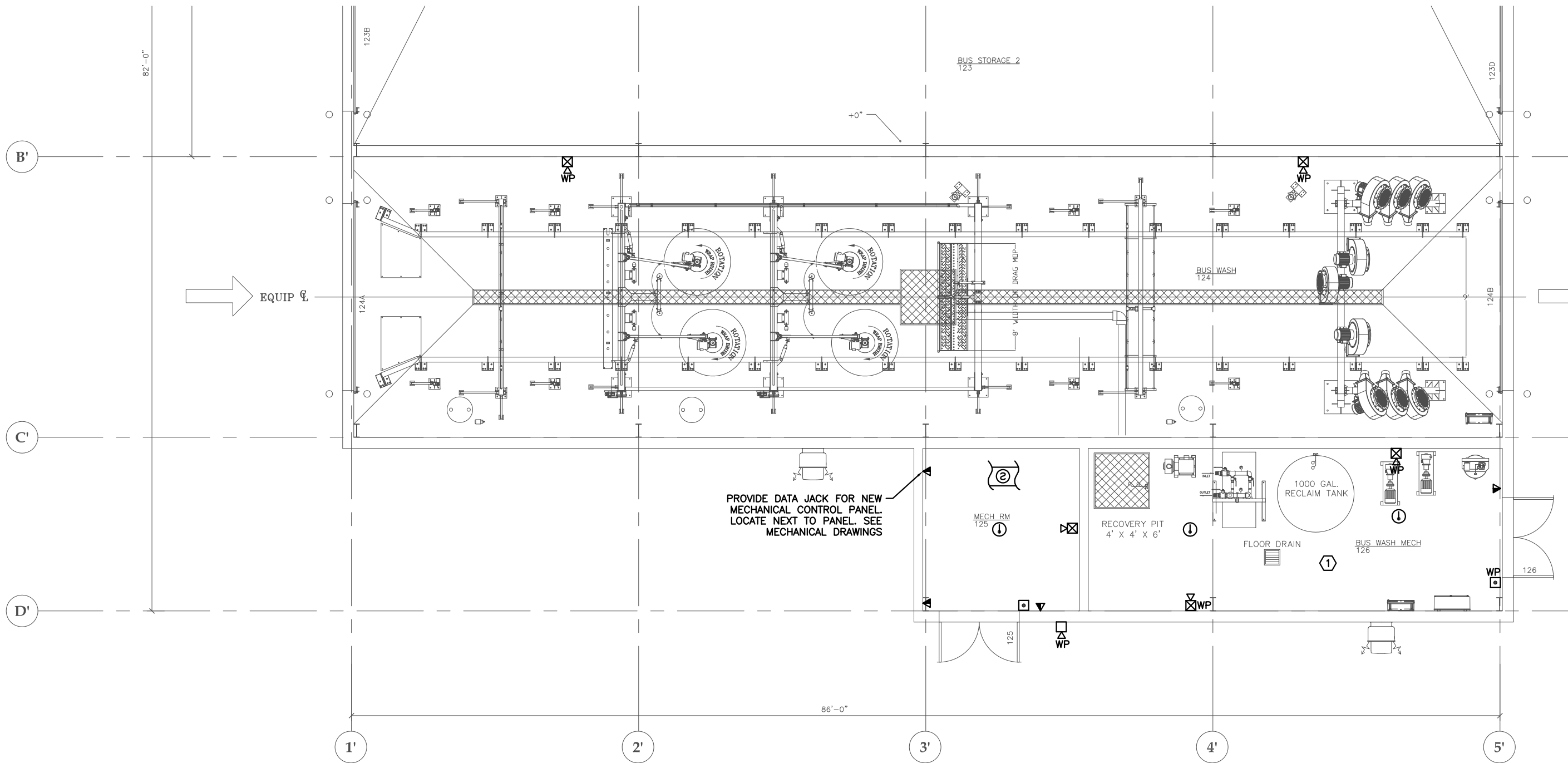
AS-BUILT



SHEET TITLE
ADMIN AREA
ENLARGED
FLOOR PLAN -
SIGNAL

DATE: November 2017
FILE: 15019

E403

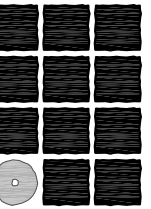


1 ENLARGED FLOOR PLAN - SIGNAL
SCALE: 0 2' 4' 8'

NOTES:

- 1 ALL ELECTRICAL EQUIPMENT IN THE BUS WASH MECH ROOM 126 SHALL BE RATED FOR USE IN DAMP LOCATIONS.
2. ALL WORK SHOWN IS NEW UNLESS NOTED OTHERWISE.

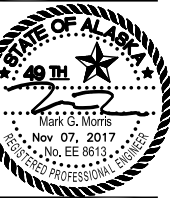
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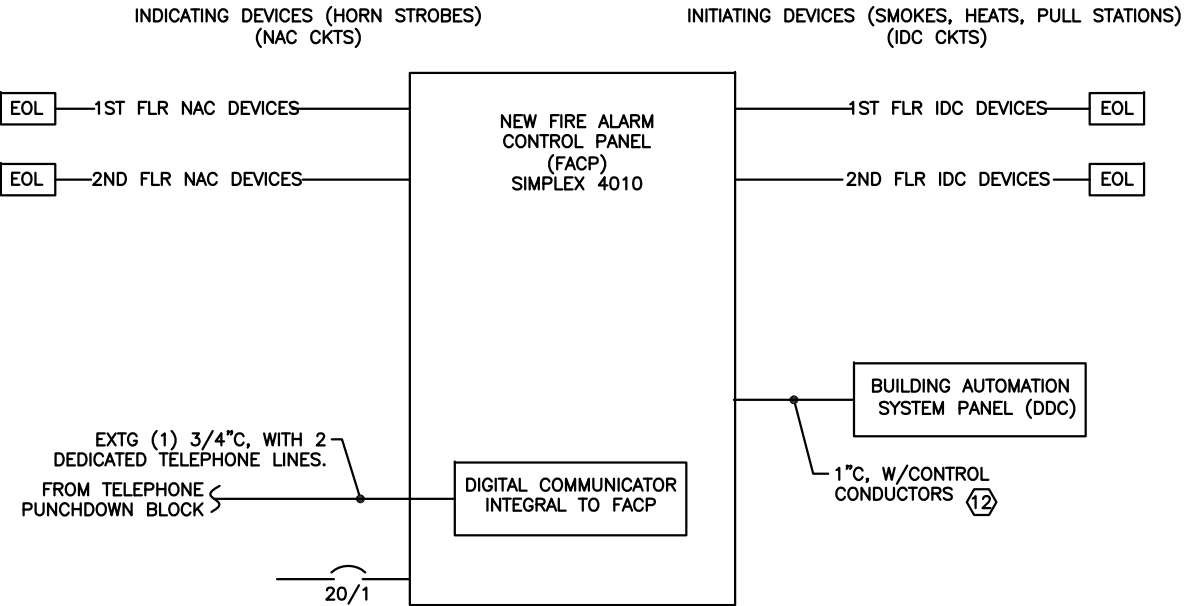
ENLARGED
FLOOR PLAN -
SIGNAL

DATE: November 2017
FILE: 15019

E404

NOTES:

1. REPLACE THE EXISTING FIRE ALARM SYSTEM. PROVIDE A NEW ADDRESSABLE PANEL WHERE SHOWN. PROVIDE NEW DEVICES, WIRING, AND CONDUIT IN THE FIRST FLOOR ADMIN AREAS AS SHOWN. REPLACE DEVICES THROUGHOUT THE REMAINDER OF THE BUILDING AND REUSE CONDUIT AND WIRING. PROVIDE NEW CONDUIT AND WIRING AS REQUIRED. SEE SHEETS E401 THROUGH E404 FOR DEVICE LOCATIONS. PROVIDE NEW CIM DEVICES AS REQUIRED.
2. PROVIDE SHOP DRAWINGS DURING SUBMITTALS. AFTER CONSTRUCTION, PROVIDE AS-BUILTS SHOWING ALL CIRCUITING. SHOW WHICH DEVICES ARE ON EACH IDC CIRCUIT, AND WHICH DEVICES ARE ON EACH NAC CIRCUIT. SHOW ALL CIM AND ALL OTHER CONTROL WIRING. PROVIDE (3) SETS OF AS-BUILT DRAWINGS TO THE ENGINEER.
3. ROUTE ALL WIRING IN CONDUIT. ALL WIRING SHALL BE RED JACKETED FIRE ALARM CABLE. PERFORM INDICATING DEVICE CIRCUIT LOAD CALCULATIONS PRIOR TO CONSTRUCTION. SIZE CONDUCTORS BASED ON THE LOAD CALCULATIONS. ALL CIRCUITS SHALL USE NO. 14 AWG CONDUCTORS MINIMUM. LABEL EACH CONDUCTOR IN EVERY J-BOX WITH ITS CIRCUIT DESIGNATION. PAINT J-BOX COVERS RED.
4. WHEN HORNS ARE SILENCED, THEY SHALL ALL SILENCE TOGETHER. WHEN THE SYSTEM IS RESET, THE INDICATING CIRCUITS SHALL ALL RESET TOGETHER. ALL STROBES AND HORN STROBES VIEWABLE FROM ANY ONE POINT IN THE BUILDING SHALL BE SYNCHRONIZED TOGETHER.
5. THE FIRE ALARM SYSTEM DEVICES SHALL BE LOCATED AND INSTALLED PER THESE DRAWINGS, THE SPECIFICATIONS, AND PER THE SHOP DRAWINGS PROVIDED BY THE FIRE ALARM MANUFACTURER'S DISTRIBUTOR THAT HAVE BEEN APPROVED BY THE ENGINEER DURING THE SUBMITTAL PROCESS. NO DEVIATIONS FROM THESE DOCUMENTS MAY BE MADE WITHOUT THE WRITTEN CONSENT OF THE ENGINEER.
6. THE FIRE ALARM DEVICES SHALL BE INSTALLED BY AN INSTALLER CERTIFIED BY THE STATE OF ALASKA TO INSTALL FIRE ALARM SYSTEMS. THE SYSTEM PROGRAMMING, TESTING, AND CERTIFICATION SHALL BE DONE BY A MANUFACTURER CERTIFIED TECHNICIAN EMPLOYED BY THE MANUFACTURER'S DISTRIBUTOR THAT SUPPLIED THE FIRE ALARM SYSTEM MATERIALS FOR THE PROJECT.
7. THE ADDRESS FOR EACH INITIATING DEVICE SHALL BE PROGRAMMED IN THE BASE OF EACH INITIATING DEVICE (SMOKE OR HEAT DETECTOR), NOT IN THE DEVICE ITSELF. A DEVICE SHALL BE ABLE TO BE REPLACED WITHOUT HAVING TO PERFORM ANY PROGRAMMING. PROVIDE CIRCUIT INTERFACE MODULES TO PROVIDE ADDRESSABILITY FOR ALL NON-ADDRESSABLE INITIATING & OTHER DEVICES (FLOW & TAMPER SWITCHES, FAN MOTOR STARTERS, ETC). PROVIDE ONE CIM PER DEVICE.



NOTES (CON'T):

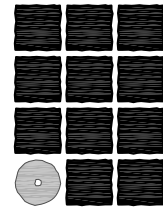
8. PROVIDE STROBE INTENSITIES AS REQUIRED TO MEET NFPA 72.
 9. ALL DEVICES SHALL BE TESTED AND SOUND READINGS OF THE AMBIENT AND ALARM LEVELS SHALL BE TAKEN IN EVERY ROOM OF THE BUILDING. A WRITTEN REPORT OF THE TEST OF EVERY DEVICE PRODUCED BY THE SYSTEM SHALL BE PROVIDED TO THE ENGINEER 7 DAYS PRIOR TO REQUESTING A FINAL INSPECTION.
 10. PROVIDE END OF LINE RESISTORS ON THE IDC CIRCUITS THAT CONTAIN CIRCUIT INTERFACE MODULES AS REQUIRED. PROVIDE END OF LINE RESISTORS ON OTHER FACP CIRCUITS AS NECESSARY TO MEET NFPA 72.
 11. ALL DEVICES SHALL BE FLUSH MOUNTED AT THE HEIGHTS INDICATED ON THE LEGEND. DEVICES MAY BE SURFACE MOUNTED ONLY IF SPECIFICALLY NOTED. THERE SHALL BE NO CHANGE TO THE LOCATION OR MOUNTING HEIGHT EXCEPT WITH WRITTEN PERMISSION FROM THE ENGINEER.
- 12 PROVIDE CIRCUITS AND SYSTEM PROGRAMMING TO SHUT DOWN DDC CONTROLLED FANS DURING A FIRE ALARM. COORDINATE WITH MECHANICAL. ROUTE CONDUIT AND CONDUCTORS TO SHUT DOWN MECHANICAL EQUIPMENT.

FIRE ALARM LEGEND

DESCRIPTION	MOUNTING HT.
PULL STATION	48" AFF
HORN STROBE	86" AFF
SMOKE DETECTOR	CEILING
STROBE ONLY	86" AFF
HEAT DETECTOR. RATE OF RISE.	CEILING
FACP FIRE ALARM CONTROL PANEL	
JUNCTION BOX	
TAMPER SWITCH	
FLOW SWITCH (PRESSURE) (BOTH HI & LOW)	
END OF LINE RESISTOR	
CIRCUIT INTERFACE MODULE	
DUCT SMOKE DETECTOR	INSIDE DUCT
HORN ONLY	86" AFF
NAC NOTIFICATION APPLIANCE CIRCUIT	
IDC INITIATING DEVICE CIRCUIT	

1 NEW FIRE ALARM RISER DIAGRAM
NO SCALE

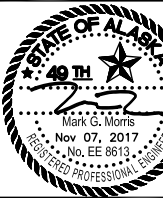
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AS-BUILT



SHEET TITLE
NEW FIRE
ALARM RISER
DIAGRAM

DATE: November 2017
FILE: 15019

E405

1. THERE ARE EXISTING DATA JACKS IN THE BUILDING THAT WILL REMAIN. DO NOT DEMO EXISTING JACKS UNLESS OTHERWISE NOTED. LEAVE ALL EXISTING DATA AND PHONE EQUIPMENT UNLESS OTHERWISE NOTED. COORDINATE WITH CBJ MIS DEPARTMENT TO INSTALL THEIR EQUIPMENT IN THE RACK. COORDINATE EXACT RACK LOCATION AND ORIENTATION WITH CBJ MIS DEPARTMENT.
2. TERMINATE ALL CAT 6 CABLES FROM TELE/DATA JACKS ON PATCH PANELS. OWNER TO PROVIDE CBJ IT NETWORK EQUIPMENT IN RACK SUPPLIED BY CONTRACTOR. PROVIDE PATCH PANELS, OUTLET STRIP. AND CABLE MANAGEMENT AS INDICATED.
3. CONNECT TWO TELEPHONE LINES TO FIRE ALARM CONTROL PANEL. PAY ACS AS NEEDED.
4. PROVIDE CABLE MANAGEMENT IN RACK TO NEATLY TRAIN CABLES FROM CONDUIT NIPPLES IN CEILING, THROUGH RACKS TO THE PATCH PANELS.
5. PROVIDE A LABEL AT EACH JACK AND EACH PORT OF THE PATCH PANEL. LABEL NUMBERING CONVENTION PER OWNER.
6. AFTER TERMINATING CAT 6 CABLES AT JACKS AND PATCH PANELS, TEST CABLES PER CAT 6 EIA/TIA STANDARDS AND PER THE SPECIFICATIONS. PROVIDE ELECTRONIC AND HARD COPIES OF TEST REPORTS. REPLACE CABLES THAT FAIL THE TEST.
7. 15 AMP, 14 RECEPTACLE, 2 STAGE SURGE SUPPRESSOR OUTLET STRIP. MIDDLE ATLANTIC PRODUCTS PD-1415C OR EQUAL. POWER OUTLET STRIP FROM DEDICATED UPS RECEPTACLE. POWER ALL RACK EQUIPMENT FROM THE OUTLET STRIP. PROVIDE (1) OUTLET STRIP FOR EACH RACK.
8. ALL TELE/DATA CABLING SHALL BE PLENUM RATED.
9. USE BLUE CABLING FOR DATA JACKS & WHITE CABLING FOR TELEPHONE JACKS.
10. PROVIDE 75 BLUE CAT 6 PATCH CORDS WITH FACTORY INSTALLED MALE CONNECTORS. 25 @ 3', 25 @ 7', 25 @ 10'.
11. PROVIDE 19" EIA, 26" DEEP, 70" HIGH FLOOR MOUNTED RACK WITH 40 RACK UNITS CAPACITY MIN (40RU). RACK FOR CBJ IT NETWORK EQUIPMENT. MIDDLE ATLANTIC PRODUCTS MRK-4026 OR EQUAL. PROVIDE WITH LOCKABLE FRONT DOOR, SOLID SIDE AND BACK DOORS AND WITH 10" TOP MOUNT FAN WITH INTEGRAL THERMOSTAT FOR ACTIVE THERMAL MANAGEMENT.
12. 1.5KVA UPS (6 RACK UNITS).
13. NOT ALL CONDUITS ARE SHOWN. PROVIDE ADDITIONAL CONDUIT AS REQUIRED. ADJUST LAYOUT FROM WHAT IS SHOWN AS NECESSARY.
14. PROVIDE THE FOLLOWING RECEPTACLES, FACEPLATES, JACKS AND INSERTS FOR ALL TELE/DATA RECEPTACLES. NO SUBSTITUTIONS:

FACE PLATES:	OR-40300011
SINGLE JACK INSERTS:	OR-S21600
DOUBLE JACK INSERTS:	OR-S22600
BLANK INSERTS:	OR-40300144
15. PROVIDE (30) 3' WHITE CAT 6 PATCH CORDS WITH FACTORY INSTALLED MALE CONNECTORS.

FACE PLATES: OR-40300011
SINGLE JACK INSERTS: OR-S21600
DOUBLE JACK INSERTS: OR-S22600
BLANK INSERTS: OR-40300144

CONDUIT TO EXISTING PANEL LA

11

STD DENSITY, CAT 6, 48 PORT PATCH PANEL. ORTRONICS OR-PHD66U48. (DATA) NO SUBSTITUTIONS.

NEW CABLE MANAGEMENT BAR

STD DENSITY, CAT 6, 48 PORT PATCH PANEL. ORTRONICS OR-PHD66U48. (DATA) NO SUBSTITUTIONS.

NEW CABLE MANAGEMENT BAR

STD DENSITY, CAT 6, 48 PORT PATCH PANEL. ORTRONICS OR-PHD66U48. (DATA) NO SUBSTITUTIONS.

50 PAIR TEL CABLE (16)

7

12

LA1-30

CAT 6 CABLE (TYP)

RJ 45 DATA (TYP)

CAT 6 CABLE (TYP)

RJ 45 TELEPHONE (TYP)

PROVIDE CROSS CONNECT AS NEEDED

EXISTING TELEPHONE PUNCHDOWN BLOCK

50 PAIR TELEPHONE PUNCHDOWN BLOCK

EXISTING TELEPHONE SYSTEM AND SERVICE

EXISTING TELEPHONE TERMINAL BOARD

PROVIDE A 1-1/2" W/CONDS. FROM EXISTING PANEL LA TO A 6"X6"X4" J-BOX ON WALL BEHIND RACK.

THIS AS BUILT DRAWING FROM CONTRACTOR'S AS BUILT DRAWINGS WHICH MAY DIFFER FROM ORIGINAL DRAWINGS.

THIS AS BUILT DRAWING WAS PREPARED
FROM CONTRACTOR PROVIDED RED LINE
DRAWINGS WHICH MAY NOT BE CORRECT.

1 DATA AND TELEPHONE RISER DIAGRAM



**MORRIS
ENGINEERING
GROUP, LLC**
PO Box 210049
NAUKE BAY, ALASKA 99821
Phone 907-789-3350



City & Borough of Juneau
CAPITAL TRANSIT FACILITY
RENOVATION & ADDITION
Juneau, Alaska
CBJ Project No. E16-016

AS-BUILT

REVISIONS



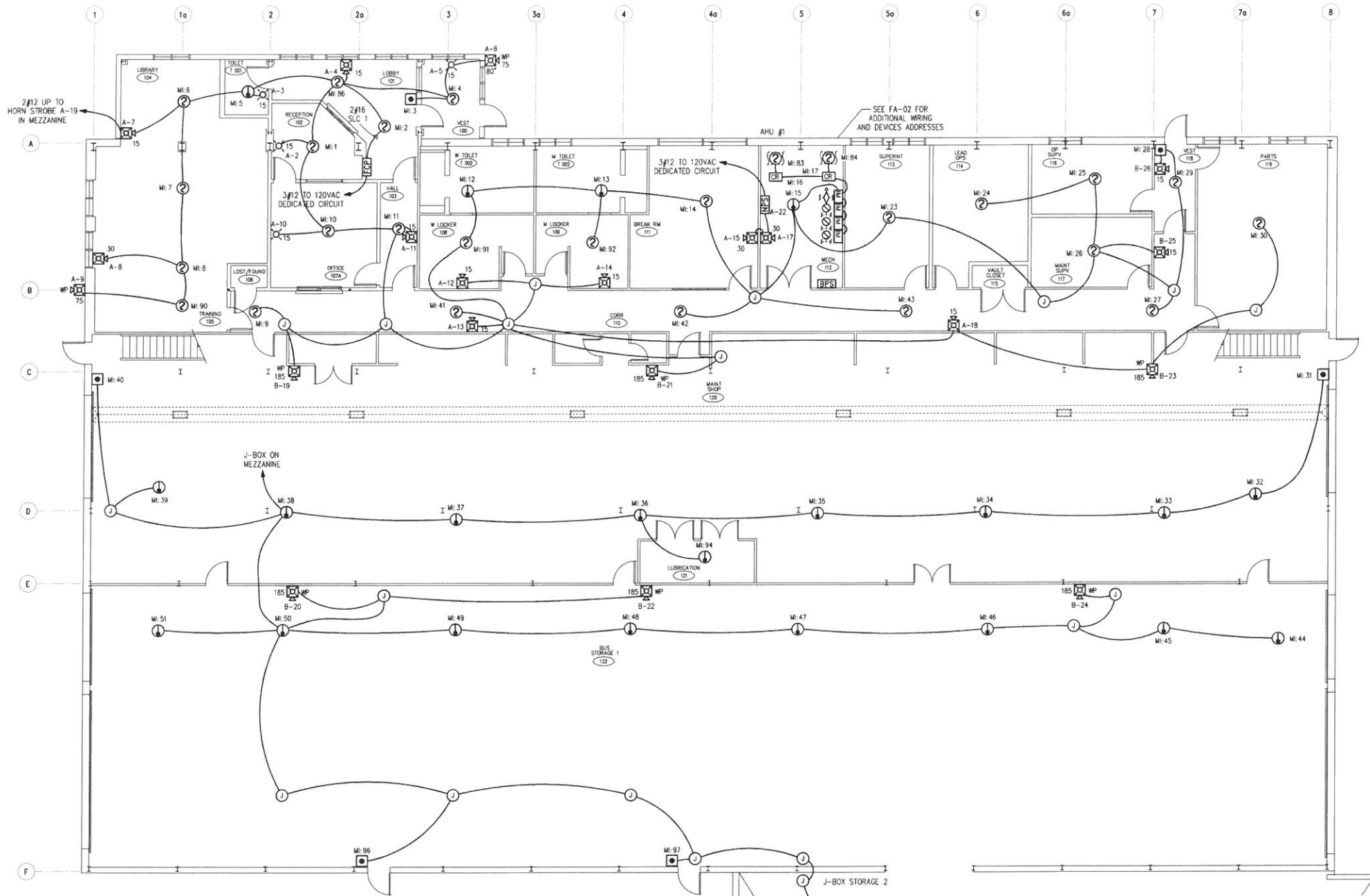
SHEET TITLE

DATA AND TELEPHONE RISER DIAGRAM

DATE: November 2017

FILE: 15019

E406



PARTIAL FLOOR PLAN
SCALE: 1/8"=1'0"

LEGEND

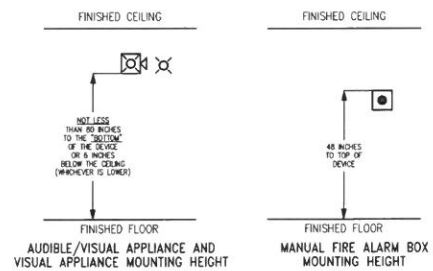
SYMBOL	MANUFAC.	DESCRIPTION	P/N	BACK BOX
[Symbol]	SIM	MANUAL FIRE ALARM BOX	4099-9004	4-SO 2-1/8" DEEP W. 1-G MUD RING
[Symbol]	FIR	MANUAL FIRE ALARM BOX, WEATHER PROOF	BG-12LOB	INCLUDED
[Symbol]	SIM	HORN/STROBE, WALL MT. # = CD SETTING	49AV-WWF	4-SO 1-1/2" DEEP
[Symbol]	SIM	HORN/STROBE, # = CD SETTING, RED W/ SURFACE MOUNT BOX	49AV-WRFO	49WPBB-AVWWR
[Symbol]	SIM	STROBE, WALL MT. # = CD SETTING	49VO-WWF	4-SO 1-1/2" DEEP
[Symbol]	SIM	PHOTO SENSOR W/ STANDARD SENSOR BASE	4098-9714 4098-9792	4-0
[Symbol]	SIM	HEAT SENSOR W/ STANDARD SENSOR BASE	4098-9733 4098-9792	4-0
[Symbol]	THE	HEAT DETECTOR, WEATHER PROOF 135"	TH-302AW135	4-0
[Symbol]	SIM	DUCT SENSOR W/ HOUSING W/ SAMPLE TUBE, 73" W/ REMOTE TEST STATION	4098-9755 4098-9857 2098-9806	N/A 4-SQ DEEP W. 1-G MUD RING
[Symbol]	SIM	INPUT MODULE W/ SURFACE COVER W/ MOUNTING BRACKET	4090-9001 4090-9807 4090-9810	1-G 2-1/2" DEEP
[Symbol]	SIM	CONTROL RELAY MODULE W/ TRIM PLATE	4090-9002 4090-9801	4-SO 2-1/8" DEEP
[Symbol]	SIM	TRUEALERT ADDRESSABLE ADAPTER W/ SURFACE MOUNT COVER PLATE	4905-9816 4905-9817	4-11/16" SQ 2" DEEP
[Symbol]	SIM	NAC REPEATER POWER SUPPLY	4009-9601	INCLUDED
[Symbol]	SIM	FIRE ALARM CONTROL PANEL	4010ES	INCLUDED
[Symbol]	SIM	END OF LINE DEVICE, 6.8K/10K	N/A	N/A
[Symbol]	SIM	SPRINKLER BELL, INDOOR/OUTDOOR W/ OUTDOOR BACK BOX	MB-G10-24-R	WBB-R
[Symbol]	(BY OTHERS)	SPRINKLER TAMPER SWITCH	N/A	N/A
[Symbol]	(BY OTHERS)	SPRINKLER FLOW SWITCH	N/A	N/A

NOTES:

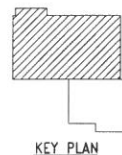
- 1.) REUSE EXISTING CONDUIT AND WIRING WHERE PRACTICAL.
- 2.) WIRE USED FOR CALCULATION PURPOSES: #12AWG, 1.98 OHMS PER 1000 FEET, AND/OR #16AWG, 4.99 OHMS PER 1000 FEET.
- 3.) 2#12 WIRE LUNTYPE (DASHED), 2#16 WIRE LUNTYPE (CONTINUOUS), UNLESS OTHERWISE NOTED.
- 4.) MOUNT SMOKE & HEAT SENSORS WITHIN 3 FEET OF CEILING PEAK.
- 5.) DO NOT MOUNT SMOKE SENSORS WITHIN 3 FEET OF DIFFUSERS.
- 6.) DO NOT RUN ANY 120VAC IN THE SAME CONDUIT AS FIRE ALARM WIRING.
- 7.) SLC = SIGNALING LINE CIRCUIT, NAC = NOTIFICATION APPLIANCE CIRCUIT.
- 8.) IF CEILING BEAMS, JOISTS, SHEDS OR PEAKS NOT SHOWN ON THESE PLANS ARE PRESENT CONTACT ATS ALASKA FOR PLACEMENT & MOUNTING INSTRUCTIONS.
- 9.) DO NOT MOUNT ANY SIMPLEX SENSORS WITHIN 36" OF AN ELECTRONIC BALLAST.
- 10.) DO NOT USE SHIELDED WIRE FOR FIRE ALARM SYSTEM, UNLESS DIRECTED TO BY ATS ALASKA.
- 11.) MANUAL FIRE ALARM BOXES TO BE MOUNTED WITHIN 5 FEET OF DOOR EXITS.
- 12.) ALL CONDUITS ENTERING FIRE ALARM CONTROL PANEL MUST BE SEALED FROM OUTSIDE ELEMENTS.
- 13.) INDOOR WEATHERPROOF HORN STROBES ARE WHITE, OUTDOOR WEATHERPROOF HORN STROBES ARE RED.

*** ATTENTION ***

THE PLACEMENT OF THE FIRE ALARM HORN/STROBES, STROBES, AND/OR BELLS MUST BE STRICTLY FOLLOWED IN ORDER TO MEET ADA REQUIREMENTS. >>>THESE DEVICES MUST NOT BE INTERCHANGED IN ANY WAY.<<< THE DEVICE TYPES SHOWN MUST BE INSTALLED IN THE EXACT LOCATIONS SHOWN ON THESE PLANS.



Contractor provided redlines included in set for clarity.



139 EAST 51st AVE, SUITE 100
ANCHORAGE, AK 99503
DAVE ENDERS
907.868.5100 TEL
907.868.5123 FAX
STATE OF ALASKA FIRE ALARM PERMIT NUMBER 04-016

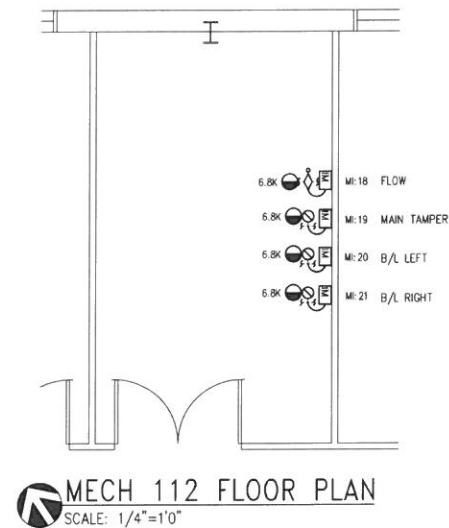
ATS
ALASKA



















CONTRACTOR/INSTALLER
HOTWIRE ELECTRIC LLC
ANCHORAGE, ALASKA

CAPITAL TRANSIT FACILITY RENOVATION & ADDITION
JUNEAU, ALASKA
PARTIAL FLOOR PLAN
FIRE ALARM DEVICE LAYOUT

D.P.S. D 1:1
DRAWN BY: MDW
APPROVED BY:
DATE CREATED: 07/02/16
REVISED DATE: 03/24/17
SCALE: AS SHOWN
JOB NUMBER: 3116540
CAD FILENAME: 3116540-FA-SYS

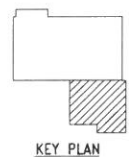
CATEGORY: FA
YEAR: 2016
SHEET NUMBER:
FA-01-ASB



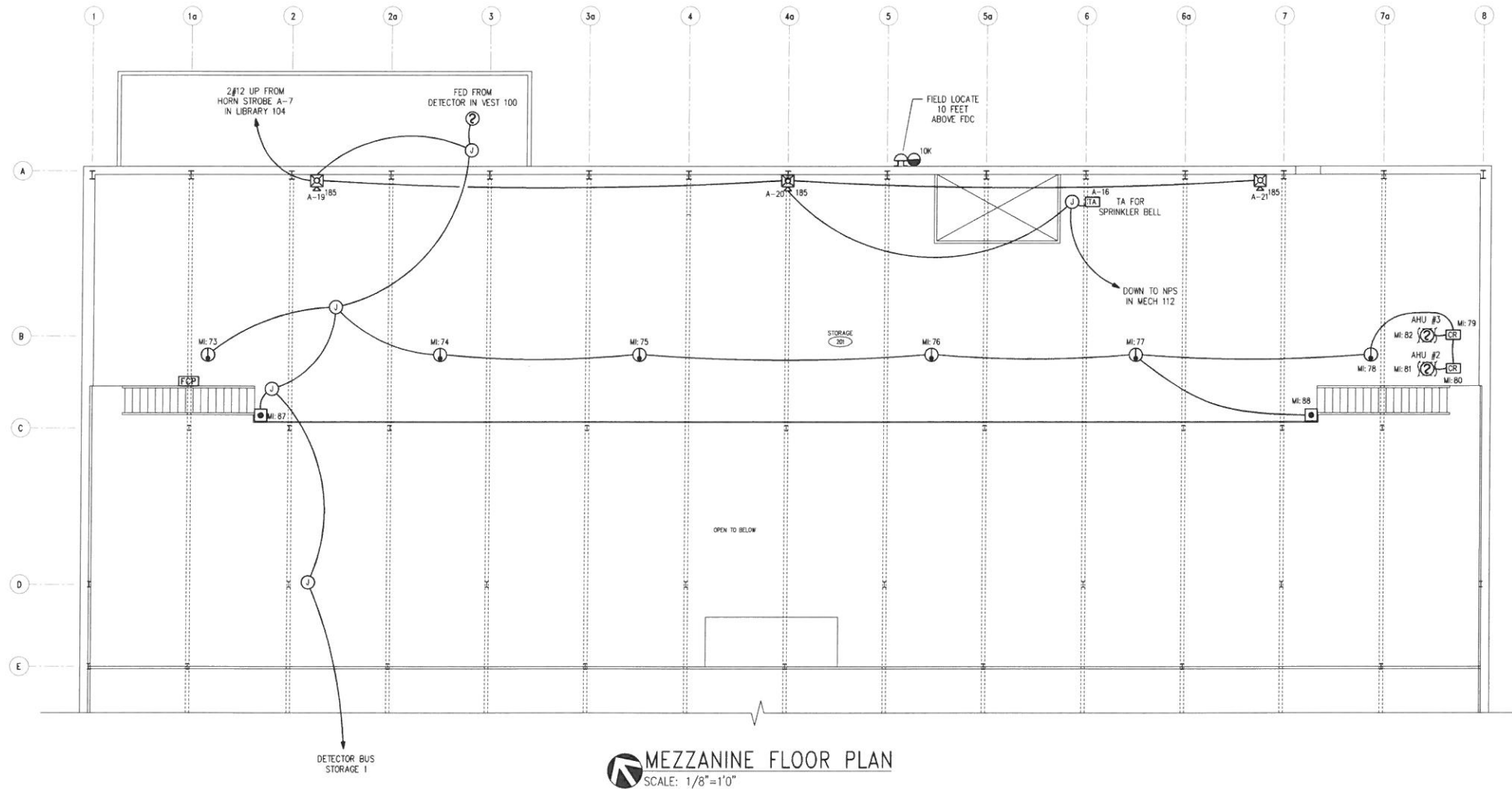
SYMBOL	MANUFAC.	DESCRIPTION	P/N	BACK BOX
	SIM	MANUAL FIRE ALARM BOX	4099-9004	4-SQ 2-1/8" DEEP W 1-G MUD RING
	FIR	MANUAL FIRE ALARM BOX, WEATHER PROOF	BG-12L08	INCLUDED
	SIM	HORN/STROBE, WALL MT. # = CD SETTING	49AV-WMF	4-SQ 1-1/2" DEEP
	SIM SIM	HORN/STROBE, # = CD SETTING, RED W/ SURFACE MOUNT BOX	49AV-WRFO	49WPBB-AVVOWR
	SIM	STROBE, WALL MT. # = CD SETTING	49VG-WMF	4-SQ 1-1/2" DEEP
	SIM SIM	PHOTO SENSOR W/ STANDARD SENSOR BASE	4098-9714 4098-9792	4-0
	SIM SIM	HEAT SENSOR W/ STANDARD SENSOR BASE	4098-9733 4098-9792	4-0
	THE	HEAT DETECTOR, WEATHER PROOF 135°	TH-302AWT35	4-0
	SIM SIM SIM	DUCT SENSOR W/ HOUSING W/ SAMPLE TUBE, 73" W/ REMOTE TEST STATION	4098-9755 4098-9857 2098-9806	N/A 4-SQ DEEP W 1-G MUD RING
	SIM SIM SIM	INPUT MODULE W/ SURFACE COVER W/ MOUNTING BRACKET	4090-9001 4090-9807 4090-9810	1-G 2-1/2" DEEP
	SIM SIM	CONTROL RELAY MODULE W/ TRIM PLATE	4090-9002 4090-9801	4-SQ 2-1/8" DEEP
	SIM SIM	TRUEALERT ADDRESSABLE ADAPTER W/ SURFACE MOUNT COVER PLATE	4905-9816 4905-9817	4-11/16" SQ 2" DEEP
	SIM	NAC REPEATER POWER SUPPLY	4009-9601	INCLUDED
	SIM	FIRE ALARM CONTROL PANEL	4010ES	INCLUDED
	SIM	END OF LINE DEVICE, 6.8K/10K	N/A	N/A
	SIM POT	SPRINKLER BELL, INDOOR/OUTDOOR W/ OUTDOOR BACK BOX	WB-G10-24-R	WBB-R
	(BY OTHERS)	SPRINKLER TAMPER SWITCH	N/A	N/A
	(BY OTHERS)	SPRINKLER FLOW SWITCH	N/A	N/A

- 1.) WIRE USED FOR CALCULATION PURPOSES: #12AWG, 1.98 OHMS PER 1000 FEET, AND/OR #16AWG, 4.99 OHMS PER 1000 FEET.
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- 7.) IF CEILING BEAMS, JOISTS, SHEDS OR PEAKS NOT SHOWN ON THESE PLANS ARE PRESENT, CONTACT AIA'S ALASKA FOR PLACEMENT & MOUNTING INSTRUCTIONS.
- 8.) DO NOT MOUNT ANY SIMPLEX SENSORS WITHIN 36" OF AN ELECTRONIC BALLAST.
- 9.) DO NOT USE SHIELDED WIRE FOR FIRE ALARM SYSTEM, UNLESS DIRECTED TO BY ITS ALASKA.
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THE PLACEMENT OF THE FIRE ALARM HORN-STROBES, STROBES, AND/OR BELLS
MUST BE STRICTLY FOLLOWED IN ORDER TO MEET ADA REQUIREMENTS.
>>THESE DEVICES MUST NOT BE INTERCHANGED IN ANY WAY.<< THE DEVICE TYPES
SHOWN MUST BE INSTALLED IN THE EXACT LOCATIONS SHOWN ON THESE PLANS.



Contractor provided redlines included in set for clarity.



LEGEND

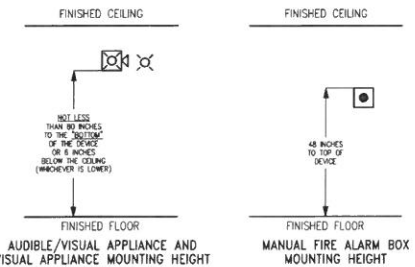
SYMBOL	MANUFAC.	DESCRIPTION	P/N	BACK BOX
	SIM	MANUAL FIRE ALARM BOX	4099-9004	4-SQ 2-1/8" DEEP W. 1-G MUD RING
	FIR	MANUAL FIRE ALARM BOX, WEATHER PROOF	BG-12LOB	INCLUDED
	SIM	HORN/STROBE, WALL MT. # = CD SETTING	49AV-WWF	4-SQ 1-1/2" DEEP
	SIM	HORN/STROBE, # = CD SETTING, RED W/ SURFACE MOUNT BOX	49AV-WRFO	49MPBB-AVOWR
	SIM	STROBE, WALL MT. # = CD SETTING	49VO-WWF	4-SQ 1-1/2" DEEP
	SIM	PHOTO SENSOR W/ STANDARD SENSOR BASE	4098-9714 4098-9792	4-0
	SIM	HEAT SENSOR W/ STANDARD SENSOR BASE	4098-9733 4098-9792	4-0
	THE	HEAT DETECTOR, WEATHER PROOF 135'	TH-302AW135	4-0
	SIM	DUCT SENSOR W/ HOUSING W/ SAMPLE TUBE, 73" W/ REMOTE TEST STATION	4098-9755 4098-9857 2098-9806	N/A 4-SQ DEEP W. 1-G MUD RING
	SIM	INPUT MODULE W/ SURFACE COVER W/ MOUNTING BRACKET	4090-9001 4090-9807 4090-9810	1-G 2-1/2" DEEP
	SIM	CONTROL RELAY MODULE W/ TRIM PLATE	4090-9002 4090-9801	4-SQ 2-1/8" DEEP
	SIM	TRUEALERT ADDRESSABLE ADAPTER W/ SURFACE MOUNT COVER PLATE	4905-9816 4905-9817	4-11/16" SQ 2" DEEP
	SIM	NAC REPEATER POWER SUPPLY	4009-9601	INCLUDED
	SIM	FIRE ALARM CONTROL PANEL	4010ES	INCLUDED
	SIM	END OF LINE DEVICE, 6.8K/10K	N/A	N/A
	SIM	SPRINKLER BELL, INDOOR/OUTDOOR W/ OUTDOOR BACK BOX	MB-G10-24-R	WBB-R
	(BY OTHERS)	SPRINKLER TAMPER SWITCH	N/A	N/A
	(BY OTHERS)	SPRINKLER FLOW SWITCH	N/A	N/A

NOTES:

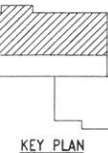
- 1.) WIRE USED FOR CALCULATION PURPOSES: #12AWG, 1.98 OHMS PER 1000 FEET, AND/OR #16AWG, 4.99 OHMS PER 1000 FEET.
- 2.) 2#12 WIRE LINETYPE (DASHED), 2#16 WIRE LINETYPE (CONTINUOUS), UNLESS OTHERWISE NOTED.
- 3.) MOUNT SMOKE & HEAT SENSORS WITHIN 3 FEET OF CEILING PEAK.
- 4.) DO NOT MOUNT SMOKE SENSORS WITHIN 3 FEET OF DIFFUSERS.
- 5.) DO NOT RUN ANY 120VAC IN THE SAME CONDUIT AS FIRE ALARM WIRING.
- 6.) SLC = SIGNALING LINE CIRCUIT, NAC = NOTIFICATION APPLIANCE CIRCUIT.
- 7.) IF CEILING BEAMS, JOISTS, SHEDS OR PEAKS NOT SHOWN ON THESE PLANS ARE PRESENT CONTACT ATS ALASKA FOR PLACEMENT & MOUNTING INSTRUCTIONS.
- 8.) DO NOT MOUNT ANY SIMPLEX SENSORS WITHIN 36" OF AN ELECTRONIC BALLAST.
- 9.) DO NOT USE SHIELDED WIRE FOR FIRE ALARM SYSTEM, UNLESS DIRECTED TO BY ATS ALASKA.
- 10.) MANUAL FIRE ALARM BOXES TO BE MOUNTED WITHIN 5 FEET OF DOOR EXITS.
- 11.) ALL CONDUITS ENTERING FIRE ALARM CONTROL PANEL MUST BE SEALED FROM OUTSIDE ELEMENTS.
- 12.) INDOOR WEATHERPROOF HORN STROBES ARE WHITE, OUTDOOR WEATHERPROOF HORN STROBES ARE RED.

*** ATTENTION ***

THE PLACEMENT OF THE FIRE ALARM HORN/STROBES, STROBES, AND/OR BELLS MUST BE STRICTLY FOLLOWED IN ORDER TO MEET ADA REQUIREMENTS. >>> THESE DEVICES MUST NOT BE INTERCHANGED IN ANY WAY <<< THE DEVICE TYPES SHOWN MUST BE INSTALLED IN THE EXACT LOCATIONS SHOWN ON THESE PLANS.



Contractor provided redlines included in set for clarity.



139 EAST 51st AVE, SUITE 100
ANCHORAGE, AK 99503
907.868.5100 TEL
907.868.5123 FAX

STATE OF ALASKA FIRE ALARM PERMIT NUMBER 04-016

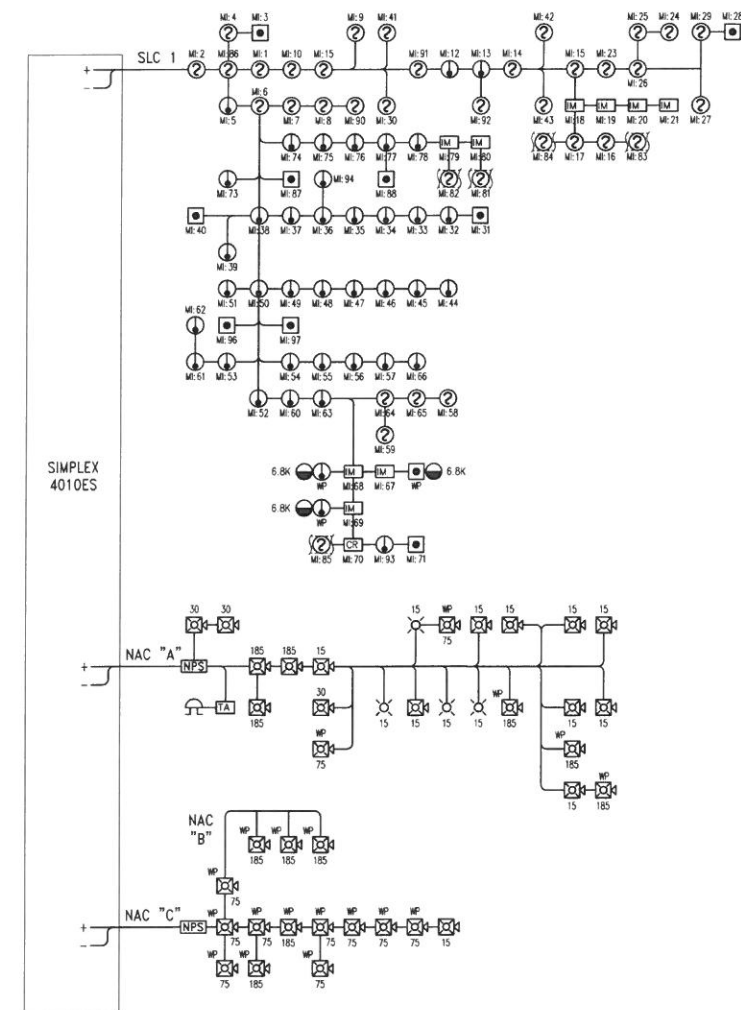
CONTRACTOR/INSTALLER
HOTWIRE ELECTRIC LLC
ANCHORAGE, ALASKA

MEZZANINE FLOOR PLAN
FIRE ALARM DEVICE LAYOUT

D.P.S. 1:1
DRAWN BY: MDM
APPROVED BY:
DATE CREATED: 07/02/16
REVISED DATE: 03/24/17
SCALE: AS SHOWN
JOB NUMBER: 3116540
CAD FILENAME: 3116540-FA-SYS

CATEGORY: FA
YEAR: 2016
SHEET NUMBER: FA-03-ASB

NOTE: MOUNT FCP PANEL AT 72" A.F.F. TO TOP OF BACK BOX



Contractor provided redlines included in set for clarity.

CATEGORY: FA YEAR: 2016
SHEET NUMBER: FA-04R-ASB

ALASKA

SKA
907.868.5100 TEL
907.868.5123 FAX

NATIONAL INSTITUTE FOR CERTIFICATION
IN ENGINEERING TECHNOLOGIES
CERTIFIED TECHNICIANS

STATE OF ALASKA FIRE ALARM PERMIT NUMBER 04-016

[illegible]

Supervisory Time		24 Hours				
Alarm Ring Time		5 Minutes				
Panel Current Requirements						
Module Type	Current In Amps		Qty in Panel	Qty in Alarm	Total Currents in Amps	
	Supv	Alarm			Supv	Alarm
MAIN PANEL	0.256	0.390	0	0	0.000	0.000
SAFELING INTERNET I	0.115	0.115	0	0	0.000	0.000
RS-232 ADAPTER	0.060	0.060	0	0	0.000	0.000
SDACT	0.030	0.040	0	0	0.000	0.000
NAC REPEATER	0.070	0.096	1	1	0.070	0.096
SLC DEVICES	0.001	0.001	0	0	0.000	0.000
Total (Amps)					0.070	0.096

Supervisory Time		24 Hours			
Alarm Ring Time		5 Minutes			
Panel	Current Requirements	Qty in Panel	Qty in Alarm	Total	
	Current in Amps			Currents in Amps	
Module Type	Supv Alarm			Supv Alarm	
MAIN PANEL	0.256 0.390	1	1	0.556 0.390	
SAFELING INTERNET I	0.115 0.115	1	1	0.115 0.115	
RS 232 ADAPTER	0.060 0.060	1	1	0.060 0.060	
SDACT	0.030 0.040	1	1	0.030 0.040	
NAC REAPTER	0.070 0.096	1	1	0.070 0.096	
SLC DEVICES	0.001 0.001	81	81	0.065 0.081	
Total (Amps)				0.556	0.782

V = VOLTAGE DROP										WIRE GAUGE = 12			
R = RESISTANCE OF WIRE (LENGTH X OHMS/1000FT)										OHMS PER 1000 FT. = 1.98			
I = CURRENT DRAW OF CIRCUIT (PER DEVICE X NO. OF DEVICES)													
FORMULA IS: I X R = V (VOLTAGE DROP)													
CURRENT TYPE	494V-WWVF (15)	494V-WWVF (30)	494V-WWVF (185)	49VO-WWVF (15)	494V-WRFO (75)	494V-WRFO (185)	Bell	I =		WIRE LENGTH	EQU. VOLTAG		
CURRENT DRAW	= 0.059	0.067	0.215	0.047	0.165	0.274	0.030	1 =	2.680	A 1050	2.079	5.572	23.428
"NAC "A"	= 9	2	3	4	2	3	1	0.822	B	540	1.069	0.878	28.121
"NAC "B"	= 0	0	0	0	0	3	1	3.502	N/A	N/A	N/A	N/A	N/A
TOTAL	= 9	2	3	4	2	6	1						

V = VOLTAGE DROP										WIRE GAUGE = 12				
R = RESISTANCE OF WIRE (LENGTH X OHMS/1000FT)										OHMS PER 1000 FT. = 1.98				
I = CURRENT DRAW OF CIRCUIT (PER DEVICE X NO. OF DEVICES)														
FORMULA IS I X R = V (VOLTAGE DROP)														
DEVICE TYPE	=	494V-WWWF (15)	494V-WWWF (30)	494V-WWWF (185)	49V0-WWVF (15)	494V-WRFO (75)	494V-WRFO (185)	Bell						
CURRENT DRAW	=	0.059	0.067	0.215	0.047	0.165	0.274	0.030	I =	CKT.	WIRE LENGTH	R =	VOLTAGE DROP	EOL VOLTAGE
NAC "C"	=	1	0	0	0	9	2	0	2.092	C	870	1.723	3.604	25.396
TOTAL	=	1	0	0	0	9	2	0	2.092	N/A	N/A	N/A	N/A	N/A

SIMPLEX PHOTO SENSOR 4098-9714
SIMPLEX HEAT SENSOR 4098-9733
SIMPLEX STANDARD SENSOR BASE 4098-9792

FROM PREVIOUS IDNET DEVICE OR FIRE ALARM CONTROL PANEL

TO ADDITIONAL IDNET DEVICES OR RETURN TO FIRE ALARM CONTROL PANEL FOR A STYLE 6 APPLICATION

ADDRESSABLE INPUT MODULE SIMPLEX 4090-9001

FROM UL-LISTED PREVIOUS IDNET DEVICE

TO ADDITIONAL DEVICES OR RETURN TO FIRE ALARM CONTROL PANEL FOR STYLE 6 SYSTEM APPLICATION

HORN/STROBE SIMPLEX 494V-WWF
SIMPLEX 494V-WRFO STROBE
SIMPLEX 4950-WWF

FROM TrueAlert COMPATIBLE SLC CONTROLLER

TO NEXT APPLIANCE OR TrueAlert-COMPATIBLE SLC CONTROLLER

WEATHER PROOF HEAT DETECTOR THERMOTECH TH-302AW135

SPRINKLER BELL SIMPLEX MB-G10-24-R

MANUAL FIRE ALARM BOX SIMPLEX 4099-9004

FROM FIRE ALARM CONTROL PANEL OR OTHER IDNET DEVICES ON CIRCUIT

TO ADDITIONAL IDNET DEVICES OR RETURN TO FIRE ALARM CONTROL PANEL FOR STYLE 6 APPLICATION

WEATHER PROOF MANUAL FIRE ALARM BOX FIRE-LITE BG-12LOB

FROM PREVIOUS DEVICE

TO NEXT DEVICE

TRUEALERT ADDRESSABLE ADAPTER SIMPLEX 4905-9816

FROM PREVIOUS DEVICE OR FCP

TO SINGLE CONVENTIONAL AUDIBLE APPLIANCE WITH 10KΩ

TO NEXT DEVICE OR RETURN TO TRUEALERT CONTROLLER

CONTROL RELAY MODULE SIMPLEX 4090-9002

NORMALLY CLOSED (N.C.)

COMMON

NORMALLY OPEN (N.O.)

NOT USED

TO NEXT DEVICE

FROM PREVIOUS DEVICE OR FCP

DUCT SMOKE SENSOR SIMPLEX 4098-9755

2098-9008 REMIT ALARM INDICATOR/TEST SWITCH

RED ALARM LED

TEST

FROM PREVIOUS IDNET DEVICE OR FIRE ALARM CONTROL PANEL

TO OTHER WAPNET/IDNET DEVICES OR RETURN TO FACP FOR STYLE 6 SLC

Contractor price included in sensor

ALASKA

JUNEAU, ALASKA

JUNEAU, ALASKA

PROJECT NAME:

D.P.S.: []

1999, 2000, 2001, 2002, 2003, 2004, 2005, 2006, 2007, 2008, 2009, 2010, 2011, 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019, 2020, 2021, 2022, 2023, 2024, 2025, 2026, 2027, 2028, 2029, 2030, 2031, 2032, 2033, 2034, 2035, 2036, 2037, 2038, 2039, 2040, 2041, 2042, 2043, 2044, 2045, 2046, 2047, 2048, 2049, 2050, 2051, 2052, 2053, 2054, 2055, 2056, 2057, 2058, 2059, 2060, 2061, 2062, 2063, 2064, 2065, 2066, 2067, 2068, 2069, 2070, 2071, 2072, 2073, 2074, 2075, 2076, 2077, 2078, 2079, 2080, 2081, 2082, 2083, 2084, 2085, 2086, 2087, 2088, 2089, 2090, 2091, 2092, 2093, 2094, 2095, 2096, 2097, 2098, 2099, 2100, 2101, 2102, 2103, 2104, 2105, 2106, 2107, 2108, 2109, 2110, 2111, 2112, 2113, 2114, 2115, 2116, 2117, 2118, 2119, 2120, 2121, 2122, 2123, 2124, 2125, 2126, 2127, 2128, 2129, 2130, 2131, 2132, 2133, 2134, 2135, 2136, 2137, 2138, 2139, 2140, 2141, 2142, 2143, 2144, 2145, 2146, 2147, 2148, 2149, 2150, 2151, 2152, 2153, 2154, 2155, 2156, 2157, 2158, 2159, 2160, 2161, 2162, 2163, 2164, 2165, 2166, 2167, 2168, 2169, 2170, 2171, 2172, 2173, 2174, 2175, 2176, 2177, 2178, 2179, 2180, 2181, 2182, 2183, 2184, 2185, 2186, 2187, 2188, 2189, 2190, 2191, 2192, 2193, 2194, 2195, 2196, 2197, 2198, 2199, 2200, 2201, 2202, 2203, 2204, 2205, 2206, 2207, 2208, 2209, 2210, 2211, 2212, 2213, 2214, 2215, 2216, 2217, 2218, 2219, 2220, 2221, 2222, 2223, 2224, 2225, 2226, 2227, 2228, 2229, 2230, 2231, 2232, 2233, 2234, 2235, 2236, 2237, 2238, 2239, 2240, 2241, 2242, 2243, 2244, 2245, 2246, 2247, 2248, 2249, 2250, 2251, 2252, 2253, 2254, 2255, 2256, 2257, 2258, 2259, 2260, 2261, 2262, 2263, 2264, 2265, 2266, 2267, 2268, 2269, 2270, 2271, 2272, 2273, 2274, 2275, 2276, 2277, 2278, 2279, 2280, 2281, 2282, 2283, 2284, 2285, 2286, 2287, 2288, 2289, 2290, 2291, 2292, 2293, 2294, 2295, 2296, 2297, 2298, 2299, 2300, 2301, 2302, 2303, 2304, 2305, 2306, 2307, 2308, 2309, 2310, 2311, 2312, 2313, 2314, 2315, 2316, 2317, 2318, 2319, 2320, 2321, 2322, 2323, 2324, 2325, 2326, 2327, 2328, 2329, 2330, 2331, 2332, 2333, 2334, 2335, 2336, 2337, 2338, 2339, 2340, 2341, 2342, 2343, 2344, 2345, 2346, 2347, 2348, 2349, 2350, 2351, 2352, 2353, 2354, 2355, 2356, 2357, 2358, 2359, 2360, 2361, 2362, 2363, 2364, 2365, 2366, 2367, 2368, 2369, 2370, 2371, 2372, 2373, 2374, 2375, 2376, 2377, 2378, 2379, 2380, 2381, 2382, 2383, 2384, 2385, 2386, 2387, 2388, 2389, 2390, 2391, 2392, 2393, 2394, 2395, 2396, 2397, 2398, 2399, 2400, 2401, 2402, 2403, 2404, 2405, 2406, 2407, 2408, 2409, 2410, 2411, 2412, 2413, 2414, 2415, 2416, 2417, 2418, 2419, 2420, 2421, 2422, 2423, 2424, 2425, 2426, 2427, 2428, 2429, 2430, 2431, 2432, 2433, 2434, 2435, 2436, 2437, 2438, 2439, 2440, 2441, 2442, 2443, 2444, 2445, 2446, 2447, 2448, 2449, 2450, 2451, 2452, 2453, 2454, 2455, 2456, 2457, 2458, 2459, 2460, 2461, 2462, 2463, 2464, 2465, 2466, 2467, 2468, 2469, 2470, 2471, 2472, 2473, 2474, 2475, 2476, 2477, 2478, 2479, 2480, 2481, 2482, 2483, 2484, 2485, 2486, 2487, 2488, 2489, 2490, 2491, 2492, 2493, 2494, 2495, 2496, 2497, 2498, 2499, 2500, 2501, 2502, 2503, 2504, 2505, 2506, 2507, 2508, 2509, 2510, 2511, 2512, 2513, 2514, 2515, 2516, 2517, 2518, 2519, 2520, 2521, 2522, 2523, 2524, 2525, 2526, 2527, 2528, 2529, 2530, 2531, 2532, 2533, 2534, 2535, 2536, 2537, 2538, 2539, 2540, 2541, 2542, 2543, 2544, 2545, 2546, 2547, 2548, 2549, 2550, 2551, 2552, 2553, 2554, 2555, 2556, 2557, 2558, 2559, 2560, 2561, 2562, 2563, 2564, 2565, 2566, 2567, 2568, 2569, 2570, 2571, 2572, 2573, 2574, 2575, 2576, 2577, 2578, 2579, 2580, 2581, 2582, 2583, 2584, 2585, 2586, 2587, 2588, 2589, 2590, 2591, 2592, 2593, 2594, 2595, 2596, 2597, 2598, 2599, 2600, 2601, 2602, 2603, 2604, 2605, 2606, 2607, 2608, 2609, 2610, 2611, 2612, 2613, 2614, 2615, 2616, 2617, 2618, 2619, 2620, 2621, 2622, 2623, 2624, 2625, 2626, 2627, 2628, 2629, 2630, 2631, 2632, 2633, 2634, 2635, 2636, 2637, 2638, 2639, 2640, 2641, 2642, 2643, 2644, 2645, 2646, 2647, 2648, 2649, 2650, 2651, 2652, 2653, 2654, 2655, 2656, 2657, 2658, 2659, 2660, 2661, 2662, 2663, 2664, 2665, 2666, 2667, 2668, 2669, 2670, 2671, 2672, 2673, 2674, 2675, 2676, 2677, 2678, 2679, 2680, 26

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Figure 1

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