

REQUEST FOR PROPOSALS

for

Design Services for La Cresta Tank Replacement C67402122



CITY OF PETALUMA
PUBLIC WORKS & UTILITIES DEPARTMENT

Issued: April 25, 2024

Proposal Deadline: 4:00 PM, May 24, 2024

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CITY OF PETALUMA

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CITY OF PETALUMA REQUEST FOR PROPOSALS

The City of Petaluma (the “City”) requests proposals from firms (individually, the “Respondent” and collectively, the “Respondents”) to provide engineering and design services for the La Cresta Tank Replacement Project in Petaluma, CA.

1. PROJECT BACKGROUND AND INTENT

La Cresta Tanks 1 and 2 are located on the southwest side of Petaluma, at the end of La Cresta Drive. The two (2) existing tanks are 500,000 gallons (Tank 1) and 200,000 gallons (Tank 2) respectively, and are reaching the end of their service life. The City intends to demolish both tanks, and replace them with a single new, 1 million gallon potable water storage tank, along with associated improvements to site infrastructure. A more detailed project scope of services is outlined below.

Respondents are obligated to comply with all applicable codes, ordinances, and regulations. Procurement shall only be conducted with responsible vendors who have the technical and financial competence to perform this work as well as an exemplary record of integrity. Contracts shall not be awarded to debarred, suspended, or ineligible vendors.

2. OVERVIEW OF SERVICES

A. Summary

The City is seeking services from qualified and experienced firms with a combination of expertise and experience in domestic drinking (potable) water storage tank design, water distribution system design, and seismic requirements for water storage tanks, as well as permitting and environmental compliance of municipal drinking water distribution systems.

B. Form of Agreement

A copy of the City’s standard Professional Services Agreement (the “Agreement”) is attached hereto as **Attachment A** and incorporated herein. By submitting a proposal, the Respondent agrees to enter into the Agreement using the attached form with no exceptions to the form of the Agreement.

C. Scope of Services

By submitting a proposal, the Respondent represents that it is fully qualified and available to provide the Services as set forth in the Scope of Services, and, unless otherwise agreed upon, agrees to provide those Services as specified if it is awarded the Agreement.

SCOPE OF SERVICES

I. PROJECT MANAGEMENT

Provide project management services for quality control and administration of the work to include agenda and minutes for progress meetings, monthly invoices, progress reports and budget tracking. The Consultant shall manage its team and overall project activities consistent with the direction from the City in order to meet the project schedule and budget. The Consultant shall manage sub-consultants, maintain schedule and budget, anticipate and mitigate potential issues and delays and coordinate and update the City on the overall progress of the Project. Project Management tasks will include at a minimum:

- (1) Organize and attend project progress meetings with the City to discuss project progress, decisions, and direction and to coordinate activities. Additional meetings shall be held at key project milestones and shall include, but are not limited to:
 - (a) Kick-off Meeting
 - (b) Site Visit(s) during design
 - (c) Milestone Review Meetings (30%, 60% and 90% milestones)
 - (d) Building and Planning Review Meeting
 - (e) City Council Meeting
- (2) Coordinate with Capital Improvement Program (CIP) staff, Water Field Operations staff, and other affected parties as required throughout the duration of the project as well as the Quality Assurance/Quality Control (QA/QC) activities for the project deliverables.

II. CONFIRMATION OF AS-BUILT LOCATIONS & UNDERGROUND UTILITY LOCATING

The consultant shall review the City's record drawings of prior site construction, and conduct site visits as required to understand existing utility layouts, arrangement and potential conflicts. Underground utility locating and topographical surveying services shall be included as needed to design improvements such that existing water, electrical, and communication infrastructure that is not being replaced or improved is avoided. A critical component of this project will be protecting and maintaining the City's communication infrastructure present at the site, during demolition and construction of the new tank.

III. DEMOLITION AND SITE IMPROVEMENT PLANS

The consultant shall prepare civil, structural, electrical, and demolition plans, specifications, and engineer's estimate of probable construction cost for the removal of the two existing tanks and replacement with a single new, 1-million-gallon nominal storage tank. The consultant shall also prepare a Preliminary Design Report narrative outlining primary design criteria, outlining key decisions made during the design process, and summarizing alternatives/options for City consideration in progressing through design development.

Plans should address the following:

- Protection in place, relocation, or installation of new communication infrastructure installed on the existing tanks.
- Domestic water supply line connection to the new tank, including associated altitude control valve, mixing inlet and isolation valves.
- Structural design of tank foundation meeting current seismic design guidelines.
- Surface preparation and recommended interior and exterior coatings
- Water tank appurtenances similar in design and operation to existing City water storage

tanks, including cathodic protection, water sampling stations, access hatches with intrusion detection and alarm, ladders, continuous railings, and lighting.

- Overflow with duckbill check valve.
- Underground utility improvements at the tank site as required to support installation of the larger tank and connection to existing water distribution pipelines.

Plans should be submitted in AutoCAD DWG and PDF format. Specifications should be prepared in alignment with CSI MasterFormat divisions and provided in both Word and PDF format. Plans and specifications shall be bid ready. The consultant should be prepared to upload plans, specifications, and documents into the City's Procore system as well as utilize this tool during design.

IV. DRAFT AND FINAL DELIVERABLES

The Consultant should provide plans for review and comment by the City stakeholders at 30%, 60%, and 90% design stages prior to delivering final construction documents. The Consultant will be expected to lead design review meetings associated with each deliverable milestone.

V. ENGINEERING SERVICES DURING CONSTRUCTION

The Consultant shall provide Engineering Services During Construction (ESDC), including bidding assistance, responding to requests for information, review of submittals, and coordination of any special inspections required as part of the tank construction. The City anticipates using a web based construction document management system (Procore) during the delivery of this project, and will require the Consultant to complete ESDC phase services within that system.

VI. SCHEDULE

The City intends to contract with the consultant in **the summer of 2024**. The consultant shall begin the work as soon as the Agreement with the City is executed, and adhering the following schedule outline:

- Notice to Proceed: June 2024
- Design: June 2024 through – February 2025
- Permitting: March 2025 – May 2025
- Construction: Beginning July 2025

3. REQUEST FOR PROPOSAL PROCEDURES

A. Requests for Information

Questions or objections relating to the Request for Proposals (the "RFP"), the attachments hereto, the RFP procedures, or the required Services may only be submitted via email to **Steve Worrell** at sworrell@cityofpetaluma.org by **4:00 PM, May 17, 2024** (the "Request for Information Deadline"). Any questions or objections that are not submitted in the manner specified and by the Request for Information Deadline will be deemed waived. City will not be bound by the oral representations of any City officials, employees, or representatives.

B. Pre-Submittal Meeting

Is not required. However, all prospective firms are encouraged to contact **Steve Worrell** at sworrell@cityofpetaluma.org to schedule a site visit if requested.

C. Submittal Instructions

PROPOSALS must be *received* by the City by or before **4:00 PM, May 24, 2024** (the “**PROPOSAL Deadline**”). The Respondent must submit one (1) electronic copy of the PROPOSAL via email, with subject line “PROPOSAL for Citywide Seismic Analysis Study Project.” The email must include the Respondent’s name, address and phone number and attach one electronic copy of the Proposal. Email PROPOSAL to:

Steve Worrell, Senior Civil Engineer, at sworrell@cityofpetaluma.org

Note that the maximum receivable email size to the City servers is approximately **20 MB**. Proposals exceeding the maximum size shall be emailed via a downloadable link.

The Respondent shall be responsible for ensuring that the City has received the PROPOSAL no later than the PROPOSAL Deadline.

D. Planned RFP Schedule

The following schedule is provided for planning purposes based on current information. However, all dates are subject to revision, including the PROPOSAL Deadline, and may be amended by addenda to this RFP:

ACTIVITY	PLANNED DATES/TIME
RFP Issued	April 25, 2024
Pre-Submittal Meeting	N/A
Request for Information Deadline	May 17, 2024, 4:00 PM
PROPOSAL Deadline	May 24, 2024, 4:00 PM
Interviews (if requested by City)	June 3 - 7, 2024
Notice of Selection	June 10, 2024
Notice to Proceed	June 2024
Consultant Services	June 2024 – May 2025

E. Addenda

City reserves the right to issue addenda to modify the terms and conditions of this PROPOSAL, including modifications to the PROPOSAL Deadline or to the Attachments to this PROPOSAL. Addenda will be posted on the City’s website at <https://cityofpetaluma.org/bid-opportunities-2/>. Each Respondent is responsible for checking the City’s website for addenda, and for reviewing all addenda before submitting its PROPOSAL.

4. PROPOSAL REQUIREMENTS

Each PROPOSAL must be submitted in compliance with the requirements of this RFP. Each PROPOSAL **must** respond to the items listed below. *Clarity and brevity are preferable to volume*. Do not attach brochures or promotional materials to the PROPOSAL. PROPOSAL should not exceed 12 one-sided pages, excluding any tabs or dividers. However, resumes may be included as an appendix and not counted in the total page count. By submitting a PROPOSAL, the Respondent agrees that the pricing and proposed approach to providing the Services, including staffing, constitutes a firm offer to enter into the Agreement with the City, and that the offer will remain open for 90 days following the PROPOSAL Deadline.

- A. Cover Letter.** Provide a brief cover letter that includes all the following information:
 - (1) Respondent’s name, address, phone number, and website address;

- (2) type of organization (e.g., corporation, partnership, etc.);
- (3) a summary of general information about Respondent and the types of services it provides in relation to the Services required by the City;
- (4) contact information, including name, title, address, phone number, and email, of Respondent's primary representative for purposes of this RFP; and
- (5) Respondent has read and understood the insurance requirements outlined in **Attachment B**, and hereby affirms (1) the cost of providing such insurance has been incorporated in the Respondent's Proposal, and (2) Respondent will be able to obtain the required insurance coverage if awarded the contract.

The cover letter must be signed by a representative that is authorized to bind Respondent by contract and must state his or her name, title, and email address.

B. General Qualifications. Provide a brief description of the Respondent's business, including the number of years in business under the current name. Describe the size of the business, including the total number of employees and offices, and identify the local office that will provide the Services if awarded the Agreement. Describe how and why Respondent is qualified to provide the Services.

Additionally, this section shall include a listing of any lawsuit and the result of that action resulting from (a) any public project undertaken by the Firm where litigation is still pending or has occurred within the last five years or (b) any type of project where claims or settlements were paid by the Firm or its insurers within the last five years.

C. Experience. Provide three (3) examples of work comparable to the services requested by this RFP, particularly with respect to services provided to other cities or public agencies. For each example provide (1) a brief description of the services provided, (2) the total project cost, (3) time period in which the services were provided, and (4) a brief statement of the Respondent's adherence to the schedule and budget for each project, and (5) the name and address of the contracting agency, including contact information for a reference check (name, title, phone number, and email address).

D. Project Team Staffing and Organization. Identify proposed team members and work they have completed on similar projects; include an organizational chart. List all applicable license numbers for any license required to perform the Services. List all subconsultants including contact information and areas of expertise. Briefly describe the roles of the prime Consultant and subconsultants. Identify by name, address, and website, each subconsultant or subcontractor, if any, that will be involved with providing the Services, including the proposed role for each such subconsultant or subcontractor.

Identify by name and title Respondent's Key Personnel, including the proposed principal-in-charge and project manager(s) who will be assigned to provide the Services. Include a resume for each Key Personnel identified, with his or her education, training, and experience.

E. Proposed Scope of Work and Approach. A scope of work shall be provided responding to and expanding on the general scope of services provided in SECTION 2, including a narrative description for each task identified in the scope of work. A description of the subtasks, which must be performed to complete the task, shall be included. All descriptions shall be of sufficient length to clearly convey that the proposer fully understands the scope of work and conveys how they

intend to approach the work.

F. Schedule. Provide an estimated schedule for delivery of each project element including milestones and deliverables. The schedule will include at a minimum the following with start and completion dates:

- Kickoff Meeting
- Site Visit(s) and Investigations
- 30% Design Deliverable
- 60% Design Deliverable
- 90% Design Deliverable
- Final Construction Documents Deliverable

G. Cost Proposal. The Respondent will perform the services stated in the contract based on the final negotiated scope of work. For this RFP, provide a Lump Sum cost proposal consistent with the Scope of Services, including any additional tasks or subtasks the Respondent deems important and appropriate to include.

The cost proposal shall include:

- A 2024-2025 rate table for its firm as well as the subconsultants.
- A listing of tasks required to accomplish the proposed scope of services;
- Labor hours for each position classification and task;
- All other reimbursable fees and expenses (noting that the City does not pay for lodging, vehicles and travel time);
- Assumptions upon which the estimate is based;
- Mark-up on other direct costs (ODC), not to exceed five (5) percent;
- The total proposed lump sum fee to complete the feasibility in its entirety.

5. EVALUATION

The factors that the City will consider in evaluating the Proposals are as follows:

<p>Completeness of Response: Responses to this RFP must be complete. Responses that do not include content addressing each of the requirements identified within the RFP and addenda will be considered incomplete and will receive no further consideration.</p>	<p>Pass/Fail</p>
<p>Conflict of Interest Statement: Discloses any financial, business or other relationship with the City of Petaluma, any clients, or any construction company that may bid on this project, and which might have an impact or financial interest upon the outcome of the construction project.</p>	<p>Pass/Fail</p>
<p>Qualifications & Experience: Relevant experience, qualifications, and technical expertise of the firm and sub-consultants to conduct permitting, final design, and construction services. Recent tank design, drinking water utility, and/or tank coating projects.</p>	<p>1-20 points</p>
<p>Technical Approach & Scope of Services: Identify the technical approach to be followed by the project team. Include a detailed scope of service to be used to complete the work, and that is appropriate for all phases of the work. Scope is feasible within the timelines included in the project schedule. Deliverables are appropriate to the scope set forth and align with project schedule.</p>	<p>1-30 points</p>
<p>Team Organization: Experience of the firm and key personnel designated on team providing similar services to other public agencies and municipalities. Roles of key individuals on the team, demonstration that these individuals have appropriate technical experience, and demonstration of capacity to perform volume and quality of needed work within proposed schedule.</p>	<p>1-30 points</p>
<p>Project Schedule: Schedule shows work completion date. Identify project timeline with major milestones and required submittals for project management. Schedule addresses all knowable phases of the project.</p>	<p>1-10 points</p>
<p>References: Provide a minimum of three references for similar projects.</p>	<p>1-10 points</p>
<p>Interview (If requested)</p>	<p>1-100 points</p>

6. SELECTION AND AWARD

A. Review. PROPOSALS will be reviewed for responsiveness and evaluated and ranked based on the factors listed in Section 5, above. When the evaluation is complete, the PROPOSALS will be ranked based on total scores to identify the PROPOSAL that is the most advantageous to the City. Acting in its sole discretion, the City may elect to conduct interviews, either in person or remotely, with shortlisted Respondents.

B. Award. The City will award the Agreement, if at all, to the Respondent(s) that are determined by the City, acting in its sole discretion, to offer the most advantageous PROPOSAL to the City based on the City's review, as outlined above. City staff will submit its recommendation to the City Council or the awarding officer, as applicable, for award of the Agreement to the Respondents that it determines to offer the most advantageous PROPOSAL. The Respondents will be notified of staff's intended recommendation by a Notice of Selection which will be posted on the City's website at <https://cityofpetaluma.org/bid-opportunities-2/> and which may also be emailed to each Respondent that submits a PROPOSAL.

7. MISCELLANEOUS

A. Disclaimers and Reservation of Rights. Upon receipt, each PROPOSAL becomes the sole property of City and will not be returned to the Respondent. Each Respondent is solely responsible for the costs it incurs to prepare and submit its PROPOSAL. The City reserves, in its sole discretion, the right to reject all PROPOSALS, including the right to cancel or postpone the RFP or the Services at any time, or to decline to award the Agreement to any of the Respondents. The City reserves the right to waive any immaterial irregularities in a PROPOSAL or submission of a PROPOSAL. The City reserves the right to reject any PROPOSAL that is determined to contain false or misleading information, or material omissions.

B. Conflict of Interest. Respondents must disclose to the City any actual, apparent, direct, or indirect, or potential conflicts of interest that may exist with respect to Respondent, any employees of Respondent, or any other person relative to the Services to be provided pursuant to this RFP. This RFP process will be conducted in compliance with all laws regarding political contributions, conflicts of interest, or unlawful activities. City employees are prohibited from participating in the selection process for this RFP if they have any financial or business relationship with any Respondent.

C. Public Records. The City is subject to the provisions of the California Public Records Act (Govt. Code § 6250 et seq.) (the "Act"), and each PROPOSAL submitted to the City is subject to disclosure as a public record, unless the PROPOSAL or any portion thereof is exempt under the Act. If a Respondent believes that any portion of its PROPOSAL is exempt from disclosure under the Act, it must clearly identify the portion(s) it believes to be exempt and identify the basis for the exemption. Each Respondent bears the burden of proving any claimed exemption under the Act, and by submitting a PROPOSAL, a Respondent agrees to indemnify, defend, and hold harmless the City against any third-party claim seeking disclosure of the PROPOSAL or any portions thereof.

Attachments:

- Attachment A: Form of Agreement
- Attachment B: Insurance Requirements
- Attachment C: Prevailing Wage Information
- Attachment D: Living Wage Acknowledgement and

Certification
Attachment E: Record Drawings of Existing La Cresta tanks

Attachment A: Form of Agreement

PROFESSIONAL SERVICES AGREEMENT

(Title of Project)

FY _____ Fund # _____ Cost Center _____ Object Code _____ Project # _____ Amount \$ _____

For multi-year contracts or contracts with multiple accounts:

FY _____ Fund # _____ Cost Center _____ Object Code _____ Project # _____ Amount \$ _____

FY _____ Fund # _____ Cost Center _____ Object Code _____ Project # _____ Amount \$ _____

FY _____ Fund # _____ Cost Center _____ Object Code _____ Project # _____ Amount \$ _____

FY _____ Fund # _____ Cost Center _____ Object Code _____ Project # _____ Amount \$ _____

FY _____ Fund # _____ Cost Center _____ Object Code _____ Project # _____ Amount \$ _____

THIS PROFESSIONAL SERVICES AGREEMENT (“Agreement”) is entered into and effective as of _____, 20____ (“Effective Date”), by and between the City of Petaluma, a
(city use only)

municipal corporation and a charter city (“City”) and _____, a _____ (“Contractor”) (collectively, the “Parties”).

WHEREAS, the Parties enter into this Agreement for the purpose of Contractor providing professional services to City under the terms and conditions set forth herein.

THEREFORE, in consideration of the mutual covenants contained in this Agreement, the Parties agree as follows:

1. **Services.**

A. Contractor shall provide the services as described in and in accordance with the schedule set forth in Exhibit “A” attached hereto and incorporated herein (“Services”). Except as otherwise expressly provided in this Agreement, this Agreement does not authorize the Contractor to perform any services in addition to those specified in Exhibit A. The City has no obligation to award any additional Services to the Contractor. Any additional Services awarded to the Contractor pursuant to this Agreement will be in the sole discretion of authorized representatives of the City and shall be added to Exhibit A in accordance with Section 25, Amendment, of this Agreement.

B. The Services under this Agreement shall not include preparing or assisting the City with any portion of the City’s preparation of a request for proposals, request for qualifications, or any other solicitation regarding a subsequent or additional contract with the City. The City shall at all times retain responsibility for City contracting, including with respect to any subsequent phase of the Services or this Agreement. The Contractor’s participation in the planning, discussions, or drawing of project plans or specifications shall be limited to conceptual, preliminary, or initial plans or specifications. The Contractor shall cooperate with the City to ensure that all contractors submitting proposals for a contract for any subsequent phase of the Services or this Agreement have access to the same information, including all conceptual, preliminary, or initial plans or specifications prepared by the Contractor pursuant to this Agreement.

2. **Compensation; Business Tax Certificate.**

- A. For the full performance of the Services as described herein, City shall compensate Contractor in accordance with the rates specified in Exhibit A.
- B. Contractor shall submit detailed monthly invoices reflecting all services performed during the preceding month and including a revised schedule for performance and additional documentation requested by City, as applicable.
- C. Contractor shall be compensated for services in addition to those described in Exhibit A, only if Contractor and City execute a written amendment to this Agreement describing the additional services to be performed and the compensation to be paid for such services. In no case shall the total compensation under this Agreement exceed \$_____ without prior written authorization of the City Manager. Further, no compensation for a section or work program component attached with a specific budget shall be exceeded without prior written authorization of the City Manager.
- D. Notwithstanding any provision herein, Contractor shall not be paid any compensation until such time as Contractor has on file with the City Finance Department a current W-9 form available from the IRS website (www.irs.gov) and has obtained a currently valid Petaluma business tax certificate.
- E. City's obligation to pay compensation to Contractor as provided herein is contingent upon Contractor's performance of the Services pursuant to the terms and conditions of this Agreement and any amendments thereto.

3. **Term.** The term of this Agreement commences on the Effective Date, and terminates on _____, unless sooner terminated in accordance with Section 4. Upon termination, any and all of City's documents or materials provided to Contractor and any and all of the documents or materials prepared for City or relating to the performance of the Services, shall be delivered to the City as soon as possible, but not later than fourteen (14) days after termination of the Agreement.

4. **Termination.** City may terminate this Agreement without cause upon ten (10) days' written notice. City may immediately terminate or suspend this Agreement for cause. Cause for immediate termination or suspension shall include, but not be limited to, any breach of this Agreement by Contractor or Contractor's bankruptcy or insolvency. Upon receipt of notice of termination or suspension for cause, Contractor shall immediately stop all work in progress under this Agreement. In the event of early termination of this Agreement by City, Contractor shall be entitled to payment for all Services performed to the date of termination to the extent such Services were performed to the satisfaction of City in accordance with the terms and conditions of this Agreement. If City terminates this Agreement for cause, Contractor shall be liable to City for any excess cost City incurs for completion of the Services.

5. **Contractor's Representation; Independent Contractor.** Contractor represents that Contractor possesses distinct professional skills in performing the Services. City has relied upon said representation as a material inducement to enter into this Agreement. Contractor shall, therefore, provide properly skilled professional and technical personnel to perform all Services under this Agreement. It is expressly understood that Contractor and its agents and employees, shall act in an independent capacity and as an independent contractor and

not as officers, employees or agents of City. This Agreement shall not be construed as an agreement for employment.

6. **Facilities and Equipment.** Contractor shall, at its sole cost and expense, furnish all facilities and equipment that may be required for furnishing Services pursuant to this Agreement. City shall furnish to Contractor no facilities or equipment, unless the City otherwise agrees in writing to provide the same.
7. **Licenses, Permits, Etc.** Contractor shall, at Contractor's sole cost and expense, keep in effect at all times during the term of this Agreement any licenses, permits or other such approvals which are legally required for performing the Services.
8. **Time.** Contractor shall devote such time to the performance of the Services as may be reasonably necessary for satisfactory performance of Contractor's obligations pursuant to this Agreement.
9. **Inspection.** Contractor shall provide the City every reasonable opportunity to ascertain that the Services are being performed in accordance with the requirements and intentions of this Agreement. All work done and materials furnished, if any, shall be subject to inspection and approval by the City. The inspection of such work shall not relieve Contractor of any of its obligations pursuant to this Agreement.
10. **Progress Reports.** Upon the City's request, Contractor shall provide, in a form acceptable to City, written progress reports of all oral and written observations, opinions, recommendations, analyses, progress and conclusions related to Contractor's performance of the Services.
11. **Confidentiality.** In the course of Contractor's employment, Contractor may have access to trade secrets and confidential information, disclosure of which is protected or limited by law. Contractor shall not directly or indirectly disclose or use any such confidential information, except as required for the performance of the Services.
12. **Conflict of Interest.**
 - A. Contractor represents that it presently has no interest, and covenants that it shall not acquire any interest, direct or indirect, financial or otherwise, which would conflict in any manner or degree with the performance of the Services hereunder. Contractor further covenants that, in the performance of this Agreement, it shall not employ any subcontractor or person having such a conflict of interest. Contractor represents that no one who has or will have any financial interest under the Agreement is an officer or employee of City. If such conflict of interest arises during this Agreement or any extension, Contractor will immediately advise City and City may, at its sole discretion, immediately terminate this Agreement. Certain Contractors are subject to the requirements, including the disclosure and reporting requirements, of the City's Conflict of Interest Code adopted pursuant to the Political Reform Act. Such Contractors subject to the City's Conflict of Interest Code include those whose work may involve: making government decisions regarding approval or adoption of rates, rules, or regulations, action on permits or other applications, authorization to enter into or modify contracts, or approval of plans, designs, reports, or studies. Contractor

agrees to comply fully with all such requirements to the extent they apply to Contractor's performance of the Services.

- B. Certain contractors, in addition to being subject to the City's Conflict of Interest Code, may be subject to other conflict of interest prohibitions, including those in the Political Reform Act, Government Code Section 81000 and following, and Section 1090 and following of the Government Code. The Political Reform Act prohibits public officials, employees and certain contractors from participating in making governmental decisions that the official, employee or consultant knows or has reason to know will result in a material financial effect on their economic interests. Government Code Section 1090 and following prohibits government officials, employees, and certain contractors from participating in making government contracts in which the official, employee or contractor has a financial interest. As a result of the financial interest City contractors have in their City contracts, the Section 1090 prohibition regarding City contractors focuses on whether a contractor is or would be "making a government contract" in a quasi-governmental capacity for purposes of Section 1090. Section 1090 prohibits City contractors from using their role as a contractor to influence how the City spends the public's funds in a way that benefits the contractor. As a result, Section 1090 may in certain circumstances prohibit the Contractor from responding to solicitations for, or being awarded, subsequent contracts that result from or relate to the Services performed pursuant to this Agreement. . Penalties for violating Section 1090 are severe, and may include felony criminal penalties, permanent disqualification from holding public office in California, disgorgement of any benefit received by the financially interested contractor, civil and administrative penalties, and voiding of the prohibited contract.
13. **Contractor No Agent.** Except as the City may otherwise expressly specify in writing, the Contractor shall have no authority, express or implied, to act or transact on behalf of City in any capacity whatsoever, including advising or representing the City concerning City public contracts as an agent of the City. Contractor shall have no authority, express or implied, pursuant to this Agreement to bind City to any obligation whatsoever.
14. **Standard of Performance.** Contractor shall perform all the Services in a manner consistent with the standards of Contractor's profession. All instruments of service of whatsoever nature, which Contractor delivers to City pursuant to this Agreement, shall be prepared in a substantial, workmanlike manner and conform to the standards of Contractor's profession. All such instruments of service shall become the sole and exclusive property of City upon delivery of the same.
15. **Assignment/Transfer.** No assignment or transfer in whole or in part of this Agreement shall be made without the prior written consent of City.
16. **Subcontractors.** Contractor shall directly perform all Services, and shall not subcontract any portion of performance of the Services without the prior written consent of City. Any such subcontractors shall be required to comply, to the full extent applicable, with the terms and conditions of this Agreement, including but not limited to, procuring and maintaining insurance coverage as required herein and which shall name City as an additional insured.
17. **Compliance With All Laws.** Contractor shall fully comply with all applicable local, state and federal rules, laws, regulations and ordinances pertaining to the performance of the

Services required hereunder, including but not limited to, the California Building Standards Code as in effect in the City, the Americans with Disabilities Act, and any laws and regulations related to any copyright, patent, trademark or other intellectual property right involved in performance of the Services. Contractor's failure to comply with any law(s) or regulation(s) applicable to the performance of the Services hereunder shall constitute a material breach of this Agreement. To the extent that any other government agency or entity provides compensation for any Services, Contractor shall comply with all rules and regulations applicable to such fiscal assistance.

18. **Prevailing Wages.** This Agreement is subject to the requirements of the California Prevailing Wage Law, California Labor Code Section 1720 et seq., and the Services as described in Exhibit A will be performed in accordance with all applicable requirements of the California Prevailing Wage Law, including, but not limited to, all applicable requirements contained in Exhibit _____, which is attached to and made a part of this Agreement.
19. **Living Wage Ordinance.** Without limiting the foregoing Section 17, Contractor shall comply fully with all applicable requirements of Petaluma Municipal Code, Chapter 8.36, Living Wage (the "Living Wage Ordinance"), as the same may be amended from time to time. Upon the City's request Contractor shall promptly provide to the City documents and information verifying Contractor's compliance with the requirements of the Living Wage Ordinance, and shall within fifteen (15) calendar days of the Effective Date of this Agreement, notify each of its affected employees as to the amount of wages and time off that are required to be provided to them pursuant to the Living Wage Ordinance. The Acknowledgement and Certification Pursuant to City of Petaluma Living Wage Ordinance, attached to this Agreement at Exhibit _____, shall be a part of this Agreement for all purposes, and Contractors that are subject to Living Wage Ordinance requirements, as determined by the City, must provide a properly completed Exhibit _____ in accordance with the requirements of the Living Wage Ordinance. Contractor's noncompliance with the applicable requirements of the Living Wage Ordinance shall constitute cause for City's termination of this Agreement pursuant to Section 4 hereof.
20. **Discrimination.** During the performance of this Agreement, Contractor shall not discriminate against any employee or applicant for employment because of race, religion, creed, color, national origin, ancestry, gender, sexual orientation, age or physical or mental disability in violation of any applicable law.
21. **Notice.** Except as otherwise specified in this Agreement, all notices to be sent pursuant to this Agreement shall be made in writing, and sent to the Parties at their respective addresses specified below or to such other address as a Party may designate by written notice delivered to the other Party in accordance with this Section. All such notices shall be sent by:
 - (i) personal delivery, in which case notice is effective upon delivery;
 - (ii) certified or registered mail, return receipt requested, in which case notice shall be deemed delivered on receipt if delivery is confirmed by a return receipt;
 - (iii) nationally recognized overnight courier, with charges prepaid or charged to the sender's account, in which case notice is effective on delivery if delivery is confirmed by the delivery service; or

- (iv) facsimile transmission, in which case notice shall be deemed delivered upon transmittal, provided that (a) a duplicate copy of the notice is promptly delivered by first-class or certified mail or by overnight delivery, or (b) a transmission report is generated reflecting the accurate transmission thereof. Any notice given by facsimile shall be considered to have been received on the next business day if it is received after 5:00 p.m. recipient’s time or on a nonbusiness day.

City: City Clerk
City of Petaluma
Post Office Box 61
Petaluma, California 94953
Phone: (707) 778-4360
Fax: (707) 778-4554
Email: cityclerk@ci.petaluma.ca.us

And:

Phone: _____
Fax: _____
Email: _____

Contractor: _____

Phone: _____
Fax: _____
Email: _____

- 22. **Ownership of Documents.** All original papers, documents or computer material on disk or microfilm, and copies thereof, produced as a result of this Agreement, shall be the property of City and may not be used by Contractor without the written consent of City. Copies of such documents or papers shall not be disclosed to others without the written consent of the City Manager or his or her designated representative. Notwithstanding this provision or any other provision in this Agreement to the contrary, the City and the Contractor shall each own all right, title and interest in and to any intellectual property authored by or on behalf of the City or the Contractor related to the Services. The City shall have an irrevocable, royalty-free, world-wide, fully-paid-up, non-exclusive license to use and authorize others to use any intellectual property of the Contractor included in the work products produced as part of the performance of the Services pursuant to this Agreement.
- 23. **Indemnification.** A. With respect to commercial general liability, to the maximum extent permitted by law, Contractor shall, at its own expense, indemnify, defend with counsel acceptable to the City, (which acceptance will not be unreasonably withheld), and hold harmless City and its officers, officials, employees, agents and volunteers (“Indemnitees”) from and against any and all liability, loss, damage, claims, suits, actions, arbitration proceedings, administrative proceedings, regulatory proceedings, civil penalties and fines,

expenses and costs (including, without limitation, claims expenses, attorney's fees and costs and fees of litigation) (collectively, "Liability") of every nature, whether actual, alleged or threatened, arising out of or in connection with the Contractor's performance of the Services or Contractor's failure to comply with any of the terms of this Agreement, regardless of any fault or alleged fault of the Indemnitees.

B. With respect to professional liability, notwithstanding the foregoing or any other provision in this Agreement, to the maximum extent permitted by law, Contractor shall indemnify defend and hold harmless the Indemnitees from Liability arising out of or in connection with the negligence, recklessness, or willful misconduct of Contractor.

C. The Contractor must respond within 30 calendar days to any tender of defense and indemnity by the City unless the time for responding has been extended by an authorized representative of the City in writing. If the Contractor fails to accept tender of defense and indemnity within 30 calendar days regarding a matter subject to tender pursuant to this Agreement, in addition any other remedies authorized by law, so much of the money due or that may become due the Contractor under this Agreement as shall reasonably be considered necessary by the City may be retained by the City until disposition has been made of the matter subject to tender, or until the Contractor accepts the tender, whichever occurs first. In the event that the City must file responsive documents in a matter tendered to Contractor prior to Contractor's acceptance of tender, where such matter is subject to tender pursuant to this Agreement, Contractor agrees to fully reimburse all costs, including but not limited to attorney's fees and costs and fees of litigation, incurred by the City in filing such responsive documents.

D. Notwithstanding the foregoing, to the extent this Agreement is a "construction contract" as defined by California Civil Code Section 2783, as may be amended from time to time, Contractor's duty to indemnify under this provision shall not apply when to do so would be prohibited by California Civil Code Section 2782, as may be amended from time to time.

E. Notwithstanding the foregoing, to the extent that the Services include design professional services subject to California Civil Code Section 2782.8, as may be amended from time to time, Contractor's duty to indemnify shall only be to the maximum extent permitted by California Civil Code Section 2782.8.

24. **Insurance.** Contractor shall comply with the "Insurance Requirements for Contractors" in Exhibit B, attached hereto and incorporated herein by reference.

City reserves the right to review any and all of the required insurance policies and/or endorsements, but has no obligation to do so. City's failure to demand evidence of full compliance with the insurance requirements set forth in this Agreement or City's failure to identify any insurance deficiency shall not relieve Contractor from, nor be construed or deemed a waiver of, its obligation to maintain the required insurance at all times during the performance of this Agreement.

25. **Amendment.** This Agreement may be amended only by a written instrument executed by both Parties.

26. **Litigation.** If litigation ensues which pertains to the subject matter of Contractor's services hereunder, Contractor, upon request from City, agrees to testify therein at a reasonable and customary fee.
27. **Construction.** This Agreement is the product of negotiation and compromise on the part of both Parties and that the Parties agree that, notwithstanding Civil Code section 1654, any uncertainty in the Agreement shall not be construed against the drafter of the Agreement.
28. **Governing Law; Venue.** This Agreement shall be enforced and interpreted under the laws of the State of California and the City of Petaluma. Any action arising from or brought in connection with this Agreement shall be venued in a court of competent jurisdiction in the County of Sonoma, State of California.
29. **Non-Waiver.** The City's failure to enforce any provision of this Agreement or the waiver thereof in a particular instance shall not be construed as a general waiver of any part of such provision. The provision shall remain in full force and effect.
30. **Severability.** If any term or portion of this Agreement is held to be invalid, illegal, or otherwise unenforceable by a court of competent jurisdiction, the remaining provisions of this Agreement shall continue in full force and effect.
31. **No Third Party Beneficiaries.** The Parties do not intend to create, and nothing in this Agreement shall be construed to create any benefit or right in any third party.
32. **Mediation.** The Parties agree to make a good faith attempt to resolve any dispute arising out of this Agreement through mediation prior to commencing litigation. The Parties shall mutually agree upon the mediator and shall divide the costs of mediation equally.
33. **Contractor's Books and Records.**
 - A. Contractor shall maintain any and all ledgers, books of accounts, invoices, vouchers, canceled checks, and other records or documents evidencing or relating to charges for services, or expenditures and disbursements charged to the City for a minimum period of three (3) years or for any longer period required by law, from the date of final payment to Contractor pursuant to this Agreement.
 - B. Contractor shall maintain all documents and records which demonstrate performance under this Agreement for a minimum period of three (3) years or for any longer period required by law, from the date of termination or completion of this Agreement.
 - C. Any records or documents required to be maintained pursuant to this Agreement shall be made available for inspection or audit, at any time during regular business hours, upon written request by the City Manager, City Attorney, City Finance Director, or a designated representative of these officers. Copies of such documents shall be provided to the City for inspection at Petaluma City Hall when it is practical to do so. Otherwise, unless an alternative is mutually agreed upon, the records shall be available at Contractor's address indicated for receipt of notices in this Agreement.

D. Where City has reason to believe that such records or documents may be lost or discarded due to dissolution, disbandment or termination of Contractor's business, City may, by written request by any of the above-named officers, require that custody of the records be given to the City and that the records and documents be maintained in Petaluma City Hall. Access to such records and documents shall be granted to any party authorized by Contractor, Contractor's representatives, or Contractor's successor in interest.

34. **Headings.** The headings used in this Agreement are for convenience only and are not intended to affect the interpretation or construction of any provisions herein.

35. **Survival.** All obligations arising prior to the termination or expiration of this Agreement and all provisions of this Agreement allocating liability between City and Contractor shall survive the termination or expiration of this Agreement.

36. **Entire Agreement.** This Agreement, including the exhibits attached hereto and incorporated herein, constitutes the entire agreement between the Parties with respect to the Services, and supersedes all prior agreements or understandings, oral or written, between the Parties in this regard.

IN WITNESS WHEREOF, the parties hereto have executed this document the day, month and year first above written.

CITY OF PETALUMA

CONTRACTOR

City Manager

By _____
Name

ATTEST:

Title

City Clerk

Address

APPROVED AS TO FORM:

City State Zip

City Attorney

Taxpayer I.D. Number

Petaluma Business Tax Certificate Number

Attachment B: Insurance Requirements – Exhibit B

EXHIBIT B
INSURANCE REQUIREMENTS – Professional Service Agreement
(NOT FOR CONSTRUCTION CONTRACTS)

Contractor’s performance of the Services under this Agreement shall not commence until Contractor shall have obtained all insurance required under this paragraph and such insurance shall have been approved by the City Attorney as to form and the Risk Manager as to carrier and sufficiency. All requirements herein provided shall appear either in the body of the insurance policies or as endorsements and shall specifically bind the insurance carrier.

Contractor shall procure and maintain for the duration of the contract insurance against claims now and in the future for injuries to persons or damages to property which may arise from or in connection with the performance of the Services by the Contractor, the Contractor’s agents, representatives, employees, or subcontractors.

A. MINIMUM SCOPE AND LIMIT OF INSURANCE

Coverage shall be at least as broad as:

1. **Commercial General Liability (CGL):** Insurance Services Office Form CG 00 01 covering CGL on an “occurrence” basis, including products and completed operations, property damage, bodily injury and personal & advertising injury with limits no less than **\$5,000,000** per occurrence. If a general aggregate limit applies, either the general aggregate limit shall apply separately to this project/location (ISO CG 25 03 or 25 04) or the general aggregate limit shall be twice the required occurrence limit. The City of Petaluma, its officers, officials, employees, and volunteers are to be covered as additional insureds (see D1 for further details).
2. **Automobile Liability:** ISO Form Number CA 00 01 covering any auto (Code 1), or if Contractor has no owned autos, hired, (Code 8) and non-owned autos (Code 9), with limit no less than **\$1,000,000** per accident for bodily injury and property damage.
3. **Workers’ Compensation:** as required by the State of California, with Statutory Limits, and Employer’s Liability Insurance with limit of no less than **\$1,000,000** per accident for bodily injury or disease.
4. The Insurance obligations under this agreement shall be the greater of 1) all the Insurance coverage and limits carried by or available to the Consultant; or 2) the minimum Insurance requirements shown in this Agreement. Any insurance proceeds in excess of the specified limits and coverage required, which are applicable to a given loss, shall be available to the City. No representation is made that the minimum Insurance requirements of this Agreement are sufficient to cover the indemnity or other obligations of the Consultant under this agreement.

B. OTHER COVERAGES

- Professional Liability (Errors and Omissions):** Insurance appropriate to the Contractor’s profession, with limit no less than **\$2,000,000** per occurrence or claim, **\$2,000,000** aggregate.

C. Deductibles and Self-Insured Retentions

Any deductibles or self-insured retentions must be declared to and approved by the City. At the option of the City, either: the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects the City, its officers, officials, employees, agents, and volunteers;

or the Consultant shall procure a bond guaranteeing payment of losses and related investigations, claim administration and defense expenses. Policies containing any self-insured retention (SIR) provision shall provide or be endorsed to provide that the SIR may be satisfied by either the named insured (Contractor) or the City.

City reserves the right to review any and all of the required insurance policies, declaration pages, and/or endorsements, but has no obligation to do so. City's failure to demand evidence of full compliance with the insurance requirements set forth in this Agreement or City's failure to identify any insurance deficiency shall not relieve Contractor from, nor be construed or deemed a waiver of, its obligation to maintain the required insurance at all times during the performance of this Agreement.

D. Other Insurance Provisions

The required general liability and automobile policies are to contain, or be endorsed to contain the following provisions:

1. **Additional Insured Status:** The City of Petaluma, its officers, officials, employees, agents, and volunteers are to be covered as additional insureds on the CGL policy with respect to liability arising out of work or operations performed by or on behalf of the Contractor including materials, parts, or equipment furnished in connection with such work or operations. General liability coverage can be provided in the form of an endorsement to the Contractor's insurance (at least as broad as ISO Form CG 20 10 11 85 or if not available, through the addition of **both** CG 20 10, CG 20 26, CG 20 33, or CG 20 38; **and** CG 20 37 if a later edition is used).
2. **Primary and Non-Contributory:** For any claims related to this project, the Consultant's insurance coverage shall be primary insurance and at least as broad as ISO CG 20 01 04 13 ~~as respects~~ the City, its officers, officials, employees, agents and volunteers. Any insurance or self-insurance maintained by the City, its officers, officials, employees, agents or volunteers shall be excess of the Consultant's insurance and shall not contribute with it. This requirement shall also apply to any Excess or Umbrella liability policies.
3. Any failure to comply with reporting or other provisions of the policies including breaches of warranties shall not affect coverage provided to the City, its officers, officials, employees, agents or volunteers.
4. The Contractor's insurance shall apply separately to each insured against whom claim is made or suit is brought except, with respect to the limits of the insurer's liability.
5. Each insurance policy required by this clause shall be endorsed to state that coverage shall not be suspended, voided, canceled by either party, reduced in coverage or in limits except after thirty (30) days' prior written notice by certified mail, return receipt requested, has been given to the City.
6. The Contractor may use **Umbrella or Excess Policies** to provide the liability limits as required in this agreement. This form or insurance will be acceptable provided that all of the Primary and Umbrella or Excess Policies shall provide all of the insurance coverages herein required, including, but not limited to, primary and non-contributory, additional insured, Self-Insured Retentions (SIRs), indemnity, and defense requirements. The Umbrella or Excess policies shall be provided on true "following form" or broader coverage basis, with coverage at least as broad as provided on the underlying Commercial General Liability insurance. No insurance policies maintained by the Additional Insureds, whether primary or excess, and which also apply to a loss covered hereunder, shall be called upon to contribute to a loss until the Contractor's primary and excess liability policies are exhausted.

7. **Waiver of Subrogation:** Consultant agrees to waive subrogation rights for commercial general liability, automobile liability and worker's compensation against City regardless of the applicability of any insurance proceeds, and to require all contractors, subcontractors or others involved in any way with the Services to do likewise.
8. It shall be a requirement under this Agreement that any available insurance proceeds broader than or in excess of the specified minimum insurance coverage requirement and/or limits shall be available to the additional insured. Furthermore, the requirement for coverage and limits shall be (1) the minimum coverage and limits specified in this Agreement, or (2) the broader coverage and maximum limits of coverage of any insurance policy or proceeds available to the named insured; whichever is greater.
9. The limits of insurance required in this Agreement may be satisfied by a combination of primary and umbrella or excess insurance. Any umbrella or excess insurance shall contain or be endorsed to contain a provision that such coverage shall also apply on a primary and non-contributory basis for the benefit of the City of Petaluma before the City of Petaluma's own insurance or self-insurance shall be called upon to protect it as a named insured.

E. Acceptability of Insurers

Insurance is to be placed with insurers with a current A.M. Best's rating of no less than A:VII.

F. Verification of Coverage

Contractor shall furnish the City with Certificate of Insurance along with Declarations and Endorsements affecting coverage required by this clause. The endorsements are to be signed by a person authorized by that insurer to bind coverage on its behalf. All endorsements are to be received and approved by the City before the Services commence. **NOTE: The City of Petaluma is now using an online insurance program, PINS Advantage. Once you have been awarded a contract with the City of Petaluma, you will receive an e-mail from PINS Advantage/City of Petaluma requesting that you forward the e-mail to your insurance agent(s).**

Attachment C: Prevailing Wage Information—Exhibit C

PREVAILING WAGE EXHIBIT _____

HOURS OF WORK:

- A. In accordance with California Labor Code Section 1810, eight (8) hours of labor in performance of the Services shall constitute a legal day's work under this Agreement.
- B. In accordance with California Labor Code Section 1811, the time of service of any worker employed in performance of the Services is limited to eight hours during any one calendar day, and forty hours during any one calendar week, except in accordance with California Labor Code Section 1815; which provides that work in excess of eight hours during any one calendar day and forty hours during any one calendar week is permitted upon compensation for all hours worked in excess of eight hours during any one calendar day and forty hours during any one calendar week at not less than one-and-one-half times the basic rate of pay.
- C. The Consultant and its subconsultants shall forfeit as a penalty to the City \$25 for each worker employed in the performance of the Services for each calendar day during which the worker is required or permitted to work more than eight (8) hours in any one calendar day, or more than forty (40) hours in any one calendar week, in violation of the provisions of California Labor Code Section 1810 and following.

WAGES:

- A. In accordance with California Labor Code Section 1773.2, the City has determined the general prevailing wages in the locality in which the Services are to be performed for each craft or type of work needed to be as published by the State of California Department of Industrial Relations, Division of Labor Statistics and Research, a copy of which is on file with the City and shall be made available on request. The Consultant and subconsultants engaged in the performance of the Services shall pay no less than these rates to all persons engaged in performance of the Services.
- B. In accordance with Labor Code Section 1775, the Consultant and any subconsultants engaged in performance of the Services shall comply Labor Code Section 1775 which establishes a penalty of up to \$50 per day for each worker engaged in the performance of the Services that the Consultant or any subconsultant pays less than the specified prevailing wage. The amount of such penalty shall be determined by the Labor Commissioner and shall be based on consideration of the mistake, inadvertence, or neglect of the Consultant or subconsultant in failing to pay the correct rate of prevailing wages, or the previous record of the Consultant or subconsultant in meeting applicable prevailing wage obligations, or the willful failure by the Consultant or subconsultant to pay the correct rates of prevailing wages. A mistake, inadvertence, or neglect in failing to pay the correct rate of prevailing wages is not excusable if the Consultant or subconsultant had knowledge of their obligations under the California Labor Code. The Consultant or subconsultant shall pay

the difference between the prevailing wage rates and the amount paid to each worker for each calendar day or portion thereof for which each worker was paid less than the prevailing wage rate. If a subconsultant worker engaged in performance of the Services is not paid the general prevailing per diem wages by the subconsultant, the Consultant is not liable for any penalties therefore unless the Consultant had knowledge of that failure or unless the Consultant fails to comply with all of the following requirements:

1. The Agreement executed between the Consultant and the subconsultant for the performance of part of the Services shall include a copy of the provisions of California Labor Code Sections 1771, 1775, 1776, 1777.5, 1813, and 1815.
2. The Consultant shall monitor payment of the specified general prevailing rate of per diem wages by the subconsultant by periodic review of the subconsultant's certified payroll records.
3. Upon becoming aware of a subconsultant's failure to pay the specified prevailing rate of wages, the Consultant shall diligently take corrective action to halt or rectify the failure, including, but not limited to, retaining sufficient funds due the subconsultant for performance of the Services.
4. Prior to making final payment to the subconsultant, the Consultant shall obtain an affidavit signed under penalty of perjury from the subconsultant that the subconsultant has paid the specified general prevailing rate of per diem wages employees engaged in the performance of the Services and any amounts due pursuant to California Labor Code Section 1813.

C. In accordance with California Labor Code Section 1776, the Consultant and each subconsultant engaged in performance of the Services, shall keep accurate payroll records showing the name, address, social security number, work classification, straight time and overtime hours worked each day and week, and the actual per diem wages paid to each journeyman, apprentice, worker, or other employee employed in performance of the Services. Each payroll record shall contain or be verified by a written declaration that it is made under penalty of perjury, stating both of the following:

1. The information contained in the payroll record is true and correct.
2. The employer has complied with the requirements of Sections 1771, 1811, and 1815 for any Services performed by the employer's employees on the public works project.

The payroll records required pursuant to California Labor Code Section 1776 shall be certified and shall be available for inspection by the Owner and its authorized representatives, the Division of Labor Standards Enforcement, the Division of Apprenticeship Standards of the Department of Industrial Relations and shall otherwise be available for inspection in accordance with California Labor Code Section 1776. In addition, Consultant and sub-consultant shall be required to be registered with the Department of Industrial Relations pursuant to Labor Code section 1725.5. Consultant and

any sub-consultant shall submit certified payroll records to the Department of Industrial Relations Labor Commissioner online:

<https://apps.dir.ca.gov/ecpr/DAS/AltLogin>.

The Consultant is responsible for ensuring compliance with this section.

- D. In accordance with California Labor Code Section 1777.5, the Consultant, on behalf of the Consultant and any subconsultants engaged in performance of the Services, shall be responsible for ensuring compliance with California Labor Code Section 1777.5 governing employment and payment of apprentices on public works contracts.
- E. In case it becomes necessary for the Consultant or any subconsultant engaged in performance of the Services to employ on the Services any person in a trade or occupation (except executive, supervisory, administrative, clerical, or other non manual workers as such) for which no minimum wage rate has been determined by the Director of the Department of Industrial Relations, the Consultant shall pay the minimum rate of wages specified therein for the classification which most nearly corresponds to Services to be performed by that person. The minimum rate thus furnished shall be applicable as a minimum for such trade or occupation from the time of the initial employment of the person affected and during the continuance of such employment.

**Attachment D: Living Wage Acknowledgement and
Certification Form—Exhibit D**

EXHIBIT _____

ACKNOWLEDGEMENT AND CERTIFICATION PURSUANT TO CITY OF PETALUMA LIVING WAGE ORDINANCE PETALUMA MUNICIPAL CODE CHAPTER 8.36

The City of Petaluma Living Wage Ordinance (“Ordinance”), Petaluma Municipal Code Chapter 8.36, applies to certain service contracts, leases, franchises and other agreements or funding mechanisms providing financial assistance (referred to hereafter as an “Agreement”) between the City of Petaluma (“City”) and/or the Petaluma Community Development Commission (“PCDC”) and contractors, lessees, franchisees, and/or recipients of City and/or PCDC funding or financial benefits (“covered entities”).

Pursuant to Petaluma Municipal Code Section 8.36.120, as part of any bid, application or proposal for any Agreement subject to the Ordinance, the covered entity shall:

- Acknowledge that the covered entity is aware of the Ordinance and intends to comply with its provisions.
- Complete the Report of Charges, Complaints, Citations and/or Findings contained in this Acknowledgement and Certification by providing information, including the date, subject matter and manner of resolution, if any, of all wage, hour, collective bargaining, workplace safety, environmental or consumer protection charges, complaints, citations, and/or findings of violation of law or regulation by any regulatory agency or court including but not limited to the California Department of Fair Employment and Housing, Division of Occupational Safety and Health (OSHA), California Department of Industrial Relations (Labor Commissioner), Environmental Protection Agency and/or National Labor Relations Board, which have been filed or presented to the covered entity within the ten years immediately prior to the bid, proposal, submission or request.

Pursuant to Petaluma Municipal Code Section 8.36.120, before the beginning of the term of any covered Agreement, or prior to the execution of said Agreement by the City or the PCDC, each covered entity shall certify that its employees are paid a living wage that is consistent with Petaluma Municipal Code Chapter 8.36.

By executing this Acknowledgement and Certification, the covered entity (i) acknowledges that it is aware of the Ordinance and intends to comply with its provisions, (ii) attests to the accuracy and completeness of information provided in the Report of Charges, Complaints, Citations and/or Findings contained herein, (iii) certifies that it pays its covered employees a Living Wage as defined in Petaluma Municipal Code Chapter 8.36 and (iv) attests that the person executing this Acknowledgement and Certification is authorized to bind the covered entity as to the matters covered in this Acknowledgment and Certification.

SO ACKNOWLEDGED and CERTIFIED:

Project or Contract I.D: _____

_____ Date: _____
(Print Name of Covered Entity/Business Capacity)

By _____
(Print Name)

/s/ _____
(Signature)

Its _____
(Title /Capacity of Authorized Signer)

**REPORT OF CHARGES, COMPLAINTS, CITATIONS AND/OR FINDINGS
PURSUANT TO PETALUMA MUNICIPAL CODE SECTION 8.36.120**

FOR EACH WAGE, HOUR, COLLECTIVE BARGAINING, WORKPLACE SAFETY, ENVIRONMENTAL OR CONSUMER PROTECTION CHARGE, COMPLAINT, CITATION, AND/OR FINDING OF VIOLATION OF LAW OR REGULATION BY ANY REGULATORY AGENCY OR COURT, INCLUDING BUT NOT LIMITED TO THE CALIFORNIA DEPARTMENT OF FAIR EMPLOYMENT AND HOUSING, DIVISION OF OCCUPATIONAL SAFETY AND HEALTH (OSHA), CALIFORNIA DEPARTMENT OF INDUSTRIAL RELATIONS (LABOR COMMISSIONER), ENVIRONMENTAL PROTECTION AGENCY AND/OR NATIONAL LABOR RELATIONS BOARD, WHICH:

- AFFECTS YOU AS A PROSPECTIVE CONTRACTOR, SUBCONTRACTOR, LESSEE, FRANCHISEE AND/OR PARTY TO ANY CITY OF PETALUMA AND/OR PETALUMA COMMUNITY DEVELOPMENT COMMISSION-FUNDED AGREEMENT OR BENEFIT SUBJECT TO PETALUMA MUNICIPAL CODE CHAPTER 8.36 (LIVING WAGE ORDINANCE), AND
- HAS BEEN FILED OR PRESENTED TO YOU WITHIN THE TEN YEARS IMMEDIATELY PRIOR TO THE BID, PROPOSAL, SUBMISSION OR REQUEST FOR WHICH THIS ACKNOWLEDGEMENT AND CERTIFICATION IS MADE.

PLEASE PROVIDE THE DATE, THE REGULATORY AGENCY OR COURT MAKING THE CHARGE COMPLAINT, CITATION OR FINDING, THE SUBJECT MATTER AND THE MANNER OF RESOLUTION, IF ANY, FOR EACH SUCH CHARGE COMPLAINT, CITATION OR FINDING.

IF NONE, PLEASE STATE "NONE": _____

ATTACH ADDITIONAL PAGES IF NEEDED.

Date: _____

Regulatory Agency or Court: _____

Subject Matter: _____

Resolution, if any: _____

Expected resolution, if known: _____

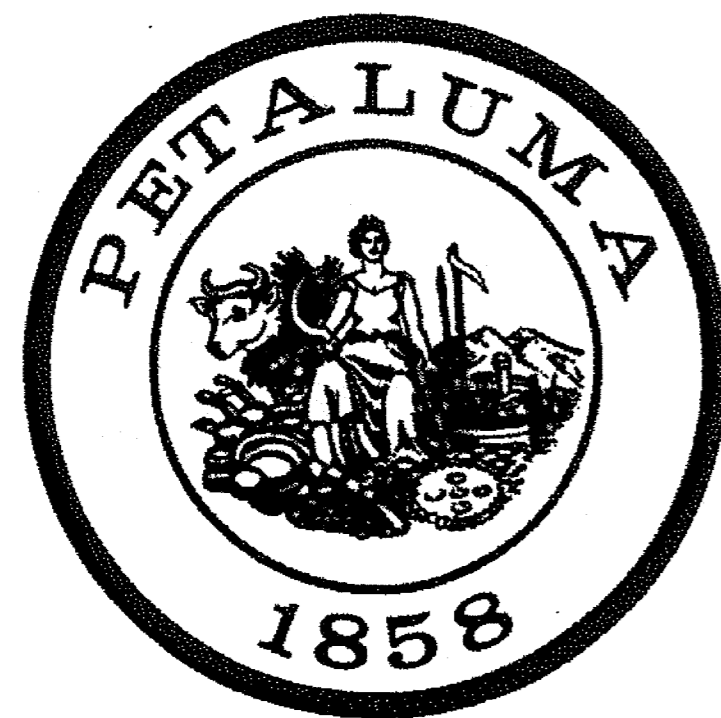
Attachment E: Record Drawings of Existing La Cresta Tanks

City of Petaluma, California

VICTORIA LIFT STATION UPGRADE W. Haven Way and Windsor Dr.

C66501002
VOLUME 2 OF 2
OCTOBER, 2014

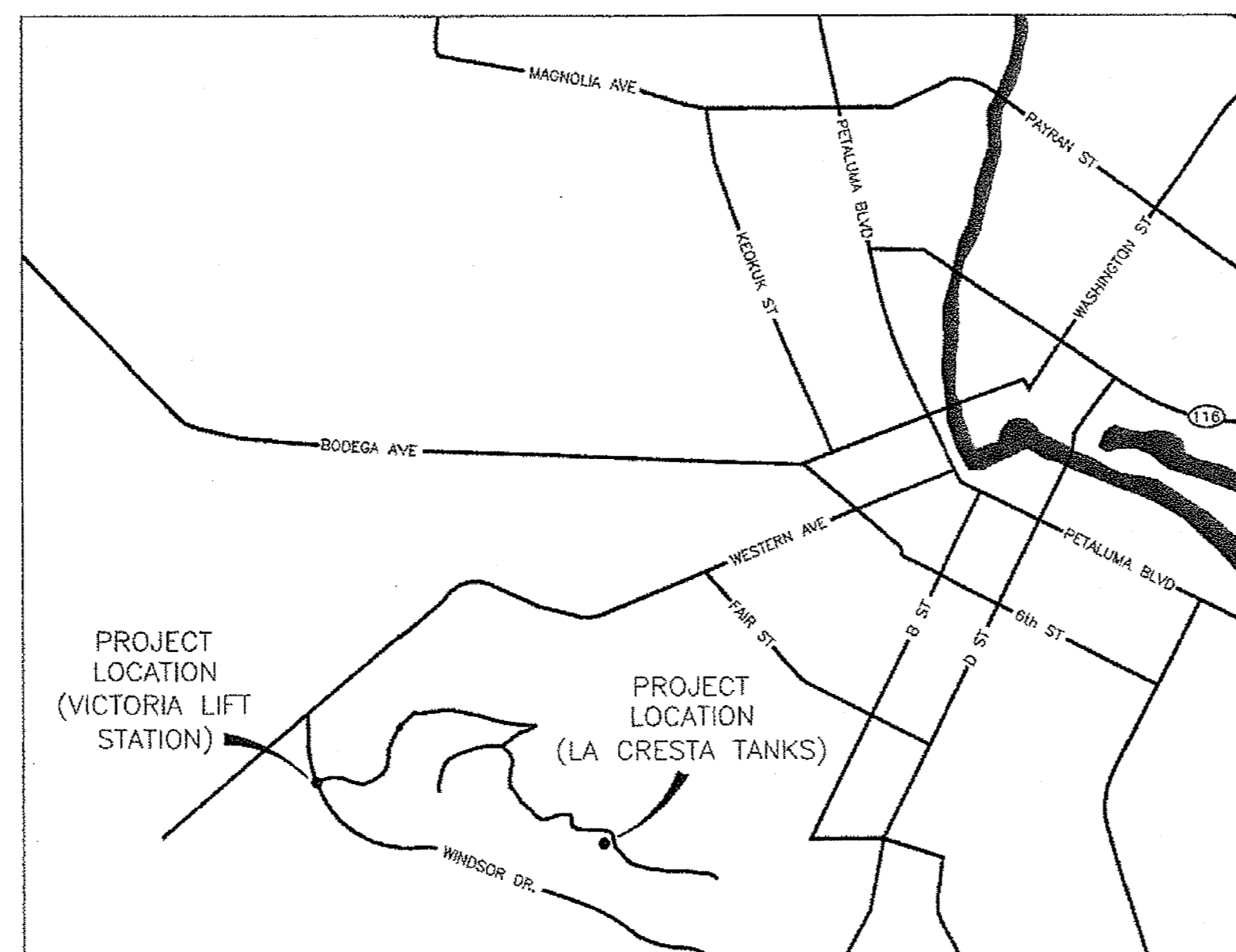
CG STEAGALL
RECORD DRAWINGS
10/8/15



MAYOR
David Glass

COUNCIL MEMBERS
Chris Albertson
Teresa Barrett
Mike Harris
Mike Healy
Gabe Kearney
Kathy Miller

CITY MANAGER
John Brown



LOCATION MAP
NOT TO SCALE

SHEET INDEX		
DRAWING NO.	SHEET NO.	TITLE
G1	1	TITLE SHEET
E1	2	LEGEND, ELECTRICAL
E2	3	ONE-LINE DIAGRAM - DEMOLITION
E3	4	ONE-LINE DIAGRAM - IMPROVEMENT
E4	5	ONE-LINE DIAGRAM - INTERMEDIATE
E5	6	SITE PLAN - DEMOLITION
E6	7	SITE PLAN - IMPROVEMENT
E7	8	CONTROL DIAGRAMS
E8.0	9	DETAILS AND ELEVATIONS - 1
E8.1	10	DETAILS AND ELEVATIONS - 2
E8.2	11	DETAILS AND ELEVATIONS - 3
E8.3	12	DETAILS AND ELEVATIONS - 4
E9	13	SCHEDULES
E10	14	LA CRESTA TANKS - RADIO REPEATER - SITE PLAN
I1	15	LEGEND, INSTRUMENTATION
I2	16	BLOCK DIAGRAM
I3	17	PROCESS AND INSTRUMENTATION DIAGRAM - 1
I4	18	PROCESS AND INSTRUMENTATION DIAGRAM - 2
I5.0	19	CONTROL DIAGRAMS - 1
I5.1	20	CONTROL DIAGRAMS - 2
I5.2	21	CONTROL DIAGRAMS - 3
I6.0	22	DETAILS AND ELEVATIONS - 1
I6.1	23	DETAILS AND ELEVATIONS - 2
I6.2	24	DETAILS AND ELEVATIONS - 3
M1	25	MECHANICAL PLAN
M2	26	VALVE AND FITTING SCHEDULE
M3	27	WETWELL COVER
M4	28	ELEVATIONS AND DETAILS - 1
M5	29	ELEVATIONS AND DETAILS - 2

DESIGNED BY:
DOUG McHANEY, P.E. E013928 10/6/14 DATE

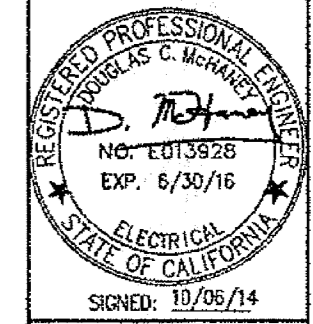
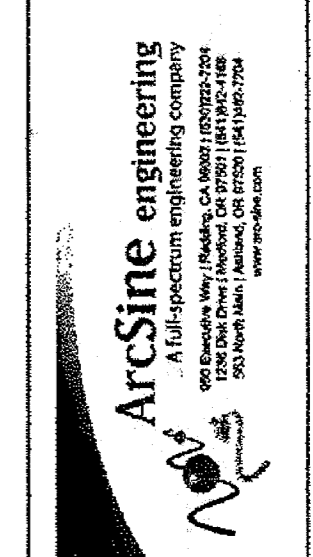
APPROVED BY:
KENT CAROTHERS, P.E. C60671 10/6/14 DATE

	SIGNATURE	DATE
CITY ENGINEER		
ENGINEERING MANAGER		10/6/14
FIRE MARSHAL	BP - KC	
PARKS	BP - KC	
PLANNING	BP - KC	
POLICE	BP - KC	
OPERATIONS SUPERVISOR		10/6/14

1 INCH
BAR EQUALS ONE
INCH WHEN DRAWING
IS PLOTTED FULL SIZE.
IF NOT, SCALE ACCORDINGLY

SHEET
G1
1 OF 29

PROJECT NO. C66501002
DESIGNED BY: VI
DRAWN BY: 1155-G
CHECKED BY: DCJ
DATE: 10/02/2014



CITY OF PETALUMA
PUBLIC WORKS & UTILITIES
11 ENGLISH STREET, PETALUMA, CA. 94952
PH. 707-778-4474 FAX. 707-778-3802

CITY OF PETALUMA
VICTORIA LIFT STATION UPGRADE
TITLE SHEET
ELECTRICAL/INSTRUMENTATION/MECHANICAL

ELECTRICAL SYMBOLS

	FIXTURE IDENTIFICATION (REFER TO LIGHTING FIXTURE SCHEDULE)
	NUMBER OF FIXTURES IN THIS GROUP
	CEILING-MOUNTED FIXTURE
	WALL-MOUNTED FIXTURE
	POLE-MOUNTED FIXTURE
	SINGLE FACE EXIT SIGN - FILLED IN PORTION OF SYMBOL REPRESENTS THE FACE OF THE EXIT SIGN - ARROW INDICATES THE DIRECTION OF EGRESS
	DOUBLE FACED EXIT SIGN - FILLED IN PORTION OF SYMBOL REPRESENTS THE FACE OF THE EXIT SIGN - ARROW INDICATES THE DIRECTION OF EGRESS
	EMERGENCY LIGHT
	FLUORESCENT FIXTURE, LENSED
	CONTINUOUS ROW FLUORESCENT FIXTURES, LENSED
	FLUORESCENT FIXTURE, OPEN STRIP
	CONTINUOUS ROW FLUORESCENT FIXTURES, OPEN STRIP
	SMALL LETTER SUBSCRIPT ON SWITCH & FIXTURE INDICATES SWITCHING
	WALL SWITCH (SINGLE POLE)
	DIMMER
	SPEED
	TWO-POLE SWITCH
	THREE-WAY SWITCH
	FOUR-WAY SWITCH
	MANUAL MOTOR STARTER
	GROUPED WALL SWITCHES, WIRING AS REQUIRED
	SINGLE CONVENIENCE RECEPTACLE
	DUPLEX CONVENIENCE RECEPTACLE
	QUADPLEX CONVENIENCE RECEPTACLE
	CONNECTION POINT
	SPECIAL PURPOSE RECEPTACLE
	SPECIAL PURPOSE PLUG
	JUNCTION BOX
	FAN
	TELEPHONE OUTLET
	SAFETY SWITCH, THREE-POLE, NEMA 1 ENCLOSURE F INDICATES FUSED DISCONNECT B INDICATES CIRCUIT BREAKER
	GENERATOR
	MOTOR, HORSEPOWER INDICATED (*F INDICATES FRACTIONAL HORSEPOWER).
	SOLENOID
	THERMOSTAT
	ROOM NUMBER

	MOTOR CONTROLLER
	COMBINATION MOTOR CONTROLLER (CIRCUIT BREAKER TYPE UNLESS NOTED OTHERWISE)
	ADJUSTABLE SPEED MOTOR CONTROLLER
	E-STOP
	CONTROL STATION
	PULLBOX
	SECTION OR DETAIL DESIGNATION (LETTER DESIGNATES SECTION, NUMBER DESIGNATES DETAIL)
	SHEET WHERE SECTION OR DETAIL IS TAKEN OR SHOWN
	CONDUIT EXPOSED
	CONDUIT EMBEDDED OR CONCEALED
	BOUNDARY LINE
	DEDICATED RACEWAY CORRIDOR (OVERHEAD TRAPEZE MOUNTED)
	HOMERUN - DESTINATION & CIRCUIT INDICATED - LEADER SHOWS CONDUIT & CONDUCTOR SIZE - 2 REPRESENTS THE NUMBER OF PARALLEL FEEDERS 1 1/4" C-3#2-#6G 2[3" C-3#350KCMIL]
	CROSSHATCHES ON CONDUIT RUNS INDICATE NUMBER OF AWG #12 WIRES
	CROSSHATCHES WITH BARS INDICATE NUMBER OF AWG #10 WIRES
	SUBSCRIPT "G" INDICATES GREEN GROUND WIRE
	CONDUIT, STUBBED & CAPPED
	CONDUIT, STUBBED UP & CAPPED
	CONDUIT, UP
	CONDUIT, DOWN
	CONDUIT UP, INTO EQUIPMENT
	WATT-HOUR METER
	SWITCH
	AMMETER
	VOLTMETER
	CURRENT TRANSFORMER
	SURGE CAPACITOR
	GROUND
	STARTER & SIZE
	OVERLOAD E = ELECTRONIC OVERLOAD
	FUSE
	SAFETY SWITCH (DISCONNECT SWITCH)
	SURGE PROTECTION DEVICE WITH SURGE CURRENT RATING SHOWN

	TRANSFORMER (ONE-LINE)
	TRANSFORMER (CONTROL DIAGRAM)
	CIRCUIT BREAKER & SIZE, THREE-POLE UNLESS NOTED OTHERWISE /N = MAGNETIC ONLY TRIP /2 = 2 POLE [272T] = 272 AMP MAGNETIC TRIP SETTING
	###F = FRAME SIZE ###T = TRIP SETTING
	CONTROL RELAY COIL
	CONTACT - NORMALLY CLOSED
	CONTACT - NORMALLY OPEN
	5-15 NEMA CONFIGURED PLUG
	TIME DELAY RELAY COIL TDDO = TIME DELAY ON DROPOUT TDPU = TIME DELAY ON PICKUP
	TIME DELAY RELAY CONTACT TO = TIME OPENING TC = TIME CLOSING
	SELECTOR SWITCH OFF AUTO MAN - MECHANICAL POSITIONS CONTACTS SHOWN ARE CLOSED IN POSITION NOTED
	PUSHBUTTON - NORMALLY OPEN
	PUSHBUTTON - NORMALLY CLOSED
	FLOW SWITCH, CLOSES ON INCREASE IN FLOW
	FLOW SWITCH, OPENS ON INCREASE IN FLOW
	LIQUID LEVEL SWITCH, CLOSES ON RISING LEVEL
	LIQUID LEVEL SWITCH, OPENS ON RISING LEVEL
	PRESSURE OR VACUUM SWITCH, CLOSES ON RISING PRESSURE
	PRESSURE OR VACUUM SWITCH, OPENS ON RISING PRESSURE
	TEMPERATURE SWITCH, CLOSES ON RISING TEMPERATURE
	TEMPERATURE SWITCH, OPENS ON RISING TEMPERATURE
	LIMIT SWITCH - HIGH OPEN
	LIMIT SWITCH - NORMALLY CLOSED
	LIMIT SWITCH - HIGH CLOSED
	LIMIT SWITCH - NORMALLY OPEN
	ELAPSED TIME METER
	HEATER
	RESISTOR

	INDICATING LIGHT (COLOR INDICATED) A=AMBER G=GREEN W=WHITE
	CONDUIT SEAL
	CORE DRILL
	PHOTOCELL
	POWER POLE
	GROUND ROD
	LAN
	MEDIUM VOLTAGE DRAW-OUT CIRCUIT BREAKER TRIP SETTING INDICATED
	VERTICAL CENTRIFUGAL PUMP
	YAGI ANTENNA

ABBREVIATIONS

A	AMP(S)
A/C	AIR CONDITIONER
AFF	ABOVE FINISHED FLOOR
AFG	ABOVE FINISHED GRADE
AIC	AMPS INTERRUPTING CAPACITY
AL	ALUMINUM
ANN	ANNUNCIATOR
ATS	AUTOMATIC TRANSFER SWITCH
AWG	AMERICAN WIRE GAUGE
BC	BYPASS CONTACTOR
BKR	BREAKER, CIRCUIT BREAKER
C	CONDUIT
CB	CIRCUIT BREAKER
CC	CONTROL CABLE
CP	CONTROL PANEL
CPB	CONCRETE PULLBOX
CR	CORROSION RESISTANT
CU	COPPER
DC	DIRECT CURRENT
EMT	ELECTRICAL METALLIC TUBING
EXST	EXISTING
G	GROUND
GFCL	GROUND FAULT CIRCUIT
GFP	INTERRUPTER (PERSONNEL)
GRS	GROUND FAULT PROTECTION (EQUIPMENT)
GRS	GROUND FAULT RELAY
GRS	GALVANIZED RIGID STEEL CONDUIT
HH	HANDHOLE
HP	HORSEPOWER
HZ	HERTZ
IC	INTERRUPTING CAPACITY
IMC	INTERMEDIATE METAL CONDUIT
KCMIL	THOUSAND CIRCULAR MILS
KVA	KILOVOLT-AMPS
KW	KILOWATT
LA	LIGHTING ARRESTOR
LAN	LOCAL AREA NETWORK
MAH	A/C HEAT EXCHANGER
MAN	MANUAL
MAX	MAXIMUM
MCC	MOTOR CONTROL CENTER,
MCU	MULTI CONDUCTOR CABLE
MH	MANHOLE
MIN	MINIMUM
MTS	MANUAL TRANSFER SWITCH
N	NEUTRAL
NA	NONAUTOMATIC
NEC	NATIONAL ELECTRICAL CODE
NIC	NOT IN CONTRACT
NTS	NOT TO SCALE
OFE	OWNER FURNISHED EQUIPMENT
OL	OVERLOAD
PB	PULLBOX
PC	PHOTOCELL
PCMC	PUMP CONTROL MOTOR CONTROLLER
PLC	PROGRAMMABLE LOGIC CONTROLLER
PM	POWER MONITOR
PNL	PANEL, PANELBOARD
PS	PRESSURE SWITCH
PVC	POLYVINYL CHLORIDE CONDUIT
RECEPT	RECEPTACLE
SMC	SMART MOTOR CONTROLLER
SP	SPARE
SSRVS	SOLID STATE REDUCED-VOLTAGE STARTER
SS	STAINLESS STEEL
SWGR	SWITCHGEAR
TB	TERMINAL BOARD
THHN	THERMOPLASTIC HIGH HEAT RESISTANT NYLON COATED
TJB	TERMINAL JUNCTION BOX
TL	TWISTLOCK
TS	TEMPERATURE SWITCH
TSP	TWISTED SHIELDED PAIR
TST	TWISTED SHIELDED TRIAD
TYP	TYPICAL
UPS	UNINTERRUPTABLE POWER SUPPLY
UH	UNIT HEATER
V	VOLT(S)
VFD	VARIABLE FREQUENCY DRIVE
WP	WEATHERPROOF
WT	WATERTIGHT (NEMA 4)
XFMR	TRANSFORMER
ZS	POSITION SWITCH (LIMIT SWITCH)

NOTES:

1. THIS IS A STANDARD LEGEND SHEET. THEREFORE, SOME SYMBOLS OR ABBREVIATIONS MAY APPEAR ON THIS SHEET AND NOT ON THE PLANS.
2. ITEMS SHOWN BOLD ARE NEW AND TO BE INSTALLED UNDER THIS CONTRACT UNLESS DESIGNATED OTHERWISE. ITEMS SHOWN THIN ARE EXISTING.

1 INCH
BAR EQUALS ONE
INCH WHEN DRAWING
IS PLOTTED FULL SIZE.
IF NOT, SCALE ACCORDINGLY

**OCTOBER
2014**

PROJECT NO. C66501002
DESIGNED BY: JS
DRAWN BY: JJ 1158-E1
CHECKED BY: DM
DATE: 10/02/2014

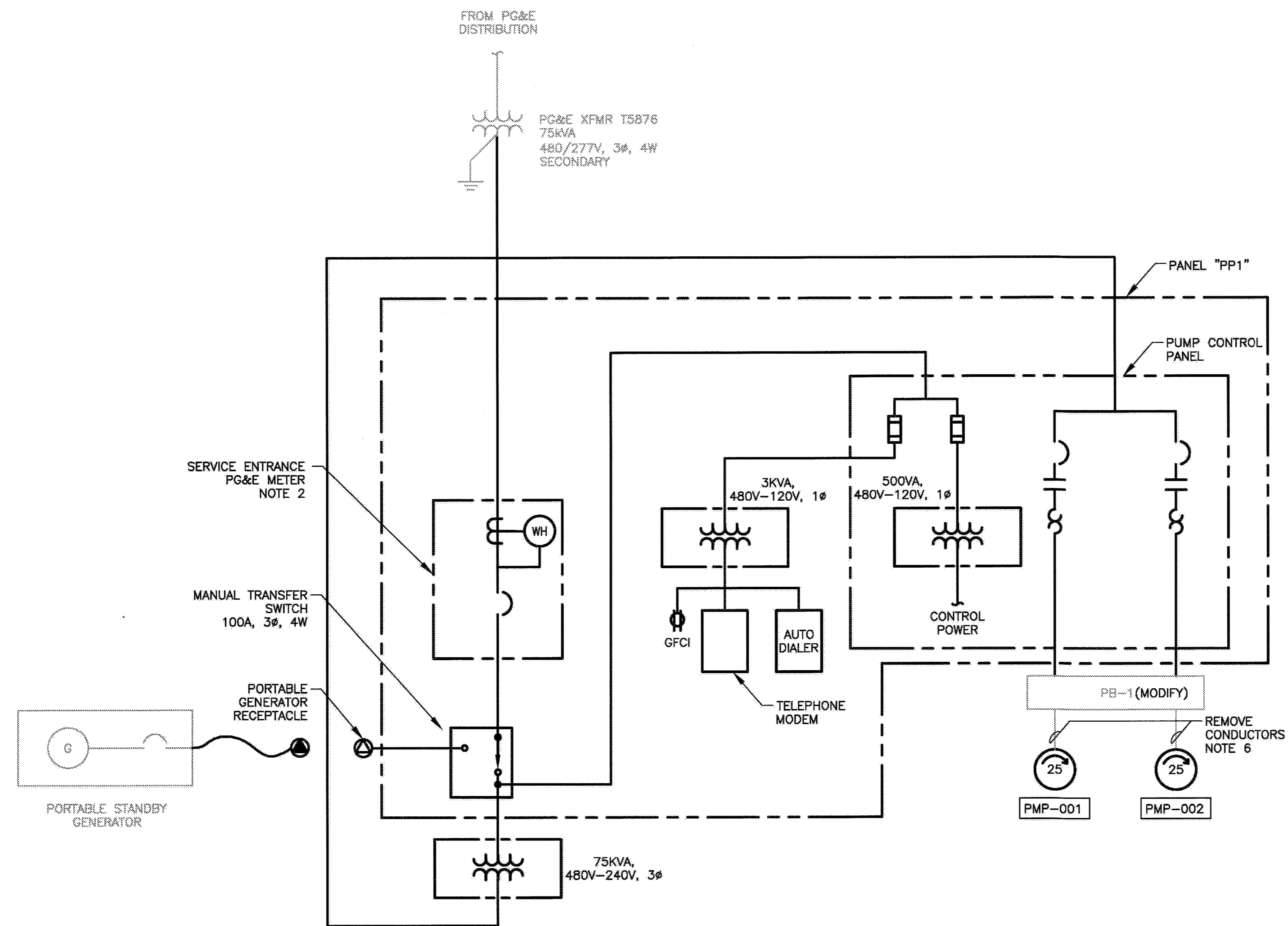
AtcSine engineering
A California Professional Engineering Company
1000 Sherman Way, Fremont, CA 94536 | (510) 222-2200
200 North Main Street, Oakland, CA 94612 | (415) 442-2200
www.atcsine.com

REGISTERED PROFESSIONAL ENGINEER
No. E013528
Exp. 6/30/16
ELECTRICAL
STATE OF CALIFORNIA
SIGNED: 10/02/14

CITY OF PETALUMA
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CITY OF PETALUMA
VICTORIA LIFT STATION UPGRADE
LEGEND, ELECTRICAL

SHEET
E1
2 OF 29



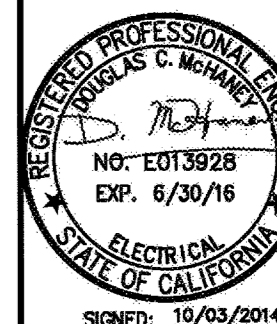
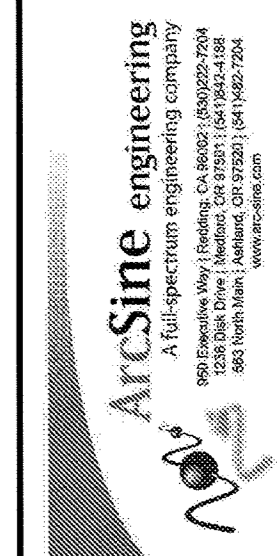
ONE-LINE DIAGRAM - DEMOLITION

NOTES:

1. SEE LEGEND AND GENERAL NOTES ON SHEET E1.
2. PROVIDE NEW METER BASE AND SOCKET. COORDINATE WITH PG&E FOR RE-USE OR REPLACEMENT OF SERVICE ENTRANCE METER.
3. BOLD ITEMS SHALL BE DEMOLISHED EXCEPT AS NOTED.
4. SALVAGE AUTODIALER AND TELEPHONE MODEM, DELIVER TO OWNER.
5. FOR SEQUENCE OF DEMOLITION, IMPROVEMENT, AND CUTOVER WORK, REFER TO SPECIFICATIONS.
6. CONSULT WITH THE OWNER, AND AT THE OWNER'S DISCRETION SALVAGE AND DELIVER PUMPS TO THE OWNER.

PROJECT NO. 066501002
 DESIGNED BY: JS
 DRAWN BY: 1165 E2
 CHECKED BY: DM

DATE: 10/02/2014



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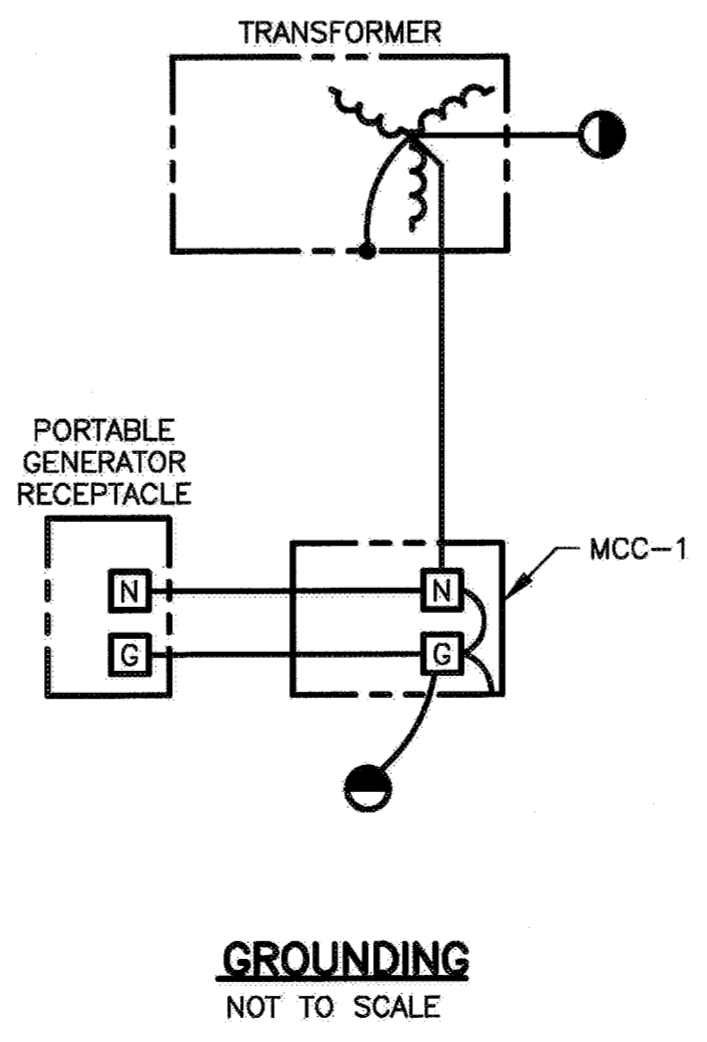
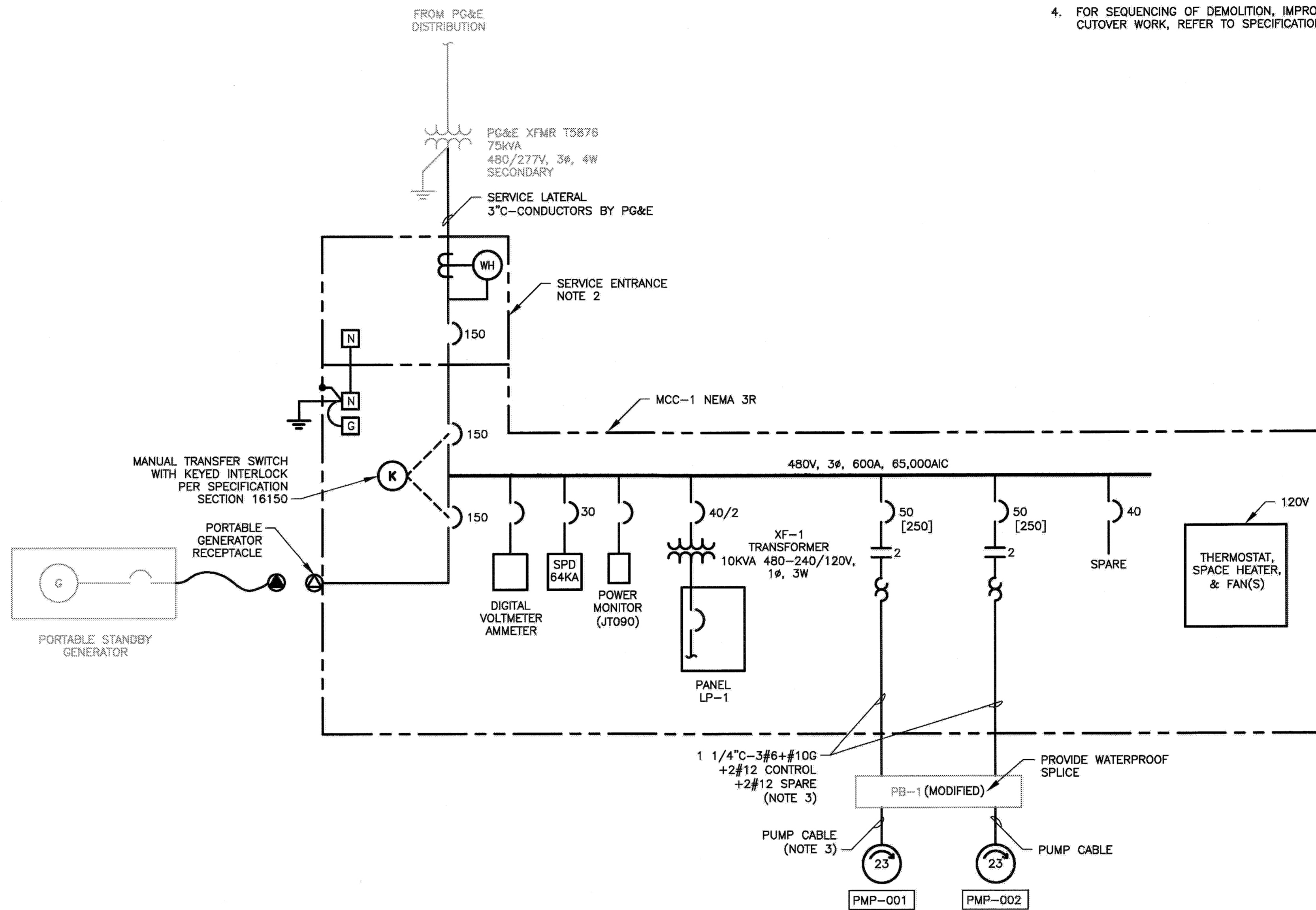
CITY OF PETALUMA
 VICTORIA LIFT STATION UPGRADE
 ONE-LINE DIAGRAM
 DEMOLITION
 ELECTRICAL

1 INCH
 BAR EQUALS ONE INCH WHEN DRAWING IS PLOTTED FULL SIZE. IF NOT, SCALE ACCORDINGLY

OCTOBER 2014

SHEET
E2
 3 OF 29

10KVA TRANSFORMER (SINGLE PHASE)	
$\frac{10 \times 1000}{480} = 20.8A$	
$\frac{20.8 \times 460\sqrt{3}}{1000} = 17.3KVA$ (IF CURRENT WERE 3-PHASE)	
LOAD SUMMARY	
(2) 23 HP MOTORS	2 x 24.9 = 49.8KVA
(1) 10KVA TRANSFORMER	17.3KVA EQUIVALENT
EQUIVALENT CONNECTED LOAD	67.1KVA
ALLOWANCE FOR FUTURE	15KVA
DESIGN LOAD	82.1KVA
$\frac{82.1 \times 1000}{480\sqrt{3}} = 98.8A$ DESIGN LOAD	
25% OF LARGEST MOTOR	+7.8A
AMPACITY REQUIRED	106.6A



ONE-LINE DIAGRAM - IMPROVEMENT

- NOTES:**
1. SEE LEGEND AND GENERAL NOTES ON SHEET E1.
 2. PROVIDE NEW METER BASE AND SOCKET. COORDINATE WITH PG&E FOR RE-USE OR REPLACEMENT OF SERVICE ENTRANCE METER.
 3. PUMP CONDUCTORS SHALL INCLUDE POWER CONDUCTORS AND SIGNAL CONDUCTORS AS REQUIRED.
 4. FOR SEQUENCING OF DEMOLITION, IMPROVEMENT, AND CUTOVER WORK, REFER TO SPECIFICATIONS.

1 INCH
 BAR EQUALS ONE
 INCH WHEN DRAWING
 IS PLOTTED FULL SIZE.
 IF NOT, SCALE ACCORDINGLY

**OCTOBER
 2014**

PROJECT NO. C6601002
 DESIGNED BY: JS
 DRAWN BY: JJ 1158-E3
 CHECKED BY: DM
 DATE: 10/02/2014

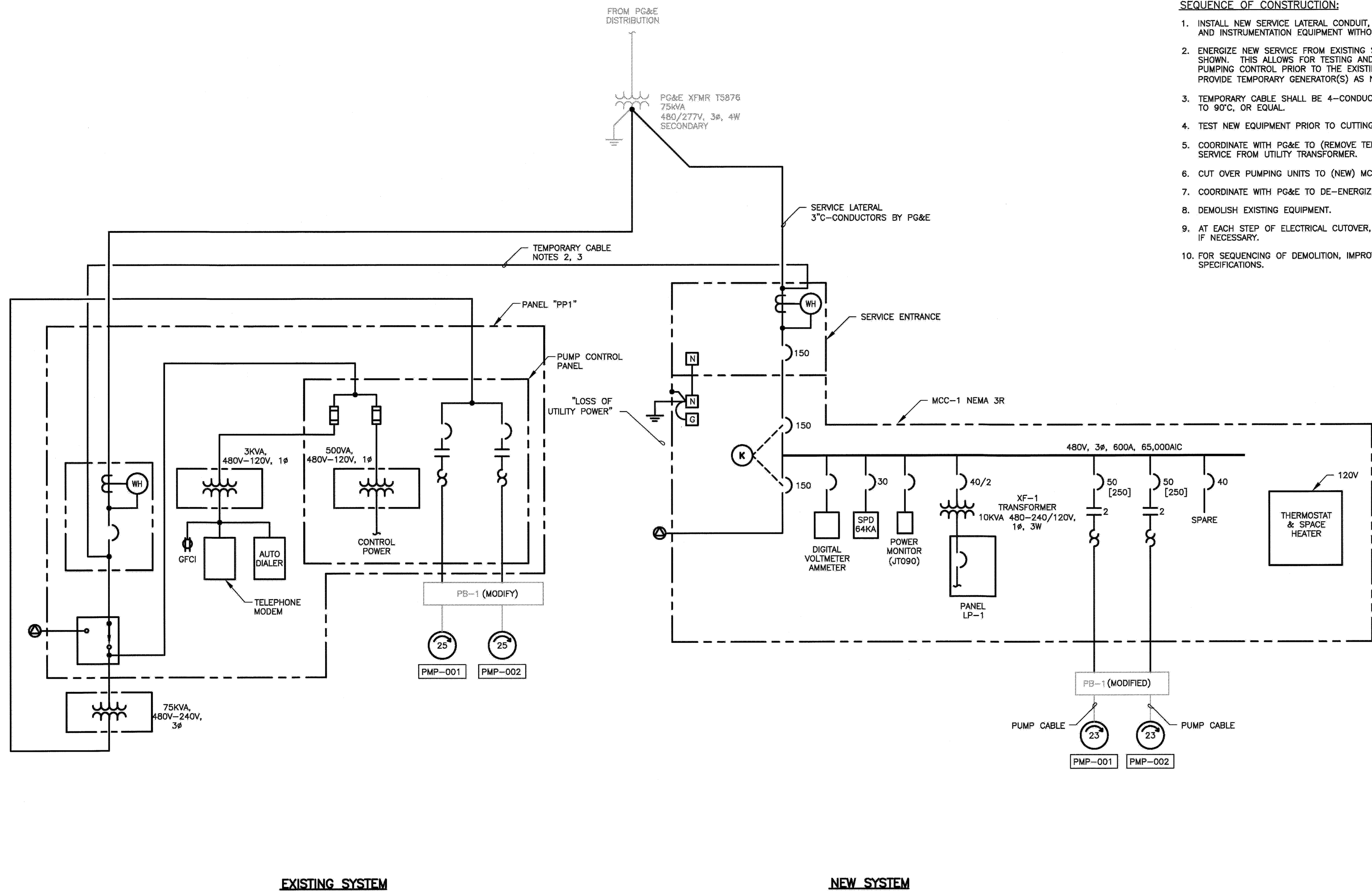
ArcSine engineering
 A full-spectrum engineering company
 1000 University Avenue, Suite 1000, Berkeley, CA 94702
 415-875-1000
 415-875-1001
 415-875-1002
 415-875-1003
 415-875-1004
 415-875-1005
 415-875-1006
 415-875-1007
 415-875-1008
 415-875-1009
 415-875-1010

REGISTERED PROFESSIONAL ENGINEER
 NO. E013928
 EXP. 8/30/16
 ELECTRICAL
 STATE OF CALIFORNIA
 SIGNED: 10/03/2014

CITY OF PETALUMA
 PUBLIC WORKS & UTILITIES
 11 ENGLISH STREET, PETALUMA, CA 94952
 PH. 707-778-4474 FAX. 707-778-3602

CITY OF PETALUMA
 VICTORIA LIFT STATION UPGRADE
 ONE-LINE DIAGRAM - IMPROVEMENT
 ELECTRICAL

SHEET
E3
 4 OF 29



- SEQUENCE OF CONSTRUCTION:**
1. INSTALL NEW SERVICE LATERAL CONDUIT, SERVICE, DISTRIBUTION, MOTOR CONTROL AND INSTRUMENTATION EQUIPMENT WITHOUT DE-ENERGIZING EXISTING SERVICE.
 2. ENERGIZE NEW SERVICE FROM EXISTING SERVICE WITH TEMPORARY CABLE AS SHOWN. THIS ALLOWS FOR TESTING AND CUTOVER, AND PROVING OUT OF NEW PUMPING CONTROL PRIOR TO THE EXISTING SYSTEM BEING TAKEN OUT OF SERVICE. PROVIDE TEMPORARY GENERATOR(S) AS NEEDED TO ACCOMPLISH THIS GOAL.
 3. TEMPORARY CABLE SHALL BE 4-CONDUCTOR, AWG #2, TYPE G RATED FOR -40°C TO 90°C, OR EQUAL.
 4. TEST NEW EQUIPMENT PRIOR TO CUTTING OVER PUMPING UNITS.
 5. COORDINATE WITH PG&E TO (REMOVE TEMPORARY CABLE AND) ENERGIZE NEW SERVICE FROM UTILITY TRANSFORMER.
 6. CUT OVER PUMPING UNITS TO (NEW) MCC-1.
 7. COORDINATE WITH PG&E TO DE-ENERGIZE EXISTING SERVICE.
 8. DEMOLISH EXISTING EQUIPMENT.
 9. AT EACH STEP OF ELECTRICAL CUTOVER, CHECK PHASE SEQUENCE, AND CORRECT IF NECESSARY.
 10. FOR SEQUENCING OF DEMOLITION, IMPROVEMENT, AND CUTOVER WORK, REFER TO SPECIFICATIONS.

EXISTING SYSTEM

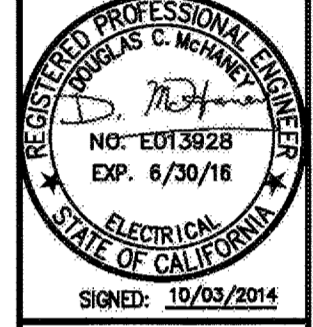
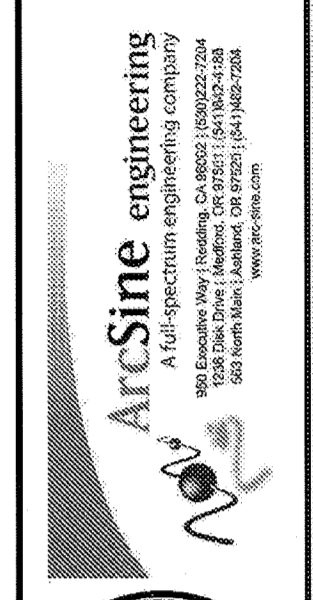
NEW SYSTEM

1 INCH

BAR EQUALS ONE INCH WHEN DRAWING IS PLOTTED FULL SIZE. IF NOT, SCALE ACCORDINGLY

OCTOBER 2014

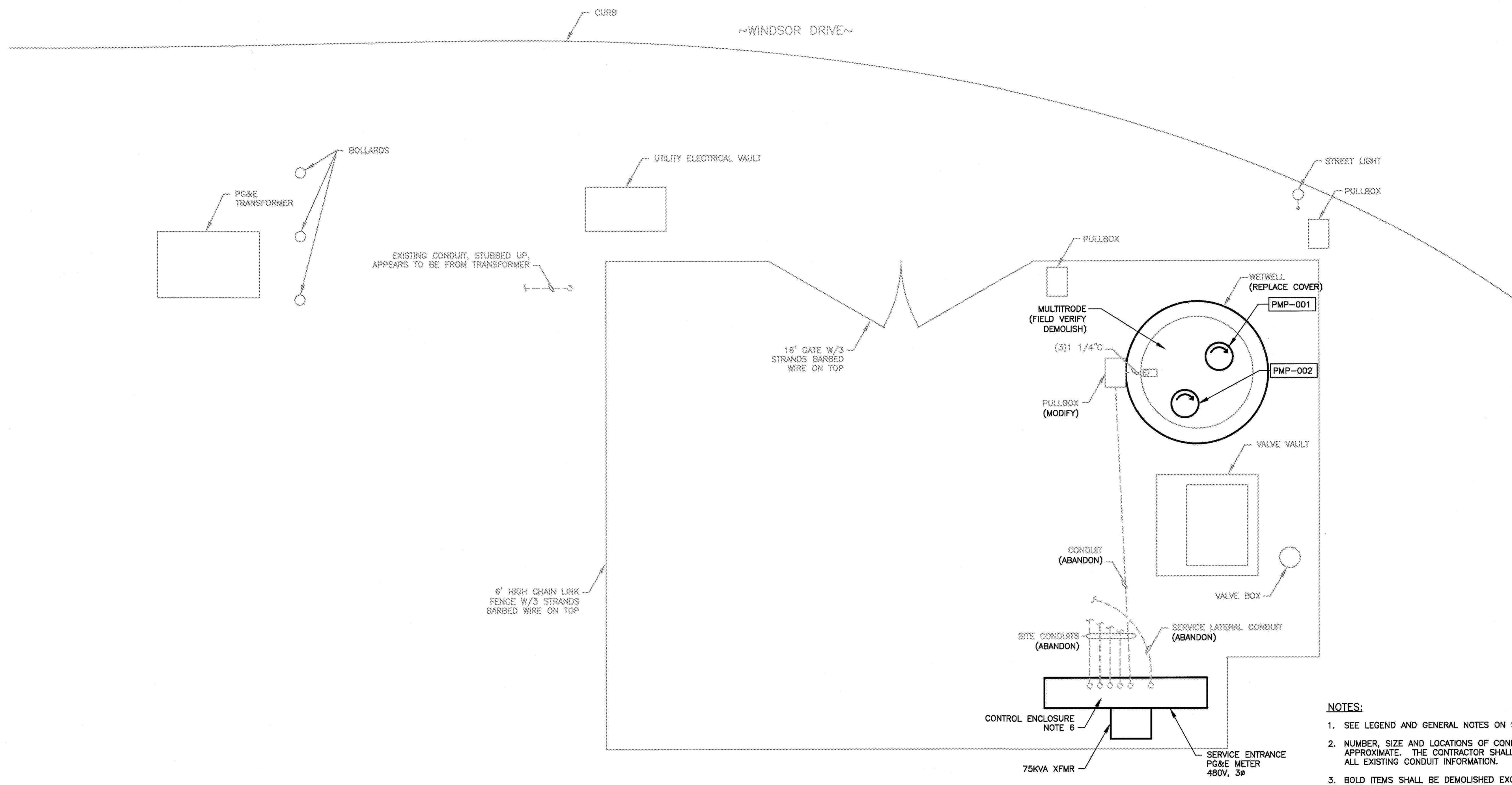
PROJECT NO. C68501002
 DESIGNED BY: JS
 DRAWN BY: JJ 115E4
 CHECKED BY: DM
 DATE: 10/02/2014



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CITY OF PETALUMA
 VICTORIA LIFT STATION UPGRADE
 ONE-LINE DIAGRAM
 INTERMEDIATE
 ELECTRICAL

SHEET
E4
 5 OF 29



SITE PLAN - DEMOLITION
SCALE: 3/8" = 1'-0"

NOTES:

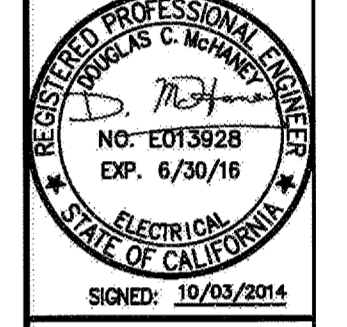
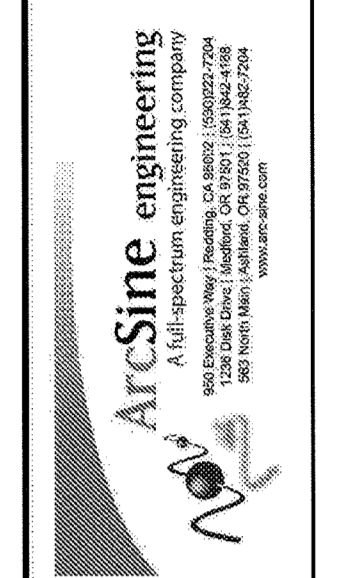
1. SEE LEGEND AND GENERAL NOTES ON SHEET E1.
2. NUMBER, SIZE AND LOCATIONS OF CONDUITS ARE APPROXIMATE. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDUIT INFORMATION.
3. BOLD ITEMS SHALL BE DEMOLISHED EXCEPT AS NOTED.
4. ABANDONED UNDERGROUND CONDUITS SHALL BE CUT OFF BELOW GRADE. SEE SPECIFICATIONS.
5. FOR SEQUENCING OF DEMOLITION, IMPROVEMENT, AND CUTOVER WORK, REFER TO SPECIFICATIONS.
6. THE CELLULAR MODEM AND ASSOCIATED CELLULAR ANTENNA SHALL BE REMOVED FROM THE EXISTING CONTROL ENCLOSURE AND REINSTALLED IN THE NEW CONTROL PANEL.

1 INCH

BAR EQUALS ONE INCH WHEN DRAWING IS PLOTTED FULL SIZE. IF NOT, SCALE ACCORDINGLY

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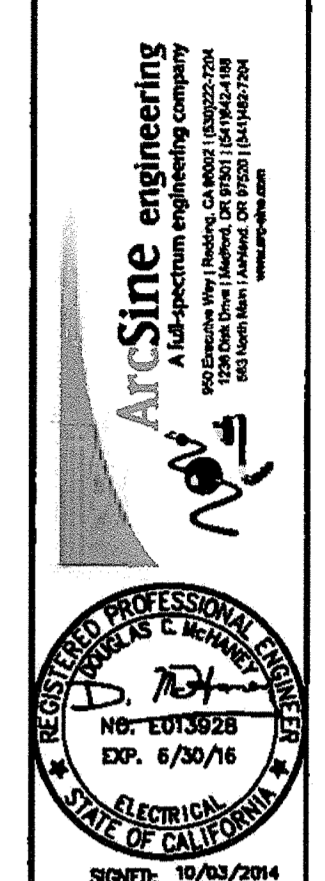
PROJECT NO. C66501002
DESIGNED BY: JS
DRAWN BY: JJ 1158-E5
CHECKED BY: DM
DATE: 10/02/2014



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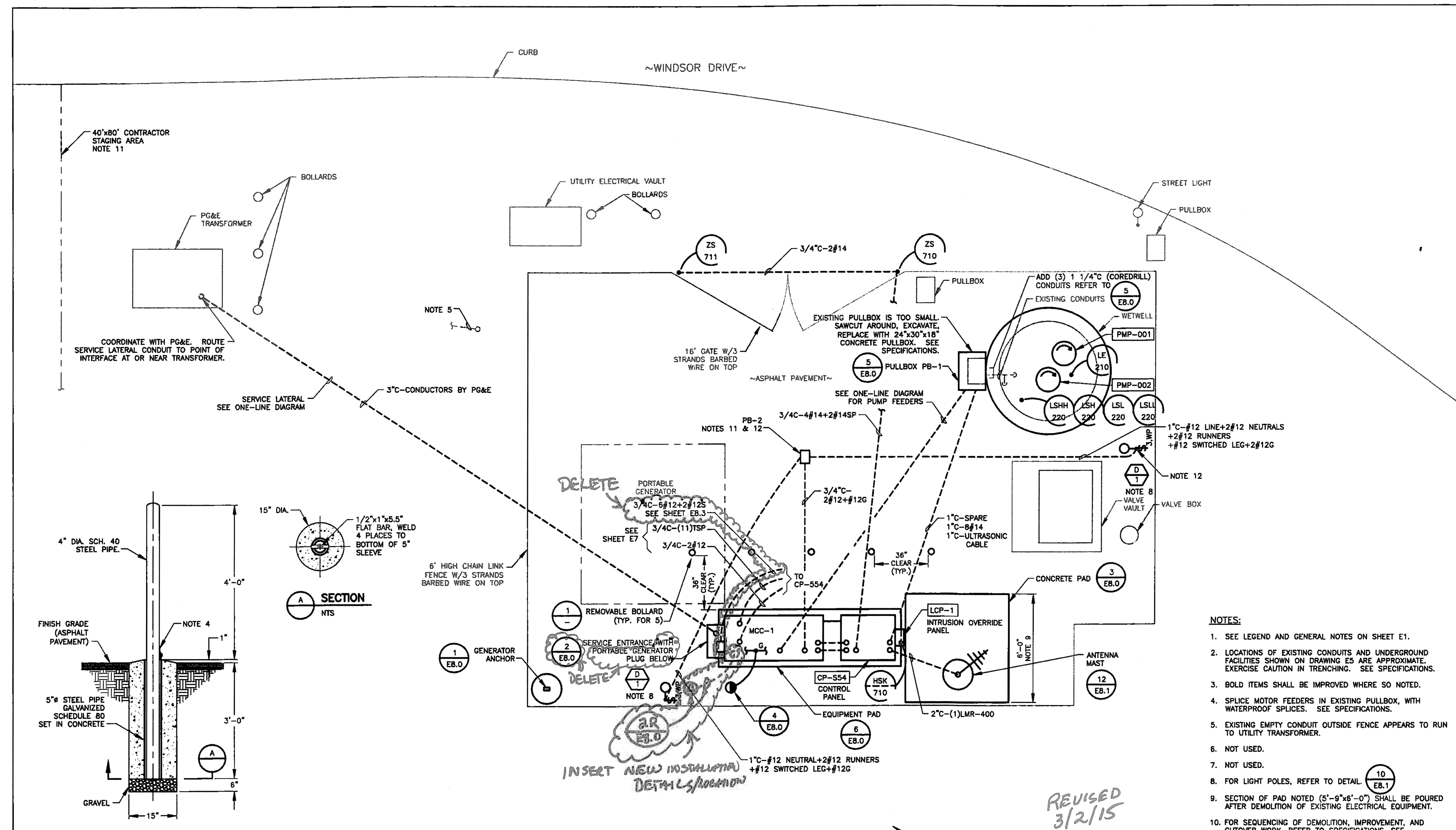
CITY OF PETALUMA
VICTORIA LIFT STATION UPGRADE
SITE PLAN - DEMOLITION
ELECTRICAL

SHEET
E5
6 OF 29



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CITY OF PETALUMA
 VICTORIA LIFT STATION UPGRADE
 ELECTRICAL
 SITE PLAN - IMPROVEMENT



- NOTES:**
- SEE LEGEND AND GENERAL NOTES ON SHEET E1.
 - LOCATIONS OF EXISTING CONDUITS AND UNDERGROUND FACILITIES SHOWN ON DRAWING ES ARE APPROXIMATE. EXERCISE CAUTION IN TRENCHING. SEE SPECIFICATIONS.
 - BOLD ITEMS SHALL BE IMPROVED WHERE SO NOTED.
 - SPLICE MOTOR FEEDERS IN EXISTING PULLBOX, WITH WATERPROOF SPLICES. SEE SPECIFICATIONS.
 - EXISTING EMPTY CONDUIT OUTSIDE FENCE APPEARS TO RUN TO UTILITY TRANSFORMER.
 - NOT USED.
 - NOT USED.
 - FOR LIGHT POLES, REFER TO DETAIL 10 EB.1
 - SECTION OF PAD NOTED (5'-9"x6'-0") SHALL BE POURED AFTER DEMOLITION OF EXISTING ELECTRICAL EQUIPMENT.
 - FOR SEQUENCING OF DEMOLITION, IMPROVEMENT, AND CUTOVER WORK, REFER TO SPECIFICATIONS. SEE SPECIFICATION SECTION 01D10.
 - PB-2: CONCRETE PULLBOX, 18"x24"x12" DEEP MIN.
 - DO NOT SPLICE NEUTRALS AND GROUNDS IN THE PULLBOX. ALL SPLICES SHALL BE ABOVE-GRADE IN THE LIGHT POLE HANDHOLE.

REVISED
 3/2/15
 PCO-01

SITE PLAN - IMPROVEMENT
 SCALE: 3/8" = 1'-0"

FIXTURE SCHEDULE

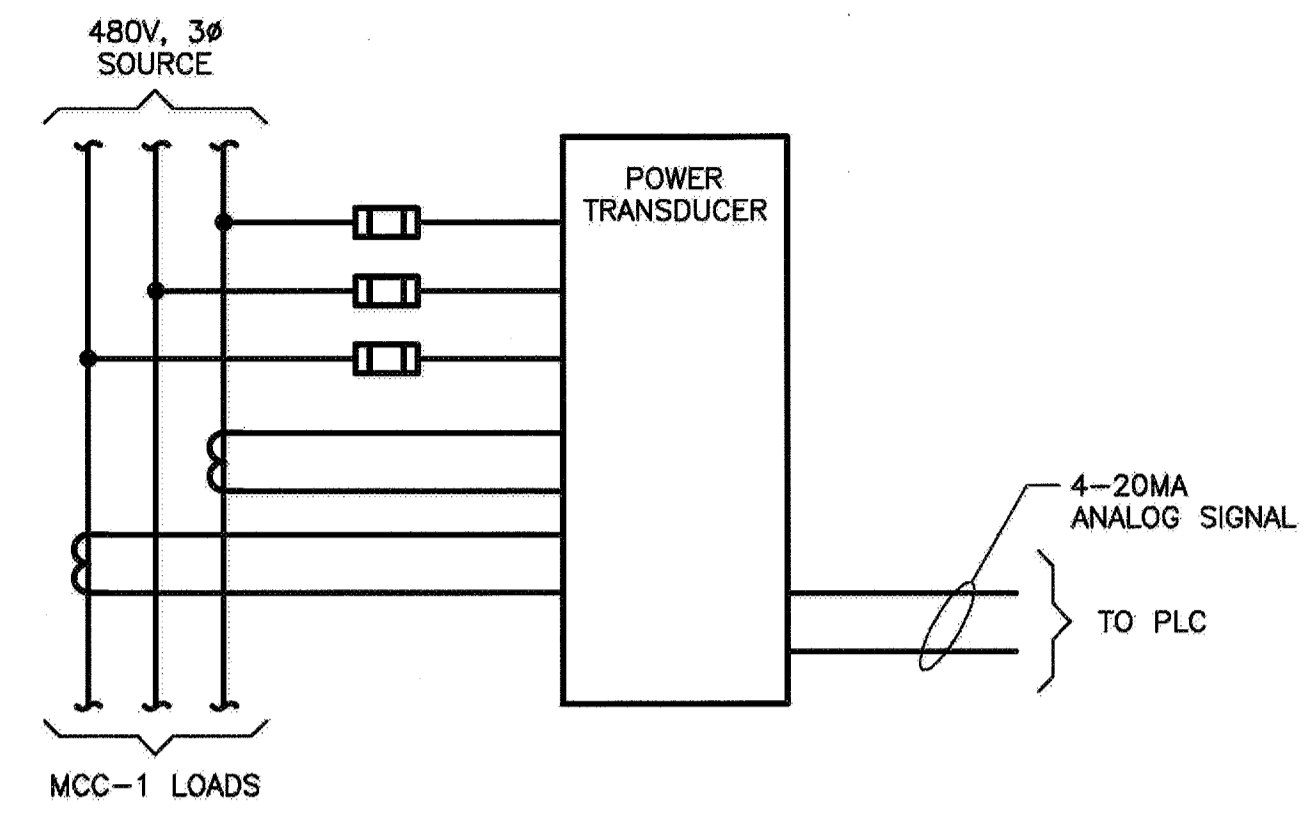
FIXTURE TYPE	DESCRIPTION	MANUFACTURER	MODEL NUMBER	QUANTITY / LAMPING	VOLTAGE / BALLAST	ENERGY CODE WATTS	CALCULATED VA (INCL BALLAST)
D	FLUORESCENT, MICRO FLOOD, CONDUIT SLIPFITTER, TENON REQUIRED. SQUARE STEEL 12' HIGH POLE.	RUUD OR EQUAL	NS6242JL WITH MNH-2 AND PA-1A4 AND PS4S12C1BZ	(1) 42W CFL	120V	48W	47VA

- NOTES:**
- POST TO BE REMOVABLE FROM SLEEVE.
 - POST TO BE FILLED WITH CONCRETE.
 - POST TO BE PAINTED WITH EPOXY PAINT (FEDERAL YELLOW). AFTER FABRICATION.
 - FURNISH AND INSTALL LOCKABLE, HINGED BOLLARD SLEEVE CAP. MATING SLEEVE CAP PADLOCK EYE SHALL BE WELDED TO THE BOLLARD PIPE.

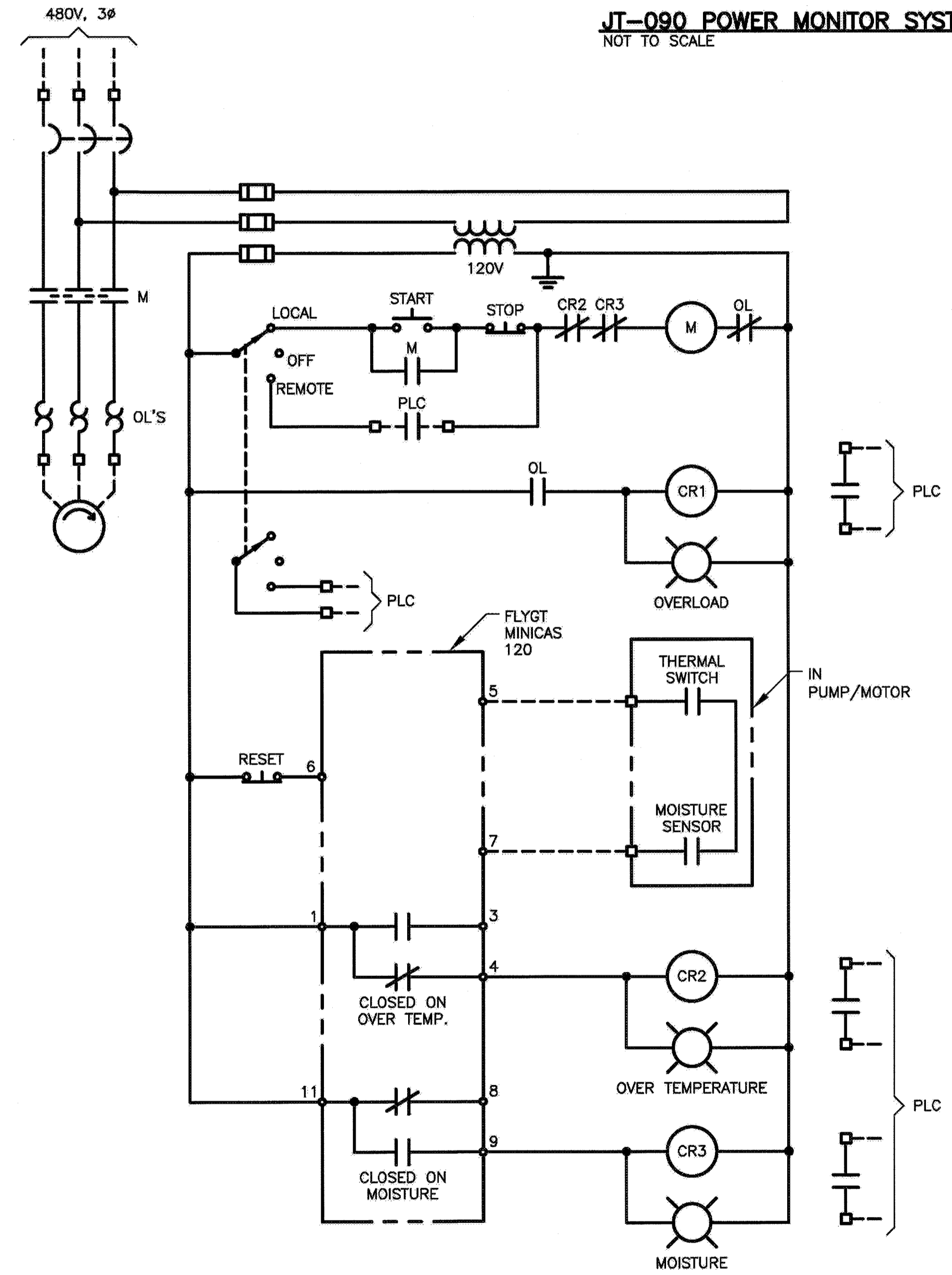
1 REMOVABLE BOLLARD
 NTS

1 INCH
 BAR EQUALS ONE INCH WHEN DRAWING IS PLOTTED FULL SIZE. IF NOT, SCALE ACCORDINGLY

OCTOBER
 2014

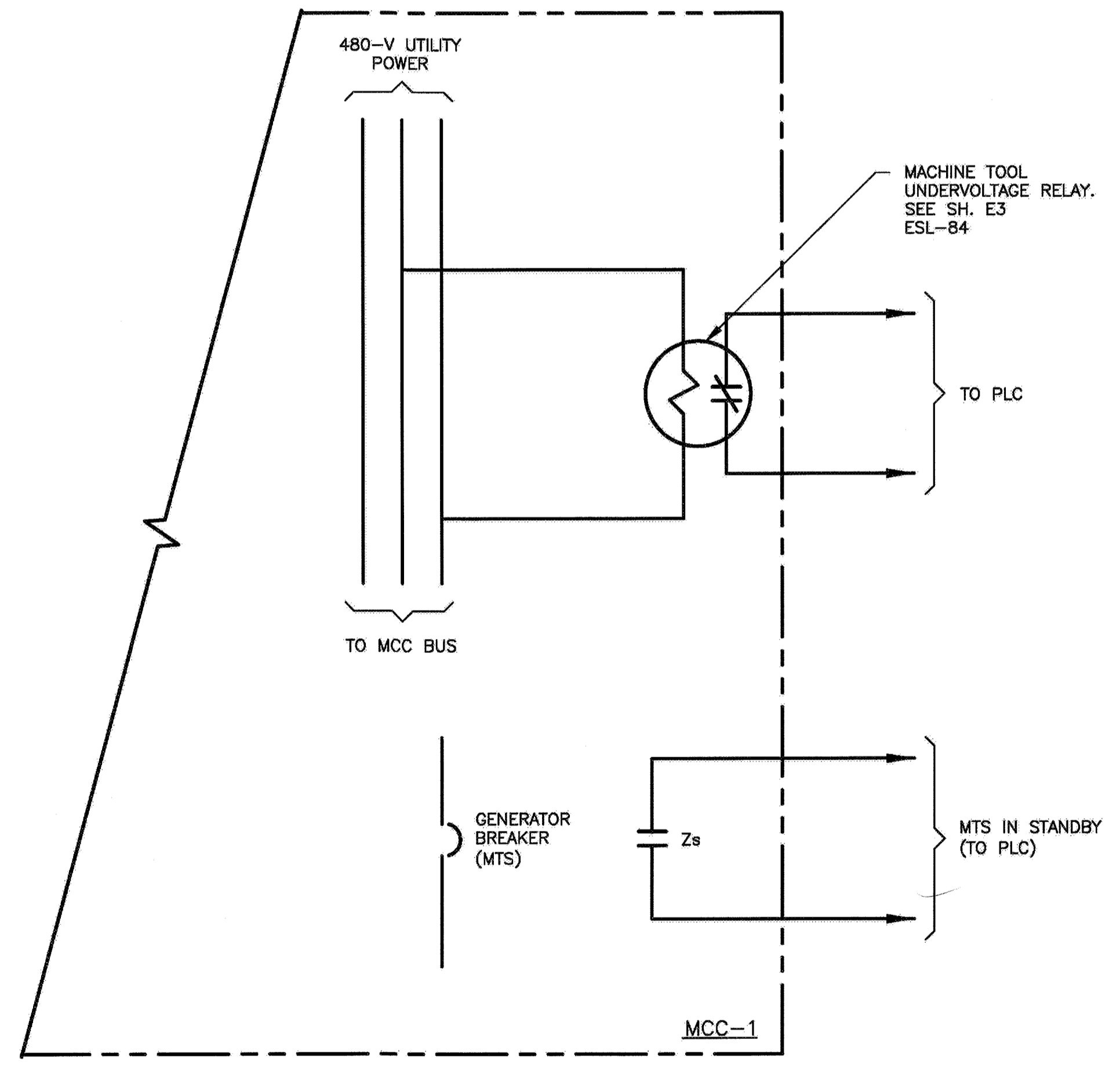


JT-090 POWER MONITOR SYSTEM
NOT TO SCALE



PMP-001
(TYP. FOR PMP-002)

NOTES:
1. CONFIGURE THE MINICAS, AND ADJUST CIRCUITING AS NEEDED, TO CAUSE AN OVER TEMPERATURE OR MOISTURE CONDITION TO BE LATCHED UNTIL THE RESET PUSHBUTTON IS DEPRESSED.



PROJECT NO. 066501002
DESIGNED BY: JS
DRAWN BY: JI 1158-E7
CHECKED BY: DW

DATE: 10/02/2014
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REGISTERED PROFESSIONAL ENGINEER
NO. E013928
EXP. 6/30/16
ELECTRICAL
STATE OF CALIFORNIA
SIGNED: 07/21/14

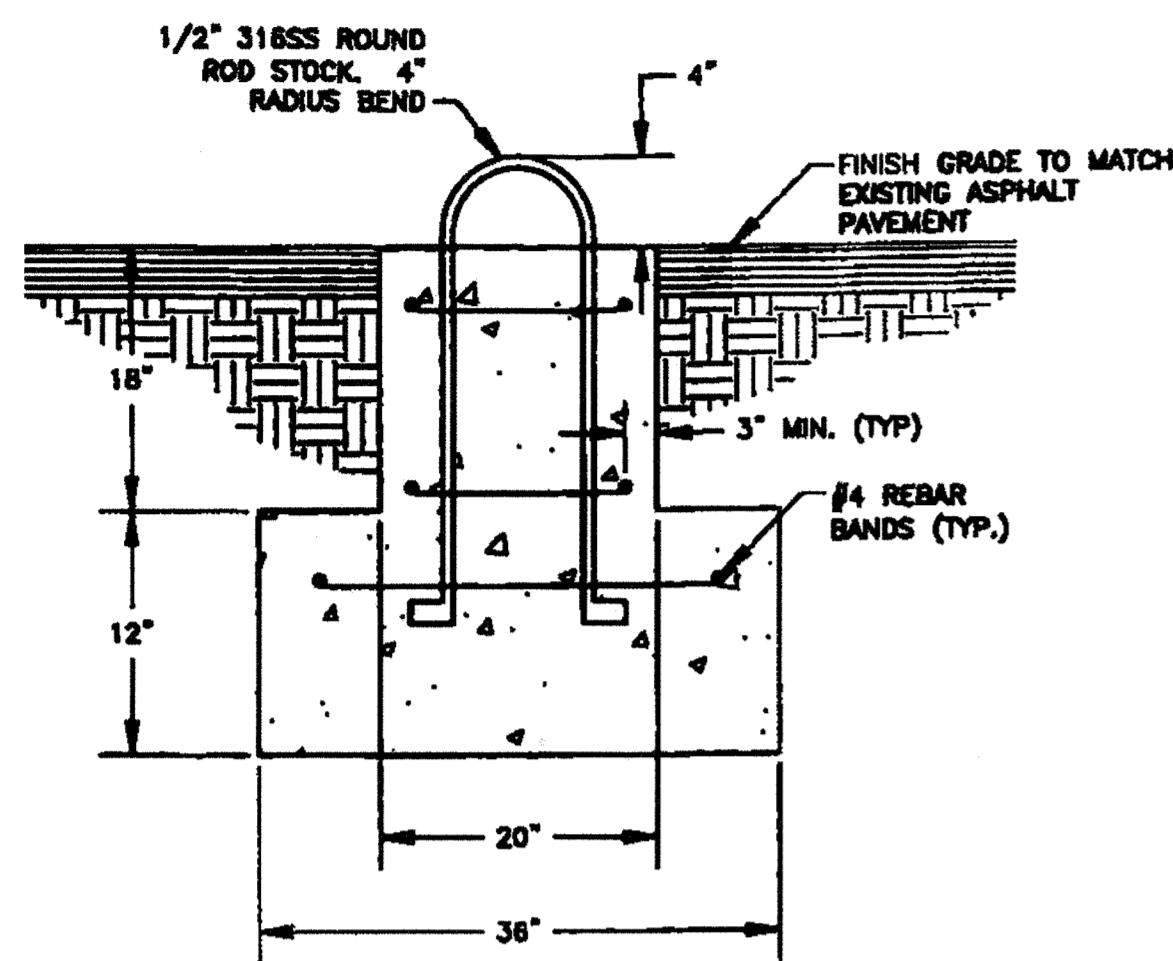
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CITY OF PETALUMA
VICTORIA LIFT STATION UPGRADE
CONTROL DIAGRAMS
ELECTRICAL

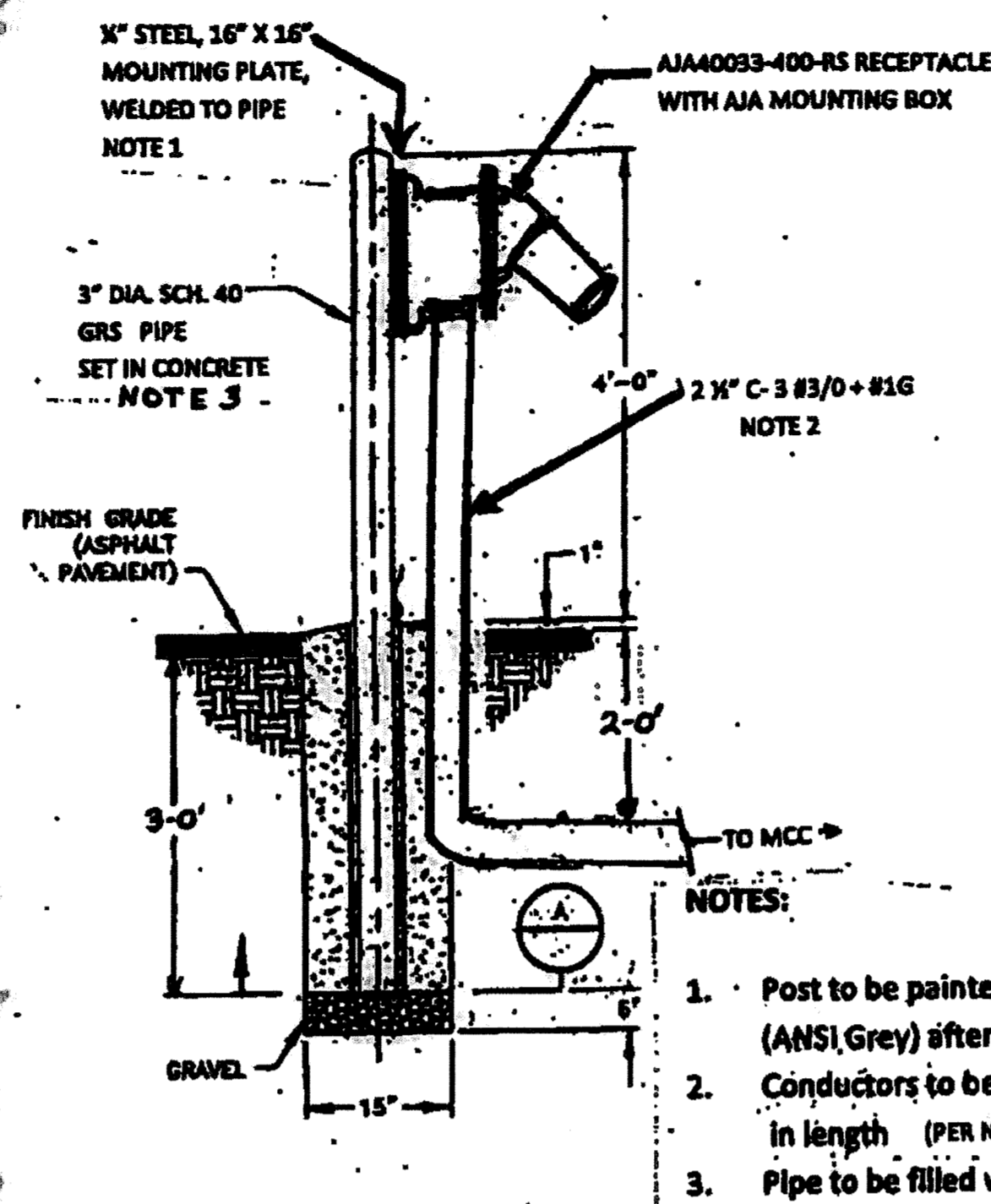
OCTOBER
2014

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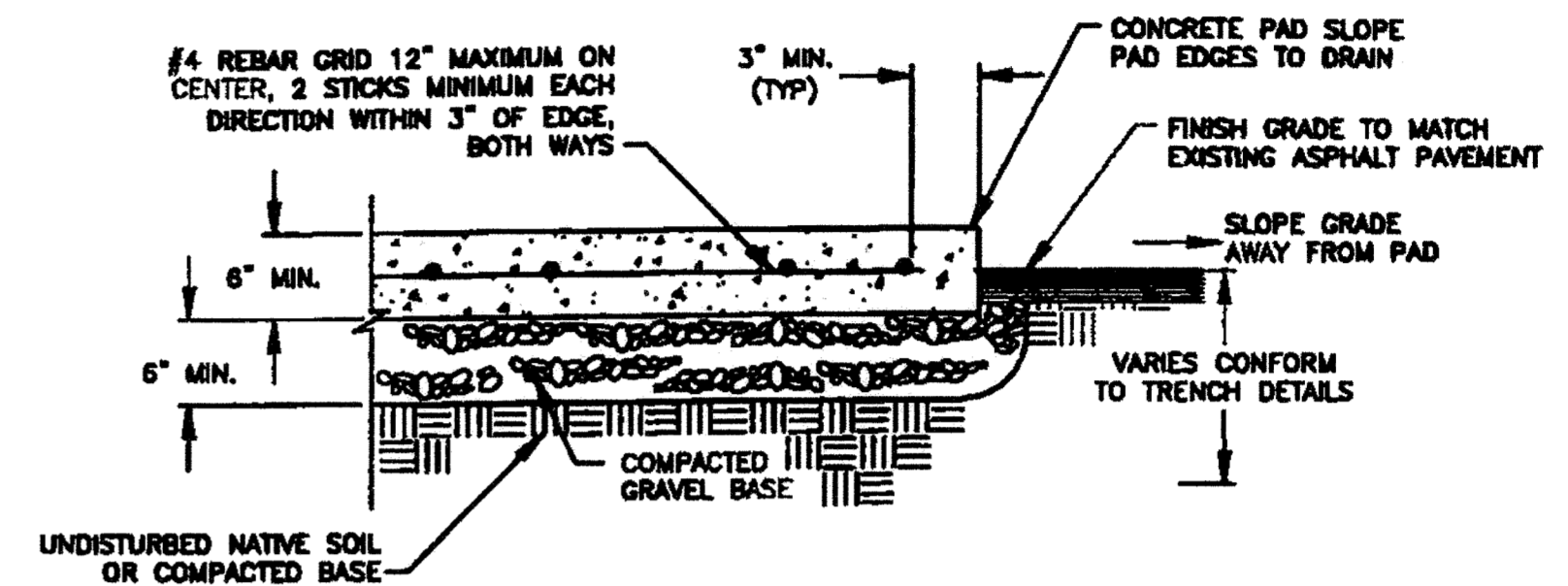
INSERT



1 GENERATOR ANCHOR
NOT TO SCALE

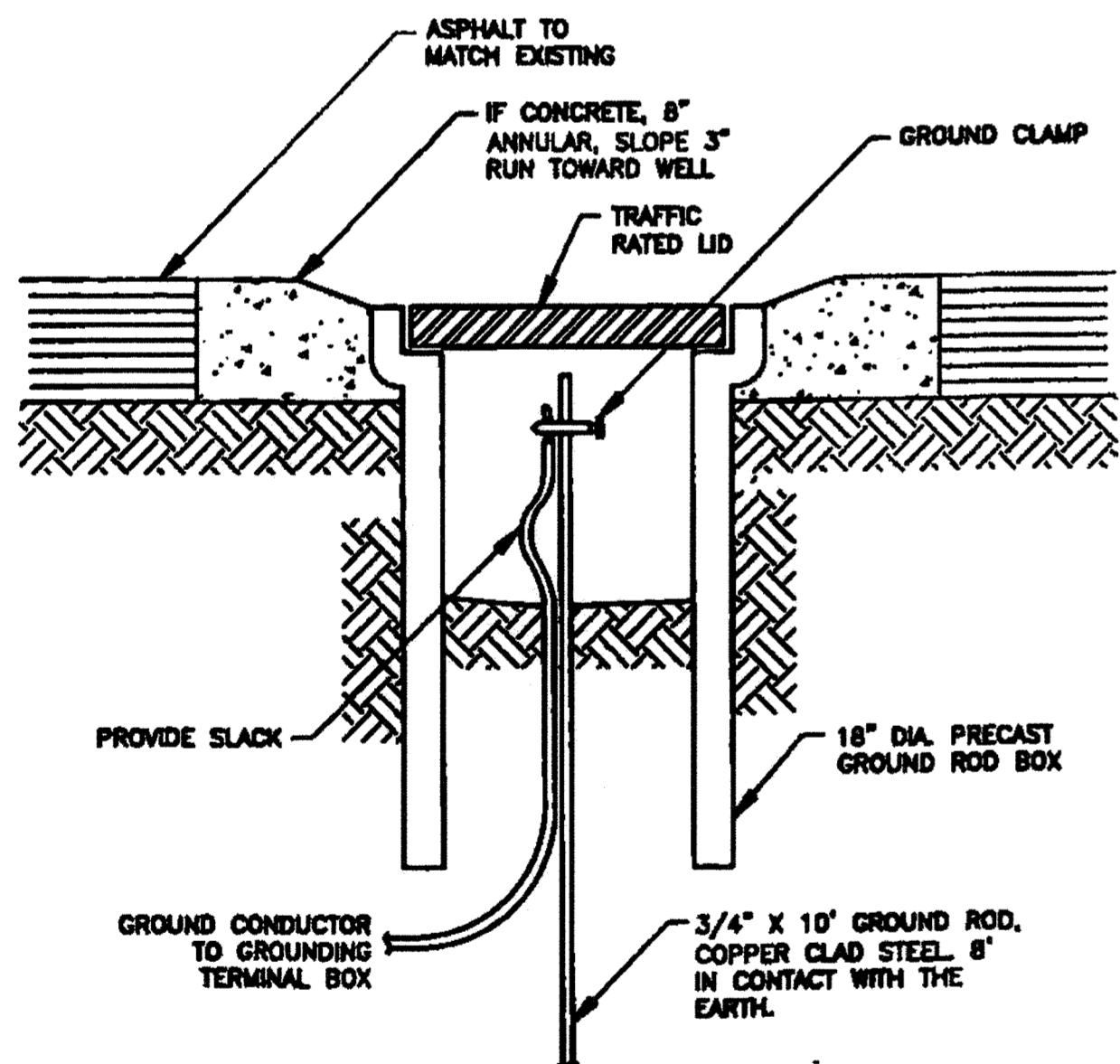


2 PORTABLE GENERATOR RECEPTACLE ELEVATION
NOT TO SCALE



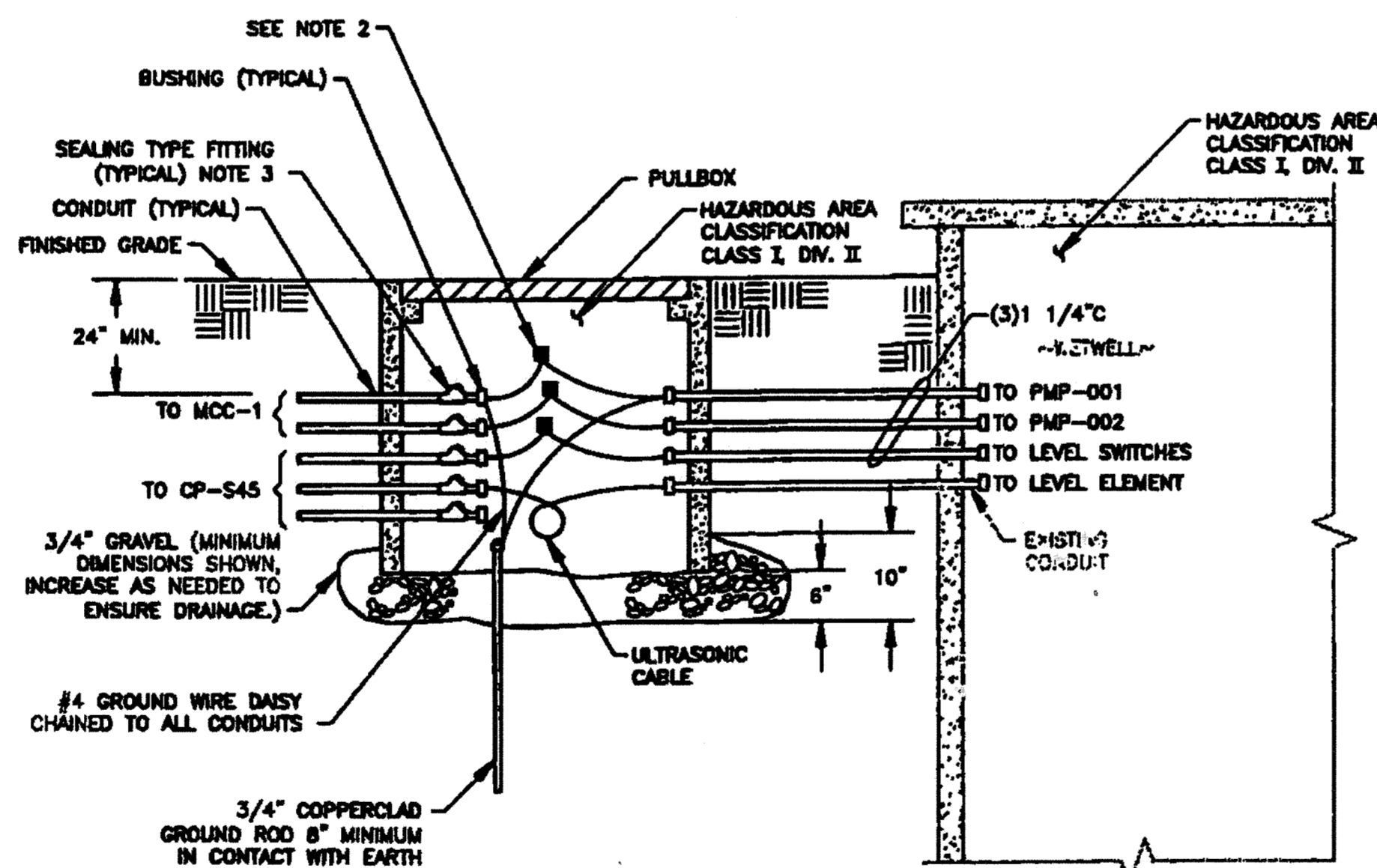
- NOTES:
- PAD THICKNESS/REINFORCEMENT SHOWN ARE MINIMUM. INCREASE IF NECESSARY FOR SOIL CONDITIONS, DRAINAGE/FLOODING, TO ADEQUATELY SUPPORT THE ENCLOSURE AND/OR TO MEET SEISMIC REQUIREMENTS.

3 CONCRETE PAD
NOT TO SCALE



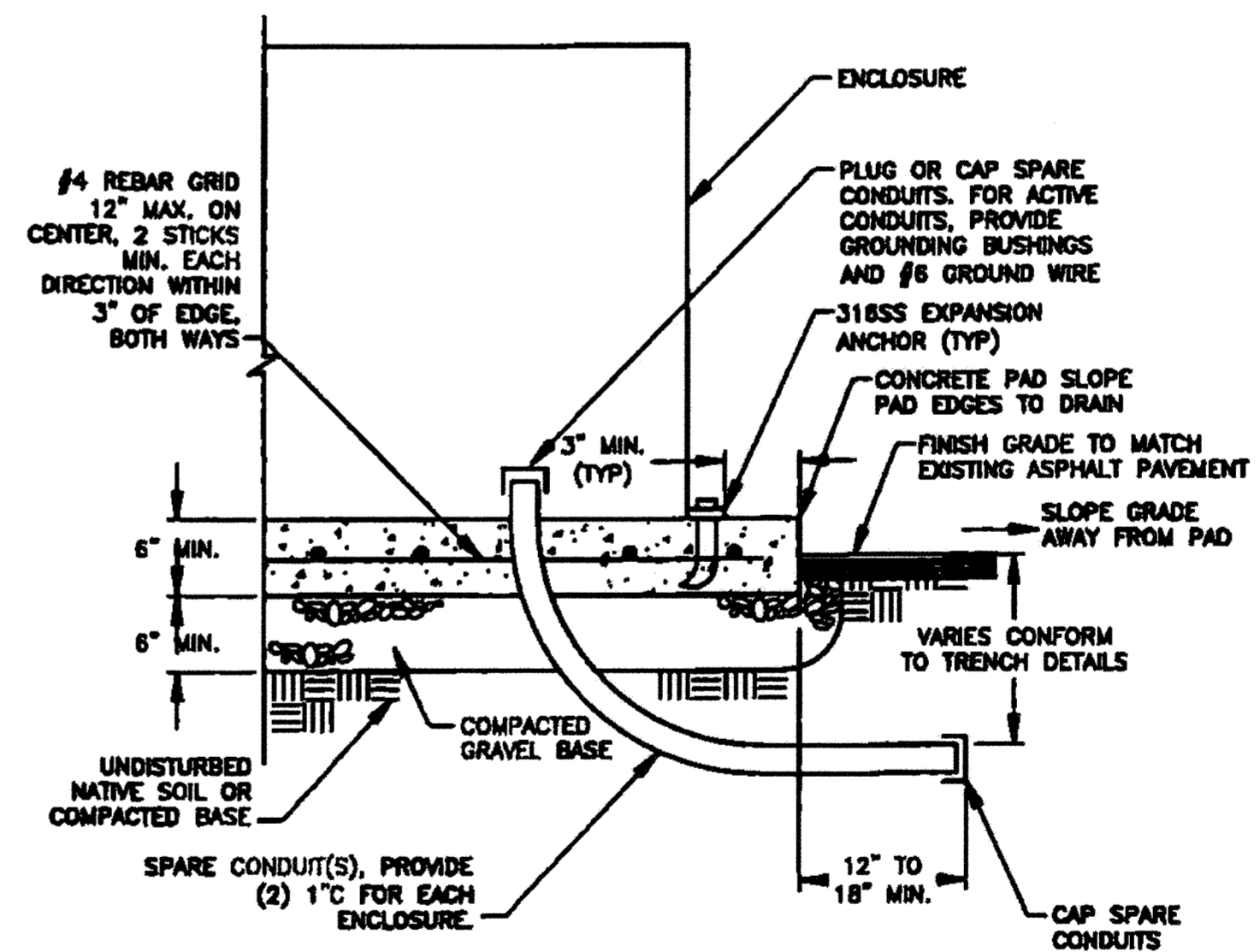
- NOTES:
- GROUND ROD MAY BE INSTALLED IN THE EQUIPMENT PAD UNDER THE SERVICE ENTRANCE SECTION OF THE ENCLOSURE (PROVIDE AT LEAST 3" ABOVE THE SLAB). IF SO INSTALLED, TILE, COVER & ANNULAR PAD MAY BE ELIMINATED.

4 GROUND ROD
NOT TO SCALE



- NOTES:
- USE STAINLESS STEEL HARDWARE AND BOLTS.
 - PROVIDE WATERPROOF SPLICES FOR MOTOR FEEDER AND LEVEL SWITCH CONDUCTORS.
 - LOCATE SEALING FITTINGS IN PULLBOX OR AT THE POINT CONDUITS ENTER EQUIPMENT ENCLOSURE.

5 PULLBOX PB-1 DETAIL
NOT TO SCALE



- NOTES:
- ENCLOSURE MOUNTING PAD THICKNESS/REINFORCEMENT SHOWN ARE MINIMUM. INCREASE IF NECESSARY FOR SOIL CONDITIONS, DRAINAGE/FLOODING, TO ADEQUATELY SUPPORT THE ENCLOSURE AND/OR TO MEET SEISMIC REQUIREMENTS.
 - FOR SPARE CONDUITS, TERMINATE 12" TO 18" PAST PAD BOUNDARIES. PROVIDE DETAILED AS-BUILT LOCATIONS.
 - FOR ACTIVE CONDUITS, AT CONDUIT END SEAL INSIDE CONDUIT WITH DAKUM OR SUITABLE PLASTIC.
 - CONCRETE POUR SHALL BE MONOLITHIC.

6 EQUIPMENT CONCRETE MOUNTING PAD
NOT TO SCALE

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3/2/15
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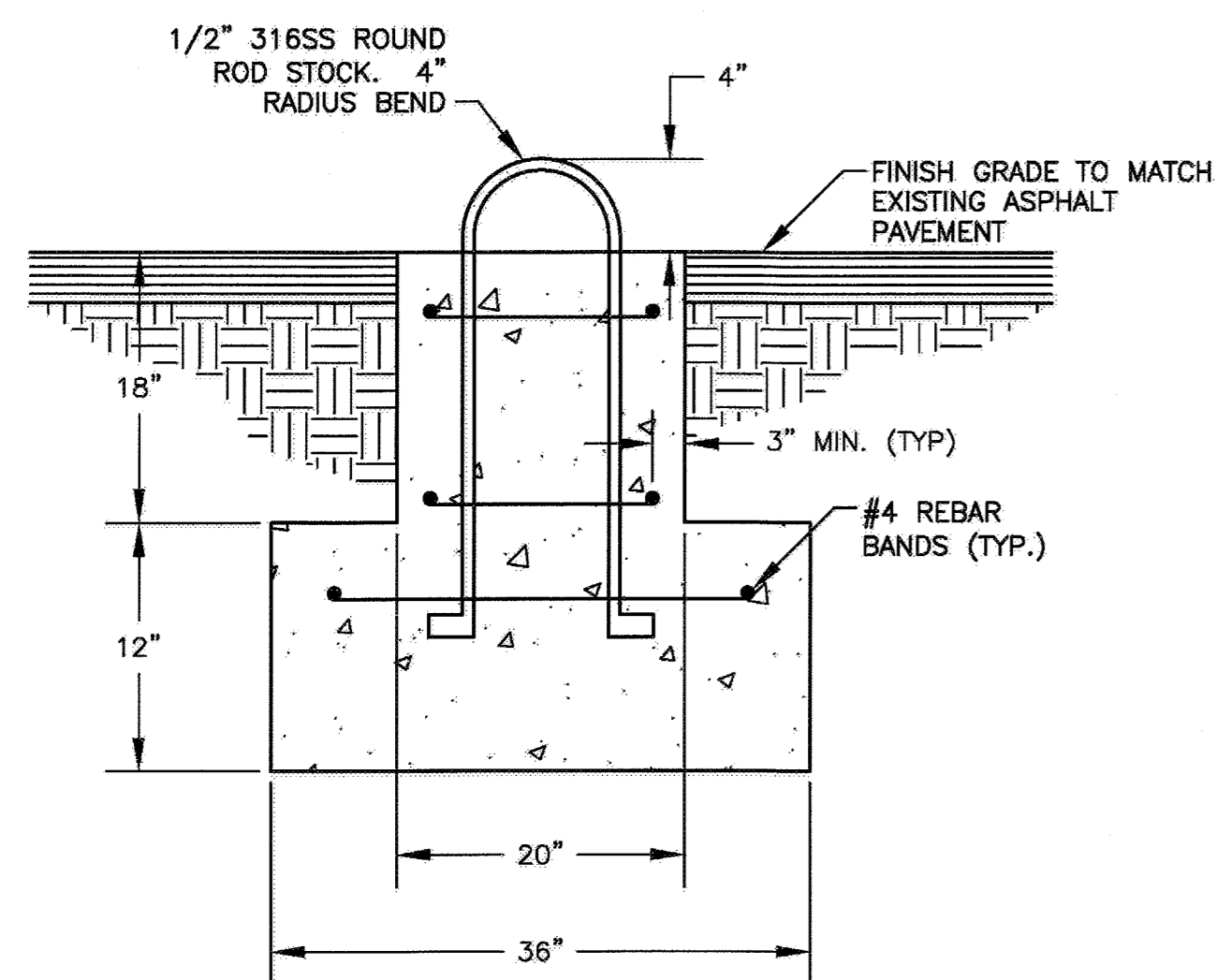
PROJECT NO. C88601002
DESIGNED BY: JB
DRAWN BY: 1184-ELD
CHECKED BY: DM
DATE: 10/22/14

ArcSine engineering
A/E/C ENGINEERING COMPANY

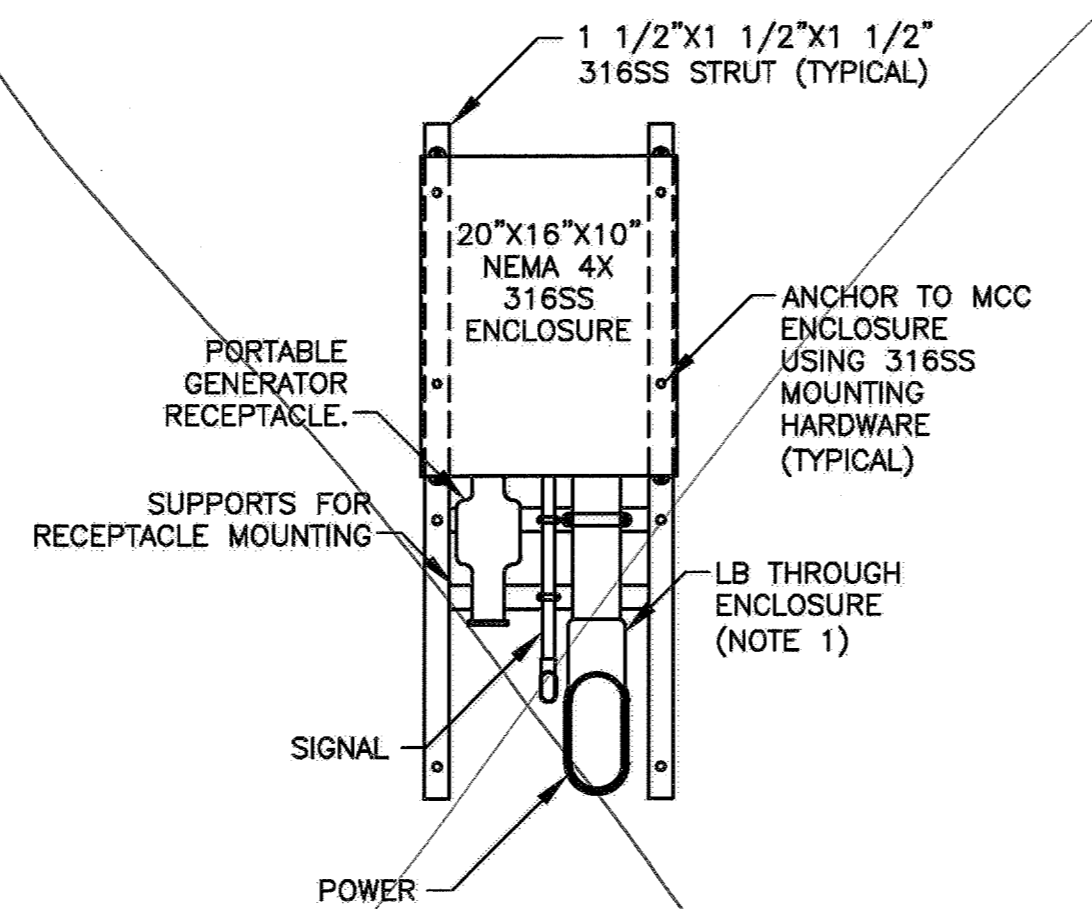
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DR. 4/28/14

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VICTORIA LIFT STATION UPGRADE
DETAILS & ELEVATIONS - 1
ELECTRICAL



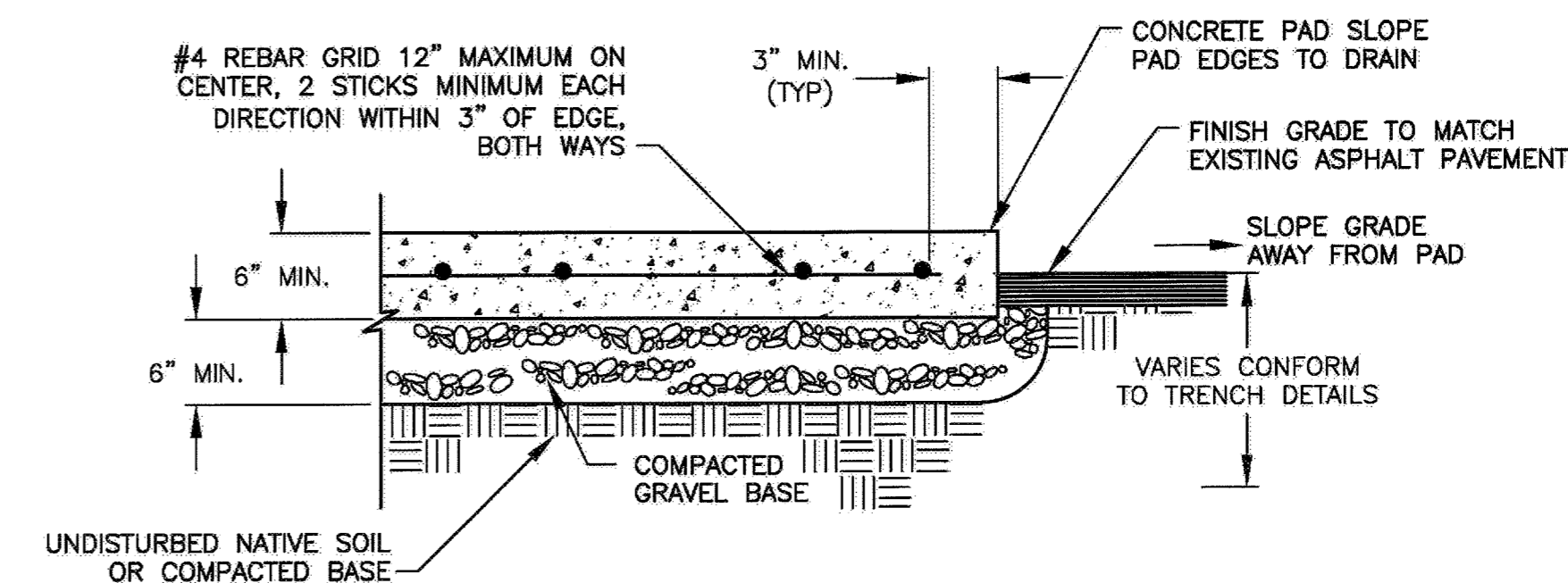
1 GENERATOR ANCHOR
NOT TO SCALE



RECEPTACLE NOTES:

- COORDINATE CONDUIT ROUTING. IF ROUTING ABOVE THE ENCLOSURE IS REQUIRED, ENTER ENCLOSURE FROM THE SIDE.

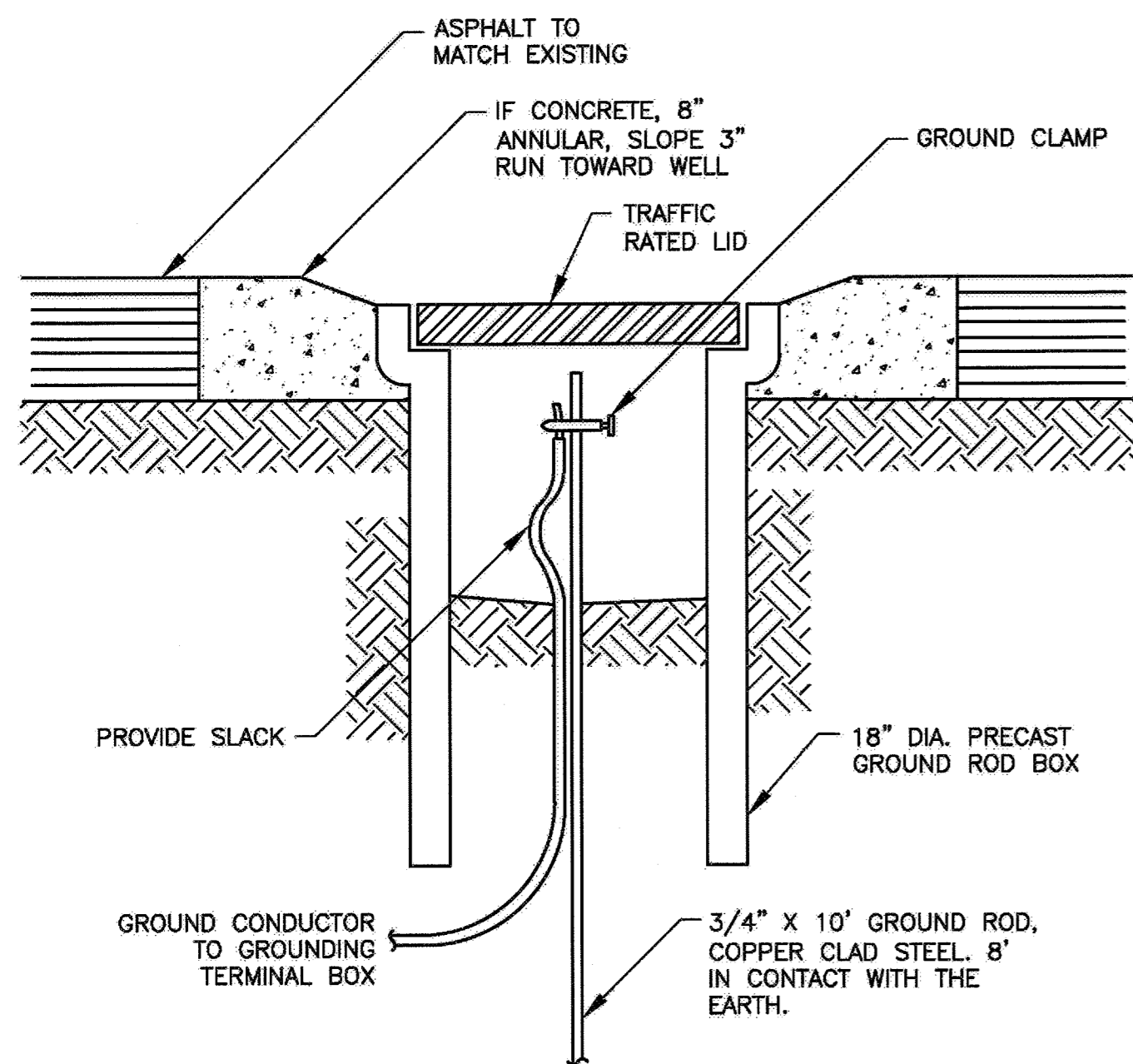
2 PORTABLE GENERATOR RECEPTACLE ELEVATION
NOT TO SCALE



NOTES:

- PAD THICKNESS/REINFORCEMENT SHOWN ARE MINIMUM. INCREASE IF NECESSARY FOR SOIL CONDITIONS, DRAINAGE/FLOODING, TO ADEQUATELY SUPPORT THE ENCLOSURE AND/OR TO MEET SEISMIC REQUIREMENTS.

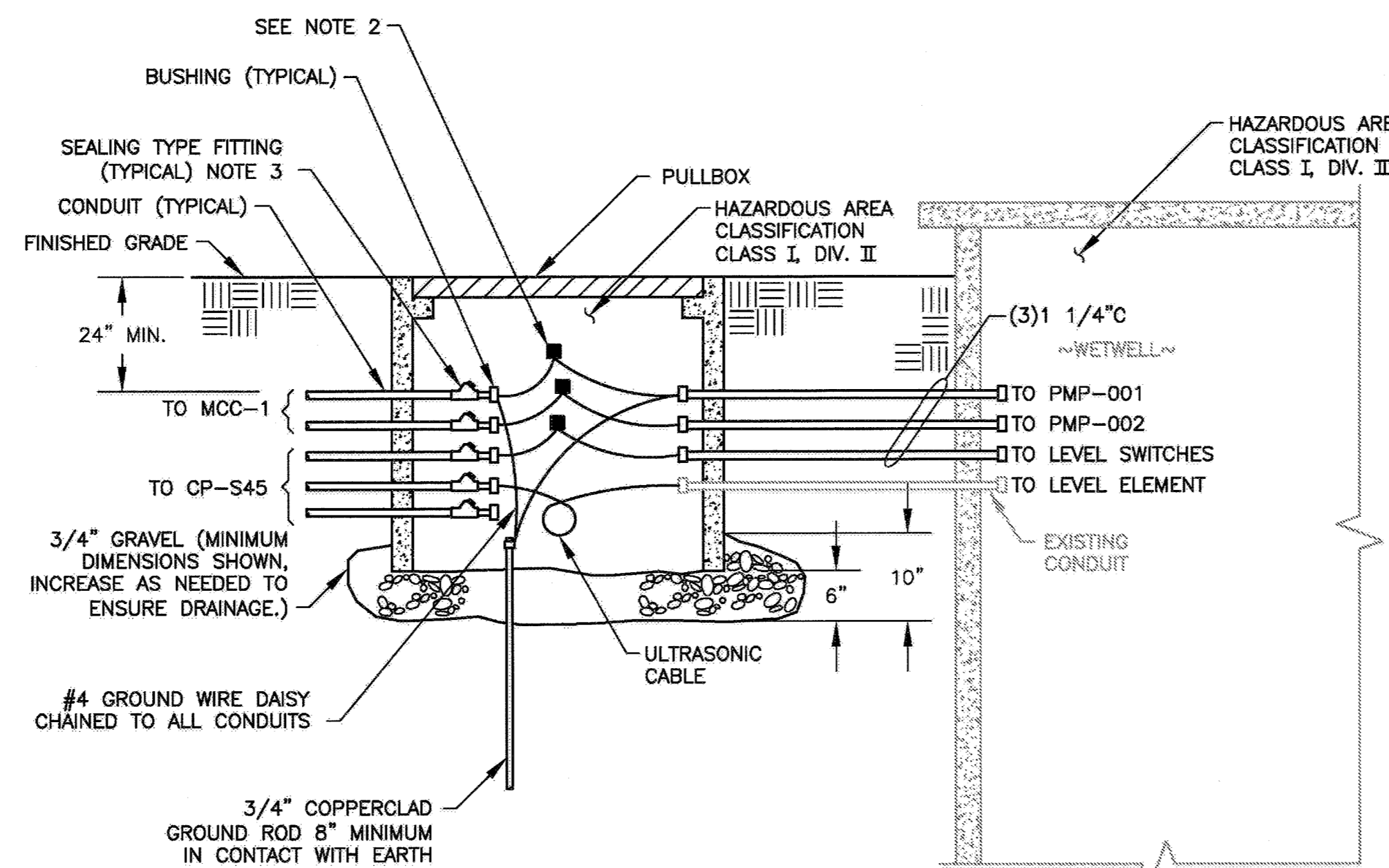
3 CONCRETE PAD
NOT TO SCALE



NOTES:

- GROUND ROD MAY BE INSTALLED IN THE EQUIPMENT PAD UNDER THE SERVICE ENTRANCE SECTION OF THE ENCLOSURE (PROVIDE AT LEAST 3 inch ABOVE THE SLAB). IF SO INSTALLED, TILE, COVER & ANNULAR PAD MAY BE ELIMINATED.

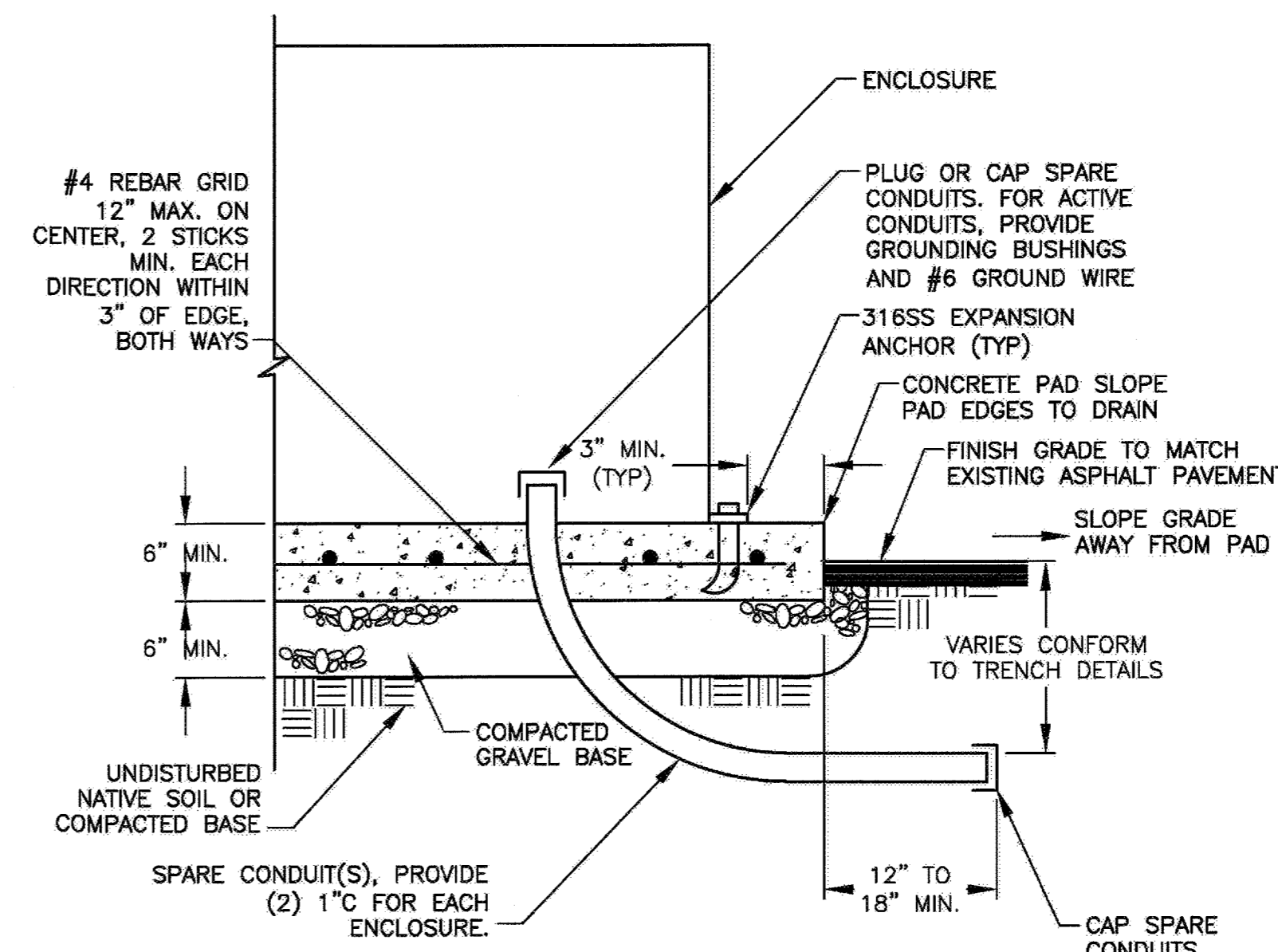
4 GROUND ROD
NOT TO SCALE



NOTES:

- USE STAINLESS STEEL HARDWARE AND BOLTS.
- PROVIDE WATERPROOF SPLICES FOR MOTOR FEEDER AND LEVEL SWITCH CONDUCTORS.
- LOCATE SEALING FITTINGS IN PULLBOX OR AT THE POINT CONDUITS ENTER EQUIPMENT ENCLOSURE.

5 PULLBOX PB-1 DETAIL
NOT TO SCALE



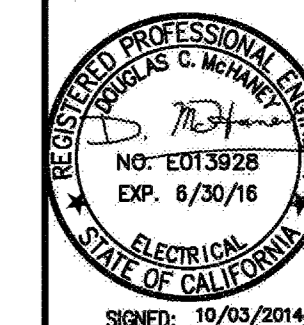
6 EQUIPMENT CONCRETE MOUNTING PAD
NOT TO SCALE

NOTES:

- ENCLOSURE MOUNTING PAD THICKNESS/REINFORCEMENT SHOWN ARE MINIMUM. INCREASE IF NECESSARY FOR SOIL CONDITIONS, DRAINAGE/FLOODING, TO ADEQUATELY SUPPORT THE ENCLOSURE AND/OR TO MEET SEISMIC REQUIREMENTS.
- FOR SPARE CONDUITS, TERMINATE 12 inch TO 18 inch PAST PAD BOUNDARIES. PROVIDE DETAILED AS-BUILT LOCATIONS.
- FOR ACTIVE CONDUITS, AT CONDUIT END SEAL INSIDE CONDUIT WITH OAKUM OR SUITABLE PLASTIC.
- CONCRETE POUR SHALL BE MONOLITHIC.

OCTOBER
2014

PROJECT NO. 066501002
DESIGNED BY: JS
DRAWN BY: 1158-EB-0
CHECKED BY: DM
DATE: 10/02/2014

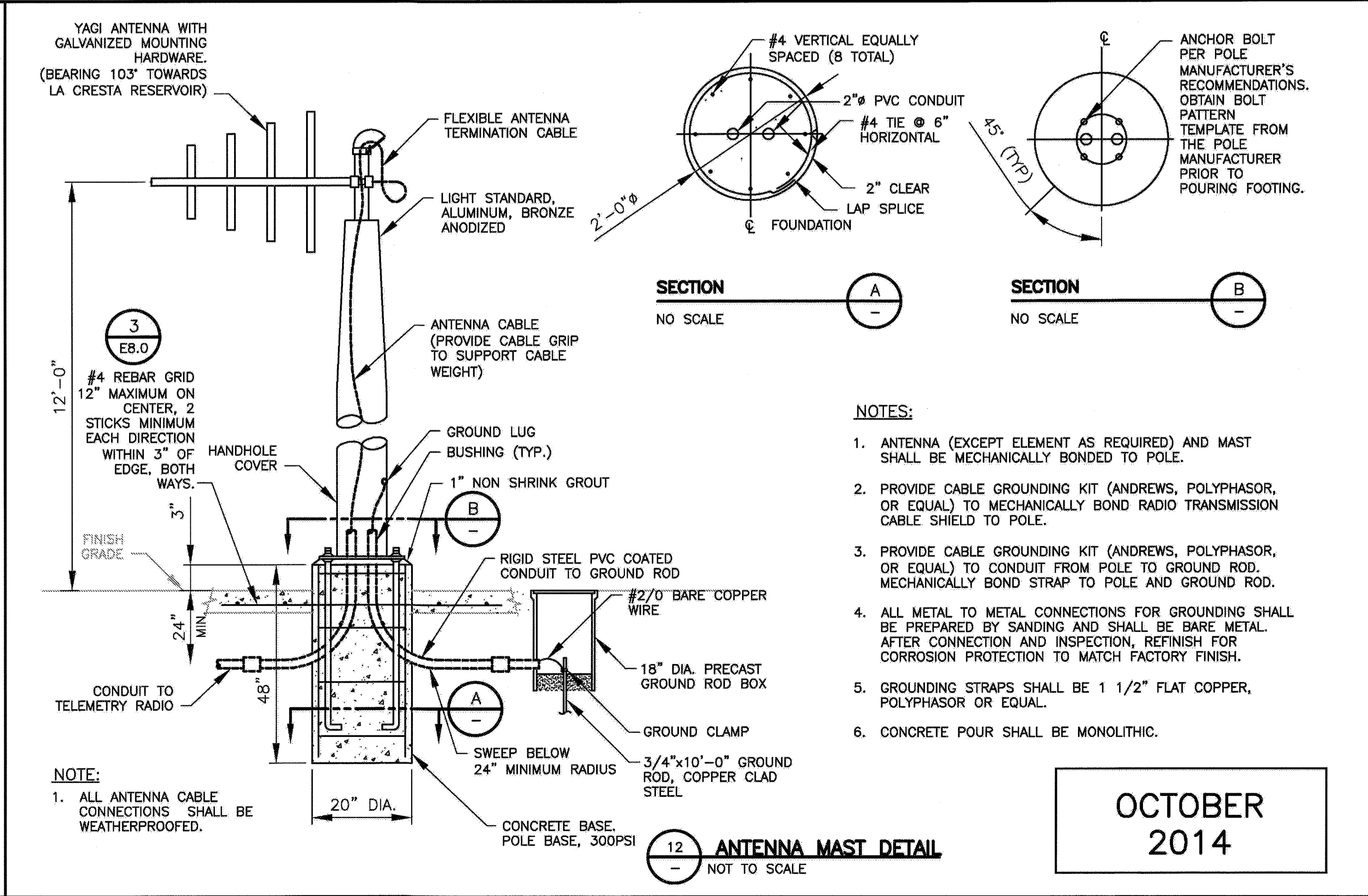
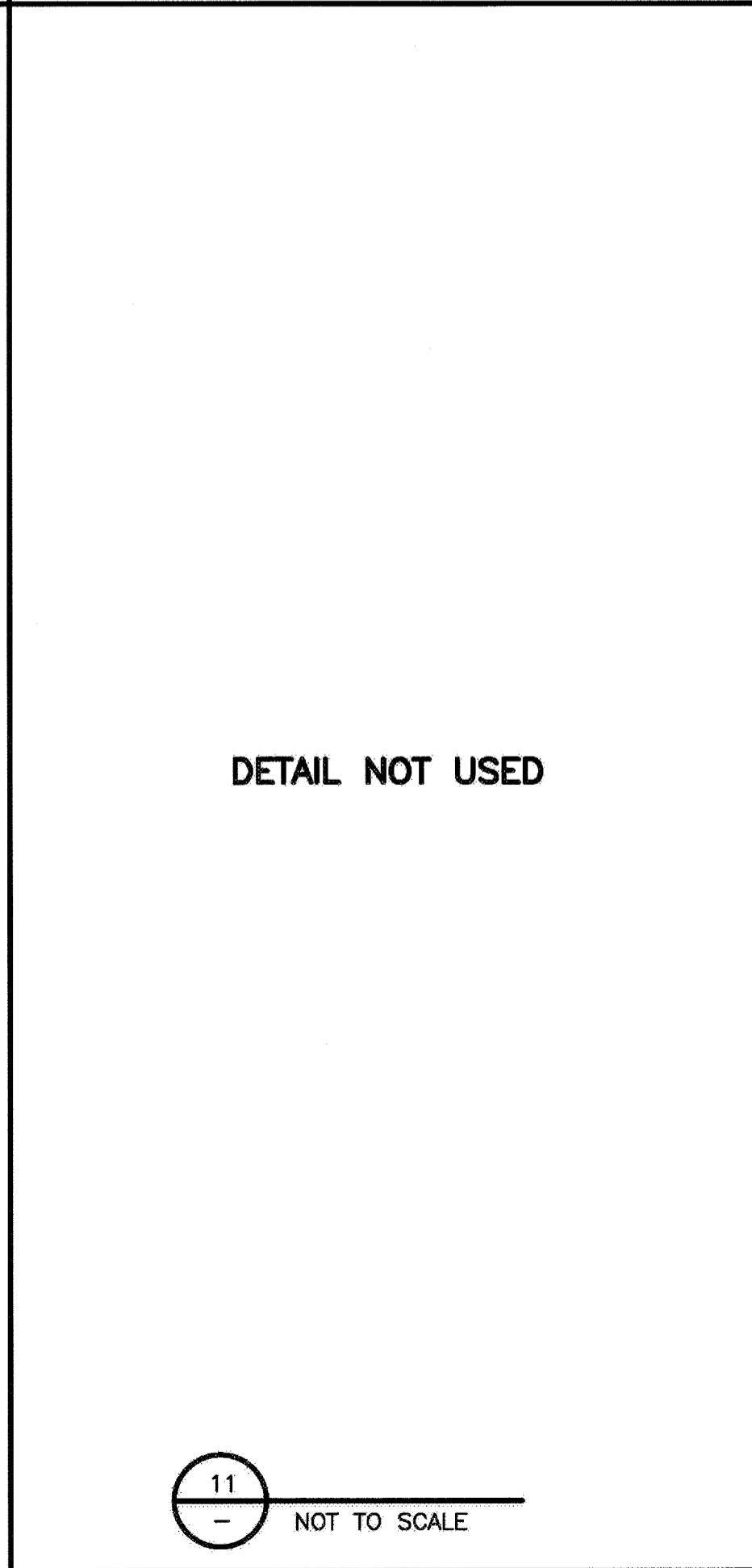
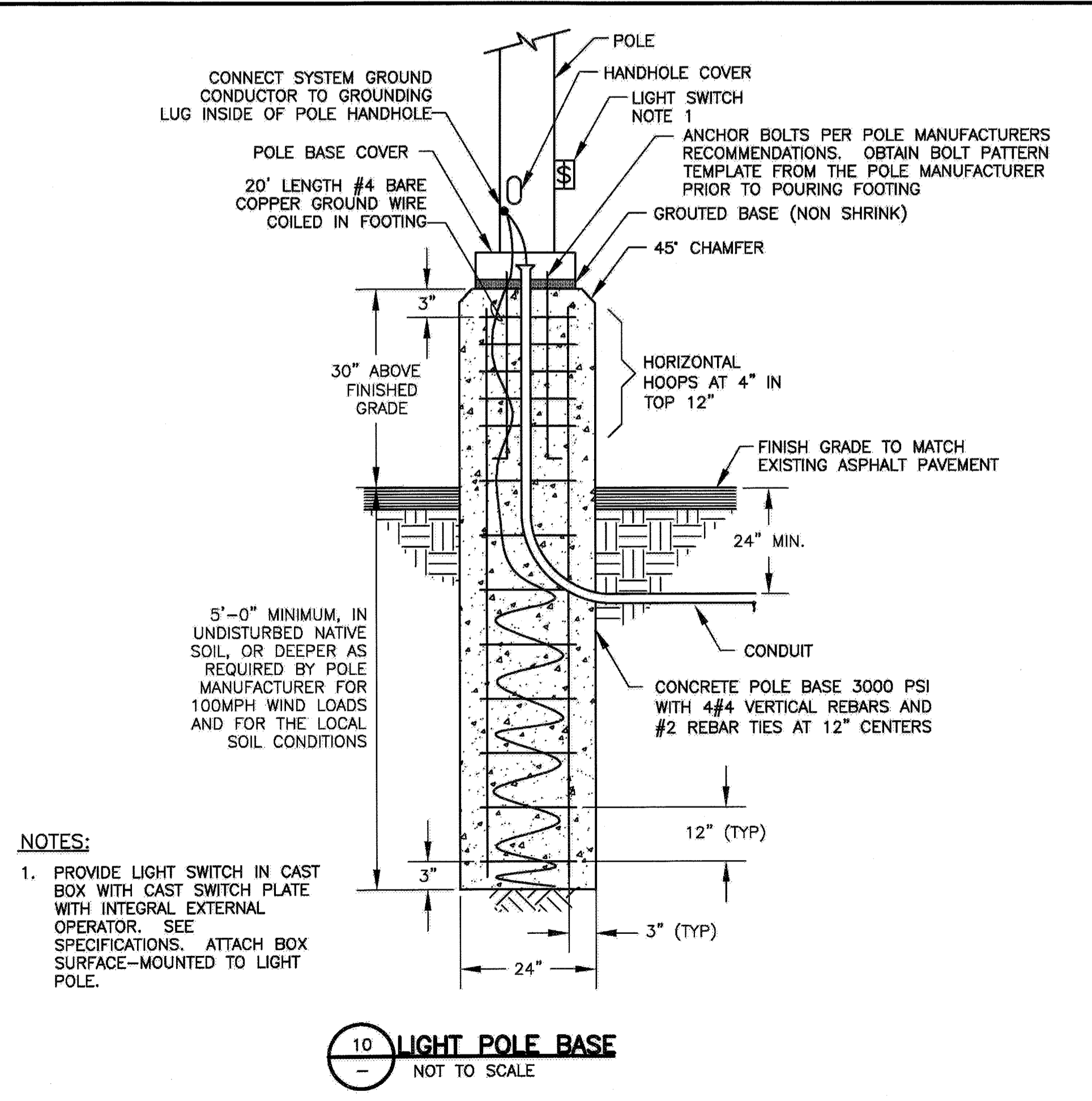
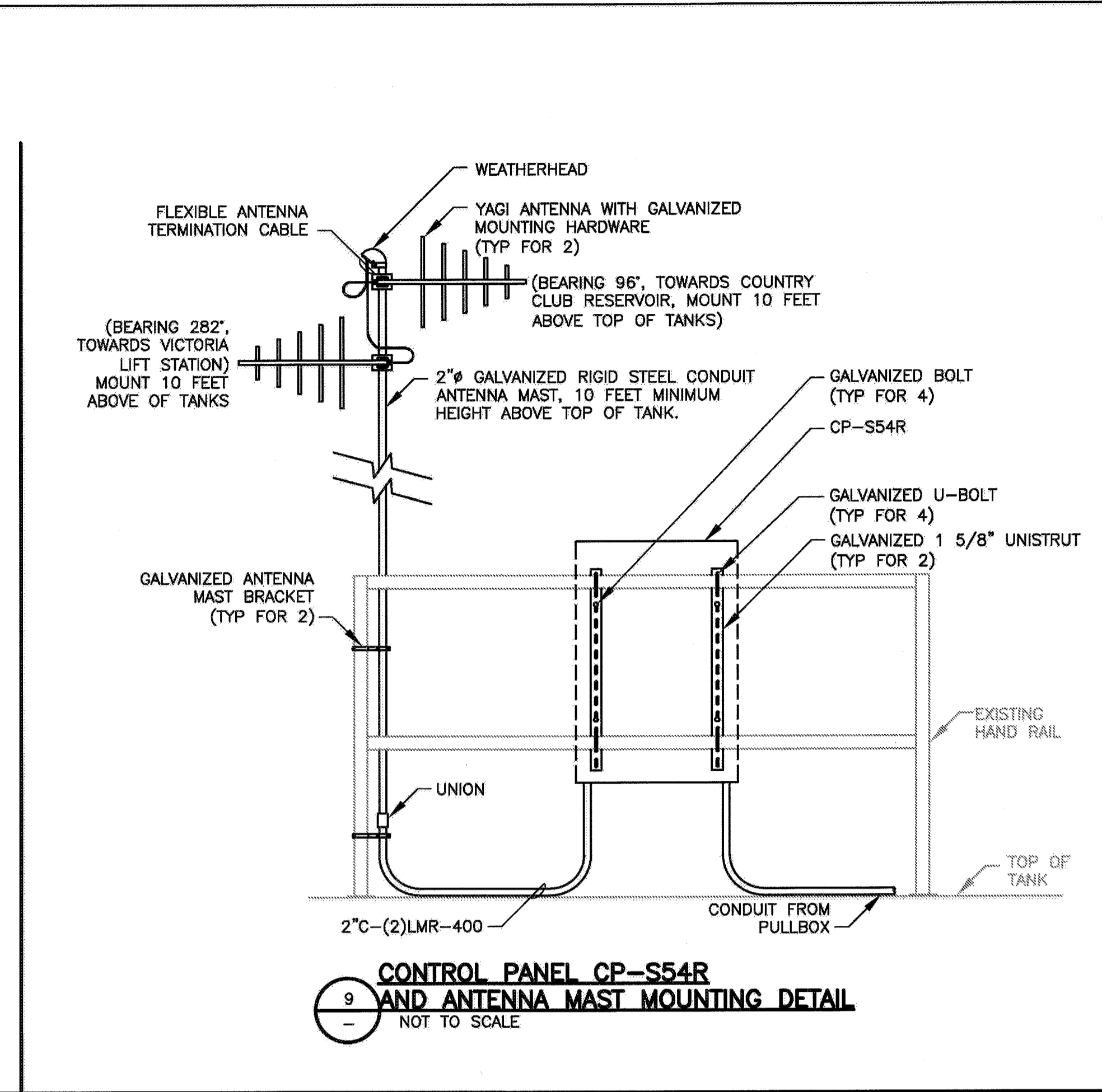
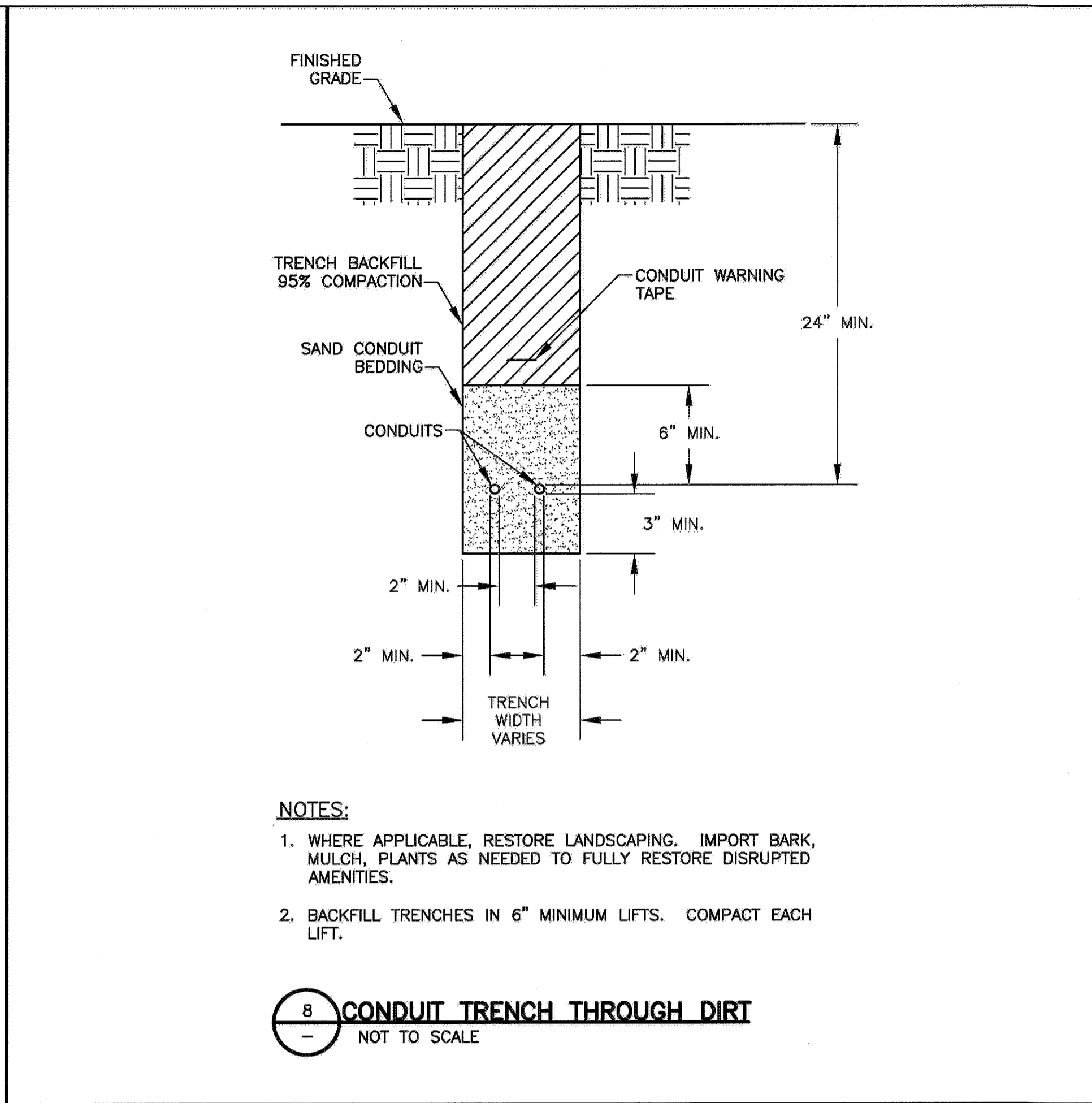
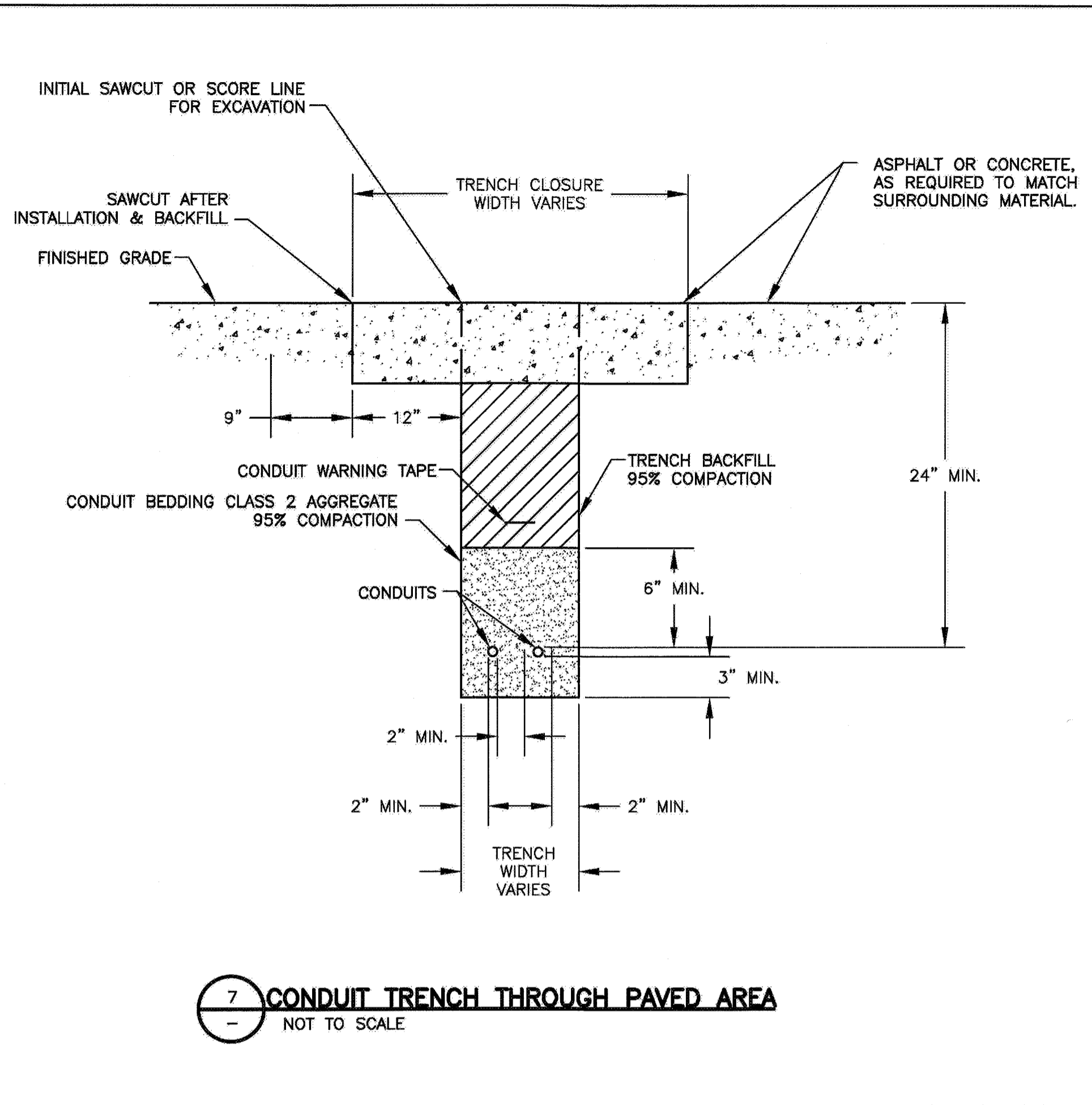


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CITY OF PETALUMA
VICTORIA LIFT STATION UPGRADE
DETAILS & ELEVATIONS - 1
ELECTRICAL

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E8.0

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- NOTES:**
- ANTENNA (EXCEPT ELEMENT AS REQUIRED) AND MAST SHALL BE MECHANICALLY BONDED TO POLE.
 - PROVIDE CABLE GROUNDING KIT (ANDREWS, POLYPHASOR, OR EQUAL) TO MECHANICALLY BOND RADIO TRANSMISSION CABLE SHIELD TO POLE.
 - PROVIDE CABLE GROUNDING KIT (ANDREWS, POLYPHASOR, OR EQUAL) TO CONDUIT FROM POLE TO GROUND ROD. MECHANICALLY BOND STRAP TO POLE AND GROUND ROD.
 - ALL METAL TO METAL CONNECTIONS FOR GROUNDING SHALL BE PREPARED BY SANDING AND SHALL BE BARE METAL. AFTER CONNECTION AND INSPECTION, REFINISH FOR CORROSION PROTECTION TO MATCH FACTORY FINISH.
 - GROUNDING STRAPS SHALL BE 1 1/2" FLAT COPPER, POLYPHASOR OR EQUAL.
 - CONCRETE POUR SHALL BE MONOLITHIC.

OCTOBER 2014

PROJECT NO. 066501002
DESIGNED BY: JS
DRAWN BY: JI 118ER1
CHECKED BY: DM
DATE: 10/02/2014

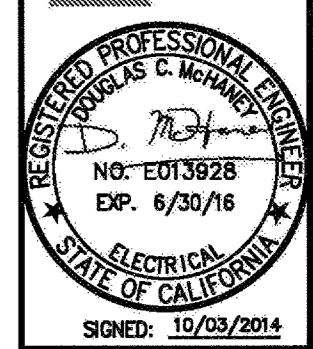
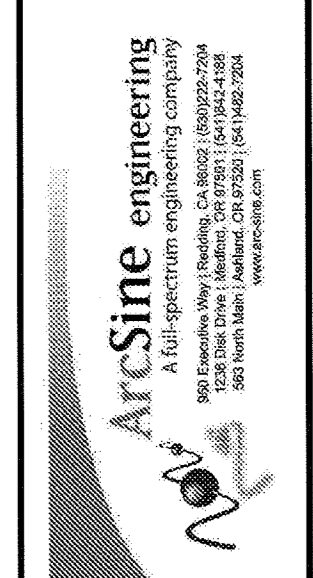
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A full-spectrum engineering company
9800 Wilshire Blvd., Suite 1000, Beverly Hills, CA 90210
Tel: 310.470.0000
www.arcsine.com

REGISTERED PROFESSIONAL ENGINEER
No. E013928
Exp. 6/30/16
ELECTRICAL
STATE OF CALIFORNIA
SIGNED: 10/02/2014

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CITY OF PETALUMA
VICTORIA LIFT STATION UPGRADE
DETAILS & ELEVATIONS - 2
ELECTRICAL

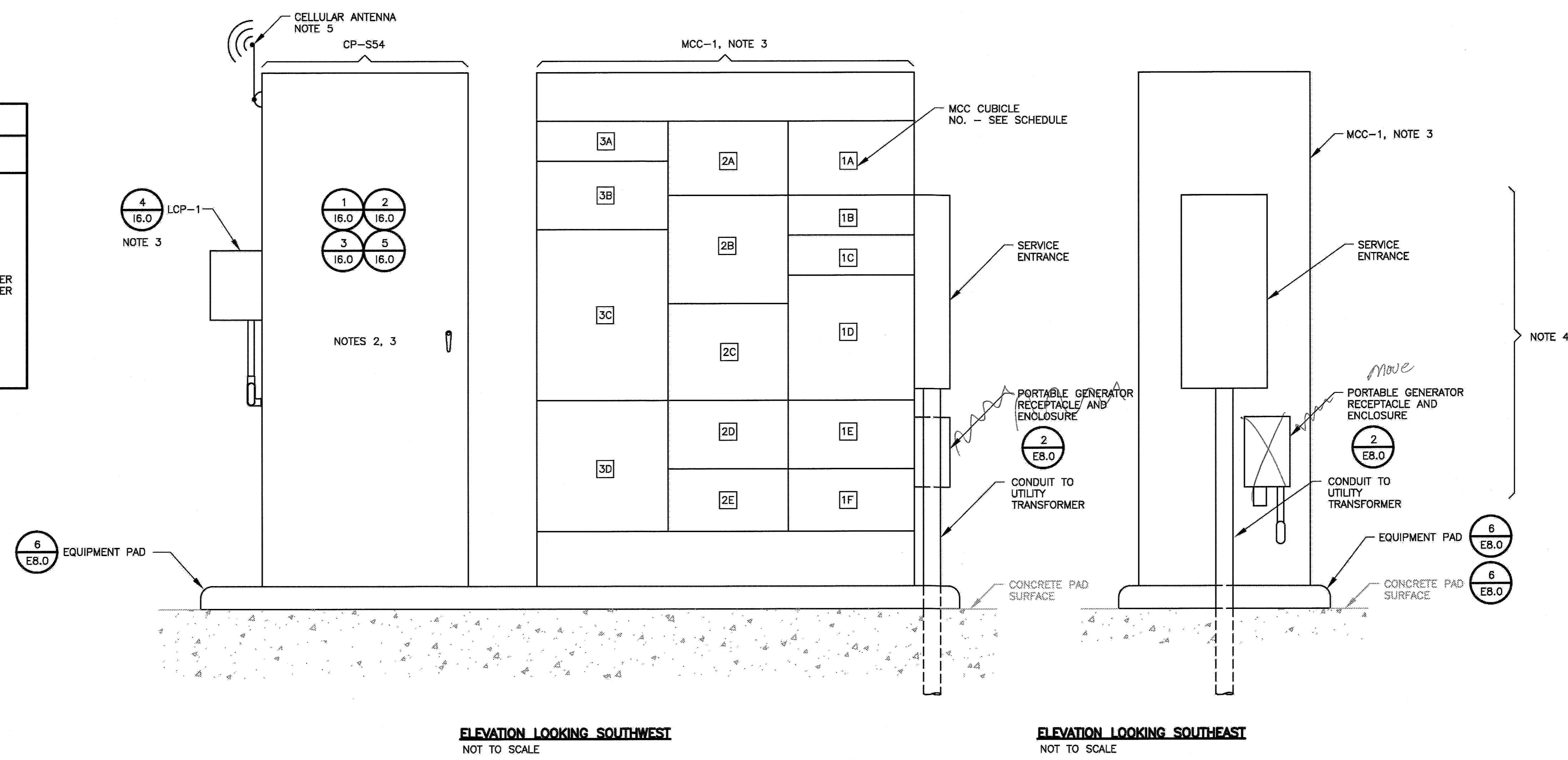
SHEET **E8.1**
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CITY OF PETALUMA
 VICTORIA LIFT STATION UPGRADE
 DETAILS & ELEVATIONS - 3
 ELECTRICAL

MCC-1 SCHEDULE	
CUBICLE NO.	CONTENTS
1A	SPACE
1B	SPD
1C	POWER MONITOR
1D	SPACE
1E	MAIN BREAKER
1F	GENERATOR BREAKER
2A	SPACE
2B	PMP-001 MOTOR STARTER
2C	PMP-002 MOTOR STARTER
2D	SPARE BREAKER
2E	SPACE
3A	SPACE
3B	TRANSFORMER BREAKER
3C	PANELBOARD LP-1
3D	TRANSFORMER XF-1



ELEVATION LOOKING SOUTHWEST
 NOT TO SCALE

ELEVATION LOOKING SOUTHEAST
 NOT TO SCALE

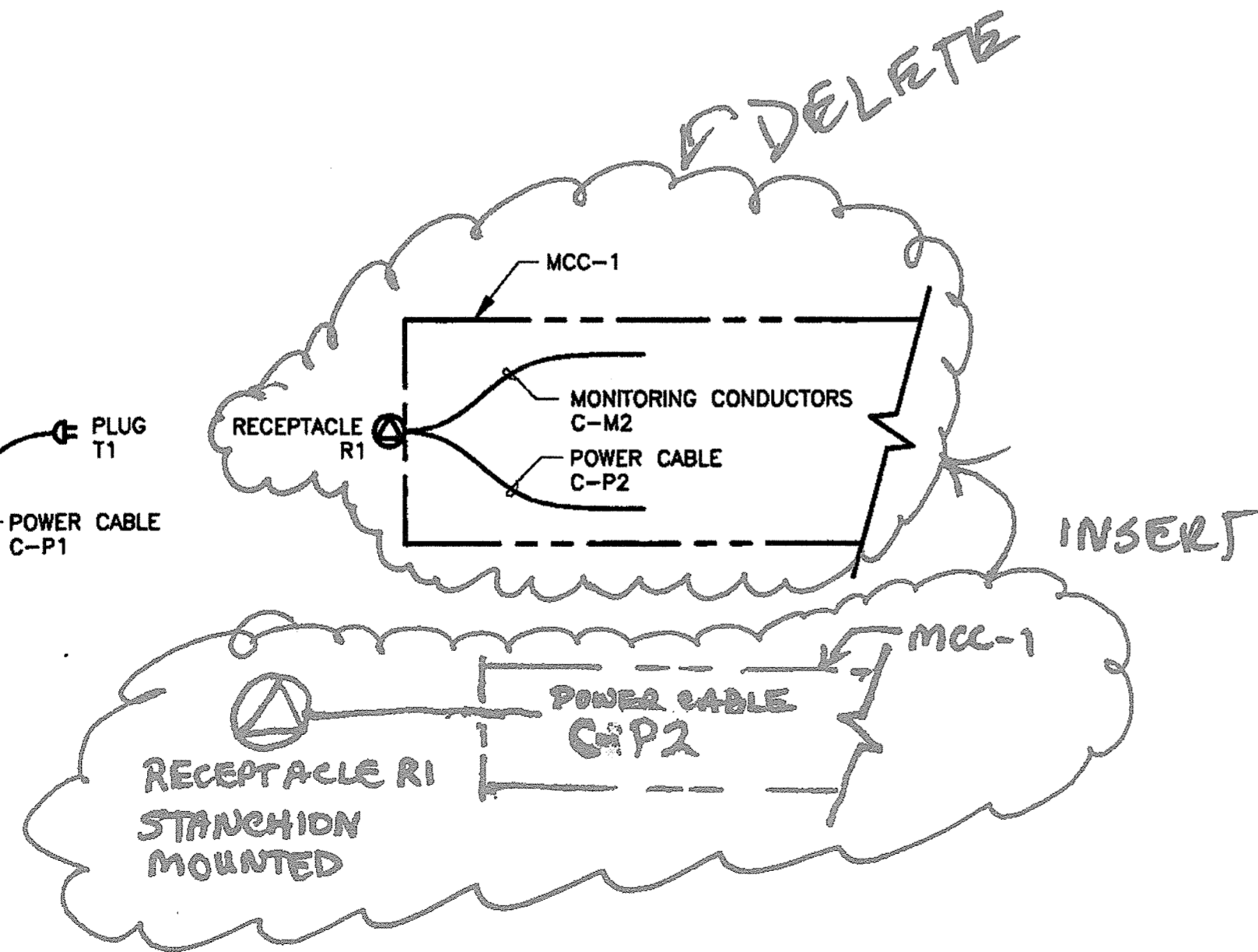
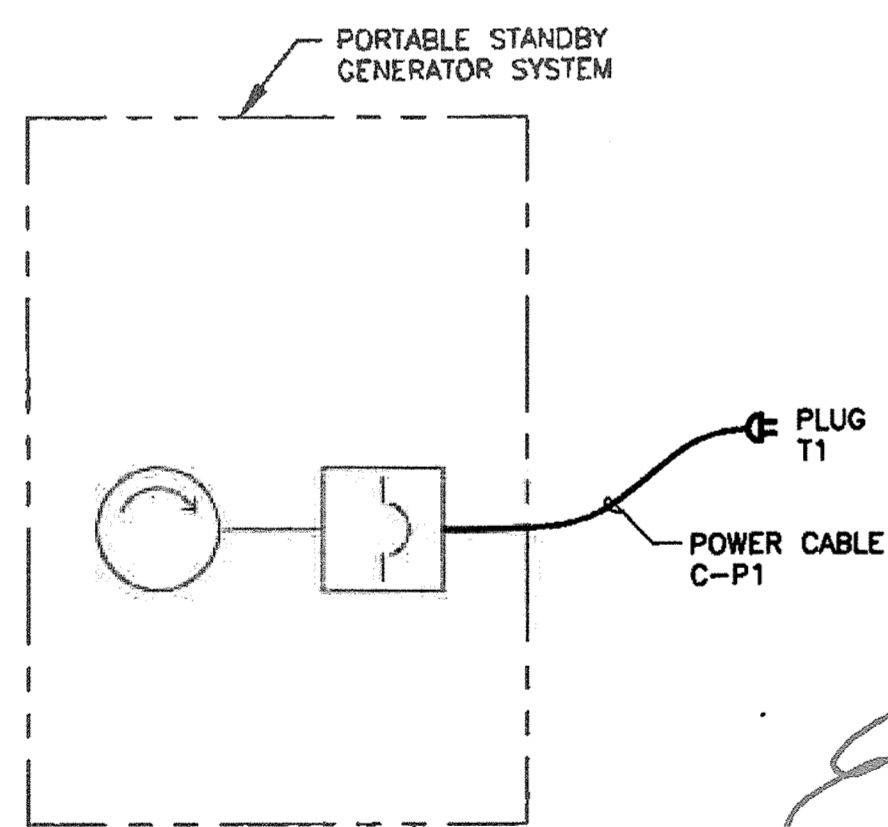
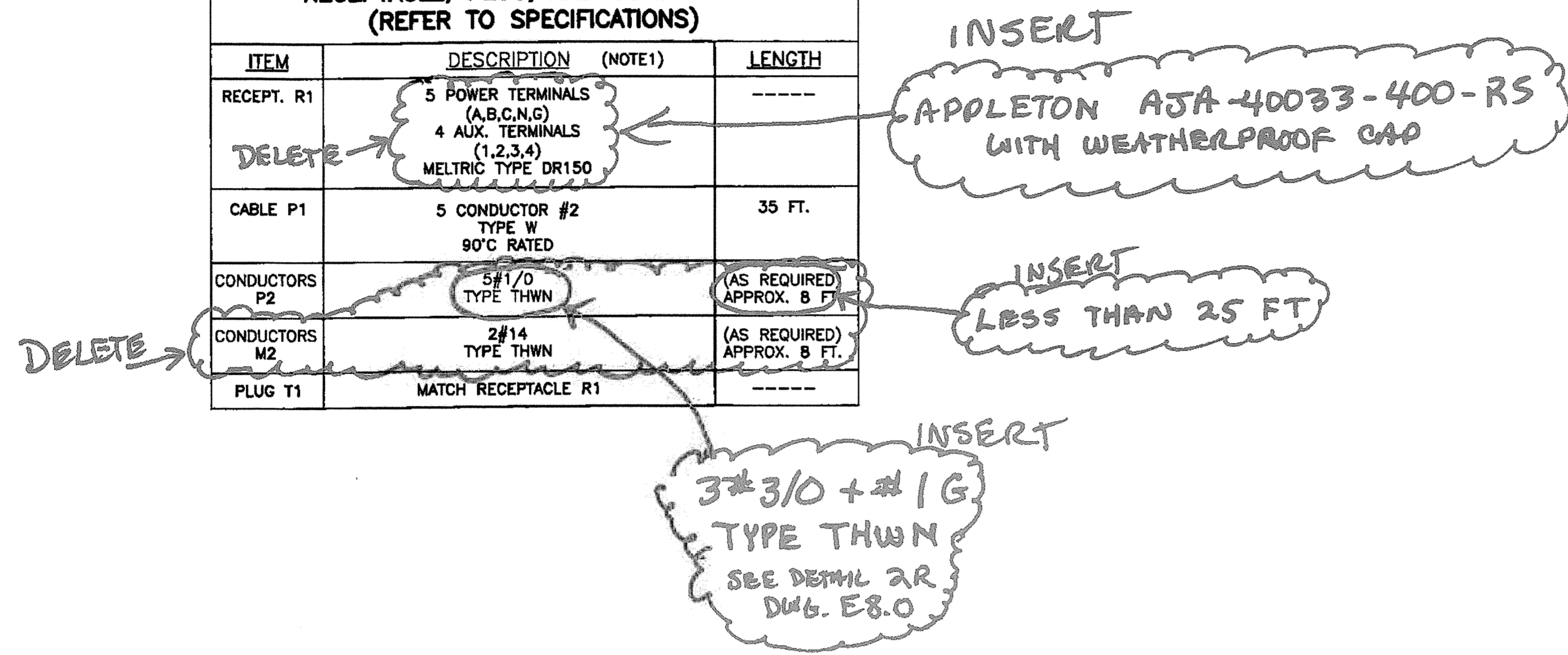
MCC-1 & CONTROL PANEL CP-S45 ELEVATION
 NOT TO SCALE

- NOTES:**
- SEE LEGEND AND GENERAL NOTES ON SHEET E1.
 - SEE DRAWING I6.0 FOR CP-S54 AND LCP-1 LAYOUT.
 - REFERENCE PANEL SCHEDULE ON SHEET E9.
 - LAYOUT OF SERVICE ENTRANCE AND GENERATOR PROVISIONS IS PRELIMINARY. COORDINATE SIZES AND ARRANGEMENTS, SUBMIT DETAILED ELEVATION.
 - REUSE CELLULAR MODEM AND ANTENNA FROM EXISTING CONTROL PANEL.

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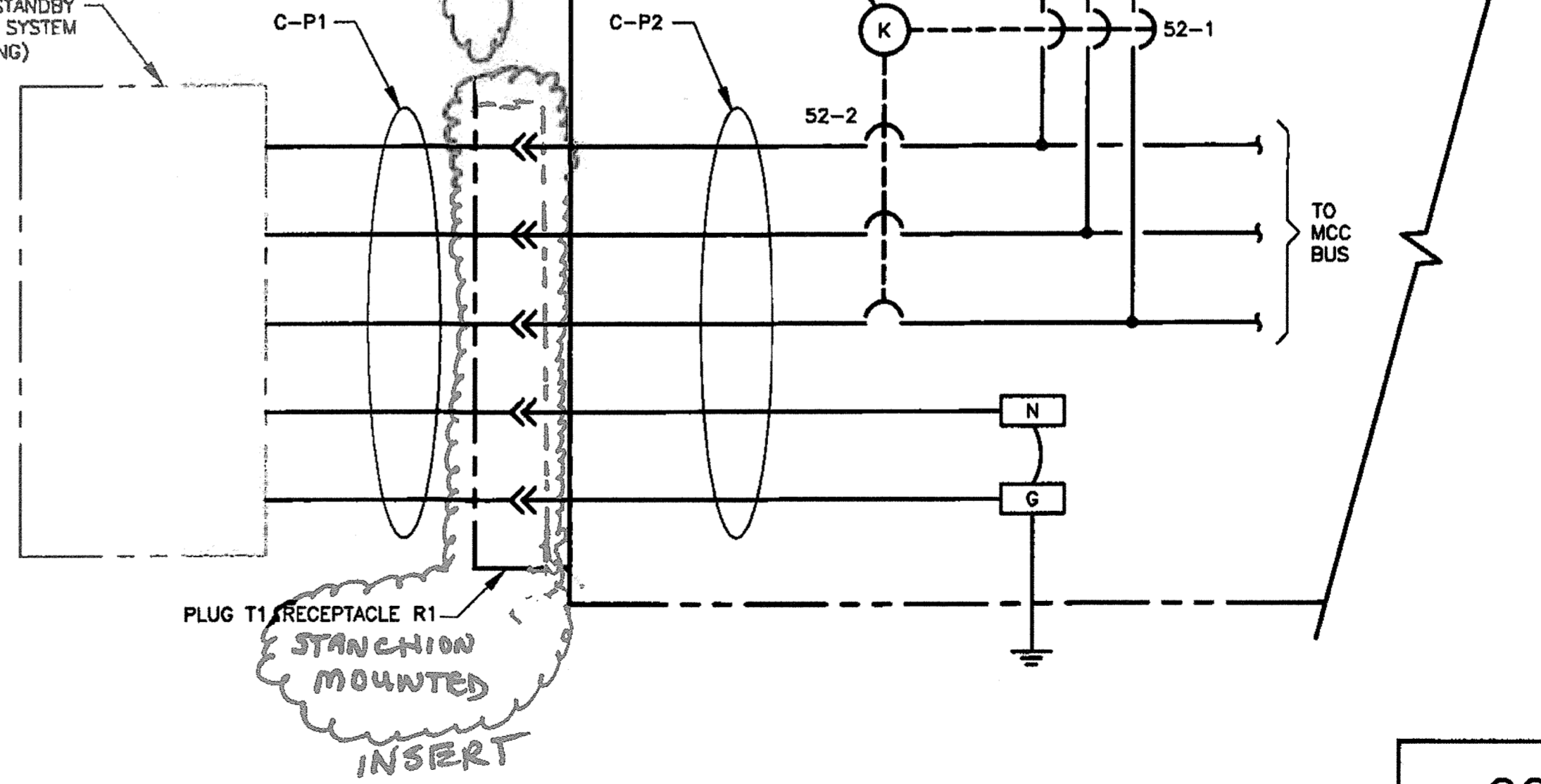
NOTES:
 1. PLUG AND RECEPTACLE PART NUMBERS ARE GENERAL. COORDINATE WITH THE CITY AND COORDINATE DETAILED PART NUMBER PRIOR TO SUBMISSION.

SCHEDULE		
RECEPTACLE, PLUG, AND CONDUCTORS (REFER TO SPECIFICATIONS)		
ITEM	DESCRIPTION (NOTE1)	LENGTH
RECEPT. R1	5 POWER TERMINALS (A,B,C,N,G) 4 AUX. TERMINALS (1,2,3,4) MELTRIC TYPE DR150	-----
CABLE P1	5 CONDUCTOR #2 TYPE W 90°C RATED	35 FT.
CONDUCTORS P2	5#1/0 TYPE THWN	(AS REQUIRED) APPROX. 8 FT.
CONDUCTORS M2	2#14 TYPE THWN	(AS REQUIRED) APPROX. 8 FT.
PLUG T1	MATCH RECEPTACLE R1	-----

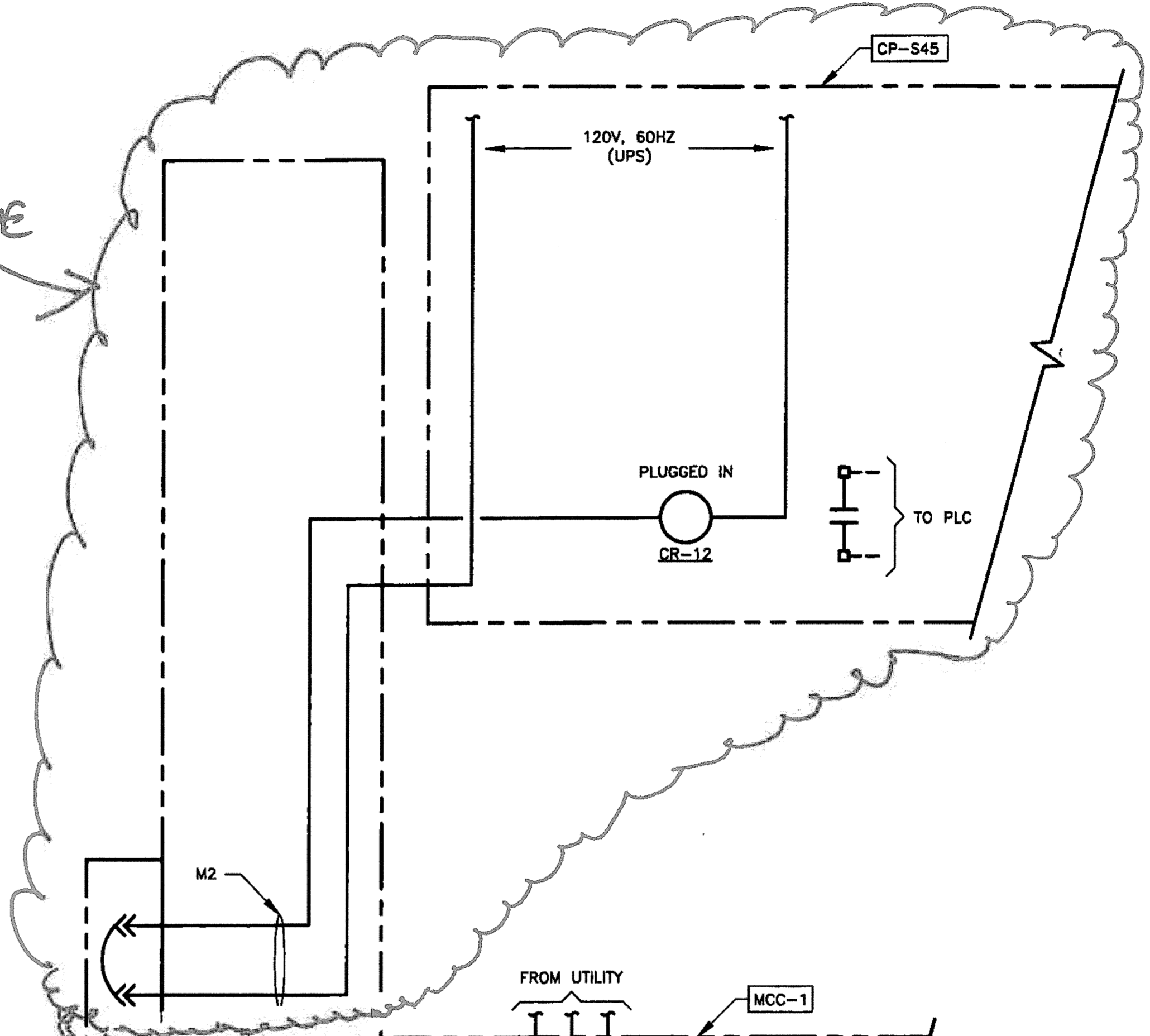


PLUG, RECEPTACLE AND CONDUCTORS

PORTABLE STANDBY GENERATOR SYSTEM (EXISTING)



PORTABLE GENERATOR SCHEMATIC

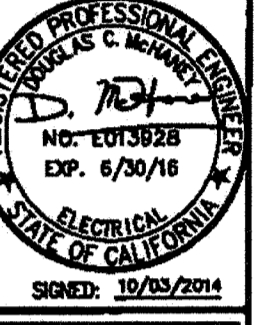
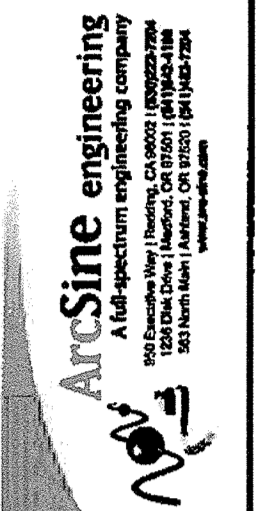


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 3/2/15
 PCD-01

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PROJECT NO. C8601002
 DESIGNED BY: JS
 DRAWN BY: JJ 1168-EB.3
 CHECKED BY: DM

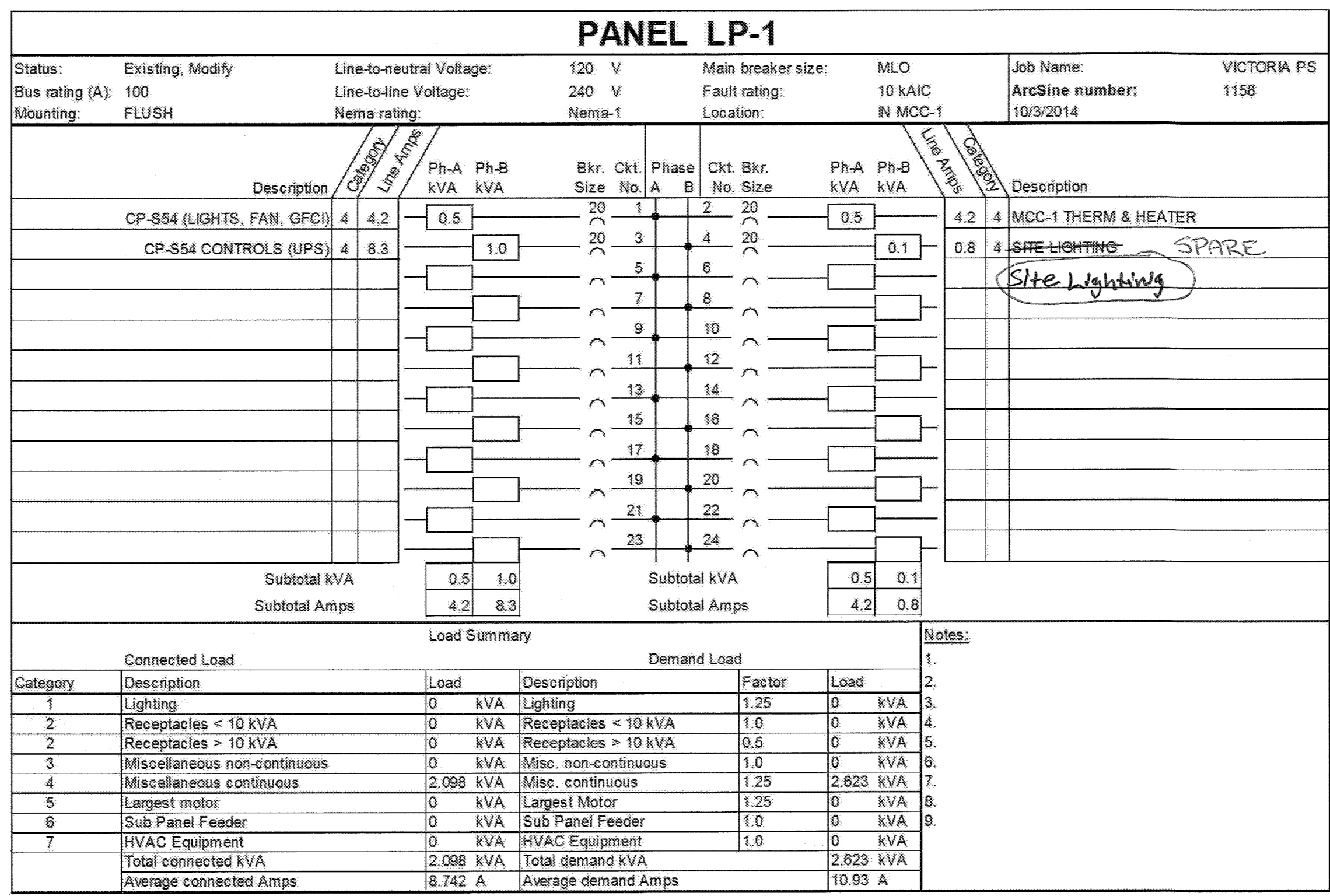
DATE: 10/02/2014



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CITY OF PETALUMA
 VICTORIA LIFT STATION UPGRADE
 DETAILS & ELEVATIONS - 4
 ELECTRICAL

SHEET
E8.3
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PANEL SCHEDULE						
DESCRIPTION	PANEL TAG	INSTRUMENT DRAWING	ELECTRICAL DRAWING	MOUNTING	NEMA RATING	SPECIFIED IN
PLC PANEL	CP-S54	I6		A	3R	316SS 13300
INTRUSION OVERRIDE	LCP-1	I6		B	4X	316SS 13300
RADIO REPEATER	CP-S54R		E10.1	D	3R	316SS 13300
MOTOR CONTROL	MCC-1		E8.2	A	3R	316SS 16050

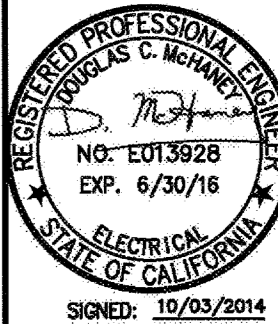
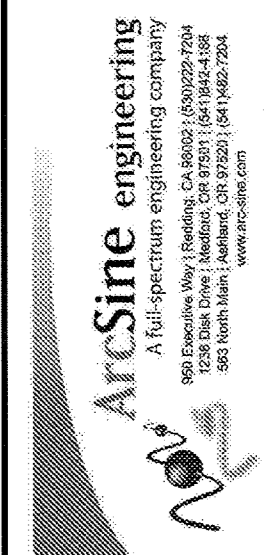
PANEL MOUNTING	
A	FREE STANDING
B	WALL OR SURFACE
C	STANCHION
D	HANDRAIL

STATION PLC-S54 I/O COUNT SCHEDULE (NOTE 2)											
I/O LIST				INSTALLED I/O COUNT				PLC MODULES			
DI	DO	AI	AO	DI	DO	AI	AO	DI (16 POINTS/MODULE)	DO (16 POINTS/MODULE)	AI (8 POINTS/MODULE)	AO (8 POINTS/MODULE)
29	5	2	0	48	16	8	0	3	1	1	0

- NOTES:**
- SEE LEGEND AND GENERAL NOTES ON SHEET E1.
 - ALL SPARE PLC I/O SHALL BE WIRED TO PANEL TERMINAL STRIPS.

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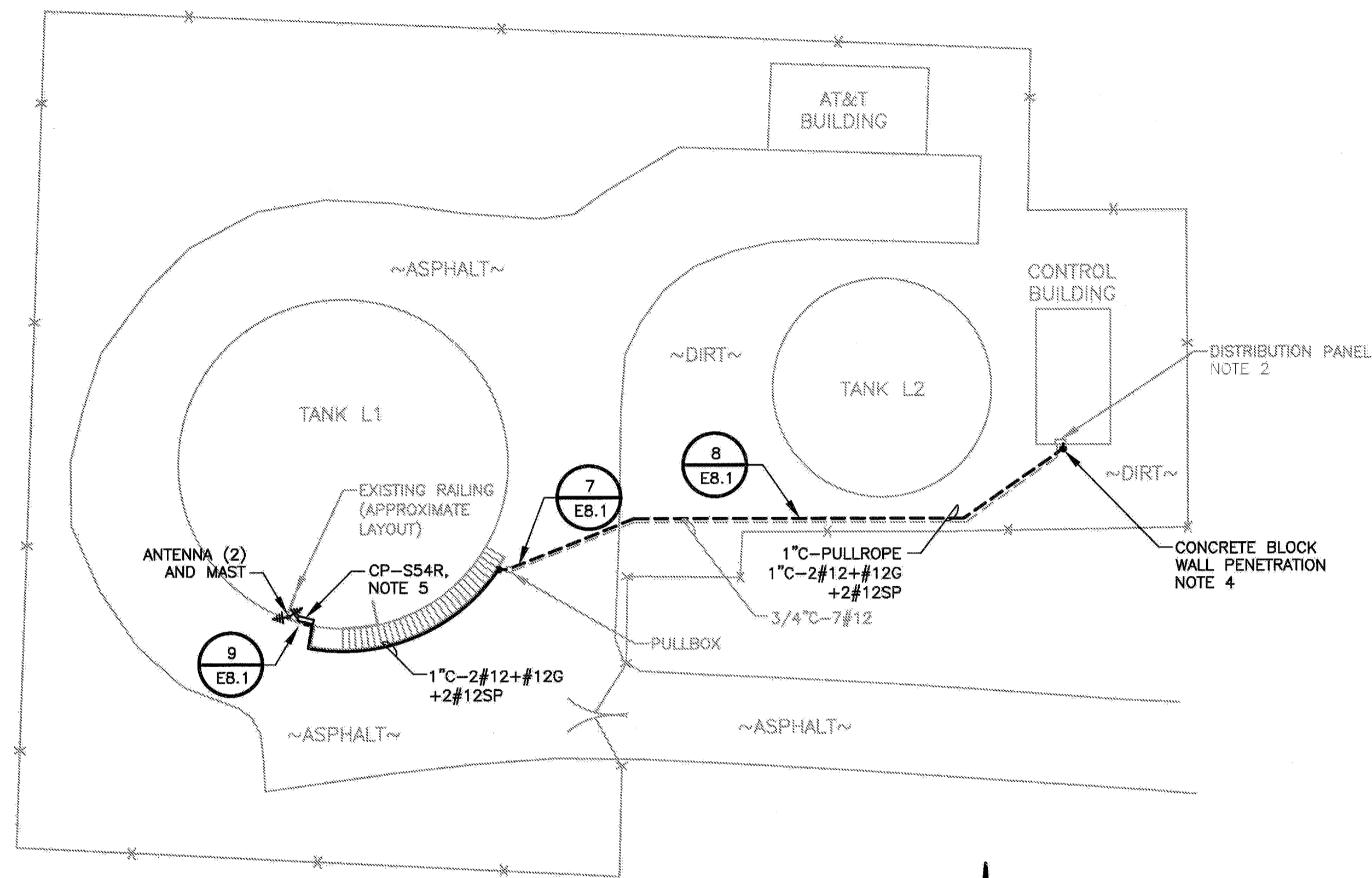
PROJECT NO. C06601002
DESIGNED BY: JS
DRAWN BY: JJ 1158 E9
CHECKED BY: DM
DATE: 10/02/2014



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CITY OF PETALUMA
VICTORIA LIFT STATION UPGRADE
SCHEDULES
ELECTRICAL

SHEET
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SITE PLAN
SCALE: 1"=20'



NOTES:

1. SEE LEGEND AND GENERAL NOTES ON SHEET E1.
2. FURNISH AND INSTALL NEW 20A BREAKER IN EXISTING DISTRIBUTION PANEL. THE NEW BREAKER SHALL SERVE CP-S54R LOCATED ON TOP OF TANK L-1.
3. LOCATIONS OF ALL EXISTING CONDUITS ARE NOT SHOWN. CONTRACTOR SHALL EXERCISE CAUTION WHEN TRENCHING FOR NEW UNDERGROUND CONDUIT.
4. CORE DRILL SOUTH WALL OF CONTROL BUILDING. NEW CONDUIT SHALL PENETRATE THE WALL AND SHALL BE ROUTED TO THE EXISTING DISTRIBUTION PANEL. SEAL AROUND PENETRATION.
5. REFERENCE PANEL SCHEDULE ON SHEET E9.

1 INCH

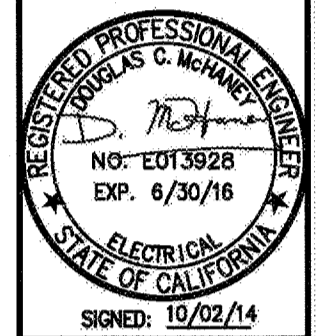
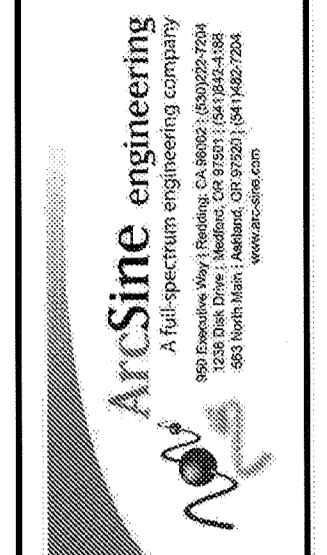
BAR EQUALS ONE INCH WHEN DRAWING IS PLOTTED FULL SIZE. IF NOT, SCALE ACCORDINGLY

OCTOBER
2014

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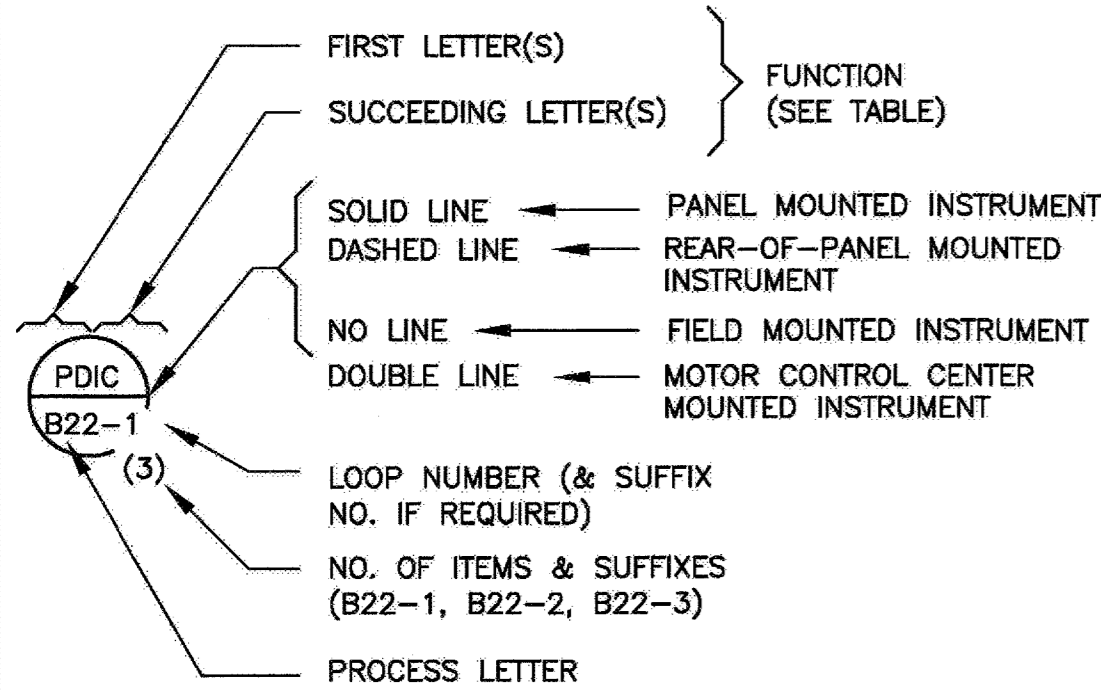
PROJECT NO. 066501002
DESIGNED BY: JS
DRAWN BY: JJ 1158-E7
CHECKED BY: DM
DATE: 10/02/2014



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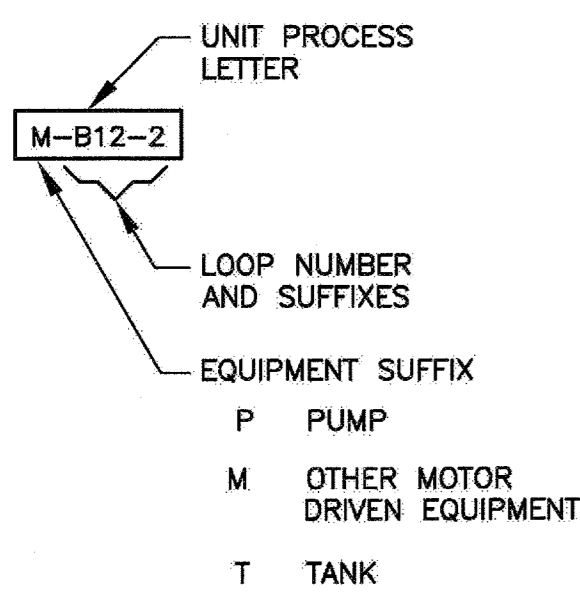
CITY OF PETALUMA
VICTORIA LIFT STATION UPGRADE
LA CRESTA TANKS - RADIO REPEATER
SITE PLAN
ELECTRICAL

INSTRUMENT IDENTIFICATION



TAG NO. CONSISTS OF FUNCTION IDENTIFICATION & LOOP NO. EXAMPLE: PDIC B22-3

EQUIPMENT IDENTIFICATION



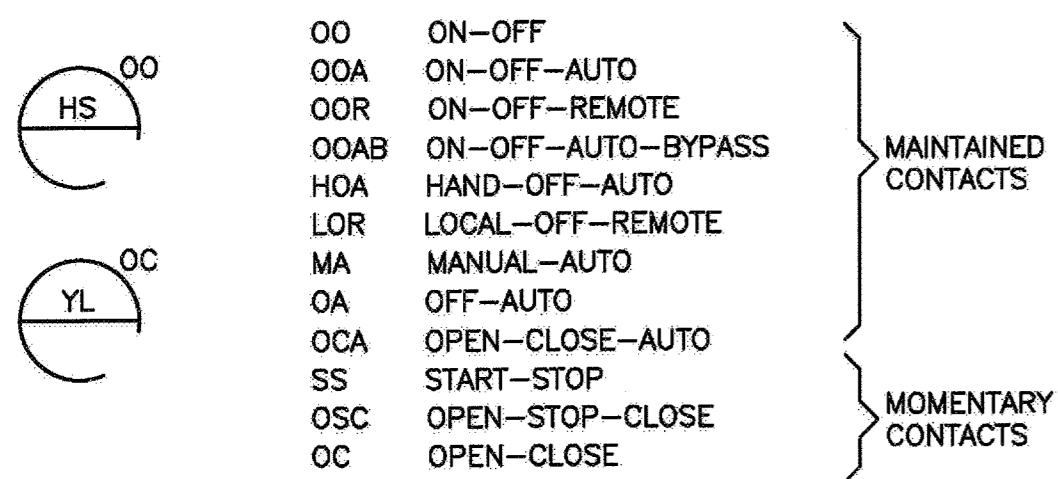
ABBREVIATIONS

- 316SST TYPE 316 STAINLESS STEEL
- ANN ANNUNCIATOR
- A/R AS REQUIRED
- AS ADJUSTABLE SPEED
- ATM ATMOSPHERE
- CCS CENTRAL CONTROL SYSTEM
- CP CONTROL PANEL
- CS CONTROL STATION
- EXST. (E) EXISTING
- FP FIELD PANEL
- MCC MOTOR CONTROL CENTER
- O/C OPEN/CLOSE(D)
- OIP OPERATOR INTERFACE PANEL
- TYP TYPICAL

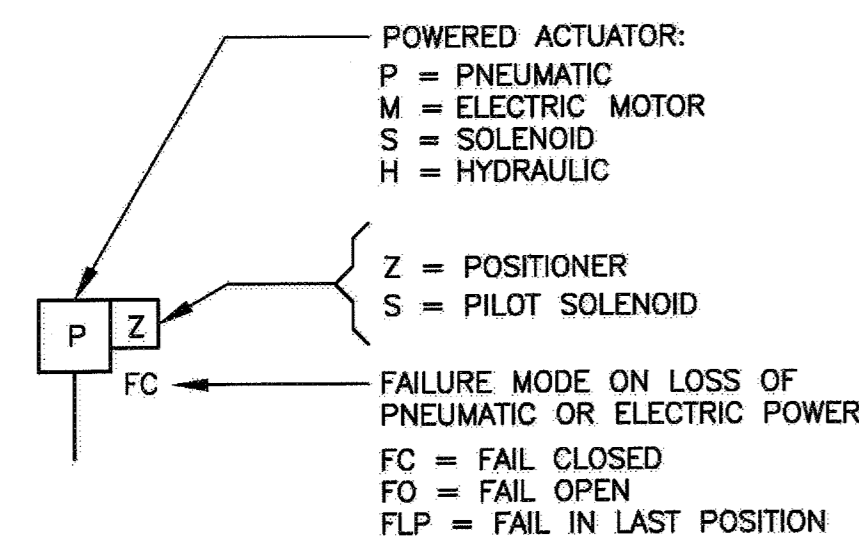
TRANSDUCER

- A = ANALOG
- V = VOLTAGE
- I = CURRENT
- P = PNEUMATIC
- PF = PULSE FREQUENCY
- PD = PULSE DURATION
- BCD = BINARY CODED DECIMAL

HAND SWITCHES AND INDICATING LIGHTS



ACTUATOR



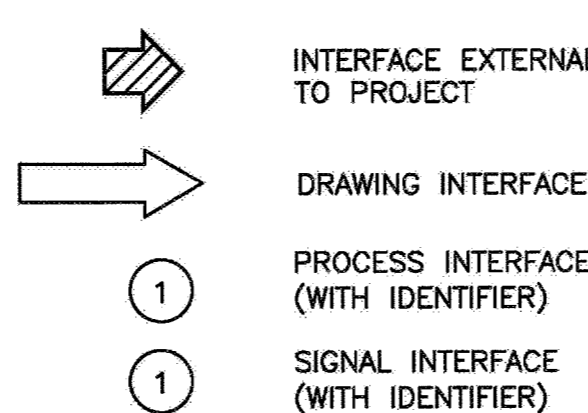
THE INTERNATIONAL SOCIETY OF AUTOMATION

LETTER	FIRST LETTER(S)		SUCCEEDING LETTERS		
	MEASURED OR INITIATING VARIABLE	MODIFIER	READOUT OR PASSIVE FUNCTION	OUTPUT FUNCTION	MODIFIER
A	ANALYSIS		ALARM		
B	BURNER, COMBUSTION		USERS CHOICE	USERS CHOICE	USERS CHOICE
C	CONDUCTIVITY			CONTROL	
D	DENSITY (S.G)	DIFFERENTIAL			
E	VOLTAGE		SENSOR (PRIMARY ELEMENT)		
F	FLOW RATE	RATIO (FRAC)			
G	GAUGE (DIMENSION)		GLASS VIEWING DEVICE	GATE	
H	HAND (MANUAL)				HIGH, OPEN
I	CURRENT (ELECTRICAL)		INDICATE		
J	POWER	SCAN			
K	TIME, TIME SCHEDULE	TIME RATE OF CHANGE		CONTROL STATION	
L	LEVEL		INDICATING LIGHT		LOW, CLOSED
M	MOISTURE OR HUMIDITY	MOMENTARY			MIDDLE, INTERMEDIATE
N	USERS CHOICE		USERS CHOICE	USERS CHOICE	USERS CHOICE
O	USERS CHOICE		ORIFICE (RESTRICTION)		
P	PRESSURE (OR VACUUM)		POINT (TEST CONNECTION)		
Q	QUANTITY	INTEGRATE, TOTALIZE			
R	RADIATION		RECORD OR PRINT		
S	SPEED OR FREQUENCY	SAFETY		SWITCH	
T	TEMPERATURE			TRANSMIT	
U	MULTIVARIABLE		MULTIFUNCTION	MULTIFUNCTION	MULTIFUNCTION
V	VIBRATION, MECHANICAL ANALYSIS			VALVE, DAMPER, LOUVER	
W	WEIGHT OR FORCE	WELL			
X	UNCLASSIFIED		UNCLASSIFIED	UNCLASSIFIED	UNCLASSIFIED
Y	EVENT, STATE OR PRESENCE			RELAY, COMPUTE CONVERT	
Z	POSITION, DIMENSION			DRIVE, ACTUATE OR UNCLASSIFIED FINAL CONTROL ELEMENT	

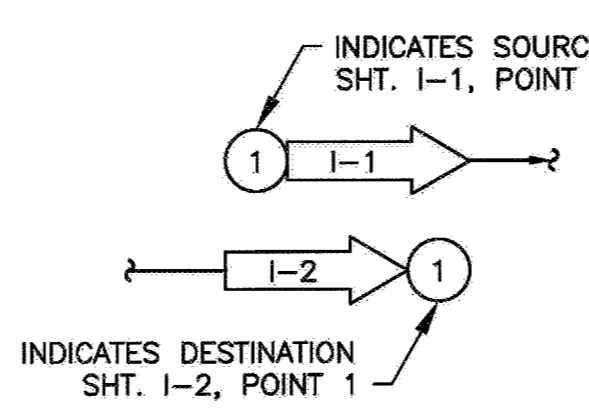
FLOW STREAM IDENTIFICATION

- AA - AGITATION AIR
- AIR - AIR
- ALS - ALUM SOLUTION
- BD - BLOWDOWN STREAM
- BIS - SODIUM BISULFITE SOLUTION
- BWW - BACKWASH WASTE
- CD - CHEMICAL DRAIN
- CGS - COAGULANT SOLUTION
- CLS - CHLORINE SOLUTION
- CS - CIRCULATING SLUDGE
- CTE - CHLORINATED TERTIARY EFFLUENT
- D - DRAIN
- DCW - DOMESTIC COLD WATER
- DD - DIGESTED DECANT
- DHW - DOMESTIC HOT WATER
- DR - DRAIN
- DS - DIGESTED SLUDGE
- DWS - DEWATERED SLUDGE
- EQE - EQUALIZATION TANK EFFLUENT
- FA - FOUL AIR
- FBW - FILTER BACKWASH
- FI - FILTER INFLUENT
- FLE - FILTER EFFLUENT
- FW - FIRE WATER
- G - GRIT
- HPCL - HYPOCHLORITE SOLUTION
- IA - INSTRUMENT AIR
- IAS - INSTRUMENT AIR SUPPLY
- ML - MIXED LIQUOR
- OF - OVERFLOW
- PAS - PLANT AIR SUPPLY
- PD - PUMPED DRAIN
- PLD - PLANT DRAIN
- PE - PRIMARY EFFLUENT
- PI - PRIMARY INFLUENT
- POS - POLYMER SOLUTION
- PS - PRIMARY SLUDGE
- PW - PROCESS WATER (PROTECTED DOMESTIC)
- RAS - RETURN ACTIVATED SLUDGE
- RCW - RECYCLED WATER
- RS - RAW SEWAGE
- RW - RECLAIMED WATER
- SA - SERVICE AIR
- SAM - SAMPLE
- SC - SCREENINGS
- SD - SANITARY DRAIN
- SE - SECONDARY EFFLUENT
- SF - SLUDGE FILTRATE
- SH - SODIUM HYPOCHLORITE
- SS - SECONDARY SCUM
- SW - SERVICE WATER (CHORINATED EFFLUENT)
- SWD - STORM WATER DRAIN
- TD - TANK DRAIN
- TE - TERTIARY EFFLUENT (UNCHLORINATED)
- TS - THICKENED SLUDGE
- TW - TREATED WATER
- UD - UNDERDRAIN
- UW - UTILITY WATER
- VP - VENT PIPE
- WAS - WASTE ACTIVATED SLUDGE

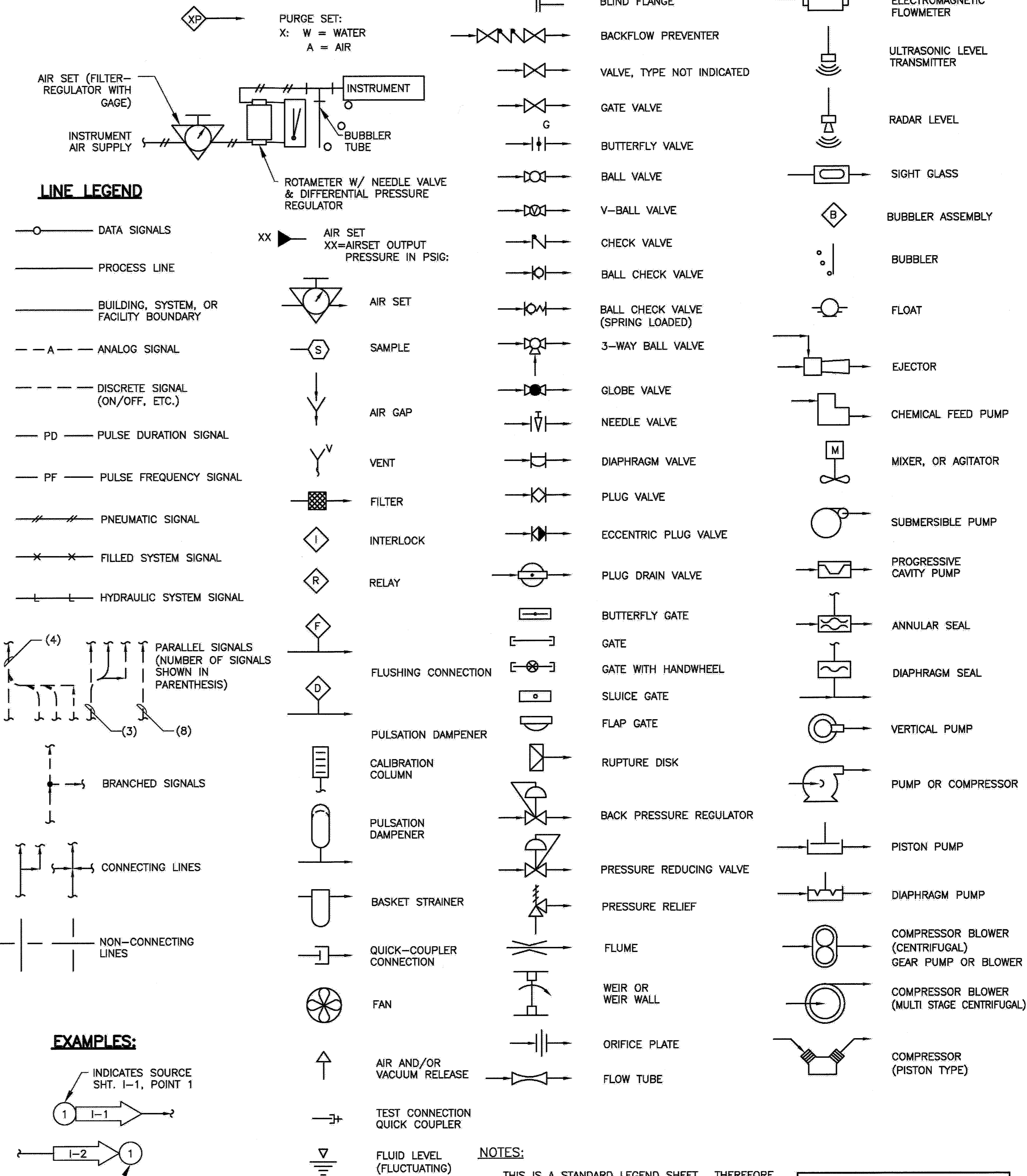
INTERFACE SYMBOLS



EXAMPLES:



SYMBOLS



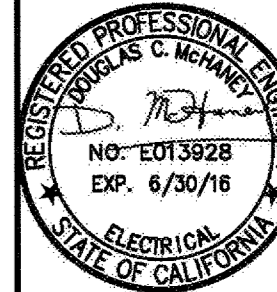
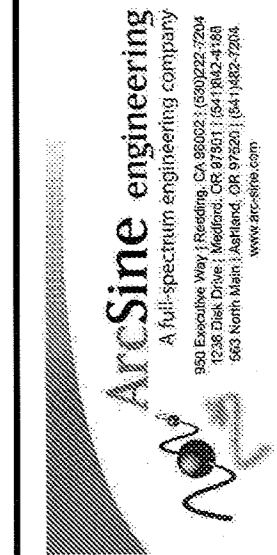
NOTES:

- THIS IS A STANDARD LEGEND SHEET. THEREFORE, SOME SYMBOLS OR ABBREVIATIONS MAY APPEAR ON THIS SHEET AND NOT ON THE PLANS.
- ITEMS SHOWN BOLD ARE NEW AND TO BE INSTALLED UNDER THIS CONTRACT UNLESS DESIGNATED OTHERWISE. ITEMS SHOWN THIN ARE EXISTING.

OCTOBER 2014

PROJECT NO. C06501002
DESIGNED BY: VM
DRAWN BY: JJ 1158-11
CHECKED BY: DM

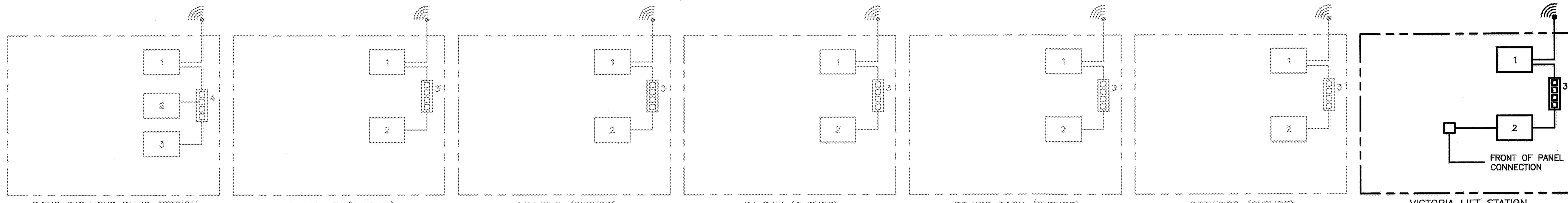
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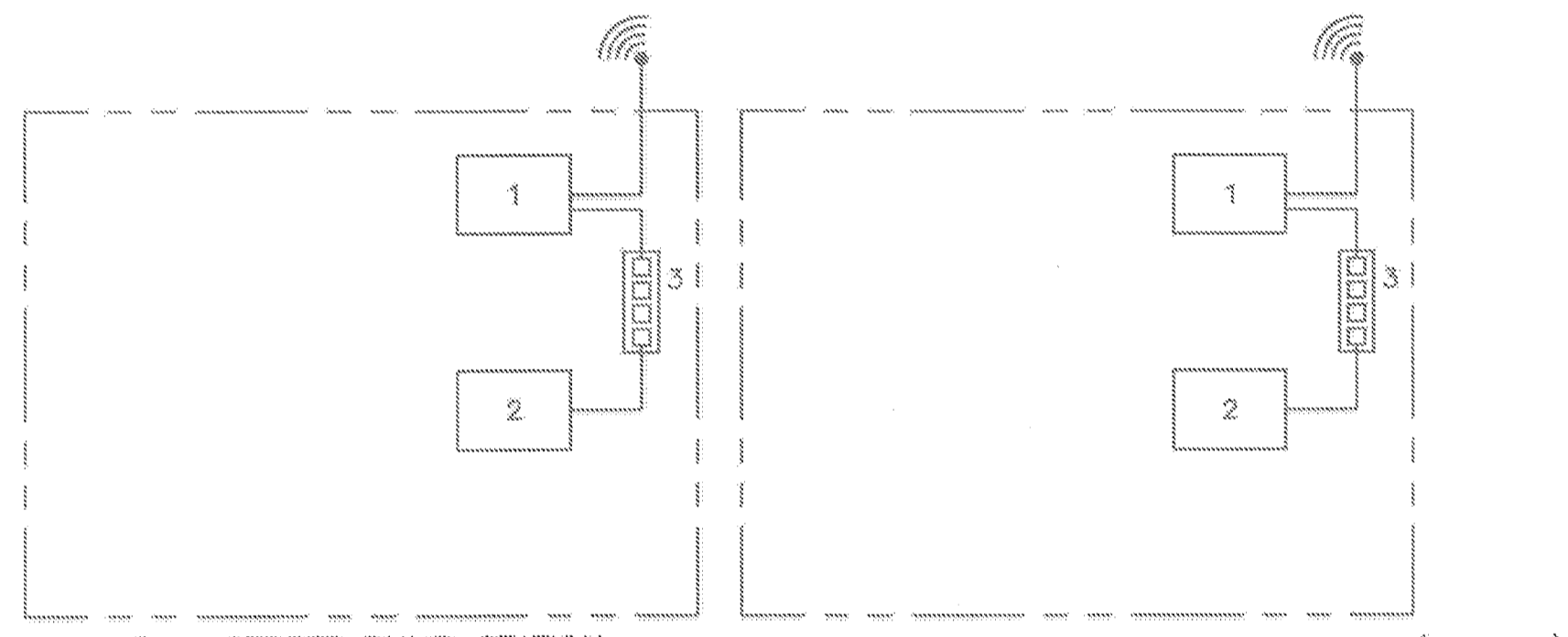
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VICTORIA LIFT STATION UPGRADE
LEGEND
INSTRUMENTATION

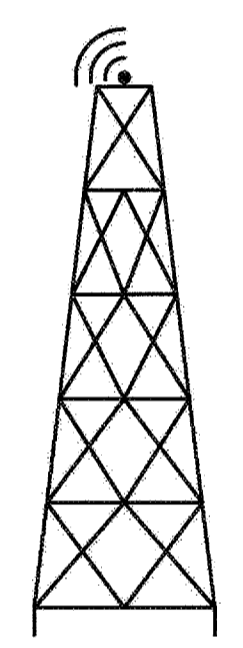
SHEET **11**
15 OF 29



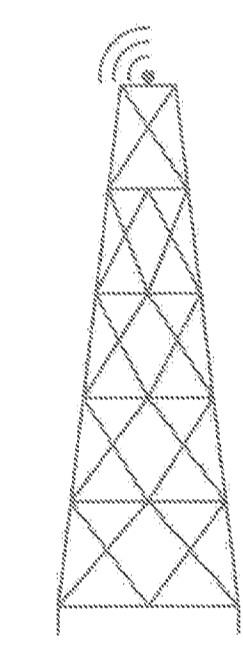
- POND INFLUENT PUMP STATION**
 1. SCADA RADIO: S53_RADIO NETWORK: WRF_REP1
 2. SCADA PLC: S53_PLC01_A
 3. SCADA PLC: S53_PLC01_B
 4. SCADA SWITCH (UNMANNED)
- COPELAND (FUTURE)**
 1. SCADA RADIO: S51_RADIO NETWORK: WRF_REP1
 2. SCADA PLC:
 3. SCADA SWITCH
- OAKMEAD (FUTURE)**
 1. SCADA RADIO: S41_RADIO NETWORK: WRF_REP1
 2. SCADA PLC:
 3. SCADA SWITCH
- PAYRAN (FUTURE)**
 1. SCADA RADIO: S50_RADIO NETWORK: WRF_REP1
 2. SCADA PLC:
 3. SCADA SWITCH
- PRINCE PARK (FUTURE)**
 1. SCADA RADIO: S61_RADIO NETWORK: WRF_REP1
 2. SCADA PLC:
 3. SCADA SWITCH
- REDWOOD (FUTURE)**
 1. SCADA RADIO: S60_RADIO NETWORK: WRF_REP1
 2. SCADA PLC:
 3. SCADA SWITCH
- VICTORIA LIFT STATION**
 1. SCADA RADIO: S54_RADIO NETWORK: WRF_REP1
 2. SCADA PLC:
 3. SCADA SWITCH



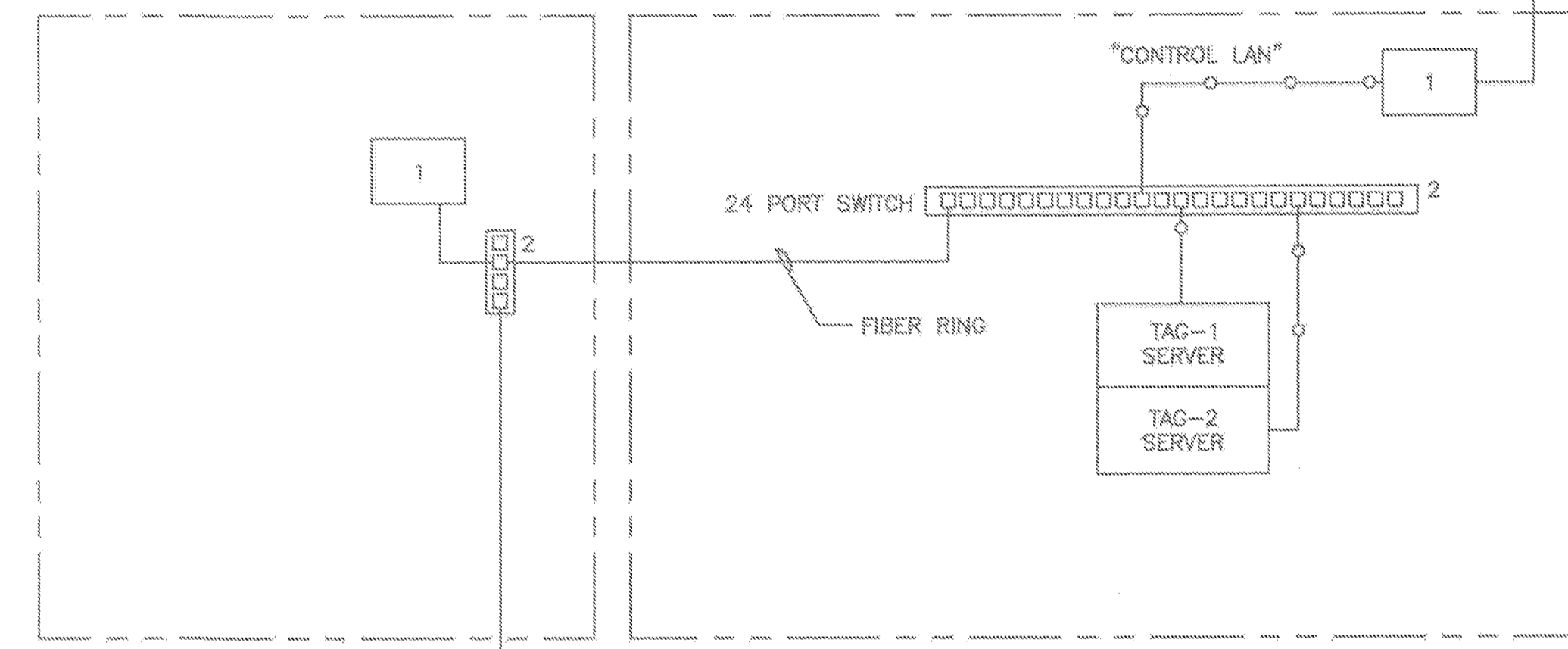
- C - STREET PUMP STATION**
 1. SCADA RADIO: S52_RADIO NETWORK: WRF_REP1
 2. SCADA PLC: S52_PLC
 3. SCADA SWITCH (UNMANAGED)
- FACTORY OUTLET MALL PUMP STATION (FUTURE)**
 1. SCADA RADIO: S62_RADIO NETWORK: WRF_REP1
 2. SCADA PLC: S62_PLC
 3. SCADA SWITCH



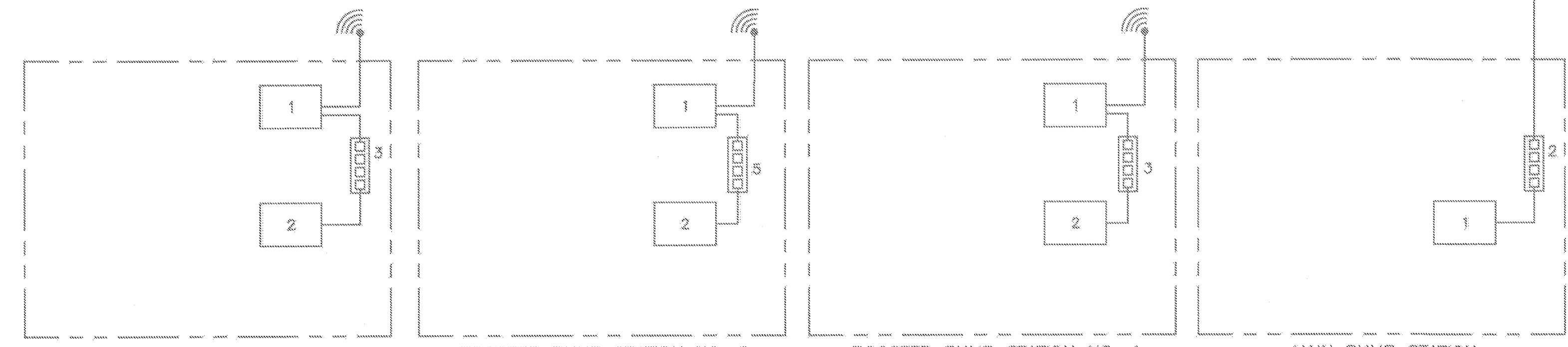
- LA CRESTA REPEATER**
1. SCADA RADIO: REMOTE GATEWAY NETWORK: WRF
 2. SCADA RADIO: ACCESS POINT 1 NETWORK WRF_REP1



- COUNTRY CLUB REPEATER**
1. SCADA RADIO: REMOTE GATEWAY NETWORK: WRF
 2. SCADA RADIO: ACCESS POINT 1 NETWORK WRF_REP1



- CCB CHEMICAL BUILDING**
 1. SCADA PLC 6
 2. SCADA SWITCH
- CITY OF PETALUMA ELLIS CREEK WATER RECYCLING FACILITY**
 1. SCADA RADIO: MASTER RADIO R00_RADIO NETWORK: WRF
 2. SCADA SWITCH



- WILMINGTON PUMP STATION (FUTURE)**
 1. SCADA RADIO: S63_RADIO NETWORK: WRF_REP1
 2. SCADA PLC:
 3. SCADA SWITCH:
- BOOSTER PUMP STATION NO. 2**
 1. SCADA RADIO: D42_RADIO NETWORK: WRF
 2. SCADA PLC: D42_PLC
 3. SCADA SWITCH (UNMANAGED)
- BOOSTER PUMP STATION NO. 1**
 1. SCADA RADIO: D41_RADIO NETWORK: WRF
 2. SCADA PLC: D41_PLC
 3. SCADA SWITCH (UNMANAGED)
- MAIN PUMP STATION**
 1. SCADA PLC: D40_PLC
 2. SCADA SWITCH (UNMANAGED)

NOTES:

1. THIS DRAWING SHOWS CITY SCADA PROVISIONS BEYOND THE VICTORIA PUMP STATION PROJECT. ITEMS SHOWN BOLD ARE THE SUBJECT OF THIS PROJECT. ITEMS SHOWN THIN ARE EXISTING, EXCEPT WHERE NOTED FUTURE IN WHICH CASE FUTURE PROJECT(S) WILL PROVIDE SCADA.

OCTOBER 2014

PROJECT NO. 066501002
 DESIGNED BY: VM
 DRAWN BY: JJ 1158-12
 CHECKED BY: DM

DATE: 10/02/2014

ArcSine engineering
 A full-spectrum engineering company
 9850 Sycamore Ave (Berkeley, CA 94702) (925) 862-2200
 580 North Blvd (Alhambra, CA 91801) (626) 444-2200
 www.arcsine.com

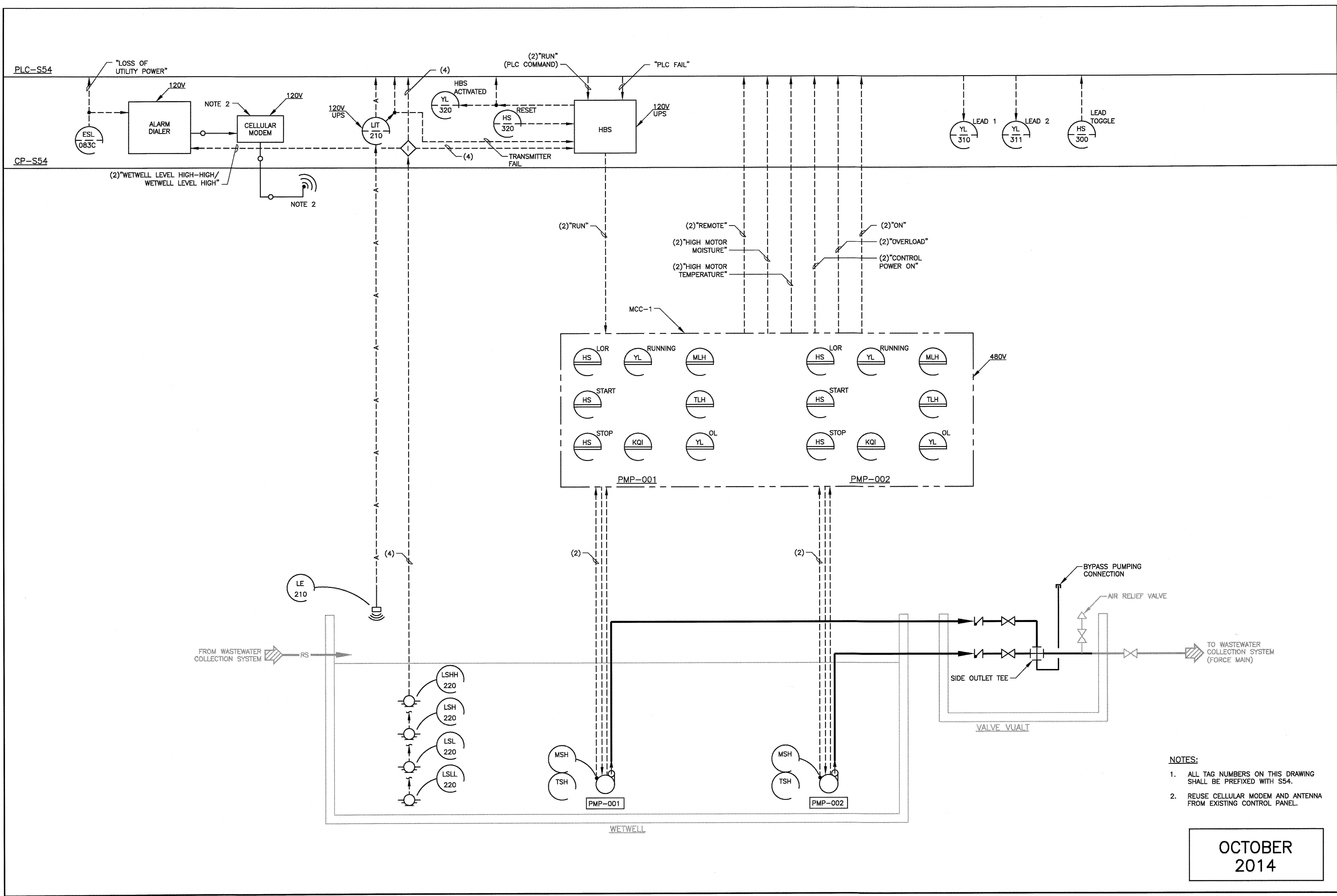
REGISTERED PROFESSIONAL ENGINEER
 STATE OF CALIFORNIA
 No. 10139228
 EXP. 6/30/16
 ELECTRONIC SIGNATURE

SIGNED: 10/03/2014

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CITY OF PETALUMA
 VICTORIA LIFT STATION UPGRADE
 INSTRUMENTATION
 BLOCK DIAGRAMS

SHEET
12
 16 OF 29



- NOTES:**
1. ALL TAG NUMBERS ON THIS DRAWING SHALL BE PREFIXED WITH S54.
 2. REUSE CELLULAR MODEM AND ANTENNA FROM EXISTING CONTROL PANEL.

OCTOBER
2014

PROJECT NO. C66501002
 DESIGNED BY: VM
 DRAWN BY: JJ 1158-13
 CHECKED BY: DM

DATE: 10/02/2014

ArcSine engineering
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 2225 South Main Street, Suite 200, Arcadia, CA 91709
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REGISTERED PROFESSIONAL ENGINEER
 STATE OF CALIFORNIA
 NO. E0135228
 EXP. 5/30/16
 SIGNED: 10/03/2014

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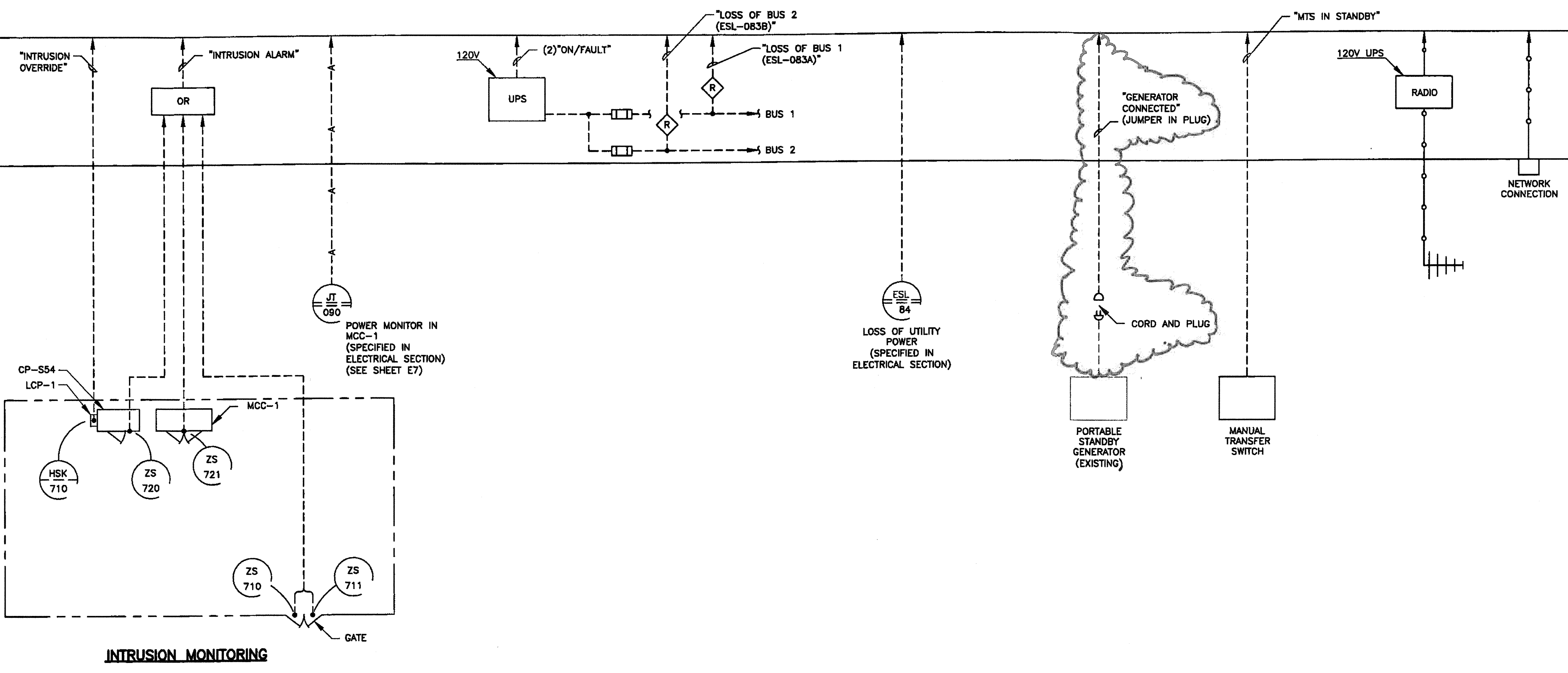
CITY OF PETALUMA
 VICTORIA LIFT STATION UPGRADE
 PROCESS AND INSTRUMENTATION DIAGRAM - 1
 INSTRUMENTATION

SHEET
13
 17 OF 29

3-222

PLC-S54

CP-S54



NOTES:

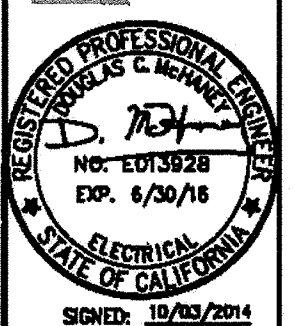
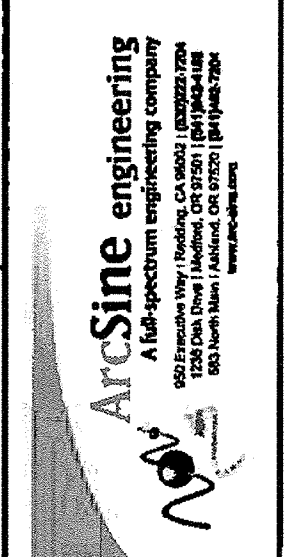
1. ALL TAG NUMBERS ON THIS DRAWING SHALL BE PREFIXED WITH S54.

*Revised
3/2/15
PCO-001*

OCTOBER
2014

PROJECT NO. 06690002
DESIGNED BY: VM
DRAWN BY: JJ 1158-14
CHECKED BY: DCM

DATE: 10/02/2014



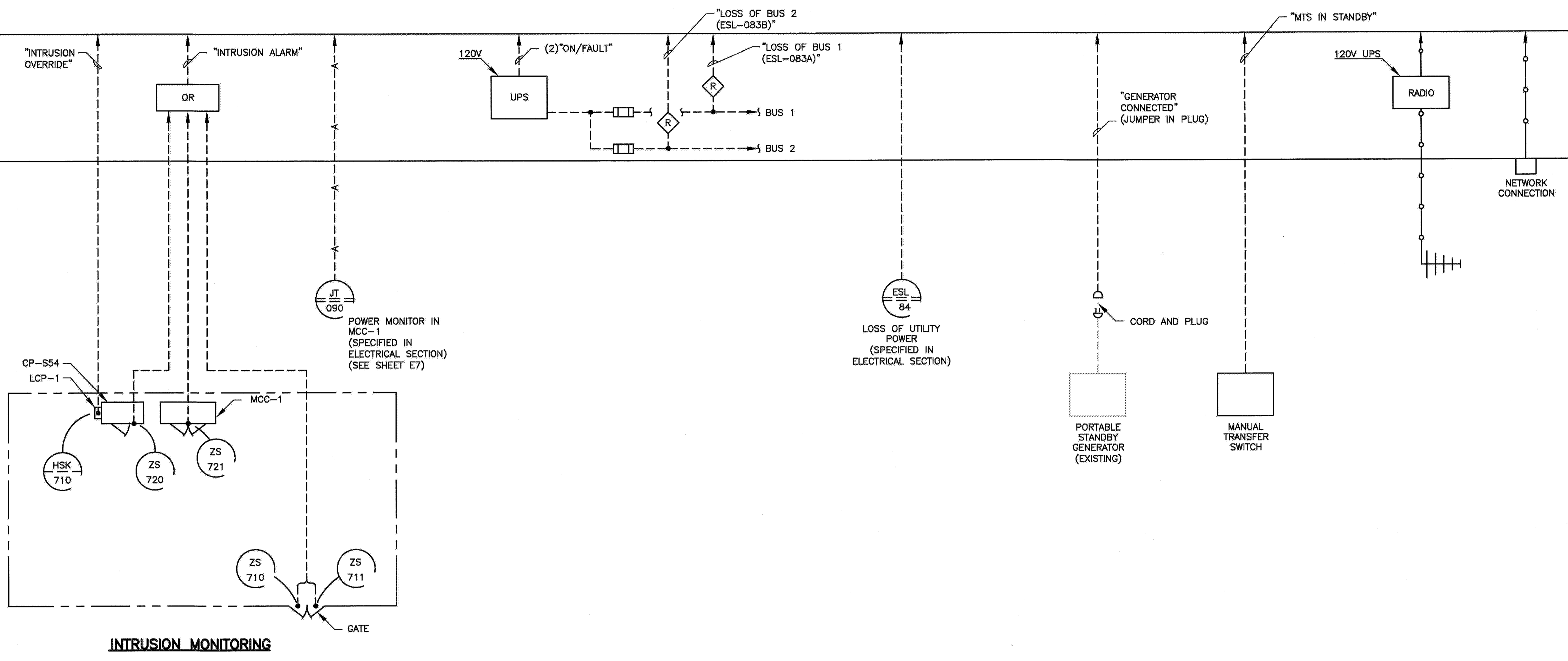
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CITY OF PETALUMA
VICTORIA LIFT STATION UPGRADE
PROCESS AND INSTRUMENTATION DIAGRAM - 2
INSTRUMENTATION

SHEET
14
18 OF 29

PLC-S54

CP-S54



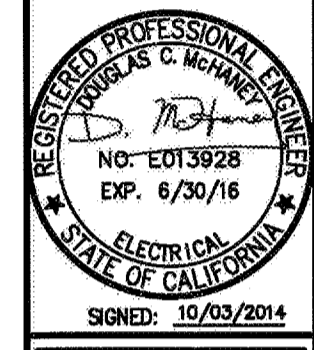
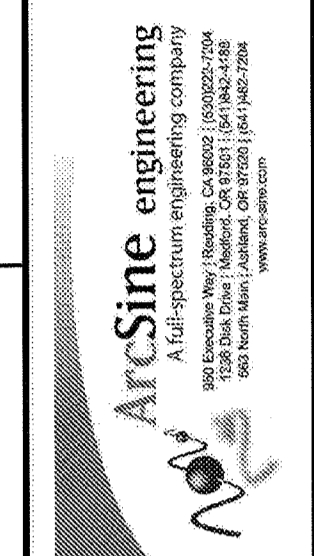
INTRUSION MONITORING

NOTES:
 1. ALL TAG NUMBERS ON THIS DRAWING SHALL BE PREFIXED WITH S54.

OCTOBER
2014

PROJECT NO. C6501002
 DESIGNED BY: VM
 DRAWN BY: JJ 11/8/14
 CHECKED BY: DCM

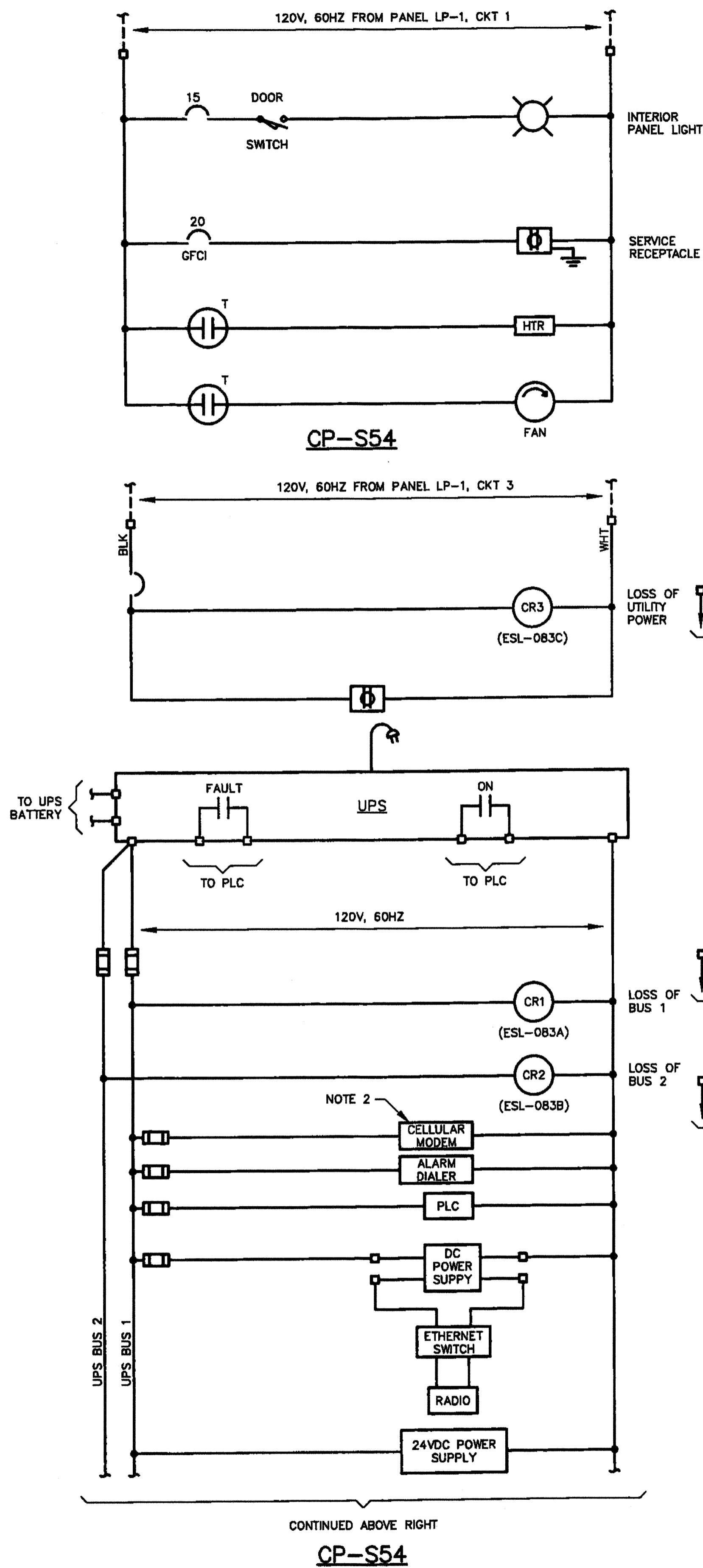
DATE: 10/02/2014



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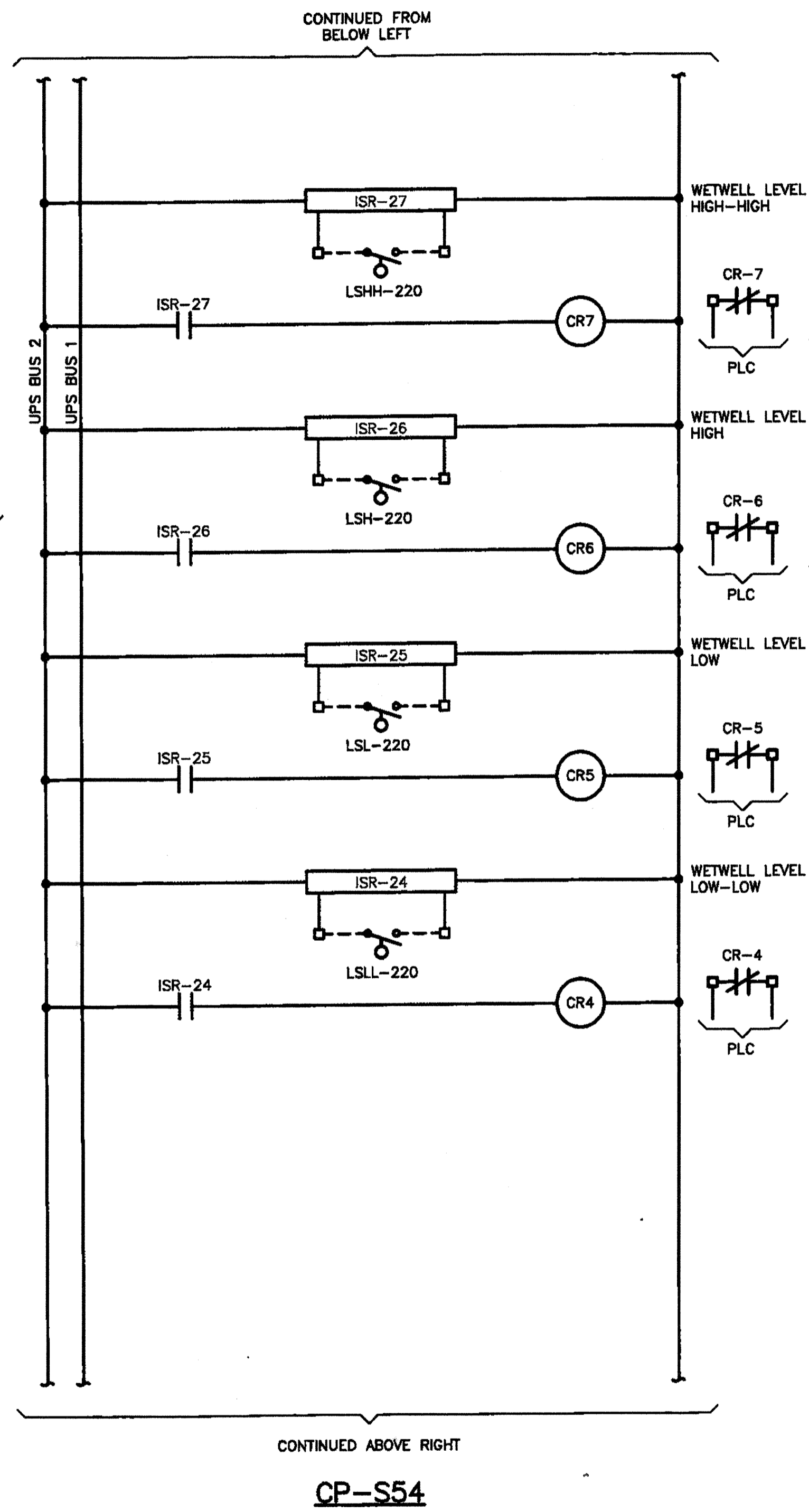
CITY OF PETALUMA
 VICTORIA LIFT STATION UPGRADE
 PROCESS AND INSTRUMENTATION DIAGRAM - 2
 INSTRUMENTATION

SHEET
14
 18 OF 29

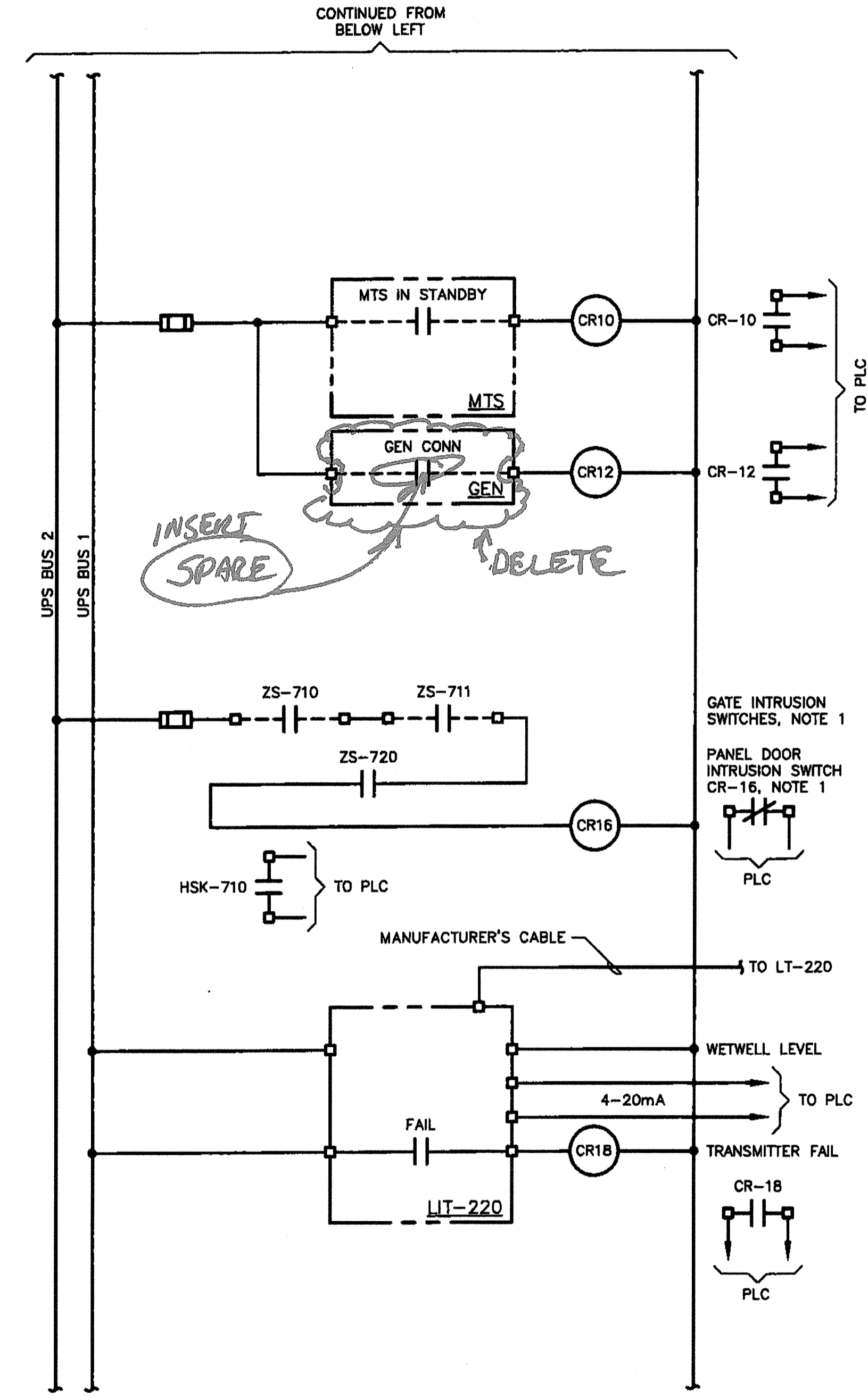


CP-S54

CP-S54



CP-S54



CP-S54

- NOTES:
1. SWITCHES CLOSE WHEN GATES AND DOOR ARE NOT OPEN.
 2. REUSE CELLULAR MODEM AND ANTENNA FROM EXISTING CONTROL PANEL.

*Revised
3/2/14
PCO-001*

OCTOBER
2014

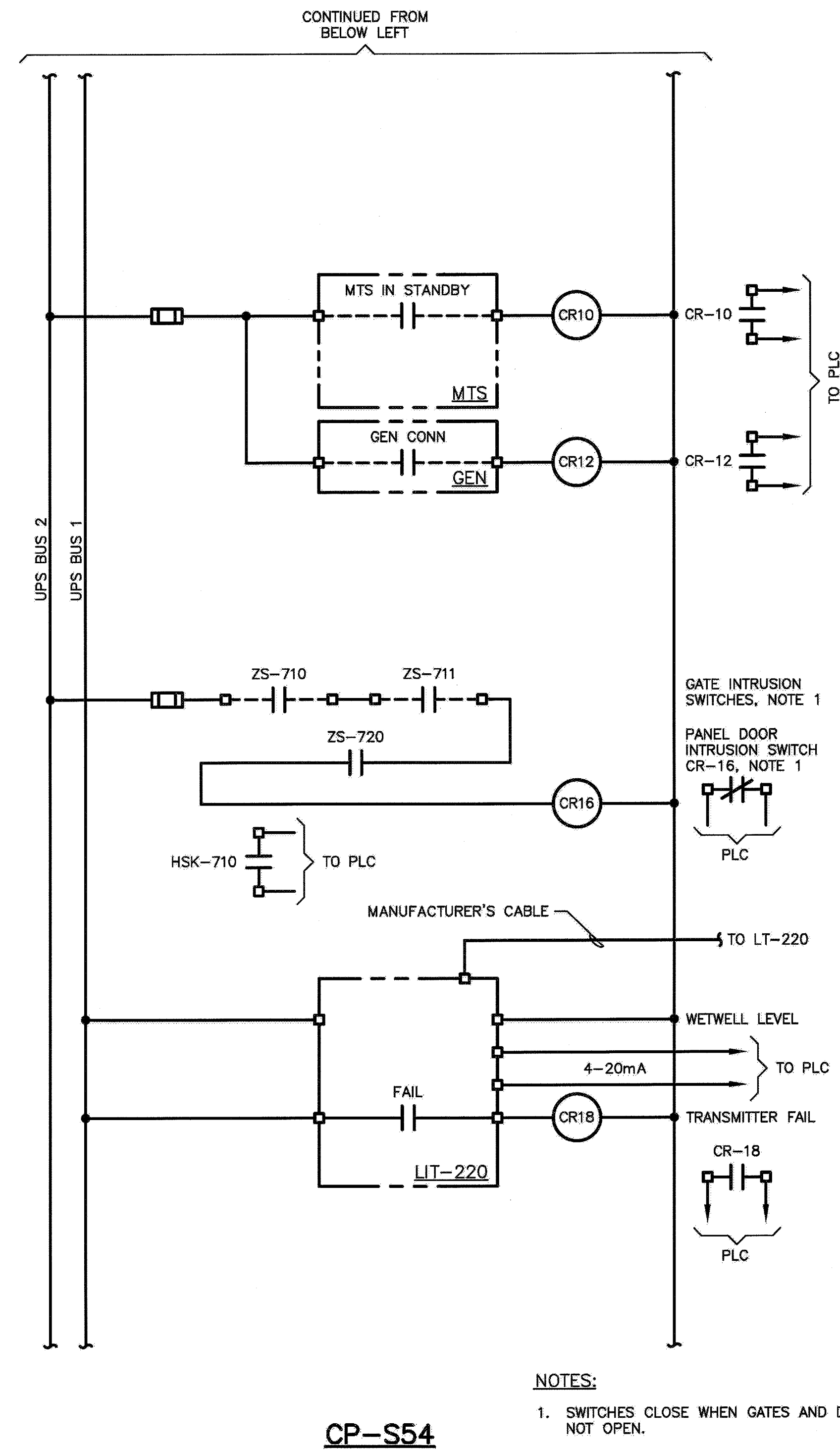
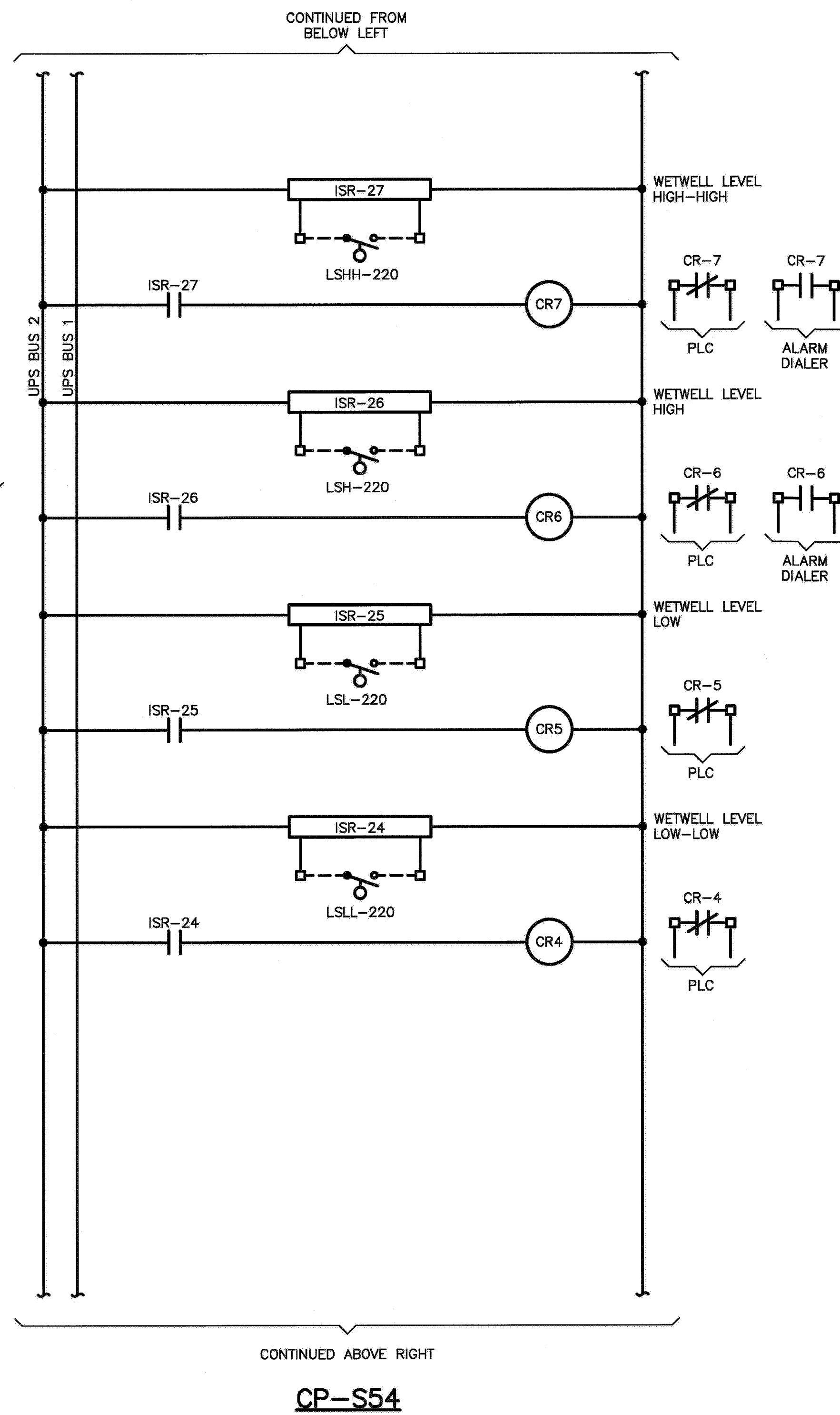
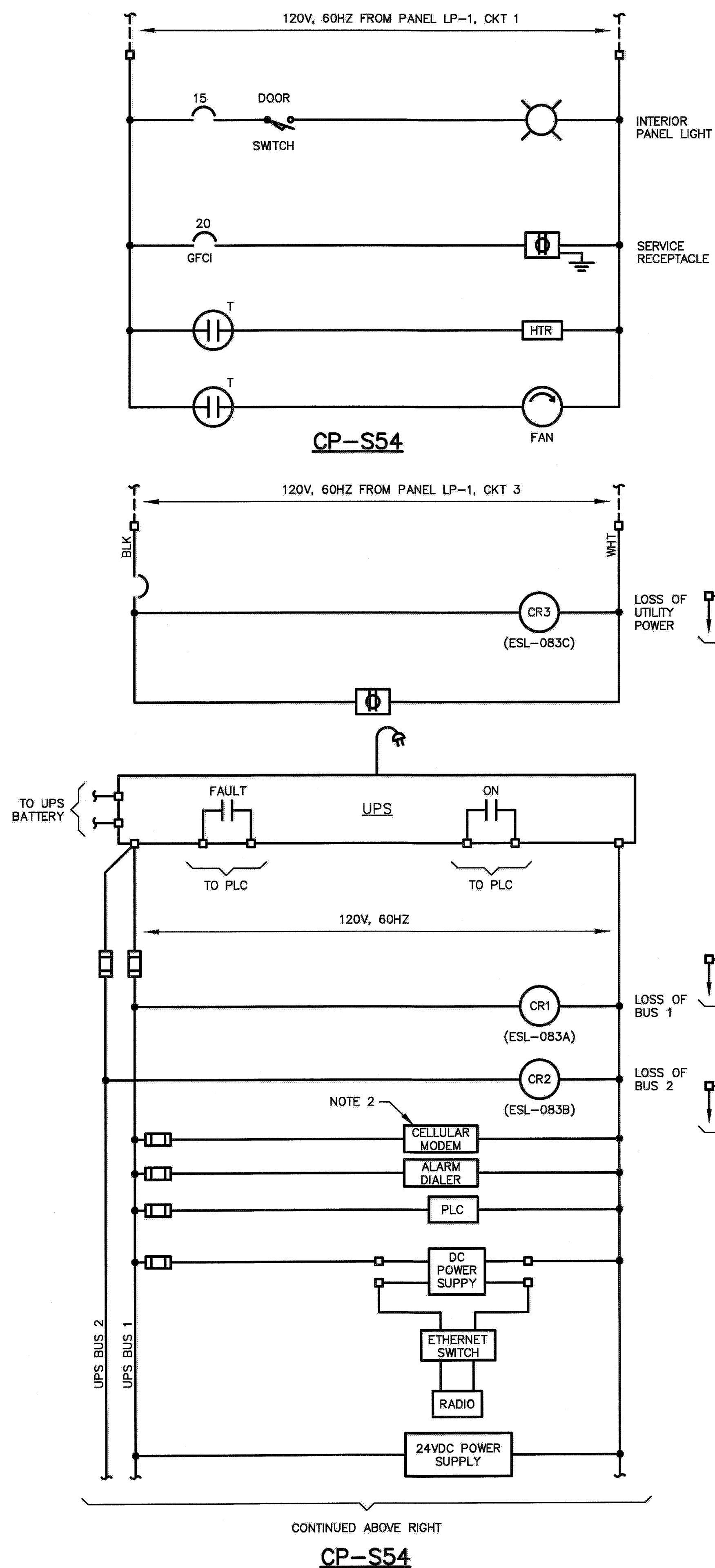
PROJECT NO. C8601002
 DESIGNED BY: VM
 DRAWN BY: JJ 1188-16.0
 CHECKED BY: DM
 DATE: 10/22/2014

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 10200 Wilshire Blvd., Suite 1000, Los Angeles, CA 90024
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 PH: 707-776-4474, FAX: 707-776-3602

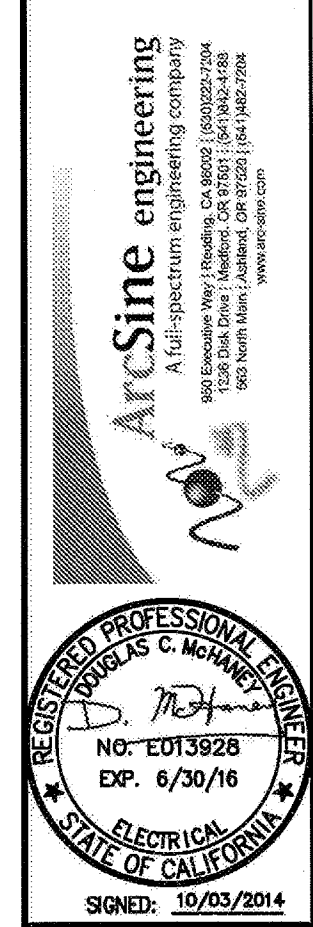
CITY OF PETALUMA
 VICTORIA LIFT STATION UPGRADE
 CONTROL DIAGRAMS - 1
 INSTRUMENTATION

SHEET
15.0
 19 OF 29



OCTOBER 2014

PROJECT NO. C66501002
 DESIGNED BY: VM
 DRAWN BY: JJ 1156:15.0
 CHECKED BY: DM
 DATE: 10/02/2014

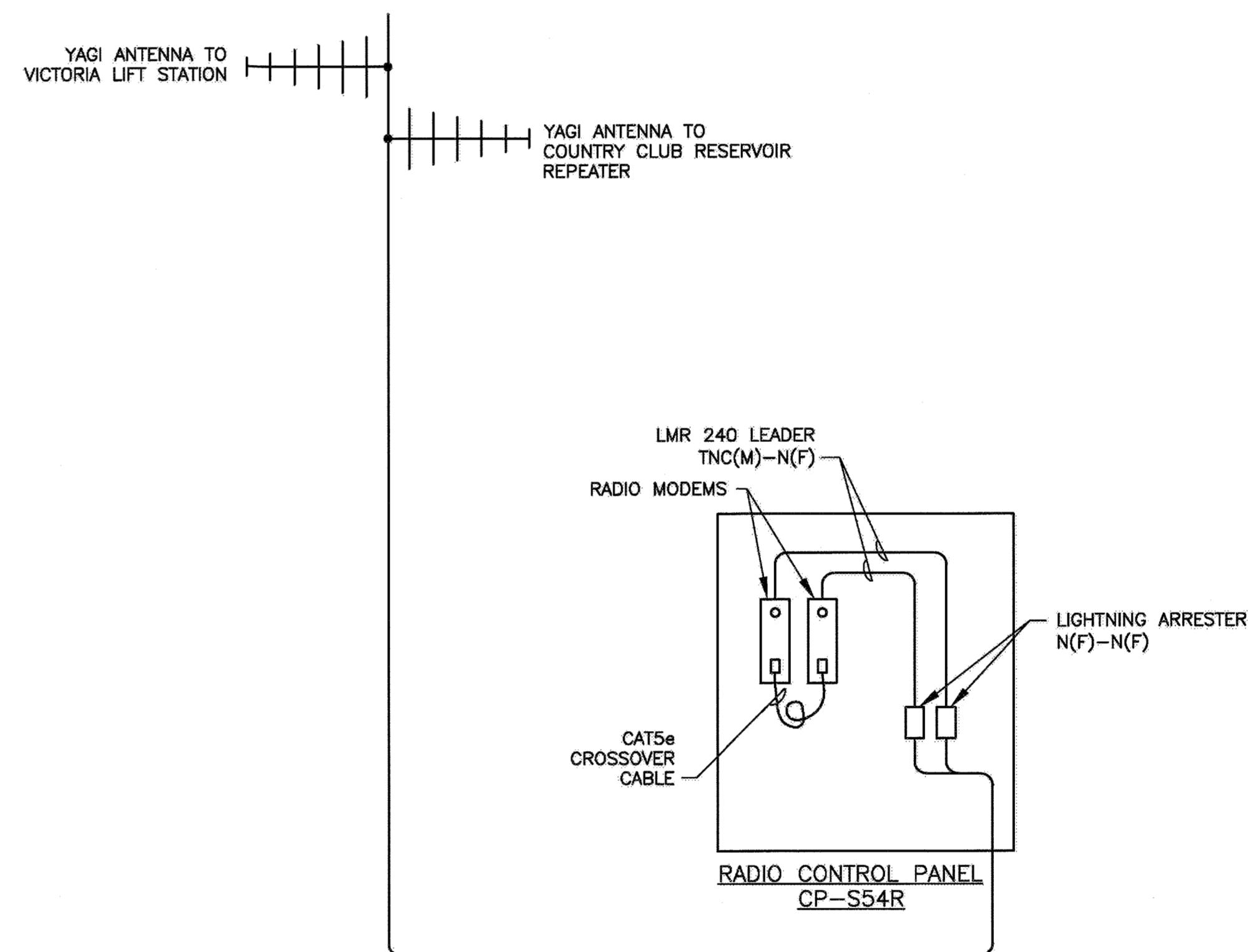
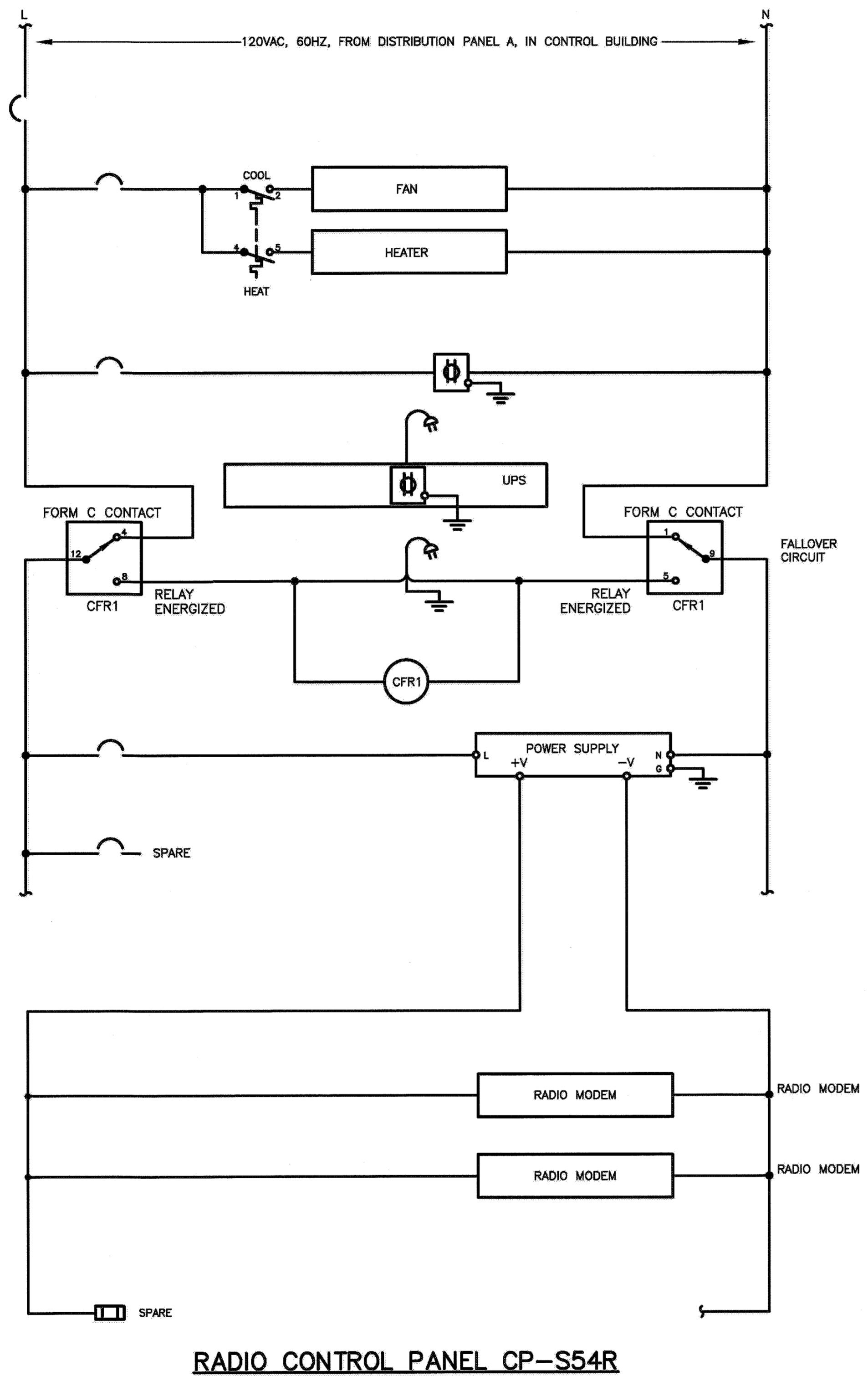


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CITY OF PETALUMA
 VICTORIA LIFT STATION UPGRADE
 CONTROL DIAGRAMS - 1
 INSTRUMENTATION

SHEET 15.0
 19 OF 29

3-222



NOTES:
1. SEE LEGEND AND GENERAL NOTES ON SHEET E1.

OCTOBER
2014

PROJECT NO. C86501002
DESIGNED BY: VM
DRAWN BY: NP 1158-6.2
CHECKED BY: DM
DATE: 10/02/2014

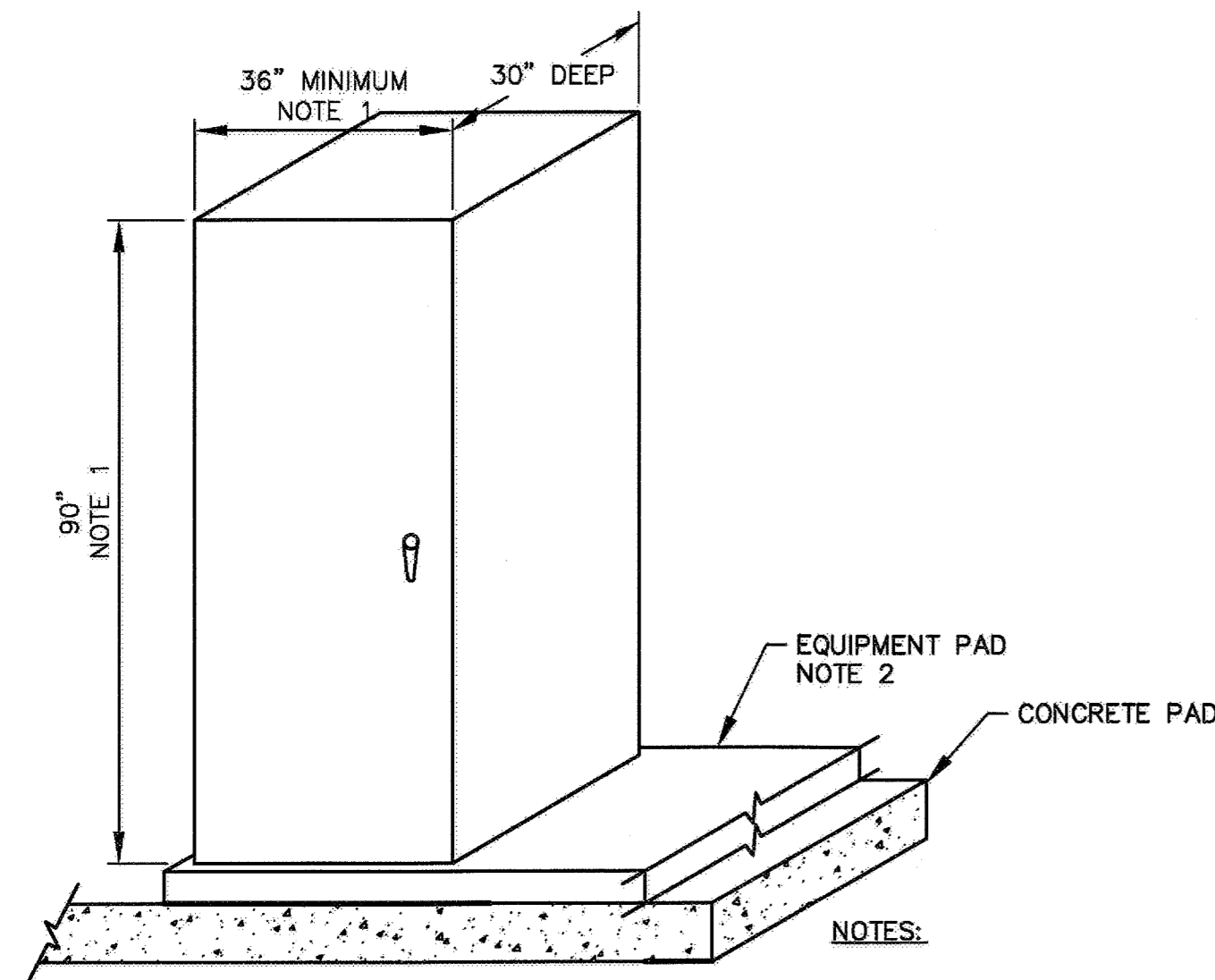
ArtSine engineering
A full spectrum engineering company
195 Riverside Way, Redlands, CA 92354 (909) 222-7200
200 North Main, Redland, CA 92354 (909) 222-7200
www.artsine.com

REGISTERED PROFESSIONAL ENGINEER
No. E0139228
EXP. 6/30/16
ELECTRICAL
STATE OF CALIFORNIA
SIGNED: 10/02/14

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PUBLIC WORKS & UTILITIES
11 ENGLISH STREET, PETALUMA, CA, 94952
PH. 707-778-4474 FAX. 707-778-3602

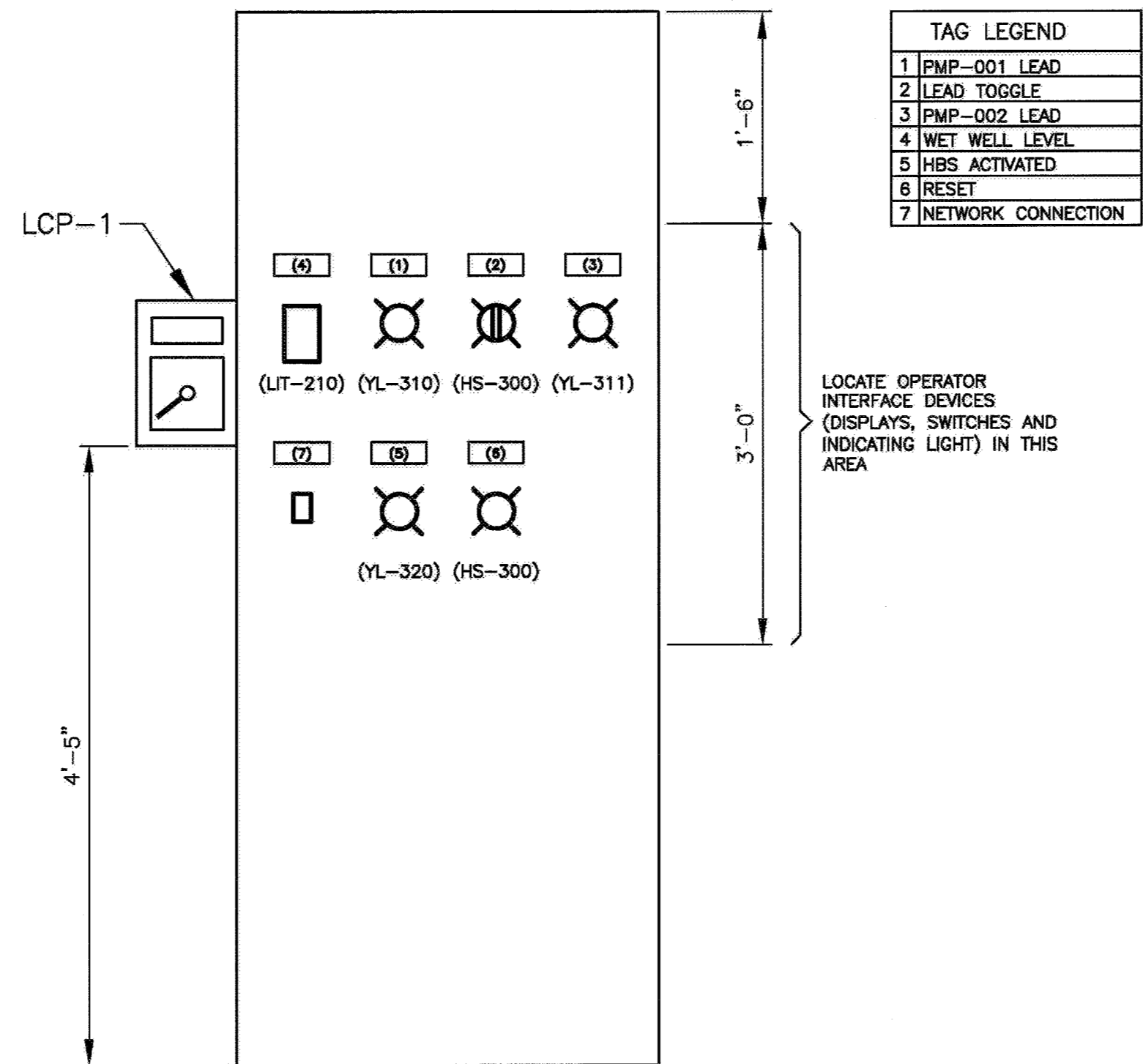
CITY OF PETALUMA
VICTORIA LIFT STATION UPGRADE
CONTROL DIAGRAMS - 3
ELECTRICAL

SHEET
15.2
21 OF 29

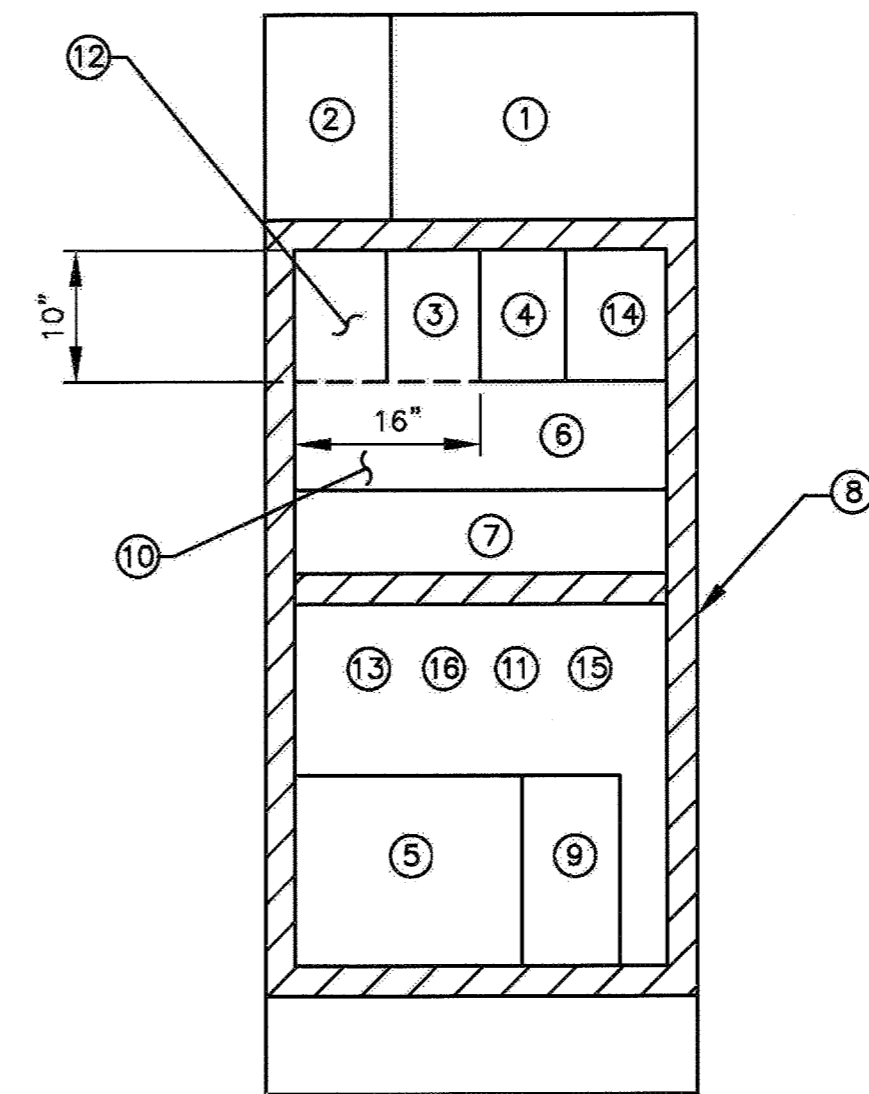


- NOTES:
1. INCREASE WIDTH, HEIGHT, AND DEPTH AS REQUIRED TO ACCOMMODATE THE REQUIRED DEVICES, WITHOUT OVERCROWDING.
 2. SEE DETAIL FOR EQUIPMENT PAD.

CONTROL PANEL CP-S54
NOT TO SCALE



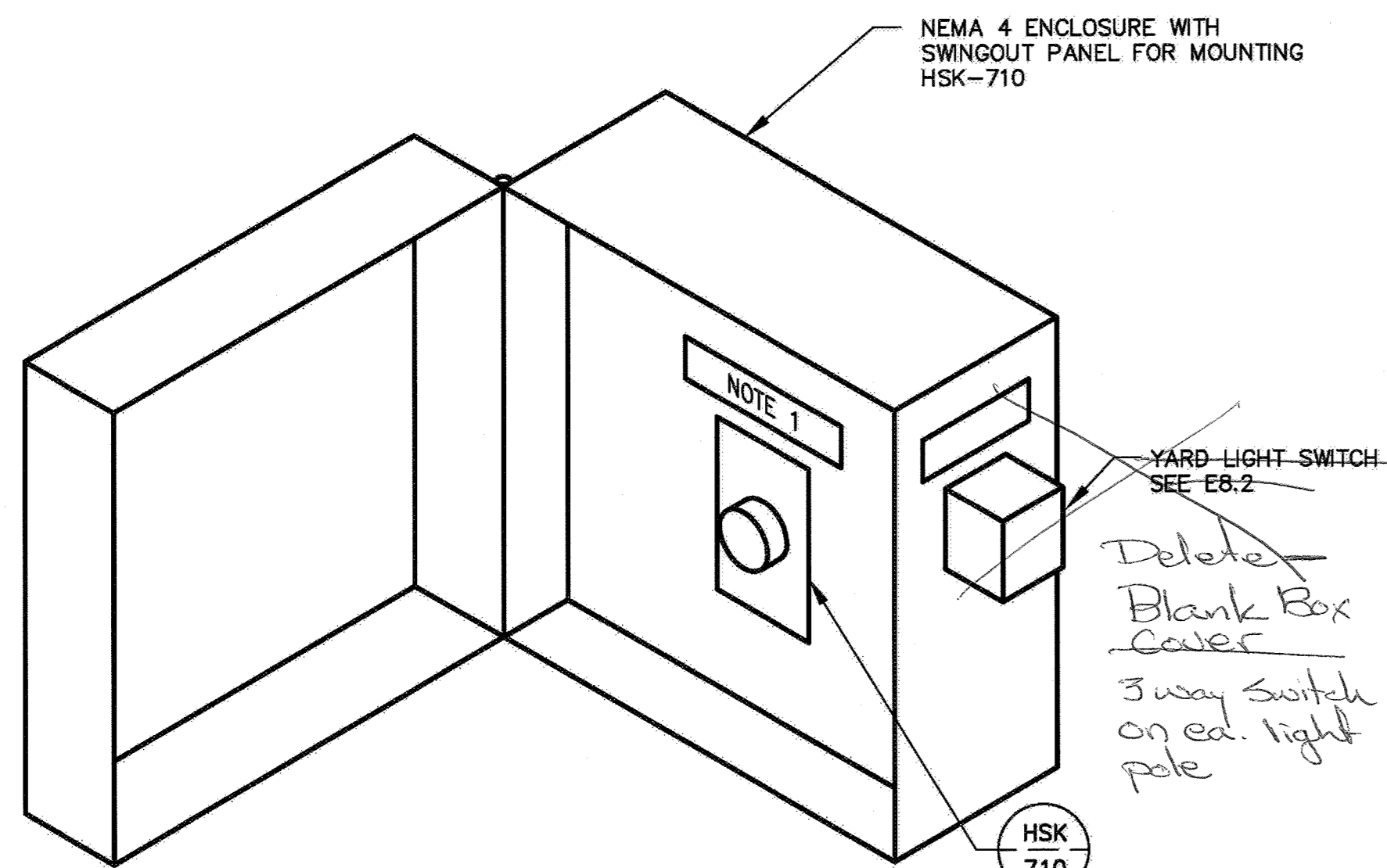
SWINGOUT PANEL LAYOUT CONTROL PANEL CP-S54
NOT TO SCALE



- LEGEND**
- 1 PLC SYSTEM
 - 2 CIRCUIT BREAKERS AND DISCONNECT FUSES
 - 3 24V DC POWER SUPPLY
 - 4 SWITCH
 - 5 UPS
 - 6 RELAYS
 - 7 TERMINAL BOARDS
 - 8 WIREWAYS
 - 9 SERVICE RECEPTACLES
 - 10 OTHER ITEMS AS REQUIRED (SPACE HEATER, FANS, THERMOSTAT, ETC.)
 - 11 ALLOWANCE FOR FUTURE DEVICES
 - 12 RADIO
 - 13 LIGHTNING ARRESTOR
 - 14 ALARM DIALER
 - 15 CELLULAR MODEM, NOTE 1
 - 16 LEVEL TRANSMITTER

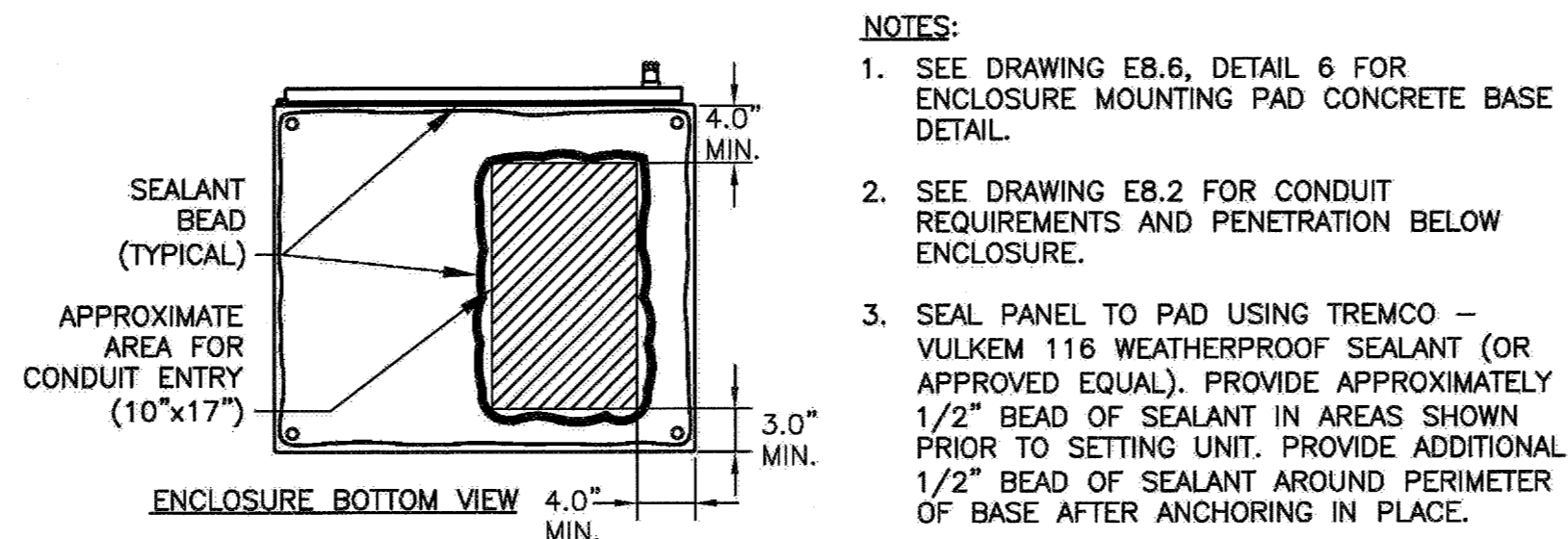
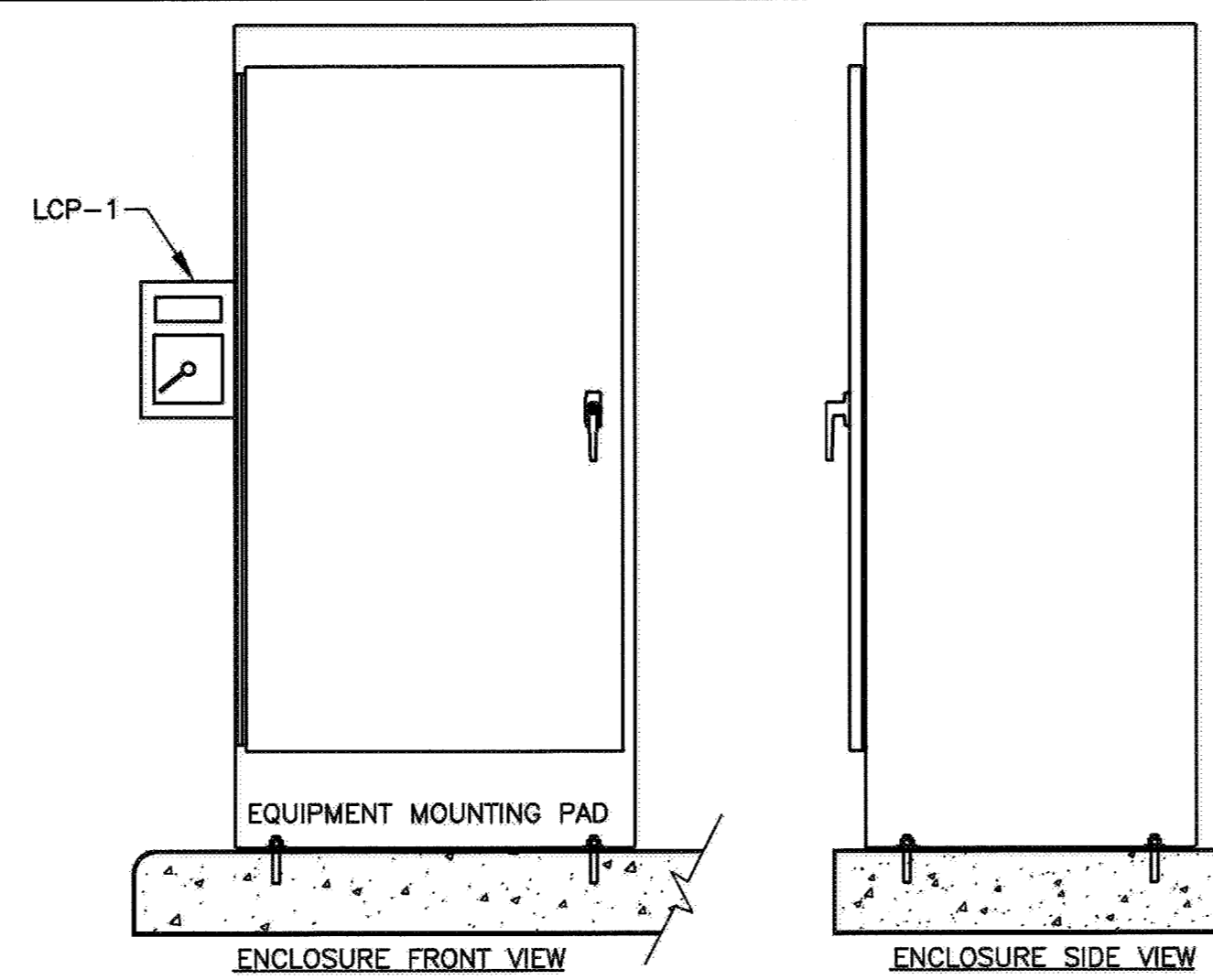
- NOTES:
1. REUSE CELLULAR MODEM AND ANTENNA FROM EXISTING CONTROL PANEL.

INTERNAL LAYOUT CONTROL PANEL CP-S54
NOT TO SCALE



- NOTES:
1. PROVIDE 1"x3" SWINGOUT PANEL WITH LAMICOID TAG ENGRAVED "OVERRIDE"

INTRUSION OVERRIDE PANEL LCP-1
NOT TO SCALE



- NOTES:
1. SEE DRAWING E8.6, DETAIL 6 FOR ENCLOSURE MOUNTING PAD CONCRETE BASE DETAIL.
 2. SEE DRAWING E8.2 FOR CONDUIT REQUIREMENTS AND PENETRATION BELOW ENCLOSURE.
 3. SEAL PANEL TO PAD USING TREMCO - VULKEM 116 WEATHERPROOF SEALANT (OR APPROVED EQUAL). PROVIDE APPROXIMATELY 1/2" BEAD OF SEALANT IN AREAS SHOWN PRIOR TO SETTING UNIT. PROVIDE ADDITIONAL 1/2" BEAD OF SEALANT AROUND PERIMETER OF BASE AFTER ANCHORING IN PLACE.

CP-S54 ENCLOSURE MOUNTING DETAIL
NOT TO SCALE

OCTOBER 2014

PROJECT NO. C86501002
DESIGNED BY: VM
DRAWN BY: JJ 1158-16.0
CHECKED BY: DCM

DATE: 10/02/2014

ArcSine engineering
A full-spectrum engineering company
10000 Wilshire Blvd., Suite 200, Beverly Hills, CA 90210
310-206-1111
www.arcsine.com

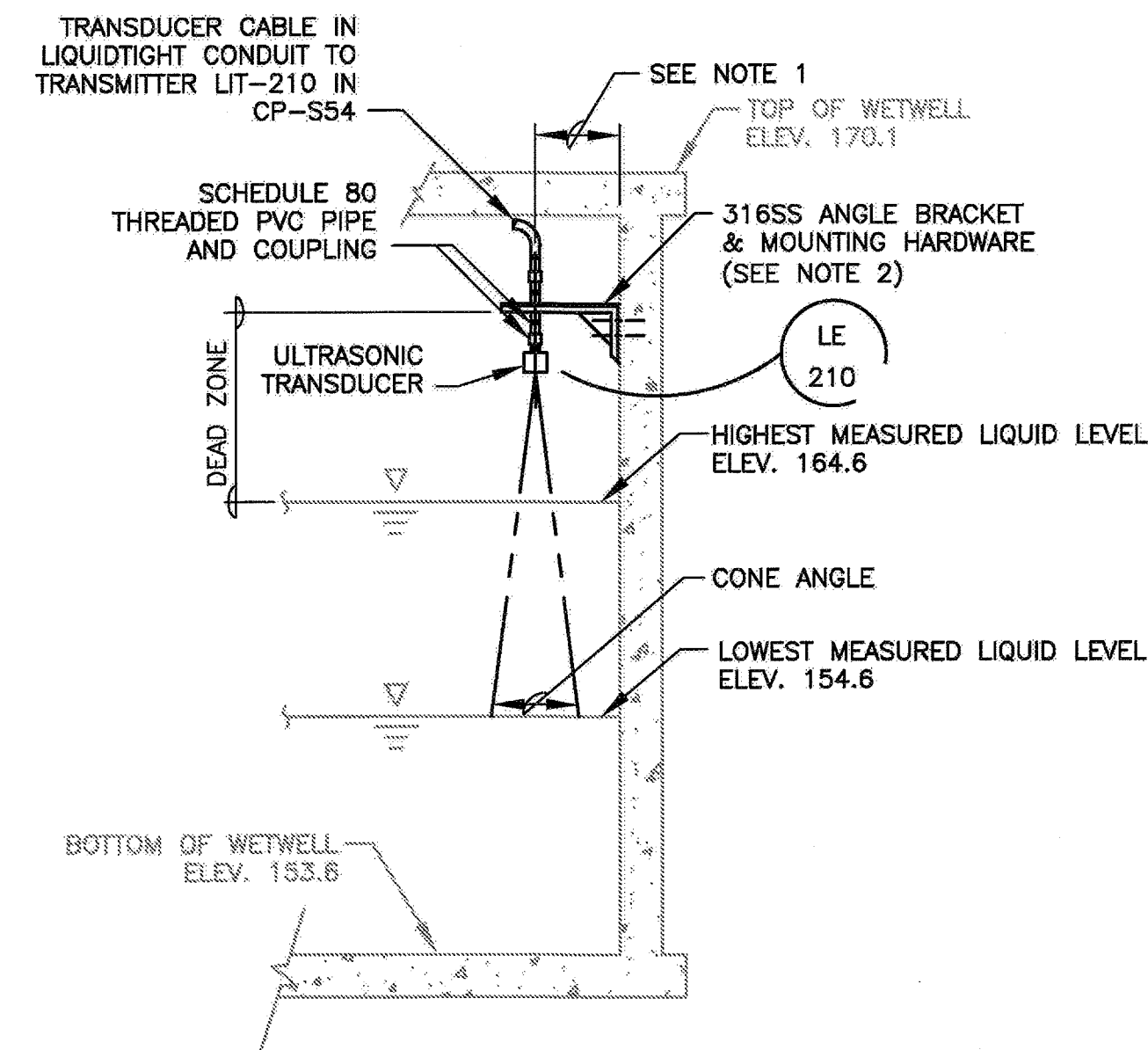
REGISTERED PROFESSIONAL ENGINEER
ELECTRICAL
STATE OF CALIFORNIA
No. E013928
EXP. 6/30/16
SIGNED: 10/03/2014

CITY OF PETALUMA
PUBLIC WORKS & UTILITIES
11 ENGLISH STREET, PETALUMA, CA 94952
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CITY OF PETALUMA
VICTORIA LIFT STATION UPGRADE
DETAILS & ELEVATIONS - 1
INSTRUMENTATION

SHEET 16.0
22 OF 29

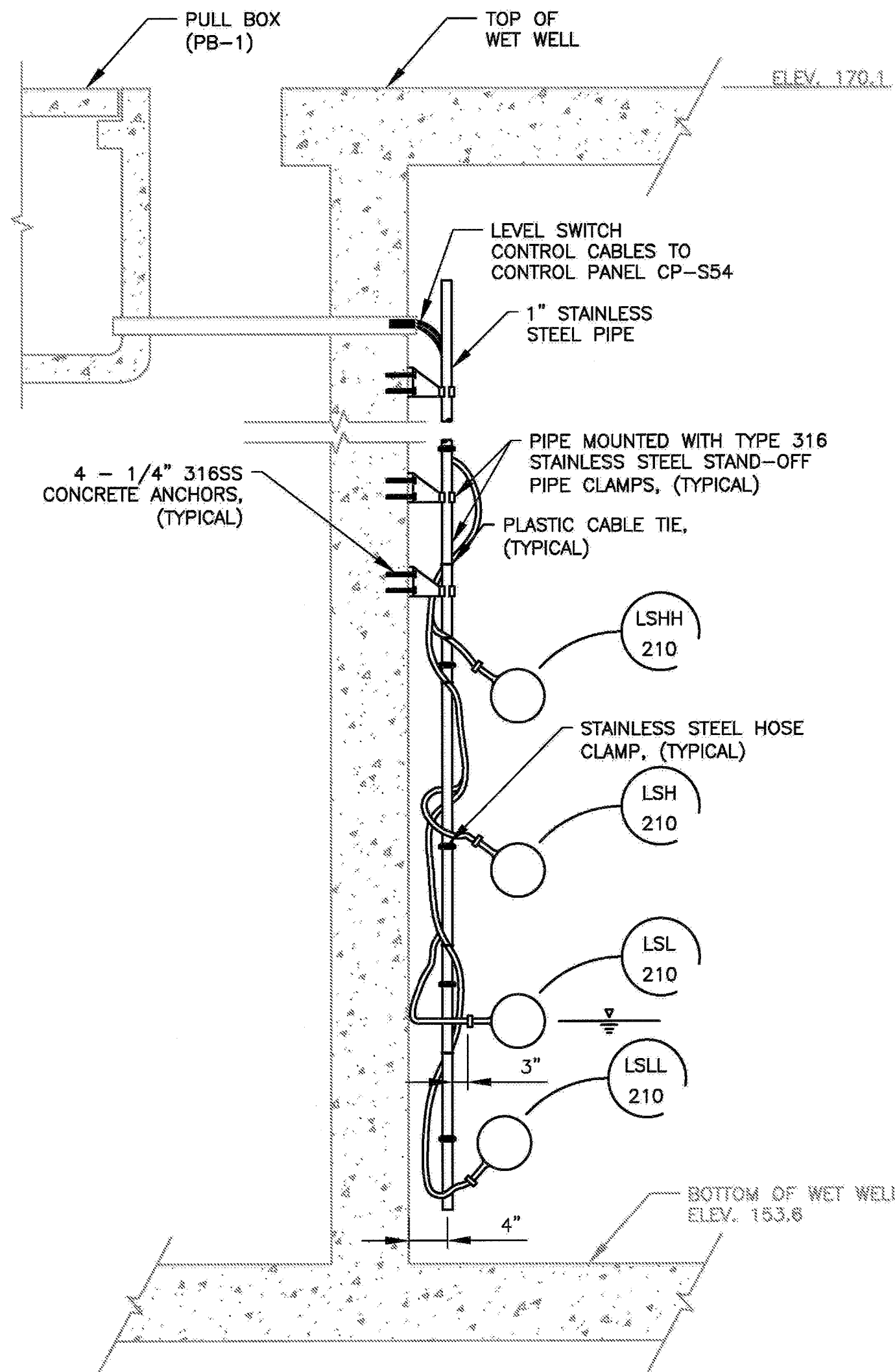
3-222



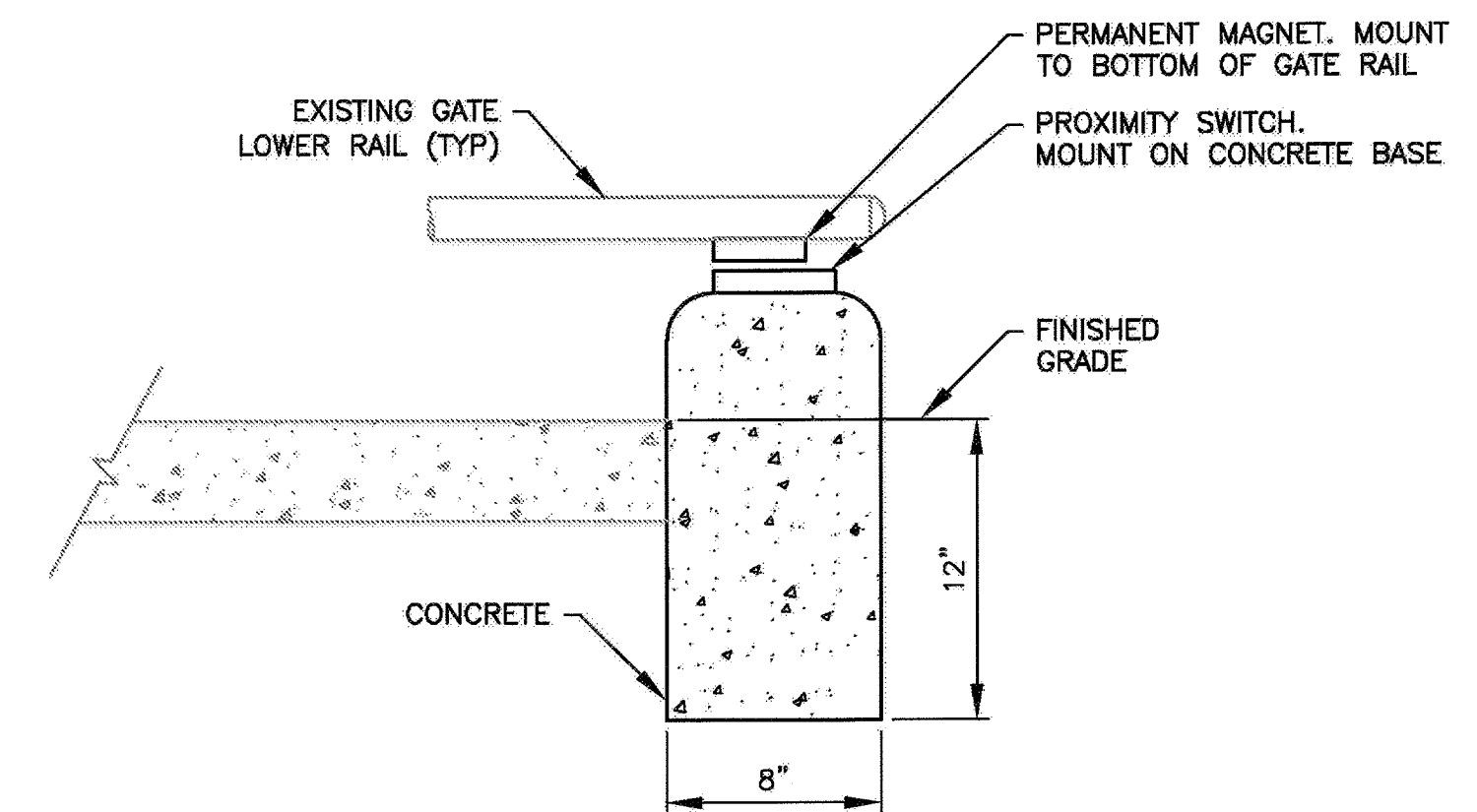
NOTES:

1. CONTRACTOR SHALL COORDINATE WITH THE MANUFACTURER FOR THE ULTRASONIC TRANSDUCER MOUNTING LOCATION, WHICH IS BASED ON CONE ANGLE AND DEPTH OF AREA BEING MONITORED. ULTRASONIC TRANSDUCER MUST BE MOUNTED FAR ENOUGH FROM VESSEL WALLS OR OTHER OBSTRUCTION TO AVOID FALSE ECHOES AT LOWEST LIQUID LEVEL.
2. SECURE BRACKET TO WALL WITH 316SS CONCRETE ANCHORS AND NUTS.

**LEVEL TRANSDUCER—ULTRASONIC
INSTALLATION AT WETWELL WALL**
7
NOT TO SCALE



**LEVEL SWITCH SUPPORT BRACKET
INSTALLATION AT WET WELL WALL**
8
NOT TO SCALE



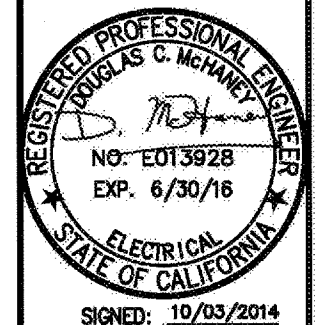
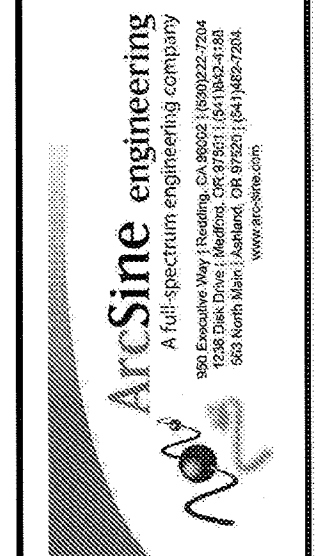
NOTES:

1. FENCE AND TWO GATES ARE EXISTING. TWO INTRUSION SWITCHES ARE REQUIRED.
2. INTRUSION SWITCHES AND CONCRETE BASES ARE NEW.
3. MOUNT SWITCH COMPONENTS USING 316SS HARDWARE.
4. MOUNT ϕ OF SWITCHES 12 INCHES OFFSET FROM ϕ OF HINGE POSTS AND DIRECTLY UNDER LOWER RAIL OF CLOSED GATE.

GATE INTRUSION SWITCH (TYP)
9
NOT TO SCALE

OCTOBER
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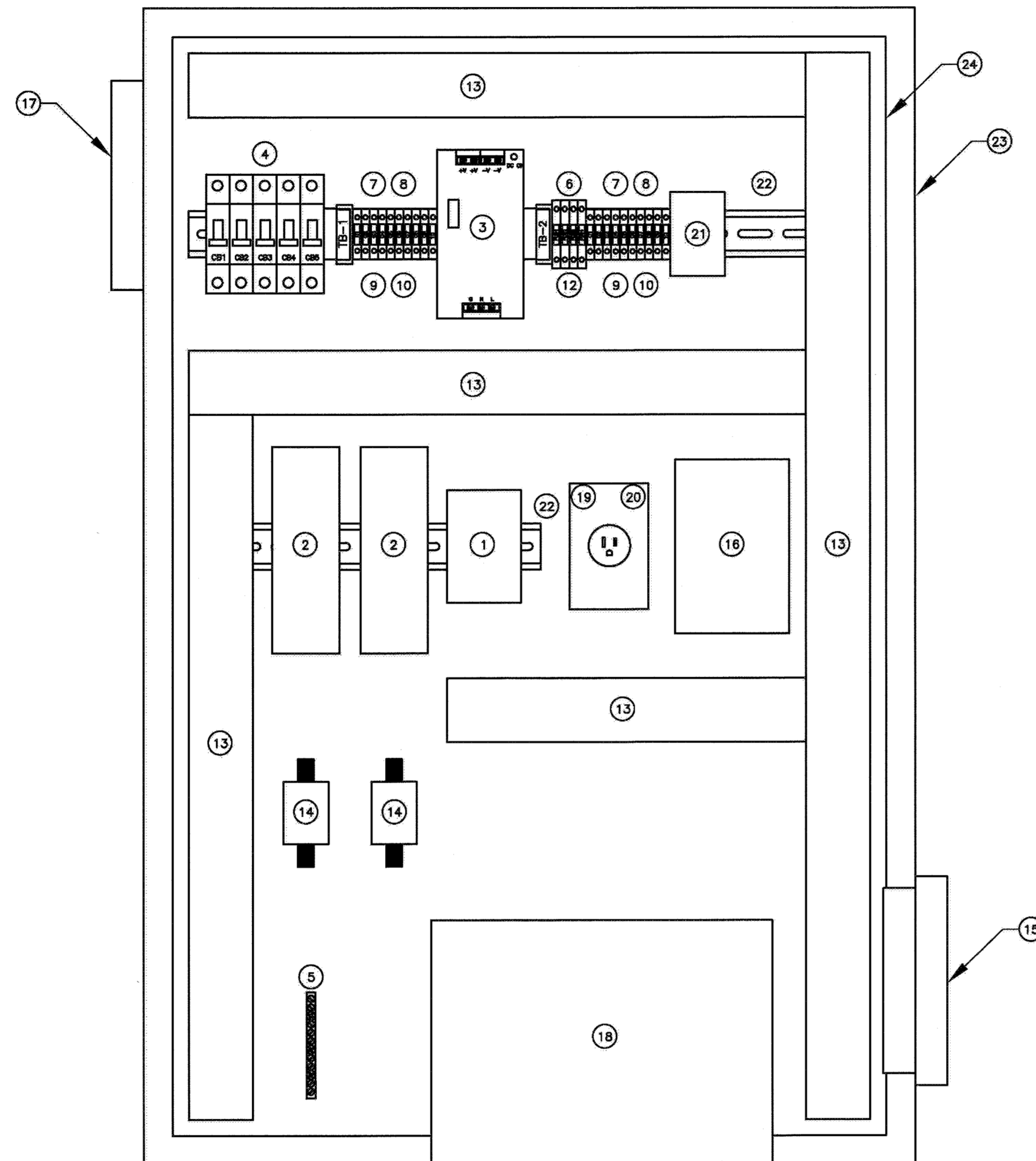
PROJECT NO. C86501002
DESIGNED BY: VM
DRAWN BY: NP-1158-16.1
CHECKED BY: DCM
DATE: 10/02/2014



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CITY OF PETALUMA
VICTORIA LIFT STATION UPGRADE
DETAILS & ELEVATIONS - 2
INSTRUMENTATION

SHEET
16.1
23 OF 29



LA CRESTA RADIO CONTROL PANEL CP-S54R INTERIOR ELEVATION
NOT TO SCALE

**LA CRESTA RADIO CONTROL PANEL CP-S54R
BILL OF MATERIALS**

NO.	DESCRIPTION	QTY.
1	COOLING/HEATING THERMOSTAT WITH DEAD BAND	1
2	RADIO MODEM	2
3	24V POWER SUPPLY, RATED FOR 10A, 240W	1
4	CIRCUIT BREAKER	5
5	GROUND BAR	1
6	FUSE BLOCK	4
7	TERMINAL BLOCK	A/R
8	END COVER, TB	A/R
9	END STOP	A/R
10	GROUP MARKER	A/R
11	TERMINAL MARKER	A/R
12	FUSE	4
13	2"W X 3"H WIRE WAY AND COVER	A/R
14	LIGHTNING ARRESTOR	2
15	FAN/FILTER, 38 CFM	1
16	HEATER	1
17	FILTER RAIN HOOD	1
18	UPS	1
19	OUTLET BOX	1
20	SINGLE 15A OUTLET	1
21	RELAY, 4-POLE, FORM C CONTACTS	1
22	DIN RAIL	A/R
23	36"H X 24"W 304 STAINLESS STEEL ENCLOSURE, NEMA 4X, PADLOCK ATTACHMENT	1
24	BACK PANEL	1

ABBREVIATIONS: A/R = AS REQUIRED

NOTES:
1. SEE LEGEND AND GENERAL NOTES ON SHEET E1.

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PROJECT NO. C08601002
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DRAWN BY: JJ 11/05/11
CHECKED BY: DM

DATE: 10/02/2014

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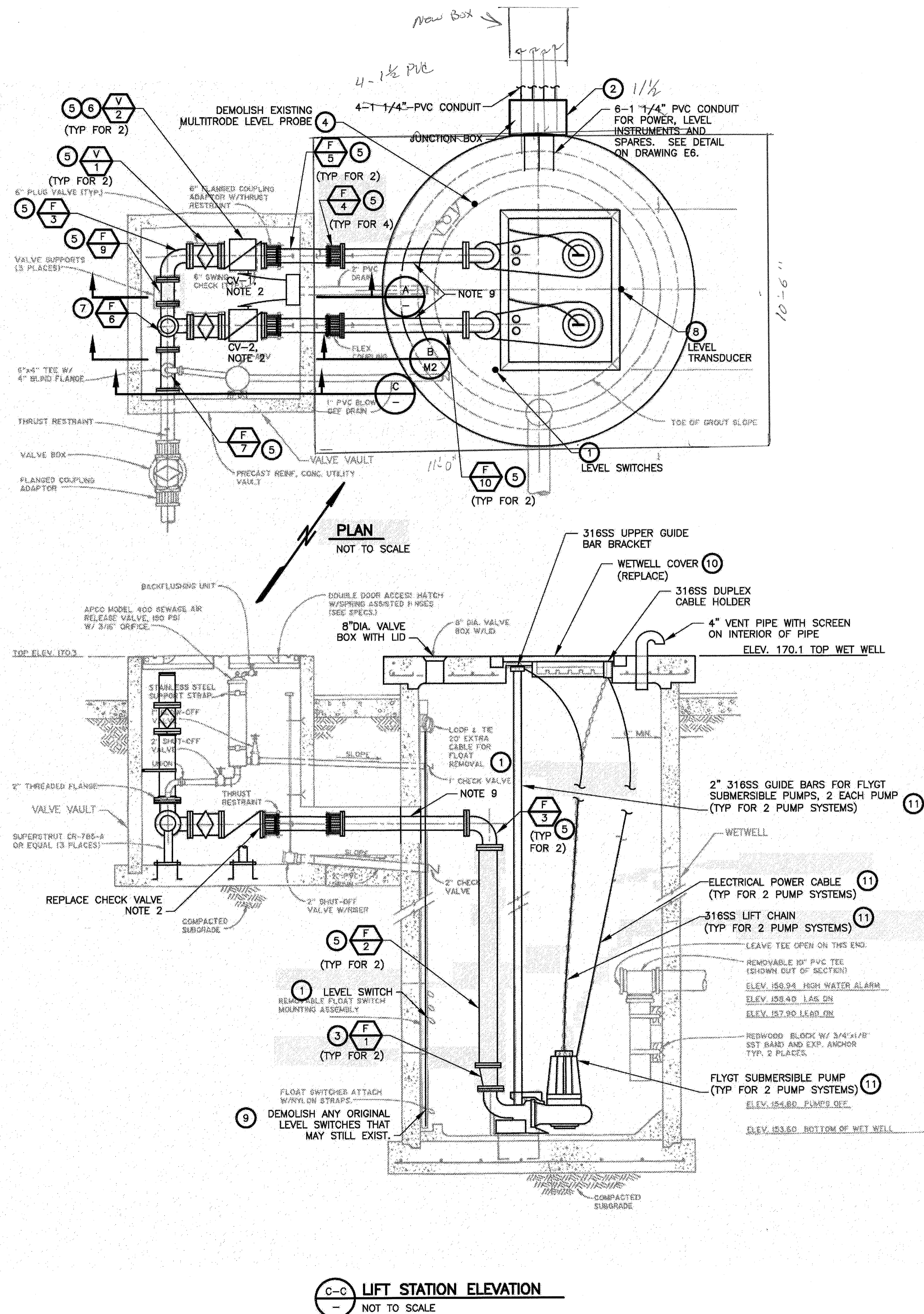
REGISTERED PROFESSIONAL ELECTRICAL ENGINEER
J. J. JOHNSON
No. 10150228
Exp. 6/30/18
ELECTRICAL
STATE OF CALIFORNIA
SIGNED: 10/02/14

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CITY OF PETALUMA
VICTORIA LIFT STATION UPGRADE
LA CRESTA TANKS - RADIO REPEATER
CONTROL PANEL INTERIOR ELEVATION
ELECTRICAL

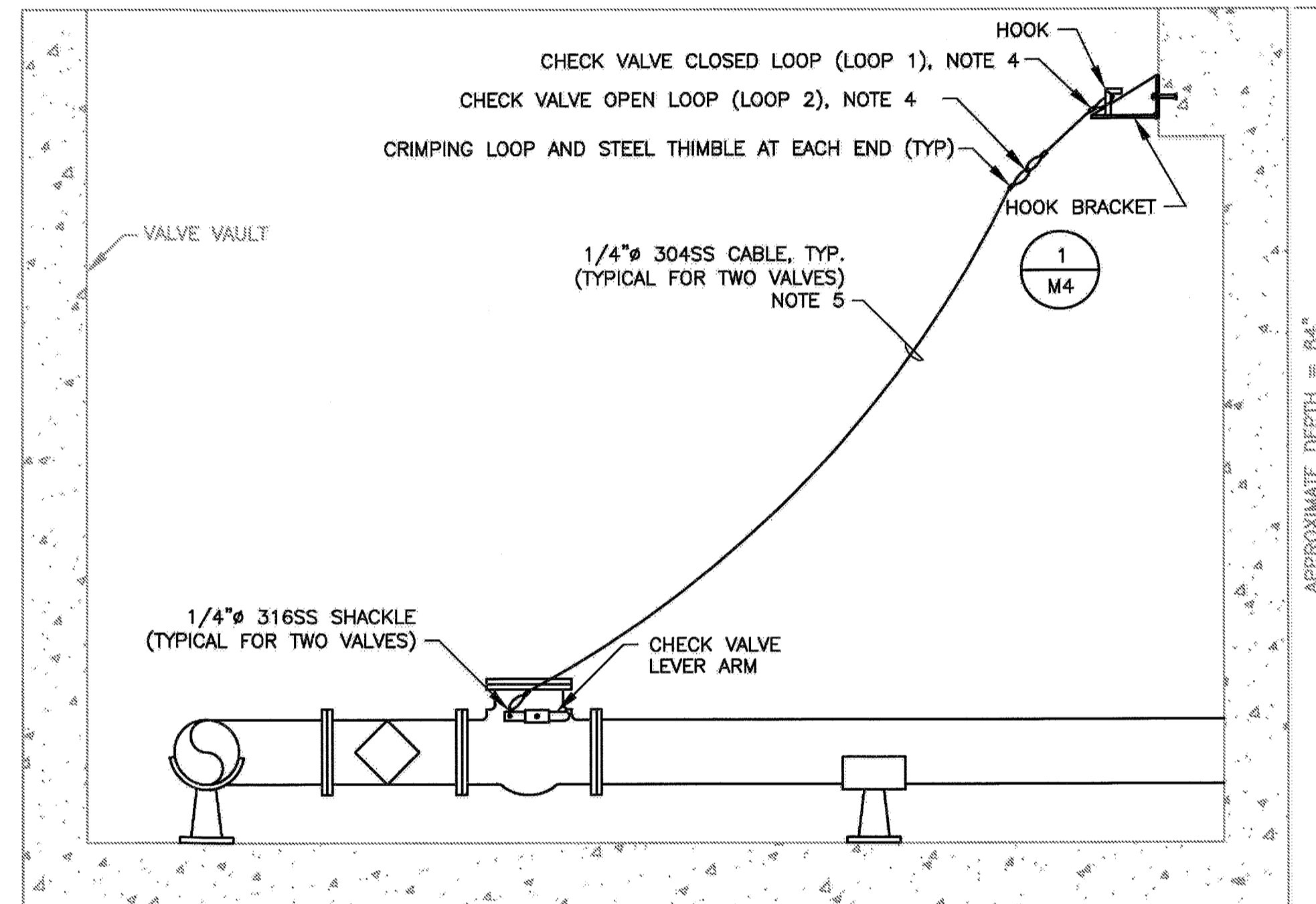
SHEET
16.2
24 OF 29

3-222



SCHEDULE OF MODIFICATIONS

- | | | | |
|---|---|----|--|
| 1 | ADD 4 LEVEL SWITCHES. LOCATE UNDER HATCH COVER. | 7 | REPLACE TEE WITH A SIDE-OUTLET TEE. |
| 2 | REPLACE PULLBOX. | 8 | ADD ULTRASONIC LEVEL TRANSDUCER. LOCATE UNDER WETWELL COVER. |
| 3 | ADD FITTING. | 9 | DEMOLISH EXISTING LEVEL SWITCHES. |
| 4 | DEMOLISH EXISTING MULTITRODE LEVEL PROBE. | 10 | DEMOLISH EXISTING CONCRETE WETWELL COVER. REPLACE WITH NEW DIAMOND PLATE WETWELL COVER. SEE DRAWING M3. |
| 5 | REPLACE EXISTING VALVE OR FITTING. | 11 | DEMOLISH TWO EXISTING PUMPS, GUIDE RAILS AND BRACKETS. PROVIDE TWO NEW FLYGT NP3153SH3-276 PUMPS EACH WITH DISCHARGE ELBOW FITTING, GUIDE RAILS, UPPER GUIDE RAIL BRACKETS, LIFT CHAIN AND CHAIN HOOK. |
| 6 | ADD CHECK VALVE MANUAL OPERATOR. | | |



NOTES:

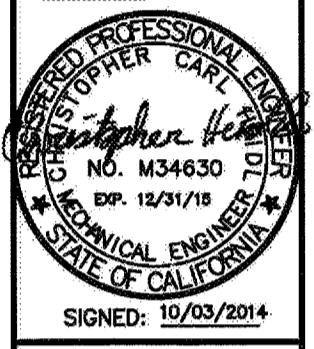
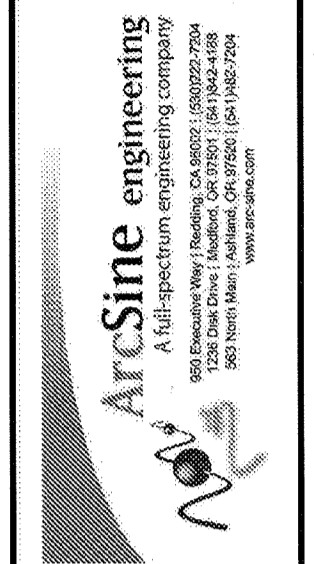
- THE STATION LAYOUT SHOWN ON THIS DRAWING WAS TAKEN FROM ORIGINAL 1991 DESIGN DOCUMENTS AND THE INFORMATION SHOWN HAS NOT BEEN VERIFIED. PERFORM FIELD INVESTIGATIONS AS REQUIRED TO DETERMINE EXISTING CONDITIONS.
- REFERENCE SPECIFICATIONS FOR VALVE REQUIREMENTS. VALVE LEVER SIDE SHALL BE AS FOLLOWS, WHEN FACING THE VALVE INLET:
 - CV-1: LEFT HAND SIDE
 - CV-2: RIGHT HAND SIDE
- PERFORM A FIELD INVESTIGATION OF EXISTING PIPING, FITTINGS, AND VALVES. SUBMIT A DRAWING THAT INCLUDES LAYING LENGTH AND DIAMETER FOR EACH COMPONENT FOR REVIEW BY THE ENGINEER. IN ADDITION TO SUBMITTING DATA FOR THE EXISTING PIPE LAYOUT, SUBMIT A DRAWING, TO SCALE, OF THE NEW PIPE LAYOUT USING THE SUBMITTED COMPONENTS FOR REVIEW BY THE ENGINEER.
- WHEN THE CHECK VALVE IS CLOSED, LOOP 1 SHALL BE ATTACHED TO THE HOOK. LOOP 2 SHALL BE ATTACHED TO THE HOOK TO MAINTAIN FULL-OPEN POSITION OF THE CHECK VALVE. FIELD INSTALL CRIMPING LOOPS TO ACHIEVE DESIRED ROPE LENGTHS FOR OPEN AND CLOSED POSITIONS OF THE NEW CHECK VALVES.
- FIELD VERIFY LENGTHS OF WIRE ROPE.
- CONTRACTOR SHALL PROVIDE SUFFICIENT QUANTITY OF CABLE HOLDERS FOR THE POWER CABLES AND LEVEL INSTRUMENTS CABLES. HOLDERS SHALL BE LOCATED SO THAT THE CABLES AND LEVEL INSTRUMENTS CABLES ARE ACCESSIBLE BY MAINTENANCE PERSONNEL FROM THE OUTSIDE WHEN STANDING ON THE WET WELL TOP SLAB.
- REPLACE ALL PIPE SUPPORTS IN THE VALVE VAULT. ESTIMATED QUANTITY OF SUPPORTS IS THREE. REFERENCE DETAIL 3 ON SHEET M4.
- REFERENCE THE VALVE AND FITTING SCHEDULE ON SHEET M2 FOR COMPONENT TAGS.
- DEMOLISH WETWELL WALL AS REQUIRED TO DEMOLISH EXISTING PIPING AND INSTALL NEW PIPING. INSTALL NEW PIPE AND GROUT ANNULAR SPACE BETWEEN THE PIPE AND WETWELL. EXISTING PIPE PENETRATION IS GROUTED.

1 INCH

BAR EQUALS ONE INCH WHEN DRAWING IS PLOTTED FULL SIZE. IF NOT, SCALE ACCORDINGLY

OCTOBER 2014

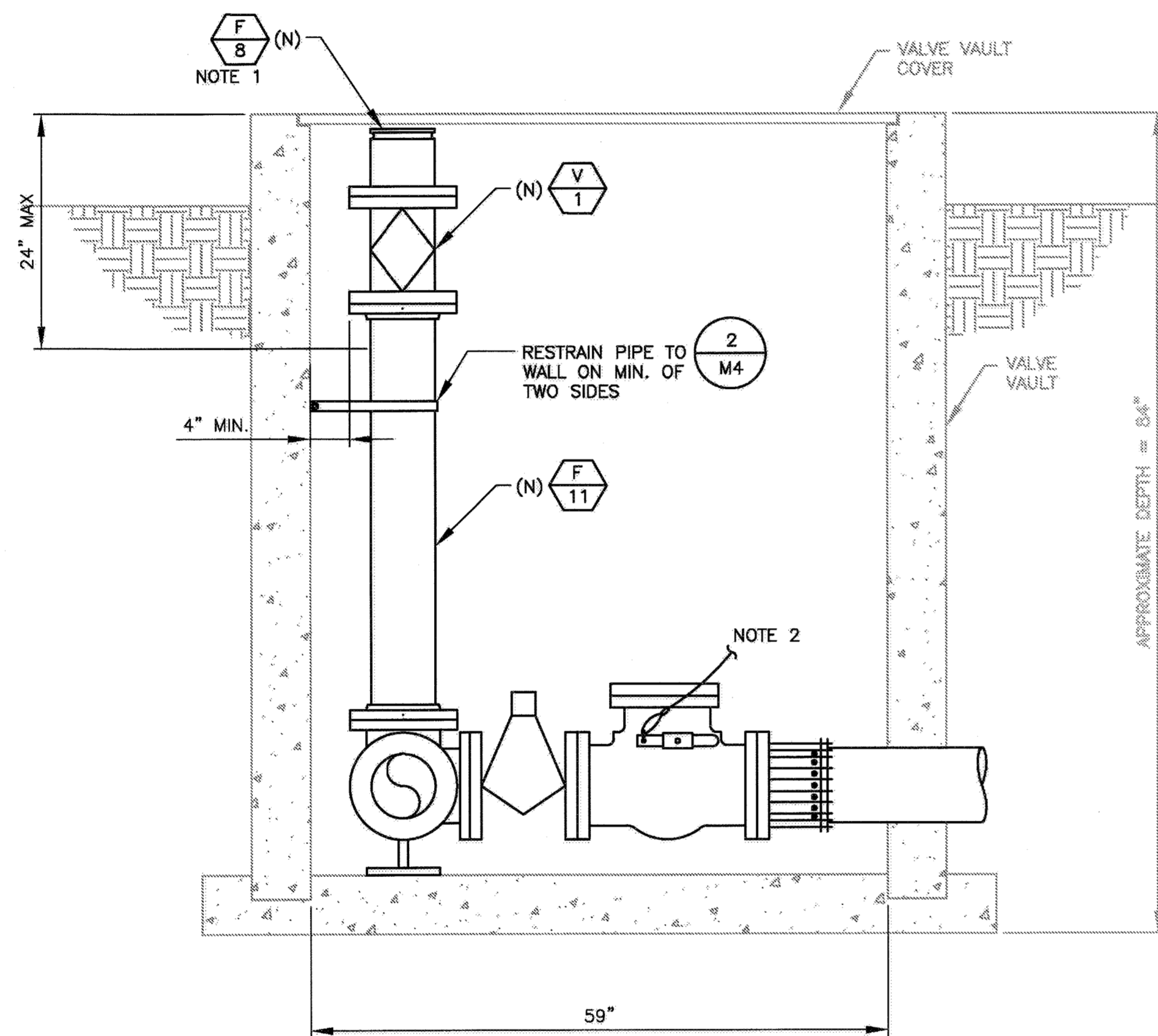
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DRAWN BY: 1158-MT
CHECKED BY: DCM
DATE: 10/02/2014



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CITY OF PETALUMA
VICTORIA LIFT STATION UPGRADE
MECHANICAL PLAN

SHEET
M1
25 OF 29



B-B VALVE VAULT PIPING
NOT TO SCALE

- NOTES:**
- EMERGENCY CONNECTION RISER SHALL TERMINATE AS HIGH IN THE VAULT AS ALLOWED FOR THE VAULT COVER TO BE FULLY CLOSED WHEN THE CAM AND GROOVE DUST CAP IS INSTALLED.
 - SEE SECTION A-A: CHECK VALVE MANUAL OPERATOR, ON SHEET M1, FOR MANUAL OPERATOR FOR CHECK VALVES.

Valve & Fitting Schedule								
Tags	Type	Connection	Material	Quantity	Diameter (in)	Laying Length (in)	Flange Drill Pattern	Notes
F-1	Eccentric Reducer	Flanged	Ductile Iron	2	4 x 6		150#	
F-2	Spool	Flanged	Ductile Iron	2	6	120 (Estimate)	150#	1
F-3	90° Ell	Flanged	Ductile Iron	3	6		150#	2
F-4	Restrained Flanged Coupling Adapter	Flanged	Ductile Iron	4	6		-	
F-5	Spool	Plain Ends	Ductile Iron	2	6	60 (Estimate)	150#	1
F-6	AWWA Side-Outlet Tee	Flanged	Ductile Iron	1	6 x 6 x 6 x 6		150#	4
F-7	Tee	Flanged	Ductile Iron	1	6 x 6 x 4		150#	5
F-8	Flanged Coupling with Grooved End for Cam-Connection	Flange x Groove	Aluminum	1	6 x 6	-	150#	7
F-9	Spool	Flanged	Ductile Iron	1	6	12 (Estimate)	150#	1
F-10	Spool	Flanged	Ductile Iron	2	6	72 (Estimate)	150#	1
F-11	Spool	Flanged	Ductile Iron	1	6	60 (Estimate)	150#	1
V-1	Plug Valve	Flanged	Reference Specifications	3	6		150#	3
V-2	Check Valve	Flanged	Reference Specifications	2	6		150#	3

- Notes:**
- Laying length shall be as required, the values shown for each spool is an estimate for bidding purposes only.
 - Laying length and type of new ell shall match laying length of existing ell.
 - Laying length of new valve shall match laying length of existing valve.
 - Laying length of new side-outlet tee shall match laying length of existing tee.
 - Laying length of new tee shall match laying length of existing tee.
 - Note not used.
 - Fitting shall be Dixon 600-AL-AL or equal. Furnish and install dust cap for the fitting.

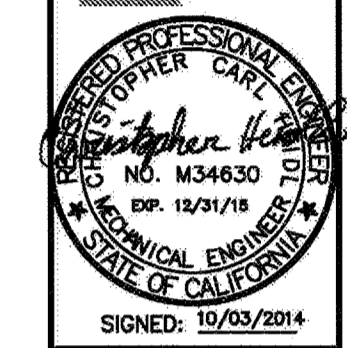
1 INCH
BAR EQUALS ONE INCH WHEN DRAWING IS PLOTTED FULL SIZE. IF NOT, SCALE ACCORDINGLY

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SHEET M2
26 OF 29

PROJECT NO. C66601002
DESIGNED BY: CCH
DRAWN BY: NP 1156-M2
CHECKED BY: DCM

DATE: 10/02/2014

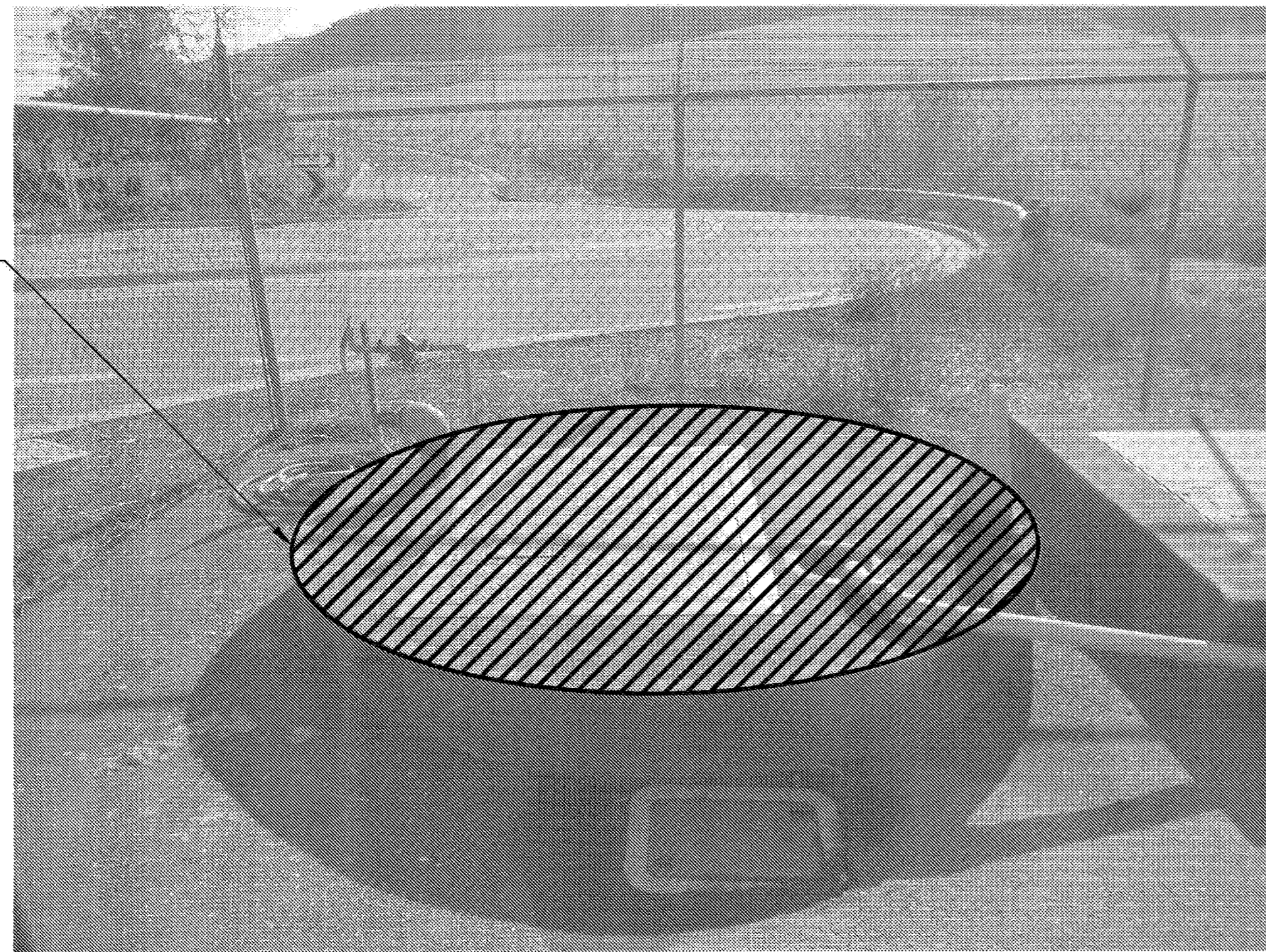


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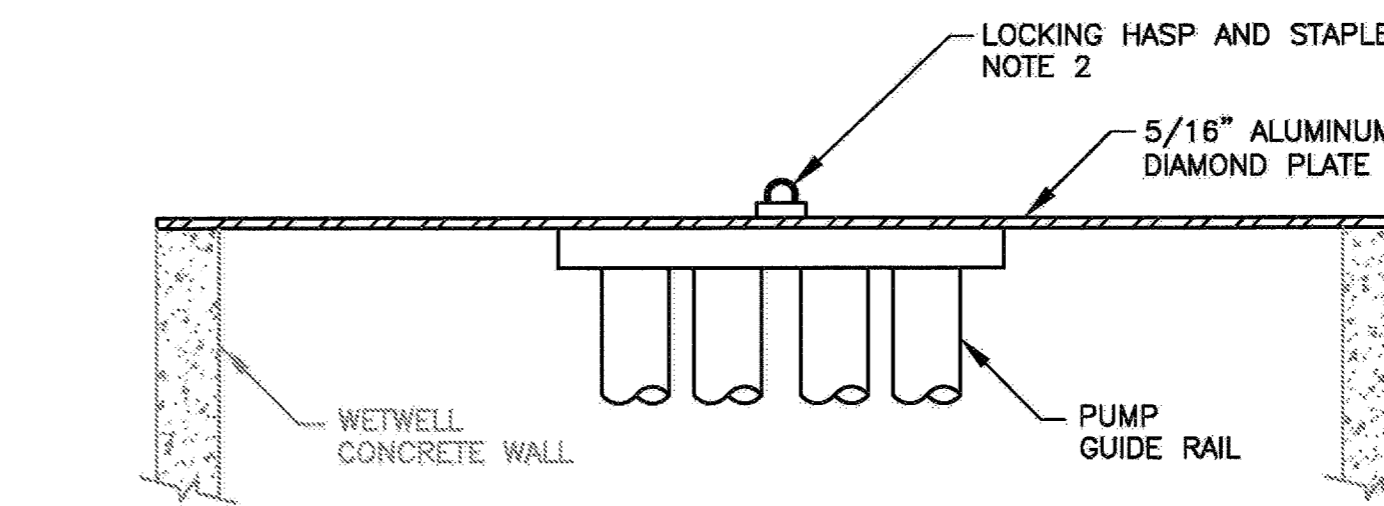
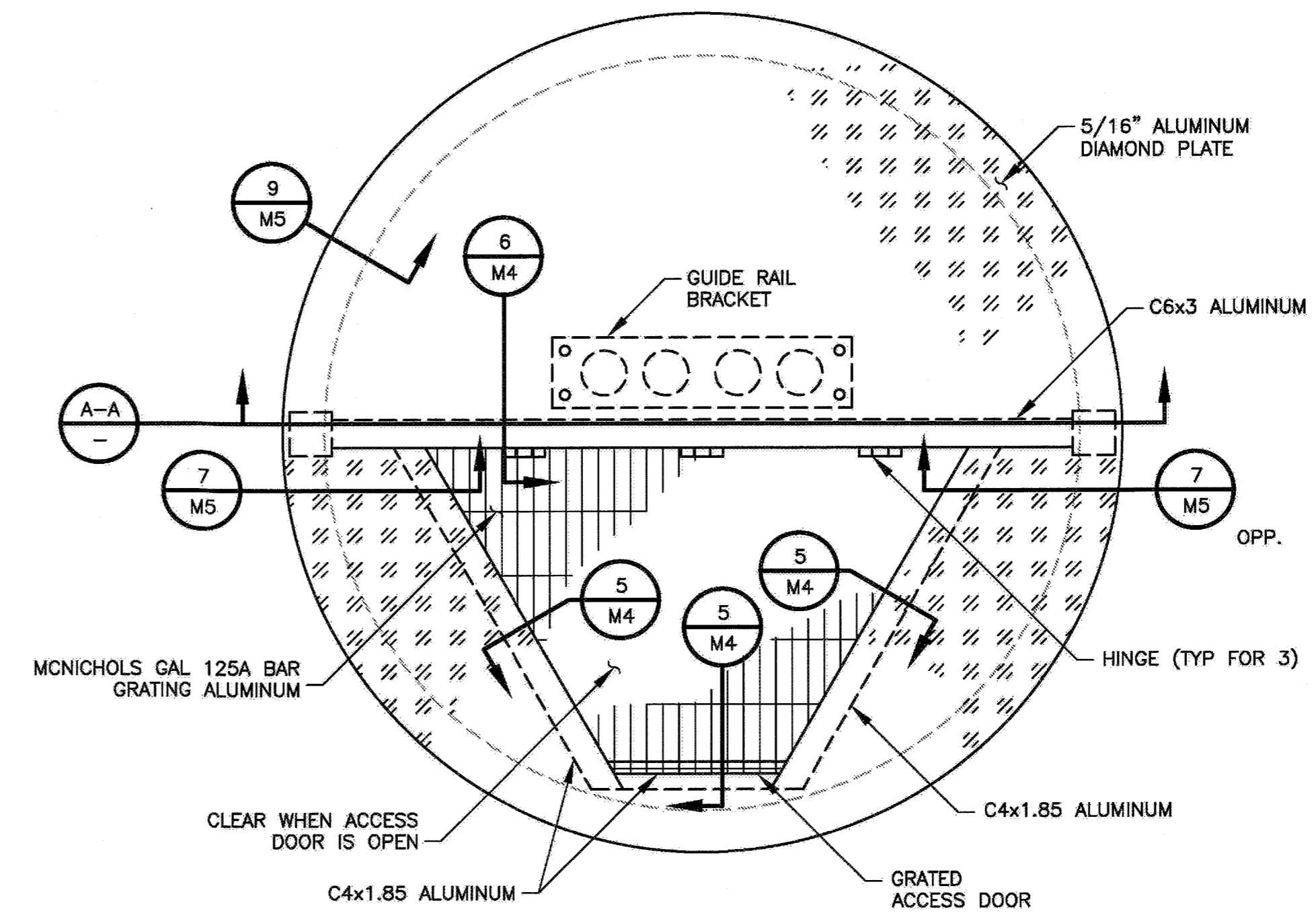
CITY OF PETALUMA
VICTORIA LIFT STATION UPGRADE
VALVE AND FITTINGS SCHEDULE
MECHANICAL

3-222

DEMOLISH EXISTING
WETWELL COVER
AND HATCH



WETWELL COVER - DEMOLITION
NOT TO SCALE



A-A SECTION
NOT TO SCALE

WETWELL COVER - IMPROVEMENT
NOT TO SCALE

NOTES:

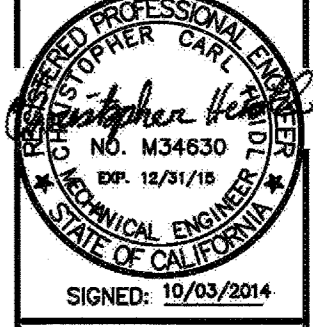
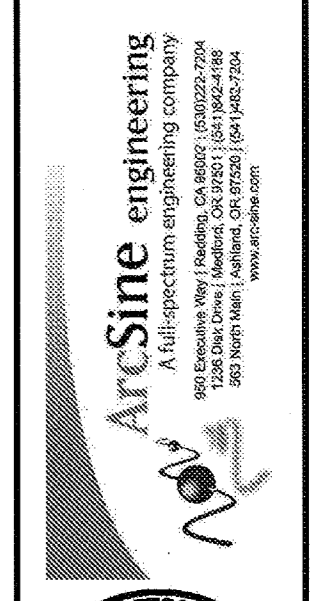
1. NOTE NOT USED.
2. PADLOCK TO BE PROVIDED BY CITY.
3. ALUMINUM CHANNELS AND ANGLES TO BE AMERICAN STANDARD SHAPES.

1 INCH

BAR EQUALS ONE
INCH WHEN DRAWING
IS PLOTTED FULL SIZE.
IF NOT, SCALE ACCORDINGLY

**OCTOBER
2014**

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DATE: 10/02/2014



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MECHANICAL
WETWELL COVER

SHEET
M3
OF 29

PROJECT NO. 066501002
 DESIGNED BY: COH
 DRAWN BY: 1158-M4
 CHECKED BY: DCM
 DATE: 10/02/2014

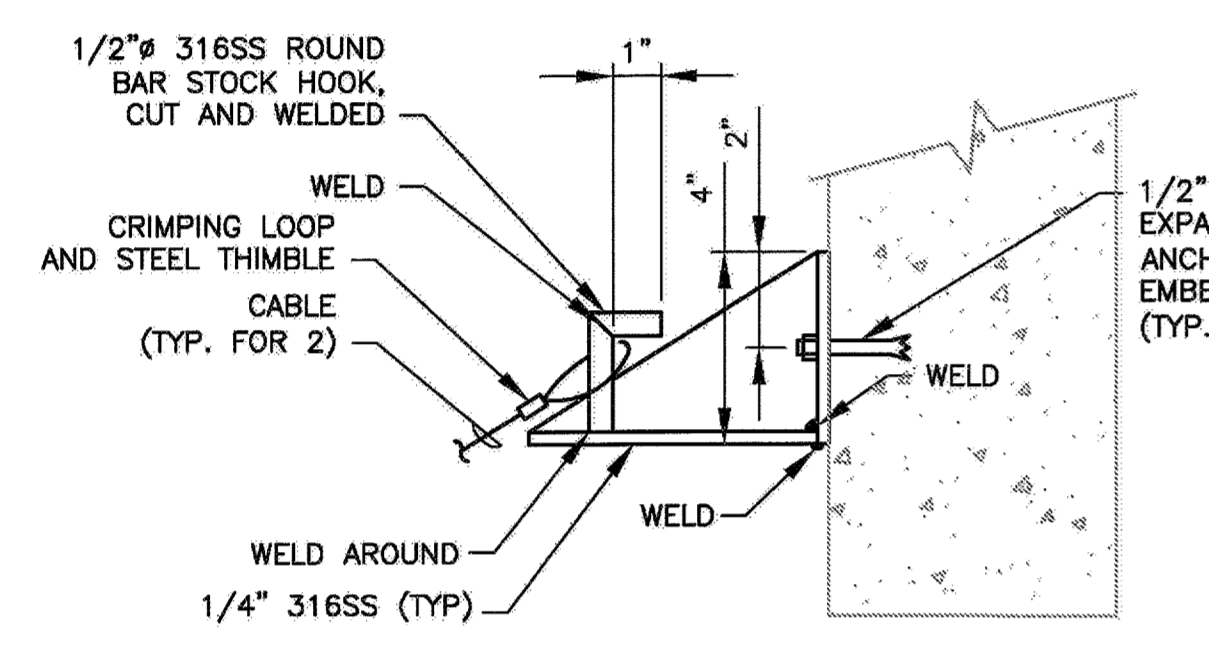
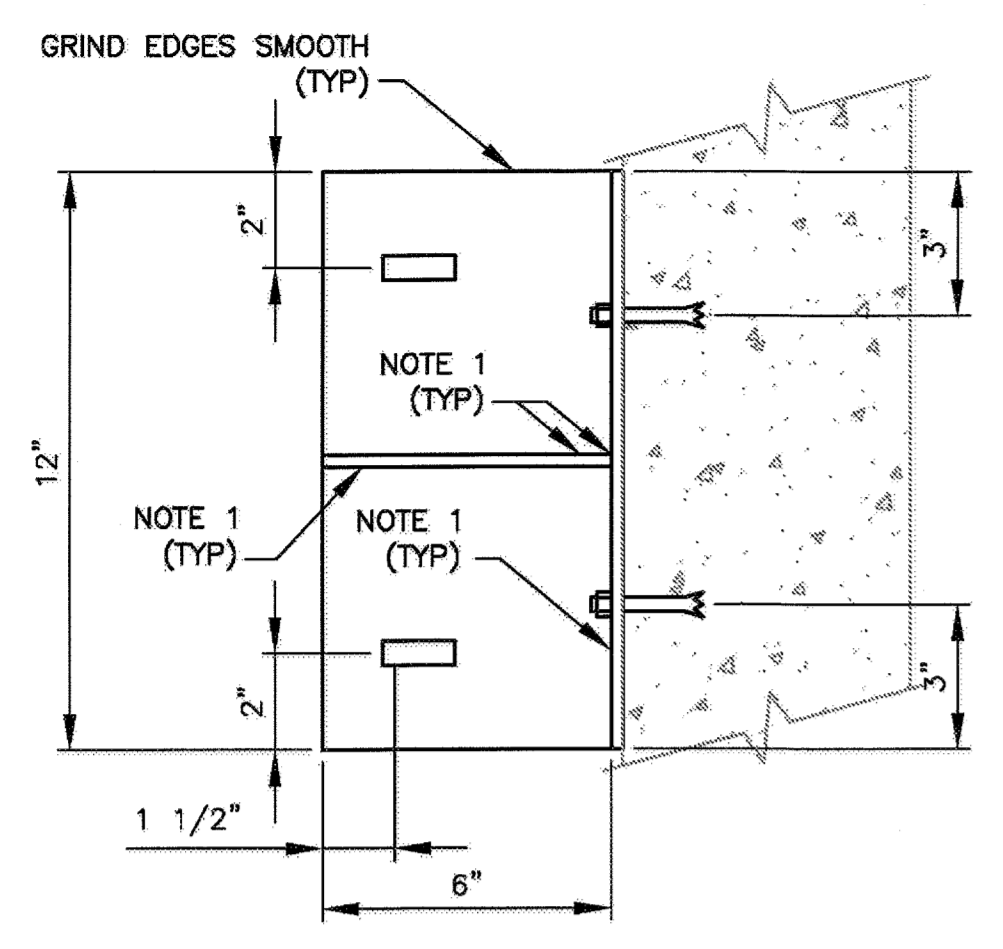
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REGISTERED PROFESSIONAL ENGINEER
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 No. 1534630
 Exp. 12/31/16
 SIGNED: 10/23/2014

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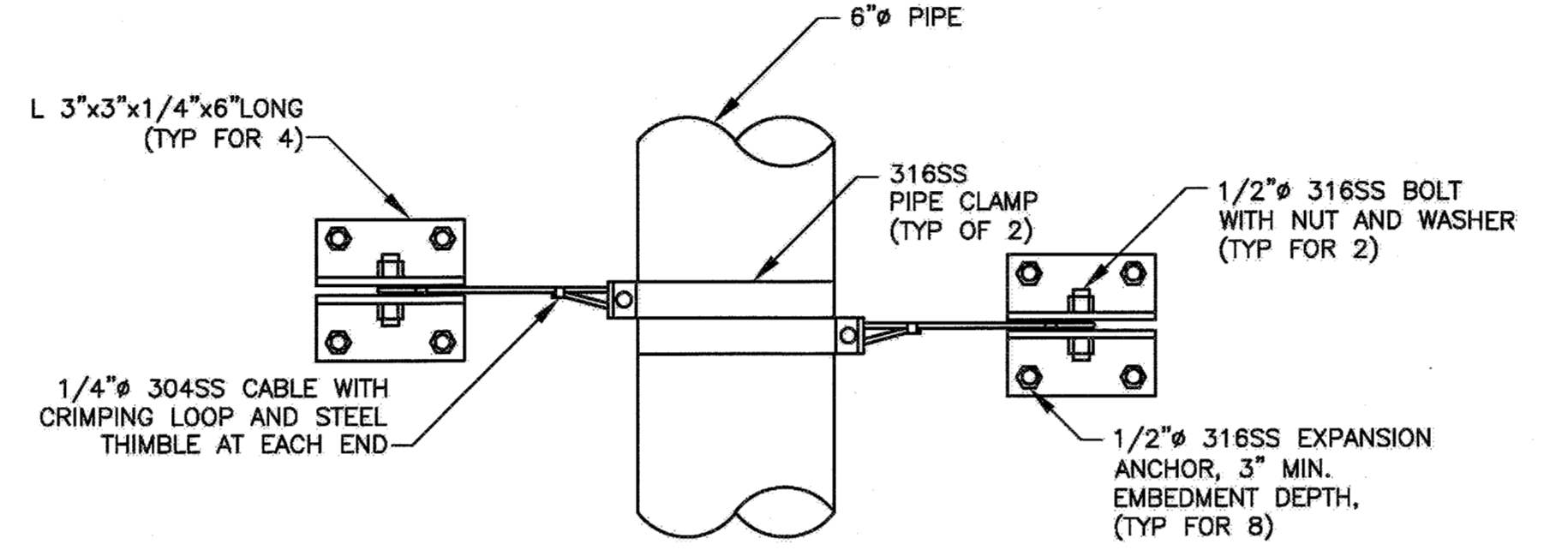
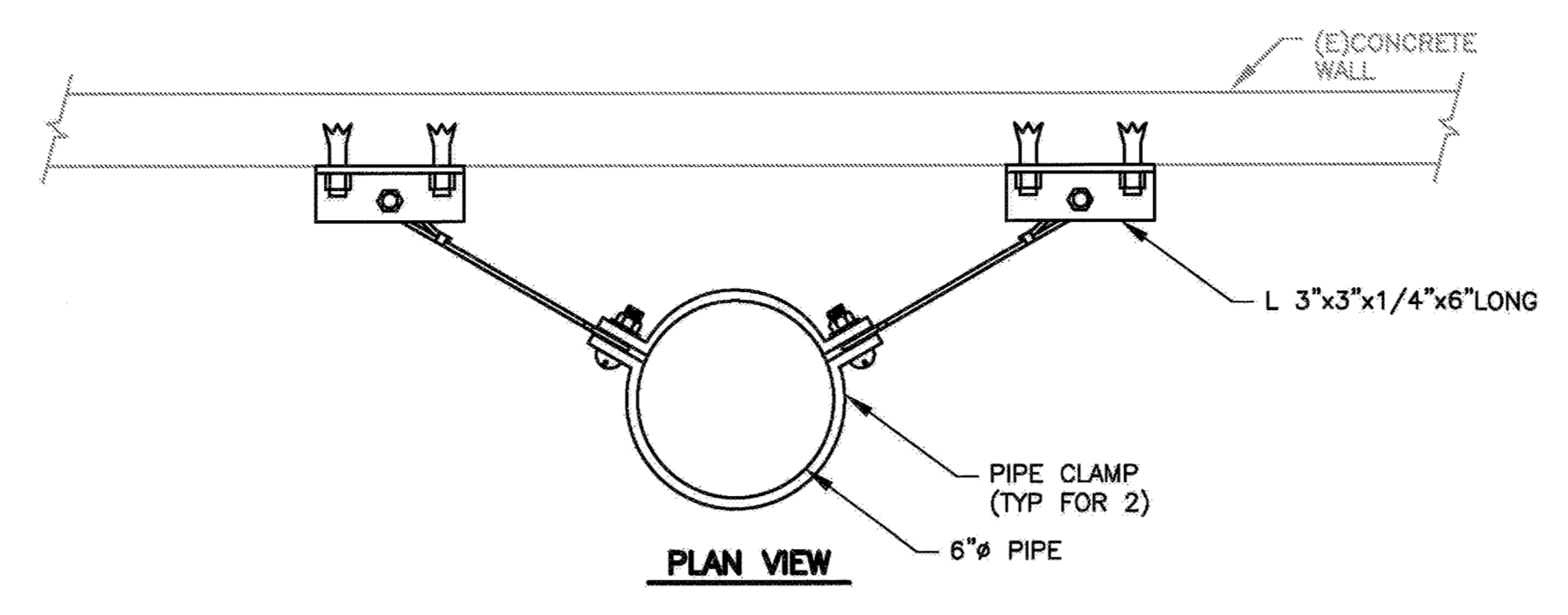
CITY OF PETALUMA
VICTORIA LIFT STATION UPGRADE
 ELEVATIONS AND DETAILS - 1
 MECHANICAL

SHEET
M4
 28 OF 29

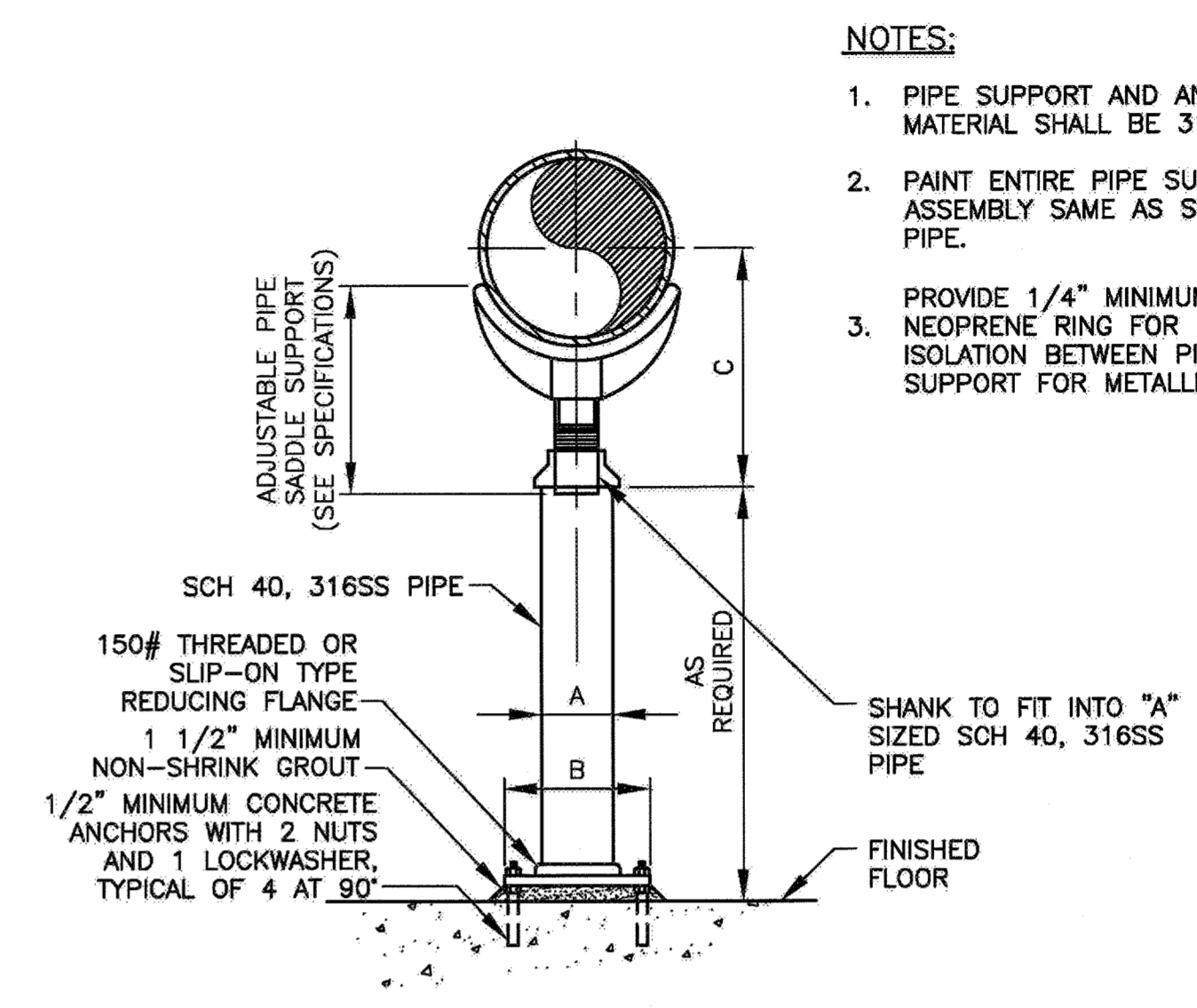


1 HOOK BRACKET
 NOT TO SCALE

NOTE:
 1. WELDS SHALL BE CONTINUOUS ALONG EACH JOINT.
 2. PRIOR TO FABRICATING BRACKET, FIELD VERIFY SUFFICIENT SPACE EXISTS IN THE VALVE VAULT TO INSTALL BRACKET AS DIMENSIONED. IF SUFFICIENT SPACE DOES NOT EXIST, NOTIFY THE ENGINEER.



2 PIPING RESTRAINT
 NOT TO SCALE



DIMENSIONS IN INCHES

PIPE SIZE	A	B	C MIN	C MAX
4	3 1/2	9	9 1/4	14
5	3 1/2	9	10	14 3/4
6	3 1/2	9	10 1/2	15 1/4
8	3 1/2	9	11 3/4	16 1/2

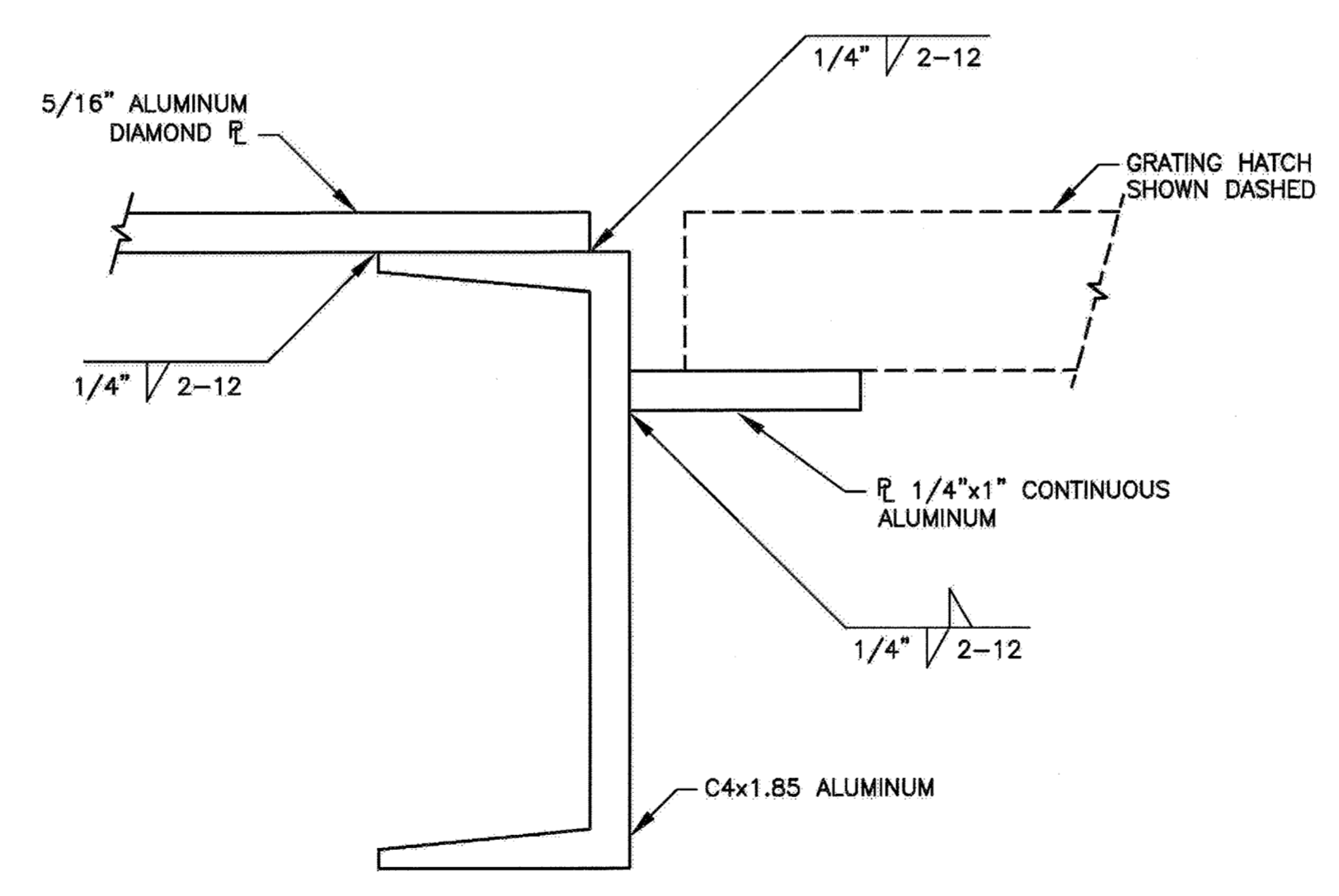
3 PIPING SUPPORT
 NOT TO SCALE

NOTES:
 1. PIPE SUPPORT AND ANCHOR MATERIAL SHALL BE 316SS.
 2. PAINT ENTIRE PIPE SUPPORT ASSEMBLY SAME AS SUPPORTED PIPE.
 3. PROVIDE 1/4" MINIMUM THICK NEOPRENE RING FOR ELECTRICAL ISOLATION BETWEEN PIPE AND SUPPORT FOR METALLIC PIPE.

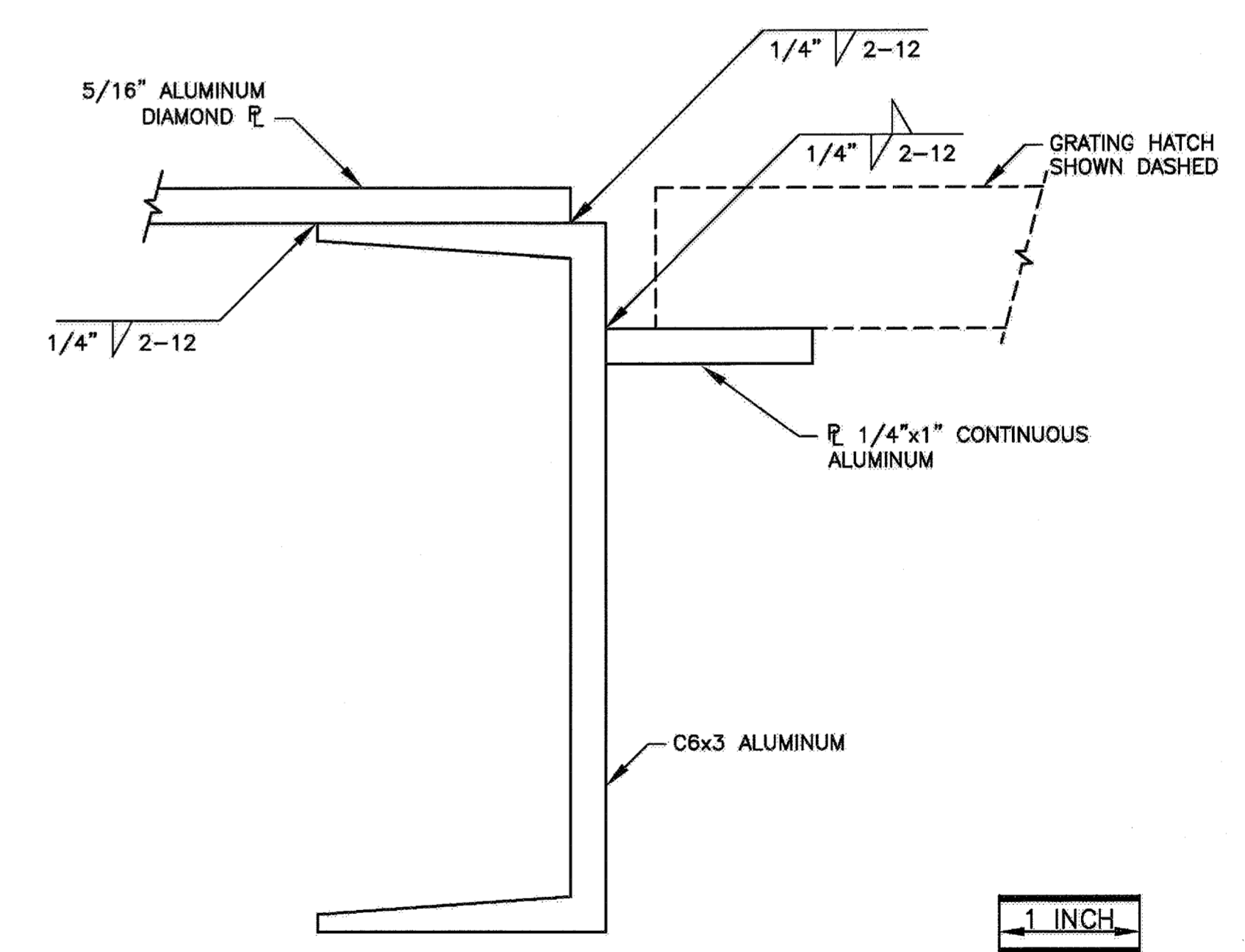
ABBREVIATIONS

- 316SS TYPE 316 STAINLESS STEEL
- 304SS TYPE 304 STAINLESS STEEL
- 10" PIPE DIAMETER
- CONC CONCRETE
- CP CONTROL PANEL
- EXST, (E) EXISTING
- FCA FLANGED COUPLING ADAPTER
- MAX MAXIMUM
- MCC MOTOR CONTROL CENTER
- MIN MINIMUM
- MJ MECHANICAL JOINT
- (N) NEW
- NC NORMALLY CLOSED
- NO NORMALLY OPEN
- NPT(F) NATIONAL PIPE THREAD, INTERNALLY THREADED FEMALE CONNECTION
- NPT(M) NATIONAL PIPE THREAD, EXTERNALLY THREADED MALE CONNECTION
- OD OUTSIDE DIAMETER
- OPP OPPOSITE
- PVC POLYVINYL CHLORIDE
- SS STAINLESS STEEL
- TYP TYPICAL
- VFD VARIABLE FREQUENCY DRIVE

4 ABBREVIATIONS
 NO SCALE



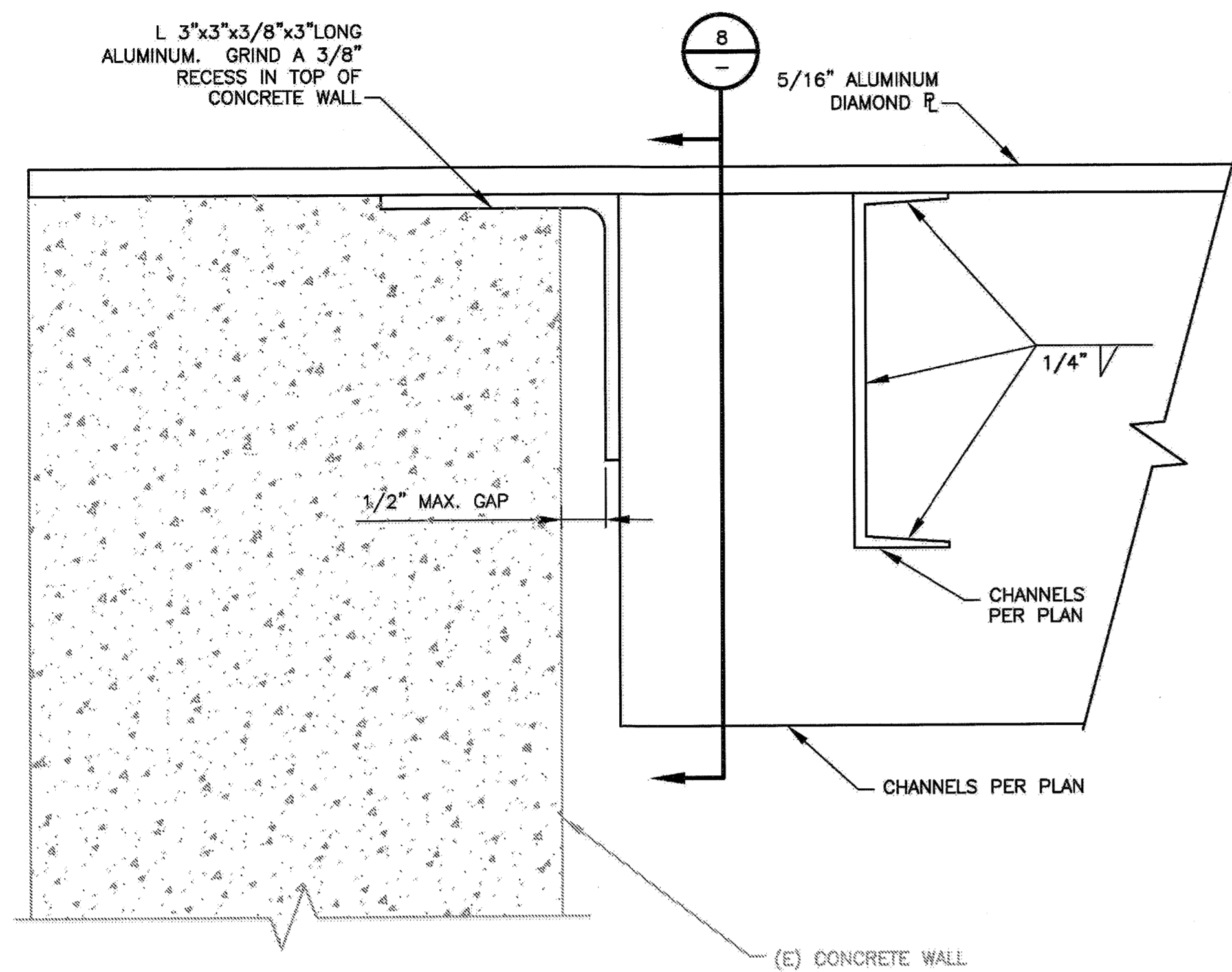
5 WELD DETAIL
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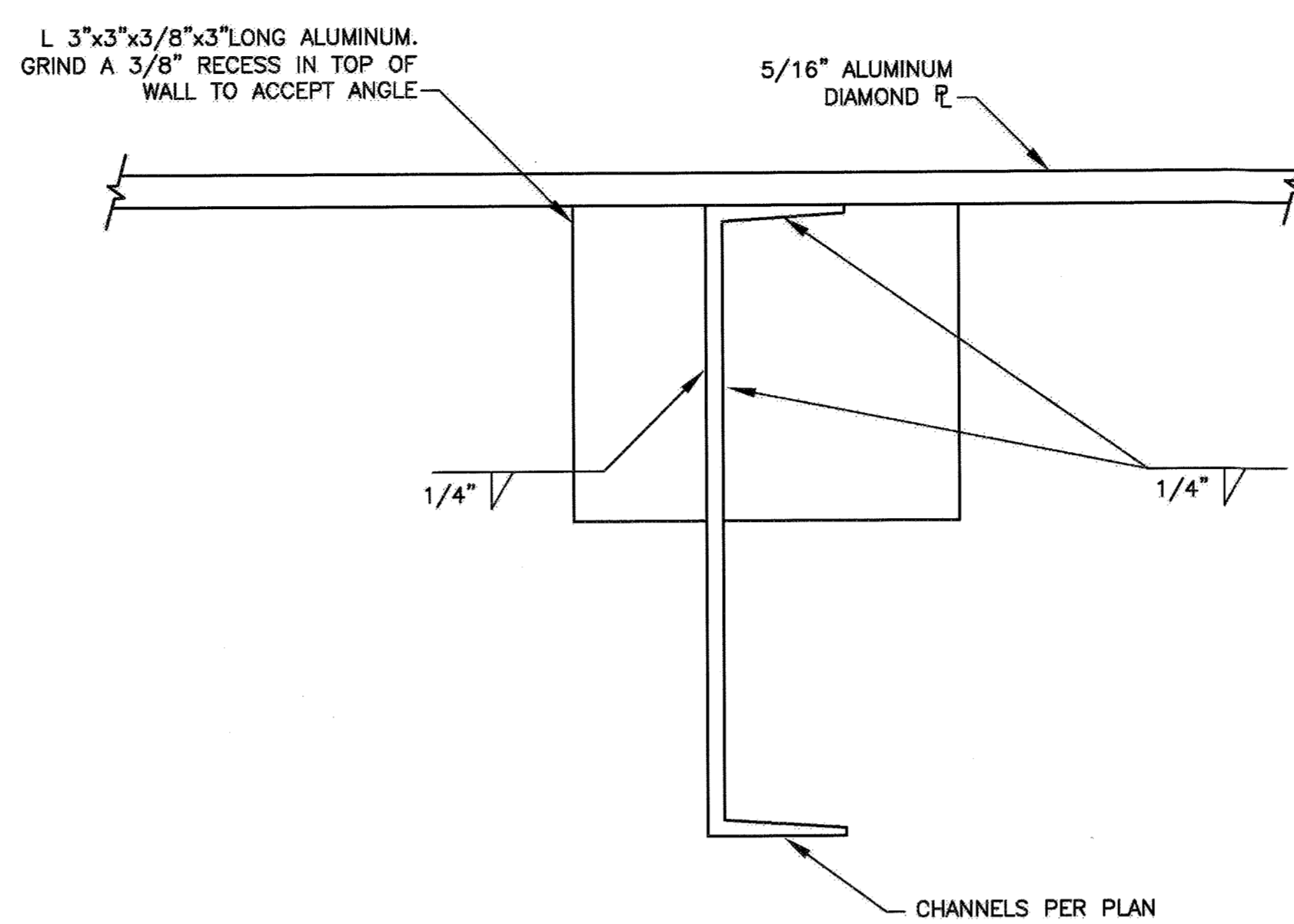
6 WELD DETAIL
 NOT TO SCALE

1 INCH
 BAR EQUALS ONE INCH WHEN DRAWING IS PLOTTED FULL SIZE. IF NOT, SCALE ACCORDINGLY

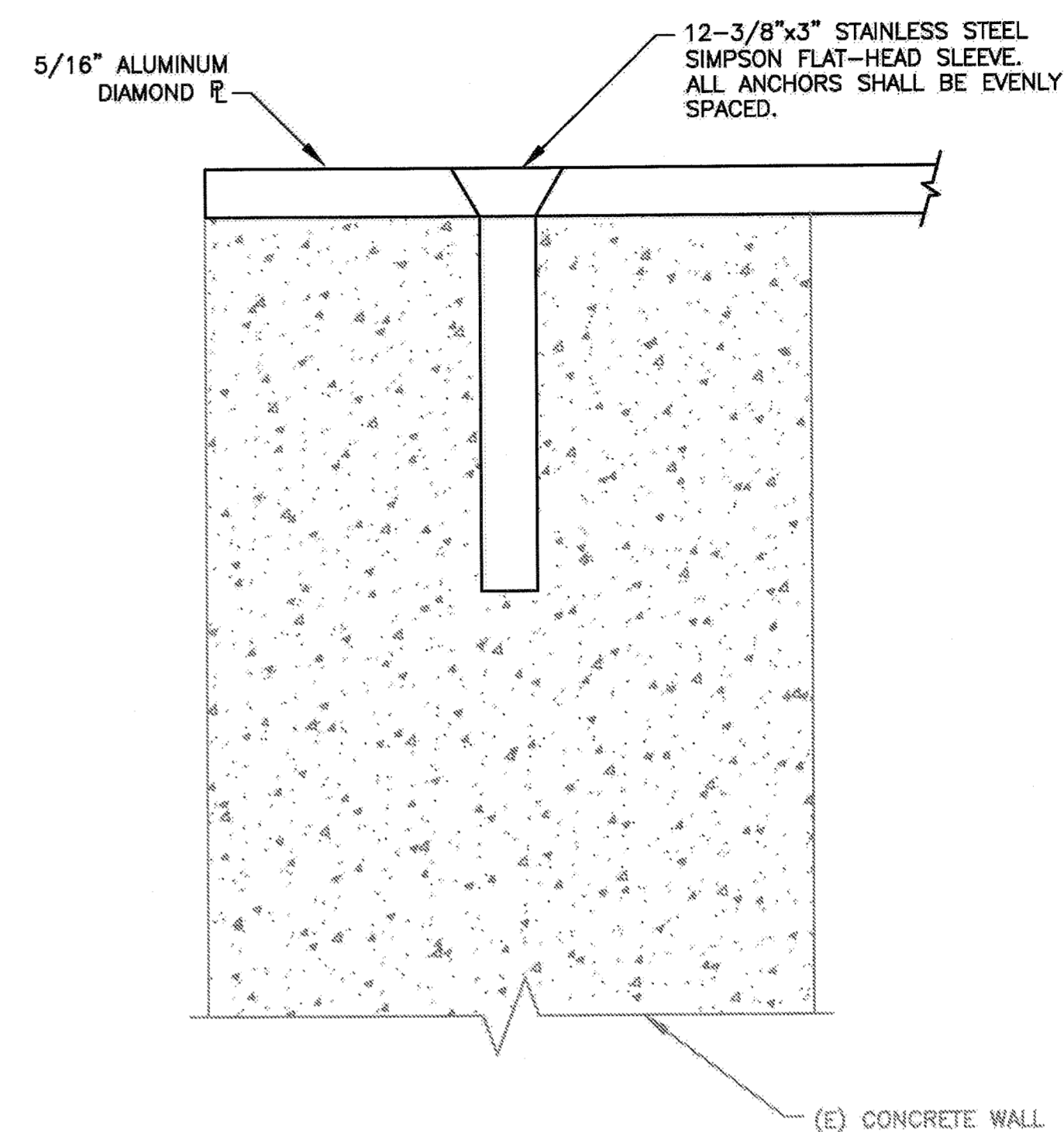
OCTOBER 2014



7 WELD DETAIL
NOT TO SCALE



8 WELD DETAIL
NOT TO SCALE



9 ANCHOR DETAIL
NOT TO SCALE

1 INCH

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OCTOBER 2014

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DESIGNED BY: CCH
DRAWN BY: 1158-M5
CHECKED BY: DOM

DATE: 10/02/2014

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Exp. 12/31/16
STATE OF CALIFORNIA
SIGNED: 10/03/2014

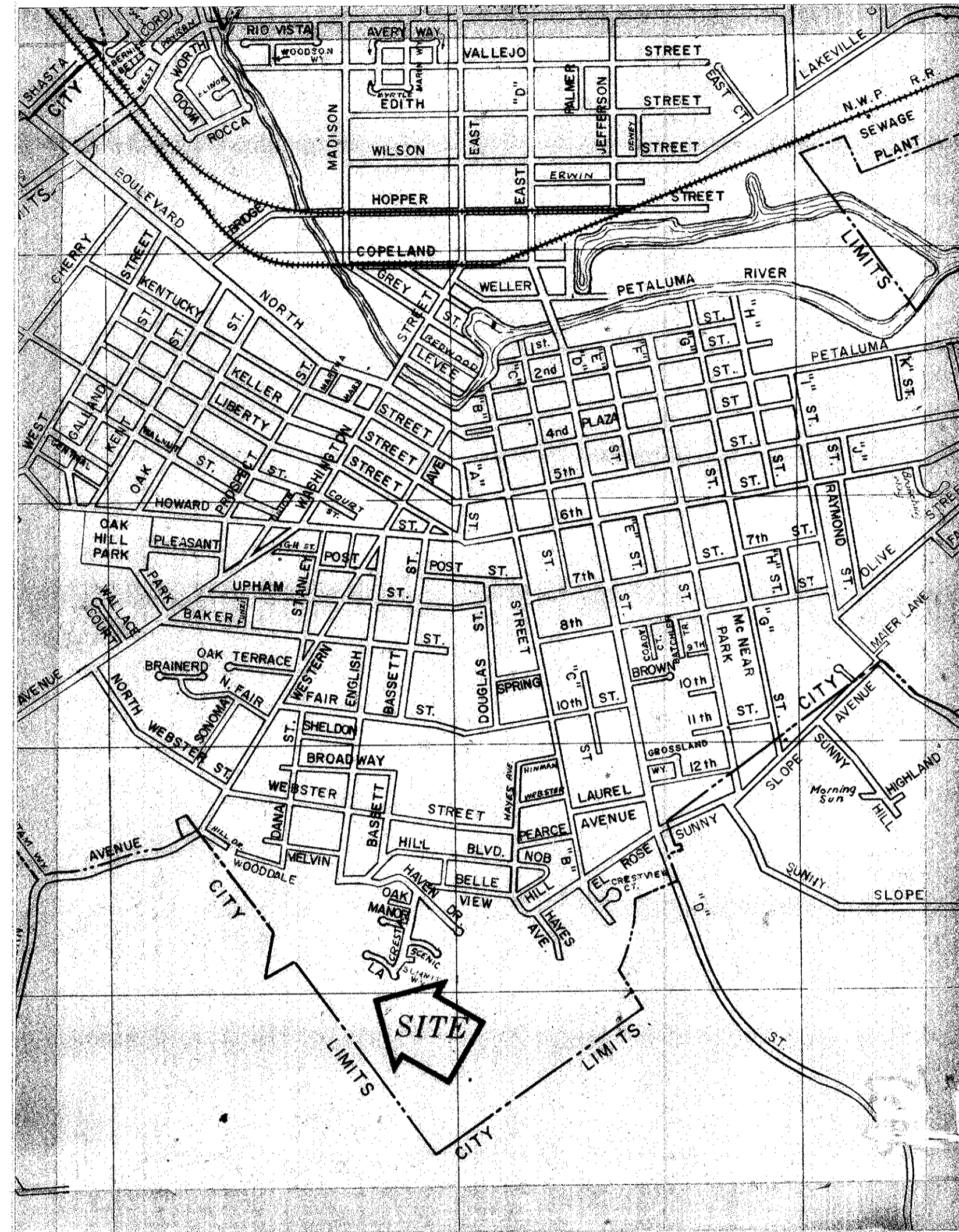
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VICTORIA LIFT STATION UPGRADE
ELEVATIONS AND DETAILS - 2
MECHANICAL

SHEET
M5

29 OF 29

3-222



LA CRESTA

AND STORAGE

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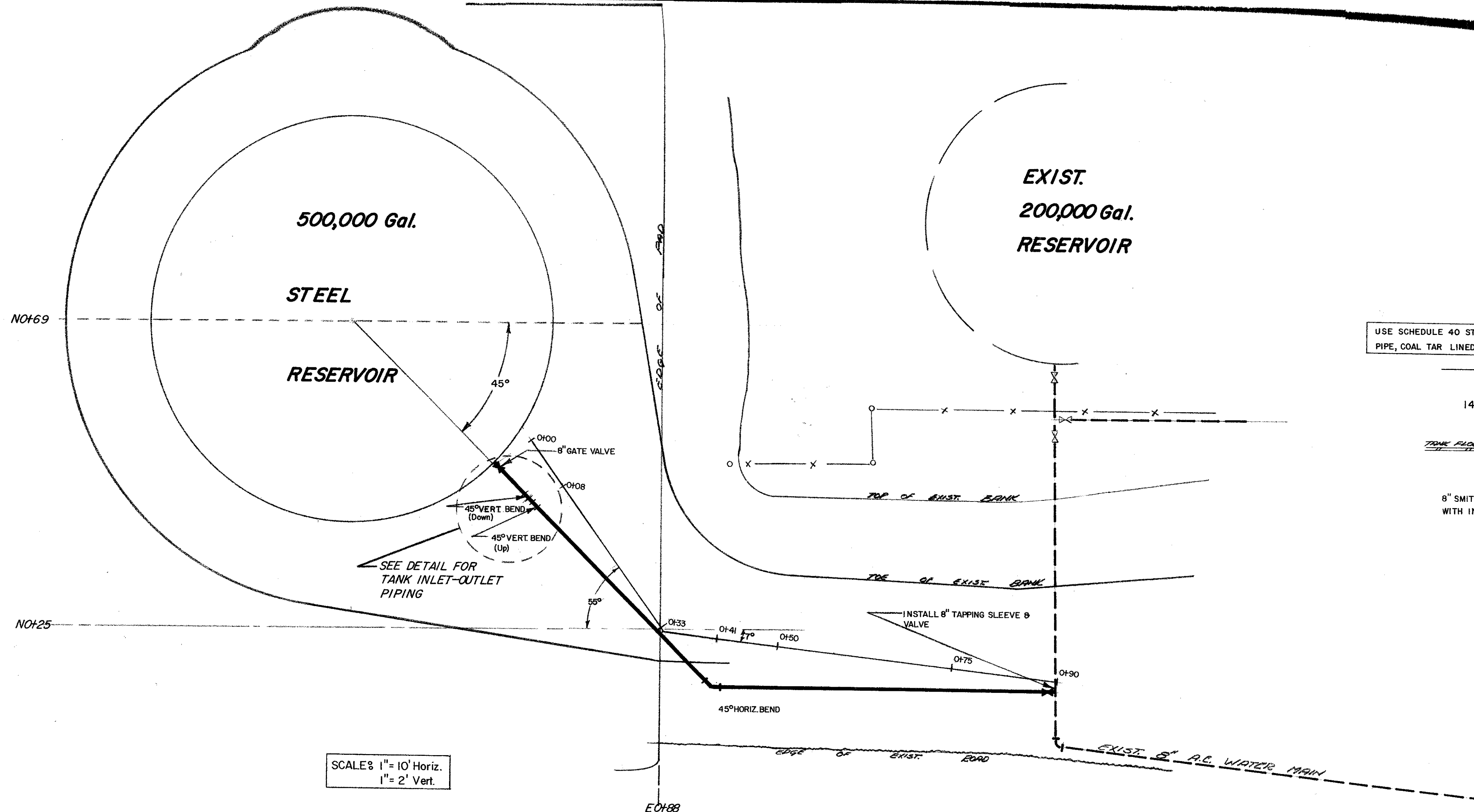
PROJECT 768-1

City of Petaluma - Dept. of Public Works

MAP
1" = 1000'

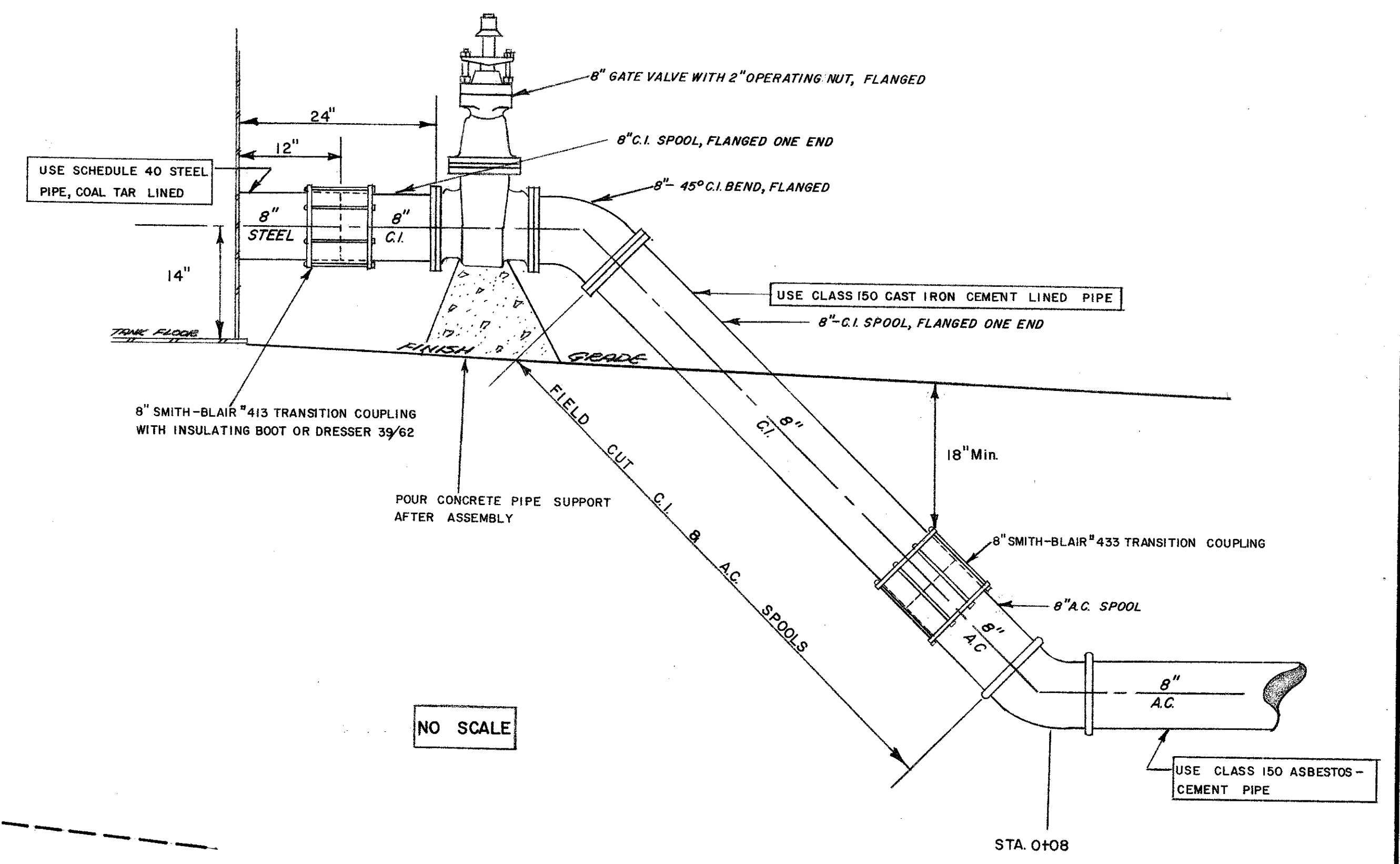


APPROVED BY *David A. Young* DATE - 5/20/68
 David A. Young P.E. 11433
 Director of Public Works



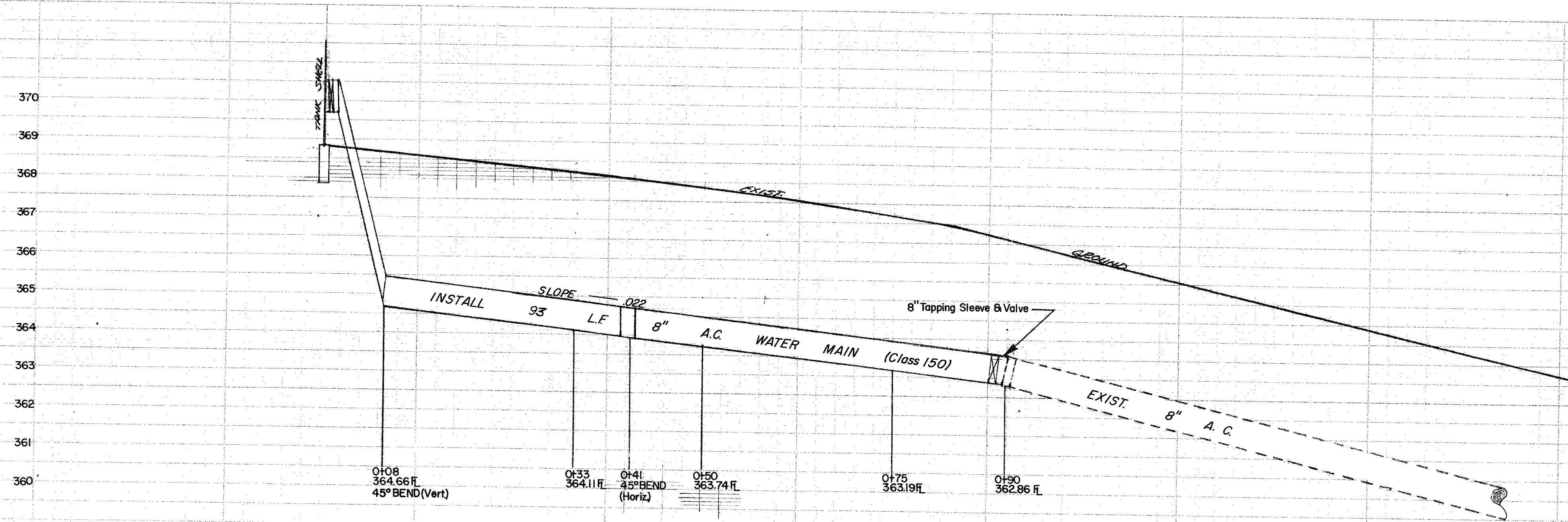
SCALE: 1" = 10' Horiz.
1" = 2' Vert.

NOTE: ALL PIPE & FITTINGS EXPOSED ABOVE GROUND WILL REQUIRE A WIRE BRUSH FINISH PRIOR TO COATING WITH THE PAINT SPECIFIED FOR THE INTERIOR ROOF.



NO SCALE

INLET-OUTLET PIPING DETAIL

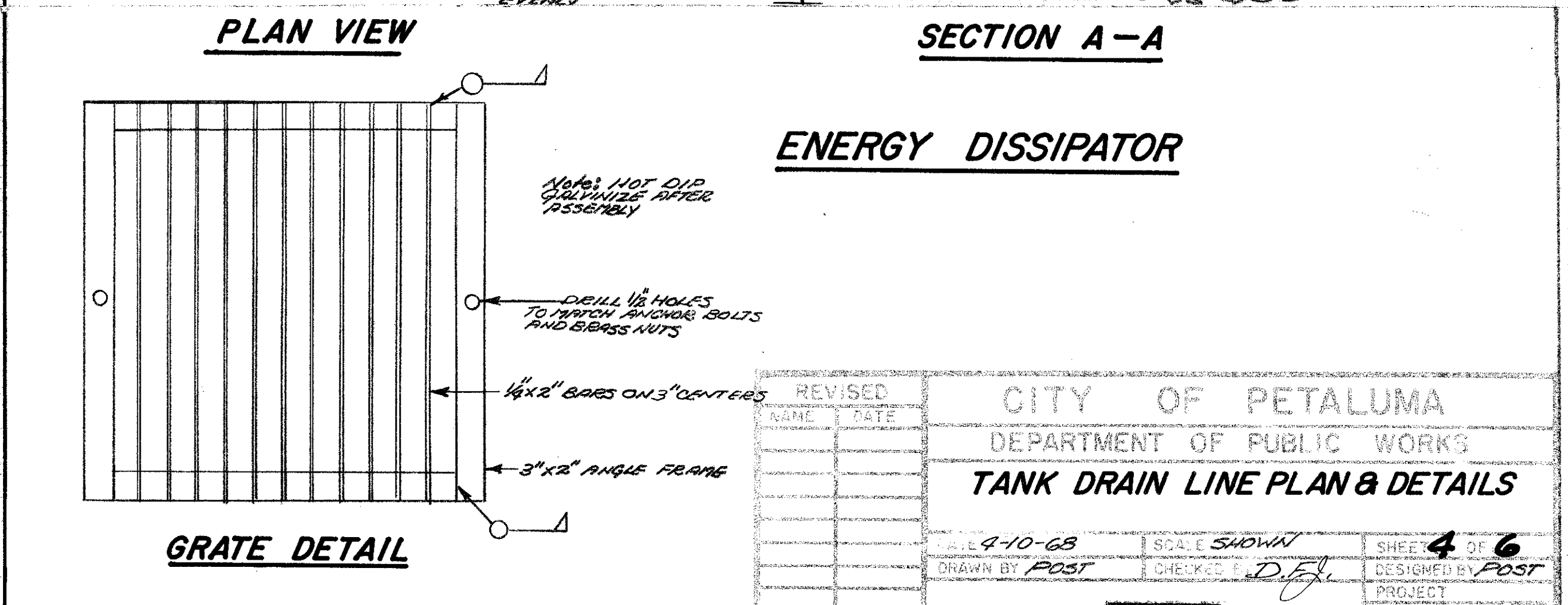
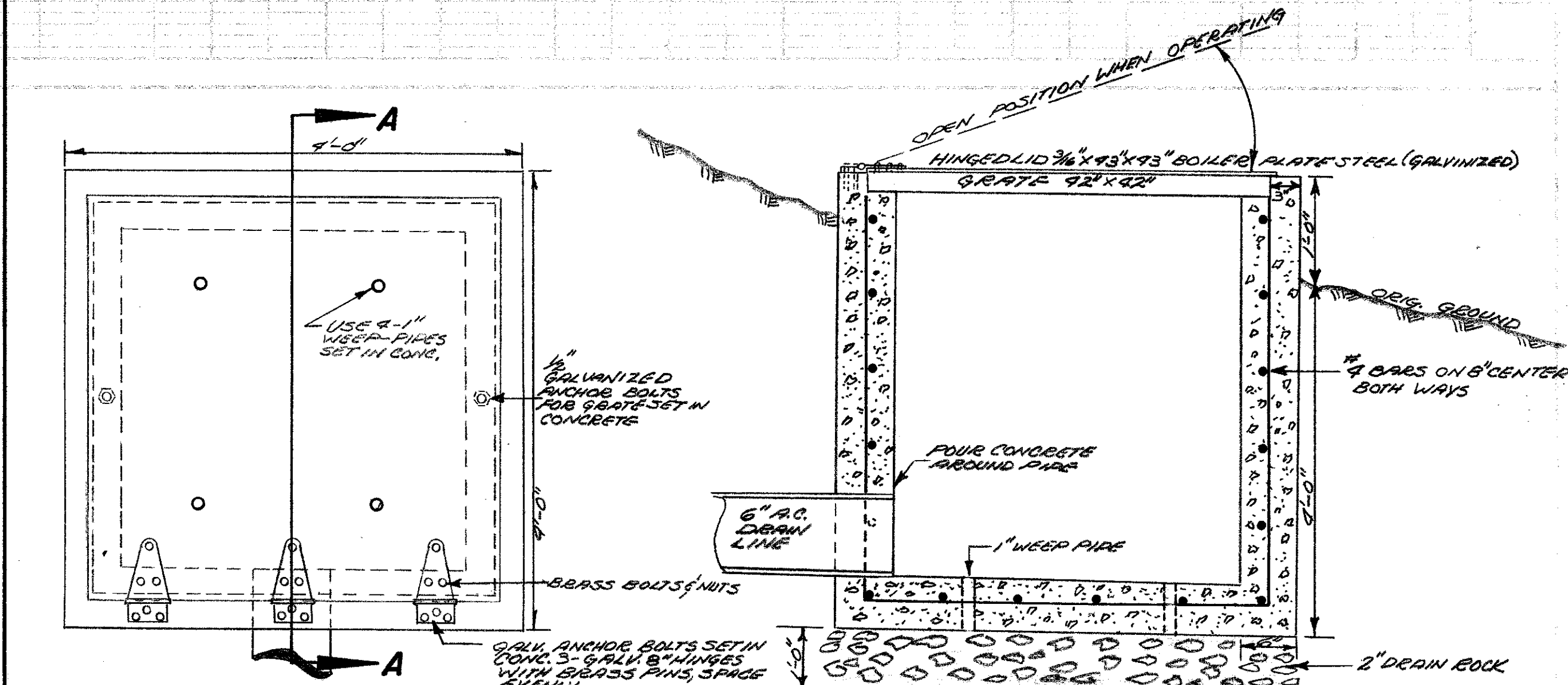
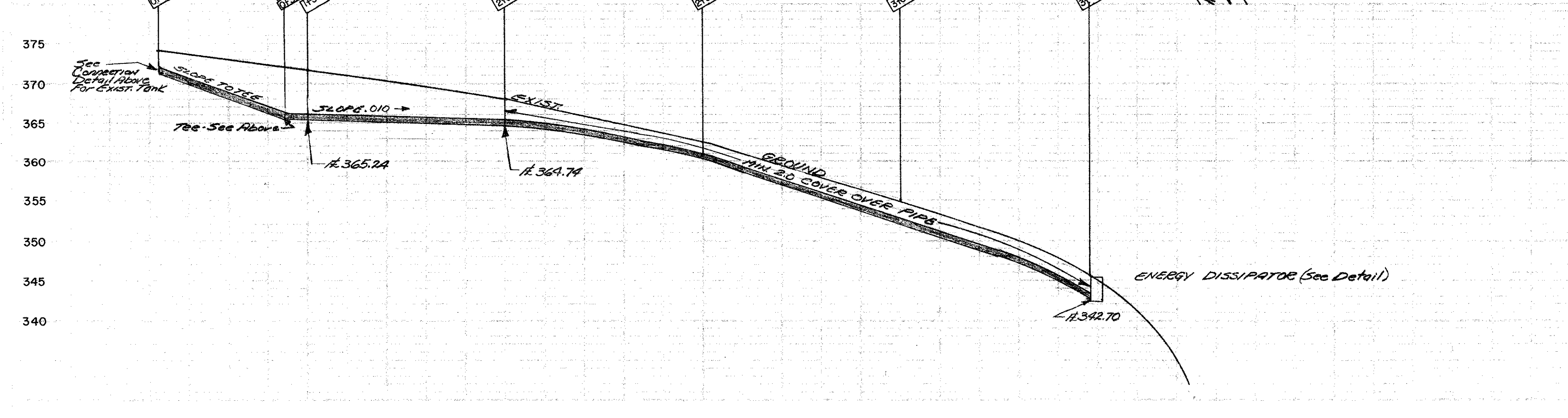
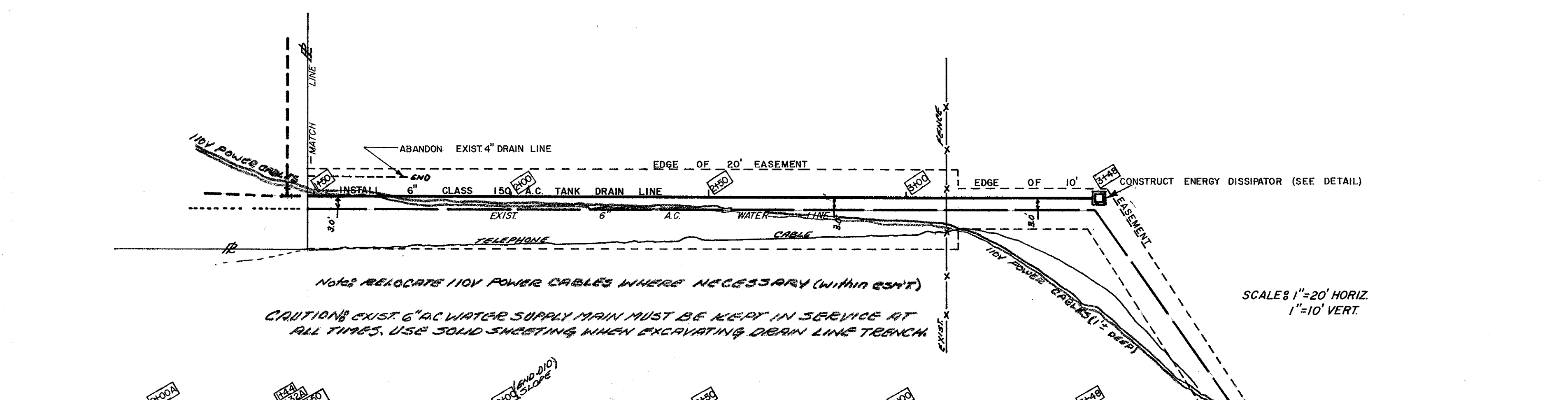
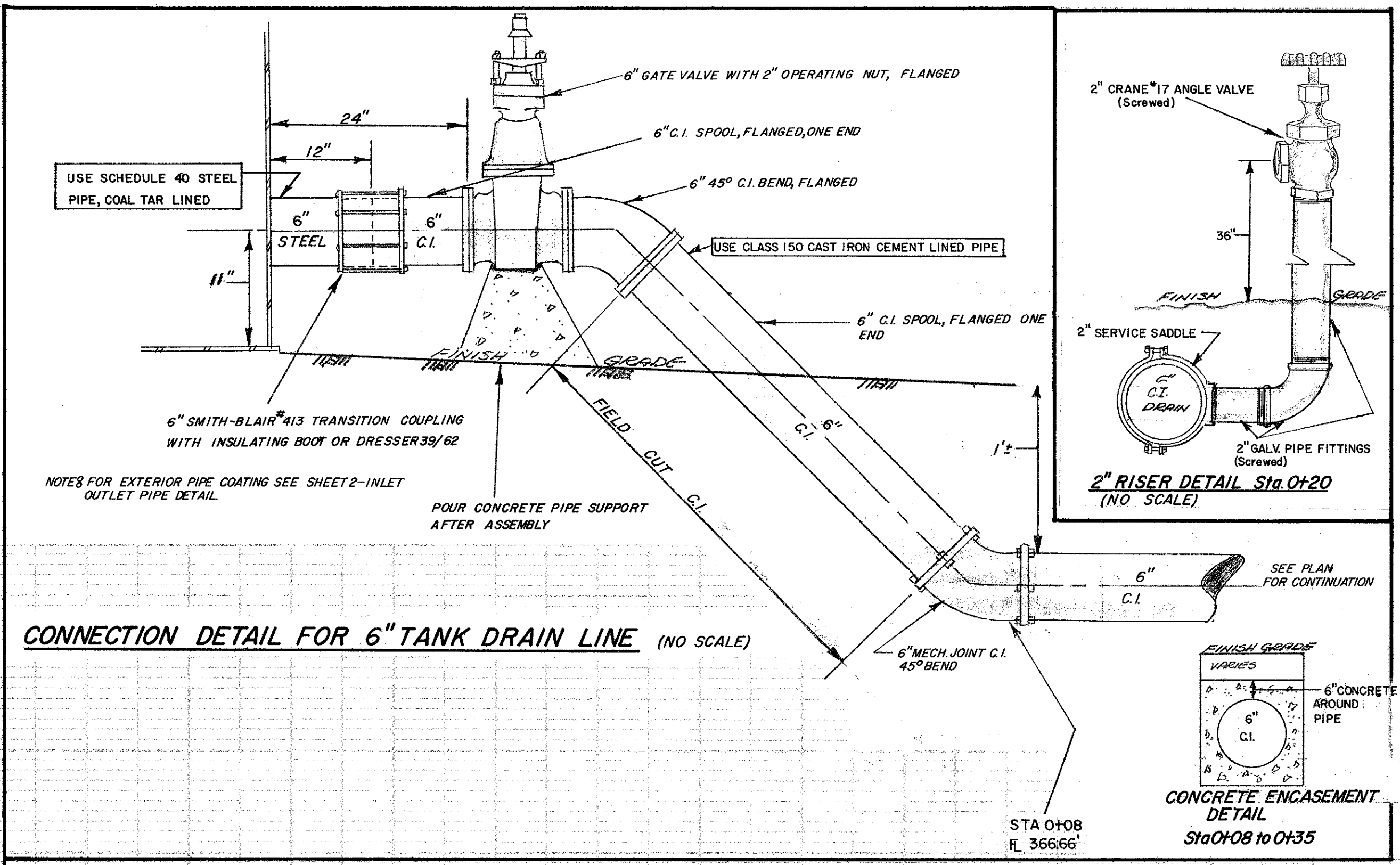
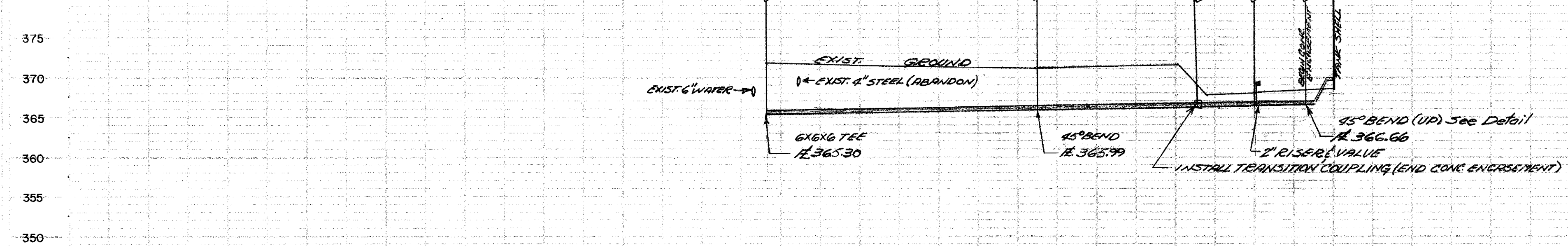
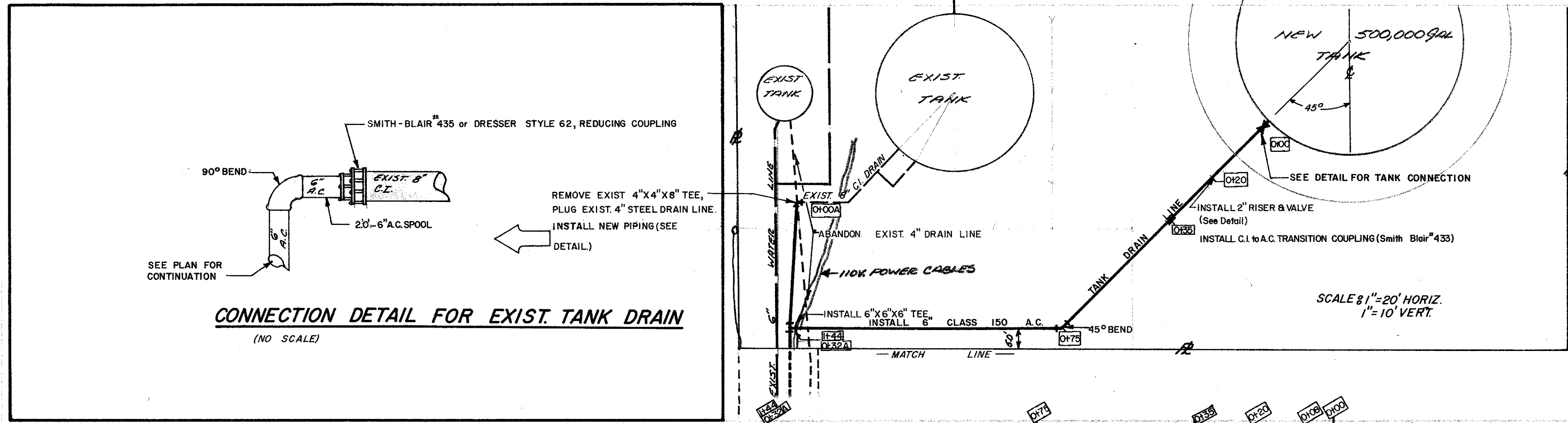


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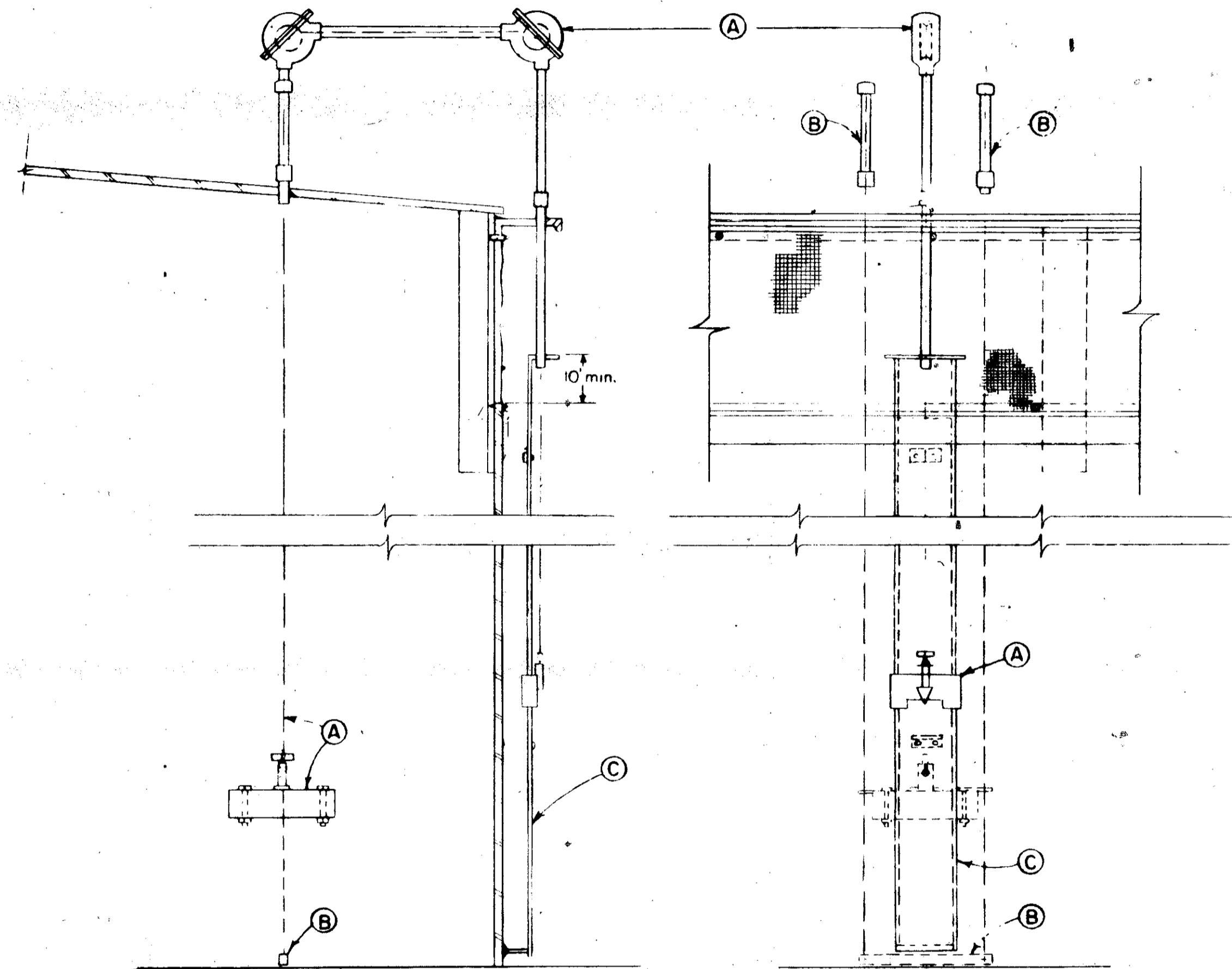
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REVISED NAME	DATE	CITY OF PETALUMA DEPARTMENT OF PUBLIC WORKS		SHEET 3 OF 6
		TANK INLET-OUTLET PIPE PLAN & DETAILS		RESIGNED BY POST
		DATE 4-1-68	SCALE SHOWN	PROJECT W-68-1
		DRAWN BY POST	CHECKED BY [Signature]	JOB NO.
				FILE NO.

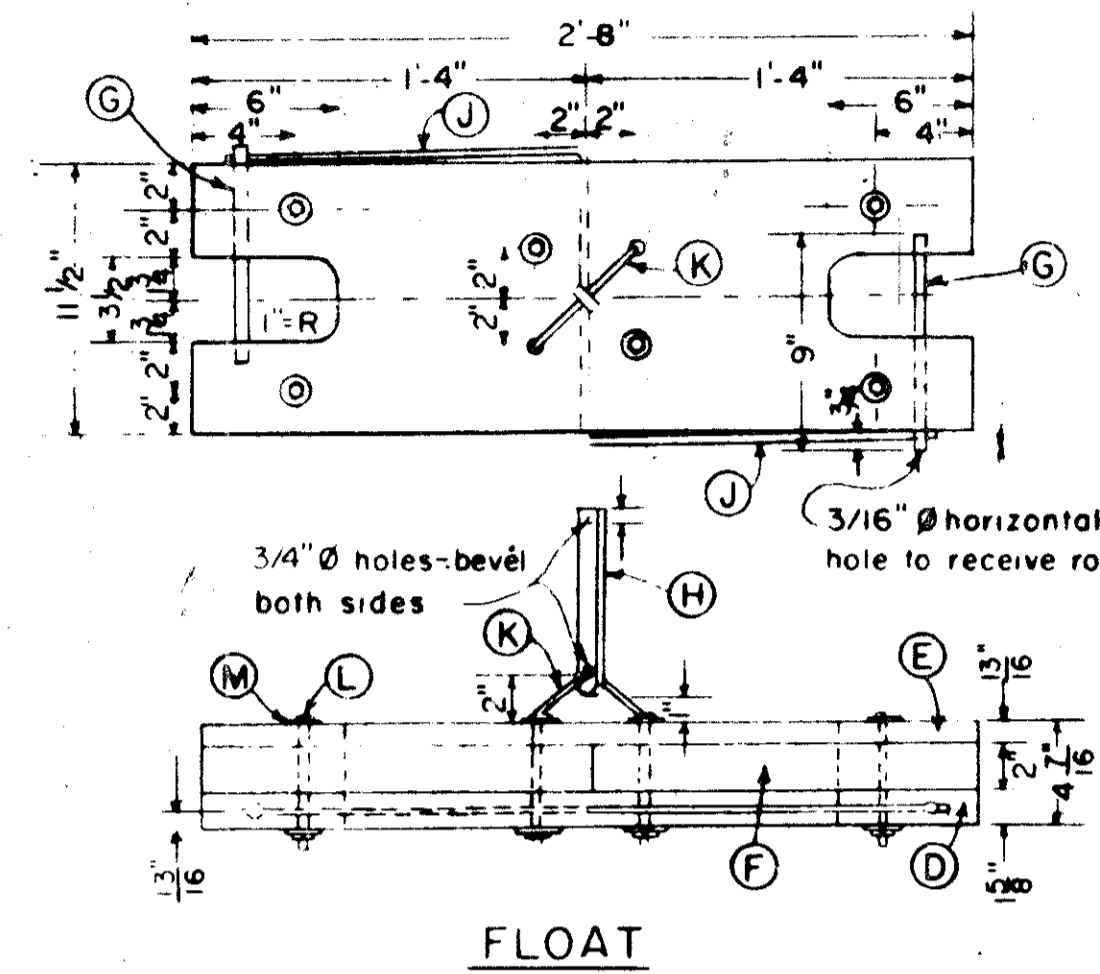
LA CRESTA TANK



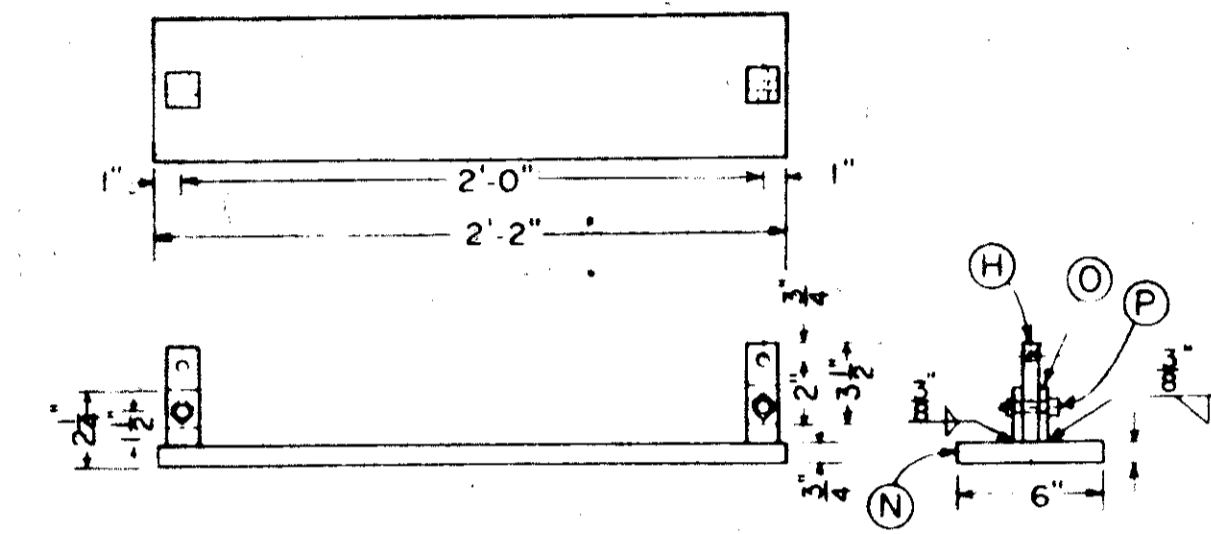
REVISED	CITY OF PETALUMA
NAME	DEPARTMENT OF PUBLIC WORKS
STATE	TANK DRAIN LINE PLAN & DETAILS
DATE	4-10-68
DRAWN BY	POST
CHECKED BY	DEL
DESIGNED BY	POST
PROJECT	
FILE NO.	



WATER LEVEL INDICATOR



FLOAT



FLOAT GUIDE WIRE WEIGHT

ASSEMBLY DETAILS - WATER LEVEL INDICATOR

P	1/2" x 2" Steel Bolts with nuts
O	3/8" x 1 1/2" Steel Bar
N	1" x 6" x 2-2" H-R Steel Plate
M	1/4" Bronze Washers
L	1/4" x 5" Bronze Machine Bolt with nuts
K	1/4" Dia. Bronze Rod
J	.144 Dia. Phosphor Bronze Rod
H	1/2" x 1-1/2" Bakelite
G	1/2" Dia Bakelite Rod
F	12" x 18" x 2" Foamglas Blocks
E	1" x 12" S4S Redwood, clear
D	2" x 12" S4S Redwood, clear
C	Indicator Board, Shand & Jurs ST-10164 or approved equal.
B	Guide wire and spring assembly with anchor bar.
A	Liquid Level Indicator, Shand & Jurs ST-92302 or approved equal.

No.	DATE	REVISION

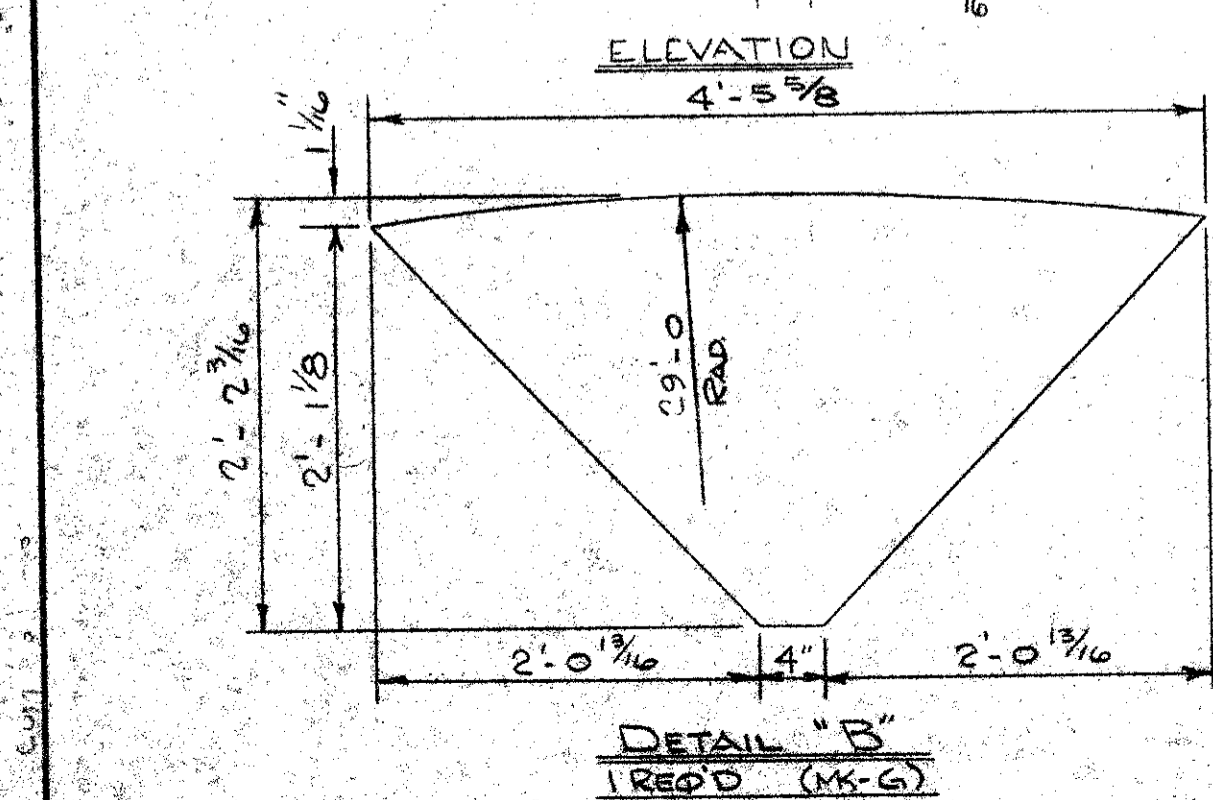
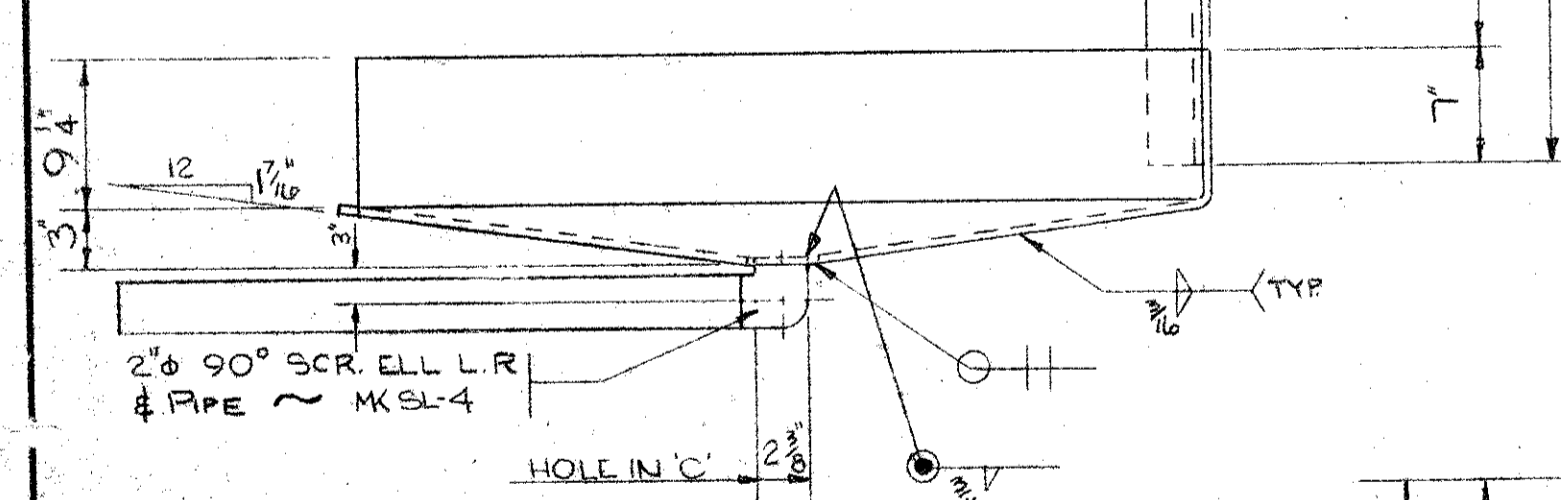
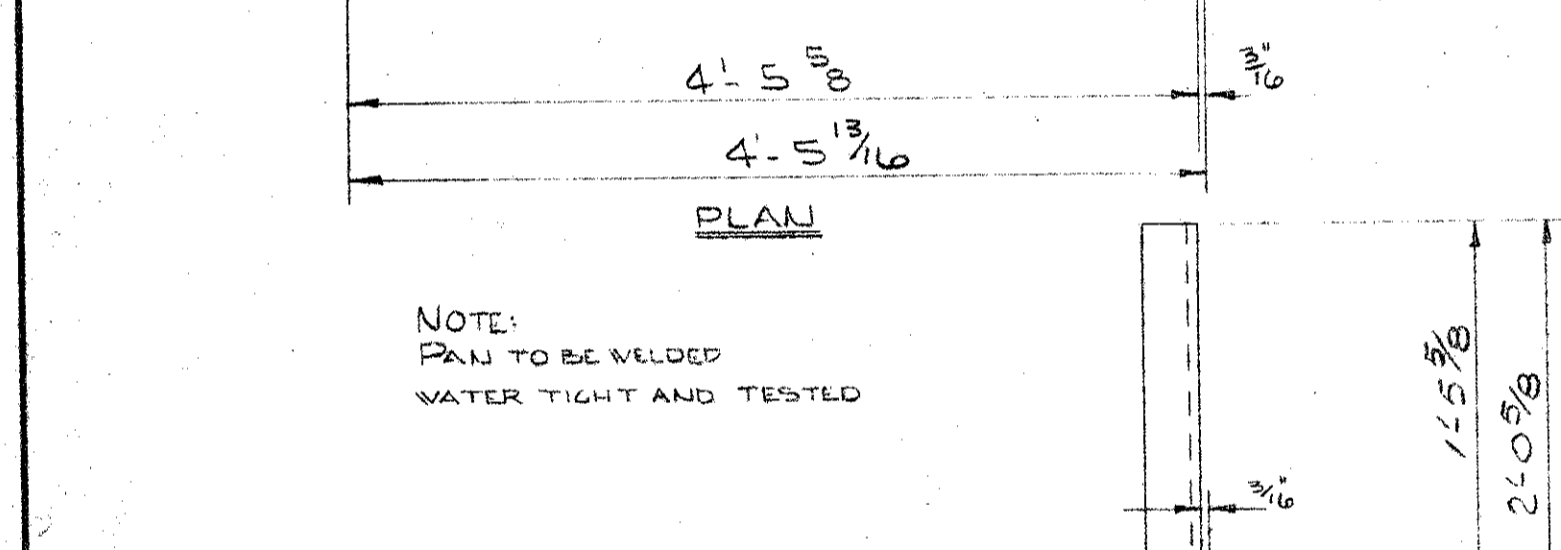
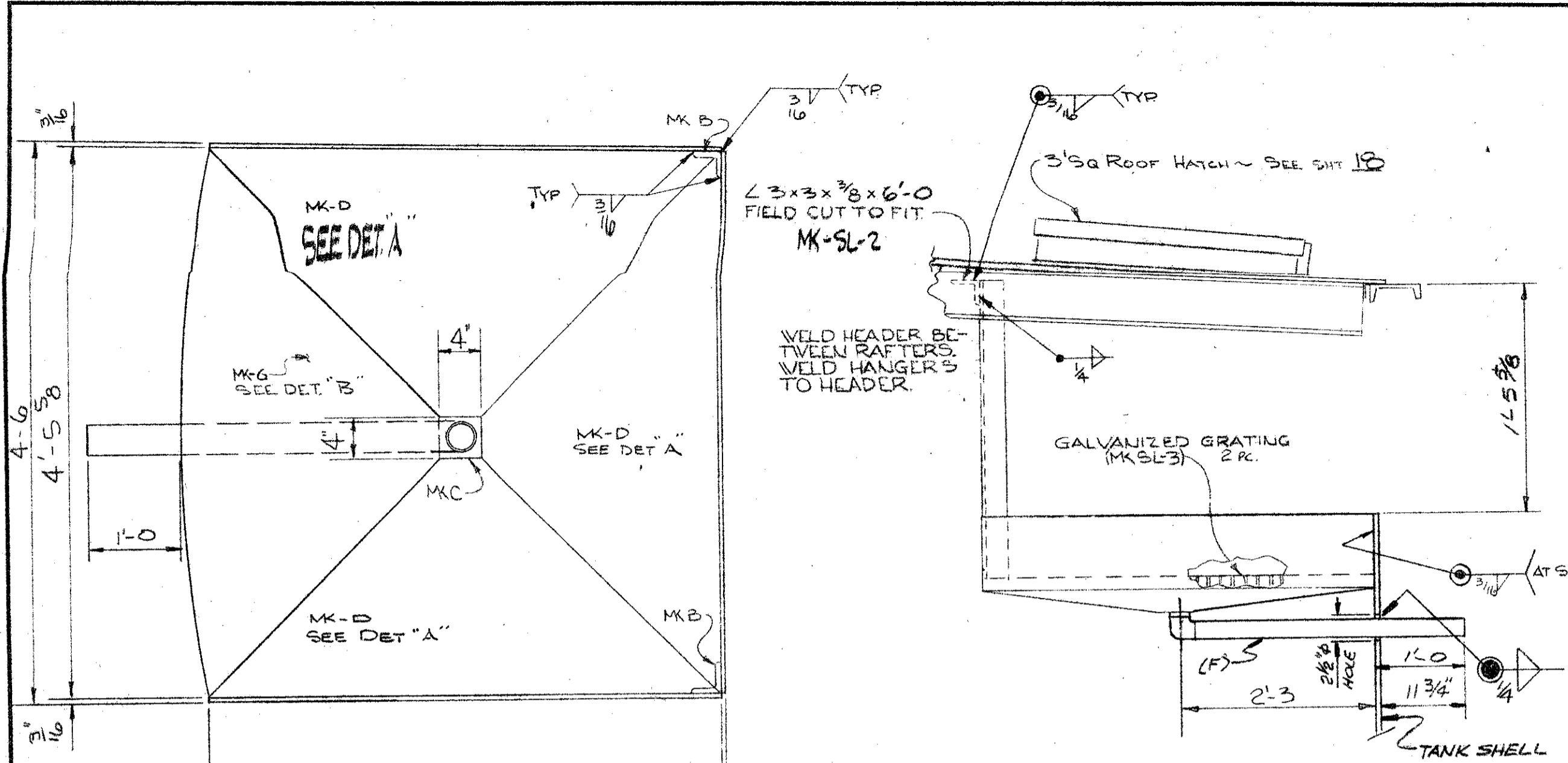
CITY OF PETALUMA
DEPARTMENT OF PUBLIC WORKS
WATER LEVEL INDICATOR

DATE 6/23/67 SCALE SHEET 6 OF 6
DRAWN BY S.C. CHECKED BY [Signature] DESIGNED BY D.A.V.

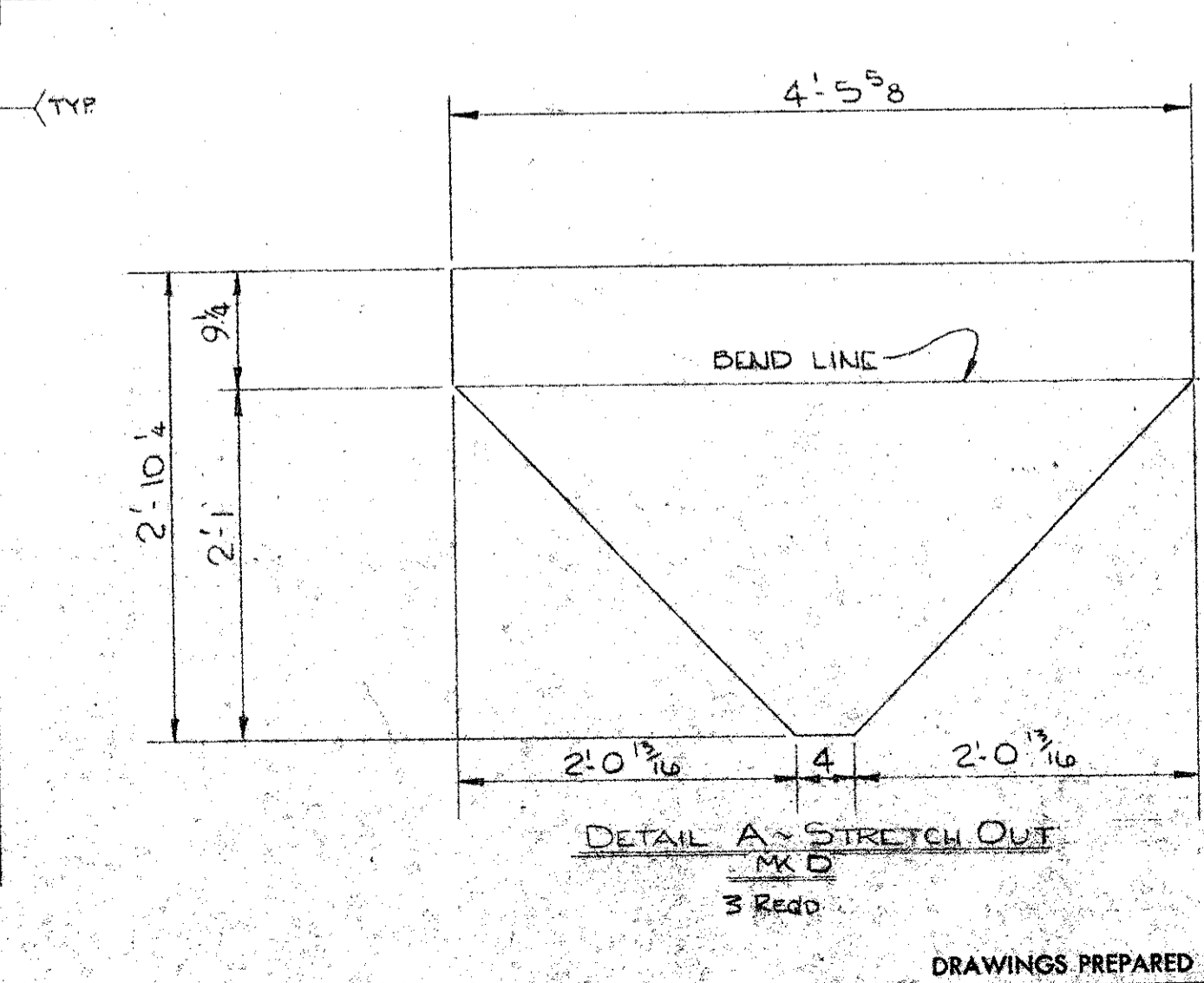
APPROVED BY: [Signature]
DIRECTOR OF PUBLIC WORKS

PROJECT
JOB NO.
FILE NO.

LA CRESTA TANK

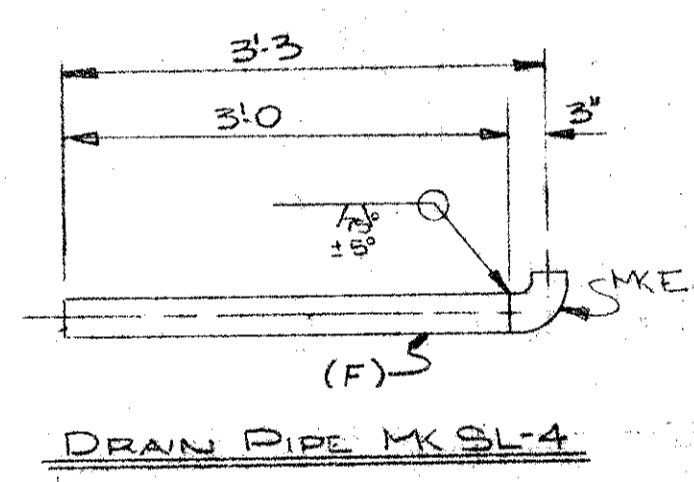


FIELD DETAIL



SHIP LIST		Job 38494		BILL OF MATERIAL DWG 7				
NO. OF PIECES	MARK	NO. OF PIECES	MARK	SECTION	LENGTH FEET	INCHES	REMARKS	WEIGHT
1	SL-1			PLATFORM/PAN				594
2	B			4 3'x 3'x 1/4	2	0 5/8		25
1	C			R 4" Sq x 3/16				122
3	D			R 3 1/4" x 3/16	4	5 5/8		291
1	G			R 2 1/2" x 3/16	4	5 5/8		97
1	SL-2	1		4 3'x 3'x 3/8	6	0		39
2	SL-3	2	STD.	WELDED GRATING	1 1/4	x 1/8	BEARING BARS	
				2 (6 1/4" x 4 1/2")	(BEARING BARS TO BE 4 1/2 LG.)			
1	SL-4			DRAIN PIPE				
1	E			2" 90° LR WELD ELL SCH 40				2
1	F			2" SCH 40 PIPE	3	0		11

NOTE: ALL ITEMS ON THIS SHEET TO BE HOT DIP GALVANIZED PER ASTM A123-47



DRAIN PIPE MK SL-4

FOR APPROVAL
PITTSBURGH-DES MOINES STEEL CO.

AUG 1 9 1968

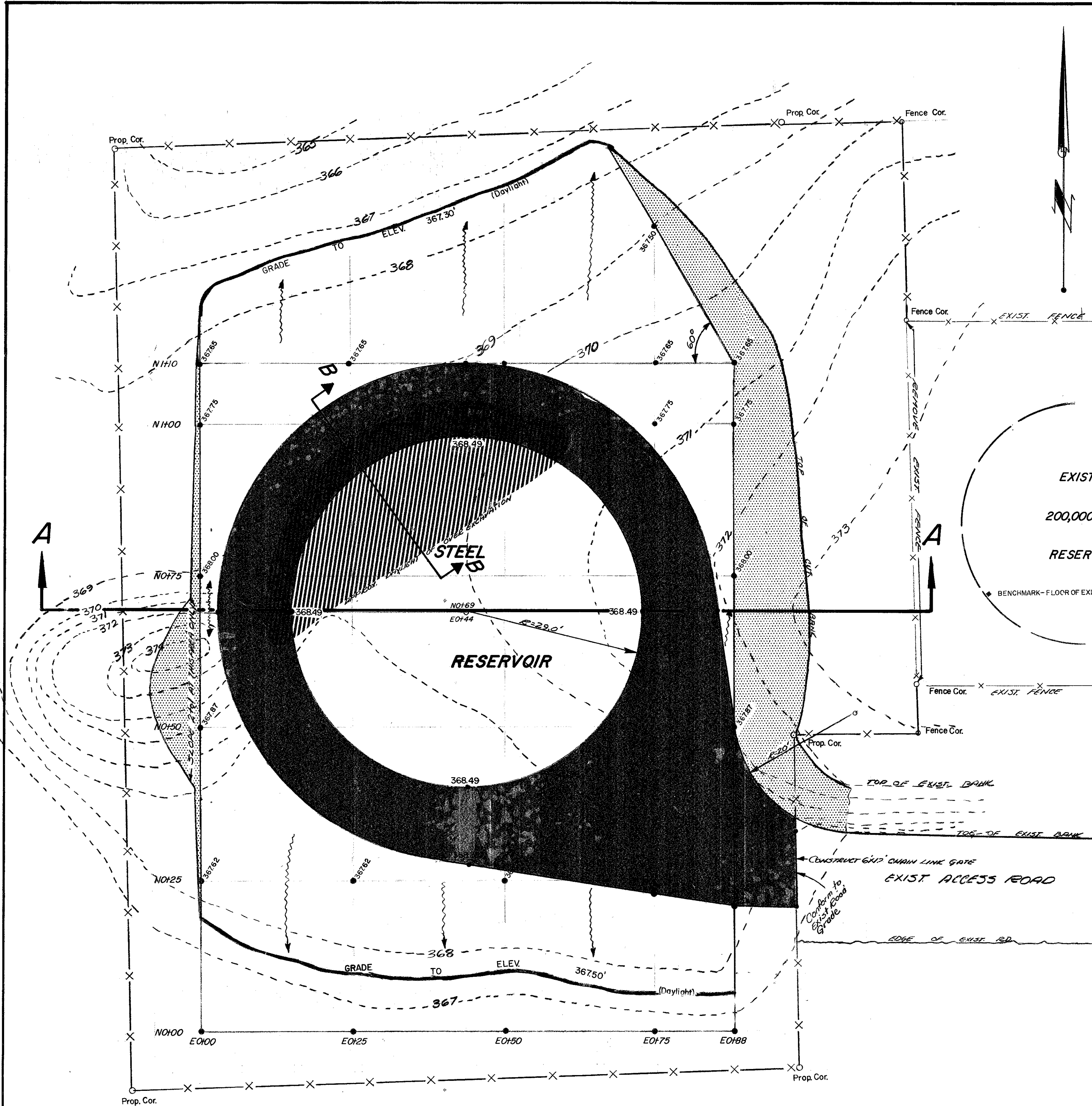
Please Return With Your Approval Or Corrections Dated 10/10/68 On This Draft

NO.	DATE	DESCRIPTION OF REVISION	BY
		OPEN HOLES	GRIT BLAST YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>
		SHOP PAINT	YES
		PAINT CONTACT SURFACES	YES <input type="checkbox"/> NO <input type="checkbox"/>

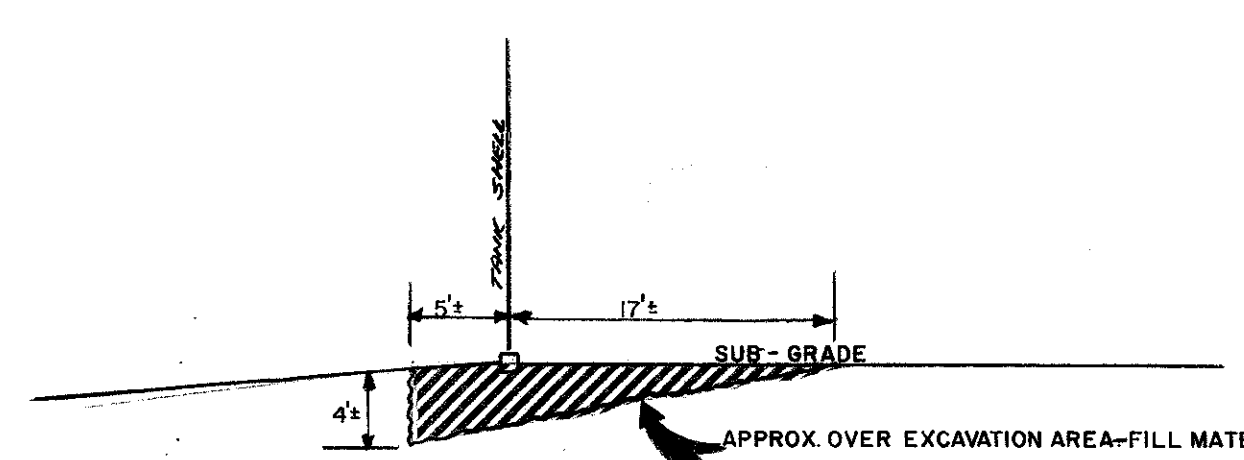
PITTSBURGH - DES MOINES STEEL CO.
ENGINEERS-FABRICATORS-CONTRACTORS
PITTSBURG, PA. WARREN, PA. BRISTOL, PA. BALTIMORE, MD.
BIRMINGHAM, ALA. DES MOINES, IOWA. PROVO, UTAH
STOCKTON, CALIF. SANTA CLARA, CALIF. FRESNO, CALIF.
1-500,000 GAL. TANK
PLATFORM AND PAN
PETALUMA, CALIFORNIA

BY	DATE	DRAWING NO.
W.J.E.	7-31-68	7
CHECKED	8-10	CONTRACT NO. 38494
BP		

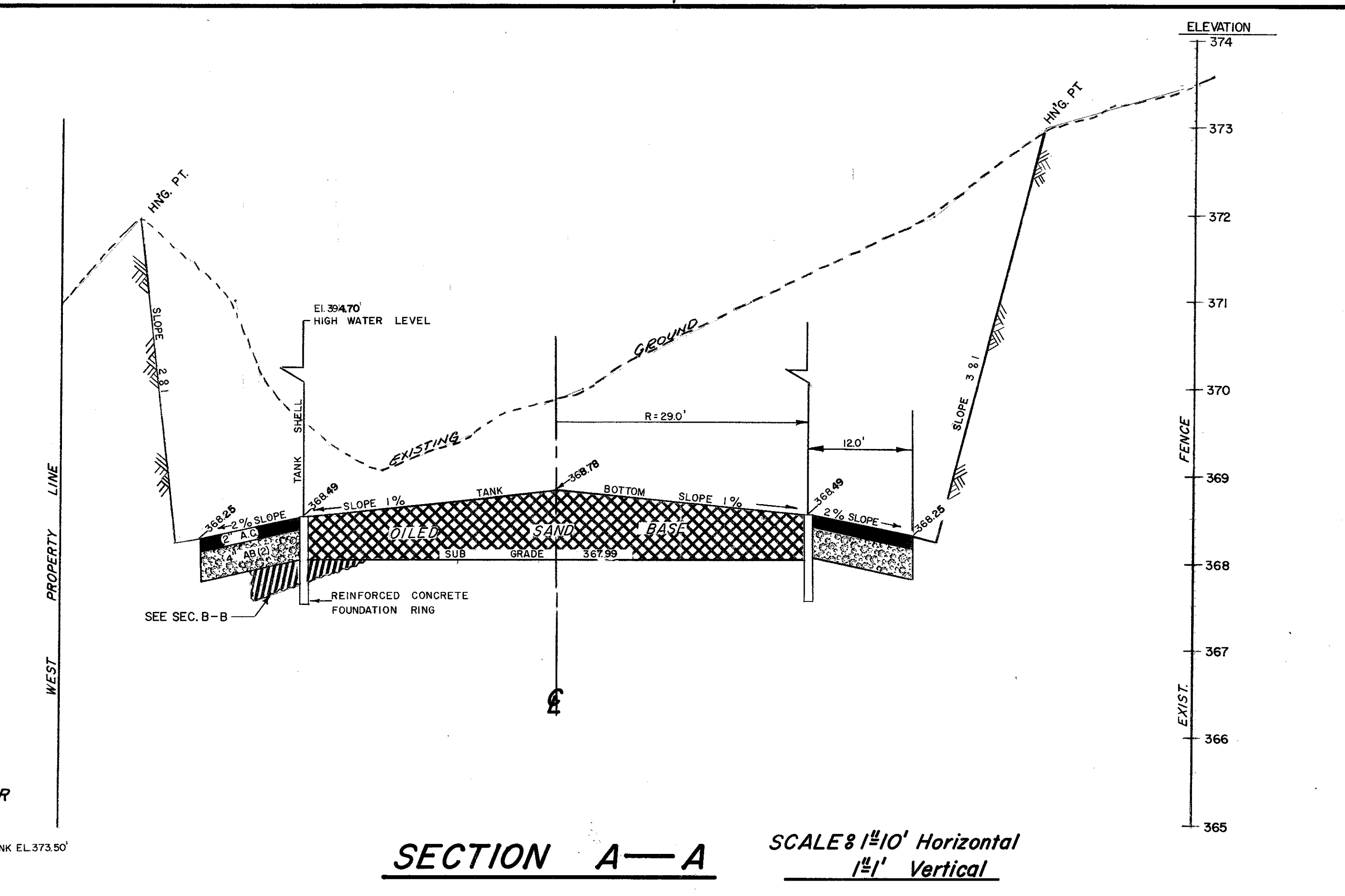
DRAWINGS PREPARED AT PROVO, UTAH



FINISH GRADING PLAN SCALE 1/2"=10'



SECTION B-B
NO SCALE

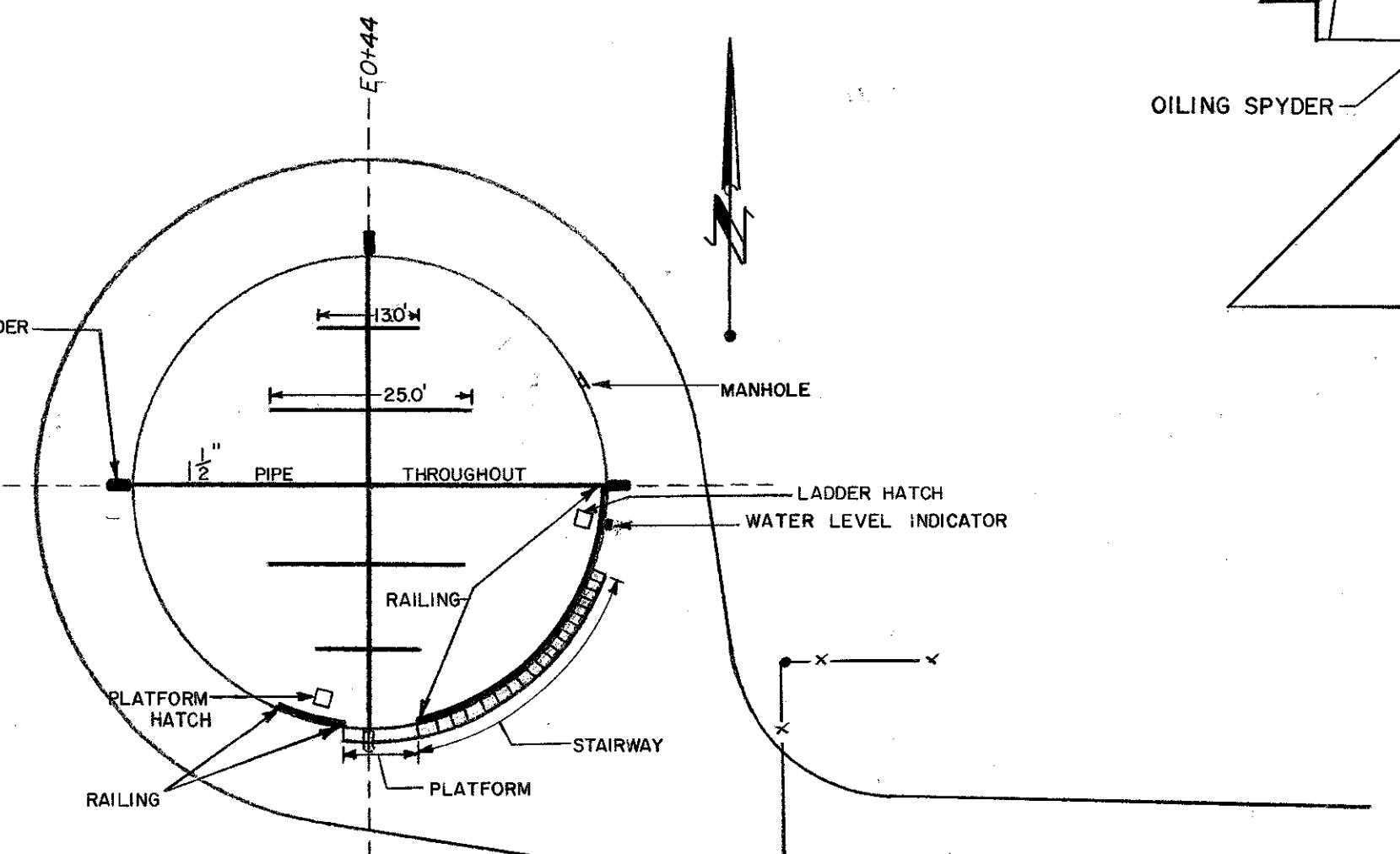


SECTION A-A SCALE 1/2"=10' Horizontal
1/2"=1' Vertical

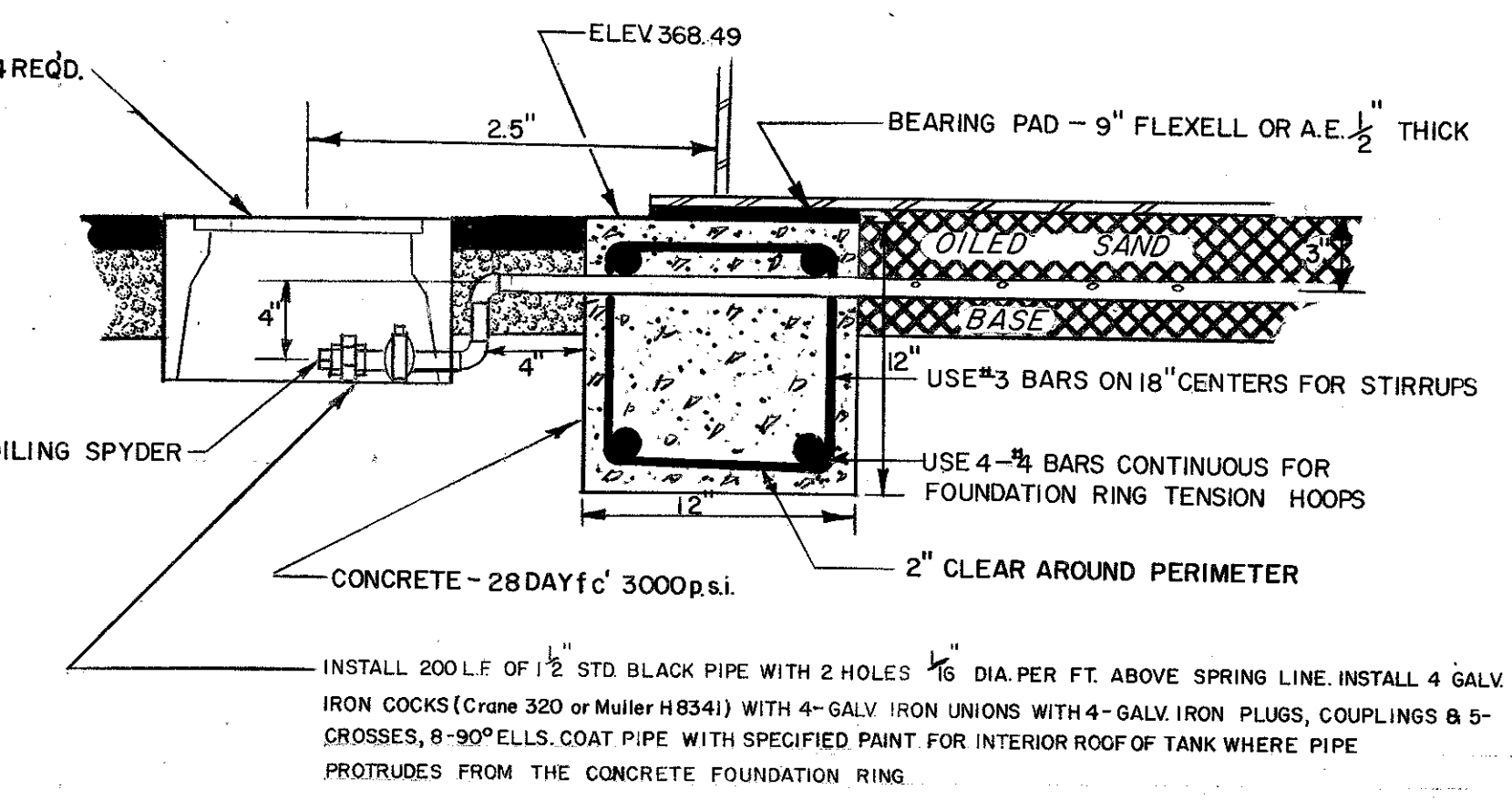
- LEGEND**
- 368.30 - FINISH GRADE ELEVATIONS
 - - - - - CUT BANK SLOPES OF 3 & 1 UNLESS SPECIFIED OTHERWISE
 - - - - - EXISTING GROUND CONTOURS
 - DIRECTION OF SURFACE WATER DRAINAGE
 - X - - - - - CONSTRUCT 6' CHAIN LINK FENCE
 - ▒ PAVED AREA (2' A.C. on 4" AB(2))
 - ▨ OVER EXCAVATION AREA (Limits & Depths of excavation to be directed by the engineer.)

TANK ELEVATION DATA

TOP OF SHELL 5" OVER HIGH WATER LEVEL	395.11'
HIGH WATER LEVEL	394.70'
EFFECTIVE DEPTH FOR 500,000 GALS	- 25.30'
12" INLET-OUTLET PIPE	369.40'
1/4" WALL THICKNESS STEEL PIPE	- .02
10" FROM O.D. STEEL PIPE TO FLOOR	- .83
1/4" STEEL FLOOR PLATE IN TANK	- .02
1/8" FLEXCELL BEARING PAD	- .09
	- .91'
TOP OF CONCRETE FOUNDATION RING	368.49'

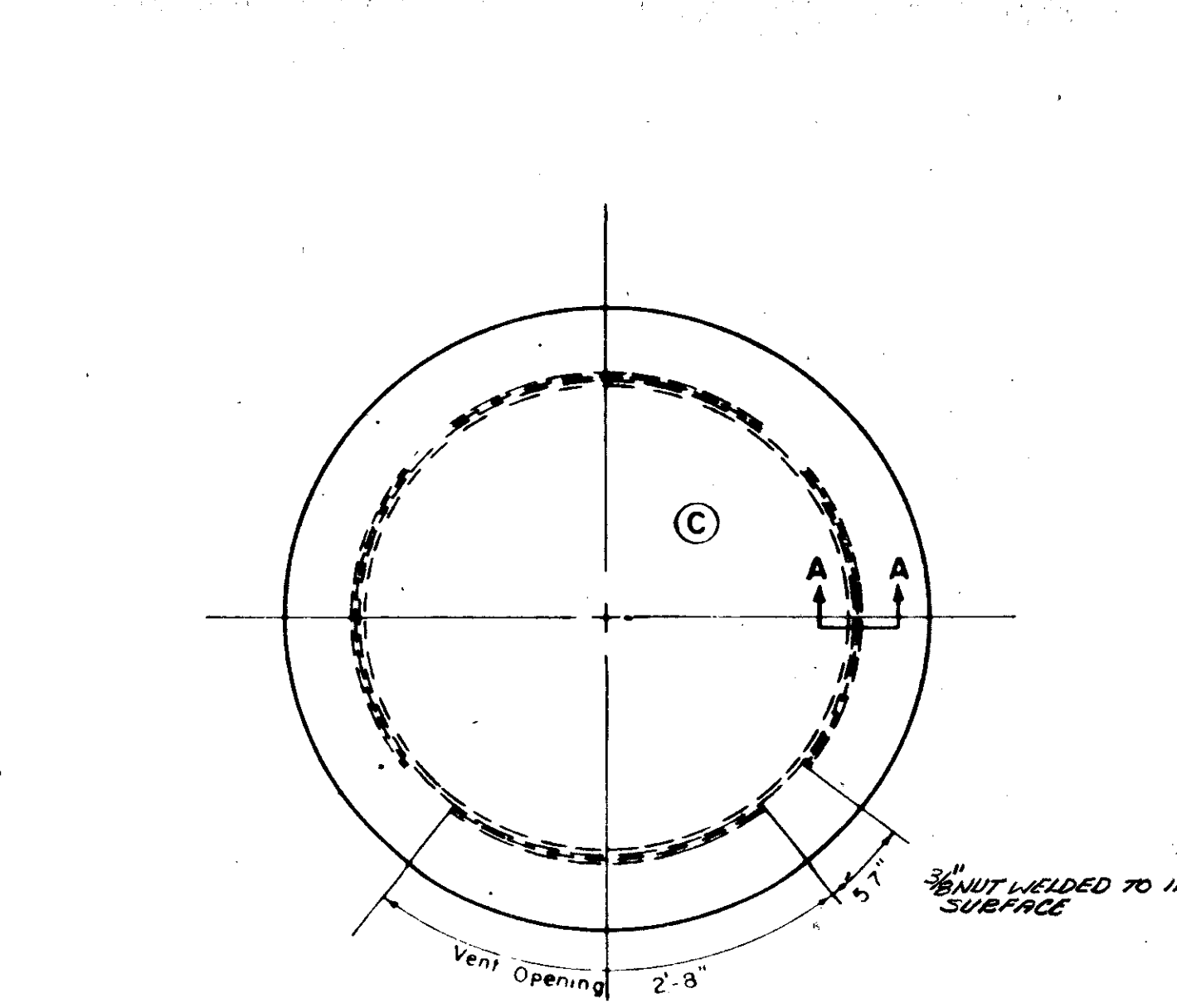


RESERVOIR & OILING SPYDER PLAN

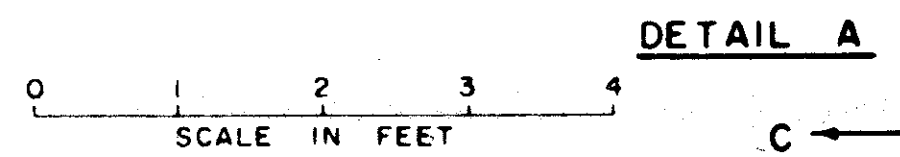


FOUNDATION RING DETAIL

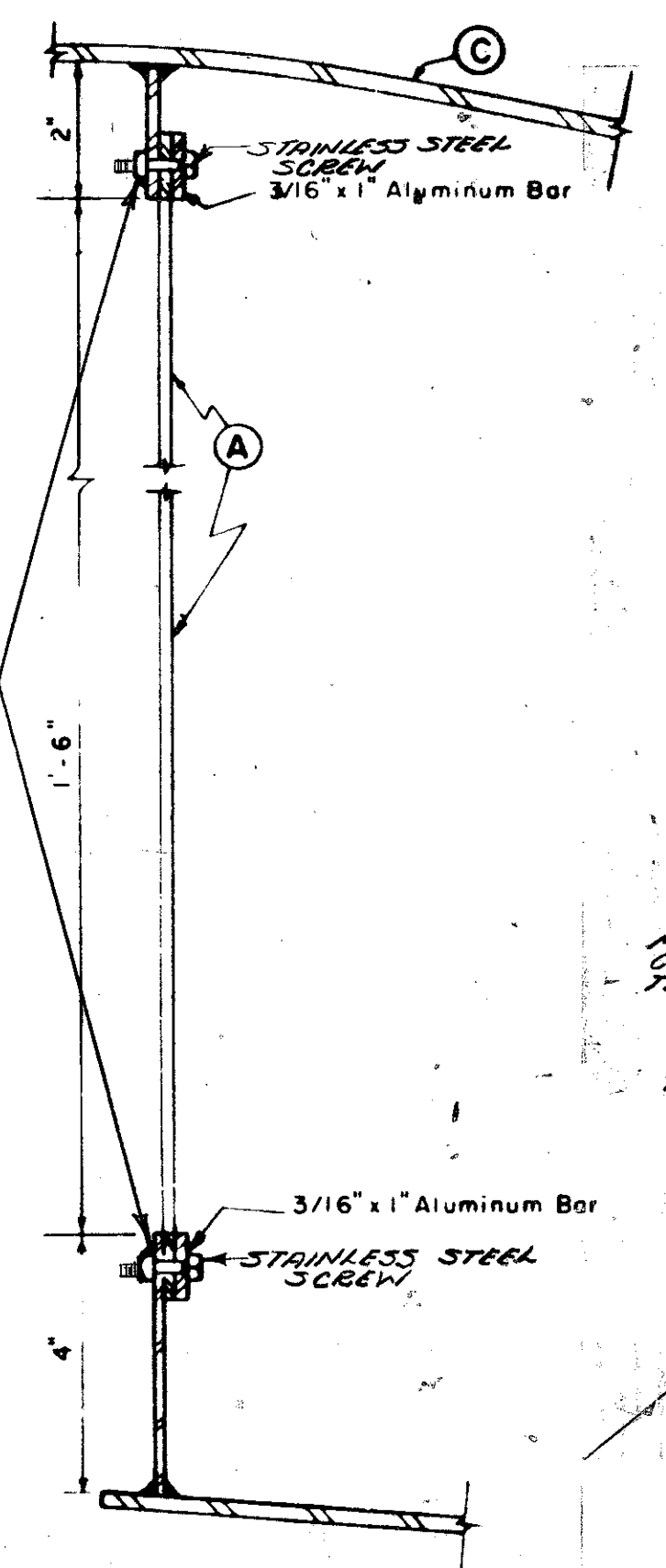
REVISED	CITY OF PETALUMA	
NAME	DEPARTMENT OF PUBLIC WORKS	
DATE	FINISH GRADING PLAN & FOUNDATION RING DETAILS	
DATE 2-9-68	SCALE SHOWN	SHEET 2 OF 6
DRAWN BY POST	CHECKED BY D.F.Y.	DESIGNED BY POST
	APPROVED BY:	PROJECT W-68-1
	<i>R.A. Young</i> 5/20/65	JOB NO.
	DIRECTOR OF PUBLIC WORKS	FILE NO.



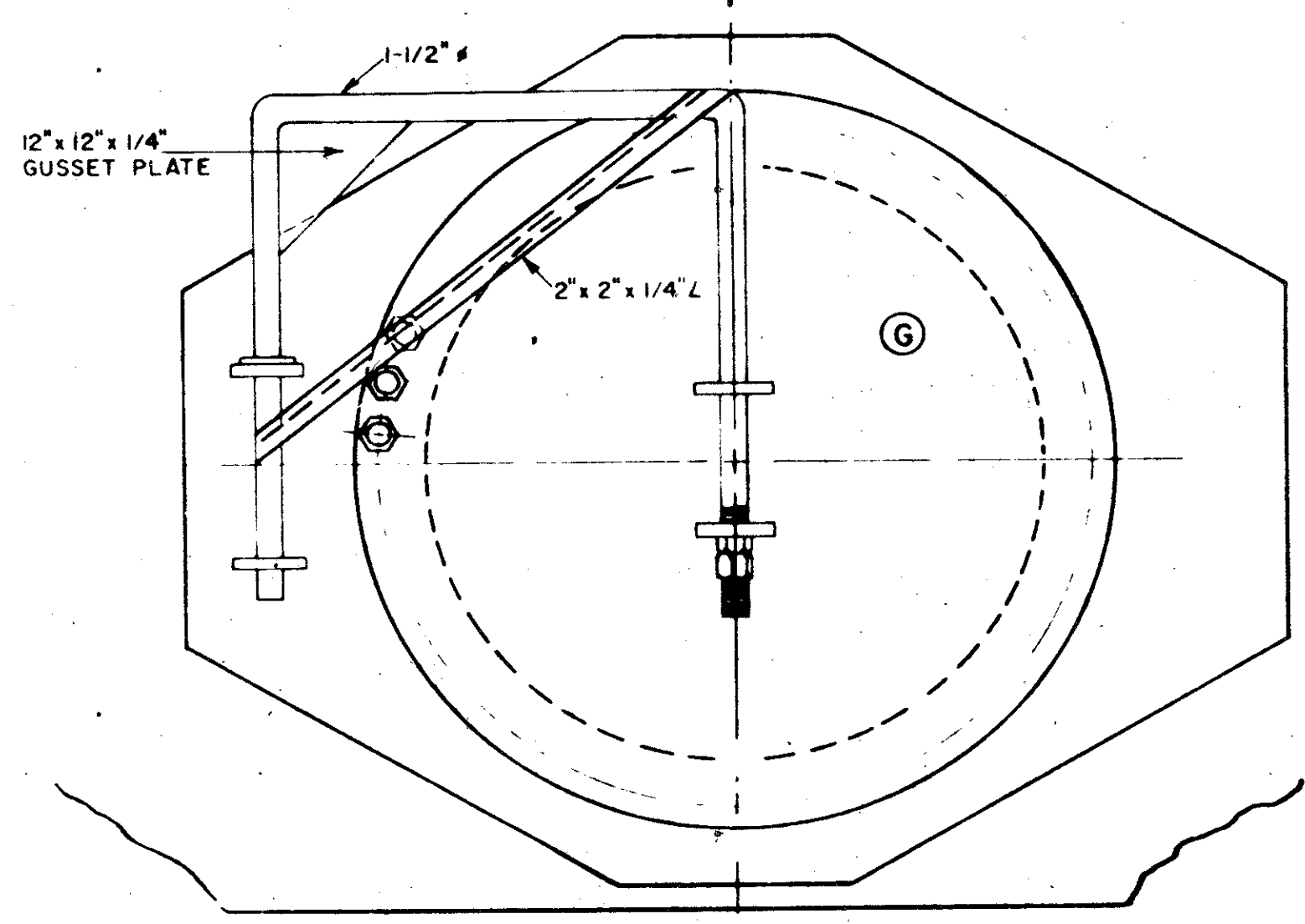
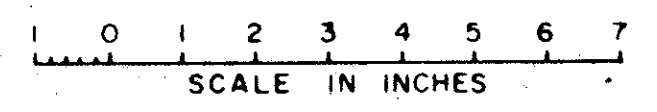
CENTER VENT



DETAIL A

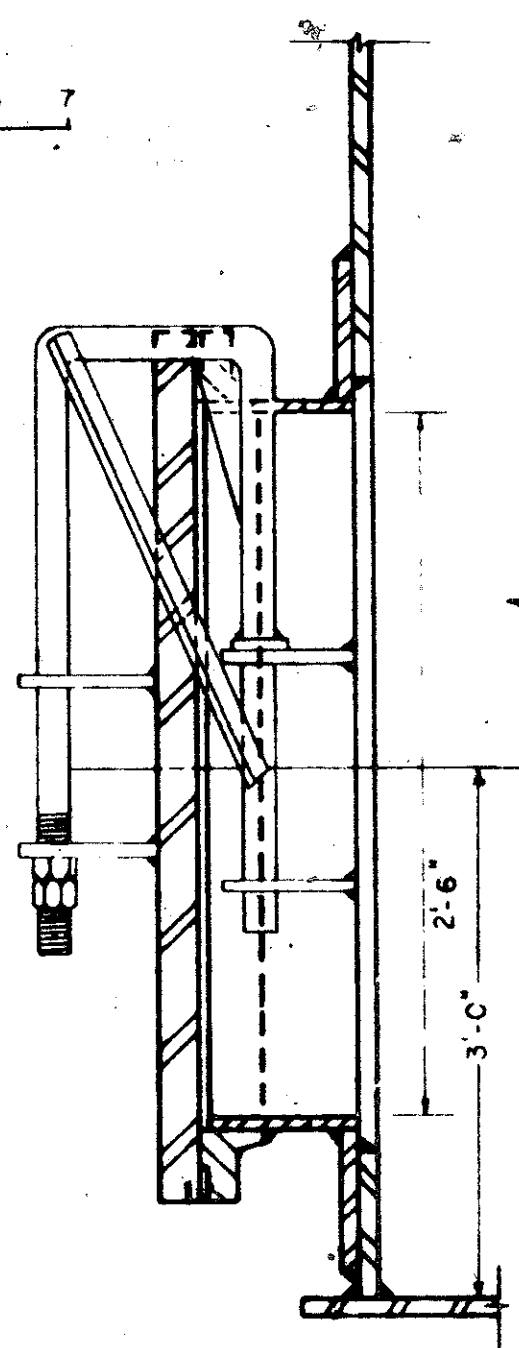
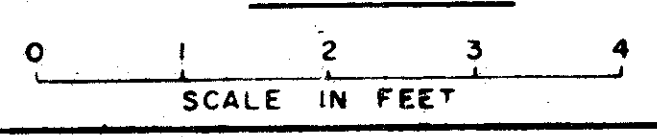


SECTION A-A

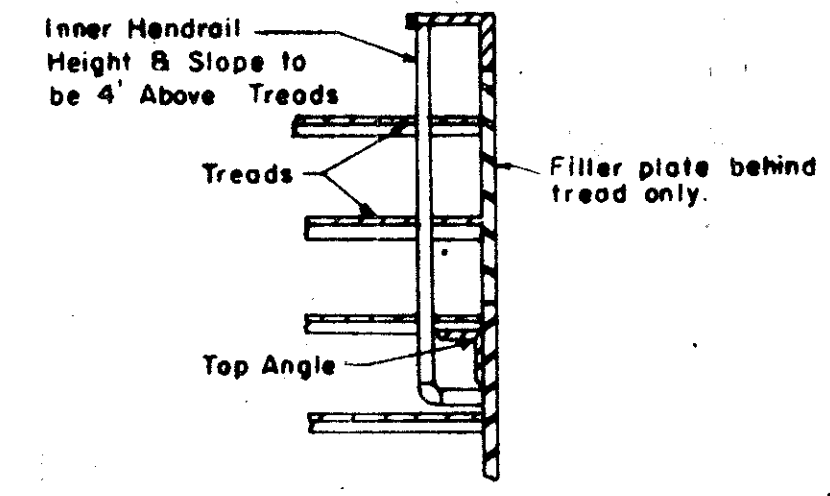


MANHOLE OPENING

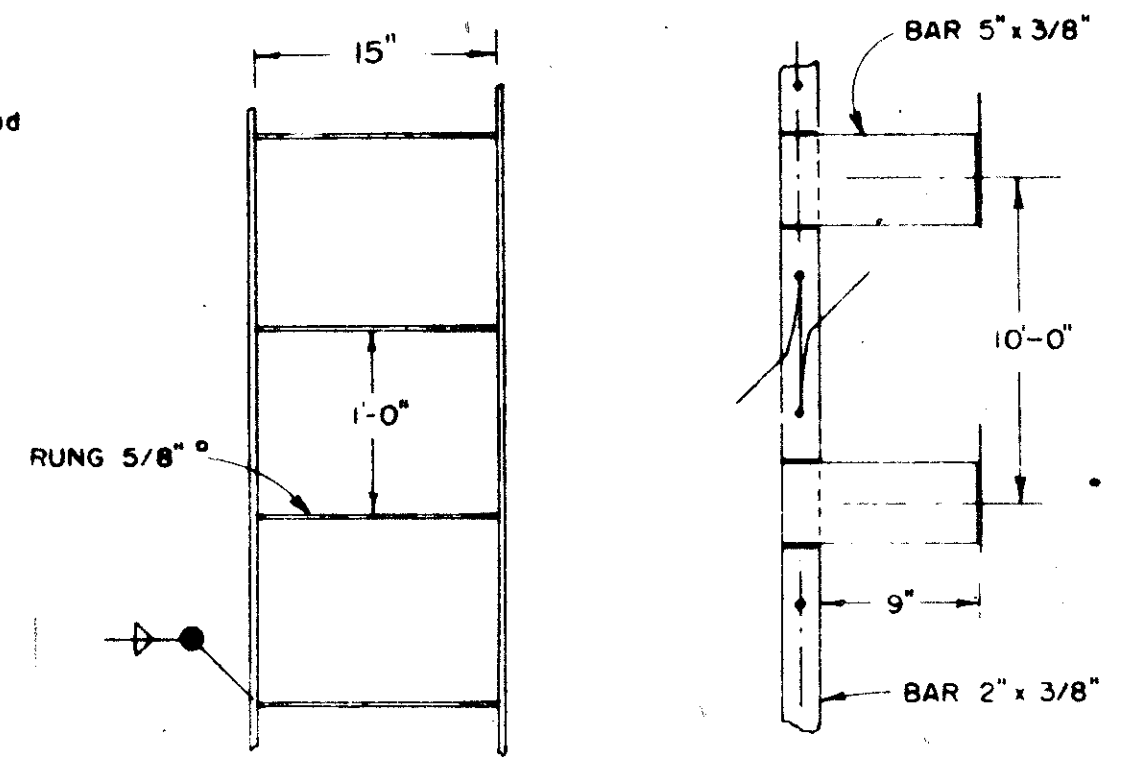
DETAIL C



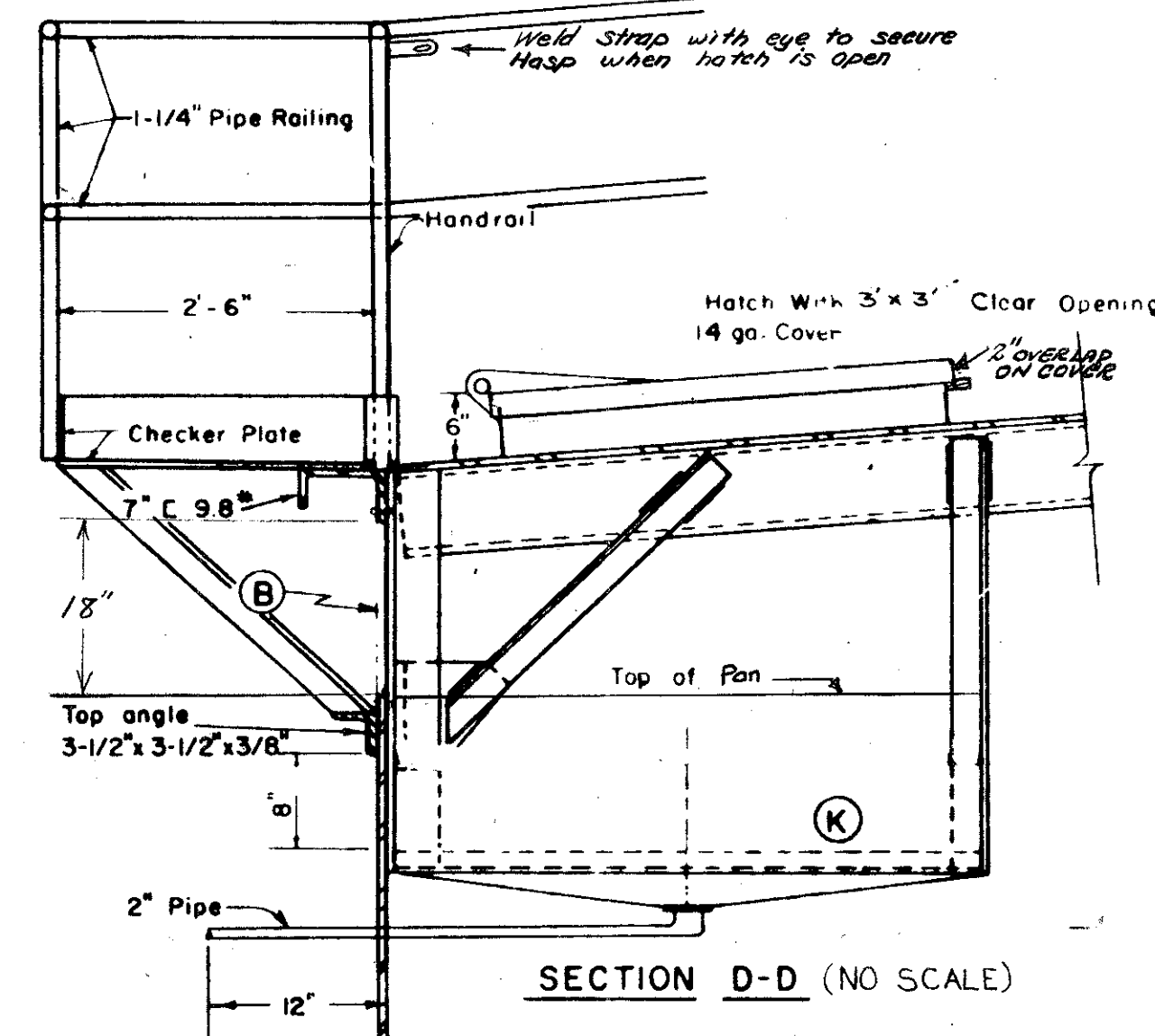
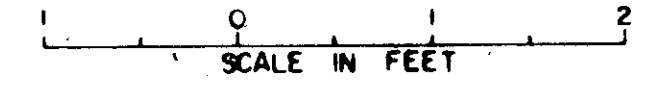
SECTION C-C



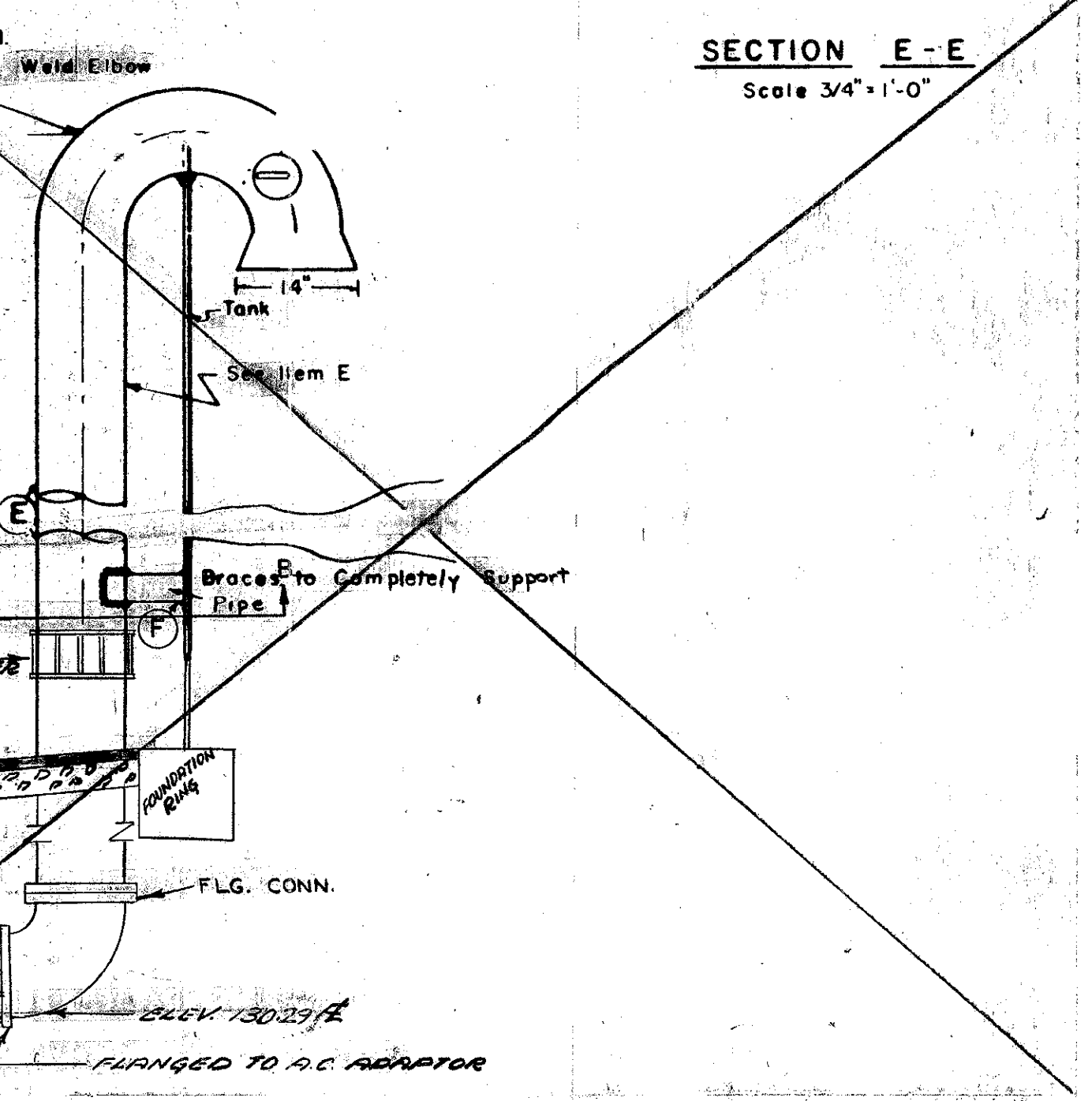
SECTION E-E
Scale 3/4" = 1'-0"



LADDER DETAIL



SECTION D-D (NO SCALE)



NOTE: ALL ACCESSORY ITEMS ON THIS SHEET TO BE LOCATED IN THE FIELD.

ROOF HATCH DETAIL

DETAIL E



- L Roof Hatches: F&I 2 square hinged roof hatches to provide 3'-0" x 3'-0" opening & padlock hasp. Use 14ga sheet steel.
- K Interior Platform: F&I platform box hot galv. before installation. Use 3/16" plate. Cover bottom with 2 pc steel floor grating galv. & drain by 2" std galv pipe to tank shell.
- J Platform & Stairway: F&I, 3/16" min checker plate stairway & platform. Design to support 1,000 lb. load at any point. Bend 2" down with 10" tread width & 8" stair rise. Slope stairs & platform to drain. F&I 1-1/4" std blk steel pipe railing per detail E this sheet.
- G Manhole Opening: F&I manhole, 30" I.D. with hinged lid. Provide std AWWA welding flange & bolted steel plate cover with std full-faced gasket.
- D Ladder: F&I ladder as shown. Hot galvanize after fabrication.
- C Vent Cover: F&I shallow dished head of 5/16" plate.
- B Reservoir Screen: F&I double brass screen 4x4 20 ga outside, 18x18 27 ga on inside. Secure to tank by welding 3/8" nuts to inside surface using stainless steel screws on 24" centers, top and bottom, and 3/8" x 1" aluminum bars. Use Indaco mastic. Screen continuous around tank and insect proof.
- A Vent Screen: F&I double brass screen 4x4 mesh -20 ga outside, 18x18-27 ga on inside. Use Indaco mastic or approved equal under frame to prevent rusting. Screen shall be insect proof.

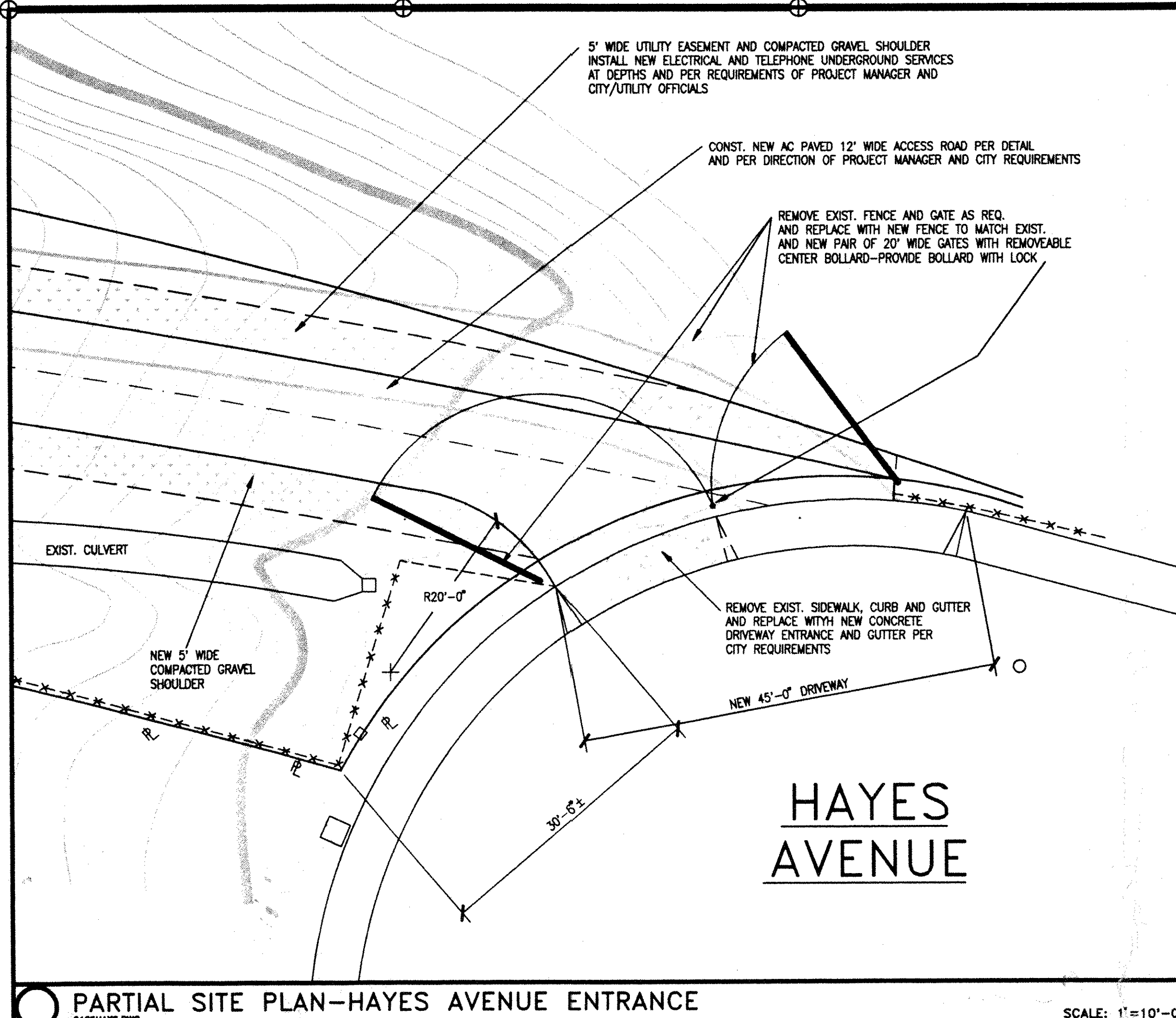
NO.	DATE	REVISION	BY
5-68		HATCH COVER	P.P.
5-68		ALUMINUM BARS CHANGED TO 3/8"	P.P.

CITY OF PETALUMA
DEPARTMENT OF PUBLIC WORKS
STEEL RESERVOIR TANK DETAILS
MISCELLANEOUS ACCESSORIES

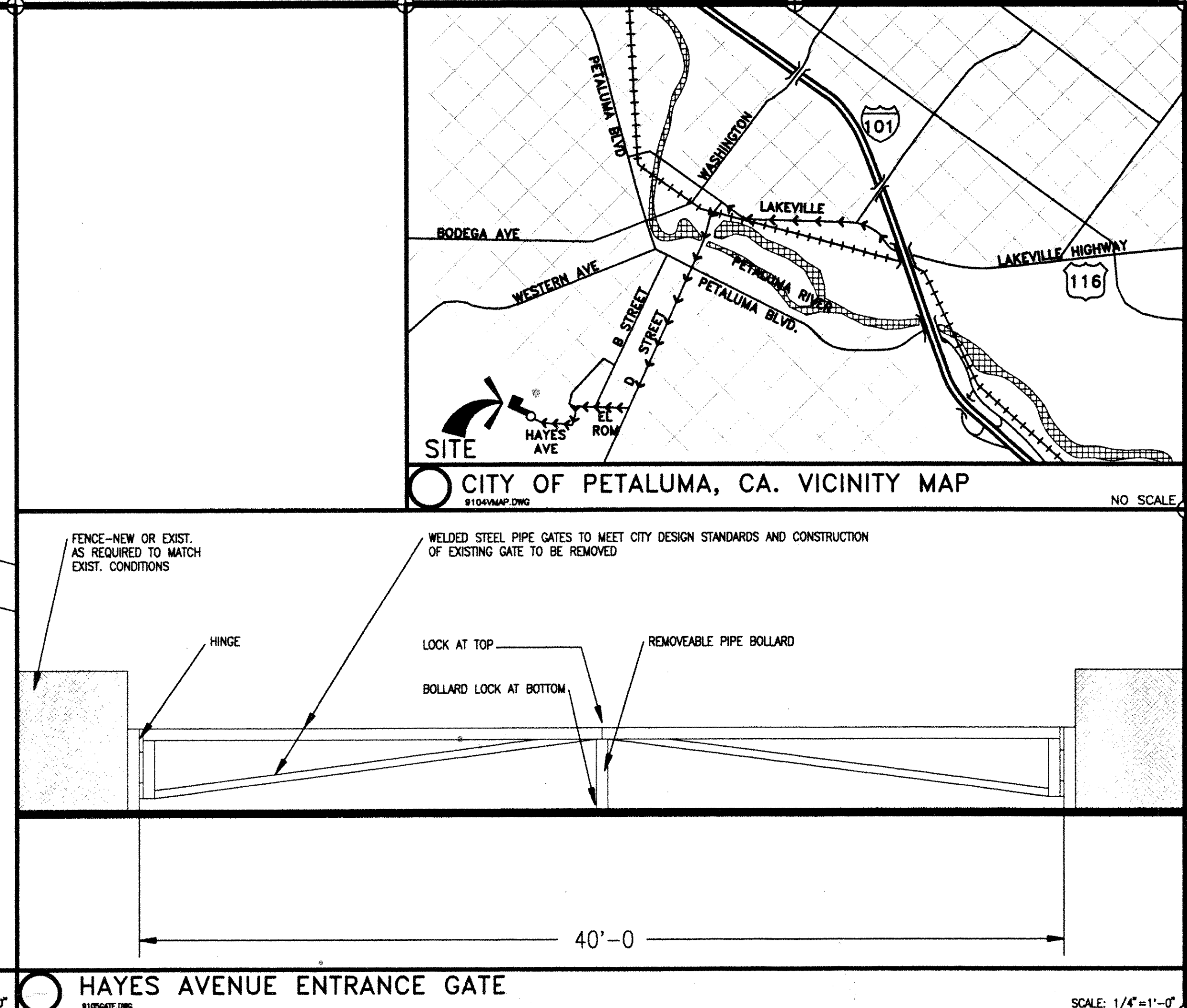
DATE 6/23/67 SCALE
DRAWN BY S.C. CHECKED BY [Signature] SHEET 5 OF 6
DESIGNED BY [Signature]
APPROVED BY: [Signature] PROJECT
DIRECTOR OF PUBLIC WORKS JOB NO.
FILE NO.

LA CRESTA TANK

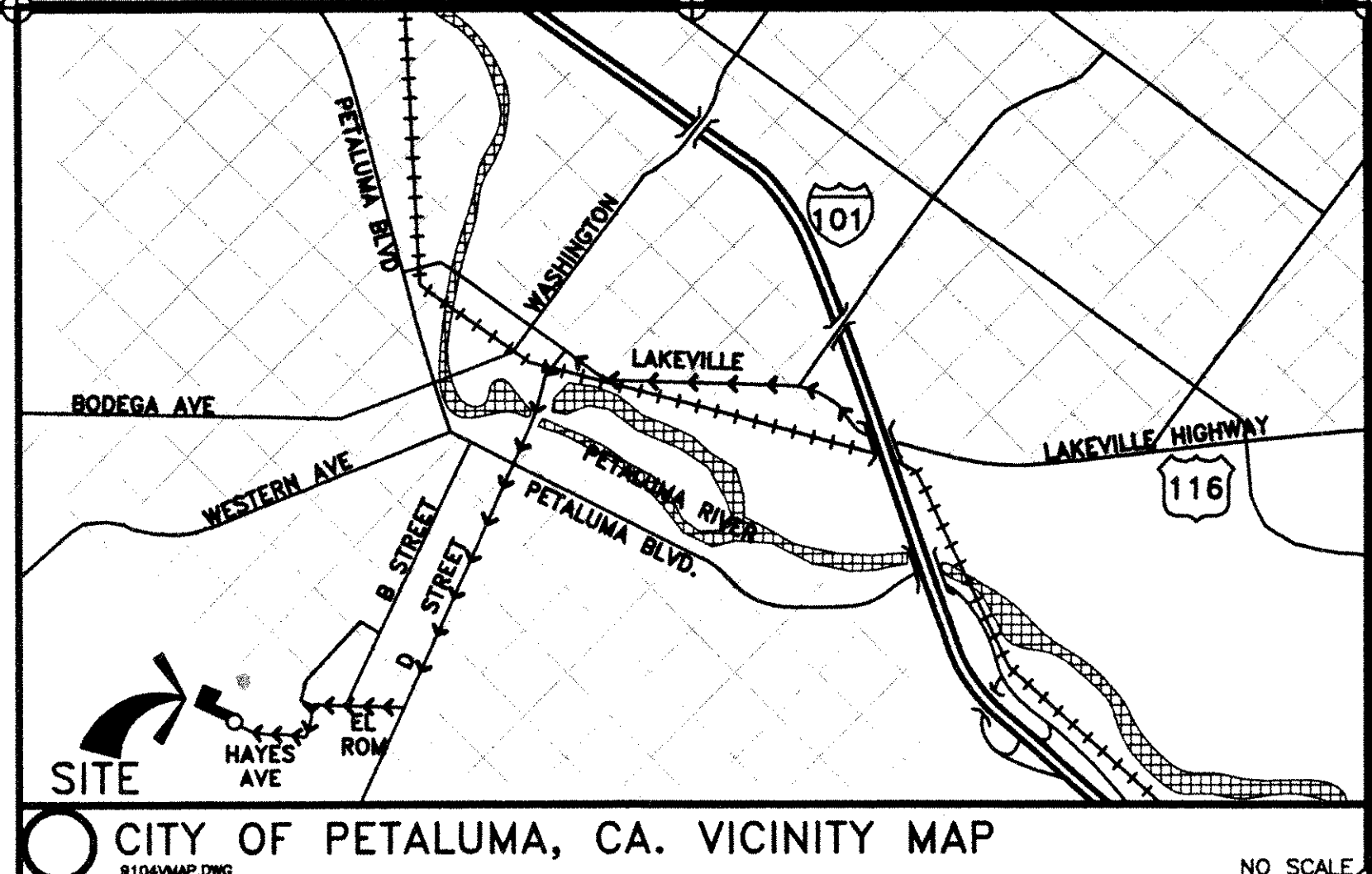
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PARTIAL SITE PLAN-HAYES AVENUE ENTRANCE
SCALE: 1"=10'-0"



HAYES AVENUE ENTRANCE GATE
SCALE: 1/4"=1'-0"



CITY OF PETALUMA, CA. VICINITY MAP
NO SCALE

- SITE DATA-CONTACT LIST**
- SITE OWNER: CITY OF PETALUMA (SEE REMAINDER OF LIST FOR SPECIFIC DEPARTMENT)
 - ASSESSOR'S PARCEL NUMBER: 008-490-04-07
 - CONTACT LIST:
 - PETALUMA BUILDING DEPARTMENT
11 ENGLISH STREET
PETALUMA, CA. 94953
(707) 778-4302
 - PETALUMA PLANNING DEPARTMENT
11 ENGLISH STREET
PETALUMA, CA. 94953
(707) 778-4301
 - PETALUMA BUREAU OF FIRE PREVENTION
11 ENGLISH STREET
PETALUMA, CA. 94953
(707) 778-4389
 - PETALUMA WATER DEPARTMENT
202 NORTH McDOWELL
PETALUMA, CA. 94953
(707) 778-4392
 - PACIFIC TELEPHONE COMPANY
5900 STATE FARM DRIVE, ROOM 201
RHONERT PARK, CA. 94928
ATTN: DAVE KEARNAN
(707) 585-4223
 - PACIFIC GAS AND ELECTRIC COMPANY
213 CORONA ROAD
PETALUMA, CA. 94954
ATTN: PAT HAYES
(707) 765-5162

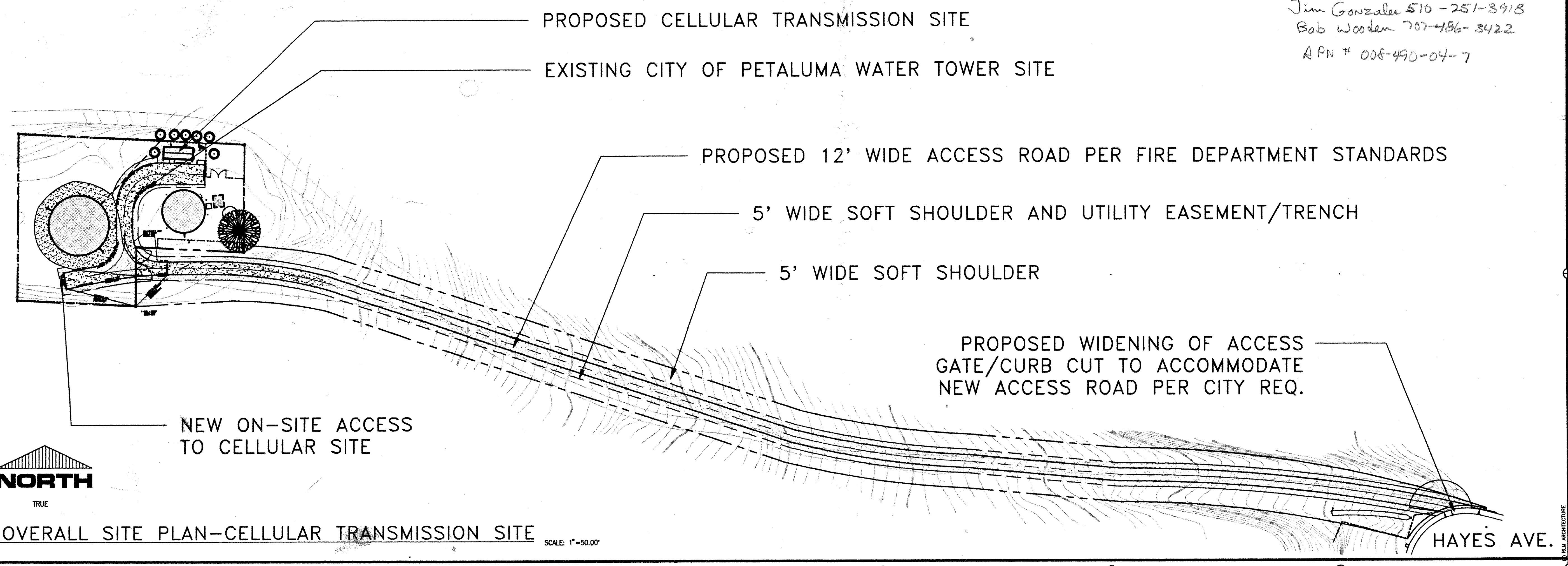
CODE COMPLIANCE

UNIFORM BUILDING CODE 1988 EDITION
BUILDING TYPE V
OCCUPANCY B-2 TELECOMMUNICATIONS EQUIPMENT SHELTER (336 SQUARE FEET)

ENERGY COMPLIANCE

THIS BUILDING IS INTENDED TO REMAIN UNINHABITED AND MAINTAIN "PROCESS ENVIRONMENTAL TEMPERATURE" (BELOW 65 DEGREES F INSIDE) AND, AS SUCH, NO ENERGY CALCULATIONS ARE REQUIRED PER SECTION 2-5302.

ARCHITECT



OVERALL SITE PLAN-CELLULAR TRANSMISSION SITE
SCALE: 1"=50.00'

Jim Gonzalez 510-251-3918
Bob Wooden 707-486-3422
APN # 008-490-04-7

DOWNTOWN PETALUMA CELLULAR SITE

CITY OF PETALUMA WATER TANK-HAYES AVENUE
PETALUMA, CALIFORNIA
PROJECT NUMBER: 5453-02-002/SR26

CLIENT/DEVELOPER
CAGAL CELLULAR COMMUNICATIONS CORP.
505 14TH STREET, SUITE 850 OAKLAND, CALIFORNIA 94612
PROJECT MANAGER: JAMES GONZALES (510) 251-3918
MOBILE: (408) 585-0093 PAGER: (510) 810-7129

THESE PLANS ARE PRELIMINARY AND NOT FOR CONSTRUCTION PURPOSES UNTIL THEY ARE SIGNED BY RESPONSIBLE PROFESSIONAL.

Signature: _____

CONSULTANT'S STAMP

Signature: _____

Signature: _____

Signature: _____

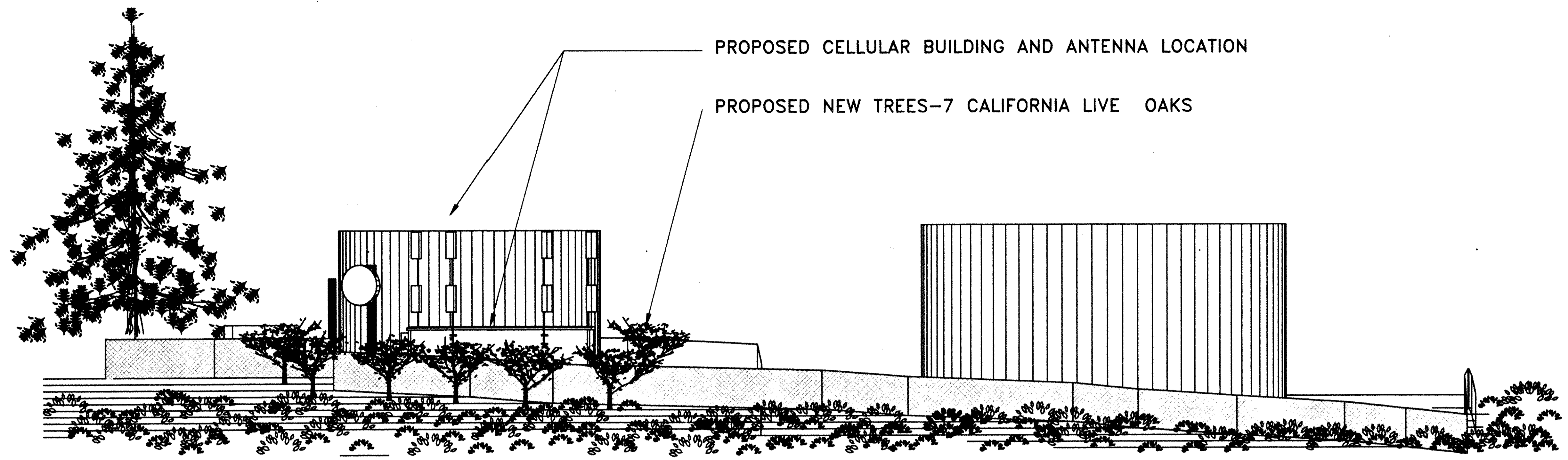
OVERALL SITE PLAN

REVISIONS	DATE	JOB NUMBER
Δ		9105.010
Δ		
Δ		
Δ		
Δ		
Δ		
Δ		
Δ		
Δ		
Δ		

DRAWN BY: RLM
SHEET NUMBER: A1

1 2 3 4 5 6 7

© RLM ARCHITECTURE



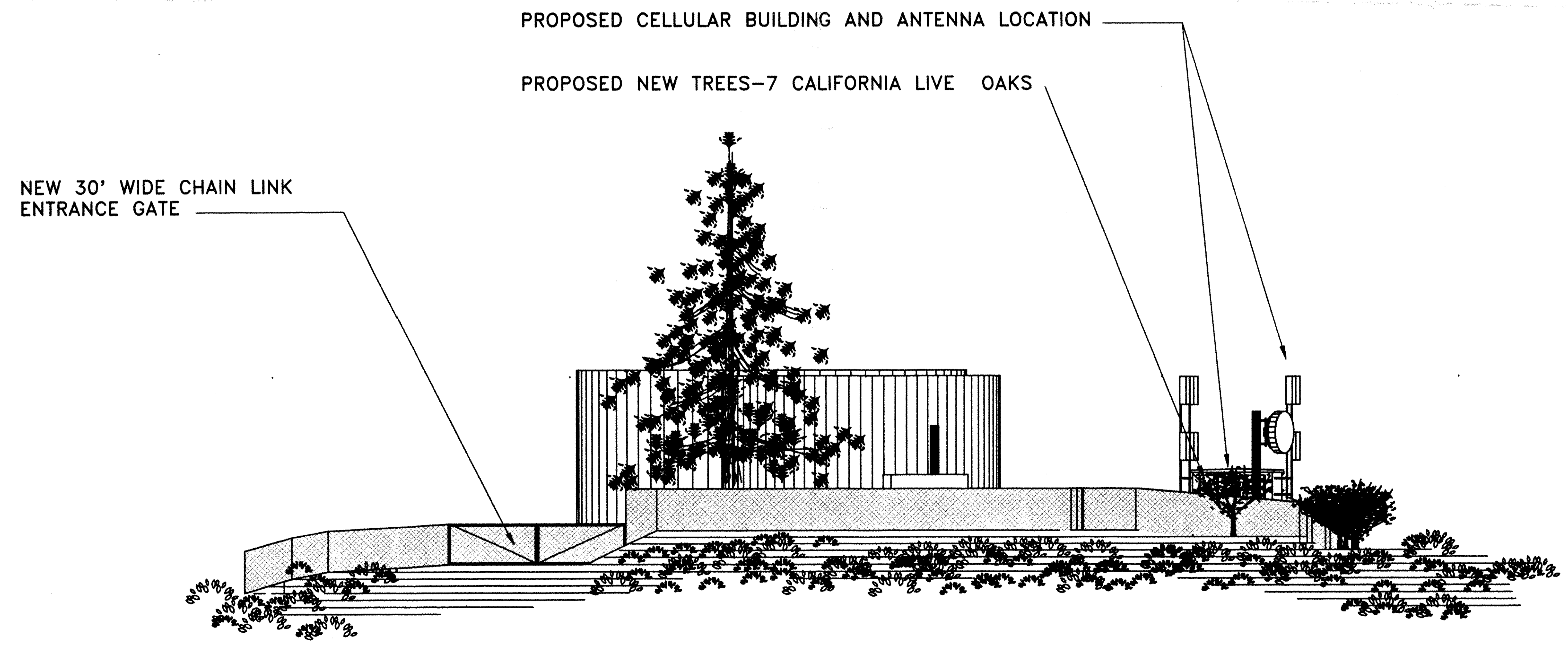
PROPOSED CELLULAR BUILDING AND ANTENNA LOCATION

PROPOSED NEW TREES-7 CALIFORNIA LIVE OAKS

B1 NORTH SITE ELEVATION
NORTH/ELEV.DWG

SCALE: 1"=10.00'

C
D



PROPOSED CELLULAR BUILDING AND ANTENNA LOCATION

PROPOSED NEW TREES-7 CALIFORNIA LIVE OAKS

NEW 30' WIDE CHAIN LINK
ENTRANCE GATE

D2 EAST SITE ELEVATION
EAST/ELEV.DWG

SCALE: 1"=10.00'

1 2 3 4 5 6 7

PROJECT NAME AND LOCATION
**DOWNTOWN PETALUMA
CELLULAR SITE**
CITY OF PETALUMA WATER TANK-HAYES AVENUE
PETALUMA, CALIFORNIA
PROJECT NUMBER: 5453-02-002/SR26

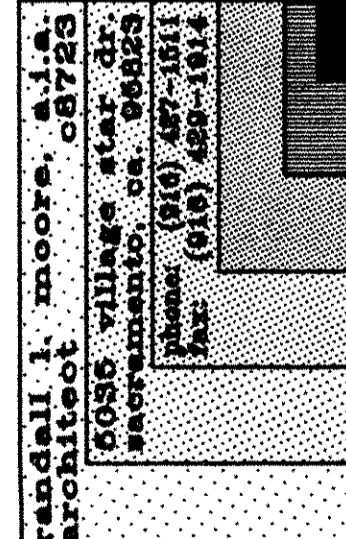
CLIENT/DEVELOPER
CAGAL CELLULAR COMMUNICATIONS CORP.
505 14TH STREET, SUITE 850 OAKLAND, CALIFORNIA 94612
PROJECT MANAGER: JAMES GONZALES (510) 251-3918
MOBILE: (408) 595-0093 PAGER: (510) 810-7129

THESE PLANS ARE PRELIMINARY
AND NOT FOR CONSTRUCTION
PURPOSES UNTIL THEY ARE
SIGNED BY RESPONSIBLE
PROFESSIONAL.



SIGNATURE

CONSULTANT'S STAMP

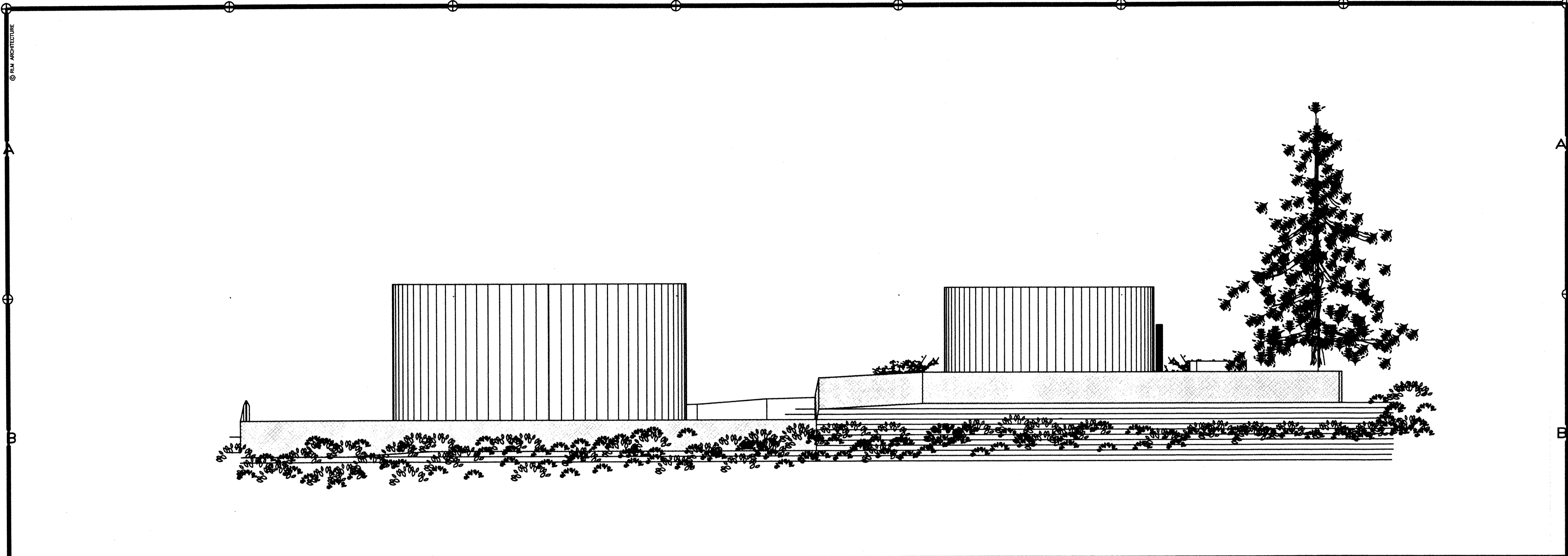


SHEET DESCRIPTION
OVERALL SITE ELEVATIONS

REVISIONS	DATE
Δ	
Δ	
Δ	
Δ	
Δ	
Δ	

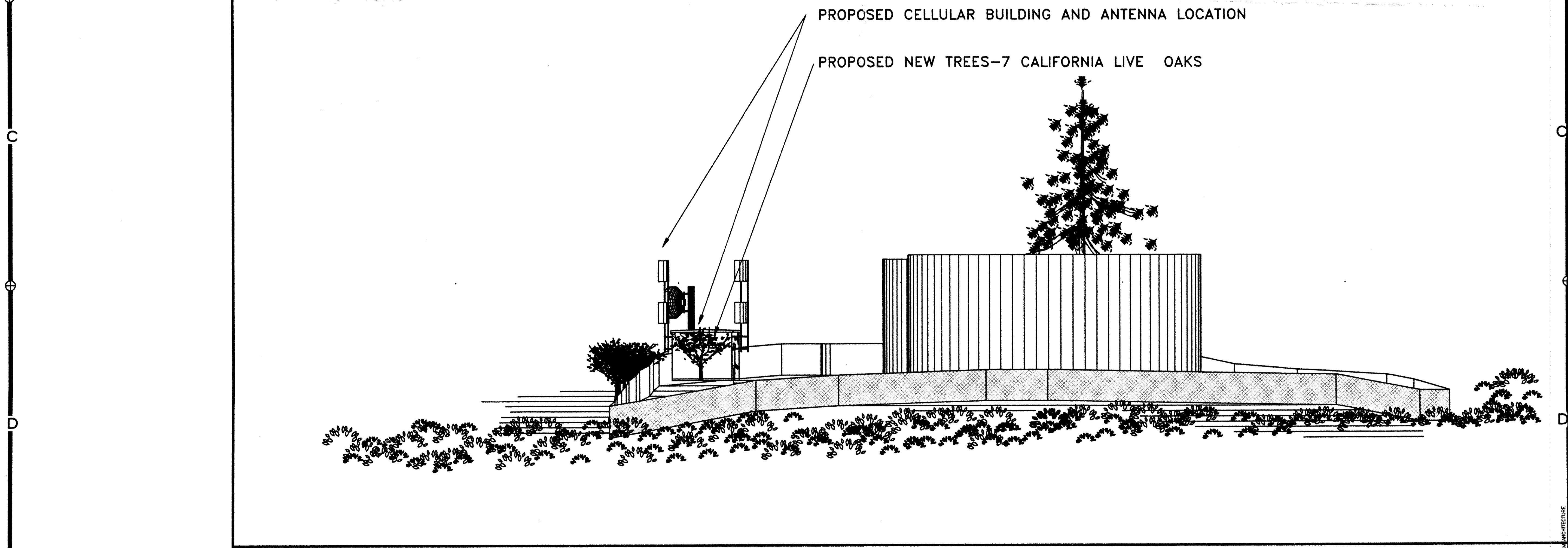
JOB NUMBER
9105.010
DATE
DRAWN BY
RLM
SHEET NUMBER
A4

© RLM ARCHITECTURE



B1 SOUTH SITE ELEVATION
SOUTH.ELV.DWG

SCALE: 1"=10.00'



D2 WEST SITE ELEVATION
WEST.ELV.DWG

SCALE: 1"=10.00'

PROJECT NAME AND LOCATION
**DOWNTOWN PETALUMA
CELLULAR SITE**
CITY OF PETALUMA WATER TANK-HAYES AVENUE
PETALUMA, CALIFORNIA
PROJECT NUMBER: 5453-92-002/SR28

CLIENT/DEVELOPER
CAGAL CELLULAR COMMUNICATIONS CORP.
505 14TH STREET, SUITE 850 OAKLAND, CALIFORNIA 94612
PROJECT MANAGER: JAMES GONZALES (510) 251-3918
MOBILE: (408) 595-0083 FAX: (510) 810-7129

THESE PLANS ARE PRELIMINARY
AND NOT FOR CONSTRUCTION
PURPOSES UNTIL THEY ARE
SIGNED BY RESPONSIBLE
PROFESSIONAL.



SIGNATURE

CONSULTANT'S STAMP

SIGNATURE

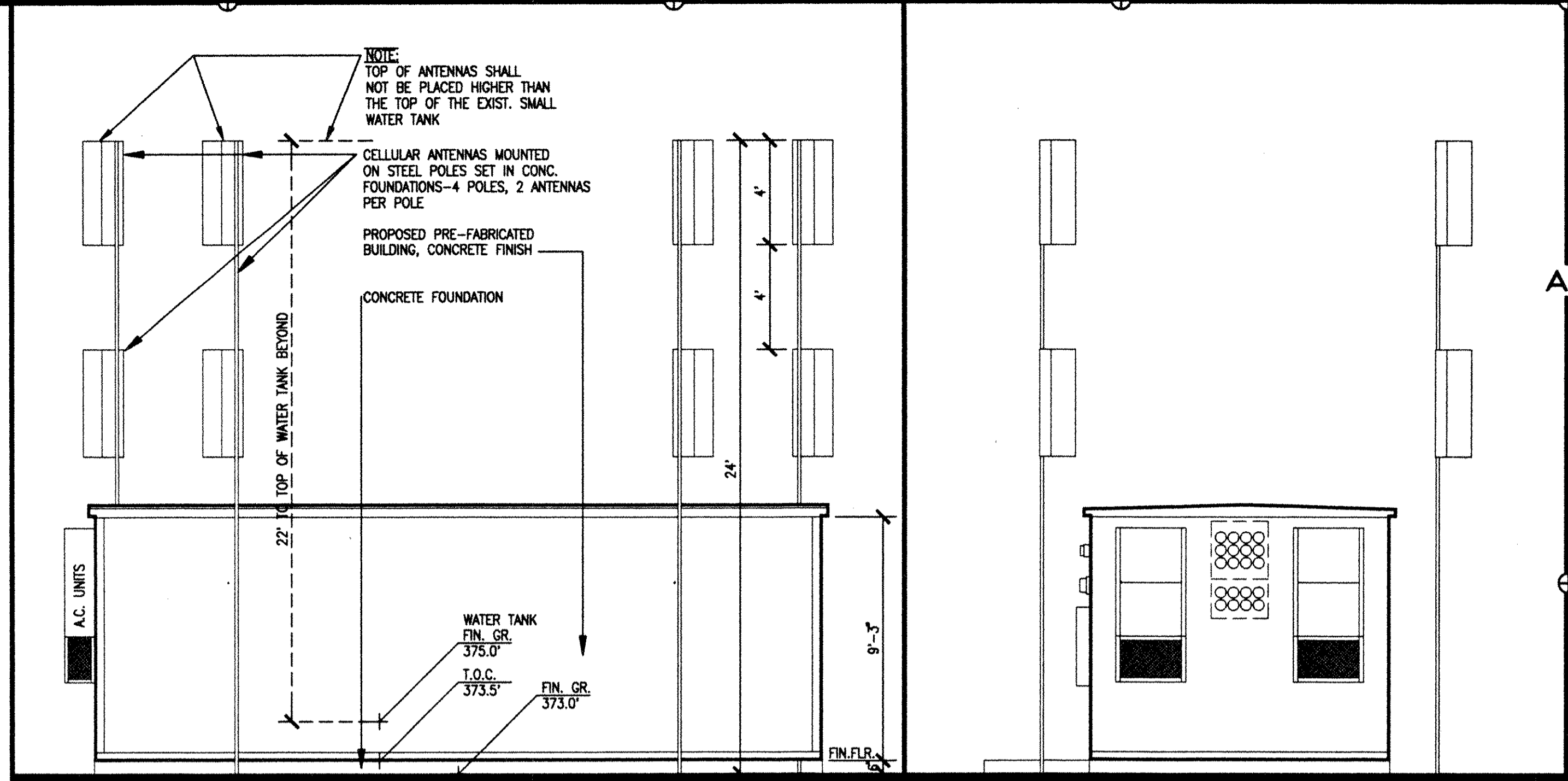
SHEET DESCRIPTION
OVERALL SITE ELEVATIONS

REVISIONS	DATE	BY

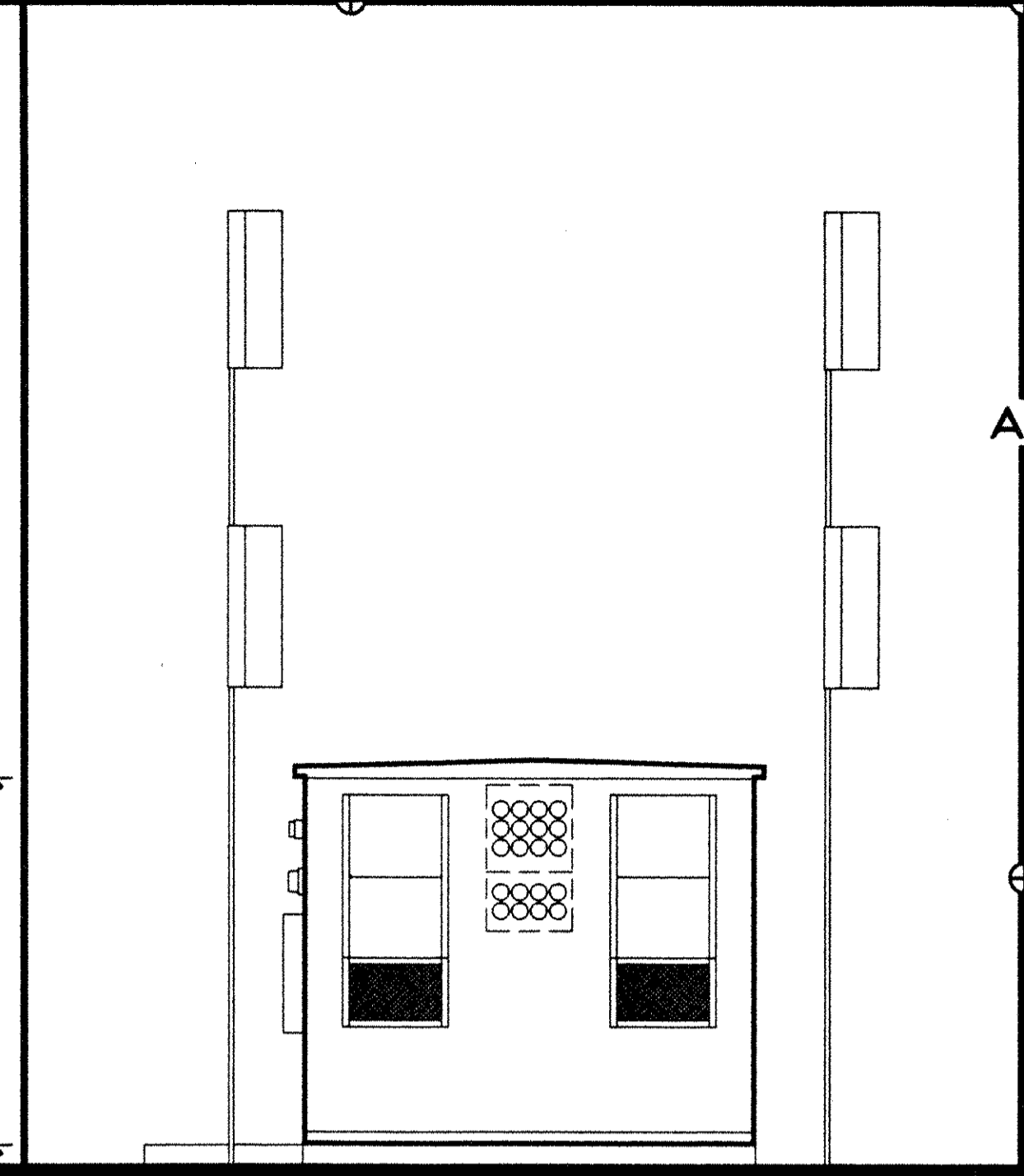
DATE: 9105.010
DRAWN BY: RLM
SHEET NUMBER: **A5**

1. CODES AND STANDARDS
 - a. All construction work shall comply with the requirements of the latest version of the Uniform Building Code, and all applicable ordinances, codes and regulations.
 - b. All materials and workmanship shall conform to Drawings and Specifications.
2. INFORMATION, EXISTING CONDITIONS
 - a. The Contractor shall review and be familiar with site conditions as shown on the attached topo/boundary survey map.
 - b. All information shown on the drawings relative to existing conditions is given as the best present knowledge, but without guarantee of accuracy and may not be as shown exactly.
 - c. The Contractor shall report any discrepancies to the Owner's Representative.
 - d. Where actual conditions conflict, revisions may not be made without the express approval of the Owner's Representative. Modification of details of construction shall not be made without written approval of the Owner's Representative.
 - e. The Contractor shall be responsible for coordinating the work of all trades and shall check all dimensions.
 - f. All items indicated to be confirmed or verified shall be done so by the Contractor prior to commencing with the specified work.
 - g. The Contractor shall protect all existing structures, finishes, equipment and furnishings scheduled to remain.
 - h. Repair and/or replacement of damaged materials shall be the responsibility of the Contractor.
 - i. Restoration shall match original undisturbed conditions.
 - j. Confirm sloping and storage locations with the Proj. Mgr. and the Property Owner Prior to starting work.
 - k. Interruption of exist. and services shall be kept to a minimum & scheduled in advance with any and all affected parties.
 - l. The intent of these plans is to specify a complete and operational system. The Contractor shall provide all resources necessary to carry out the intent of these drawings.
3. SHORING AND BRACING
 - a. The Contractor shall be responsible for all shoring, bracing and guys in accordance with all National, State and Local safety ordinances during construction.
4. INTENT OF DOCUMENTS
 - a. It is the intent of the Documents to describe and define a complete place of work.
 - b. The Contractor shall be responsible for furnishing at no additional cost to the Owner all materials, labor and services to produce and deliver a fully completed job in all its details, although some of the work and material may not be mentioned in the Notes or detailed on the Drawings.
 - c. Materials, supplies and items required in the work which are not covered by detailed descriptions in the contract documents shall be standard products of industry-recognized manufacturers, specifically recommended for their intended use by such manufacturers, and shall be subject to approval by the Owner's Representative.
5. EXISTING UTILITIES
 - a. Interruption of electrical, gas, water, and telephone services shall be scheduled in advance and shall be kept to a minimum.
 - b. The contractor shall notify owner prior to any service interruption.
 - c. Where building utilities, systems, or equipment are affected by construction work they shall be relocated, rerouted or replaced to provide a complete operating system.
6. GRADING
 - a. The area within the lease limits shall be cleared and grubbed of existing vegetation and treated with a non-toxic herbicide that meets all State and Local requirements regarding its use.
 - b. The entire lease area shall be uniformly graded per the requirements and elevations shown on the grading plan.
 - c. Grading and excavation spoils shall be either uniformly placed over the lease area or in a location predetermined by the Owner's Representative.
 - d. The entire lease area shall be compacted to a minimum 95% and this compaction shall extend a minimum of 5 feet beyond the lease area limits.
7. MATERIAL STAGING
 - a. Areas to be used by contractor for staging, storage, etc., shall be verified with Owner's Representative prior to beginning construction.
8. OWNER'S EQUIPMENT
 - a. Verify all Owner furnished or relocated equipment for required dimensions.
 - b. The Contractor shall be responsible for obtaining the Owner's equipment, transporting materials to the job site and installing all equipment and materials as required by the Drawings, Specifications, and/or the Owner's specifications.
9. MATERIALS AND FINISHES
 - a. All new material, work and finishes shall match existing materials and work of similar function and finishes except where more rigid requirements are specified or are required by applicable codes.
 - b. Repair, patch and replace all existing work damaged due to this work including surfaces and finishes disturbed by plumbing, mechanical, fire sprinkler or electrical work, to match original undisturbed conditions.
 - c. The Owner's Representative shall determine amount of surfaces to be replaced.
10. SHELTER
 - a. The Contractor shall be responsible for off-loading the shelter and securing the shelter to the foundation.
 - b. The Contractor shall coordinate all final equipment locations with the Owner's Representative.
 - c. All exposed piping and conduits shall be painted to match the shelter.
11. TESTING
 - a. The Contractor shall provide Grounding testing and certification of such tests to the Owner's Representative per the Grounding Specifications shown herein these documents or as provided by the Owner's Representative.
 - b. All Helix Testing shall be provided by the General Contractor per the Grounding Specifications shown herein these documents or as provided by the Owner's Representative.
12. CLEAN UP
 - a. The Contractor shall maintain the site in a clean, safe, orderly manner leaving no material spoils, scraps, etc., lying around the work area.
 - i. Such scrap material shall be collected in a safe, controlled area and shall be disposed of in a proper manner as directed by the Owner's Representative and/or the local sanitation district.
13. SURVEY
 - a. As directed by the Owner's Representative, a Land Survey shall be performed by a Registered Land Surveyor or Civil Engineer.

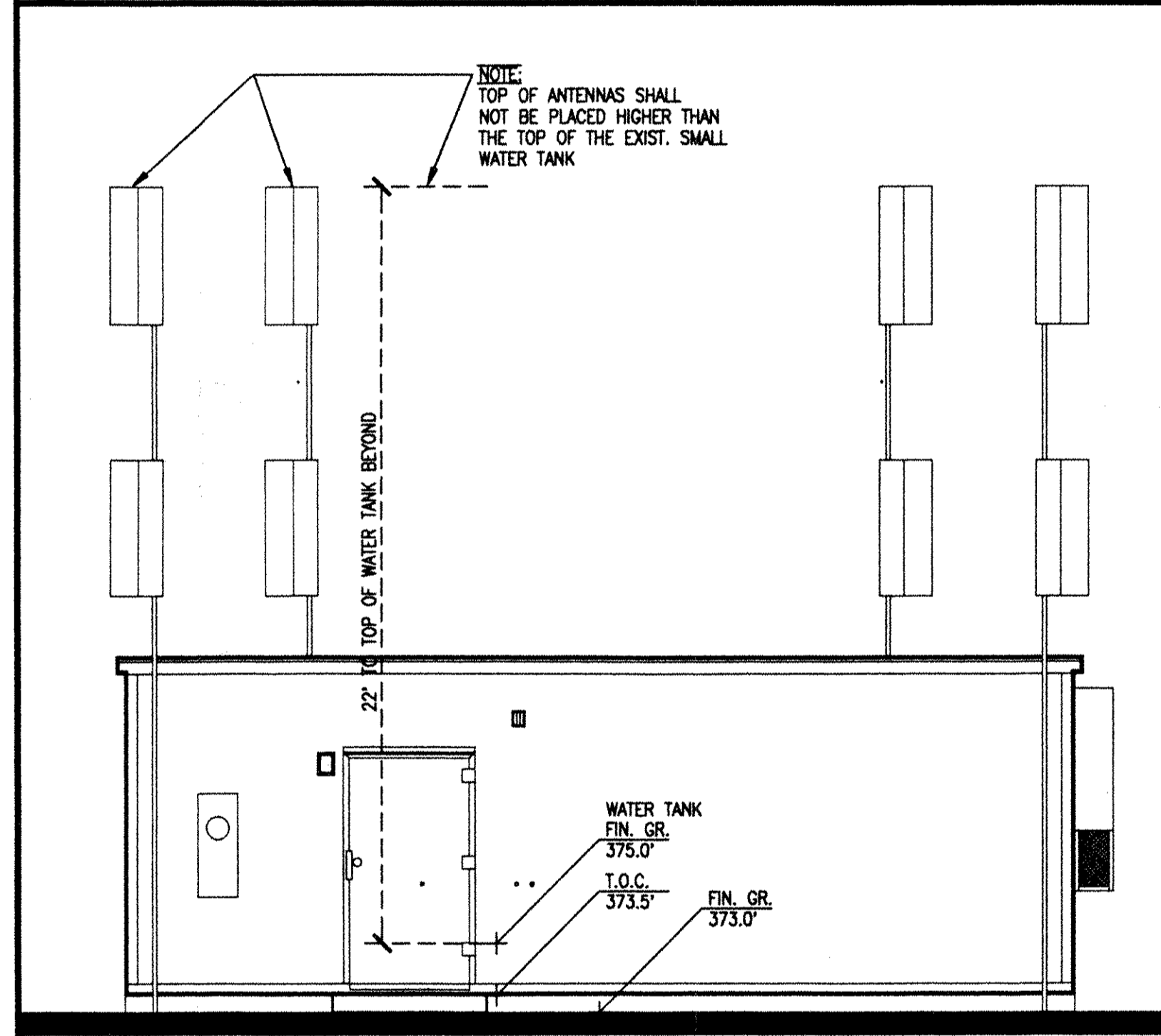
D1 GENERAL NOTES
GENERAL.DWG NO SCALE



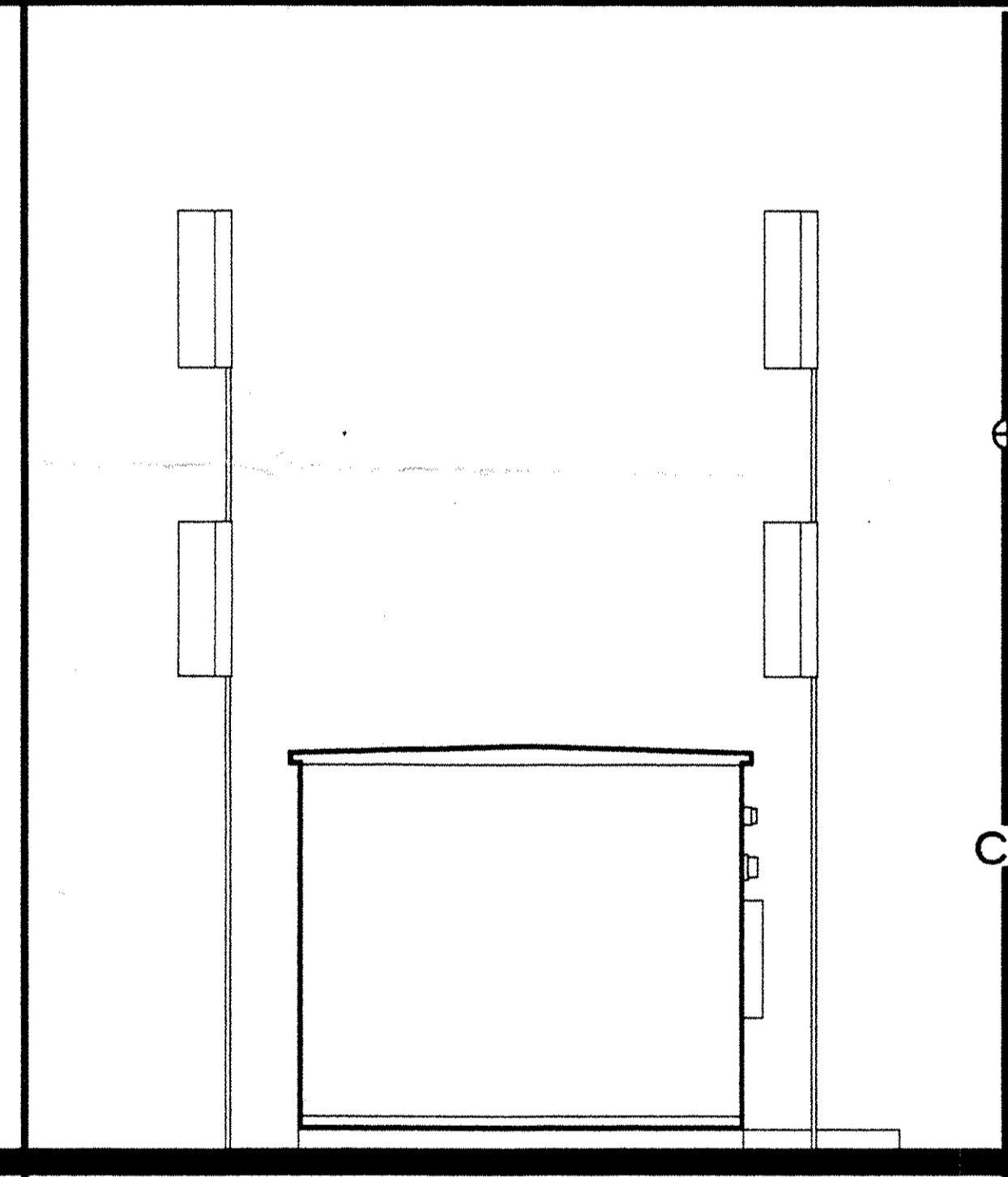
B4 NORTH ELEVATION-PROPOSED BUILDING/ANTENNAS
SCALE: 1/4"=1'-0"



B6 EAST ELEVATION-PROPOSED BLDG.
SCALE: 1/4"=1'-0"



C4 SOUTH ELEVATION-PROPOSED BUILDING/ANTENNAS
SCALE: 1/4"=1'-0"



C6 WEST ELEVATION-PROPOSED BLDG.
SCALE: 1/4"=1'-0"

PROJECT NAME AND LOCATION
**DOWNTOWN PETALUMA
CELLULAR SITE**
CITY OF PETALUMA WATER TANK-HAYES AVENUE
PETALUMA, CALIFORNIA
PROJECT NUMBER: 5463-92-002/SR26

CLIENT/DEVELOPER
CACAL CELLULAR COMMUNICATIONS CORP.
505 14TH STREET, SUITE 850 OAKLAND, CALIFORNIA 946
PROJECT MANAGER: JAMES GONZALES (510) 251-39
MOBILE: (408) 595-0083 FAX: (510) 810-71

THESE PLANS ARE PRELIMINARY AND NOT FOR CONSTRUCTION PURPOSES UNTIL THEY ARE SIGNED BY RESPONSIBLE PROFESSIONAL.



SIGNATURE

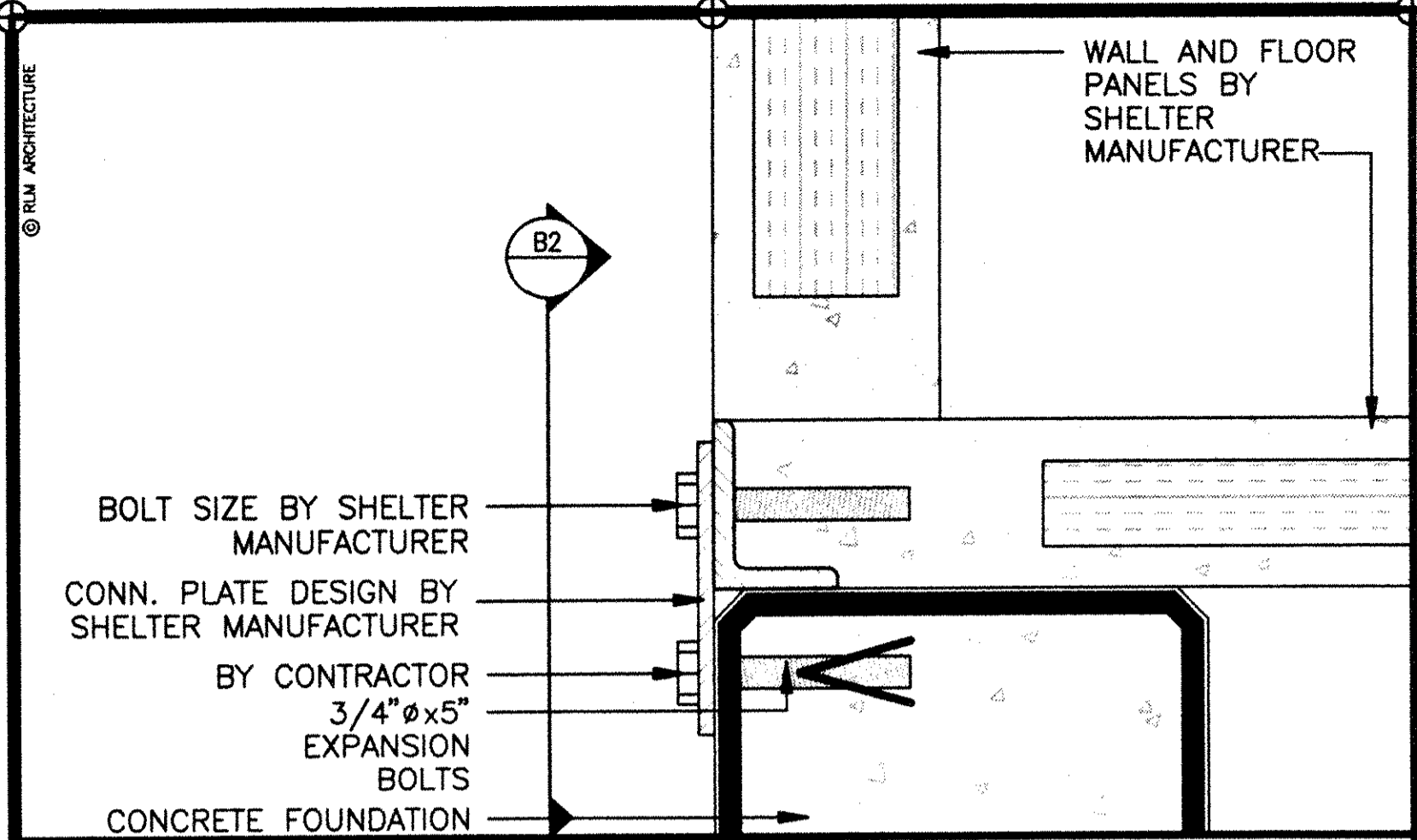
CONSULTANT'S STAMP

SIGNATURE

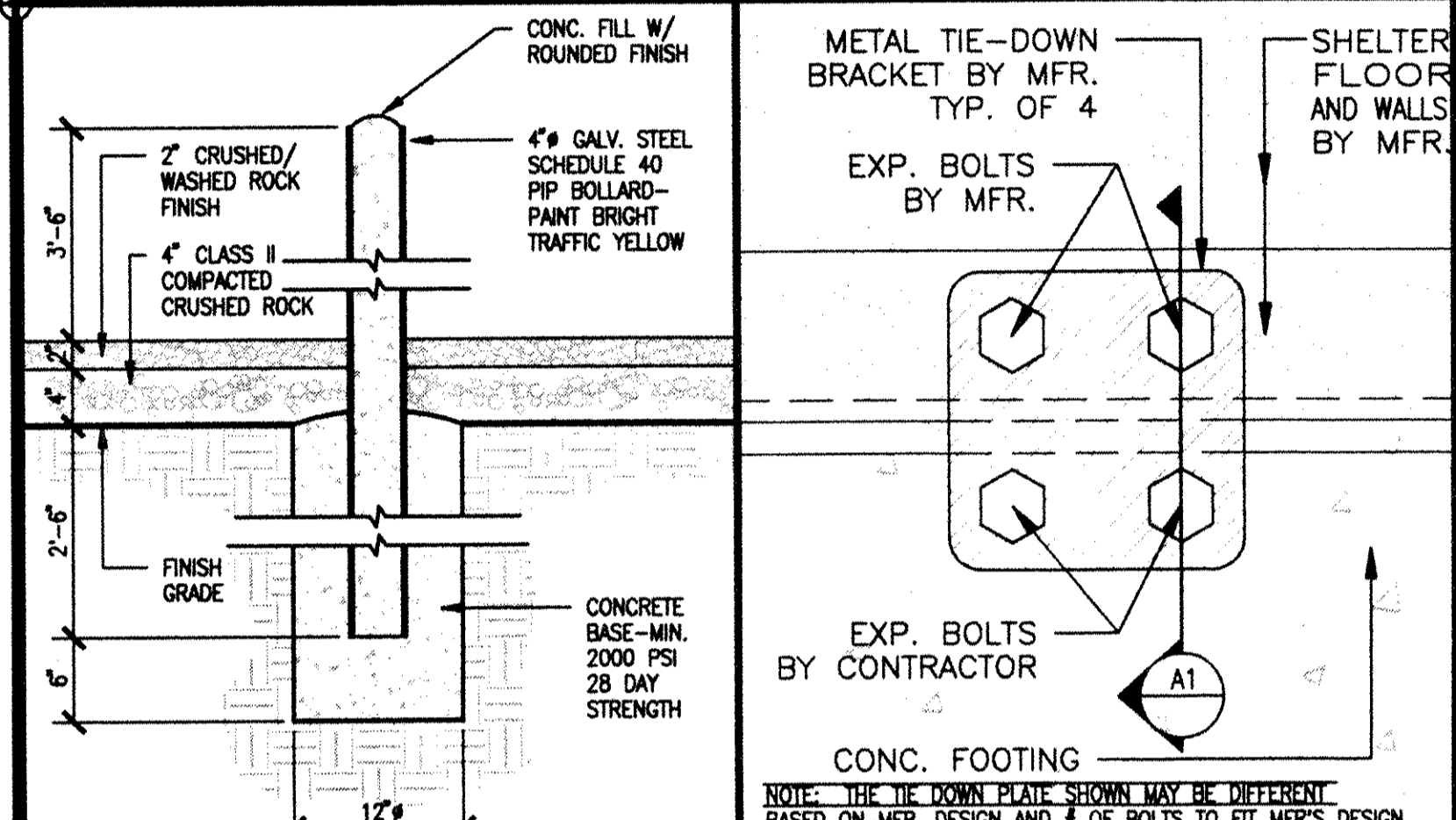
D SHEET DESCRIPTION
EXTERIOR ELEV'S, GEN. NOTES

REVISIONS	DATE

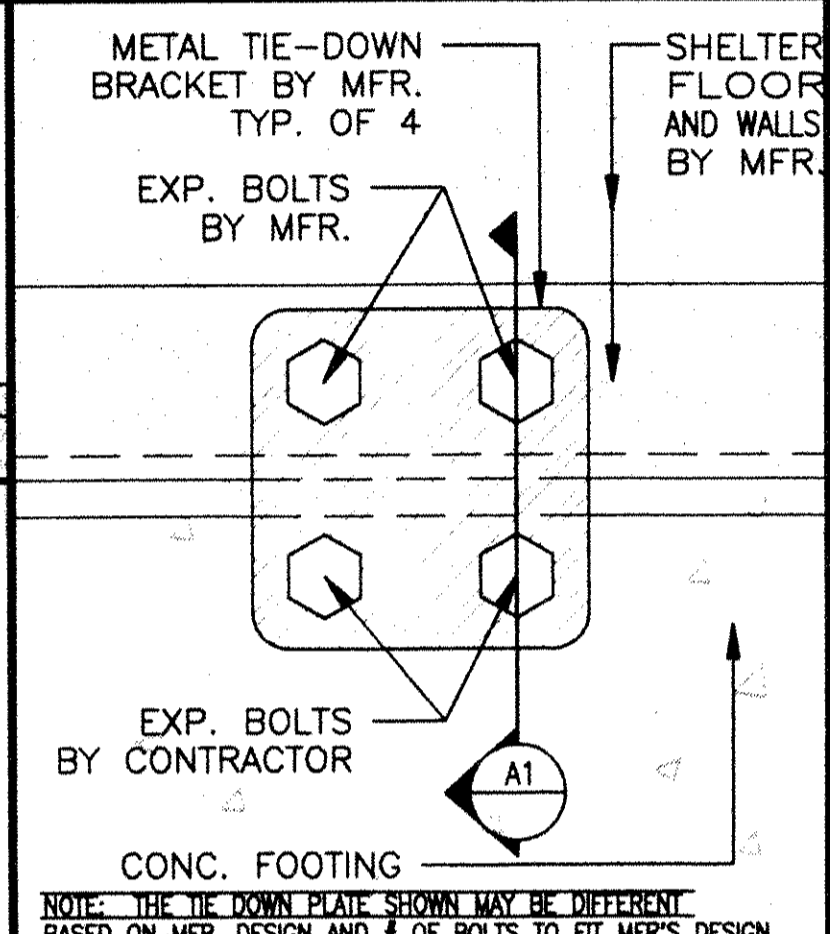
JOB NUMBER
9105.010
DATE
DRAWN BY
RLM
SHEET NUMBER
A6



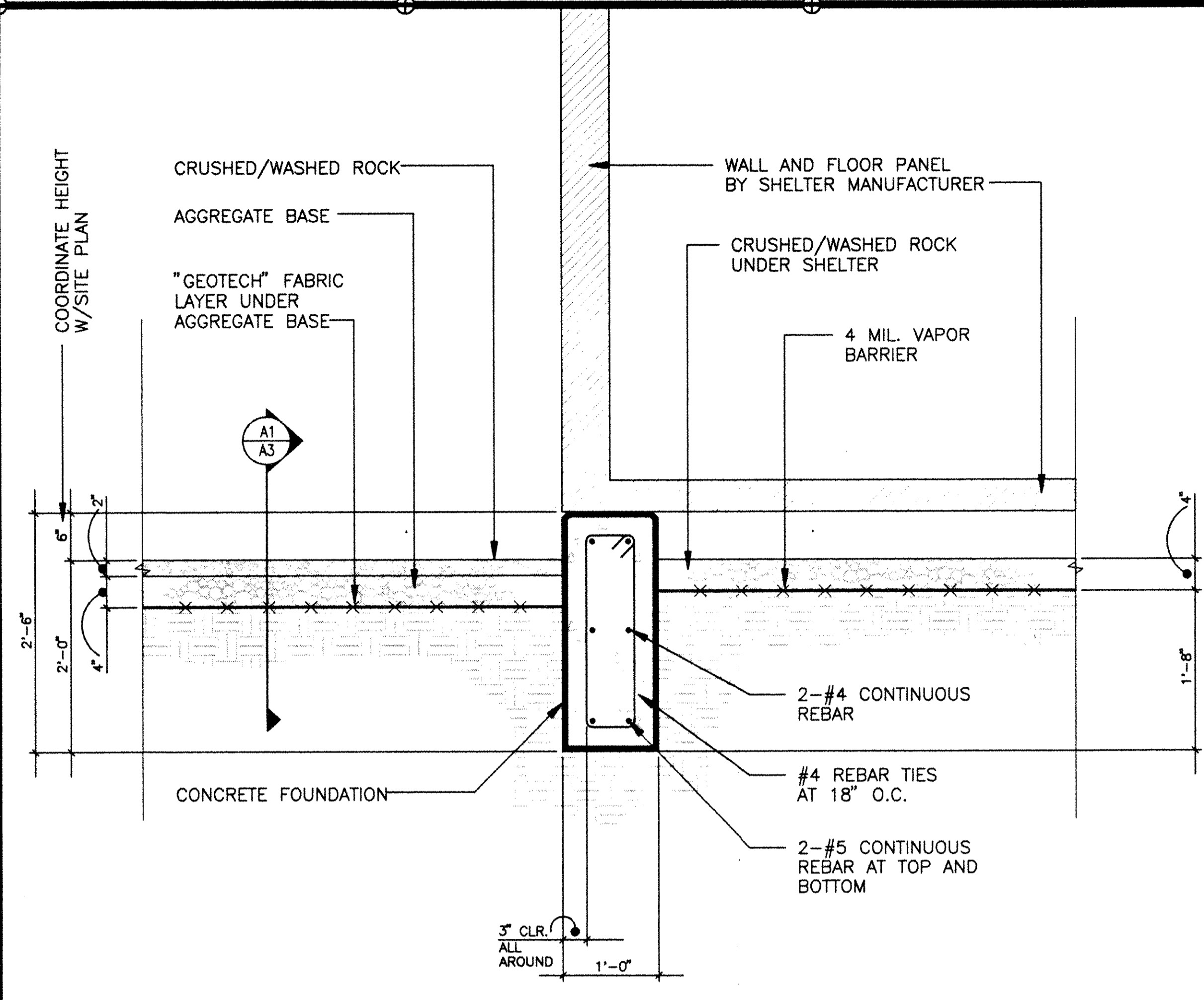
A1 TYPICAL TIE-DOWN DETAIL SCALE: 3"=1'-0"



B1 CONC. FILLED BOLLARD SCALE: 1"=1'-0"



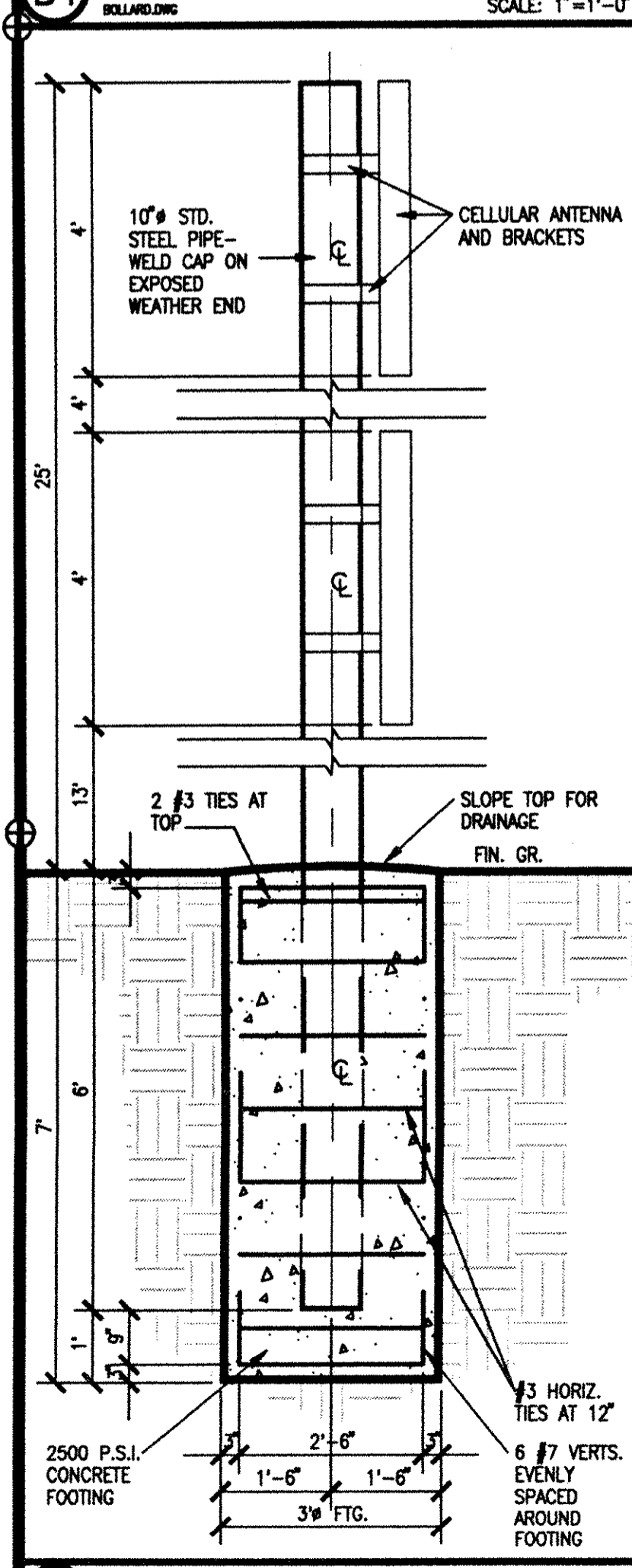
B2 TIE-DOWN ELEVATION SCALE: 3"=1'-0"



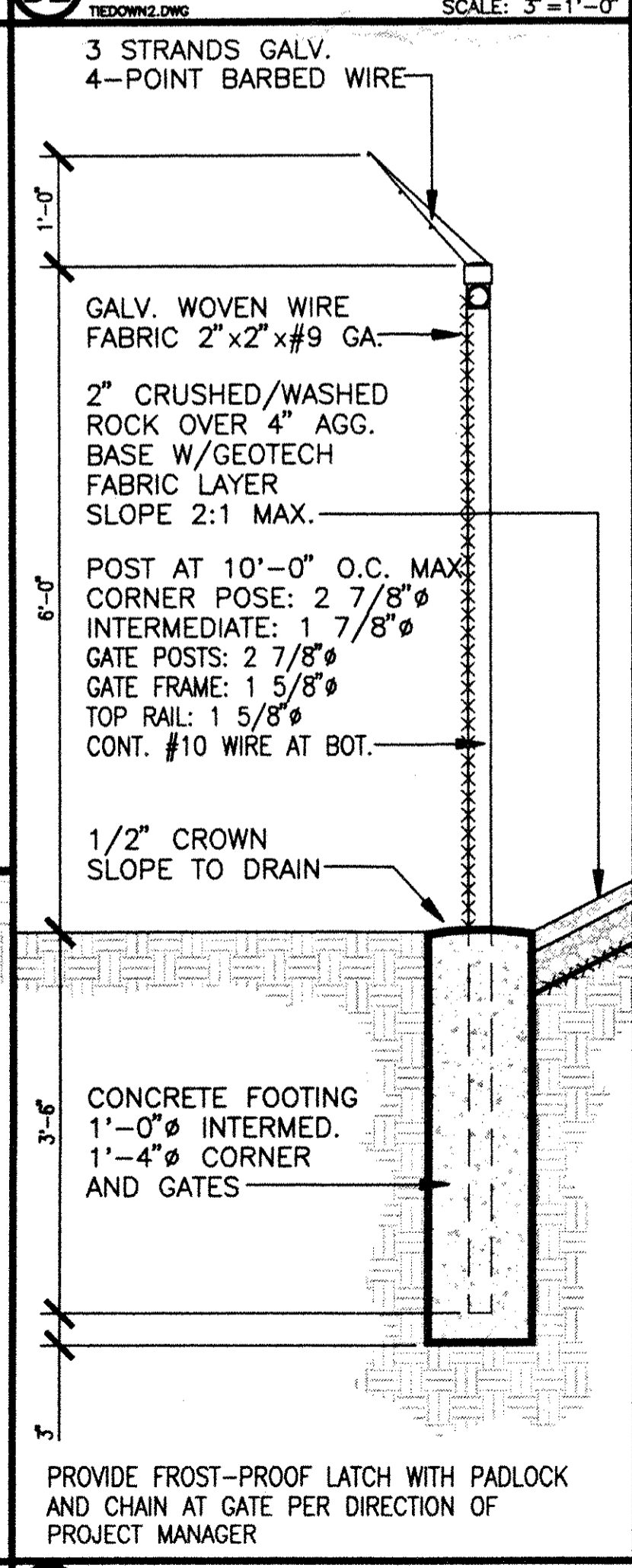
B3 TYPICAL FOOTING DETAIL SCALE: 1"=1'-0"

- 1. CODES:** ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE REQUIREMENTS OF THE U.B.C., U.M.C., NATIONAL ELECTRIC CODE, CALTRANS, AND ALL OTHER LOCAL, STATE AND NATIONAL CODES, ORDINANCES, AND REGULATIONS, AL APPLICABLE TO THIS PROJECT.
- 2. CHAIN LINK FENCE:** GALVANIZED STEEL 2"x2"x#9 GAUGE FABRIC, FRAMEWORK SHALL BE OF ROUND GALVANIZED PIPE WITH A TOP RAIL AND #7 GA. TENSION WIRE AT THE BOTTOM. PROVIDE GATE STOPS AND LATCH WITH LOCKING DEVICE. GATE STOPS OR HOLD BACKS SHALL BE "SEMMERLING FENCE AND SUPPLY, INC." PRODUCT #02315 OR APPROVED EQUAL. THE LATCH WITH LOCKING DEVICE SHALL BE A DOUBLE DRIVE INDUSTRIAL LATCH MADE BY "SEMMERLING FENCE AND SUPPLY COMPANY" PRODUCT #02235 OR APPROVED EQUAL. GATES SHALL HAVE A MINIMUM SWING OF 180 DEGREES. FABRIC AND FRAMEWORK ARE TO BE HOT-DIPPED GALVANIZED STEEL, CONFORMING TO "INDUSTRIAL STEEL SPECIFICATIONS FOR FENCE POSTS, GATES, AND ACCESSORIES," AS PUBLISHED BY THE "CHAIN LINK FENCE MANUFACTURER'S INSTITUTE", EXCEPT AS OTHERWISE SPECIFIED HEREIN.
- 3. EARTHWORK:**
- a. CLEAR AND GRUB SITE AND STRIP ORGANIC LADEN TOPSOIL, TOP 2 TO 3 INCHES. REMOVE FROM SITE AND DISPOSE OR USE FOR TOPSOIL IN LANDSCAPE AREA IF APPLICABLE.
 - b. SCARIFY EXISTING SUB-BASE TO A DEPTH OF 12" AND COMPACT TO 90% RELATIVE COMPACTION AT A MINIMUM MOISTURE CONTENT AT 2% ABOVE OPTIMUM, A.S.T.M. D1557, UNDER SHELTER BUILDING.
 - c. COMPACT BACKFILL TO 90% RELATIVE COMPACTION IN 18" MAXIMUM LOOSE LIFTS AT 2% OPTIMUM MOISTURE CONTENT, IF BACKFILL IS REQUIRED.
 - d. CARE SHALL BE TAKEN TO AVOID DRYING OF SOILS IN THE EXPOSED FOOTING EXCAVATIONS. THE MOISTURE CONTENT SHALL BE AT 2% ABOVE OPTIMUM AT TIME OF PLACEMENT OF CONCRETE.
 - e. ROCK UNDER FOUNDATIONS SHALL BE CLASS 2 PERMEABLE CONFORMING TO CALTRANS.
 - f. SITE GRAVEL: CLASS 2 AGGREGATE BASE CONFORMING TO CALTRANS COMPACTED TO 90% RELATIVE COMPACTION.
- 4. REINFORCED CONCRETE:** 3000 P.S.I. CONCRETE PER ACT 318; A.S.T.M. A165 GRADE 40 REINFORCED: A.S.T.M. A185 WELDED WIRE FABRIC. ALL RE-BAR TO HAVE MINIMUM A.C.I. BENDS AT WALL CORNERS. COMPLY WITH U.B.C. 306.g.1 SPECIAL INSPECTION FOR CONCRETE.
- 5. STRUCTURAL STEEL:** STEEL PLATES AND BARS-A.S.T.M. A36, A.W.S. FOR WELDING. CONCRETE ANCHORS SHALL BE RED HEAD WEDGE TYPE ANCHORS.

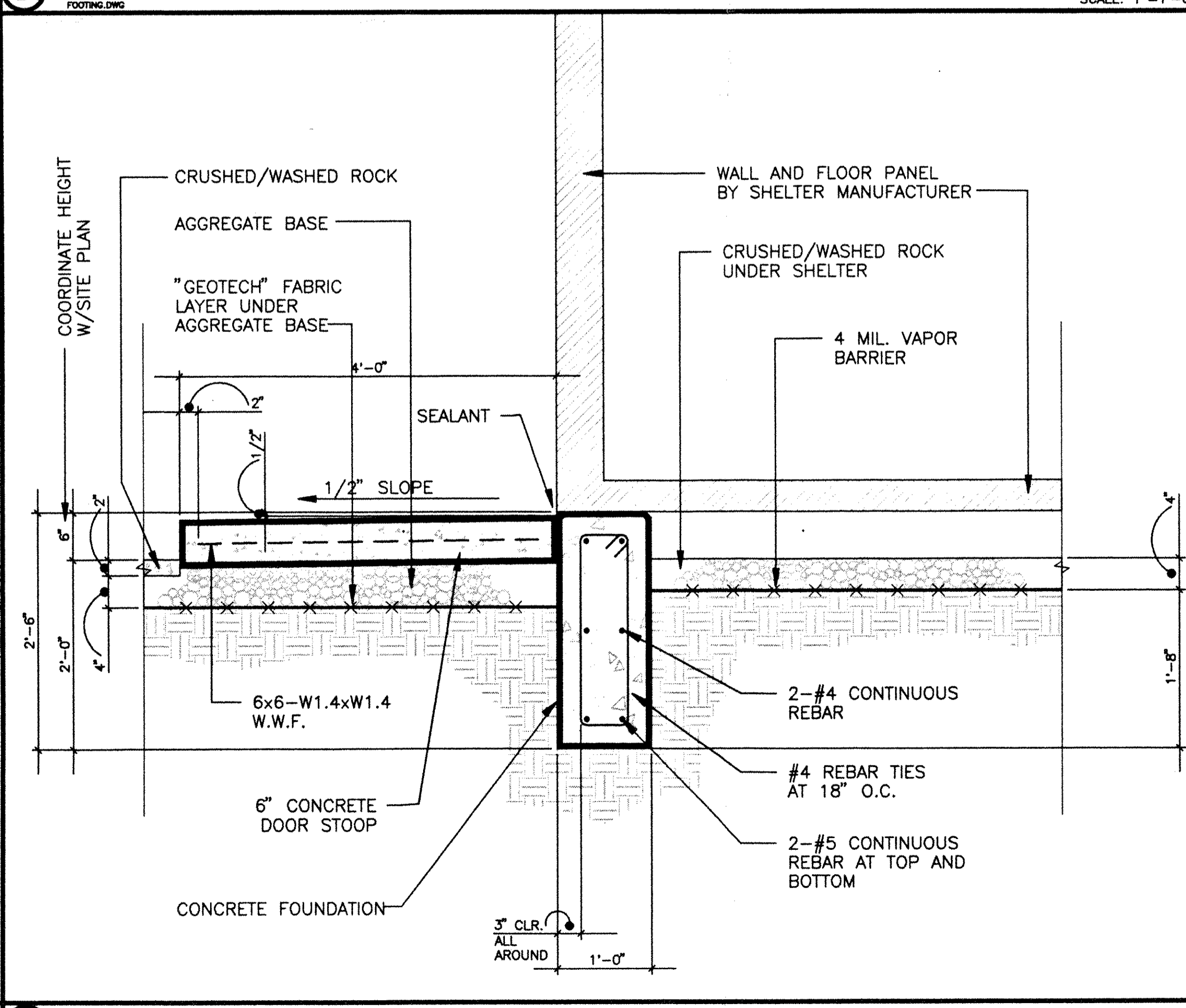
B6 NOTES & SPECIFICATIONS NO SCALE



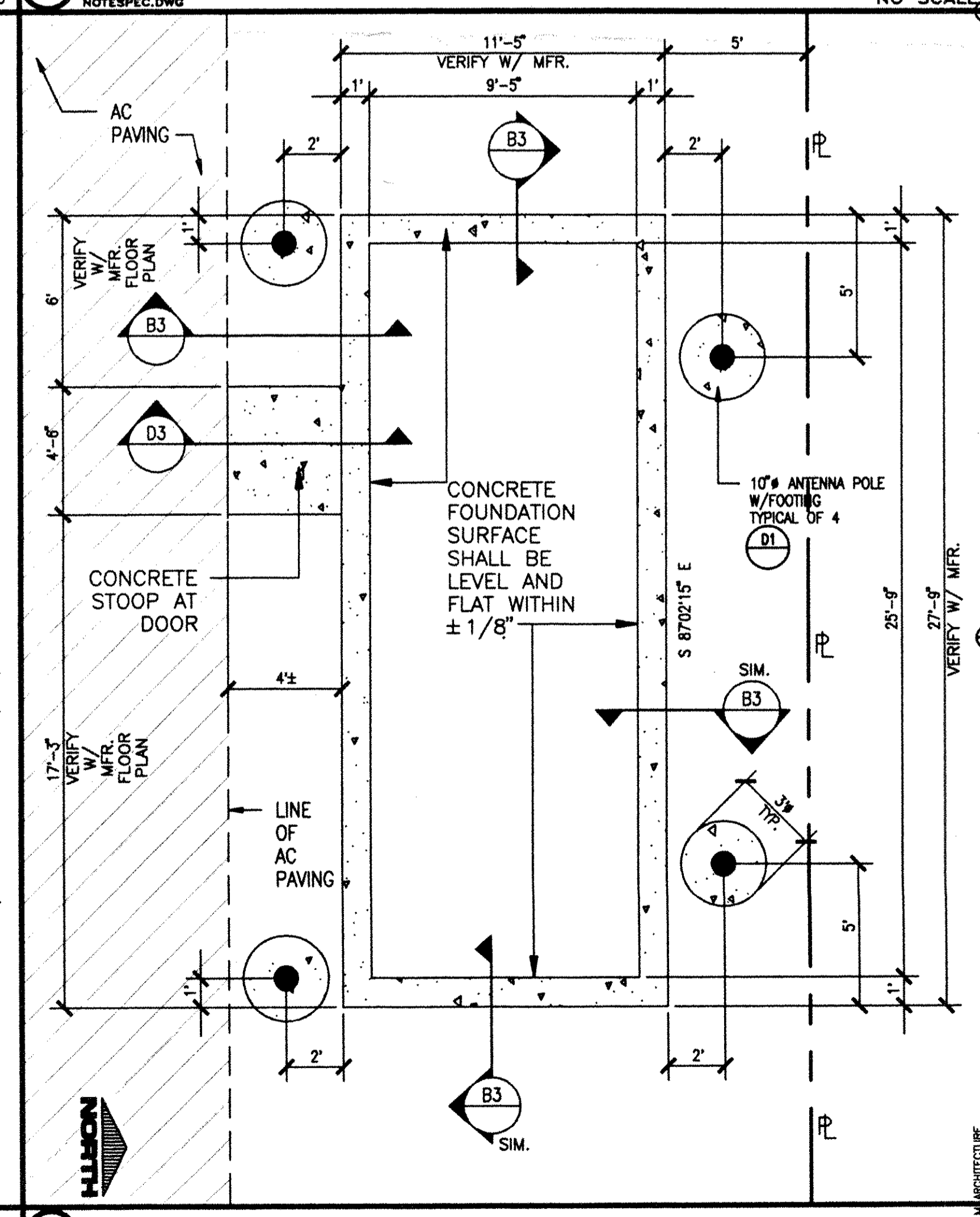
D1 ANTENNA POLE FOOTING SCALE: 1/2"=1'-0"



D2 TYP. FENCE DETAIL SCALE: 3/4"=1'-0"



D3 CONCRETE DOOR STOOP DETAIL SCALE: 1"=1'-0"



D6 FOUNDATION PLAN SCALE: 1/4"=1'-0"

PROJECT NAME AND LOCATION
DOWNTOWN PETALUMA CELLULAR SITE
 CITY OF PETALUMA WATER TANK-HAYES AVENUE
 PETALUMA, CALIFORNIA
 PROJECT NUMBER: 5453-92-002/SR26

CLIENT/DEVELOPER
CAGAL CELLULAR COMMUNICATIONS CORP.
 505 14TH STREET, SUITE 850 OAKLAND, CALIFORNIA 94612
 PROJECT MANAGER: JAMES GONZALES (510) 251-3918
 MOBILE: (408) 585-0083 PAGER: (510) 810-7125

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SIGNATURE
 CONSULTANT'S STAMP
 SIGNATURE

SHEET DESCRIPTION

NO.	REVISIONS	DATE

JOB NUMBER: 9105.010
 DRAWN BY: RLM
 SHEET NUMBER: A7

GENERAL NOTES:

1. EXAMINE THE SITE WORK TO DETERMINE CONDITIONS UNDER WHICH THE WORK IS TO BE PERFORMED. COMPARE SITE CONDITIONS WITH DRAWINGS AND SPECIFICATIONS. ASCERTAIN AND CHECK THE LOCATIONS OF ANY EXISTING STRUCTURES AND EQUIPMENT WHICH WILL AFFECT THE WORK SPECIFIED HEREIN. THE CONTRACTOR SHALL NOTIFY OWNERS REPRESENTATIVE OF ANY DISCREPANCIES FOUND.
2. ALL WORK SHALL COMPLY WITH THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE AND ANY OTHER APPLICABLE STATE AND LOCAL CODES.
3. GROUNDING SYSTEM RESISTANCE SHALL NOT EXCEED 5 OHMS. IF THE RESISTANCE VALUE IS EXCEEDED, NOTIFY THE OWNER FOR FURTHER INSTRUCTION ON METHODS FOR REDUCING THE RESISTANCE VALUE.
4. INSPECTIONS SHALL BE ARRANGED FOR BY THE CONTRACTOR.
5. SUBMIT SHOP DRAWINGS AND/OR CATALOG CUTS ON ALL MATERIALS AND EQUIPMENT.
6. UPON COMPLETION OF WORK, CONDUCT CONTINUITY, SHORT CIRCUIT, AND GROUNDING TESTS FOR APPROVAL. SUBMIT TEST REPORTS AND FURNISH TO CELLULAR TELEPHONE CO. ONE COMPLETE SET OF PRINTS SHOWING "AS INSTALLED WORK". CLEAN PREMISES OF ALL DEBRIS RESULTING FROM WORK AND LEAVE WORK IN A COMPLETE AND UNDAMAGED CONDITION.
7. CONTRACTOR TO COORDINATE WITH UTILITY COMPANY AND PAY FOR TEMPORARY POWER AND COORDINATE CONNECTION OF PERMANENT SERVICE TO THE SITE.

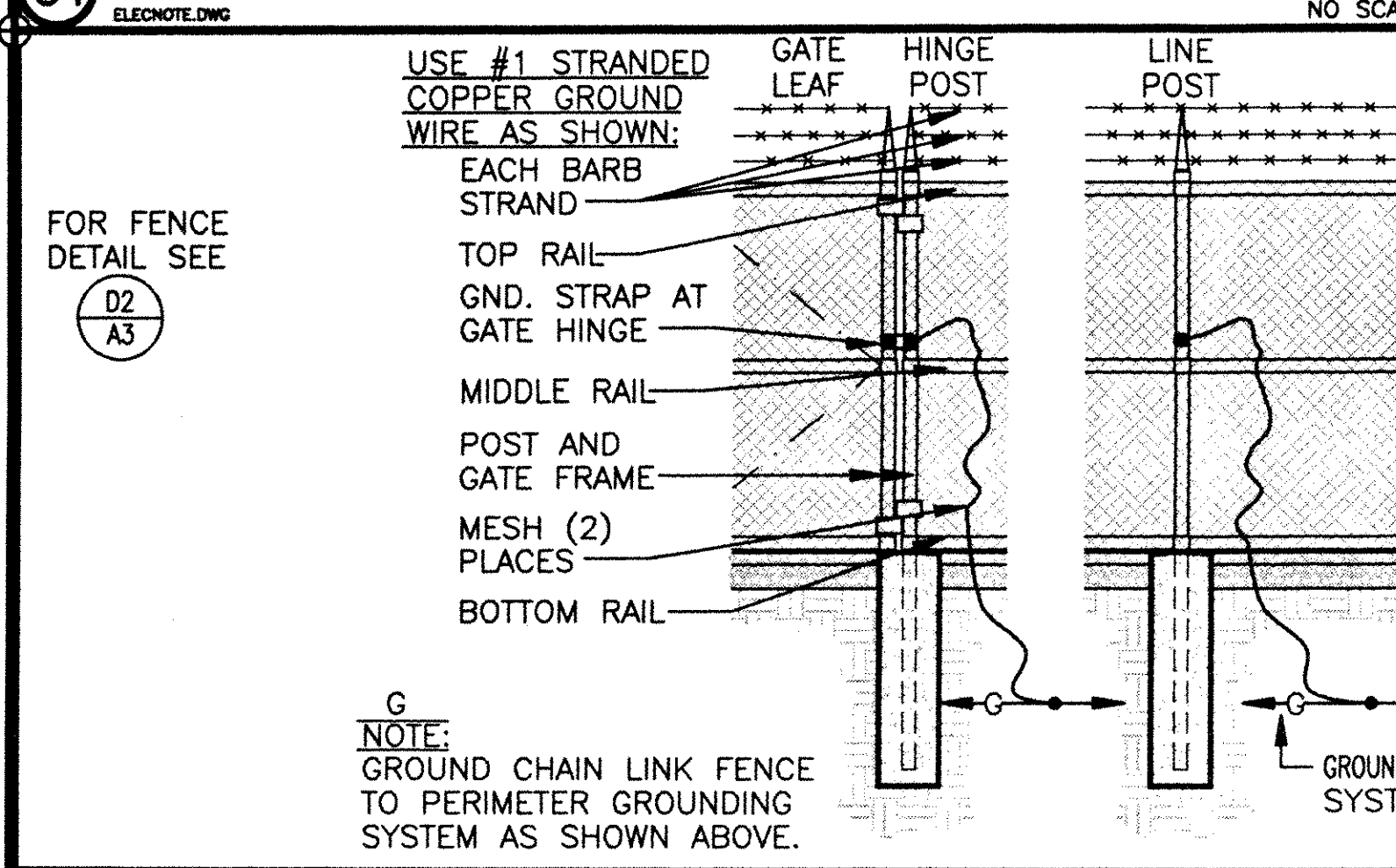
MATERIALS:

1. CONDUIT: E.M.T. FOR CONDUITS USED INDOORS, RIGID STEEL GALVANIZED FOR EXPOSED CONDUIT USED FOR OUTDOORS, TRIANGLE, ALLIED, OR EQUAL. P.V.C. SCHEDULE 40 FOR UNDERGROUND CONDUIT.
2. CONDUIT FITTINGS: THREADED TYPE FOR RIGID STEEL CONDUIT AND COMPRESSION TYPE FOR E.M.T., RACO, OR EQUAL. SET SCREW FITTINGS NOT PERMITTED.
3. WIRE: COPPER CONDUCTORS, 600V, TYPE THHN OR THWN #12 MINIMUM UNLESS OTHERWISE NOTED, COLOR CODED, GENERAL ELECTRIC, OR EQUAL.
4. GROUND CONDUCTOR: STRANDED COPPER #1.
5. GROUND RODS: COPPER CLAD STEEL, 5/8" ROUND AND 8' LONG, COPPERWELD OR APPROVED EQUAL.
6. METER SOCKET: AMPERES, VOLTAGE, NUMBER OF PHASES AS NOTED ON THE DRAWINGS AND APPROVED BY UTILITY COMPANY.
7. ALL MATERIALS SHALL BE U.L. LISTED.

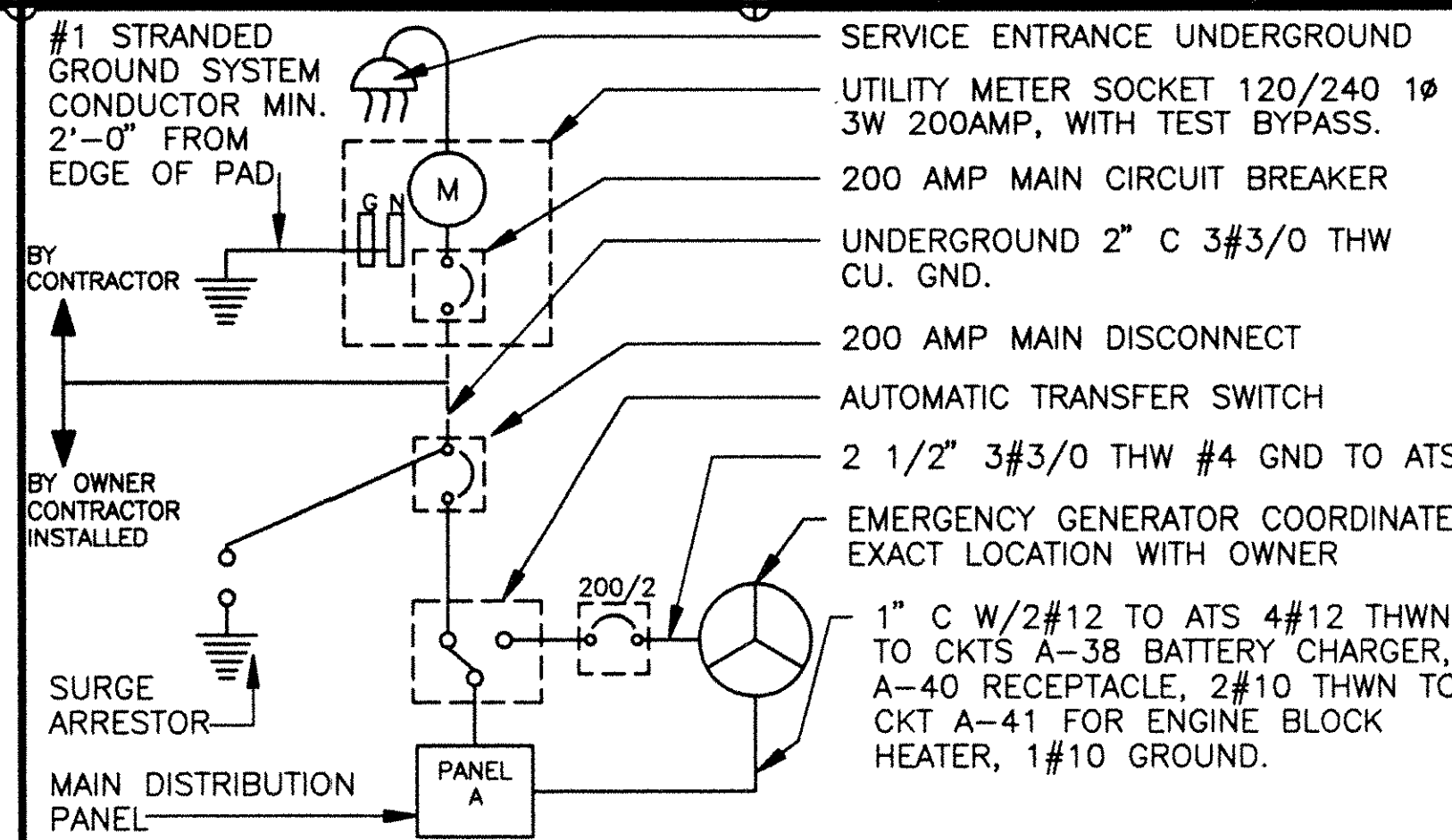
GROUNDING NOTES:

1. ALL CONNECTIONS TO GROUND SYSTEM MADE ABOVE GRADE TO BE MECHANICAL TYPE.
2. ALL CONNECTIONS TO GROUND SYSTEM MADE BELOW GRADE TO BE CADWELD TYPE.
3. GROUND ROD SPACING TO BE 10'-0" MAXIMUM CENTER-LINE TO CENTER-LINE.
4. ALL EXTERIOR GROUND CONDUCTOR AND TOP OF GROUND RODS TO BE BURIED TO A MINIMUM DEPTH OF 2'-6" BELOW GRADE OR 6" BELOW FROST LINE, WHICHEVER IS DEEPER.
5. ON SITE SUPERVISION BY OWNER REPRESENTATIVE REQUIRED PRIOR TO COMMENCING ALL GROUNDING WORK.

(C1) ELECTRICAL NOTES AND SPECIFICATIONS



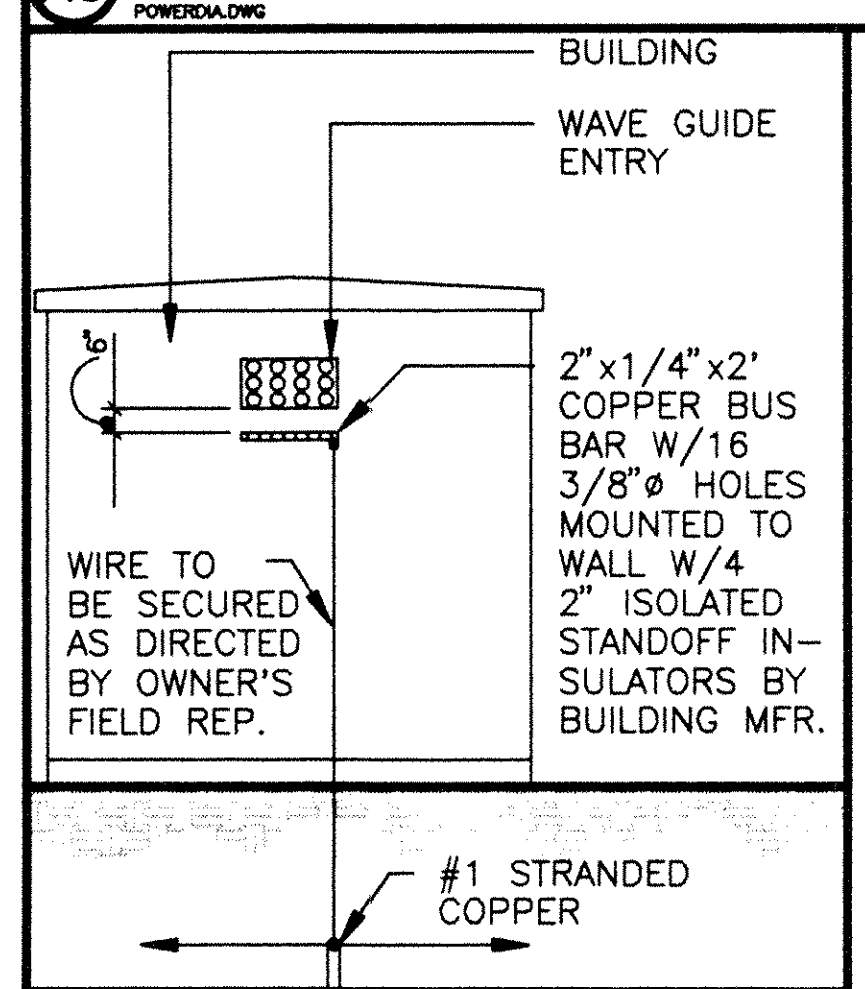
(D1) FENCE GROUNDING DETAIL



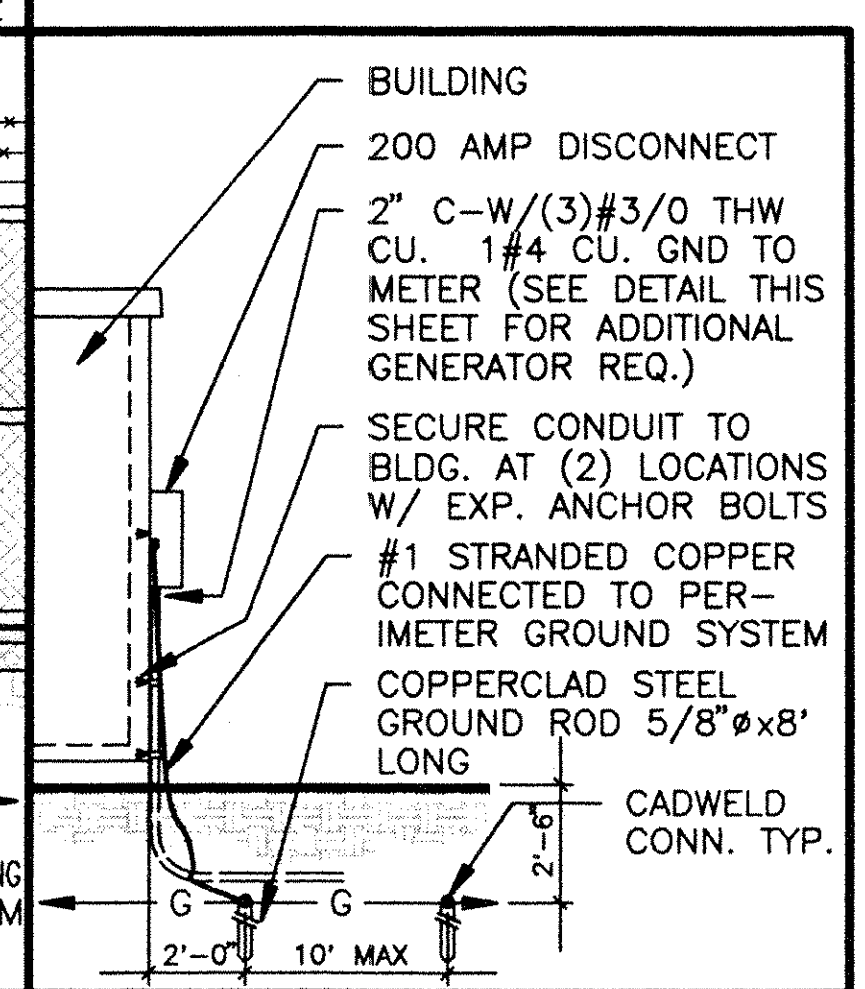
(A3) POWER ONE LINE DIAGRAM

- CADWELD, BELOW GRADE
- BRONZE OR COPPER CLAD MECHANICAL CLAMP ABOVE GRADE
- ⊕ GROUND ROD
- G— #1 STRANDED COPPER WIRE UNLESS OTHERWISE NOTED
- (E) EXISTING
- S.O.H. SERVICE OVERHEAD

(A5) LEGEND



(B3) WAVE GUIDE GROUND BUS DETAIL



(D3) METER SOCKET/ GROUND ROD

PROJECT NAME AND LOCATION
DOWNTOWN PETALUMA CELLULAR SITE
CITY OF PETALUMA WATER TANK-HAYES AVENUE
PETALUMA, CALIFORNIA
PROJECT NUMBER: 5453-92-002/SR26

CLIENT/DEVELOPER
CAGAL CELLULAR COMMUNICATIONS CORP.
505 14TH STREET, SUITE 850 OAKLAND, CALIFORNIA 94612
PROJECT MANAGER: JAMES GONZALES (510) 251-3918
MOBILE: (408) 595-0093 PAGER: (510) 810-7129

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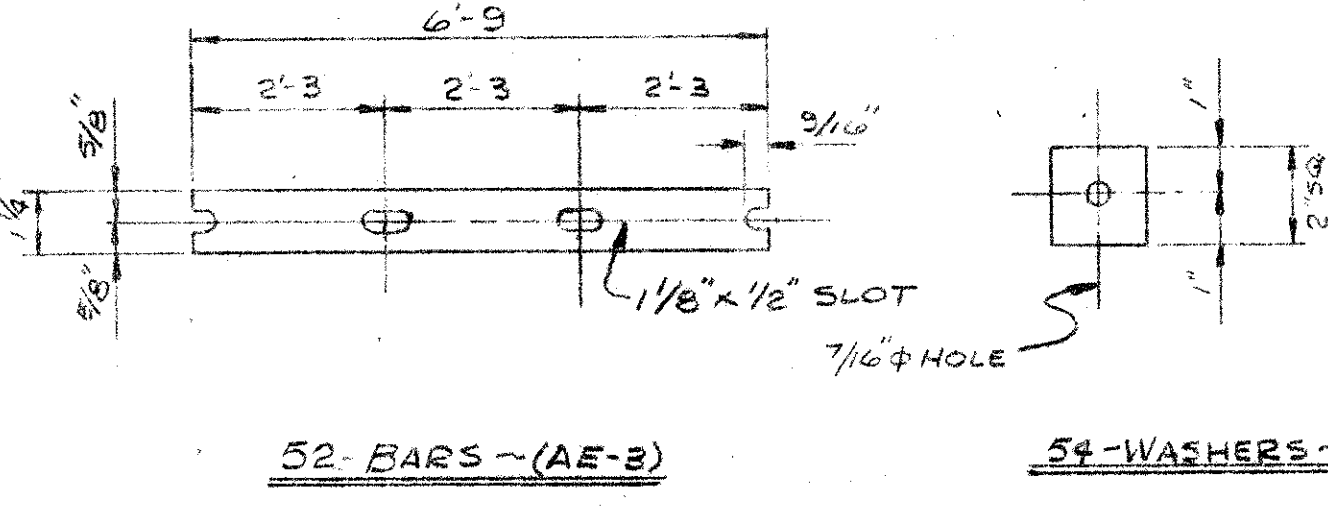
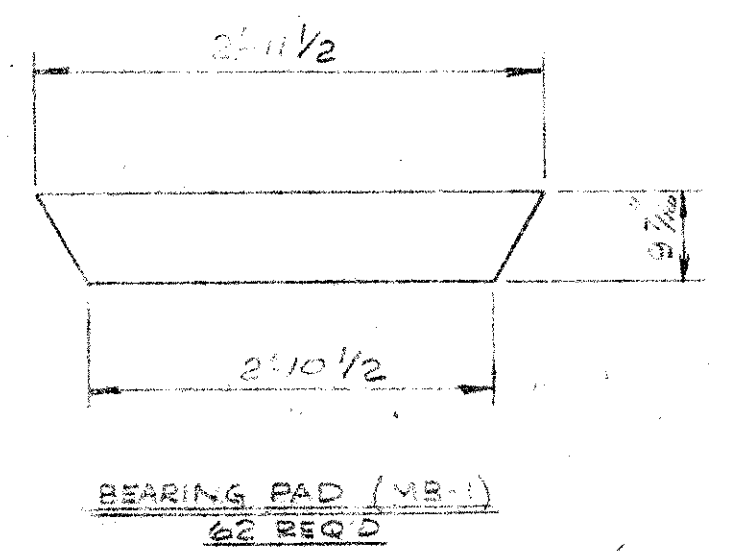
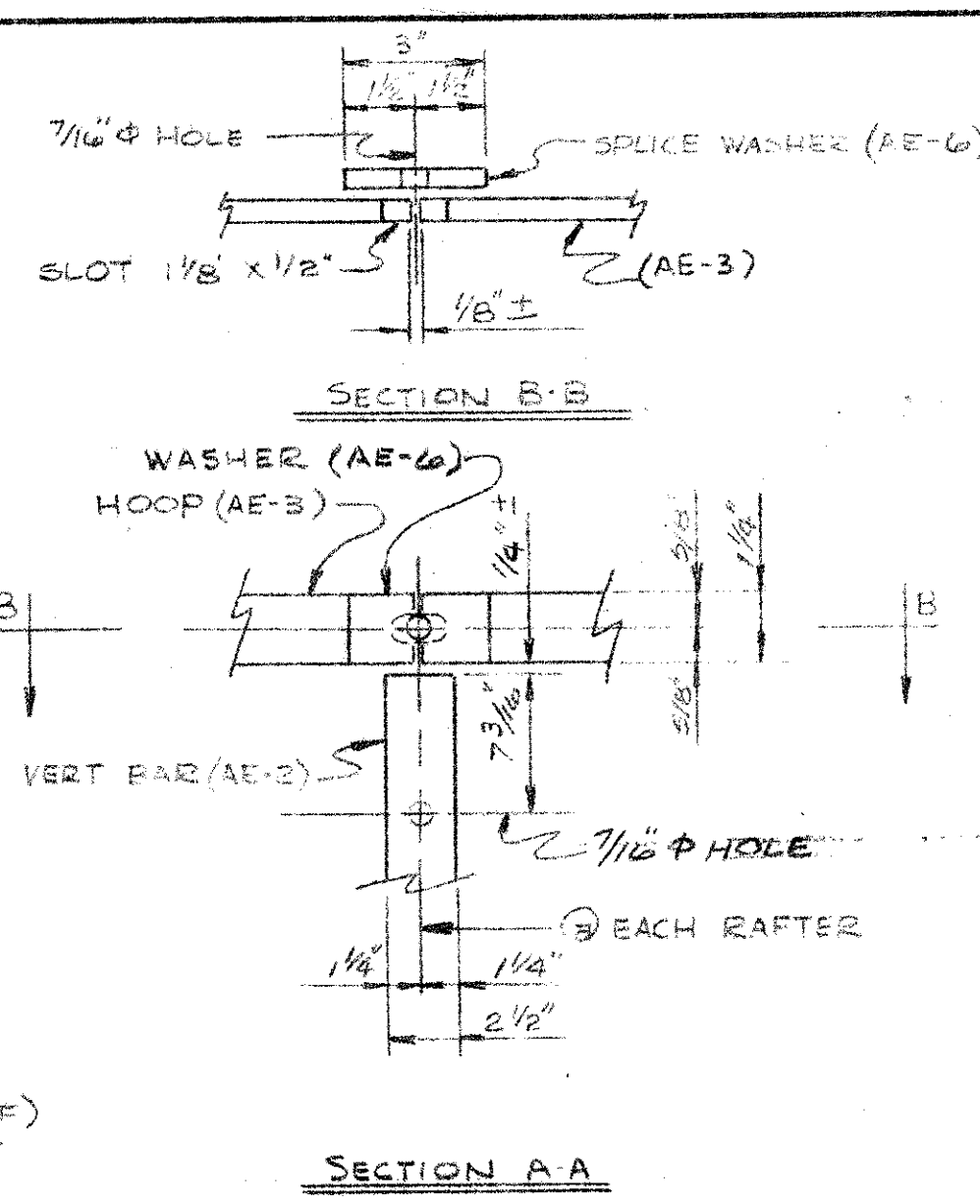
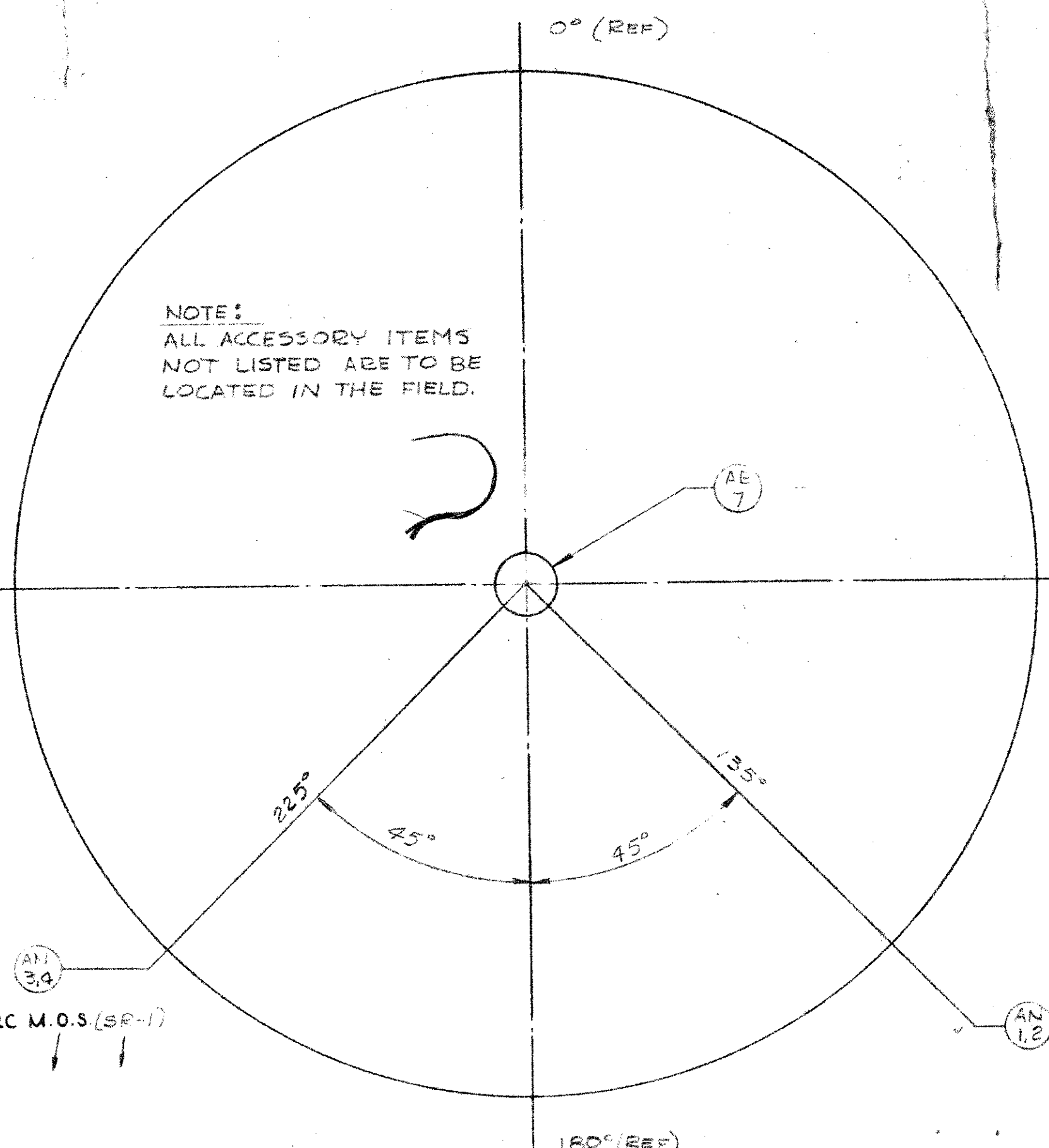


SIGNATURE
CONSULTANT'S STAMP

SHEET DESCRIPTION
ELEC. PLOT PLAN, ONE LINE DIAGRAM, GROUNDING DETAILS, NOTES AND SPECIFICATIONS

REVISIONS	DATE	BY	CHKD

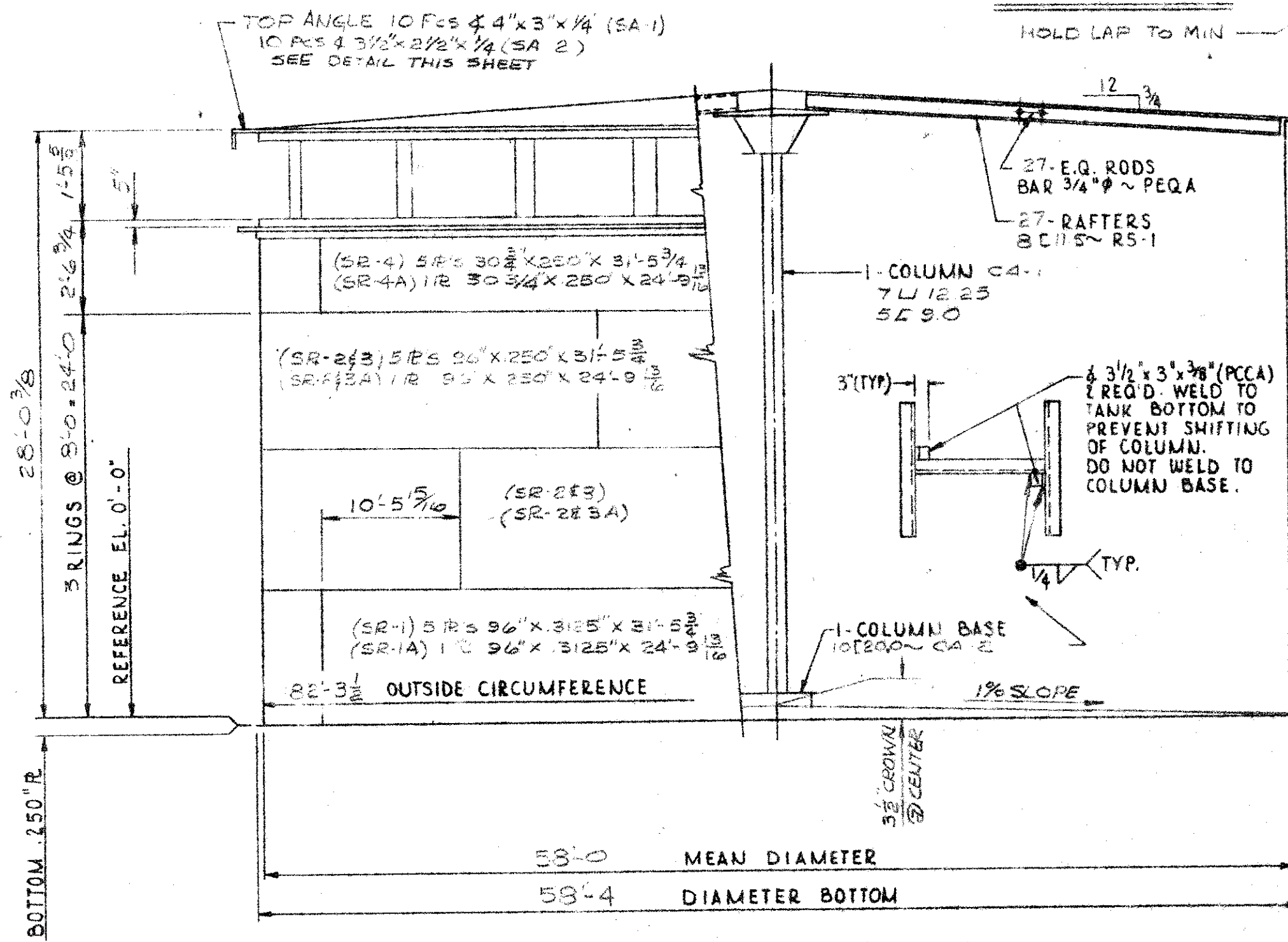
JOB NUMBER: 9105.010
DATE:
DRAWN BY: RLM
SHEET NUMBER: **A8**



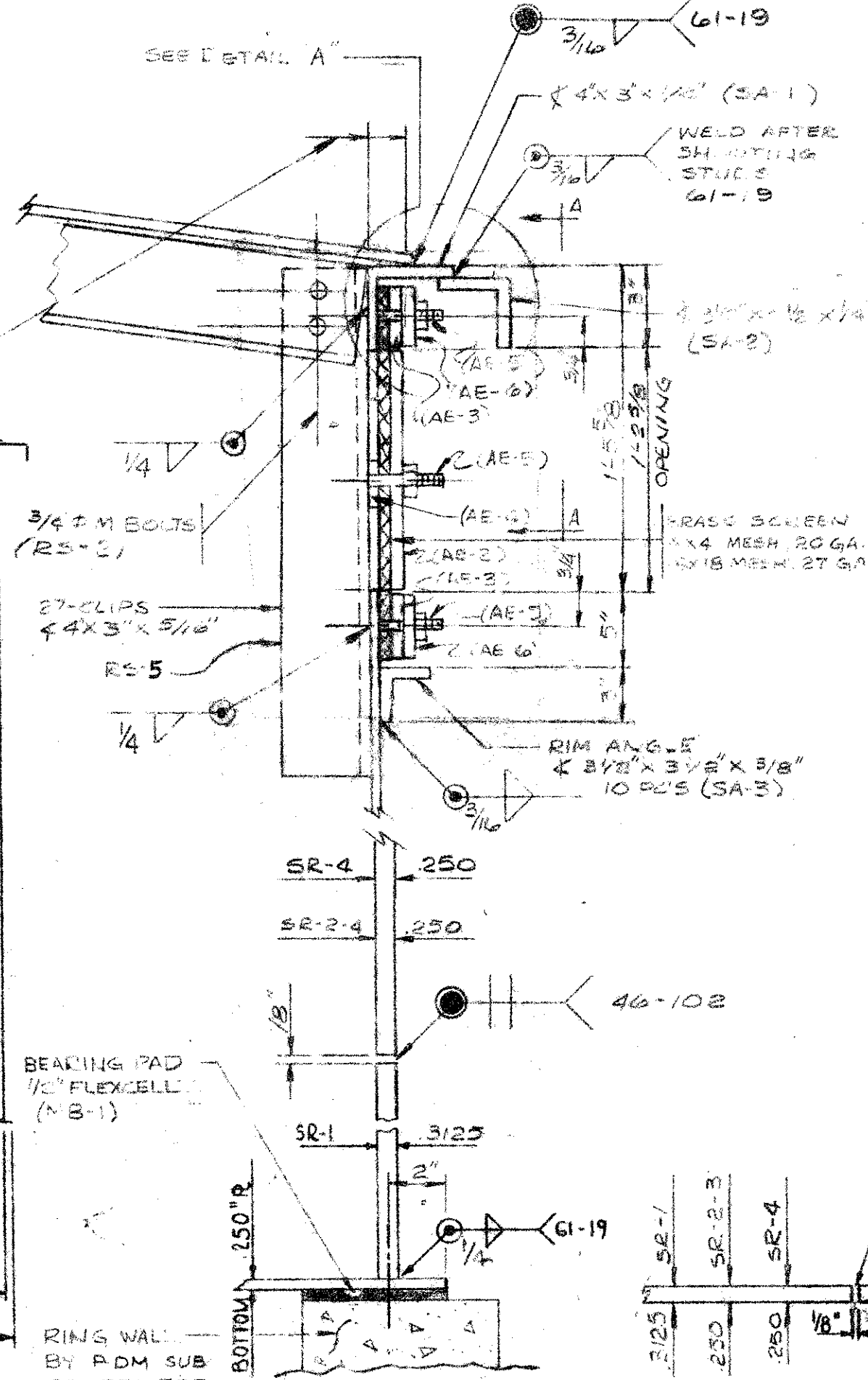
DRAWING AND ACCESSORY LIST				SHIP LIST		JOB 38494		BILL OF MATERIAL		DWG.		
MARK	REQ'D	DESCRIPTION	DWG.	NO. OF PIECES	MARK	NO. OF PIECES	MARK	SECTION	LENGTH FEET	INCHES	REMARKS	WEIGHT
ELEVATION AND ORIENTATION			1					SHELL				
AE-1-10	26	SHELL VENTS		5	SR-1	5		R 3 9/16" x 3125"	31	5 3/4		16117
		ROOF STRUCTURE		2	SR-1A	1		R do	24	9 3/16		2541
AA-1-8, 16	1	SPIRAL STAIRWAY		3	SR-23	5		R 3 1/2" x 250"	31	5 3/4		12844
AA-9	1	PLATFORM		4	SR-23A	1		R do	24	9 3/16		2025
AA-10-11	1	HAND RAILINGS		5	SR-4	5		R 5 30 3/4" x 230"	31	2 3/4		8114
AA-12-15	1	INSIDE LADDER		6	SR-4A	1		R do	24	9 3/16		1650
SL-1-4	1	PLATFORM/PAN		7								
AM-1-2	1	30" SHELL MANHOLE		8	SA-1			TOP ANGLE				
AL-1-6	1	LIQUID LEVEL INDICATOR		9		10		4 1/2" x 3" x 1/4"	18	2 3/16	ARC MEAS. ON BACK	1057
AM-3	2	36" ROOF HATCHES		10	SA-2	10		4 3/2" x 2 1/2" x 1/2"	18	7		310
AE-7	1	48" VENT		11				RIM ANGLE				
AN-1-2	1	8" INLET & OULET		12				4 3/8" x 3 1/2" x 3/8"	8	2 3/4		1057
AN-3-4	1	6" DRAIN		13	SA-3	10						
		ROOF PLATE LAYOUT		14								
		BOTTOM PLATE LAYOUT		15								
				8	AE-1	8		4 x 4 MESH 20 GA. OS	20	7		185
				8	AE-10	8		18 x 6 MESH 27 GA. IS	20	7		185
				27	AE-2	27		BAR 2 1/2" x 3/16"	1	2 3/8	ALUM.	18
				52	AE-3	52		BAR 1 1/2" x 3/16"	4	9		95
				54	AE-4	54		BAR 2" x 1/4"	0	2		8
				185	AE-5	185		3/8" x 1/2" C.C.F. S.S. NELSON				8
				54	AE-6	54		STUDE. TYPE 304 ALUM.				
				1	AE-8	1		BAR 1 1/2" x 3/16"	0	3	ALUM.	5
				1	AE-9	1		4 x 4 MESH 20 GA. OS	13	10		14
				1	AE-9	1		18 x 18 MESH 27 GA. IS	13	10		14
				62	MB-1	62		BEARING PAD				
								FLEXCELL SHEET				20
								9 1/2" x 1/2" x 2-11 1/2"				

FOR APPROVAL
PITTSBURGH-DES MOINES STEEL CO.
AUG 10 1968
Please Return With This Approval Or Correction Stamp Herein On This Sheet

ORIENTATION

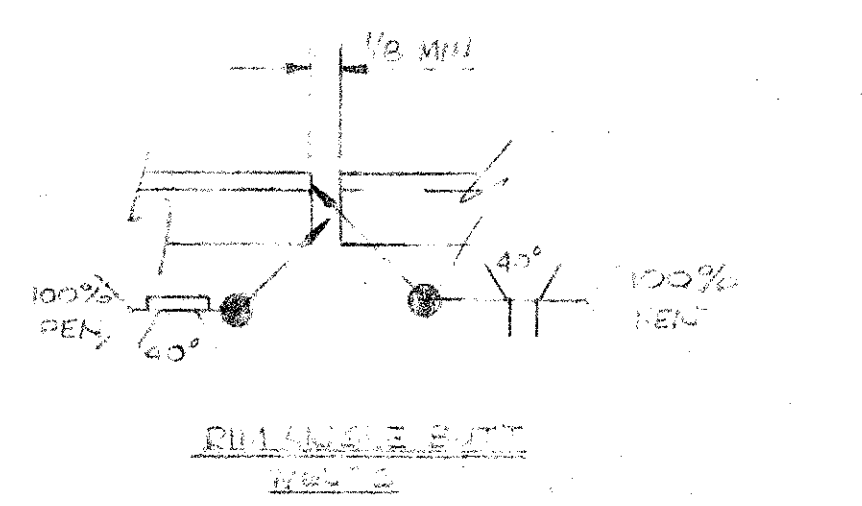


ELEVATION
SCALE: NONE



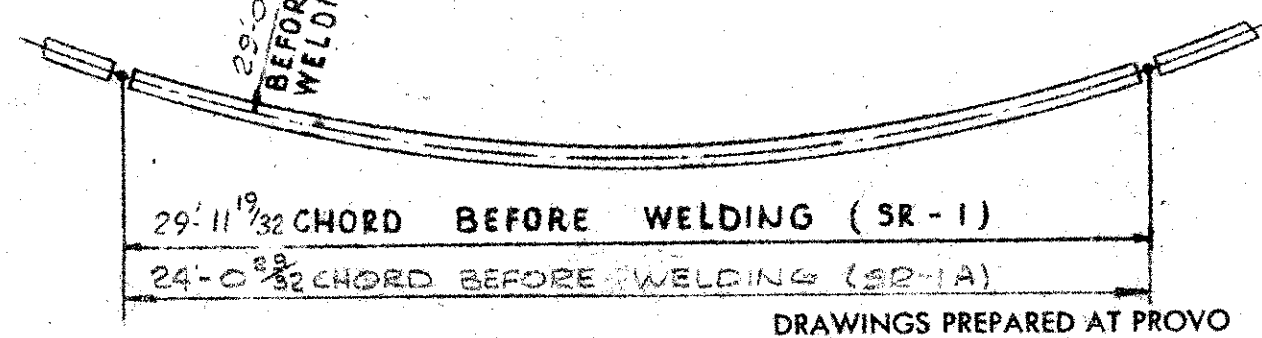
HORIZONTAL SHELL WELDS **VERTICAL SHELL WELDS**

NOTE:
BARS (AE-3) ARE LEFT OUT WHERE SPIRAL STAIRWAY CROSSES.



FIELD NOTES:

1. ALL SHELL PLATES ARE TO HAVE A COMMON VERTICAL C.
2. ALL SHELL BUTT WELDS ARE TO HAVE COMPLETE PENETRATION AND FUSION.



GENERAL NOTES:

1. TANK TO BE DESIGNED, FABRICATED AND ERECTED PER A.W.W.A. SPEC'S D100-65 AND/OR CUSTOMER'S SPEC'S, WHICHEVER GOVERNS.
2. MATERIAL:

PLATE	ASTM	A 283-C
SHAPES	ASTM	A 36
BOLTS	ASTM	A 307-A Hx & Hx
3. FOUNDATION TO BE FURNISHED FIRM AND TO GRADE BY PDM SUBCONTRACTOR.
4. TESTING:
 TANK BOTTOM IS TO BE TESTED WITH PDM VACUUM SEAM TESTER.
 THE SHELL IS TO BE TESTED BY FILLING THE TANK WITH WATER FURNISHED, CONNECTED, PUMPED INTO AND DISPOSED OUT OF TANK BY OTHERS.
 ROOF WELDS TO BE CLEANED & INSPECTED VISUALLY.
5. INSPECTION SHALL BE BY RADIOGRAPHY PER A.W.W.A. SPEC'S D100-65, APPENDIX "C". FILM BECOMES THE PROPERTY OF THE OWNER.
6. PDM NAME PLATE A 550 REQ'D.
7. FIELD PAINTING BY PDM SUB CONTRACTORS.

NO.	DATE	DESCRIPTION OF REVISION	BY

OPEN HOLES GRIT BLAST YES NO
 SHOP PAINT YES
 PAINT CONTACT SURFACES YES NO

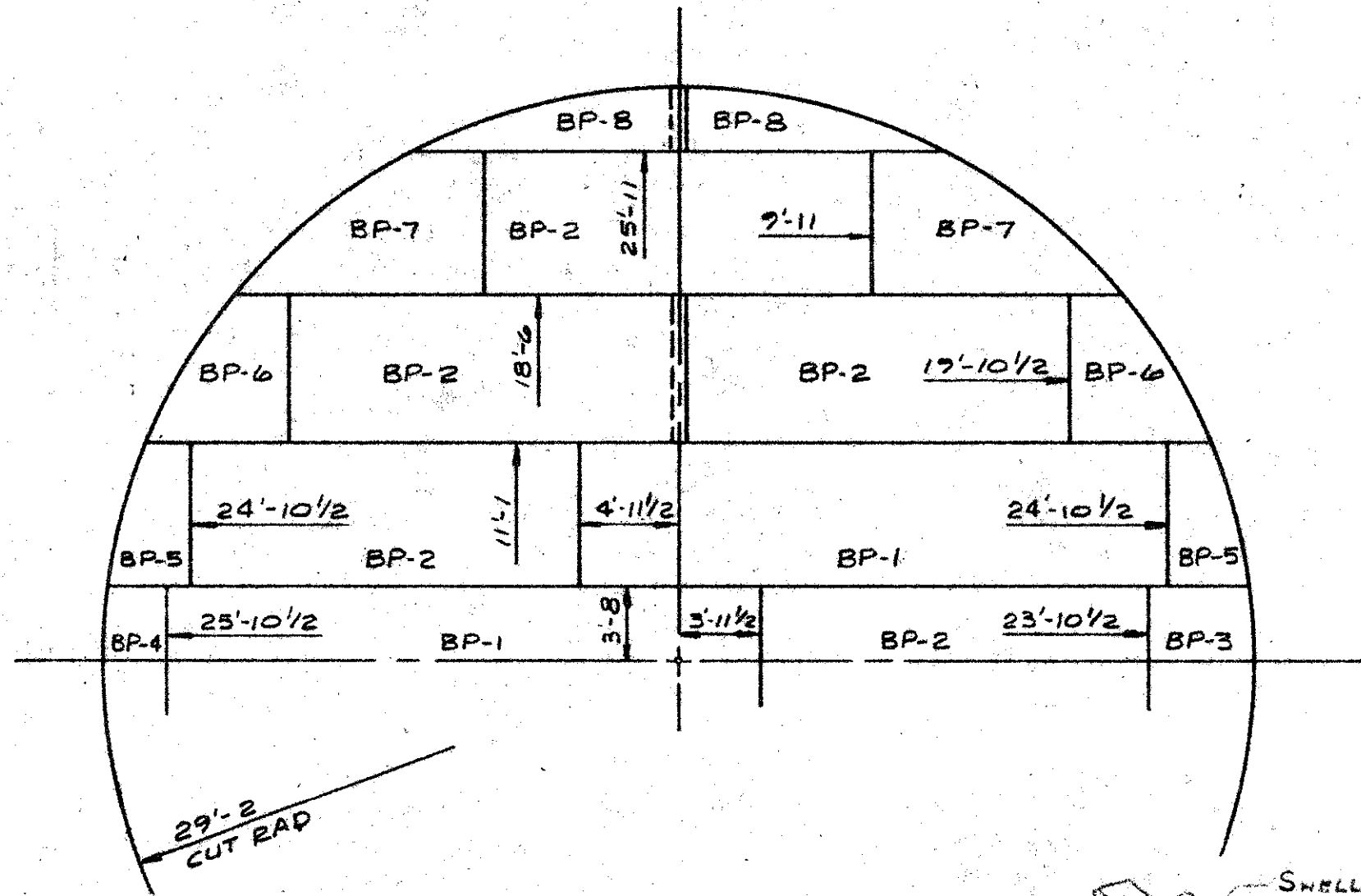
PITTSBURGH - DES MOINES STEEL CO.
 ENGINEERS-FABRICATORS-CONTRACTORS
 PITTSBURGH, PA. WARREN, PA. BRISTOL, PA. BALTIMORE, M.D.
 BIRMINGHAM, ALA. DES MOINES, IOWA PROVO, UTAH
 STOCKTON, CALIF. SANTA CLARA, CALIF. FRESNO, CALIF.

1. 500,000 GAL TANK
 ELEVATION, ORIENTATION AND DETAILS
 PETALUMA, CALIFORNIA

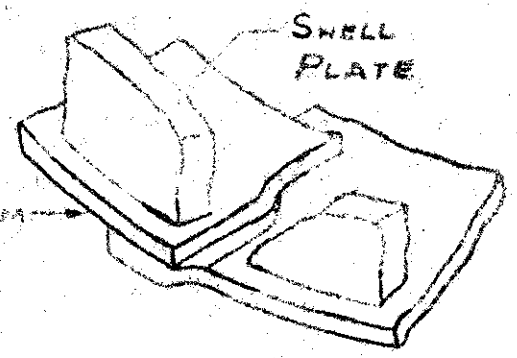
BY	DATE	DRAWING NO.
WITE	7/17/68	1
CHECKED	BP	8-9

CONTRACT NO. 38494
 DRAWINGS PREPARED AT PROVO

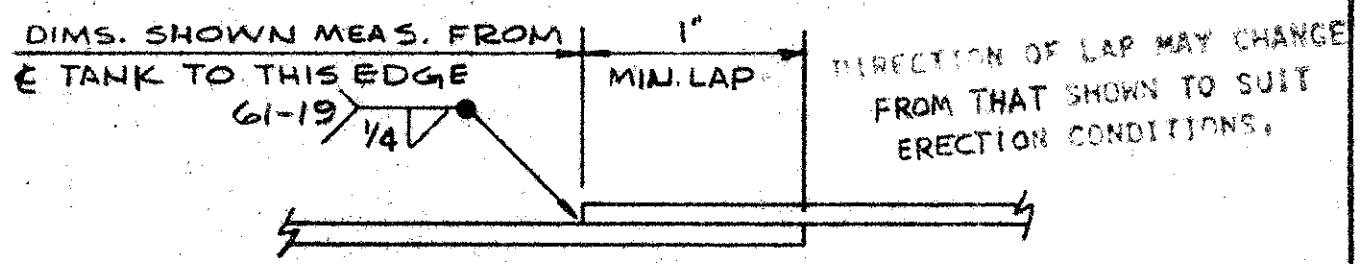
9-39



BOTTOM PLATE LAYOUT
.250" (1/4") R



BREAK DOWN BOTTOM PLATES UNDER SHELL AS SHOWN TO FORM A SMOOTH BEARING SURFACE.



TYPICAL SEAM

NO.	DATE	DESCRIPTION OF REVISION	BY

OPEN HOLES _____ GRIT BLAST YES NO

SHOP PAINT YES

PAINT CONTACT SURFACES YES NO

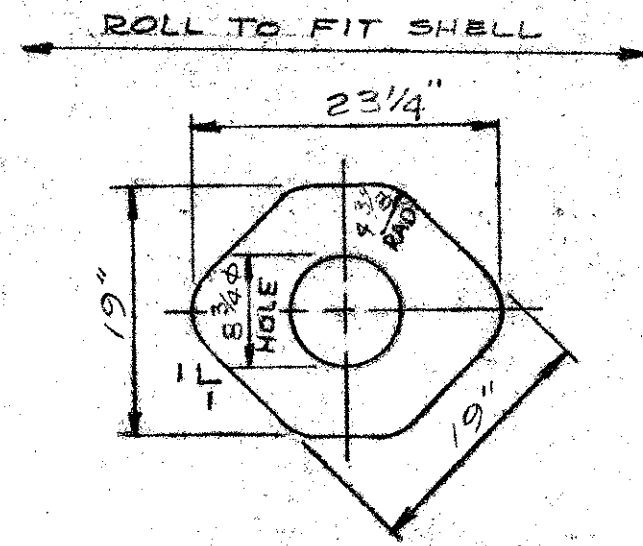
PITTSBURGH - DES MOINES STEEL CO.
ENGINEERS-FABRICATORS-CONTRACTORS
PITTSBURGH, PA. WARREN, PA. BRISTOL, PA. BALTIMORE, M.D.
BIRMINGHAM, ALA. DES MOINES, IOWA PROVO, UTAH
STOCKTON, CALIF. SANTA CLARA, CALIF. FRESNO, CALIF.
1-500,000 GAL TANK
BOTTOM PLATE LAYOUT
PETALUMA, CALIFORNIA

BY	DATE	DRAWING NO. <u>1E</u>
DRAWN <u>W.T.E</u>	<u>7-19-68</u>	CONTRACT NO. <u>38494</u>
CHECKED <u>BP</u>	<u>8-10</u>	

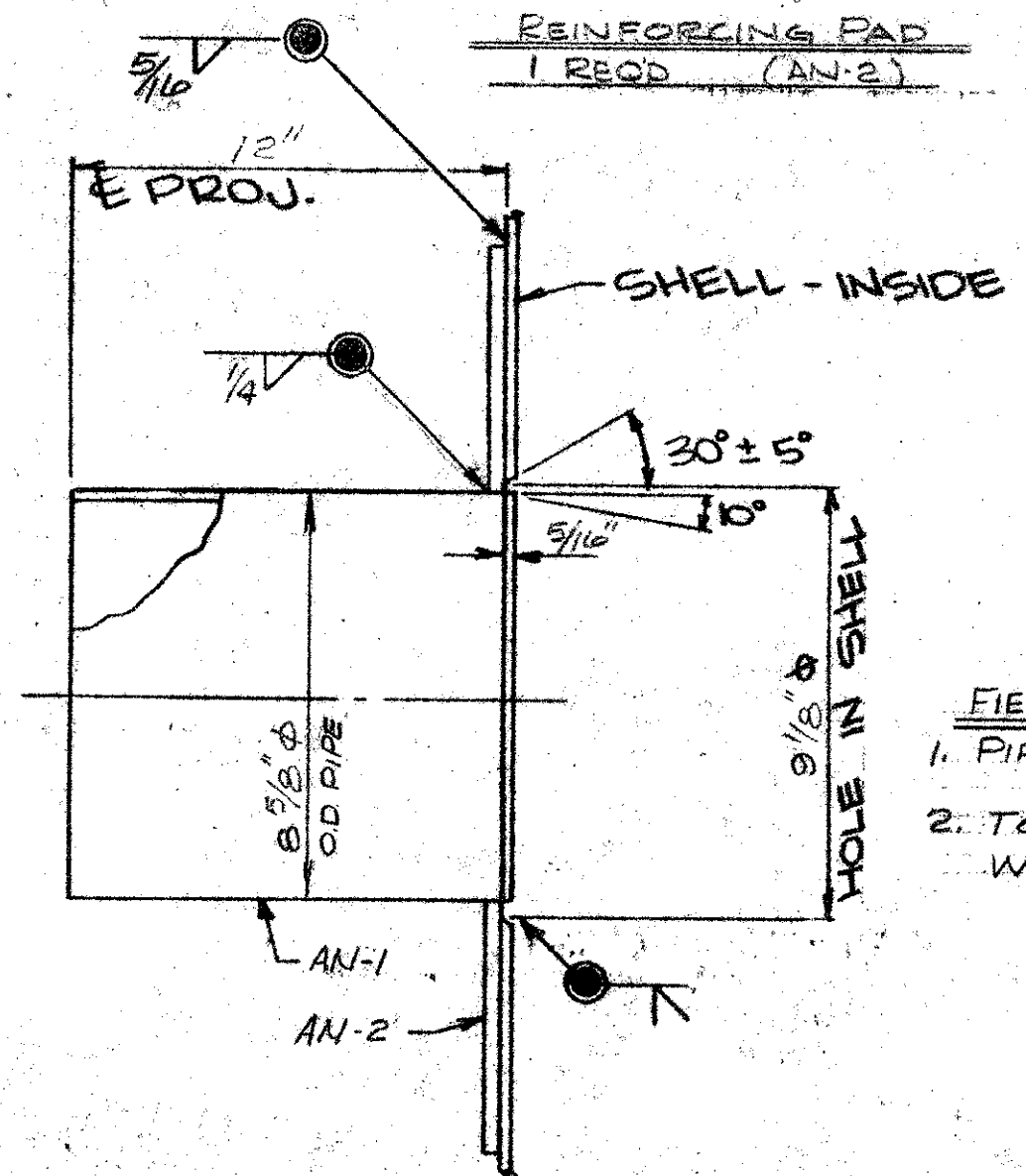
DRAWINGS PREPARED AT PROVO, UTAH

2-1-8
10/21

9-39



REINFORCING PAD
1 REQD (AN-2)



ELEVATION

± ELEV. = 14"
MEAS. FROM TOP
BTM. RES.

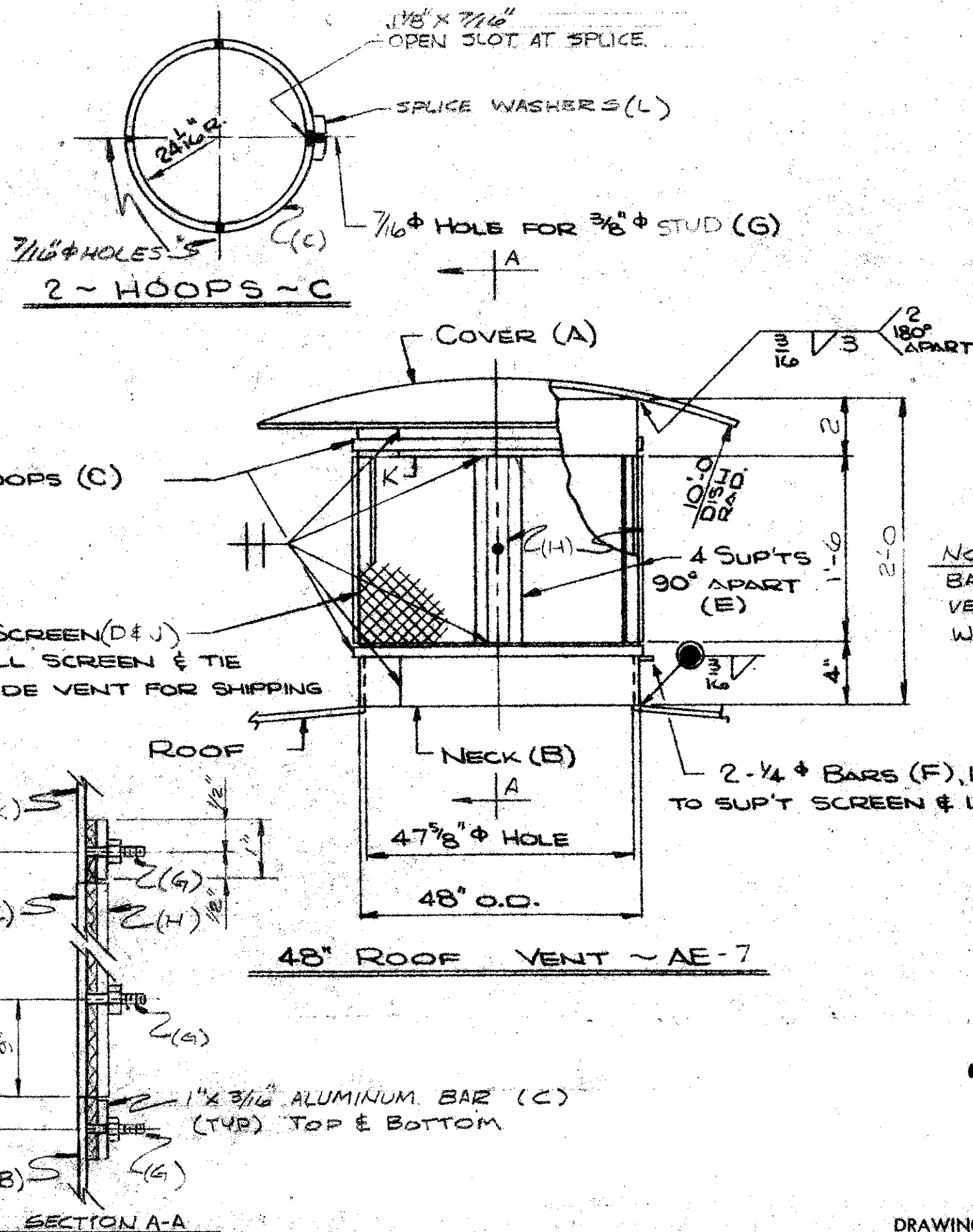
- FIELD NOTES:
1. PIPE, COAL TAR LINED
 2. TOUCH UP AFTER WELDING

SHIP LIST		JOB 38494		BILL OF MATERIAL 12		DWG. 12	
NO. OF PIECES	MARK	NO. OF PIECES	MARK	SECTION	LENGTH FEET INCHES	REMARKS	WEIGHT
1	AN-1	1		8" NOZZLE 8" SCH 40 PIPE	1 0 3/16		30
1	AN-2	1		PAD R 19" SQ X 5/16			15
						TOTAL	45

R = A283-C
PIPE-A53 (COAL TAR LINED)

NO.		DATE	DESCRIPTION OF REVISION	FOR APPROVAL PITTSBURGH-DES MOINES STEEL CO. BY
OPEN HOLES		GRIT BLAST YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>		AUG 2 1968
SHOP PAINT		YES		Please Return With Of Corrections On This Print
PAINT CONTACT SURFACES		YES <input type="checkbox"/> NO <input type="checkbox"/>		
PITTSBURGH - DES MOINES STEEL CO.				
ENGINEERS-FABRICATORS-CONTRACTORS				
PITTSBURGH, PA. WARREN, PA. BRISTOL, PA. BALTIMORE, M.D.				
BIRMINGHAM, ALA. DES MOINES, IOWA PROVO, UTAH				
STOCKTON, CALIF. SANTA CLARA, CALIF. FRESNO, CALIF.				
1-500,000 GAL. TANK				
8" INLET OUTLET				
PETALUMA, CALIFORNIA				
BY		DATE		DRAWING NO.
DRAWN W.T.E		7/29/68		12
CHECKED BP		8-10		CONTRACT NO. 38494

DRAWINGS PREPARED AT PROVO



SHIP LIST		JOB 38494		BILL OF MATERIAL		DWG. 11		
NO. OF PIECES	MARK	NO. OF PIECES	MARK	SECTION	LENGTH FEET	INCHES	REMARKS	WEIGHT
48" VENT								
1	AE-7	1	A	R 64" Ø x 3/16"				15
		1	B	BAR 4" x 3/16"	12	6 1/4		16
		2	C	BAR 1" x 3/16"	12	7 9/16	ALUMINUM	6
		1	D	4x4 MESH 20GA. 0.5			BRASS SHIP	5
				SCREEN 1'-8 1/2" x 12"	12	11	LOOSE	
		4	E	BAR 4" x 3/16"	1	6		4
		2	F	ROD 1/4" Ø	0	1		
		12	G	3/8" Ø CCF NELSON 1/2" NUTS	0	1 1/4	STALS. STL.	
STUDS								
		4	H	BAR 1 1/4" x 3/16"	1	6	ALUMINUM	1
		1	J	18x18 MESH 27GA. 15			BRASS SHIP	5
				SCREEN 1'-8 1/2" x 12"	12	11	LOOSE	
		1	K	BAR 2" x 3/16"	12	6 1/4		16
		2	L	BAR 1 1/4" x 3/16"	0	3	ALUM.	

BAR = MILD STL. U.N. TOTAL 68
 R = A283-C

FOR APPROVAL
 PITTSBURGH-DES MOINES STEEL CO.

AUG 12 1958

NO.	DATE	DESCRIPTION OF REVISION	BY

OPEN HOLES 7/16" Ø GRIT BLAST YES NO

SHOP PAINT YES

PAINT CONTACT SURFACES YES NO

PITTSBURGH - DES MOINES STEEL CO.
 ENGINEERS-FABRICATORS-CONTRACTORS
 PITTSBURGH, PA. WARREN, PA. BRISTOL, PA. BALTIMORE, M.D.
 BIRMINGHAM, ALA. DES MOINES, IOWA PROVO, UTAH
 STOCKTON, CALIF. SANTA CLARA, CALIF. FRESNO, CALIF.

1-500,000 GAL. TANK
 48" ROOF VENT
 PETALUMA, CALIFORNIA

BY	DATE	DRAWING NO.
W.J.E.	7/31/58	11

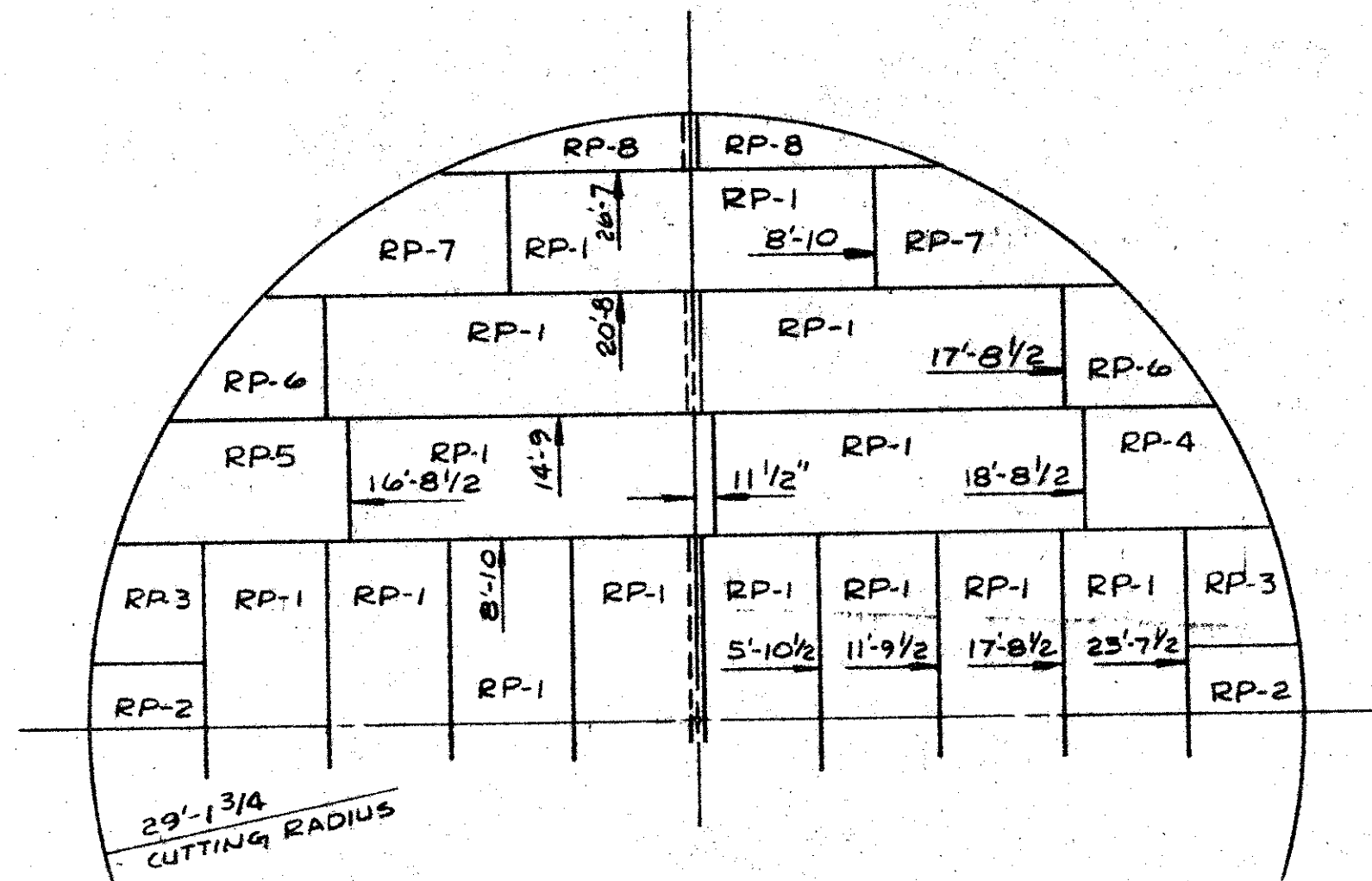
CHECKED - RP 8-10 CONTRACT NO. 38494

DRAWINGS PREPARED AT PROVO

9-39

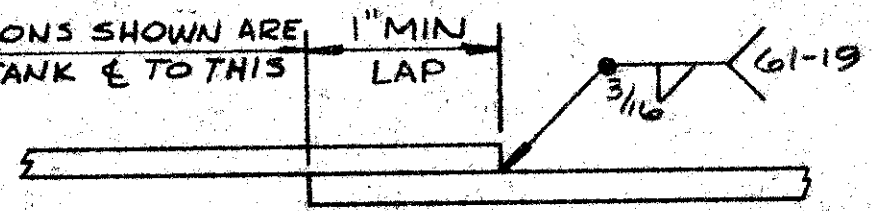
8-13

9-39



ROOF PLATE LAYOUT
.1875" IB

DIMENSIONS SHOWN ARE FROM TANK & TO THIS EDGE



TYPICAL SEAM

DIRECTION OF LAP MAY CHANGE FROM THAT SHOWN TO SUIT ERECTION CONDITIONS.

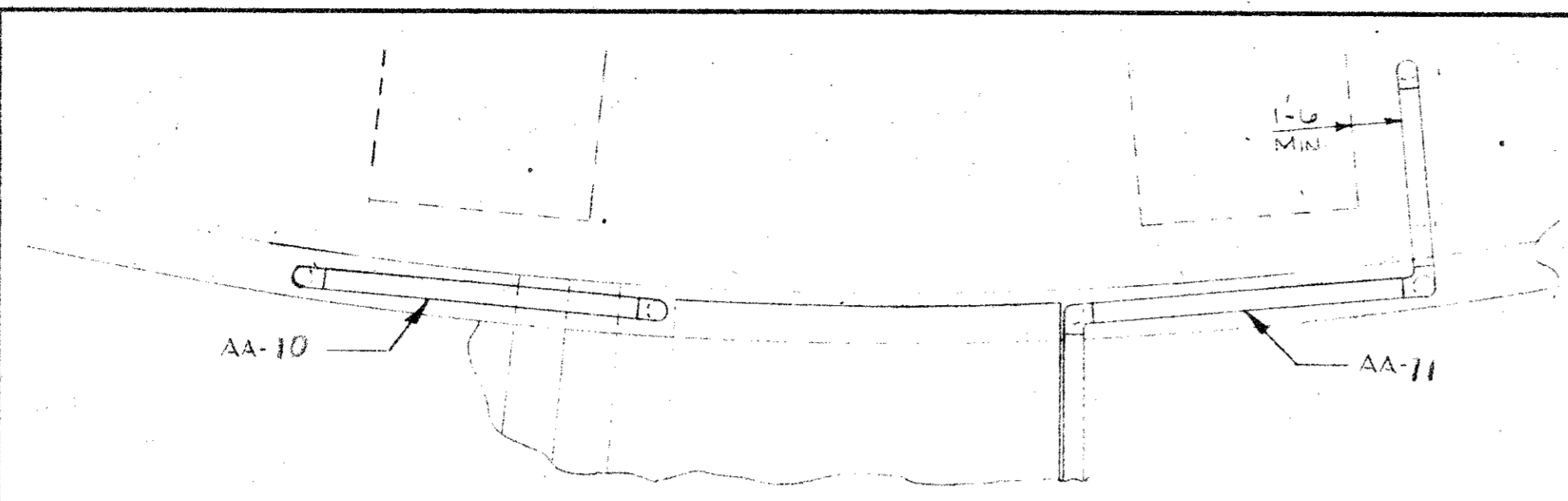
NO.	DATE	DESCRIPTION OF REVISION	BY
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		SHOP PAINT <u>YES</u>	
		PAINT CONTACT SURFACES YES <input type="checkbox"/> NO <input type="checkbox"/>	
PITTSBURGH - DES MOINES STEEL CO. ENGINEERS-FABRICATORS-CONTRACTORS PITTSBURGH, PA. WARREN, PA. BRISTOL, PA. BALTIMORE, M.D. BIRMINGHAM, ALA. DES MOINES, IOWA PROVO, UTAH STOCKTON, CALIF. SANTA CLARA, CALIF. FRESNO, CALIF. 1-500,000 GAL TANK ROOF PLATE LAYOUT PETALLUMA, CALIFORNIA			
BY	DATE	DRAWING NO. 14	
DRAWN W.T.E	7-19-68		
CHECKED BP	8-10	CONTRACT NO. 38494	

DRAWINGS PREPARED AT PROVO

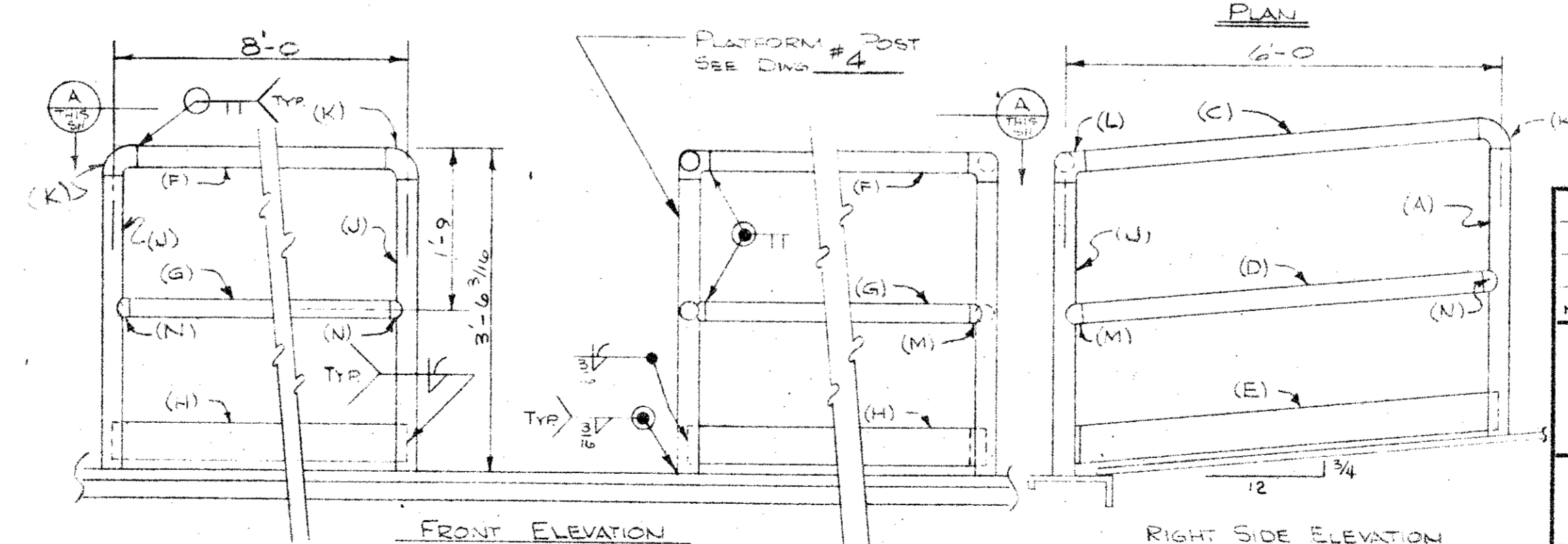
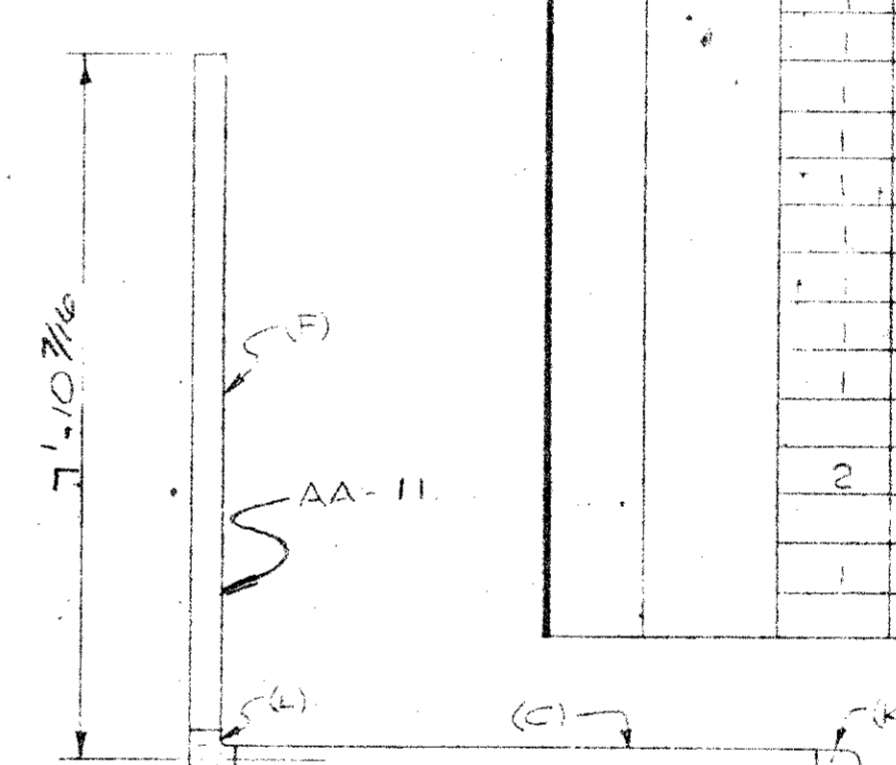
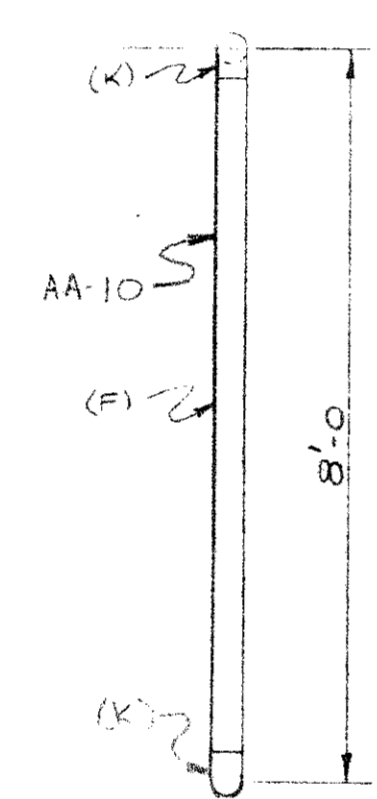
BILL PAGE
LA Cresta

9-39

8-12
21-8



SECTION A-A
 NOTE:
 RIGHT HAND SHOWN
 LEFT HAND REQ'D



HAND RAILINGS
 1 REQ'D AA-10
 1 REQ'D AA-11
 NOTE:
 RIGHT HAND SHOWN -
 LEFT HAND REQ'D

SHIP LIST		38494		BILL OF MATERIAL				5	DRG	5
NO. OF PIECES	MARK	NO. OF PIECES	MARK	SECTION	LENGTH FEET	INCHES	REMARKS	WEIGHT		
<u>HAND RAILINGS</u>										
1	AA-10	1	F	1/4" SCH 40 PIPE	7	8 7/8		15		
		1	G	do	7	10 1/2		15		
		1	H	BAR 4" x 3/16	8	0		18		
		2	J	1/4" SCH 40 PIPE	3	3 1/16		8		
		2	K	WAGNER #801 1/4" PIPE 90° ELL				1		
2	N	2	N	WAGNER #1822 TYPE A 1/4" PIPE END CONNECTOR						
1	AA-11	1	A	1/4" SCH 40 PIPE	3	4		15		
		1	J	do	3	3 1/16		8		
		1	-	do	5	9		9		
		1	D	do	5	10 3/8		9		
		1	E	BAR 4" x 3/16	5	11 1/4		10		
		1	F	1/4" SCH 40 PIPE	7	8 7/8		15		
		1	G	do	7	10 1/2		15		
		1	H	BAR 4" x 3/16	8	0		18		
		1	K	WAGNER #801 1/4" PIPE 90° ELL				1		
		1	L	WAGNER #840 1/4" PIPE 90° ELL W/SIDE OUTLET				1		
		2	M	WAGNER #816 TYPE B 1/4" PIPE END CONNECTOR				1		
		1	N	WAGNER #1822 TYPE A 1/2" PIPE END CONNECTOR				1		
								TOTAL = 200		

NOTE:
 RIGHT HAND SHOWN -
 LEFT HAND REQ'D

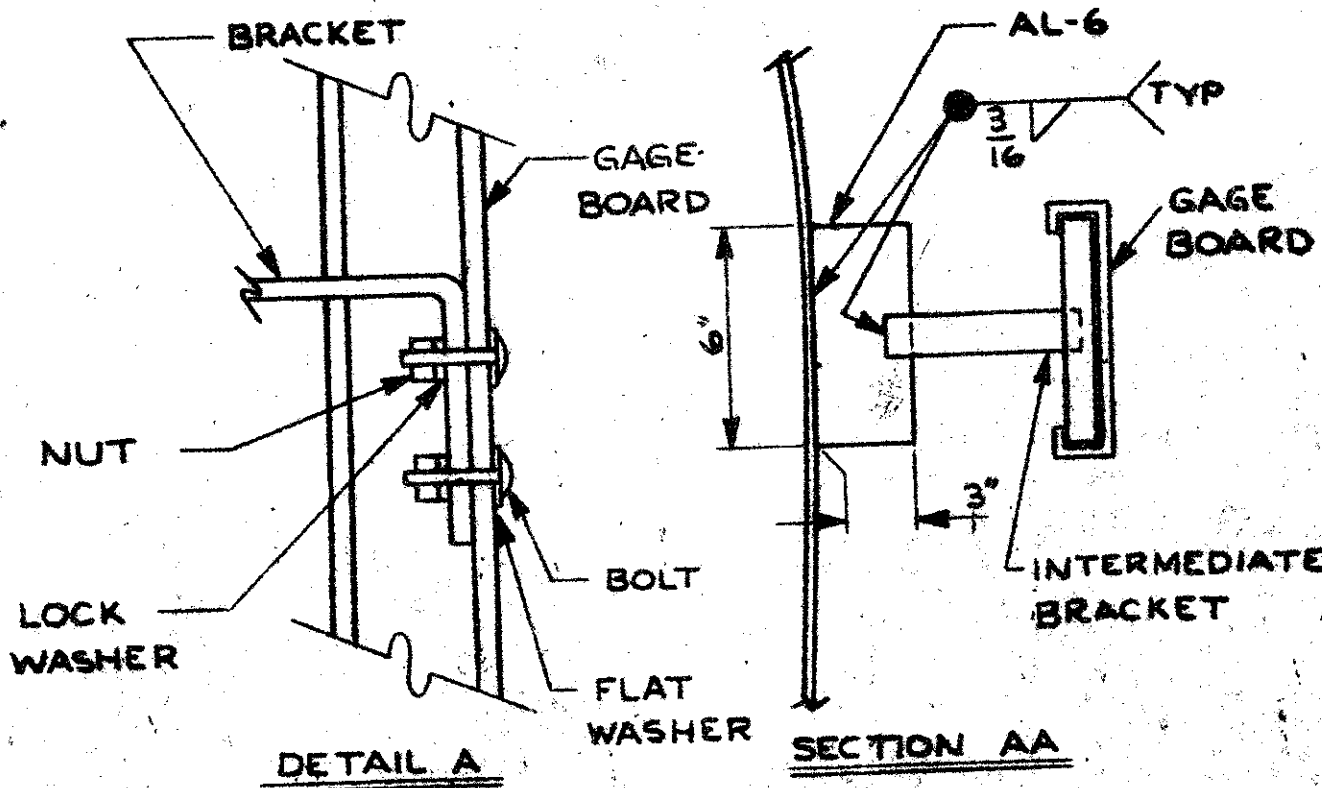
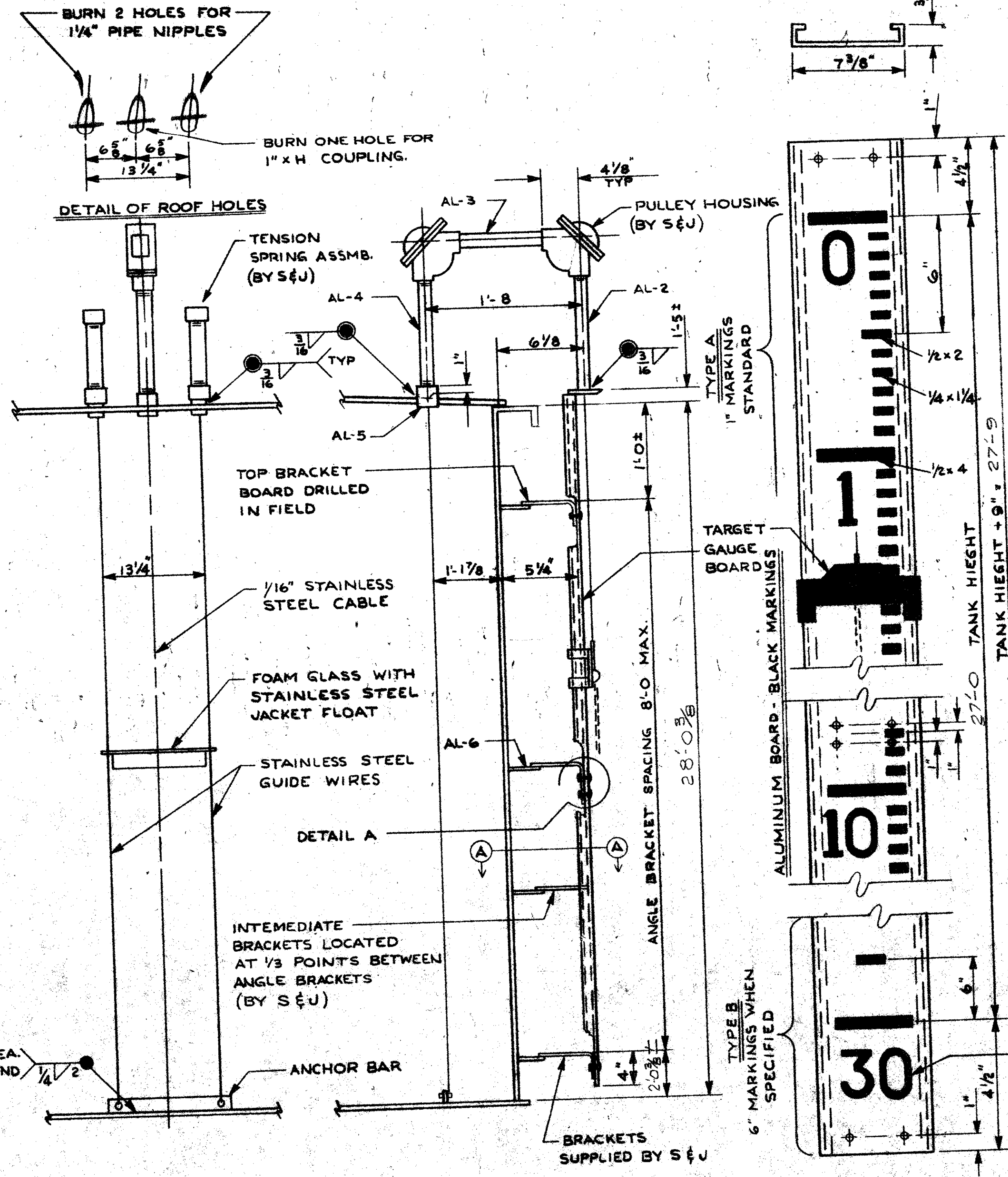
NO.	DATE	DESCRIPTION OF REVISION	BY
OPEN HOLES _____ GRIT BLAST YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> SHOP PAINT YES _____ FOR APPROVAL PAINT CONTACT SURFACES YES <input type="checkbox"/> NO <input type="checkbox"/>			
PITTSBURGH - DES MOINES STEEL CO. ENGINEERS-FABRICATORS-CONTRACTORS PITTSBURGH, PA. WARREN, PA. BRISTOL, PA. BALTIMORE, MD. BIRMINGHAM, ALA. DES MOINES, IOWA PROVO, UTAH STOCKTON, CALIF. SANTA CLARA, CALIF. FRESNO, CALIF.			
1-500,000 GAL. TANK HAND RAILINGS PETALUMA, CALIFORNIA			
BY	DATE	DRAWING NO. 5	
DRWN	8-1-68	CONTRACT NO. 38494	
CHECKED	8-9		

DRAWINGS PREPARED AT PROVO, UTAH

9-39

NO. OF PIECES	MARK	NO. OF PIECES	MARK	LENGTH		REMARKS	WEIGHT
				FEET	INCHES		
1	AL-1	1		S&J FIG 92302-01			
				LIQUID LEVEL INDICATOR			
				COMPLETE W/BOARD FOR			
				27'-0" HIGH CONE ROOF TK. (W/2	40		
				INTERMEDIATE BRACKETS			
				PER BOARD SECTION)			
1	AL-2	1		1" SCH 40 PIPE	0 6		1
1	AL-3	1		do	1 1/8		2
1	AL-4	1		do	1 10		3
1	AL-5	1		1" X H COUPLING			2
5	AL-6	5		BAR 3" X 3/16"	0 6		4
				TOTAL			52

PIPE = A120
BAR = MILD STL.



GAGE BOARD DETAILS DRAWINGS PREPARED AT PROVO

ASSEMBLY DETAILS

FOR APPROVAL
PITTSBURGH-DES MOINES STEEL CO.
AUG 12 1968

NO. DATE DESCRIPTION OF REVISION
Please Return With Yes Or Corrections On This Print

OPEN HOLES GRIT BLAST YES NO

SHOP PAINT YES

PAINT CONTACT SURFACES YES NO

PITTSBURGH - DES MOINES STEEL CO.
ENGINEERS-FABRICATORS-CONTRACTORS
PITTSBURGH, PA. WARREN, PA. BRISTOL, PA. BALTIMORE, M.D.
BIRMINGHAM, ALA. DES MOINES, IOWA PROVO, UTAH
STOCKTON, CALIF. SANTA CLARA, CALIF. FRESNO, CALIF.
1-500,000 GAL. TANK

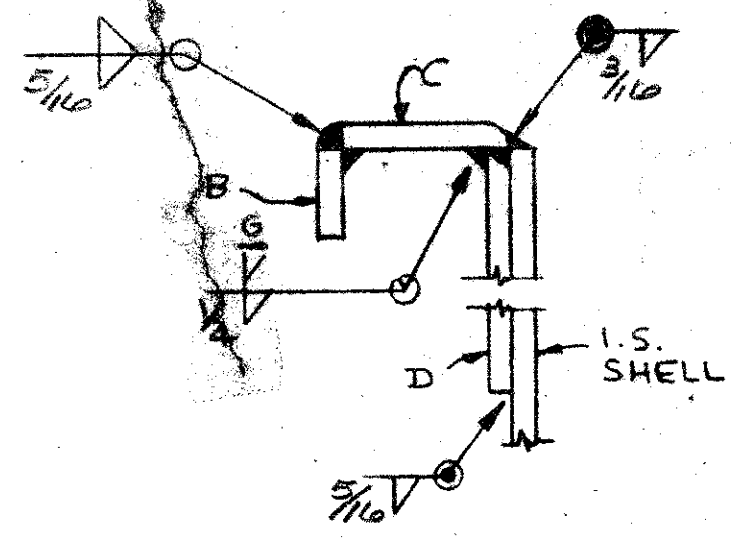
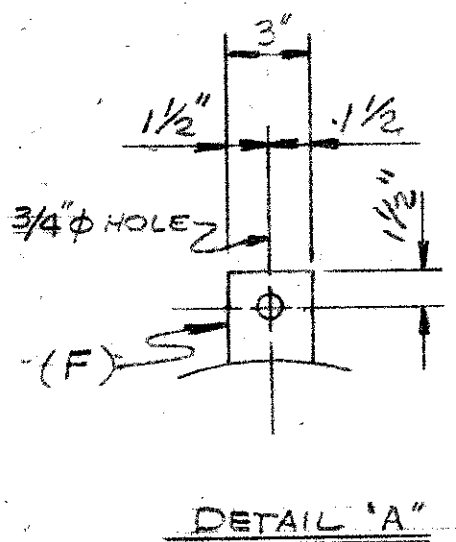
LIQUID LEVEL INDICATOR
PETALUMA, CALIFORNIA

DRAWN BY BD DATE 7-25-68 DRAWING NO. 9
CHECKED BY RP DATE 8-10 CONTRACT NO. 38494

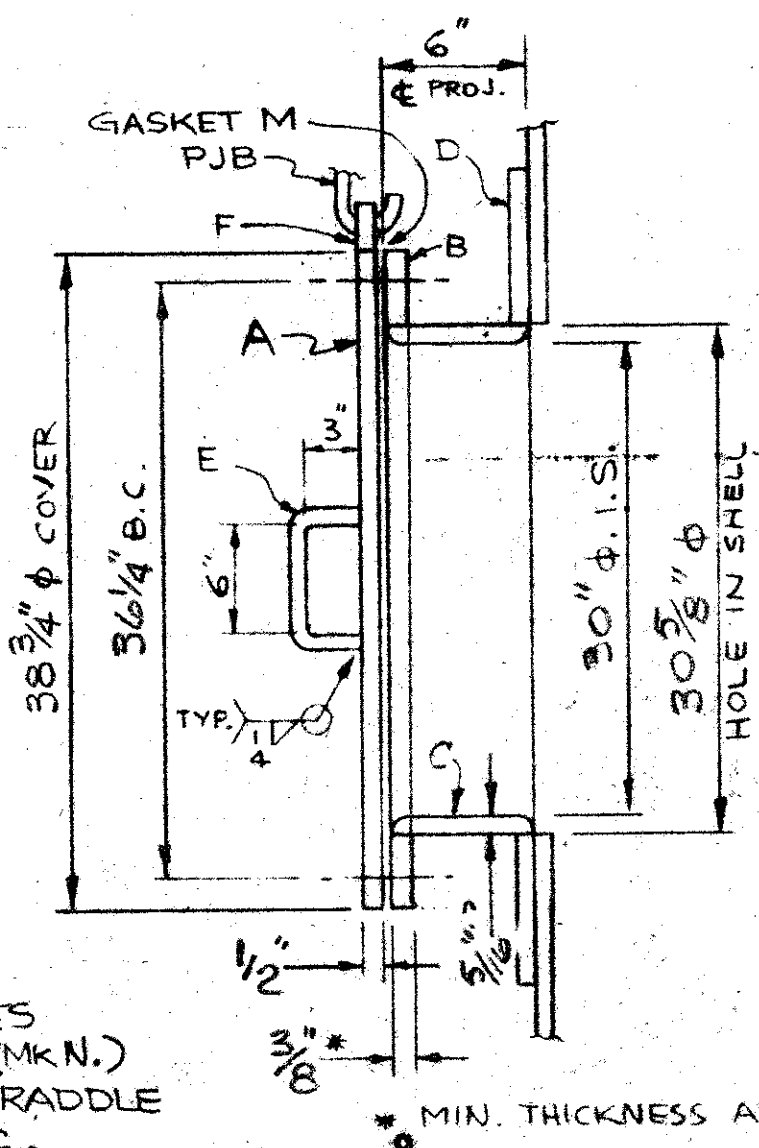
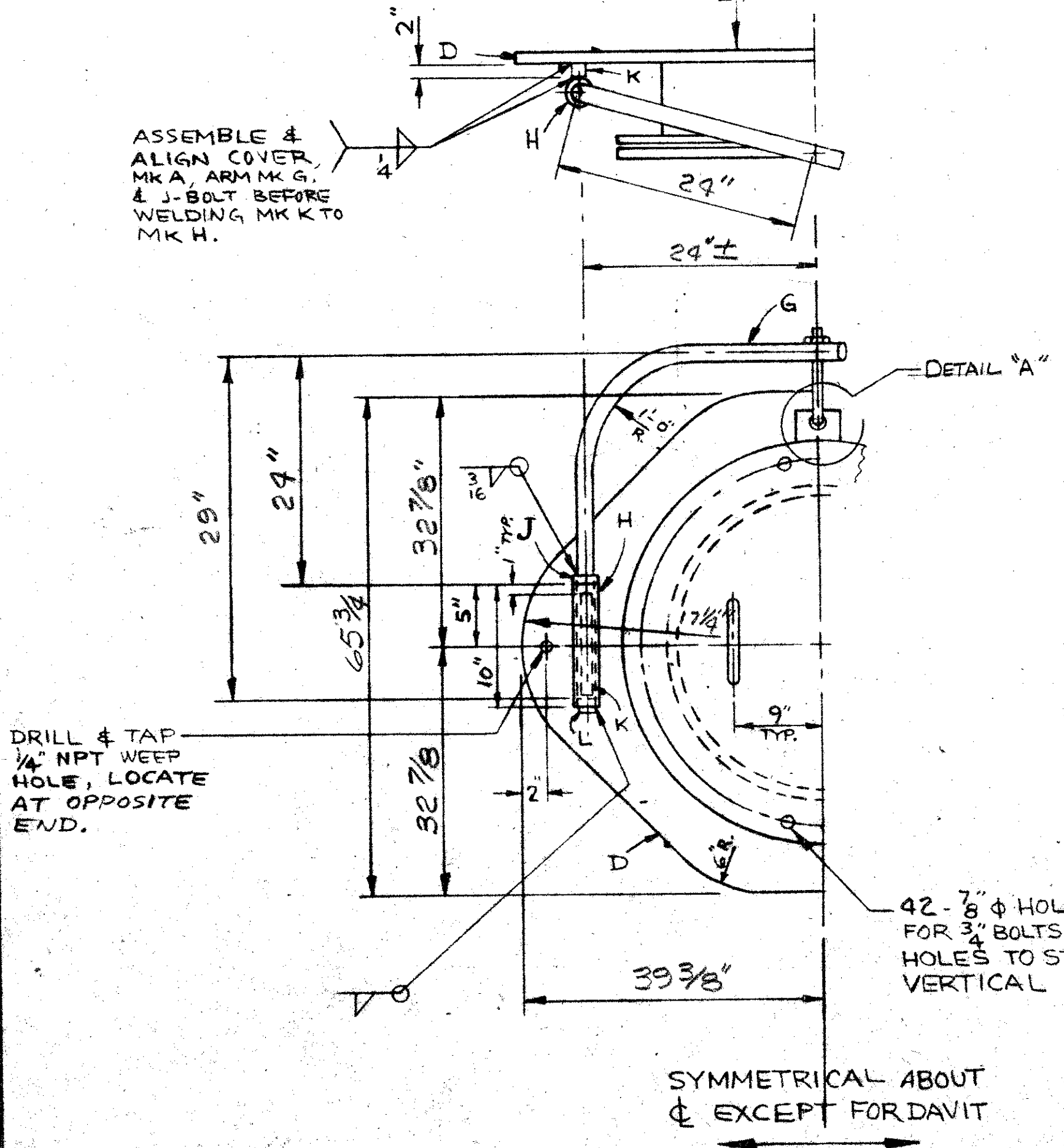
SHIP LIST		JOB 38494 BILL OF MATERIAL 8		DWG. 8			
NO. OF PIECES	MARK	NO. OF PIECES	MARK	SECTION	LENGTH FEET INCHES	REMARKS	WEIGHT
1	AM-1	?		30" SHELL MANHOLE w/DAVIT			
1	A			R 38 3/4" φ x 1/2"			170
1	B			R 36 1/4" O.D. x 1/2" x 30" P.I.D.			50
1	C			R 6 1/8" x 5/16"	7 11/4		70
1	D			R 65 3/8" SQ. x 5/16"			385
2	E			BAR 5/8" φ	1 1		5
1	F			R 3" x 3/8"	0 3/2		2
1	G			2" SCH 80 PIPE	4 2		3
1	H			2 1/2" SCH 40 PIPE	0 10		1
1	J			DO	0 1		1
1	K			R 2" x 1/2"	0 8		3
1	PJB			STD J-BOLT w/NUT 5/8" φ x 10 LG w/ 3" THD			1
1	M			C.I. RUBBER			1
42	N			3/4" φ M. BOLT w/NUT 35 3/8" φ x 8" x 30" I.D.	0 2		25
1	L			R 2 1/2" φ x 3/16"			
2	AM-2	2		5/8" φ M BOLT w/NUT	3/4		

PLATE = A283-C
 PIPE = STEEL
 BAR = C-STEEL
 BOLTS = A 307A

TOTAL 643



ATTACHMENT DETAIL

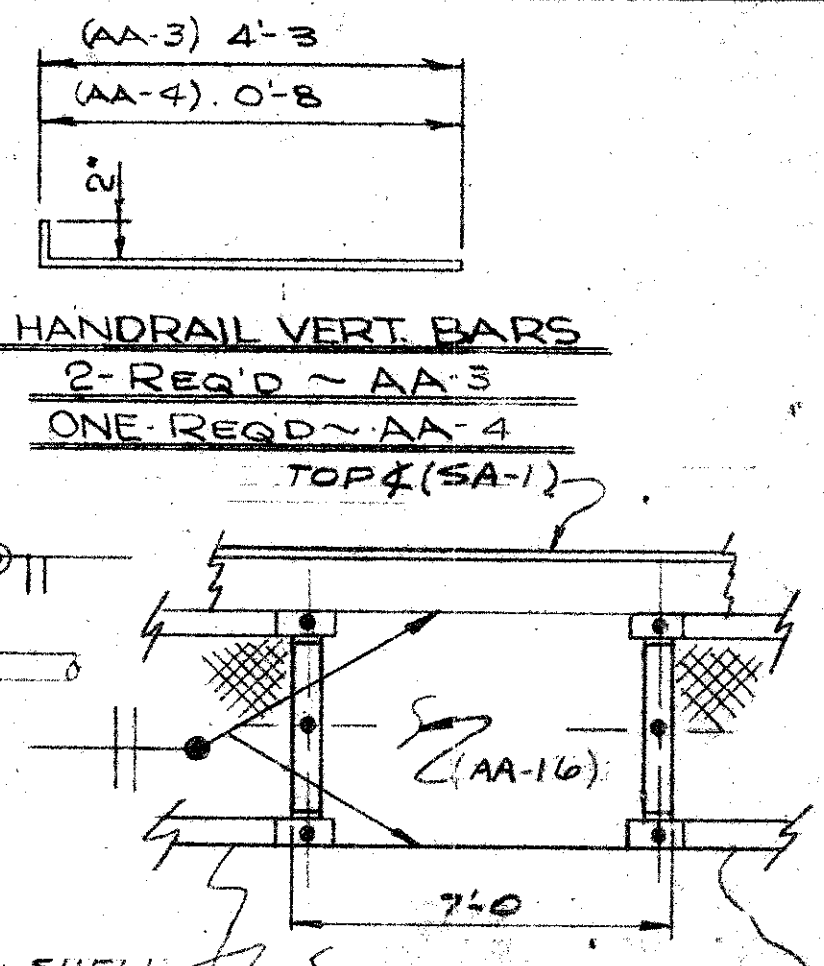
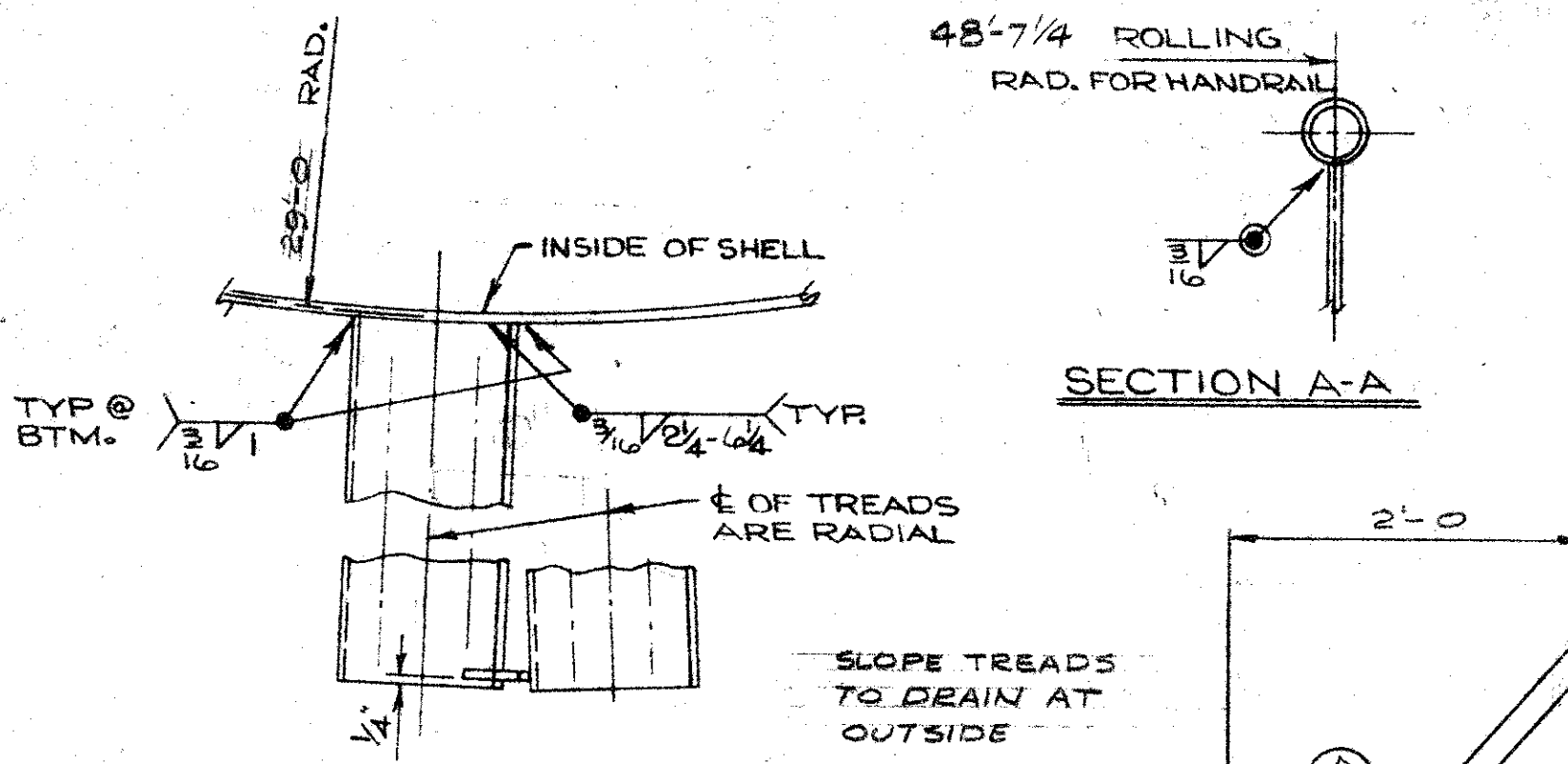


SHIP TWO BOLTS AM-2 FOR FIELD USE. FIELD CUT AND DRILL A 2" x 6" BOARD TO BE PLACED OVER THE MANHOLE DURING THE PAINT DRYING PERIOD.

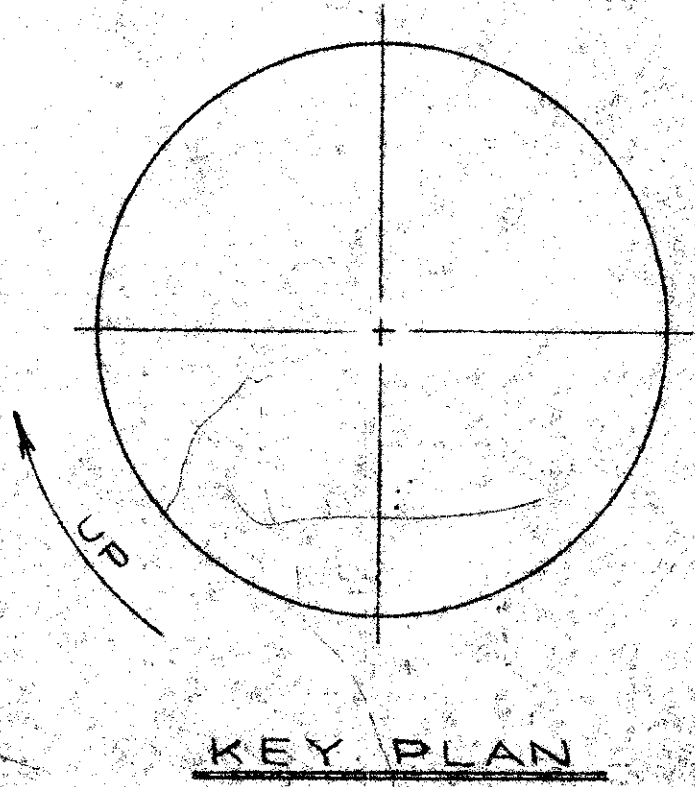
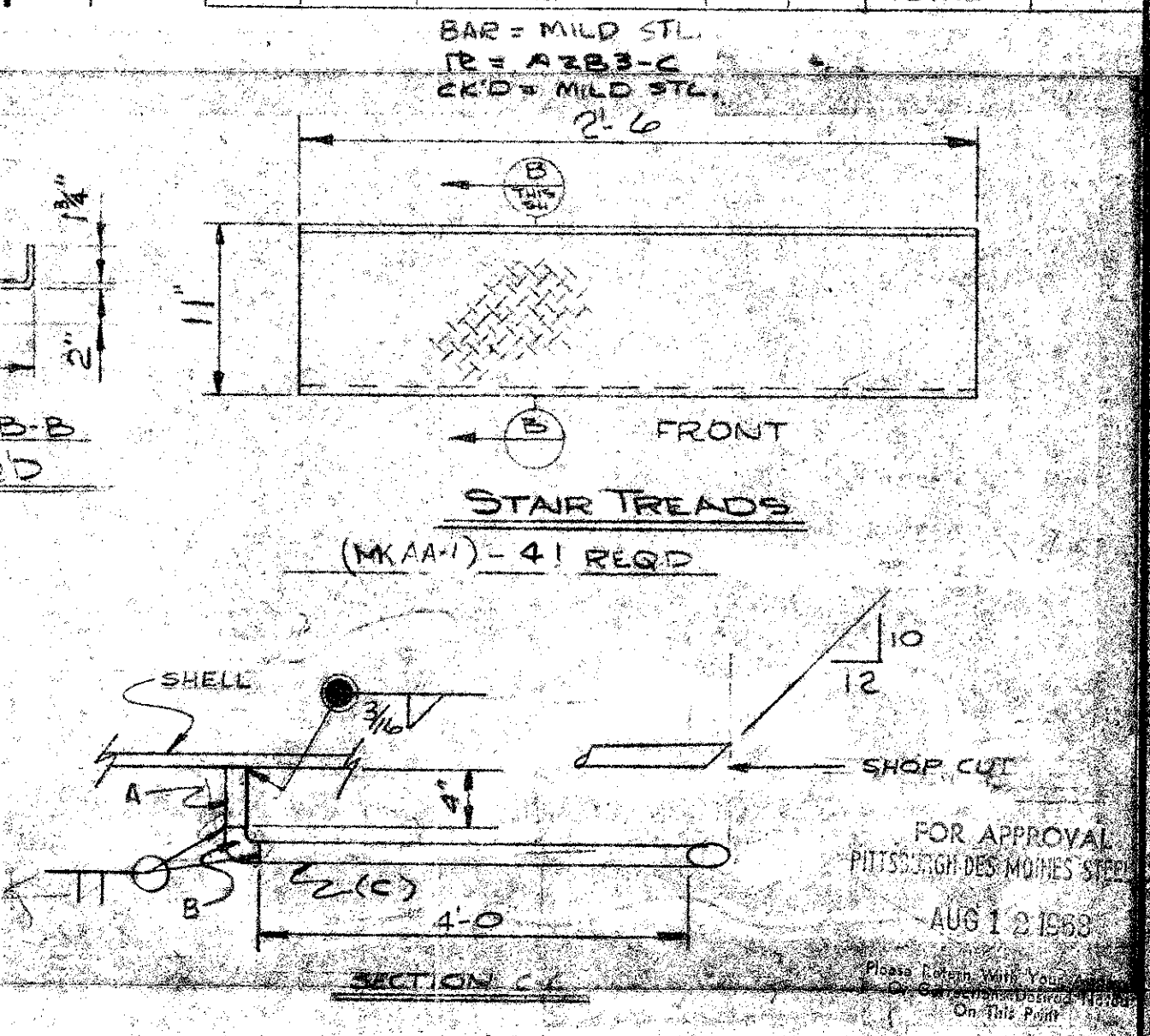
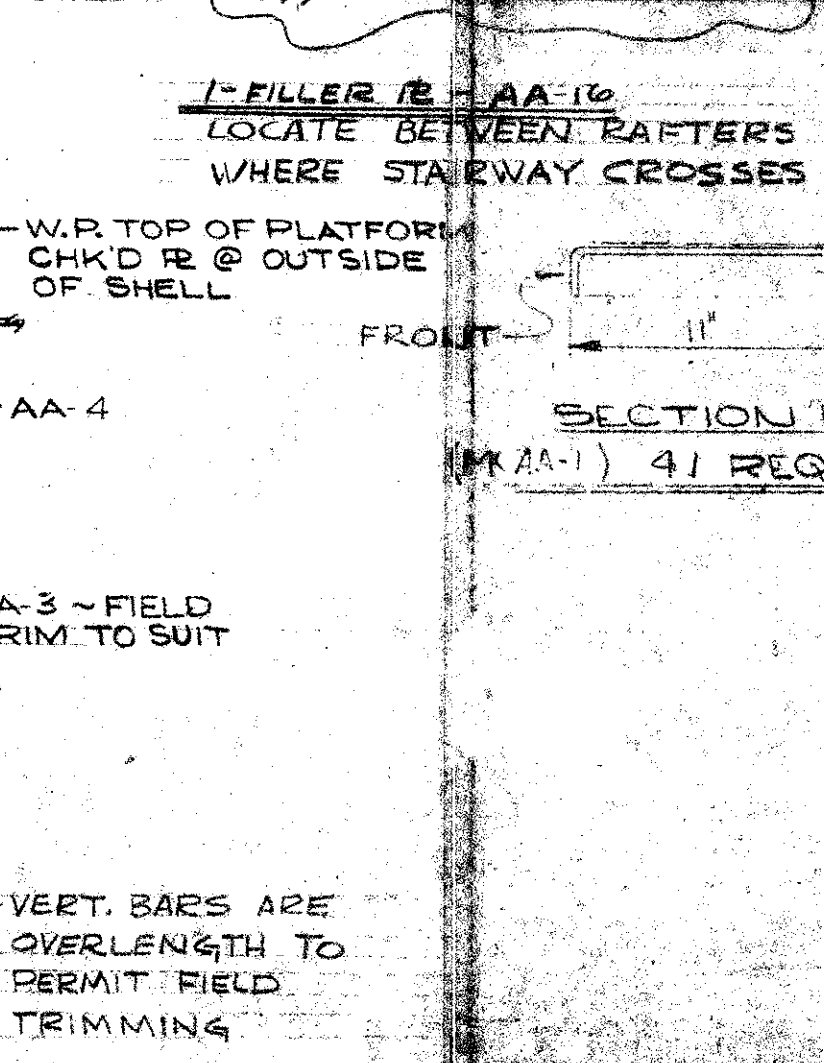
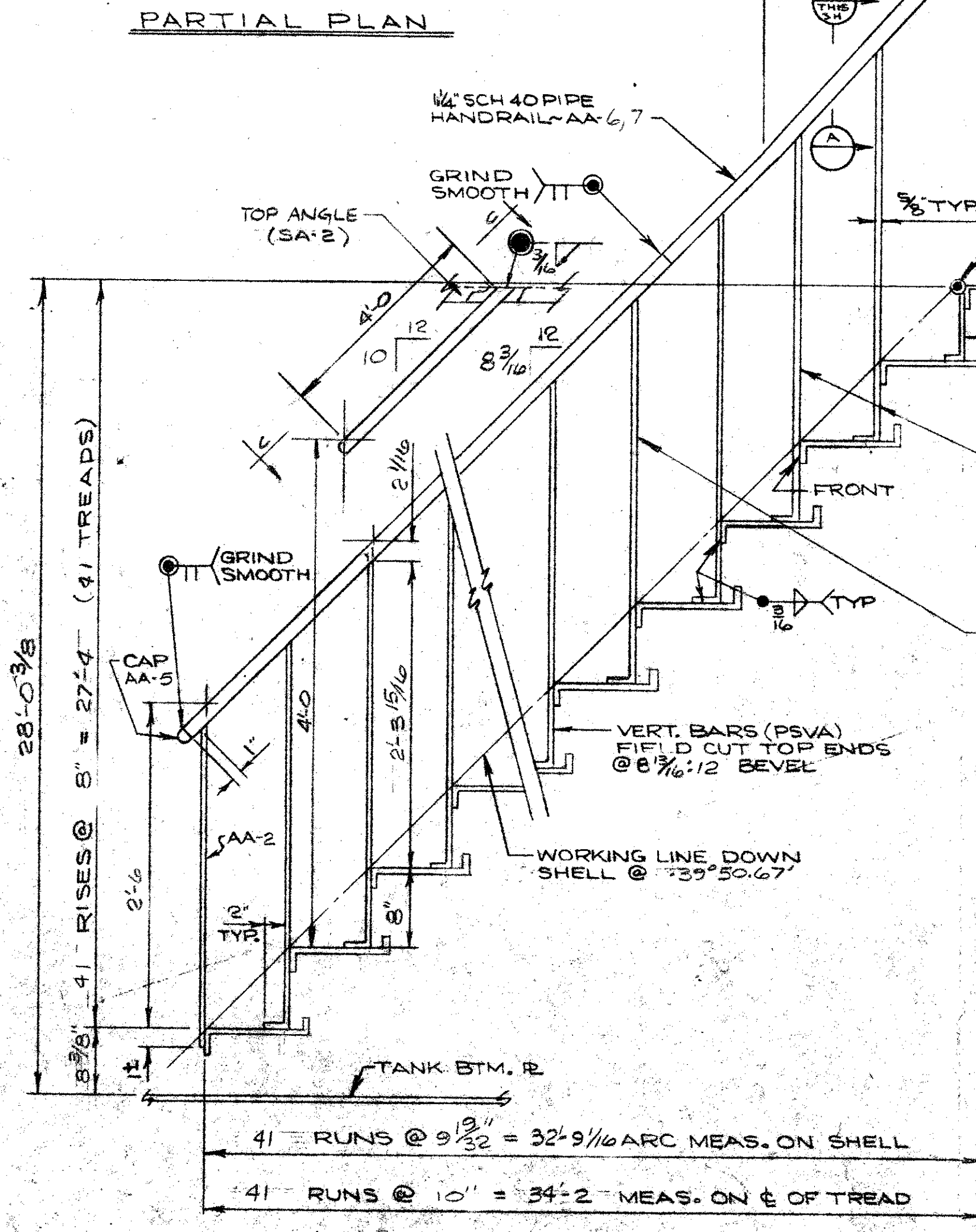
NO.		DATE	DESCRIPTION OF REVISION	BY	DATE
OPEN HOLES		GRIT BLAST YES <input checked="" type="checkbox"/> NO <input type="checkbox"/>			
SHOP PAINT		YES <input checked="" type="checkbox"/>			
PAINT CONTACT SURFACES		YES <input type="checkbox"/> NO <input type="checkbox"/>			
PITTSBURGH - DES MOINES STEEL CO.					
ENGINEERS-FABRICATORS-CONTRACTORS					
PITTSBURGH, PA. WARREN, PA. BRISTOL, PA. BALTIMORE, M.D.					
BIRMINGHAM, ALA. DES MOINES, IOWA PROVO, UTAH					
STOCKTON, CALIF. SANTA CLARA, CALIF. FRESNO, CALIF.					
1-500,000 GAL. TANK					
30" SHELL MANHOLE w/DAVIT					
PETALUMA, CALIFORNIA					
DRAWN: W.T.E.		DATE: 8-10-68		DRAWING NO. 8	
CHECKED: RP		DATE: 8-10		CONTRACT NO. 38494	

DRAWINGS PREPARED AT PROVO, UTAH

8-12
3
COP 7



SHIP LIST		JOB 38494		BILL OF MATERIAL 5		DWG 5		
NO. OF PIECES	MARK	NO. OF PIECES	MARK	SECTION	LENGTH FEET INCHES	REMARKS	WEIGHT	
SPIRAL STAIRWAY								
41	AA-1	41		3/16 CHECKERED R14 3/8	2 6		850	
38	PSVA	38		STD. 3/8" DIA VERT. BAR			133	
1	AA-2	1		BAR 3/8" DIA	2 9		4	
2	AA-3	2		do	4 4 3/8	BENT	6	
1	AA-4	1		do	0 2 3/8	do	1	
1	AA-5	1		WAGNER #3219 TYPE C			1	
				1/4" PIPE END CAP				
2	AA-6	2		1/4" SCH 40 PIPE	21 0	ROLL TO 48-7/4 RAD.	90	
1	AA-7	1		do	8 0	do	23	
1	AA-8	1	C	1/4" SCH 40 PIPE	4 1 1/2		10	
			A	do	0 4		1	
			B	WAGNER #801 90° ELL FOR 1/4" PIPE			1	
1	AA-16	1		R14 5/8" X 1/4"	7 0	ROLL TO 23" O.D.		
						PIPE = A120	TOTAL	1120



NO.	DATE	DESCRIPTION OF REVISION	BY

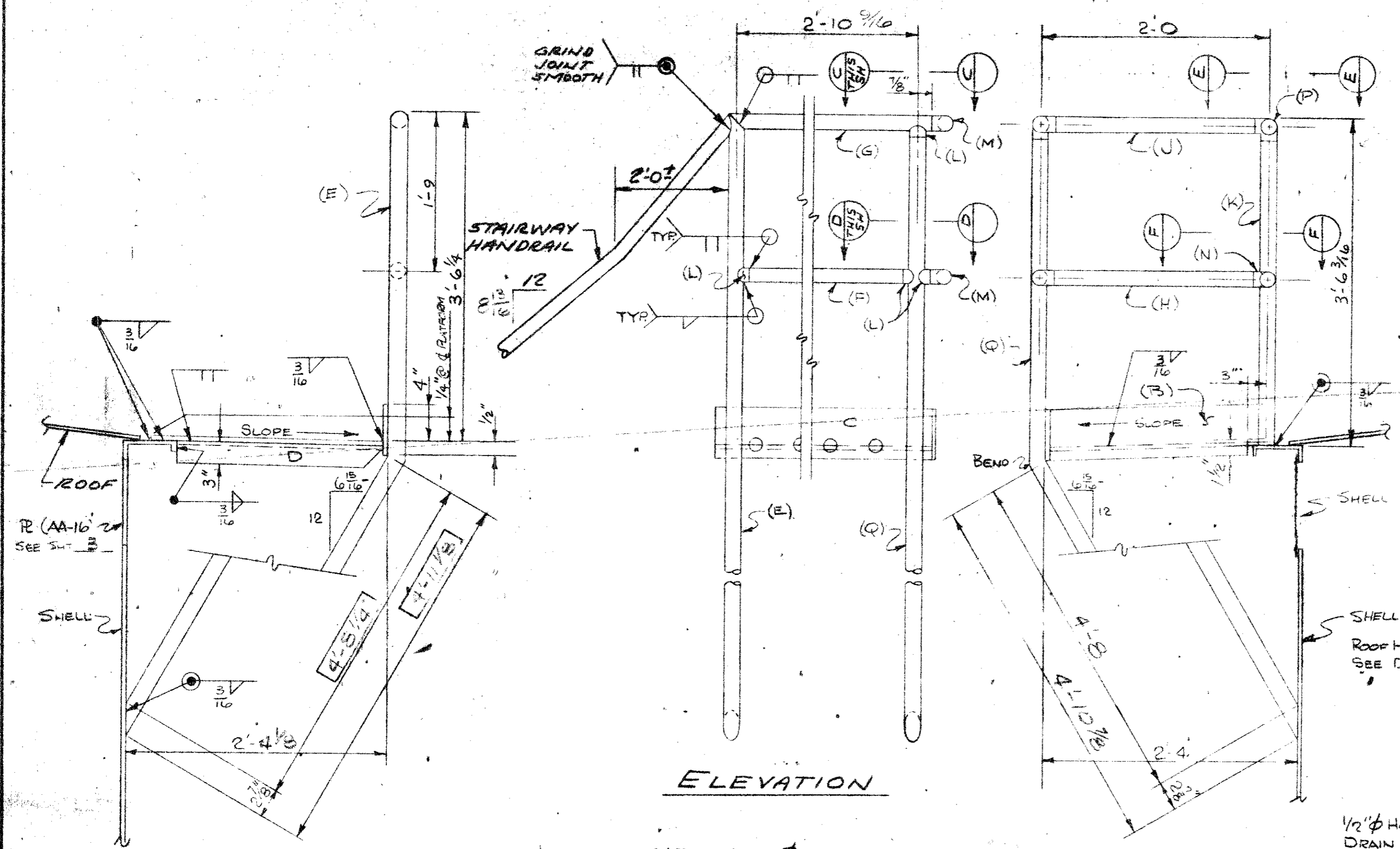
OPEN HOLES _____ GRIT BL/ ST YES NO
 SHOP PAINT YES
 PAINT CONTACT SURFACES YES NO

PITTSBURGH - DES MOINES STEEL CO.
 ENGINEERS-FABRICATORS-CONTRACTORS
 PITTSBURGH, PA. WARREN, PA. BRISTOL, PA. BALTIMORE, MD
 BIRMINGHAM, ALA. DES MOINES, IOWA PROVO, UTAH
 STOCKTON, CALIF. SANTA CLARA, CALIF. FRESNO, CALIF.

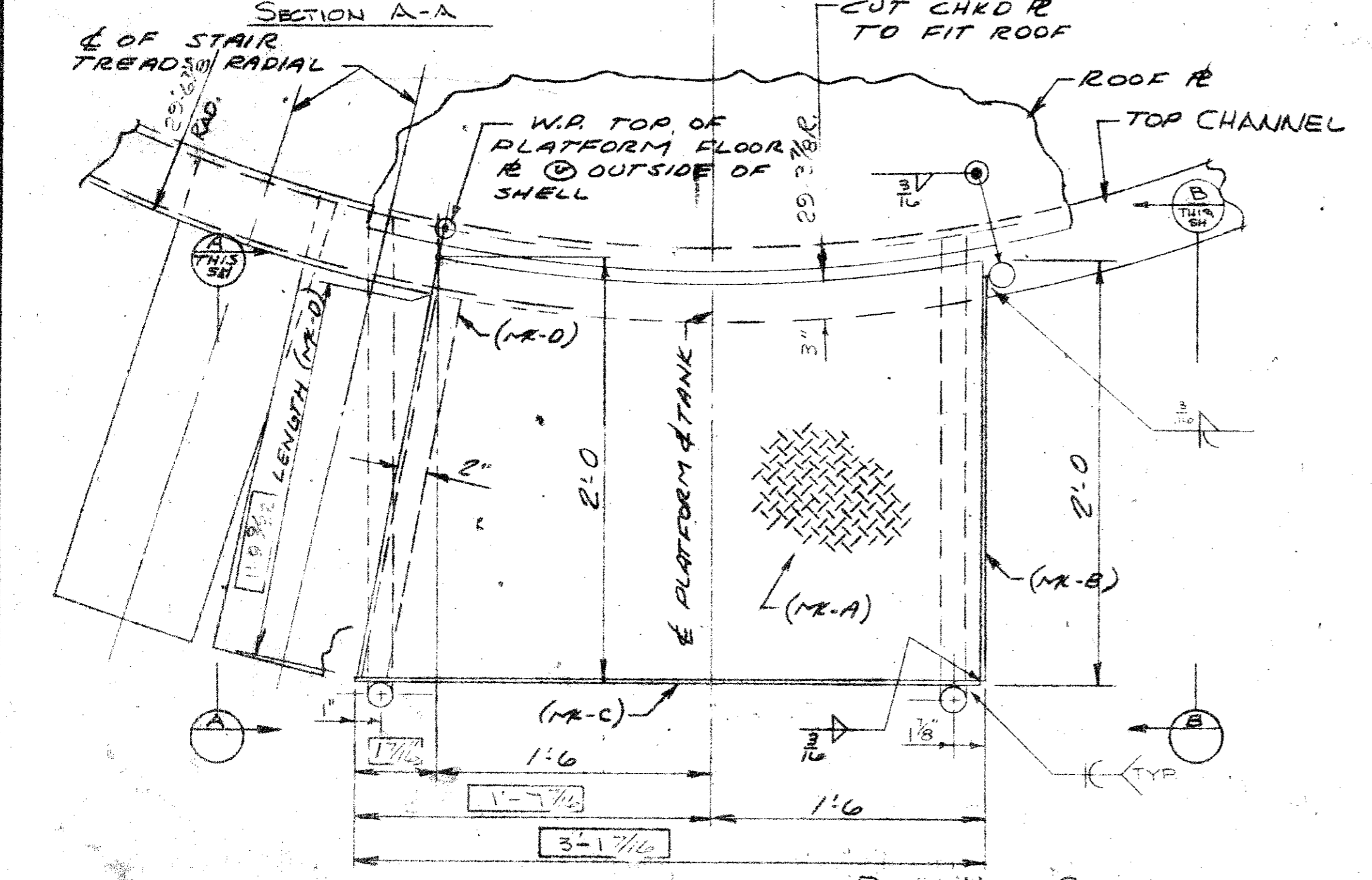
1,500,000 GAL. TANK
 SPIRAL STAIRWAY
 PETALUMA, CALIFORNIA

BY	DATE	DRAWING NO.
W.T.E.	7-22-68	3
CHECKED	BP	8-9
		CONTRACT NO. 38494

BY: [] DATE: []
 DESCRIPTION: []
 REV. NO. 1 DATE: []



SHIP LIST		BILL OF MATERIAL		4			
NO. OF PIECES	MARK	NO. OF PIECES	MARK	SECTION	LENGTH	REMARKS	WEIGHT
					FEET INCHES		
PLATFORM							
1	A	1	A	7/8" CHOKER 24	3 1/2		67
1	B	1	B	1/2" BAR 4 1/2 x 7/8	1 11		7
1	C	1	C	do	3 1/4		9
1	D	1	D	L 3 x 2 x 3/8	1 2 3/32		7
1	E	1	E	1 1/4" SCH 40 PIPE	8 5/8		20
1	F	1	F	do	2 4 1/8		20
1	G	1	G	do	2 8 7/8		6
1	H	1	H	do	3 0 1/4		7
1	I	1	I	do	1 10 1/4		5
1	J	1	J	do	1 8 7/8		5
1	K	1	K	do	3 3 13/16		8
4	L	4	L	WAGNER #1822 TYPE A 1 1/4" PIPE END CONNECTOR			1
2	M	2	M	WAGNER #2066 1 1/4" PIPE 90° ELL			1
2	N	2	N	WAGNER #557 TYPE B 1 1/4" PIPE END CONNECTOR			1
1	P	1	P	WAGNER #540 1 1/4" PIPE 90° ELL W/SIDE OUTLET.			1
BAR = C-STL 4 = A7 OR A36 PIPE = A120							TOTAL = 165



SECTION A-A

SECTION B-B

SECTION C-C

SECTION D-D

SECTION E-E

SECTION F-F

TOE BAR DETAIL
1 REQ'D (MK-C)

NOTE:
RIGHT HAND SHOWN - LEFT HAND REQ'D.

GRIT BLAST YES NO
 SHOP PAINT YES NO

FOR APPROVAL
 PITTSBURGH-DES MOINES STEEL CO.

MATERIAL TO AUG 12 1968

PITTSBURGH-DES MOINES STEEL CO.
 ENGINEERS - FABRICATORS - CONTRACTORS
 PITTSBURGH, PA. WARREN, PA. BRISTOL, PA. BALTIMORE, MD.
 BIRMINGHAM, ALA. DES MOINES, IOWA. PROVO, UTAH.
 STOCKTON, CALIF. SANTA CLARA, CALIF. FRESNO, CALIF.

1-500,000 GAL TANK

PLATFORM

FOR DETALUMA, CALIFORNIA

CUSTOMER'S ORDER NO. DATE 7-31-68

ORDER NO. DRAWN BY WTE APPROVED BY BP

SCALE = 1/4" JOB NO 35494

PRINT ISSUED SHEET NO. 4

DISTRIBUTION OF PRINTS:
 DATE: []
 NO. []
 TO []

DRWG'S PREPARED AT PROVO, UTAH

9-39