Solicitation
COVER SHEET

RFP 1100 DTB3021 - SUBSTATION RELAY PANELS

IDENTIFICATION	
Number	RFP 1100 DTB3021
Title	Substation Relay Panels
Summary	Establish a five (5) year supply agreement for Substation Relay Panels
Type	Request for Proposals (RFP)
Version (Addenda)	1

AUTHORIZED CONTACT PERSONS	
Primary	DeJuan Brown, Procurement Specialist III; (512) 974-2670; DeJuan.Brown@austintexas.gov
Secondary	Sandy Brandt, Procurement Manager; (512) 322-6594; Sandy.Brandt@austintexas.gov
Subcontractor Questions	Small Minority Business Resources Department; (512) 974-7600; SMBRComplianceDocuments@austintexas.gov
Notes	See Solicitation Instructions, 3.1 Authorized Contact Persons.

IMPORTANT DATES

OFFERS DUE

Date and Time	Tuesday, May 23, 2023 @ 2:00PM CST
Notes	See Solicitation Instructions, 5 Offer Submission.

OFFER OPENING

Date and Time	Tuesday, May 23, 2023 @ 3:00PM CST
Notes	See Solicitation Instructions, 5 Offer Submission.

QUESTIONS DUE

Date and Time	One week prior to solicitation closure
Submission Method	Email Only
Notes	See Solicitation Instructions, 3.2 Questions.

PRE-OFFER CONFERENCE

Conference (Yes/No)	Yes

1 REQUEST FOR PROPOSALS

1.1 Invitation. The City of Austin invites all Responsible Offerors to submit Proposals to provide the goods and/or services described in this Solicitation.

1.2 Documents. This Request for Proposals ("RFP" or "Solicitation") is composed of all documents listed in the Attachments section of the Solicitation Cover Sheet.

1.3 Process. The process described in this RFP is the Competitive Sealed Proposals process. This process is procedurally compliant with the competitive proposal processes prescribed by Texas Local Government Code Ch. 252 and Ch. 271.

1.4 Changes. The City may change or revise any of the contents of this Solicitation through the issuance of a written Addendum. Any Addenda issued will be added to the Attachments section of the Solicitation Cover Sheet. The Version number displayed in the Solicitation Cover Sheet will indicate the number of Addenda issued. Any explanation, clarification, interpretation or change to the Solicitation made in any other manner is not binding upon the City, and Offerors shall not rely upon such explanation, clarification, interpretation or change. Oral explanations or instructions given before the award of the Contract are not binding.

1.5 Review of Documents. Offerors shall review the entire Solicitation, as revised. Offerors shall notify the Authorized Contact Person(s) listed on the Solicitation Cover Sheet in writing of any omissions, ambiguities, inconsistencies or errors in the Solicitation prior to the Offer Due Date and Time displayed in the Important Dates section of the Solicitation Cover Sheet. Offerors shall also notify the City of any Solicitation contents the Offeror believes may be unreasonably restrictive.

1.6 Cancellation. The City reserves the right to cancel this Solicitation at any time for any reason and to resolicit the goods and services included in this Solicitation.

2 PUBLICATION AND NOTICES

2.1 Publication. This Solicitation was published in the City's financial services website, Austin Finance Online, as of the Published date displayed in the Solicitation Cover Sheet section.

2.2 Email Notices. On the Solicitation's Published date, email notices regarding this Solicitation were issued to all vendors registered in Austin Finance Online, that had previously selected the NIGP Codes displayed in the Solicitation Cover Sheet section. All subsequent email notices regarding this Solicitation will be limited to those vendors or other persons that subscribe to this Solicitation in Austin Finance Online.

2.3 Newspaper Notices. If applicable, one or more notices of this Solicitation were published in the newspaper as required by statute.

2.4 Third-Party Notices. Austin Finance Online is the only source of official notices regarding this Solicitation. Prospective Offerors shall not rely on any notices concerning this Solicitation received from sources other than Austin Finance Online.

3 COMMUNICATIONS AND MEETINGS

3.1 Authorized Contact Persons. The names and contact information for the authorized contact persons for this Solicitation are displayed in the Solicitation Cover Sheet. Offerors needing assistance contacting an Authorized Contact Person regarding this Solicitation may also contact the Purchasing Office's main line at (512) 974-2500 and request assistance from any member of the Purchasing Office's management team. Offerors may direct specific questions concerning subcontractors and responding to the Minority-owned Business Enterprise and Women-owned Business Enterprise Procurement Program requirements to the SMBR contact, also listed on the Solicitation Cover Sheet.

3.2 Questions. Offerors shall submit any questions concerning this Solicitation in writing via e-mail to the Authorized Contact Persons displayed on the Solicitation Cover Sheet. The City will respond to all questions received by the Questions Due Date and Time displayed on the Solicitation Cover Sheet. The City will publish one or more Addenda displaying all timely received questions and the City's responses to each for any information not already contained in the solicitation.

3.3 Vendor Help Desk. For general questions concerning the City's online financial services system, Austin Finance Online, Vendor Connection ("Vendor Connection"), Offerors may contact the Vendor Help Desk at (512) 974-2018. Assistance from the Vendor Help Desk is limited to navigating and using Vendor Connection only. The Vendor Help Desk will not respond to any questions concerning a specific Solicitation.

3.4 No-Lobbying. This Solicitation is subject to City Code, Ch. 2-7, Article 6, Anti-Lobbying and Procurement.(https://assets.austintexas.gov/purchase/downloads/New_ALO_Ordinance_No_20180614-056.pdf) The No-Lobbying period for this Solicitation starts on the Published Date displayed on the Solicitation Cover Page. The No-Lobbying Period continues through the earliest of the following: (i) the Solicitation is cancelled, (ii) the last of any resulting contract(s) are executed, or (iii) 60-days following Council authorization of the last contract resulting from this Solicitation. The No-Lobbying Period continues throughout the completion of the solicitation process. During the No-Lobbying Period, Offerors, Respondents and/or their Agents shall not make any prohibited communications to City Officials or City employees other than the Authorized Contact Persons. Respondents includes both prospective and actual Offerors.

3.5 Pre-Offer Conferences. The City may hold one or more pre-offer conferences to review the Solicitation and to receive verbal questions. The Solicitation Cover Sheet will display if a Pre-Offer Conference is being held and if attendance at this meeting is mandatory. If a Pre-Offer Conference is planned, the date, location, time and any other necessary information regarding this meeting will also be displayed in the Solicitation Cover Sheet. Attendance at any Pre-Offer Conference will be recorded and will be included in an Addendum published following the meeting. As the Solicitation is subject to changes (See Solicitation Instruction, 1.4 Changes.) Offerors shall not rely on verbal exchanges that may occur at a Pre-Offer Conference. Offerors shall continue to submit all questions in writing (See Solicitation Instructions, 3.2 Questions.)

3.6 Site Visits. The City may hold one or more site visits to allow prospective Offerors to inspect the location(s) where work under any resulting contract will be performed and to receive verbal questions. The Solicitation Cover Sheet will display if a Site Visit is being held and if attendance at this meeting is mandatory. If a Site Visit is planned, the date, location, time and any other necessary information regarding this meeting will also be displayed in the Solicitation Cover Sheet. Attendance at any Site Visit will be recorded and will be included in an Addendum published following the meeting. As the Solicitation is subject to changes (See Solicitation Instruction, 1.4 Changes.) Offerors shall not rely on verbal exchanges that may occur at a Pre-Offer Conference. Offerors shall continue to submit all questions in writing (See Solicitation Instructions, 3.2 Questions.)

4 OFFER PREPARATION

4.1 Offer Submittals. Offerors intending to respond to this Solicitation shall download and complete each of the Submittal documents listed in the Solicitation Cover Sheet. Submittal documents will include additional Solicitation instructions specific to its contents. Offerors will complete each Submittal in accordance with the instructions in the submittal. At a minimum, submittals will include a Price Offer, a Technical Offer, and an Offer and Certifications submittal.

4.2 Alternate Offers. Unless excluded elsewhere in the Solicitation, Offerors may submit alternative Offers, in addition to their primary Offer. Offerors seeking to submit an alternative Offer may include with their completed Submittals, any alternative Submittals as applicable.

4.3 Exceptions. Offerors shall indicate if they take exception to any portions of the Solicitation in their Proposal. Any exceptions included in the Proposal may negatively impact the City's evaluation of the Proposal or may cause the City to reject the Proposal entirely.

4.4 Proposal Acceptance Period. All proposals are valid for a period of one hundred and eighty (180) calendar days subsequent to the RFP closing date unless a longer acceptance period is offered in the proposal

4.5 Proprietary and Confidential Information. All Offers received and opened by the City are subject to the Texas Government Code, Ch. 552, and will be made available to the public. Offerors seeking to keep any portions of their Offer confidential shall mark each such portion as "Proprietary". The City will, to the extent allowed by law, endeavor to protect such information from disclosure. The City may request a review and determination from the Attorney General's Office of the State of Texas, of any Proposal contents marked as "Proprietary". A copyright notice or symbol is insufficient to identify proprietary or confidential information.

4.6 Cost of Offer Preparation and Participation. Offerors are responsible for all costs related to the preparation of their Offer and incurred while participating in this Solicitation process.

4.7 Minority and Women Owned Business Enterprise (MBE/WBE) Procurement Program. If the solicitation includes an MBE/WBE Program Compliance Plan or Offeror intends to subcontract, the Offeror shall comply with the provisions of Chapters 2-9A, 2-9B, 2-9C, and 2-9D, as applicable, of the Austin City Code and the terms of the Compliance Plan or Subcontractor Utilization Plan as approved by the City (the "Plan").

4.8 Materials Specifications/Descriptive Literature.

4.8.1 If a Solicitation refers to a Qualified Products List (QPL), Standard Products List (SPL) or a manufacturer's name and product, any Offeror offering products not referenced in the solicitation must submit as part of their Offer materials specifications/descriptive literature for the non-referenced product. Materials specifications/descriptive literature must be identified to show the item(s) in the Offer to which it applies.

4.8.2 Material specifications/descriptive literature are defined as product manufacturer's catalog pages, "cut sheets" applicable tests results, or related detailed documents that specify material construction, performance parameters, and any industrial standards that are applicable such as ANSI, ASTM, ASME, SAE, NFPA, NBS, EIA, ESL, and NSA. The submitted materials specifications/descriptive literature must include the manufacturer's name and product number of the product being offered.

4.8.3 The failure of the materials specifications/descriptive literature to show that the product offered conforms to the requirements of the Solicitation shall result in rejection of the Offer.

4.8.4 Failure to submit the materials specifications/descriptive literature as part of the Offer may subject the Offer to disqualification from consideration for award.

4.9 Qualified products List:

4.9.1 If a solicitation refers to a Qualified Products List (QPL) or a manufacturer's name and/or product number, only offers for those pre-qualified items and/or manufacturers will be considered for award.

4.10 Pricing Requirements – Non-Specified Items.

4.10.1 The City may purchase additional related items that are available from the Contractor in various quantities. Pricing for these non-specified items will be calculated based on a percentage markup over Contractors cost as identified in the Price Sheet under the Non-Specified Parts Section.

4.10.2 Offeror shall propose a percentage markup to their cost.

4.10.2.1 The percentage markup shall be fixed throughout the term of the Contract and are not subject to increase. They shall also remain firm through subsequent renewal periods if the City and the Contractor choose to renew the Contract.

4.10.2.2 The Offeror may offer a different percentage discount or markup amount per manufacturer for any Non-Specified Part; however, parts within each manufacturer's product line shall be priced by taking the stated list price and applying that percentage discount or markup.

4.11 Hazardous Materials.

4.11.1 If this Solicitation involves hazardous materials, the Offeror shall furnish with the Offer Safety Data Sheets (SDS), (OSHA Form 20), on all chemicals and hazardous materials specifying the generic and trade name of product, product specification, and full hazard information including receiving and storage hazards. Instructions, special equipment needed for handling, information on approved containers, and instructions for the disposal of the material are also required.

4.11.2 Failure to submit the SDS as part of the Offer may subject the Offer to disqualification from consideration for award.

4.11.3 The SDS, instructions and information required in paragraph "A" must be included with each shipment under the contract.

4.12 Published Price Lists.

4.12.1 Offerors may quote using published price lists in the following ways:

4.12.1.1 Offerors may quote one discount from a Published Price List for all offered items to be covered in the Contract. The discount must remain firm during the life of the Contract.

4.12.1.2 Offerors may quote their dealer cost, plus a percentage markup to be added to the cost. The percentage markup must remain firm during the life of the contract.

4.12.2 Two (2) copies of the list upon which the discounts or markups are based shall be submitted with the Offer. All price lists identified in the Offer shall clearly include the Offeror's name and address, the solicitation number, prices, title of the discount and number, and the latest effective date of the price list. If the Offer is based on a discount or markup on a manufacturer's price list, the price list must also include the manufacturer's name, the manufacturer's latest effective date, and the manufacturer's price schedule. All price lists submitted become part of the Offer.

4.12.3 The price list may be superseded or replaced during the Contract term only if price revisions are the result of the manufacturer's official price list revision. Written notification from the Contractor of price changes, along with two (2) copies of the revised list must be submitted to the Buyer in the Purchasing Office with the effective date of change to be at least 30 calendar days (30 unless a different period is inserted) after written notification. The City reserves the right to refuse any list revision.

4.12.4 The discounts or markups on equipment rental, material, supplies, parts, and contract services shall be fixed throughout the term of the Contract, and are not subject to increase.

4.12.5 Failure to submit written notification of price list revisions will result in the rejection of new prices being invoiced. The City will only pay invoices according to the last approved price list.

5 OFFER SUBMISSION

Offers in response to this Solicitation may be submitted using one of the following methods.

5.1 Electronic Offers. Electronic Offers (electronic documents) shall be submitted to the City of Austin using the Solicitation's eResponse function, available through the City's online financial system, Austin Finance Online. To submit Electronic Offers using the eResponse function, Offeror's must first be registered as a vendor with the City of Austin in Austin Finance Online.

See Instructions, Submitting Offers in Austin Finance Online.

5.1.1 Due Date and Time for Electronic Offers. Electronic Offers in response to this Solicitation shall be submitted via eResponse by the Offer Due Date and Time displayed in the Important Dates section of the Solicitation Cover Sheet. The system time within Austin Finance Online shall be the official time of record for Electronic Offers.

5.1.2 Withdrawing Electronic Offers. Electronic Offers submitted online in response to this Solicitation may be withdrawn, revised and resubmitted using the eResponse function any time prior to the Solicitation's Due Date and Time. Withdrawn Electronic Offers may be resubmitted, with or without modifications, up to the Solicitation's Due Date and Time.

5.1.3 Late Electronic Offers. The Solicitation's eResponse function in Austin Finance Online will not allow Electronic Offers to be submitted past the Solicitation's Due Date and Time.

5.1.4 Opening Electronic Offers. The information regarding Electronic Offers will become available on or shortly after the Offer Opening Date and Time stated on the Solicitation's Cover Sheet. When Electronic Offers are opened, the names of each Offeror would be displayed within the Solicitation's eResponse section. For Solicitations conducted via Competitive Sealed Bidding, the Price Offer for each Offeror will also be displayed in the eResponse section.

5.2 Hardcopy Offers. Hardcopy Offers (physical documents including paper and flash drives) must be returned in a sealed envelope and shall be delivered to the City of Austin's Purchasing Office at one of the following addresses, depending on the delivery method:

Deliveries by US Mail	**Deliveries by Courier Services (e.g., Fedex, UPS, etc.) and In-Person Deliveries**
City of Austin Financial Services Department-Central Procurement Response to Solicitation: RFP 1100 DTB3021 505 Barton Springs Road, Ste 330 Austin, Texas 78704	City of Austin, One Texas Center Purchasing Office Response to Solicitation RFP 1100 DTB3021 505 Barton Springs Rd Austin, TX 78704 Reception Phone: (512) 974-2500

5.2.1 Due Date and Time for Hardcopy Offers. Hardcopy Offers in response to this Solicitation shall be received by the City via one of the aforementioned delivery methods by the Offer Due Date and Time displayed in the Important Dates section of the Solicitation Cover Sheet. The time stamp clock at the Purchasing Office reception desk shall be the official time of record for Hardcopy Offers.

5.2.2 Withdrawing Hardcopy Offers. See below for changes due to the COVID-19 pandemic.

5.2.3 Late Hardcopy Offers. All Hardcopy Offers received after the Solicitation's Due Date and Time will be rejected. Late Hardcopy Offers that are inadvertently received by the City shall be returned to the Offeror. It is the responsibility of the Offeror to ensure that their Offer arrives at the proper location by the Solicitation's Due Date and Time. Arrival at the City's mailroom, mail terminal, or post office box will not constitute the Hardcopy Offer arriving on time. The City may, at its sole discretion, receive a late Hardcopy Offer if the City's misdirection or mishandling was the sole or main cause for the Hardcopy Offer's late receipt at the designated location.

5.2.4 Opening Hardcopy Offers. The City will open Hardcopy Offers on or shortly after the Offer Opening Date and Time stated on the Solicitation's Cover Sheet. When Hardcopy Offers are opened, the names of each Offeror would be read aloud. For Solicitations conducted via Competitive Sealed Bidding, the Price Offer for each Offeror will be available to read aloud. If no one is in attendance at the Solicitation Opening, the aggregate price will be read aloud, with the remaining Price Offer available for public inspection immediately following the Solicitation opening.

5.3 Special procedures due to 2020 COVID-19 Pandemic.

5.3.1 Confirmation of Submittals – Due to the current Pandemic circumstances, the City is not able to provide written confirmation of Hardcopy Offers when they are received or able to verify receipt of Hardcopy Offers or provide signature confirmation of Offers delivered by common carriers.

5.3.2 Withdrawing Hardcopy Offers – Hardcopy Offers may be withdrawn in writing or by email at any time prior to the Solicitations Due Date and Time. Offerors must send emails to withdraw Offers to the following email address: PurchasingAdmin@austintexas.gov

5.3.3 Solicitation Openings - Due to the current Pandemic circumstances, the City is not facilitating public attendees at Solicitation openings. Instead, the City will conduct this Solicitation opening via live webcast at the following website: https://www.austintexas.gov/financeonline/afo_content.cfm?s=66 .

When conducting a Solicitation opening via webcast, the City will read the applicable information from Hardcopy Offers aloud and will referring the public to the Solicitation's eResponse section to view the remaining Electronic Offers.

6 OFFER EVALUATION

6.1 Basis of Competition. The City may compare Offers based on groups or categories and will choose the basis of competition that best meets the City's needs for the resulting contracts. The basis of competition for each RFP will be described in section 11, Evaluation of Offers below.

6.2 Minimum Responsiveness. Proposals are Minimally Responsive when they include all of the Submittals listed in this Solicitation, completed and with sufficient detail in each to evaluate the Proposal in accordance with the Solicitation's Instructions. Proposals that are not Minimally Responsive may be deemed non-responsive and rejected.

6.3 Responsibility. An Offeror is responsible if they have the financial and practical ability, resources, expertise, past performance and positive compliance history with all City ordinances. An Offer may be rejected if an Offeror is determined to not be responsible.

6.4 Clarifications. Any time after the opening of Proposals, the City may contact Offerors to ask questions about their Proposal's contents in order to better understand these contents as-written. Responses to clarification questions, whether done verbally or submitted in writing, do not change the Proposal's contents. Clarifications are not to be confused with Discussions as described herein.

6.5 Evaluation. Proposals that are Minimally Responsive will be evaluated based on the Evaluation Factors listed in Section 11.1 of the Solicitation Instructions. Evaluation Factors correspond to their specified Submittals and shall indicate their respective weighting next to each. Proposal submittals not identified as Evaluation Factors will be evaluated on a pass / fail basis in accordance with the Solicitation's Instructions and any further instructions within each Solicitation. Although minimum responses are required in all Submittals, the Submittals identified as Evaluation Factors will be used to differentiate the Proposals and to identify which Proposal(s) represent the Best Value to the City. The City's evaluation may be made without Clarifications or Discussions with Offerors. Proposals should, therefore, include the Offeror's most favorable terms.

6.6 Discussions and Proposal Revisions. After completing initial evaluations, the City may enter into Discussions (communications which may include negotiations and feedback about the Proposal submitted) with one or more Offerors submitting the highest rated Proposal(s). Following the completion of Discussions, the City may request Proposal revisions from these Offerors. The City may seek multiple rounds of Discussions and Proposal revisions as deemed necessary by the City. The City may revise its initial evaluations depending on the contents of any Proposal revisions received following these Discussions.

6.7 Interviews/Presentations. The City may require that one or more Offeror submitting the highest rated Proposals participate in interviews and/or presentations.

7 CONTRACT AWARD AND EXECUTION

7.1 Award Determination. City staff will recommend Contract award to the Offeror(s) submitting the highest rated Proposal(s) based on the Evaluation Factors set forth in this Solicitation. The Award Determination will be published to Austin Finance Online and notice will be sent to all Offerors subscribed to the Solicitation.

7.2 Multiple Awards. If the City determines that multiple contracts are needed, the City will award one or more additional contracts to the Offeror(s) submitting the next highest rated Proposal(s).

7.3 Contract Execution. Contracts within the City Manager's authority will be awarded and executed simultaneously. Contracts above the City Manager's authority will be executed following their authorization by the Austin City Council.

8 ADMINISTRATIVE MATTERS

8.1 Solicitation File. All documents included in this Solicitation, and all timely received Offers in response to this Solicitation, except for Offer contents deemed by Offerors to be proprietary and confidential, will be available for public inspections upon the execution of the contract.

8.2 Debriefings. Offerors may request a debriefing meeting to ask any questions concerning the Solicitation's contents, process or the evaluation of their Offer. Debriefing meetings are informal exchanges and may be

requested anytime following the earlier of (i) after the contract resulting from this Solicitation is executed, or in the case of multiple awards, the last contract is executed; (ii) the date the Solicitation is cancelled. Debriefings are not public called meetings in accordance with the Texas Open Meetings Act and are usually limited to a single Offeror and any of their representatives. Only information regarding the Solicitation documents and the Offeror's Offer (including City's evaluation of the Offer) in response to the Solicitation will be discussed.

8.3 Reservations. The City reserves the right to: (i) specify approximate quantities in the Solicitation; (ii) extend the Solicitation due date and time; (iii) add additional terms or modify existing terms in the Solicitation; (iv) reject an Offer containing exceptions, additions, qualifications or conditions not called for in the Solicitation; (v) reject an Offer received from an Offeror who is currently debarred or suspended by the City, State, or Federal Government; (vi) reject an Offer that contains fraudulent information; (vii) reject an Offer that has material omissions; (viii) reject any or all Offers; (ix) procure any goods or services included in this Solicitation by other means; (x) consider and accept alternate Offers, if specified in the Solicitation, when most advantageous to the City; (xi) reject an Offer if prices in the Offer are unbalanced (some prices are significantly high and other prices are significantly low) and/or (xii) waive any minor informality in any Offer or procedure so long as the deviation does not affect the competitiveness of the Solicitation process.

8.4 Protests. The Purchasing Officer has the authority to settle or resolve any claim of an alleged deficiency or protest. The procedures for notifying the City of Austin of an alleged deficiency or filing a protest are listed below. If you fail to comply with any of these requirements, the Purchasing Officer may dismiss your complaint or protest.

8.4.1 Protest regarding the Solicitation (Pre-Submittal Protest). Any protest regarding the Solicitation by the City shall be filed no later than five (5) days prior to the due date and time for proposals. Any protest filed after that date which raises issues regarding the Solicitation will not be considered.

8.4.2 Protests regarding the evaluation of Proposals. Any protest regarding the evaluation of Proposals by the City shall be filed with the City no later than five (5) days after the notification of award recommendation is posted on Austin Finance Online, or notification that the protestor's status as a Offeror has changed, such as notification that an Offer has been found to be non-responsive or an Offeror has been found to be non-responsible. Any protest filed after such date which raises issues regarding the evaluation will not be considered. Offerors may only protest the evaluation of their Proposal.

8.4.3 Protest Regarding Award of Contract (Post-Award Protest). Any protest regarding the award of the contract shall be filed no later than ten (10) days after the date of award. Any protest regarding the award of the contract filed after such date will not be considered.

8.4.4 You shall submit your protest in writing and it shall include the following information: (i) your name, address, telephone, and email address; (ii) the Solicitation number; (iii) the specific facts and/or law upon which the protest of the Solicitation or the award is based, including all pertinent documents and evidence thereto; and (iv) the form of relief requested.

8.4.5 Your protest shall be concise and presented logically and factually to help with the City's review.

8.4.6 When the City receives a timely written protest, the Purchasing Officer will determine whether the grounds for your protest are sufficient. If the Purchasing Officer decides that the grounds are sufficient, the Purchasing Office will schedule a protest hearing, usually within five (5) working days. If the Purchasing Officer determines that your grounds are insufficient, the City will notify you of that decision in writing.

8.4.7 The protest hearing is informal and is not subject to the Open Meetings Act. The purpose of the hearing is to give you a chance to present your case, it is not an adversarial proceeding. Those who may attend from the City are: representatives from the department that requested the purchase, the Department of Law, the Purchasing Office, and other appropriate City staff. You may bring a representative or anyone else that will present information to support the factual grounds for your protest with you to the hearing.

8.4.8 A decision will usually be made within fifteen (15) calendar days after the hearing.

8.4.9 The City will send you a copy of the hearing decision after the appropriate City staff has reviewed the decision.

8.4.10 When a protest is filed, the City usually will not make an award until a decision on the protest is made. However, the City will not delay an award if the City Manager or the Purchasing Officer determines that the City urgently requires the supplies or Services to be purchased, or failure to make an award promptly will unduly delay delivery or performance. In those instances, the City will notify you and make every effort to resolve your protest before the award.

8.5 Interested Parties Disclosure. As a condition to entering the Contract, the Business Entity constituting the Offeror must provide the following disclosure of Interested Parties to the City prior to the award of a contract with the City on Form 1295 "Certificate of Interested Parties" as prescribed by the Texas Ethics Commission for any contract award requiring council authorization. The Certificate of Interested Parties Form must be completed on the Texas Ethics Commission website, printed, and signed by the authorized agent of the Business Entity with acknowledgment that disclosure is made under oath and under penalty of perjury. The City will submit the "Certificate of Interested Parties" to the Texas Ethics Commission within 30 days of receipt from the successful Offeror. The Offeror is reminded that the provisions of Local Government Code 176, regarding conflicts of interest between the bidders and local officials remains in place. Link to Texas Ethics Commission Form 1295 process and procedures below:

https://www.ethics.state.tx.us/File/

9 DEFINITIONS

Whenever a term defined by the Uniform Commercial Code, as enacted by the State of Texas, is used in the Contract, the UCC definition shall control, unless otherwise defined in the Contract.

"Addendum" means a written instrument issued by the Contract Awarding Authority that modifies or clarifies the Solicitation prior to the Due Date. "Addenda" is the plural form of the word.

"Best Offer" means the best evaluated Offer in response to a Request for Proposals or Request for Qualifications/Statements.

"Best Offeror" means the Offeror submitting the Best Offer.

"City" means the City of Austin, a Texas home-rule municipal corporation.

"Offer" means a complete signed response to a Solicitation including, but not limited to, a Request for Proposals.

"Offeror" means a person, firm, or entity that submits an Offer in response to this Solicitation. Any Offeror may be represented by an agent after submitting evidence demonstrating the agent's authority. The agent cannot certify as to his own agency status.

"Proposal" means a complete, properly signed Offer to a Request for Proposals.

"Proposer" means a person, firm, or entity that submits an Offer in response to a Request for Proposals.

"Purchasing Office" refers to the Purchasing Office in the Financial Services Department of the City.

"Purchasing Officer" means the director of the Purchasing Office and the principle recipient of procurement authority from the City Manager.

"Request for Proposals" means all documents utilized for soliciting Proposals.

"Responsible Offeror" means the financial and practical ability of the Offeror to perform the Contract and takes into consideration resources, expertise, and past performance of the Offeror as well as compliance with all City ordinances concerning the purchasing process.

"Responsive" means meeting all the requirements of a Solicitation.

"Solicitation" means this Request for Proposals or RFP.

10. PROPOSAL SUBMITTALS

10.1 Executive Summary. Provide an Executive Summary that summarizes your RFP response and confirms that the Proposer will comply with the requirements, provisions, terms, and conditions specified in this solicitation. The Executive Summary should be in the form of a standard business letter on official business letterhead and signed by an authorized representative of Proposer. Include the complete name and address of your firm, telephone number, and email address of the person the City of Austin should contact regarding your firm's response.

10.2 Authorized Negotiator: Include name, address, email, and telephone number of a person in your organization authorized to negotiate Contract terms and render binding decisions on Contract matters.

10.3 Solution: Submit panel elevation drawings and construction details demonstrating conformance to Austin Energy specification E-, and Quality Assurance and Quality Control Process.

10.4 Demonstrated Applicable Experience and Manufacturing Capabilities

10.4.1 Relevant Company Experience

10.4.2 References: Provide in the Reference Sheet (OFFERS and CERTIFICATIONS): according to Section 1.2 of Specification E-1620.

10.5 Price Proposal – Whichever Offeror offers the City the most competitive price will be awarded the maximum amount of points. Remaining points will be distributed on a pro-rated basis

10.6 Delivery Lead Times

10.7 Local Business Presence - The City seeks opportunities for businesses in the Austin Corporate City Limits to participate on City contracts. The Local Business Presence form in the Offer and Certifications section must be completed to be considered for Local Business Presence. Points will be awarded through a combination of the Offeror's Local Business Presence and/or the Local Business Presence of their subcontractors. Evaluation of the Team's Percentage of Local Business Presence will be based on the dollar amount of work as reflected in the Offeror's MBE/WBE Compliance Plan or MBE/WBE Utilization Plan. Any Offers with subcontracting not indicating specific percentages or dollar amounts will not receive Local Business Presence points for subcontracting.

10.8 Service-Disabled Veteran Business Enterprise ("SDVBE") - Pursuant to the interim Service-Disabled Veteran Business Enterprise (SDVBE) Program, Offerors submitting proposals in response to a Request for Proposals shall receive a three point (3 percent) preference if the Offeror, at the same time the proposal is submitted, is certified by the State of Texas, Comptroller of Public Accounts as a Historically Underutilized Business and is a Service-Disabled Veteran Business Enterprise. This preference does not apply to subcontractors. To receive this preference, Offerors shall complete the enclosed Section 0840 Service-Disabled Veterans Business Enterprise Preference Form, in accordance with the Additional Solicitation Instructions included therein.

11. Evaluation of Offers

11.1 Evaluation Factors

RFP Evaluation Factors	Maximum Points
Solution	30
Demonstrated Applicable Experience and Manufacturing Capabilities	27
Price Proposal	20
Delivery Lead Times	10
Local Business Presence	10

Team's Local Business Presence	Points Awarded
Local business presence of 90% to 100%	10
Local business presence of 75% to 89%	8
Local business presence of 50% to 74%	6
Local business presence of 25% to 49%	4
Local presence of between 1 and 24%	2
No local presence	0

Service-Disabled Veteran Business Enterprise	3
Total	**100**

11.2 Interviews and/or presentations, Optional. The City will score proposals on the basis of the criteria listed above. The City may select a "short list" of Proposers based on those scores. "Short-listed" Proposers may be invited for presentations, demonstrations, or discussions with the City. The City reserves the right to re-score "short-listed" proposals as a result, and to make award recommendations on that basis.

CITY OF AUSTIN
STANDARD TERMS AND CONDITIONS

The Contractor agrees that the Contract shall be governed by the following terms and conditions.

1 GENERAL

1.1 TERM OF CONTRACT:

A. The Contract shall commence upon execution unless otherwise specified and shall continue in effect until all obligations are performed in accordance with the Contract. Upon written notice to the Contractor from the City's Purchasing Officer or designee, unless specified otherwise in the Scope of Work, the Contract may be extended beyond the initial term at the City's sole option unless the Contractor is notified 30 days prior to the expiration. If the City exercises any extension option, all terms, conditions, and provisions of the Contract shall remain in effect for that extension period, subject only to any economic price adjustment otherwise allowed under the Contract.

B. Upon expiration of the initial term or any period of extension, the Contractor agrees to holdover under the terms and conditions of this Contract for such a period as is reasonably necessary for the City to re-solicit and/or complete the Deliverables due under this Contract. Any holdover period will not exceed 180 calendar days unless mutually agreed on by both parties in writing.

1.2 INDEFINITE QUANTITY:

The quantities and/or services listed herein are estimates of the goods and services needed by the City for the period of the Contract. The City reserves the right to purchase more or less of these quantities and/or services as may be required during the Contract term. Quantities and/or services will be as needed and specified by the City for each order. Unless specified in the Contract, there are no minimum order quantities.

1.3 INVOICES:

A. The Contractor shall submit separate Invoices for each Order after each delivery or on the schedule provided in the Contract. If partial shipments or deliveries are authorized by the City, a separate Invoice must be sent for each shipment or delivery made.

B. Invoices shall be sent to the address on the Purchase Order of Delivery Order in the section entitled, "BILL TO". Proper Invoices must include a unique Invoice number, the purchase Order or delivery Order number, the master agreement number (if applicable), the Department's Name, and the name of the point of contact for the Department. Invoices shall be itemized according to pricing structure in the Contract. A copy of the bill of lading and the freight waybill, when applicable, shall be attached to the Invoice. The Contractor's name and, if applicable, the tax identification number on the Invoice must exactly match the information in the Vendor's registration with the City. Unless otherwise instructed in writing, the City may rely on the remittance address specified on the Contractor's Invoice. Invoices received without all required information cannot be processed and will be returned to the vendor.

C. Invoices for labor shall include a tabulation of work-hours at the appropriate rates and grouped by work Order number. Time billed for labor shall be limited to hours actually worked.

D. **Unless otherwise expressly authorized in the Contract, the Contractor shall pass through all Subcontracting and other authorized expenses at actual cost without markup**.

E. Federal excise taxes, State taxes, or City sales taxes must not be included in the Invoiced amount. The City will furnish a tax exemption certificate upon request.

1.4 PAYMENT:

A. All proper Invoices received by the City will be paid within 30 calendar days of the City's receipt of the Deliverables or of the Invoice, whichever is later.

B. If payment is not timely made, (per Paragraph A), interest shall accrue on the unpaid balance at the lesser of the rate specified in Texas Government Code §2251.025 or the maximum lawful rate; except, if payment is not timely made for a reason for which the City may withhold payment hereunder, interest shall not accrue until 10 calendar days after the grounds for withholding payment have been resolved.

C. If partial shipments or deliveries are authorized by the City, the Contractor will be paid for the partial shipment or delivery, as stated above, provided that the Invoice matches the shipment or delivery.

D. The City may withhold or set off the entire payment or part of any payment otherwise due the Contractor to such extent as may be necessary on account of:

   i. Delivery of defective or non-conforming Deliverables by the Contractor;
   ii. Third party claims, which are not covered by the insurance which the Contractor is required to provide under the terms of this Contract, are filed or there is reasonable evidence indicating probable filing of such claims;
   iii. Failure of the Contractor to pay Subcontractors, or for labor, materials or equipment;
   iv. Damage to the property of the City or the City's agents, employees or Contractors, which is not covered by insurance required to be provided by the Contractor;
   v. Reasonable evidence demonstrates that the Contractor's obligations will not be completed within the time specified in the Contract, and that the unpaid balance would not be adequate to cover actual or liquidated damages for the anticipated delay;
   vi. Failure of the Contractor to submit proper Invoices with all required attachments and supporting documentation; or
   vii. Failure of the Contractor to comply with any material provision of the Contract Documents.

E. Notice is hereby given of Article VIII, §1 of the Austin City Charter which prohibits the payment of any money to any person, firm or corporation who is in arrears to the City for taxes, and of §2-8-3 of the Austin City Code concerning the right of the City to offset indebtedness owed the City.

F. The Contractor agrees to accept payment by either credit card, check or Electronic Funds Transfer for all goods and/or services provided under the Contract. The Contractor shall factor the cost of processing credit card payments into the Offer. There shall be no additional charges, surcharges, or penalties to the City for payments made by credit card.

G. The awarding or continuation of this Contract is dependent upon the availability of funding. The City's payment obligations are payable only and solely from funds appropriated and available for this Contract. The absence of appropriated or other lawfully available funds shall render the Contract null and void to the extent funds are not appropriated or available and any Deliverables delivered but unpaid shall be returned to the Contractor. The City shall provide the Contractor written notice of the failure of the City to make an adequate appropriation for any fiscal year to pay the amounts due under the Contract, or the reduction of any appropriation to an amount insufficient to permit the City to pay its obligations under the Contract. In the event of inadequate appropriation of funds, there will be no penalty nor removal fees charged to the City. The City shall pay the Contractor, to the extent of funds appropriated or otherwise legally available for such purposes, for all goods delivered and services performed, and obligations incurred prior to the date of notice of non-appropriation.

1.5 FINAL PAYMENT AND CLOSE OUT:

A. If a Minority-Owned Business Enterprise/Women-Owned Business Enterprise (MBE/WBE) Program Compliance Plan is required by the Solicitation, and the Contractor has identified Subcontractors, the Contractor is required to submit a Contract Close-Out MBE/WBE Compliance Report to the Project Manager or Contract Manager no later than the 15th calendar day after completion of all work under the Contract. Final payment, retainage, or both may be withheld if the Contractor is not in compliance with the requirements of the Compliance Plan as accepted by the City.

B. The making and acceptance of final payment will constitute:

i. A waiver of all claims by the City against the Contractor, except claims (1) which have been previously asserted in writing and not yet settled, (2) arising from defective work appearing after final inspection, (3) arising from failure of the Contractor to comply with the Contract or the terms of any warranty specified herein, (4) arising from the Contractor's continuing obligations under the Contract, including but not limited to indemnity and warranty obligations, or (5) arising under the City's right to audit; and

ii. A waiver of all claims by the Contractor against the City other than those previously asserted in writing and not yet settled.

1.6 SPECIAL TOOLS & TEST EQUIPMENT:

If the price stated on the Offer includes the cost of any special tooling or special test equipment fabricated or required by the Contractor for the purpose of filling this Order, such special tooling equipment and any process sheets related thereto shall become the property of the City and shall be identified by the Contractor as such.

1.7 AUDITS AND RECORDS:

A. The Contractor agrees that the representatives of the Office of the City Auditor or other authorized representatives of the City shall have access to, and the right to audit, examine, or reproduce, any and all records of the Contractor related to the performance, including security audits, under this Contract, at the City's expense. The Contractor agrees to refund to the City any overpayments disclosed by any such audit. The City agrees to protect from disclosure Contractor's confidential and proprietary information disclosed during an audit to the same extent it protects its own confidential and proprietary information, subject to the requirements of the Texas Public Information Act, Chapter 2251, Texas Government Code.

B. Records Retention:

i. Contractor is subject to City Code Chapter 2-11 (Records Management), and as it may subsequently be amended.

ii. The Contractor shall retain all records for a period of three years after final payment on this Contract or until all audit and litigation matters that the City has brought to the attention of the Contractor are resolved, whichever is longer.

1.8 FINANCIAL DISCLOSURES AND ASSURANCE:

The City may request and review financial information as the City requires to determine the credit worthiness of the Contractor, including but not limited to, annual reports, audited financial Statements and reports, bank letters of credit or other credit instruments. Failure of the Contractor to comply with this requirement shall be grounds for terminating the Contract.

1.9 RIGHT TO ASSURANCE:

Whenever one party to the Contract in good faith has reason to question the other party's intent to perform, demand may be made to the other party for written assurance of the intent to perform. If no assurance is given within the time specified after demand is made, the demanding party may treat this failure as an anticipatory repudiation of the Contract.

1.10 STOP WORK NOTICE:

The City may issue an immediate Stop Work Notice in the event the Contractor is observed performing in a manner that is in violation of Federal, State, or local guidelines, or in a manner that is determined by the City to be unsafe to either life or property. Upon notification, the Contractor will cease all work until notified

by the City that the violation or unsafe condition has been corrected. The Contractor shall be liable for all costs incurred by the City as a result of the issuance of such Stop Work Notice.

1.11 DEFAULT:

The Contractor shall be in default under the Contract if the Contractor (a) fails to fully, timely and faithfully perform any of its material obligations under the Contract, (b) fails to provide adequate assurance of performance, (c) becomes insolvent or seeks relief under the bankruptcy laws of the United States or (d) makes a material misrepresentation in Contractor's Offer, or in any report or Deliverable required to be submitted by the Contractor to the City. The City shall be in default if it fails to make payment in accordance with the Payment terms of this Contract.

1.12 TERMINATION FOR CAUSE:

In the event of a default by either party, the non-defaulting party shall have the right to terminate the Contract for cause, by written notice effective ten 10 calendar days, unless otherwise specified, after the date of such notice, unless the defaulting party, within such 10 day period, cures such default, or provides evidence sufficient to prove to the non-defaulting party's reasonable satisfaction that such default does not, in fact, exist. Additionally, the City shall have the right to act in accordance with the terms defined by "City of Austin Purchasing Office Probation, Suspension and Debarment Rules for Vendors." In addition to any other remedy available under law or in equity, either party shall be entitled to recover all actual damages, costs, losses and expenses, incurred by the party as a result of the Contractor's default, including, without limitation, cost of cover, court costs, and prejudgment and post-judgment interest at the maximum lawful rate. All rights and remedies under the Contract are cumulative and not exclusive of any other right or remedy provided by law. In the event of termination of the Contract under this Section, the Contractor shall handover all complete and partially complete Work Products and Documentation developed under this Contract.

1.13 ATTORNEY'S FEES:

In consideration of the award and execution of this Contract and in consideration of the City's waiver of its right to attorney's fees, the Contractor knowingly and intentionally waives its right to attorney's fees under §271.153, Texas Local Government Code, in any administrative proceeding, alternative dispute resolution proceeding, or litigation arising out of or connected to this Contract.

1.14 TERMINATION WITHOUT CAUSE:

The City shall have the right to terminate the Contract, in whole or in part, without cause any time upon 30 calendar days' prior written notice. Upon receipt of a notice of termination, the Contractor shall promptly cease all further work pursuant to the Contract, with such exceptions, if any, specified in the notice of termination. The City shall pay the Contractor, to the extent of funds appropriated or otherwise legally available for such purposes, for all goods delivered and services performed, and obligations incurred prior to the date of termination in accordance with the terms hereof. In the event of termination of the Contract under this Section, the Contractor shall handover all complete and partially complete Work Products and Documentation developed under this Contract.

1.15 FRAUD:

Fraudulent Statements by the Contractor on any Offer or in any report or Deliverable required to be submitted by the Contractor to the City shall be grounds for the termination of the Contract for cause by the City and may result in legal action.

1.16 DELAYS:

The City may delay scheduled delivery or other due dates by written notice to the Contractor if the City deems it is in its best interest. If such delay causes an increase in the cost of the work under the Contract, the City and the Contractor shall negotiate an equitable adjustment for costs incurred by the Contractor in the Contract price and execute an amendment to the Contract. The Contractor must assert its right to an adjustment within 30 calendar days from the date of receipt of the notice of delay. Failure to agree on any adjusted price shall be handled under the Dispute Resolution Clause. However, nothing in this provision shall excuse the Contractor from delaying the delivery as notified.

1.17 FORCE MAJEURE:

Contractor may be excused from performance under the Contract for any period when performance is prevented as the result of an act of God, strike, war, civil disturbance, epidemic, pandemic, sovereign conduct, or court order provided that the Contractor experiences the event of force majeure and prudently and promptly acts to take any and all steps that are within the Contractor's control to ensure performance and to shorten the duration of the event of force majeure. Contractor shall provide notice of the force majeure event to the City within three (3) business days of the event or delay, whichever occurs later, to establish a mutually agreeable period of time reasonably necessary to overcome the effect of such failure to perform. Subject to this provision, such non-performance shall not be deemed a default or a ground for termination. However, the City may terminate an order under the Contract if it is determined by the City that the Contractor will not be able to deliver goods or services in a timely manner to meet the business needs of the City.

1.18 INDEMNITY:

A. IN THIS SECTION, THE FOLLOWING TERMS HAVE THE MEANINGS ASSIGNED BELOW:
   (1) "INDEMNIFIED PARTY" IS THE CITY AND THE CITY'S OFFICERS, ELECTED AND APPOINTED OFFICIALS, EMPLOYEES, AGENTS, REPRESENTATIVES, SUCCESSORS AND ASSIGNS.
   (2) "INDEMNIFYING PARTY" IS THE CONTRACTOR, ITS OFFICERS, AGENTS, EMPLOYEES, SUBCONTRACTORS, SUCCESSORS AND ASSIGNS.
   (3) THE INDEMNIFYING PARTY SHALL INDEMNIFY, HOLD HARMLESS, AND DEFEND THE INDEMNIFIED PARTY AGAINST ANY AND ALL LOSSES, DAMAGES, LIABILITIES, DEFICIENCIES, CLAIMS, CAUSES OF ACTION, JUDGMENTS, SETTLEMENTS, INTEREST, AWARDS, PENALTIES, FINES, COSTS OR EXPENSES, INCLUDING PROFESSIONAL FEES AND ATTORNEYS' FEES, THAT ARE INCURRED BY THE INDEMNIFIED PARTY ARISING OUT OF ANY DIRECT OR THIRD PARTY CLAIM OF:
      i. BREACH OR NON-FULFILLMENT OF ANY PROVISION OF THIS CONTRACT BY THE INDEMNIFYING PARTY;
      ii. ANY FALSE REPRESENTATION OR WARRANTY MADE BY THE INDEMNIFYING PARTY IN THIS CONTRACT OR IN THE INDEMNIFYING PARTY'S PROPOSAL/RESPONSE LEADING TO THIS CONTRACT;
      iii. ANY NEGLIGENT OR MORE CULPABLE ACT OR OMISSION OF THE INDEMNIFYING PARTY, INCLUDING ANY RECKLESS OR WILLFUL MISCONDUCT, RELATED TO THE PERFORMANCE OF ITS OBLIGATIONS UNDER THIS CONTRACT;
      iv. BODILY INJURY; DEATH OF ANY PERSON; OCCUPATIONAL ILLNESS OR DISEASE; LOSS OF SERVICES, WAGES, OR INCOME; OR DAMAGE TO REAL OR PERSONAL PROPERTY CAUSED BY THE NEGLIGENT OR MORE CULPABLE ACTS OR OMISSIONS OF INDEMNIFYING PARTY, INCLUDING ANY RECKLESS OR WILLFUL MISCONDUCT; OR
      v. ANY FAILURE OF THE INDEMNIFYING PARTY TO COMPLY WITH ANY APPLICABLE FEDERAL, STATE, OR LOCAL LAWS, REGULATIONS, OR CODES RELATED TO THE PERFORMANCE OF ITS OBLIGATIONS UNDER THIS CONTRACT.

B. THE INDEMNIFIED PARTY SHALL GIVE THE INDEMNIFYING PARTY WRITTEN NOTICE (A "CLAIM NOTICE") OF ANY CLAIM RECEIVED RELATED TO THIS CONTRACT. THE INDEMNIFYING PARTY'S DUTY TO DEFEND APPLIES IMMEDIATELY. THE INDEMNIFIED PARTY'S FAILURE TO PROVIDE A CLAIM NOTICE TO THE INDEMNIFYING PARTY DOES NOT RELIEVE THE INDEMNIFYING PARTY OF ITS DUTY TO INDEMNIFY, HOLD HARMLESS AND DEFEND THE INDEMNIFIED PARTY.

C. THE INDEMNIFIED PARTY MAY SELECT ITS OWN LEGAL COUNSEL TO REPRESENT ITS INTERESTS. THE INDEMNIFYING PARTY SHALL:
   i. REIMBURSE THE INDEMNIFIED PARTY FOR ITS REASONABLE COSTS AND ATTORNEY'S FEES IMMEDIATELY UPON REQUEST, AS THEY ARE INCURRED, AND
   ii. REMAIN RESPONSIBLE TO THE INDEMNIFIED PARTY FOR ANY LOSSES INDEMNIFIED UNDER THIS SECTION.

D. THE INDEMNIFYING PARTY SHALL GIVE PROMPT, WRITTEN NOTICE TO THE INDEMNIFIED PARTY OF ANY PROPOSED SETTLEMENT OF A CLAIM THAT IS INDEMNIFIABLE UNDER THIS SECTION. THE INDEMNIFYING PARTY MAY NOT, WITHOUT THE INDEMNIFIED PARTY'S PRIOR, WRITTEN CONSENT, SETTLE OR COMPROMISE ANY CLAIM OR CONSENT TO THE ENTRY OF ANY JUDGMENT REGARDING WHICH INDEMNIFICATION IS BEING SOUGHT UNDER THIS SECTION.

E. MAINTENANCE OF THE INSURANCE REQUIRED BY THIS CONTRACT SHALL NOT LIMIT THE INDEMNIFYING PARTY'S OBLIGATIONS UNDER THIS SECTION. THE INDEMNIFYING PARTY SHALL REQUIRE ALL SUBCONTRACTORS TO INDEMNIFY THE CITY IN THE SAME MANNER AS PROVIDED IN THIS SECTION.

1.19 NOTICES:

Unless otherwise specified, all notices, requests, or other communications required or appropriate to be given under the Contract shall be in writing and shall be deemed delivered three business days after postmarked if sent by U.S. Postal Service Certified or Registered Mail, Return Receipt Requested. Notices delivered by other means shall be deemed delivered upon receipt by the addressee. Notices to the Contractor shall be sent to the address registered with the City. Notices to the City shall be addressed to the City at P.O. Box 1088, Austin, Texas 78767 and marked to the attention of the assigned Procurement Specialist.

1.20 CONFIDENTIALITY:

The Parties may be granted access to certain of the other Party's or Licensor's Confidential Information (including inventions, employee information, trade secrets, confidential know-how, confidential business information, and other information which the Party or its licensors consider confidential) (Confidential Information) to provide the Deliverables to the City. The Parties acknowledge and agree that the Confidential Information is the valuable property of the disclosing Party and its licensors and any unauthorized use, disclosure, dissemination, or other release of the Confidential Information will substantially injure the disclosing Party and its licensors. The receiving Party (including its employees, Subcontractors, agents, or representatives) agrees it will maintain the Confidential Information in strict confidence and shall not disclose, disseminate, copy, divulge, recreate, or otherwise use the Confidential Information without prior written consent of disclosing Party, or in a manner not expressly permitted under this Contract, unless the Confidential Information is required to be disclosed by law or an Order of a court or other governmental authority (including a Texas Attorney General opinion) with proper jurisdiction. In all cases, the receiving Party agrees to promptly notify the disclosing Party before disclosing Confidential Information to permit the disclosing Party reasonable time to seek an appropriate protective Order. The receiving Party agrees to use protective measures no less stringent than the receiving Party uses in its business to protect its own most valuable information. In all circumstances, the receiving Party's protective

measures must be at least reasonable measures to ensure the continued confidentiality of the Confidential Information.

A. The Parties agree: (i) not to use Confidential Information for any reason other than for the purpose of providing or receiving the Deliverables, (ii) not to disclose Confidential Information to any third party other than to its employees who have a need to know the Confidential Information for furtherance of providing the Deliverables, and (iii) to promptly notify the disclosing Party of any request for Confidential Information to be disclosed under any law or order of any court or other governmental authority with proper jurisdiction, so as to permit disclosing Party reasonable time to seek an appropriate protective order.
B. All Confidential Information and derivations thereof shall remain the sole and exclusive property of disclosing Party, and no license or other right to the Confidential Information or intellectual property is granted or implied hereby. Upon the written request of disclosing Party, the receiving Party shall promptly return to disclosing Party all tangible items of Confidential Information furnished by disclosing Party and all copies thereof or certify in writing that all Confidential Information, including all copies, has been destroyed.
C. No expiration or termination of the Contract shall affect either Party's rights or obligations with respect to Confidential Information.
D. The Parties acknowledge and agree that any breach or threatened breach of the Contract could cause harm for which money damages may not provide an adequate remedy.
E. The parties agree that in the event of such a breach or threatened breach of the Contract, in addition to any other available remedies, City may seek temporary and permanent injunctive relief restraining the Contractor from disclosing or using, in whole or in part, any Confidential Information.

1.21 TEXAS PUBLIC INFORMATION ACT:

A. All material submitted by the Contractor to the City related to the Contract may become subject to public disclosure upon receipt by the City. Any portions of such material claimed by the Contractor to be proprietary must be clearly marked as such. Determination of the public nature of the material is subject to the Texas Public Information Act, Chapter 552, Texas Government Code.
B. In accordance with Texas Government Code §552.372, if this Contract has a stated expenditure of at least $1 million in public funds for the purchase of goods or services by the City or results in the expenditure of at least $1 million in public funds for the purchase of goods or services by the City in a fiscal year, Contractor agrees to:
   i. Preserve all Contracting information related to the Contract as provided by the records retention requirements in the AUDITS AND RECORDS Section of the Contract;
   ii. Promptly provide to the City any Contracting information related to the Contract that is in the custody or possession of Contractor on request of the City; and
   iii. On completion of the Contract, either:
      (1) Provide at no cost to the City all Contracting information related to the Contract that is in the custody or possession of Contractor; or
      (2) Preserve the Contracting information related to the Contract as provided by the records retention requirements in the AUDITS AND RECORDS Section of the Contract.
C. The requirements of Subchapter J, Chapter 552, Texas Government Code, may apply to this Contract, and the Contractor agrees that the Contract can be terminated if the Contractor knowingly or intentionally fails to comply with a requirement of that Subchapter.

1.22 PUBLICATIONS:

All published material and written reports submitted under the Contract must be originally developed material unless otherwise specifically provided in the Contract. When material not originally developed is included in a report in any form, the source shall be identified.

1.23 ADVERTISING:

The Contractor shall not advertise or publish, without the City's prior written consent, the fact that the City has entered into the Contract, except to the extent required by law.

1.24 NO CONTINGENT FEES:

The Contractor warrants that no person or selling agency has been employed or retained to solicit or secure the Contract upon any agreement or understanding for commission, percentage, brokerage, or contingent fee, excepting bona fide employees of bona fide established commercial or selling agencies maintained by the Contractor for the purpose of securing business. For breach or violation of this warranty, the City shall have the right, in addition to any other remedy available, to cancel the Contract without liability and to deduct from any amounts owed to the Contractor, or otherwise recover, the full amount of such commission, percentage, brokerage or contingent fee.

1.25 GRATUTIES:

The City may, by written notice to the Contractor, cancel the Contract without liability if it is determined by the City that gratuities were Offered or given by the Contractor or any agent or representative of the Contractor to any officer or employee of the City of Austin with a view toward securing the Contract or securing favorable treatment with respect to the awarding or amending or the making of any determinations with respect to the performing of such Contract. In the event the Contract is canceled by the City pursuant to this provision, the City shall be entitled, in addition to any other rights and remedies, to recover or withhold the amount of the cost incurred by the Contractor in providing such gratuities.

1.26 PROHIBITION AGAINST PERSONAL INTEREST IN CONTRACTS:

No officer, employee, independent consultant, or elected official of the City who is involved in the development, evaluation, or decision-making process of the performance of any Solicitation shall have a financial interest, direct or indirect, in the Contract resulting from that Solicitation. Any willful violation of this Section shall constitute impropriety in office, and any officer or employee guilty thereof shall be subject to disciplinary action up to and including dismissal. Any violation of this provision, with the knowledge, expressed or implied, of the Contractor shall render the Contract voidable by the City.

1.27 INDEPENDENT CONTRACTOR:

The Contract shall not be construed as creating an employer/employee relationship, a partnership, or a joint venture. The Contractor's services shall be those of an independent Contractor. The Contractor agrees and understands that the Contract does not grant any rights or privileges established for employees of the City.

1.28 ASSIGNMENT DELEGATION:

The Contract shall be binding upon and ensure to the benefit of the City and the Contractor and their respective successors and assigns, provided however, that no right or interest in the Contract shall be assigned and no obligation shall be delegated by the Contractor without the prior written consent of the City. Any attempted assignment or delegation by the Contractor shall be void unless made in conformity with this Paragraph. The Contract is not intended to confer rights or benefits on any person, firm or entity not a party hereto; it being the intention of the parties that there be no third-party beneficiaries to the Contract.

1.29 WAIVER:

The claim or right arising out of a breach of the Contract cannot be discharged in whole or in part by a waiver or renunciation of the claim or right unless the waiver or renunciation is supported by consideration and is in writing signed by the aggrieved party. No waiver by either the Contractor or the City of any one or more events of default by the other party shall operate as, or be construed to be, a permanent waiver of any rights or obligations under the Contract, or an express or implied acceptance of any other existing or future default or defaults, whether of a similar or different character.

1.30 MODIFICATIONS:

The Contract can be modified or amended only in writing and signed by both parties. No pre-printed or similar terms on any Contractor Invoice, Order, clickwrap agreement or other document shall have any force or effect to change the terms, covenants, and conditions of the Contract.

1.31 INTERPRETATION:

The Contract is intended by the parties as a final, complete and exclusive Statement of the terms of their agreement. No course of prior dealing between the parties or course of performance or usage of the trade shall be relevant to supplement or explain any term used in the Contract. Although the Contract may have been substantially drafted by one party, it is the intent of the parties that all provisions be construed in a manner to be fair to both parties, reading no provisions more strictly against one party or the other. Whenever a term defined by the Uniform Commercial Code, as enacted by the State of Texas, is used in the Contract, the UCC definition shall control, unless otherwise defined in the Contract.

1.32 DISPUTE RESOLUTION:

A. If a dispute arises out of or relates to the Contract, or the breach thereof, the parties agree to negotiate prior to prosecuting a suit for damages. However, this Section does not prohibit the filing of a lawsuit to toll the running of a statute of limitations or to seek injunctive relief. Either party may make a written request for a meeting between representatives of each party within 14 calendar days after receipt of the request or such later period as agreed by the parties. Each party shall include, at a minimum, one senior level individual with decision-making authority regarding the dispute. The purpose of this and any subsequent meeting is to attempt in good faith to negotiate a resolution of the dispute. If, within 30 calendar days after such meeting, the parties have not succeeded in negotiating a resolution of the dispute, they will proceed directly to mediation as described below. Negotiation may be waived by a written agreement signed by both parties, in which event the parties may proceed directly to mediation as described below.
B. If the efforts to resolve the dispute through negotiation fail, or the parties waive the negotiation process, the parties may select, within 30 calendar days, a mediator trained in mediation skills to assist with resolution of the dispute. Should they choose this option, the City and the Contractor agree to act in good faith in the selection of the mediator and to consider qualified individuals nominated to act as mediator. Nothing in the Contract prevents the parties from relying on the skills of a person who is trained in the subject matter of the dispute or a Contract interpretation expert. If the parties fail to agree on a mediator within 30 calendar days of initiation of the mediation process, the mediator shall be selected by the Travis County Dispute Resolution Center. The parties agree to participate in mediation in good faith for up to 30 calendar days from the date of the first mediation session. The City and the Contractor will share the mediator's fees equally and the parties will bear their own costs of participation such as fees for any consultants or attorneys they may utilize to represent them or otherwise assist them in the mediation.

1.33 JURISDICTION AND VENUE:

The Contract is made under and shall be governed by the laws of the State of Texas, including, when applicable, the Uniform Commercial Code as adopted in Texas, Bus. & Comm. Code, Chapter 1, excluding any rule or principle that would refer to and apply the substantive law of another State or jurisdiction. All issues arising from this Contract shall be resolved in the courts of Travis County, Texas and the parties agree to submit to the exclusive personal jurisdiction of such courts. The foregoing, however, shall not be construed or interpreted to limit or restrict the right or ability of the City to seek and secure injunctive relief from any competent authority as contemplated herein.

1.34 INVALIDITY:

The invalidity, illegality, or unenforceability of any provision of the Contract shall in no way affect the validity or enforceability of any other portion or provision of the Contract. Any void provision shall be deemed severed from the Contract and the balance of the Contract shall be construed and enforced as if the Contract did not contain the particular portion or provision held to be void. The parties further agree to reform the Contract to replace any stricken provision with a valid provision that comes as close as possible to the intent of the stricken provision. The provisions of this Section shall not prevent this entire Contract from being void should a provision which is the essence of the Contract be determined to be void.

1.35 HOLIDAYS:

Dates for the holidays observed by the City can be found here https://www.austintexas.gov/department/official-city-holidays

If a Legal Holiday falls on Saturday, it will be observed on the preceding Friday. If a Legal Holiday falls on Sunday, it will be observed on the following Monday.

1.36 SURVIVABILITY OF OBLIGATIONS:

All provisions of the Contract that impose continuing obligations on the parties, including but not limited to the warranty, indemnity, and confidentiality obligations of the parties, shall survive the expiration or termination of the Contract.

1.37 COOPERATIVE CONTRACT:

A. The City has entered into Interlocal Purchasing Agreements with other governmental entities, for the purpose of accessing their cooperative contracts and making available our cooperative contracts, pursuant to the Interlocal Cooperation Act, Chapter 791 of the Texas Government Code. The Contractor agrees to offer the same prices and terms and conditions of this cooperative contract to other eligible governmental agencies that have entered into an interlocal agreement with the City for the purpose of accessing the City's cooperative contracts.
B. The City does not accept any responsibility or liability for the purchases by other governmental entities made under a separate contract based on this cooperative contract.

1.38 EQUAL OPPORTUNITY:

A. **Equal Employment Opportunity**: No Contractor, or Contractor's agent, shall engage in any discriminatory employment practice as defined in Chapter 5-4 of the City Code. No Offer submitted to the City shall be considered, nor any Purchase Order issued, or any Contract awarded by the City unless the Offeror has executed and filed with the City Purchasing Office a current Non-Discrimination Certification. Non-compliance with Chapter 5-4 of the City Code may result in sanctions, including termination of the Contract and the Contractor's suspension or debarment from participation on future City Contracts until deemed compliant with Chapter 5-4.

B. **Non-Retaliation**: The Contractor agrees to prohibit retaliation, discharge or otherwise discrimination against any employee or applicant for employment who has inquired about, discussed or disclosed their compensation.

C. **Americans with Disabilities Act (ADA) Compliance**: No Contractor, or Contractor's agent, shall engage in any discriminatory practice against individuals with disabilities as defined in the ADA, including but not limited to: employment, accessibility to goods and services, reasonable accommodations, and effective communications.

1.39 SUBCONTRACTORS:

A. If the Contractor identified Subcontractors in an MBE/WBE Program Compliance Plan or Subcontractor Plan the Contractor shall comply with the provisions of Chapters 2-9A, 2-9B, 2-9C, and 2-9D, as applicable, of the Austin City Code and the terms of the Compliance Plan or Subcontractor Plan as approved by the City (the "Plan"). The Contractor shall not initially employ any Subcontractor except as provided in the Contractor's Plan. The Contractor shall not substitute any Subcontractor identified in the Plan, unless the substitute has been accepted by the City in writing in accordance with the provisions of Chapters 2-9A, 2-9B, 2-9C and 2-9D, as applicable. No acceptance by the City of any Subcontractor shall constitute a waiver of any rights or remedies of the City with respect to defective Deliverables provided by a Subcontractor. If a Plan has been approved, the Contractor is additionally required to submit a monthly Subcontract Awards and Expenditures Report to the Contract Manager no later than the 10th calendar day of each month.

B. Work performed for the Contractor by a Subcontractor shall be pursuant to a written Contract between the Contractor and Subcontractor. The terms of the Subcontract may not conflict with the terms of the Contract and shall contain provisions that

   i. Require that all Deliverables and services to be provided by the Subcontractor be provided in strict accordance with the provisions, Specifications and terms of the Contract;

   ii. Prohibit the Subcontractor from further Subcontracting any portion of the Contract without the prior written consent of the City and the Contractor. The City may require, as a condition to such further Subcontracting, that the Subcontractor post a payment bond in form, substance and amount acceptable to the City;

   iii. Require Subcontractors to submit all Invoices and applications for payments, including any claims for additional payments, damages or otherwise, to the Contractor in sufficient time to enable the Contractor to include same with its Invoice or application for payment to the City in accordance with the terms of the Contract;

   iv. Require that all Subcontractors obtain and maintain, throughout the term of their Contract, insurance in the type and amounts specified for the Contractor, with the City being a named insured as its interest shall appear; and

   v. Require that the Subcontractor follow terms as defined in section, AUDITS AND RECORDS and City Code Chapter 2-11

C. The Contractor shall be fully responsible to the City for all acts and omissions of the Subcontractors just as the Contractor is responsible for the Contractor's own acts and omissions. Nothing in the Contract shall create for the benefit of any such Subcontractor any Contractual relationship between the City and any such Subcontractor, nor shall it create any obligation on the part of the City to pay or to see to the payment of any moneys due any such Subcontractor except as may otherwise be required by law.

D. The Contractor shall pay each Subcontractor its appropriate share of payments made to the Contractor not later than 10 calendar days after receipt of payment from the City.

1.40 NON-SPECIFIED ITEMS:

The City may purchase additional related items that are available from the Contractor. Pricing for these non-specified items will be calculated based on a percentage markup over Contractors cost, percentage discount of list price or as otherwise identified in the Price Sheet under the Non-Specified Items Section. The percentage markup or discount shall be fixed throughout the term of the Contract and are not subject to increase. They shall also remain firm through subsequent Contract extension options. The City may request additional information from the Contractor to substantiate the percentage markup or discount prior to placing an order.

1.41 ECONOMIC PRICE ADJUSTMENT:

A. **Price Adjustments**: Prices shown in this Contract shall remain firm for the first six months of the Contract. After that, in recognition of the potential for fluctuation of the Contractor's cost, a price adjustment (increase or decrease) may be requested by either the City or the Contractor on the anniversary date of the Contract or as may otherwise be specified herein. The percentage change between the Contract price and the requested price shall not exceed the percentage change between the specified index in effect on the date the Solicitation closed and the most recent, non-preliminary data at the time the price adjustment is requested. Prices for products or services unaffected by verifiable cost trends shall not be subject to adjustment.

B. **Effective Date**: Approved price adjustments will go into effect on the anniversary date of Contract award, shall not be retroactive and shall and remain in effect until Contract expiration unless changed by subsequent amendment.

C. **Adjustments**: A request for price adjustment must be made in writing and submitted to the other Party prior to the yearly anniversary date of the Contract; adjustments may only be considered at that time unless otherwise specified herein. Requested adjustments must be solely for the purpose of accommodating changes in the Contractor's direct costs. Contractor shall provide an updated price listing once agreed to adjustment(s) have been approved by the parties.

D. The City, at its sole discretion, may consider approving an adjustment on fully documented market increases.

E. If the requested adjustment is not supported by the referenced index, the City, at its sole discretion, may consider approving an adjustment on fully documented market increases.

1.42 MONTHLY SUBCONTRACT AWARDS AND EXPENDITURES REPORT:

(applicable when an MBE/WBE Compliance Plan is required)

The Contractor must submit a monthly Subcontract Awards and Expenditures Report to the Contract Manager specified herein no later than the tenth calendar day of each month.

1.43 INSURANCE:

A **GENERAL INSURANCE REQUIREMENTS**:

i. The Contractor shall provide a Certificate of Insurance as verification of coverages and endorsements required in Section B., Specific Insurance Requirements, to the City prior to Contract execution and within 14 calendar days after written request from the City. Failure to provide the required Certificate of Insurance may subject the Offer to disqualification from consideration for award. The Contractor must also forward a Certificate of Insurance to the City whenever a

previously identified policy period has expired, or an extension option or hold over period is exercised, as verification of continuing coverage.

ii. All endorsements naming the City as additional insured, waivers, and notices of cancellation shall indicate, and the Certificate of Insurance shall be mailed to the following address:

City of Austin Purchasing Office
P.O. Box 1088
Austin, Texas 78767
OR
PURInsuranceCompliance@austinTexas.gov

iii. The Contractor shall not commence work until the required insurance is obtained and until such insurance has been reviewed by the City. Approval of insurance by the City shall not relieve or decrease the liability of the Contractor hereunder and shall not be construed to be a limitation of liability on the part of the Contractor.

iv. The City may request that the Contractor submit certificates of insurance to the City for all Subcontractors prior to the Subcontractors commencing work on the project.

v. The Contractor's and all Subcontractors' insurance coverage shall be written by companies authorized to do business in the State of Texas and have an A.M. Best rating of B+VII or better.

vi. The "other" insurance clause shall not apply to the City where the City is an additional insured shown on any policy. It is intended that policies required in the Contract, covering both the City and the Contractor, shall be considered primary coverage as applicable.

vii. If insurance policies are not written for amounts specified in Section B., Specific Insurance Requirements, the Contractor shall carry Umbrella or Excess Liability Insurance for any differences in amounts specified. If Excess Liability Insurance is provided, it shall follow the form of the primary coverage.

viii. The City shall be entitled, upon request, at an agreed upon location, and without expense, to review certified copies of policies and endorsements thereto and may make any reasonable requests for deletion or revision or modification of particular policy terms, conditions, limitations, or exclusions except where policy provisions are established by law or regulations binding upon either of the parties hereto or the underwriter on any such policies.

ix. The City reserves the right to review the insurance requirements set forth during the effective period of the Contract and to make reasonable adjustments to insurance coverage, limits, and exclusions when deemed necessary and prudent by the City based upon changes in exposure, statutory law, court decisions, the claims history of the industry or financial condition of the insurance company as well as the Contractor.

x. The Contractor shall not cause any insurance to be canceled nor permit any insurance to lapse during the term of the Contract or as required in the Contract.

xi. The Contractor shall be responsible for premiums, deductibles and self-insured retentions, if any, stated in policies. Self-insured retentions greater than $499,999 shall be disclosed on the Certificate of Insurance.

xii. If any required insurance is written on a claims-made basis, the Certificate of Insurance shall state that the coverage is claims-made and the retroactive date shall be prior to or coincident with the date of the Contract and the coverage continuous and shall be provided for 24 months following the completion of the Contract.

xiii. The insurance coverages specified in Section B., Specific Insurance Requirements, are required minimums and are not intended to limit the responsibility or liability of the Contractor.

B. **Specific Insurance Coverage Requirements**: The Contractor, consistent with its status as an independent Contractor shall carry and will cause its Subcontractors to carry, at a minimum insurance in the types and

amounts indicated below for the duration of the Contract, including extension options and hold over periods, and during any warranty period.

i. **Worker's Compensation and Employers' Liability Insurance**: Coverage shall be consistent with statutory benefits outlined in the Texas Worker's Compensation Act (Section 401). The minimum policy limits for Employer's Liability are $1,000,000 bodily injury each accident, $1,000,000 bodily injury by disease policy limit and $1,000,000 bodily injury by disease each employee.

(1) The Contractor's policy shall apply to the State of Texas and include these endorsements in favor of the City of Austin:

a. Waiver of Subrogation, Form WC420304, or equivalent coverage;

b. 30 Days' Notice of Cancellation, Form WC420601, or equivalent coverage.

ii. **Commercial General Liability Insurance**: Coverage with minimum bodily injury and property damage per occurrence limits of $2,000,000 for coverages A (Bodily Injury and Property Damage) and B (Personal and Advertising Injury).

(1) The policy shall contain the following provisions:

a. Contractual liability coverage for liability assumed under the Contract and all other Contracts related to the project;

b. Independent Contractors coverage (Contractor/Subcontracted work);

c. Products/Completed Operations Liability for the duration of the warranty period;

d. If the project involves digging or drilling, provide Explosion, Collapse, and Underground (X, C, & U) Coverage.

(2) The policy shall also include these endorsements in favor of the City of Austin:

a. Waiver of Subrogation, Endorsement CG 2404, or equivalent coverage;

b. 30 Days' Notice of Cancellation, Endorsement CG 0205, or equivalent coverage;

c. The City of Austin listed as an additional insured, Endorsement CG 2010, or equivalent coverage**.**

iii. **Business Automobile Liability Insurance**: Coverage f or all owned, non-owned and hired vehicles with a minimum combined single limit of $2,000,000 per occurrence for bodily injury and property damage.

(1) The policy shall include these endorsements in favor of the City of Austin:

a. Waiver of Subrogation, Endorsement CA0444, or equivalent coverage;

b. 30 Days' Notice of Cancellation, Endorsement CA0244, or equivalent coverage;

c. The City of Austin listed as an additional insured, Endorsement CA2048, or equivalent coverage**.**

C. **Endorsements**: The specific insurance coverage endorsements specified above, or their equivalents must be provided. If endorsements, which are the equivalent of the required coverage, are proposed to be substituted for the required coverage, copies of the equivalent endorsements must be provided for the City's review and approval.

2 GOODS

2.1 DELIVERY AND PACKAGING TERMS:

A. **DELIVERY AND TRANSPORTATION CHARGES**: Deliverables shall be shipped F.O.B. destination, prepaid and allowed unless otherwise specified. Unless otherwise stated in this Contract, the Contractor's price shall be deemed to include all delivery and transportation charges of required mode of transportation. The City shall have the right to designate what method of transportation shall be used to ship the Deliverables. The place of delivery shall be set forth in the block of the Purchase Order or Delivery Order

entitled "SHIP TO" and/or Offer Sheet. Unless requested by the City, deliveries shall not be made on City-recognized legal holidays. The City expressly reserves all rights under law, to inspect the Deliverables at delivery before accepting them, and to reject defective or non-conforming Deliverables.

B. **NO REPLACEMENT OF DEFECTIVE TENDER:** Every tender or delivery of Deliverables must fully comply with all provisions of the Contract as to time of delivery, quality, and quantity. Any non-complying tender shall constitute a breach. However, the Contractor shall have the right to substitute a conforming tender; provided if the time for performance has not yet expired. The Contractor shall notify the City of the intention to cure and may then make a conforming tender within the time allotted in the Contract.

C. **ACCEPTANCE OF INCOMPLETE OR NON-CONFORMING DELIVERABLES:** All Deliverables must be shipped complete unless arrangements for partial shipments are made in advance. If, instead of requiring immediate correction or removal and replacement of defective or non-conforming Deliverables, the City prefers to accept it, the City may do so. The Contractor shall pay all claims, costs, losses and damages attributable to the City's evaluation of and determination to accept such defective or non-conforming Deliverables or Services. If any such acceptance occurs prior to final payment, the City may deduct such amounts as are necessary to compensate the City for the diminished value of the defective or non-conforming Deliverables or Services. If the acceptance occurs after final payment, such amount will be refunded to the City by the Contractor within 30 calendar days of notification provided by the City.

D. **RIGHT OF INSPECTION AND REJECTION:** The City expressly reserves all rights under law to inspect the Deliverables at delivery before accepting them, and to reject defective or non-conforming Deliverables

E. **CONTRACTOR PACKAGING DELIVERABLES:** The Contractor will package Deliverables in accordance with good commercial practice and shall include a packing list showing the description of each item, the quantity and unit price. Unless otherwise provided in the Specifications, each shipping container shall be clearly and permanently marked as follows: (a) The Contractor's name and address, (b) the City's name, address and Purchase Order or Delivery Order number and the price agreement number if applicable, (c) container number and total number of containers, e.g. box 1 of 4 boxes, and (d) the number of the container bearing the packing list. The Contractor shall bear the cost of packaging. Deliverables shall be suitably packed to secure lowest transportation costs and to conform with requirements of common carriers and any applicable Specifications. The City's count or weight shall be final and conclusive on shipments not accompanied by packing lists.

2.2 WARRANTY:

A. **PRICE**:

i. The Contractor certifies that the prices in the Offer have been arrived at independently without consultation, communication, or agreement for the purpose of restricting competition, as to any matter relating to such fees with any other firm or with any competitor.

ii. The Contractor warrants that its prices provided in this Contract are no higher than its current prices on orders for similar goods under similar terms of purchase.

B. **TITLE & RISK OF LOSS**: Title to and risk of loss of the Deliverables shall pass to the City only when the City actually receives and accepts the Deliverables. The Contractor warrants that it has good and indefeasible title to all Deliverables furnished under the Contract, and that the Deliverables are free and clear of all liens, claims, security interests and encumbrances. The Contractor shall indemnify and hold the City harmless from and against all adverse title claims to the Deliverables.

C. **DELIVERABLES**: The Contractor warrants and represents that all Deliverables sold the City under the Contract shall be free from defects in design, workmanship or manufacture, and conform in all material respects to the Specifications, drawings, and descriptions in the Solicitation, to any samples furnished by the Contractor, to the terms, covenants and conditions of the Contract, and to all applicable State,

Federal or local laws, rules, and regulations, and industry codes and standards. Unless otherwise stated in the Contract, the Deliverables shall be new or recycled merchandise, and not used or reconditioned.

i. The Contractor may not limit, exclude or disclaim the foregoing warranty or any warranty implied by law; and any attempt to do so shall be without force or effect.

ii. Unless otherwise specified in the Contract, the warranty period shall be at least one year from the date of acceptance of the Deliverables or from the date of acceptance of any replacement Deliverables. If during the warranty period, one or more of the above warranties are breached, the Contractor shall promptly upon receipt of demand either repair the non-conforming Deliverables or replace the non-conforming Deliverables with fully conforming Deliverables, at the City's option and at no additional cost to the City. All costs incidental to such repair or replacement, including but not limited to, any packaging and shipping costs, shall be borne exclusively by the Contractor. The City shall endeavor to give the Contractor written notice of the breach of warranty within 30 calendar days of discovery of the breach of warranty, but failure to give timely notice shall not impair the City's rights under this Section.

iii. If the Contractor is unable or unwilling to repair or replace defective or non-conforming Deliverables as required by the City, then in addition to any other available remedy, the City may reduce the quantity of Deliverables it may be required to purchase under the Contract from the Contractor, and purchase conforming Deliverables from other sources. In such event, the Contractor shall pay to the City upon demand the increased cost, if any, incurred by the City to procure such Deliverables from another source.

iv. If the Contractor is not the manufacturer, and the Deliverables are covered by a separate manufacturer's warranty, the Contractor shall transfer and assign such manufacturer's warranty to the City. If for any reason the manufacturer's warranty cannot be fully transferred to the City, the Contractor shall fully assist and cooperate with the City to enforce such manufacturer's warranty for the benefit of the City.

i. Contractor warrants that all Equipment shall be at current engineering change levels and shall be eligible for the manufacturer's standard prime shift maintenance contract upon delivery.

2.3 WARRANTY BY CONTRACTOR AGAINST INFRINGEMENTS:

A. The Contractor represents and warrants to the City that: (i) the Contractor shall provide the City good and indefeasible title to the Deliverables and (ii) the Deliverables supplied by the Contractor in accordance with the Specifications in the Contract will not infringe, directly or contributorily, any patent, trademark, copyright, trade secret, or any other intellectual property right of any kind of any third party; that no claims have been made by any person or entity with respect to the ownership or operation of the Deliverables and the Contractor does not know of any valid basis for any such claims.

B. The Contractor shall, at its sole expense, defend, indemnify, and hold the City harmless from and against all liability, damages, and costs (including court costs and reasonable fees of attorneys and other professionals) arising out of or resulting from: (i) any claim that the City's exercise anywhere in the world of the rights associated with the City's' ownership, and if applicable, license rights, and its use of the Deliverables infringes the intellectual property rights of any third party; or (ii) the Contractor's breach of any of Contractor's representations or warranties Stated in this Contract.

C. In the event of any such claim, the City shall have the right to monitor such claim or at its option engage its own separate counsel to act as co-counsel on the City's behalf. Further, Contractor agrees that the City's Specifications regarding the Deliverables shall in no way diminish Contractor's warranties or obligations under this Paragraph and the City makes no warranty that the production, development, or delivery of such Deliverables will not impact such warranties of Contractor.

2.4 BUY AMERICAN ACT:

In accordance with applicable Federal Regulations, the City is restricted from using Federal funds for purchasing supplies that are not domestic end products, for use within the United States. Offerors shall deliver only domestic end products except to the extent that it specified delivery of foreign end products in the Buy American Act Certificate.

DEFINITIONS

1. **"Affiliate" –** including but not limited to, (i) Contractor's parent, subsidiaries, sister companies, partnerships, joint ventures, franchisees, assigns, business partners, contractors, subcontractors and consultants, controlling, controlled by or under common control of Contractor as they may change from time to time and (ii) Users, as they may change from time to time.
2. **"Amendment**" **–** a written document executed by both Parties that modifies the terms of this Contract, including referenced attachments.
3. **"Authorized Persons" –** the Contractor personnel (including subcontractor personnel) located in the contiguous United States having successfully completed the required background check and related requirements of the Contract.
4. **"Change Order Request" –** the written document provided by the City to Contractor requesting changes to Contractor's obligations under this Contract.
5. **"Change Order Response" –** the written document provided to the City by Contractor in response to City's Change Order Request.
6. **"City Confidential Information" –** (a) information provided by the City that is marked or identified as confidential, (b) information, including software, computer programs, documentation, processes, procedures, techniques, technical, financial, customer, personnel and other business information of a non-public nature that would reasonably be understood to be confidential whether or not marked or identified as confidential, (c) information generated by Contractor (or subcontractor) that contains, reflects, or is derived from Confidential Information, (d) Personal Identifying Information, (e) Restricted Data , and (f) all other information made confidential by federal, state or local law or regulation. City Confidential Information is part of City Data.
7. **"City Data" –** data or information (in any form) regarding the City or its customers that is created, collected, provided, obtained, or otherwise made available in connection with this Contract to an Authorized Person.

8. **"City Identified Contact" –** the person or persons designated in writing by the City to receive security incident notifications.
9. **"City" –** the City of Austin, Texas, a municipal corporation and subdivision of the State of Texas, or a department of same.
10. **"Cloud Service" –** any Service made available to Users via the Internet from a provider's servers as opposed to being provided from the City's own on-premises servers. In this instance, it would mean such Services provided by the Contractor.
11. **"Confidential Information" –** all written or oral information, which may be disclosed by either Party to the other, related to the business operations of either Party or a third party that has been identified as confidential or that by the nature of the information or the circumstances surrounding disclosure ought reasonably to be treated as confidential; "**City Confidential Information"** is a subsets of Confidential Information.
12. **"Contract" –** the final general authorizing document (including Change Orders thereto) utilized by the City to procure Services from Contractor and any attachments and appendices attached thereto.
13. **"Contract Price" –** the total amount to be paid to Contractor under any Purchase Order as it may be adjusted or changed in accordance with the terms of the final Contract.
14. **"Contractor" –** the contractor and its employees, subcontractors, agents and affiliates who are providing the services agreed to under the contract.
15. **"Contractor Information" –** all techniques, algorithms and methods or rights thereto owned by or licensed to Contractor during the term of this Contract and employed by Contractors in connection with the Services provided to City.
16. **"Contractor Software" –** software that was developed or licensed to Contractor independent of this Contract and which Contractor utilizes to provide the Subscription Services or the Non-subscription Services.
17. **"Data Breach" –** the unauthorized access by a non-authorized person(s) that results in the use, disclosure or theft of City's or City's customers' unencrypted Personally Identifiable Information or City Confidential Information.
18. "**Documentation" –** the documentation created by the Contractor for the Services provided but does not include customized documentation prepared under the Contract and which are Deliverables under the Contract, including the Statement of Work; such Deliverables are wholly owned by City and Contractor shall make no claim to such Deliverables.

19. **"Facility" –** the City designated facility or location set forth in the Purchase Order where Services are to be performed by Contractor or Supplier or software installed.
20. **"FACTA" –** the Fair and Accurate Credit Transactions Act, 15 U.S.C. §§ 1681-1681x**.**
21. **"Final Acceptance Date" –** the date upon which the City confirms that all Services and Work Products have been completed and tested and function in accordance with the terms of the Contract.
22. **"IaaS Subscription Schedule" –** the document, part of the Contract, executed by both Parties that sets out the Parties' rights and obligations with respect to City's access to and use of the IaaS services.
23. **"Infrastructure-as-a-Service"** (IaaS) **–** the capability provided to the consumer to provision processing, storage, networks and other fundamental computing resources where the consumer is able to deploy and run arbitrary software, which can include operating systems and applications. The consumer does not manage or control the underlying cloud infrastructure but has control over operating systems, storage, deployed applications and possibly limited control of select networking components (e.g., host firewalls).
24. **"Non-Public Data" –** data typically considered internal and used for city business or mission needs. All information is considered Non-Public unless otherwise classified or explicitly defined through the Information Governance Program or official policy or procedural documents.
25. **"Public Data"** means data typically created for public release or released to the public through management decision and/or a public information request.
26. **"Restricted Data"** means data typically exempt from public disclosure requirements under the provisions of applicable state or federal law. Examples of restricted information are regulated and confidential data.
27. **"Non-Subscription Services" –** the Services provided to City by Contractor under this Contract that are not included in the definition of Subscription Services. Non-subscription Services shall include, but not be limited to, consulting, implementation, customization and other services provided to City by Contractor under this Contract, together with all documentation provided by or otherwise required of Contractor for any of the consulting, implementation, customization or other Services it provides.
28. **"PaaS Subscription Schedule" –** the document, part of the Contract, executed by both Parties that sets out the Parties' rights and obligations with respect to City's access to and use of the PaaS services.
29. "**Party**" or "**Parties**" **–** the City and Contractor, individually or together, as applicable.
30. **"Personally Identifiable Information" –** information that can be used to distinguish or trace an individual's identity, either alone or when combined with other personal or identifying information that is linked or linkable to a specific individual. PII includes, but is not limited to, personal information and/or personal data. Some forms of PII are considered Restricted Data and require additional protection, including, but not

limited to, Sensitive Personal Information (SPI), Sensitive and/or Protected PII, and Protected Health Information (PHI).

31. **"Platform-as-a-Service"** (PaaS) **–** the capability provided to the City to deploy onto the cloud infrastructure consumer-created or -acquired applications created using programming languages and tools supported by the provider. This capability does not necessarily preclude the use of compatible programming languages, libraries, services and tools from other sources. The consumer does not manage or control the underlying cloud infrastructure, including network, servers, operating systems or storage, but has control over the deployed applications and possibly application hosting environment configurations.
32. "**Purchase Order**" **–** the general authorizing document (including Change Orders thereto) utilized by the City to procure Services from Contractor under this Contract and any attachments and appendices attached thereto.
33. **"SaaS Software Application"** and **"SaaS Software" –** the computer software listed on a SaaS Subscription Schedule to which Contractor has granted City access and use as part of the Subscription Services. This includes any customization, other derivative works, upgrades, releases, fixes, patches, etc. related to the software that Contractor develops or deploys during the term of this Contract, together with all documentation provided by or otherwise required of Contractor for any of the software, customization, other derivative works, upgrades, releases, fixes, patches, etc.
34. **"SaaS Subscription Schedule" –** the document, part of the Contract, executed by both Parties that sets out the Parties' rights and obligations with respect to City's access to and use of the SaaS Software Application.
35. **"Security Incident" –** any actual or potential unauthorized disclosure of, or unauthorized access to, City Confidential Information; or a violation or imminent threat of violation of computer security policies, acceptable use policies, or violation or imminent threat of violation of industry standard security practices.
36. **"Service Level Agreement" (SLA) –** a written agreement between both the City and the Contractor that is subject to the terms and conditions of the Contract that, unless otherwise agreed, includes (1) the technical service level performance promises, (i.e. metrics for performance and intervals for measure), (2) description of service quality, (3) identification of roles and responsibilities, (4) security responsibilities and notice requirements, (5) how disputes are discovered and addressed, and (6) any remedies for performance failures by or otherwise required of Contractor for any of the software, customization, other derivative works, upgrades, releases, fixes, patches, etc.
37. **"Service Levels" –** the performance specifications for work performed by the Contractor under a SaaS Subscription Schedule or Statement of Work.

38. **"Services" –** work, direction of work, installation services, technical information, technical consulting, software programming and development, software maintenance and support services, or other professional and technical services furnished by Contractor as described in detail in the final Contract.
39. **"Software"** – the computer programs in source code, object code or binary form or in any other form, including any related or included computer programs, whether owned by Licensor or licensed to Licensor by a third party which has authorized Licensor to sublicense such computer programs, and including any documentation or related materials concerning the application, use, training of users, theory of operation, maintenance or any other aspect of the Software.
40. **"Software-as-a-Service" (SaaS) –** the Services provided to the City to use the Contractor's offering running on non-City owned infrastructure. The User does not manage or control the underlying cloud infrastructure including network, servers, operating systems, storage or even individual application capabilities, with the possible exception of limited user-specific application configuration settings.
41. "**Specifications**" **–** those technical specifications attached to the Contract and to which the Services and Work Products supplied by Contractor must conform.
42. **"Statement/Scope of Work" –** a written statement of Deliverables including Services and, ultimately, the Contract, which describes the City's Service needs and expectations.
43. **"Subscription Services" –** City's access to and use of and Contractor's provision of the SaaS Software Applications and other Services listed on a SaaS Subscription Schedule and in accordance with the terms and conditions set forth in the SaaS Subscription Schedule and Contract documents, as appropriate.
44. **"Third Party" –** any natural person or legal entity other than Contractor and City.
45. **"Transition Date" –** the date upon which it is established to City's satisfaction that the SaaS Software Application is stable enough to support City's production processing.
46. **"User Information" –** all information directly or indirectly obtained from Users accessing the SaaS Software Applications where such information is obtained by Contractor or by any of its employees, representatives, agents or any Third Parties having contractual privity with Contractor or who are under Contractor's supervision or control.
47. **"User" –** City's employees, agents, consultants, outsourcing companies, contractors and others who are authorized by City to access and use the SaaS Software Applications and any part or portion of the Subscription Services or non-Subscription Services in the performance of their duties for City.
48. **"Work Product" –** all deliverables and other materials, products or modifications developed or prepared for City by Contractor under this Contract, including without limitation, any integration software or other software, all data, program images and text viewable on the Internet, any HTML code relating thereto, or

any program code, including program code created, developed or prepared by Contractor under or in support of the performance of its obligations under this Contract, including manuals, training materials and documentation, but excluding the Contractor's Software.

SCOPE OF WORK

SOLICITATION NO. RFP 1100 DTB3021

SUBSTATION RELAY PANELS

1.0 Purpose

Contractor shall provide Substation Relay Panels for various substations.

2.0 Term of Contract

The term of the contract shall commence upon execution, unless otherwise specified, and remain in effect for an initial term of 24 months. The Contract may be extended beyond the initial term for up to three additional 12-month periods at the City's sole option.

3.0 Tasks/Requirements

3.1 Contractor's Responsibilities

The Contractor shall perform the following tasks:

- Contractor shall acknowledge receipt of the Purchase Order and provide an estimated delivery date within 5 days of PO issue.
- Contractor shall adhere to the agreed upon lead time of equipment. AE shall be notified if lead time changes occur, and shall provide a timely plan of action to address delay.
- Contractor shall ship the ordered equipment to Austin Energy at the address listed in 4.0 Delivery Requirements section of this document.
- Contractor shall submit an Invoice for the Purchase Order after the equipment is delivered to Austin Energy. Invoices shall be submitted per section 5.0 Invoice Requirements of this document.

3.2 Austin Energy's Responsibilities

Austin Energy will perform the following tasks:

- Place Purchase Order with Contractor within established lead times.
- Identify Point-of-Contact (POC) for delivery coordination.
- Process invoices and issue payments to the Contractor within the agreed-upon timeline.

4.0 Delivery Requirements

4.1 Delivery shall be made to the following location unless otherwise specified in the purchase order or via email: Shipments shall be made F.O.B. destination with full freight allowed and prepaid.

Delivery Location:	
Delivery Address:	Austin Energy ATTN: Neal Ashmore 2526 Kramer Lane, Building E Austin, TX 78758
Days/Hours of Operation:	Monday – Thursday, 7AM-3PM

4.2 Deliveries must be scheduled Monday through Thursday between 7:00 a.m. and 3:00 p.m. Deliveries shall not be made on City-recognized legal holidays, unless requested by Austin Energy.

4.3 All deliveries must be scheduled with the Austin Energy Contact for Delivery listed below. Delivery locations are not manned and unscheduled deliveries will not be accepted by Austin Energy. The Contractor shall schedule deliveries at least 48 hours prior to delivery and again 24 hours prior to delivery to confirm. The Contractor shall not deliver equipment unless scheduled and confirmed by the Austin Energy Contact for Delivery.

Austin Energy Contact for Delivery:
Neal Ashmore
Phone: (512) 505-3787
Email: neal.ashmore@austinenergy.com

4.4 The Contractor shall be responsible for manufacturing and shipping the unit such that it will withstand, without damage, all forces encountered during truck, water, or rail shipment. When shipping by rail, the Contractor shall use special cars designed to provide maximum protection from shock. Rail delivery will not be available directly to sites.

4.5 The Contractor shall be responsible for packing all equipment and parts for shipment such that they will not be damaged in shipment and can be safely stored outside for six (6) months. The Contractor shall be responsible for and make good any and all damages due to improper preparation or loading for shipment.

4.6 Delivery locations do not have loading docks. The Contractor shall ensure that all equipment is delivered to Austin Energy Delivery Address (refer to Section 4.1) via flat-bed trailer. Intermodal-style shipping container deliveries are NOT acceptable. Austin Energy does not have accommodations to safely unload material from this type of container. Unloading will be done by Austin Energy, with either a crane or an outdoor forklift. Unloading instructions shall be clearly posted on the equipment and shall also be provided to Austin Energy when the delivery is scheduled.

4.7 Whenever possible, equipment shall be delivered complete, fully assembled, and ready to energize.

4.8 The Contractor shall be responsible for strictly complying with all City of Austin and Austin Energy spill prevention, control, and containment regulations and guidelines. Exceptions will not be allowed.

4.9 The Contractor shall also be responsible for strictly complying with all OSHA, City of Austin, and Austin Energy safety rules and regulations. The Contractor shall be responsible for ensuring that all their subcontractors comply with OSHA, City of Austin, and Austin Energy safety rules and regulations. This includes use of all required safety equipment such as hard hats, safety harnesses, safety eyewear, steel toe footwear, and face masks. Exceptions will not be allowed.

4.10 The Contractor shall provide, with each delivery, a shipping, or Delivery Ticket showing the description of each item, quantity, and unit price.

5.0 Invoice Requirements

Austin Energy's preference is to have invoices sent to the email address listed below, unless otherwise specified by Austin Energy.

Address to send Invoices:
Email: Anthony.Fisher@austinenergy.com

For questions regarding your invoice/payment please contact the Austin Energy Contract Manager.

6.0 Service Advisories

6.1 The Contractor shall provide a copy of all applicable service advisories to Austin Energy. Copies of all service advisories shall be sent to the following address:

Address to send Service Advisories:
City of Austin – Austin Energy
ATTN: Sub. Const. & Maint. Superintendent and
Equip. & Matls. Engineering Supervisor
2526 Kramer Lane Bldg. "E"
Austin, Texas 78758

CITY OF AUSTIN ELECTRIC UTILITY DEPARTMENT

PURCHASE SPECIFICATION

FOR

SUBSTATION RELAY PANELS

DATE	PREPARED BY	ISSUANCE/REVISION	APPROVAL SIGNATURES
05/30/2017	M. Vela de Casillas	Revision	Scott Bayer
07/07/2017	M. Vela de Casillas	Revision	Scott Bayer
09/12/2017	M. Vela de Casillas	Revision	Scott Bayer
11/28/2022	Sonil Momin	Revision	Martha Vela de Casillas

REASON FOR REVISION	*AFFECTED PARAGRAPHS*
2022 Request for Proposal	All

This specification, until rescinded, shall apply to each future purchase and contract for the commodity described herein. Retain for future reference.

CITY OF AUSTIN ELECTRIC UTILITY DEPARTMENT
PURCHASE SPECIFICATION
FOR
SUBSTATION RELAY PANELS

1.0 SCOPE AND CLASSIFICATION

1.1 Scope

1.1.1 The City of Austin Electric Utility Department is hereafter referred to as Austin Energy (AE). This specification establishes the minimum requirements for the Contractor of substation relay panels including, but not limited to materials, construction, fabrication, wiring, testing, operating characteristics, and safety features.

1.1.2 The relay panels shall be used to protect high voltage transmission lines, substation equipment and the distribution system of Austin Energy.

1.2 Classification

1.2.1 This specification and attached drawings set forth the requirements for the Contractor and supply of substation relay panels.

1.2.2 The relay panels will be installed inside a temperature-controlled control house in an electric utility substation below an altitude of 1000 meters.

1.2.3 The Contractor of these panels shall have a minimum of five (5) years of experience in the production of relay panels for the United States electric utility market.

1.2.4 The relay panels offered under this specification shall have been in commercial service in an electric utility in the United States for a minimum of five (5) years in the configuration being offered.

1.2.5 To provide evidence that the requirements of paragraphs 1.2.3 and 1.2.4 are met, the Contractor shall provide a list of installations where the substation relay panels, like the ones being offered, have been operational for a minimum of five (5) years. The installation information shall include: date of initial operation, location, owner, and contact number of owner's representatives.

1.3 Warranty

Warranty period shall be five (5) years from the date of acceptance of the deliverables or from the date of acceptance of any replacement. If Contractor deems it necessary to repair at the factory, warranty shall include freight from Austin Energy to Contractor facility.

1.4 Single Point of Contact

The following person is designated as Contract Manager, and will act as the contact point between the City and the Contractor:

City of Austin – Austin Energy
Martha Vela de Casillas
2526 Kramer Lane, Bldg. "E"
Austin, Texas 78758
Phone: 512-505-7027
Martha.VeladeCasillas@austinenergy.com

2.0 APPLICABLE STANDARDS

These relay panels shall be manufactured with highest quality materials and workmanship in accordance with the latest applicable standards of the ANSI, IEEE, NEMA and NFPA.

3.0 FUNCTIONAL REQUIREMENTS

3.1 The Contractor shall provide relay panels of the height and width shown on the attached drawings.

3.2 The relay panels shall be fabricated as per the attached drawings and wired per the wiring diagrams provided at time of order.

3.3 The panels shall be rigid, self-supporting structures mounted on channel base sills with provisions for bolting to floor.

3.4 The panel shall be fabricated so that the control cables enter from the top.

3.5 The panels shall incorporate all the specified relaying and control equipment listed on the attached drawings along with any additional devices, as required, to provide operational panels. All listed devices shall be the responsibility of the vendor, unless specified otherwise in the solicitation.

3.6 The Contractor shall be able to accommodate modifications to standard relay panel designs for special applications.

3.7 The Contractor shall stock typical metal and electrical components for relay and metering panels that can be made available to Austin Energy to support emergency situations. Upon request, the Contractor shall expedite panel manufacturing process and delivery.

4.0 TYPES OF RELAY PANELS

4.1 Listed below are the different types of relay panel packages utilized by Austin Energy. The transmitted files in PDF format containing the master drawings are located in *Attachment 1*.

4.1.1 Unit Sub Diff. Relay Panel- Master Dwg Number R10_387_USD_Xa_Rev C.

4.1.2 421 Line Relay Panel- Master Dwg Number R10_421_Xa_Rev L.

4.1.3 RTAC Communications Panel - Master Dwg Number R10_RTAC_C_Rev F.

4.1.4 Double RTAC Communications Panel - Master Dwg Number R10_2RTAC_C_Rev E.

4.1.5 Capacitor Bank Panel - Master Dwg Number R10_CAP_487V_Va_Rev L.

4.1.6 Breaker Control Panel - Master Dwg Number R10_BKR_Ya_Rev K.

4.1.7 Double Breaker Panel – Master Dwg Number R10_DUAL_BKR_CNTL_Xa.Rev A.

4.1.8 Single Bus Diff. Relay Panel - Master Dwg Number R10_587ZSB_Za_Rev I.

4.1.9 Double Bus Diff. Relay Panel - Master Dwg Number R10_587ZDB_Za_Rev I.

4.1.10 Bus Tie Relay Panel - Master Dwg Number R10_BTIE_Ta_Rev D.

4.1.11 Auto Transformer Diff Relay Panel – Master Dwg Number R10_AT_XFR_Rev A.

4.1.12 Auto Transformer 387/487E Diff and Overcurrent Relay Panel – Master Dwg Number R10_AT_487E_X.Rev A.

4.1.13 Auto Transformer Dual Breaker Relay Panel - Master Dwg Number R10_AT_DUAL_BKR_CNTL_X. Rev A.

4.1.14 MOD Panel - Master Dwg Number R10_MOD_X_Rev A.

4.1.15 Feeder Breaker Door Plate (351S & 501) - Master Dwg Number R14X.01a_FDR_351S_501_Rev C.

4.1.16 Feeder Breaker Door Plate (351S) - Master Dwg Number R12_FDR_351-S_Xc_Rev C.

4.1.17 Standard Axion Panel – Master Dwg Number R10_COMM_AXION_Rev A.

4.1.18 PQ Meter, 2 Meter Option - Master Dwg Number R10_PQ_2_MET_X_Rev B.

4.1.19 PQ Meter, 4 Meter Option - Master Dwg Number R10_PQ_4_MET_Y_Rev B.

4.1.20 PQ Meter, 6 Meter Option - Master Dwg Number R10_PQ_6_MET_Z_Rev B.

4.1.21 EPS Meter, 2 Meter Option - Master Dwg Number R10_EPS_2_MET_X_Rev C.

4.1.22 EPS Meter, 4 Meter Option - Master Dwg Number R10_EPS_4_MET_Y_Rev C.

4.1.23 EPS Meter, 6 Meter Option - Master Dwg Number R10_EPS_6_MET_Z_Rev C.

5.0 CONSTRUCTION REQUIREMENTS

5.1 Exterior surfaces of the panels shall be free of non-specified holes, seams, dents, weld marks, burrs, loose scale, sharp edges, or other imperfections.

5.2 All screws, bolts, and washers shall be zinc-plated steel.

5.3 The panels shall be constructed of 1/8-inch aluminum (enforced with cross-bars where necessary). Door plates shall be made only of steel. All relays and equipment on the front surface shall be mounted flush or semi-flush.

5.4 After fabrication, if steel is used, the panel shall be painted with primer and two coats of enamel paint ANSI 70 semi-gloss gray in color exterior and white semi-gloss interior. Aluminum panels do not require painting; however they must be “brushed” or “buffed” to reduce the appearance of finger prints.

5.5 Control wiring shall be #12 AWG stranded tinned copper, switchboard wire, 600 volt insulation, type SIS, gray in color.

5.6 All control wiring shall be terminated on equipment case studs or terminal blocks and must be securely attached. *Splicing of any wire is unacceptable.*

5.7 All control wire shall have wire markers placed at each termination that identifies the termination location at the other end.

5.8 All terminations shall use insulated ring tongue terminals. Only ratcheting type tools are acceptable for crimping the terminal onto the wire. The Contractor shall ensure wires are securely attached to terminals. *Spade lugs or push on terminals are not acceptable* for any termination in the panels.

5.9 Control wire shall be tie wrapped between equipment cases and terminal blocks. Small groups of wire not in wiring duct shall be adequately supported and tie wrapped.

5.10 Control wire shall be routed vertically on the rear outside edge of the panel in two 2-inch by 4-inch slotted channel wiring duct, standard gray. The wiring duct shall be screwed to the panel. The wire duct shall be provided with covers that are removable without tools.

5.11 All control wire shall be cut to length.

5.12 The back of all devices shall be permanently labeled.

5.13 Terminal blocks shall be clearly identified and labeled as found on the connection diagrams. Legible hand lettering is acceptable.

5.14 Unless otherwise noted on project specific drawings or instructions, nameplates shall be machine printed plastic adhesive tape, black background with white letters, dimensions and text arrangement per drawings.

5.15 Each relay panel shall also be provided with an additional nameplate mounted on the back of the panel with the following information:

- Contractor Name
- Date of Manufacture
- Project Name when specified on Purchase Order Drawings
- Relay Panel Master Drawing Number
- AE Purchase Order Number

5.16 The control equipment and indicating devices shall be arranged as per the attached drawings.

5.17 Each panel shall include a full width copper ground bus bar 27 3/4-inch by 1-inch by 1/4-inch that makes metal to metal contact with the panel. Drill and tap the ground with at least 20 evenly spaced 10/32 holes with washer head grounding screws. Provide properly sized hole in the panel side at each end of the ground bus to

facilitate mounting an intertie bus bar to an adjacent panel bus bar. Provide one intertie bus bar with slotted holes and two ¼ inch copper bolts, nuts, and washers for the bus intertie connections. Supply, as part of the ground bus, two grounding terminals, one at each end, to accept #6 to 4/0 stranded copper.

5.18 Relay sockets shall be mounted on extruded aluminum Din Rail mounting tracks.

5.19 The relay panel shall be of a modular rack design to facilitate operation, maintenance, and future reconfiguration. Each device row shall be removable from the front of the panel. Areas that do not have devices mounted shall have a blank removable panel. Screws used to secure the panel plates to the channel shall be either self-tapping or drilled and tapped. The use of bolts and nuts to secure front plate panels is not acceptable.

5.20 The control panels shall be fabricated using strict workmanship guidelines ensuring AE requirements are met. The work area and tools should at a minimum adhere to the following:

5.20.1 The cable and wiring area shall have a controlled environment to limit entry of contamination.

5.20.2 Tools shall be clean and properly maintained by the Contractor. Calibration and inspection records shall be kept and made available to AE upon request.

5.21 The offered price shall include all equipment as listed on each drawing, the wiring of each terminal point of the equipment to terminal blocks/test switches within the panel, testing and delivery for each item bid.

5.22 Austin Energy will provide project specific panel drawings which will include (but not limited to) exact point to point schematic and wiring diagrams and nameplate information at time of order.

6.0 MATERIAL REQUIREMENTS

The Contractor shall subject all materials used in the construction of the relay panels to rigid quality assurance and control standards. The Contractor shall have complete traceability on all materials from receiving until final installation in the relay panel. Material tracking and inspection reports shall be made available to the AE inspector upon request.

7.0 TEST REQUIREMENTS

7.1 AE reserves the right to visit the manufacturing facility and to observe the relay panels while undergoing construction and testing. The Contractor may not charge AE for its right to visit the facility during construction and testing. AE shall be notified at least (3) weeks prior to start of the required tests. If three (3) weeks' notice is not given before the start of testing, AE reserves the right to have the Contractor, at its sole expense, delay the testing until AE inspector(s) assigned to this purchase are available. Furthermore, if the AE inspector(s) arrives on site and the relay panels are not ready for testing within eight (8) hours, AE reserves the right to postpone the testing for up to three (3) weeks and the Contractor shall reimburse AE for any travel and labor costs incurred by AE due to vendor delays.

7.2 Contractor shall completely assemble the panels before shipment and apply A/C and D/C voltage to each respective circuit for twenty-four (24) hours. After assembly the Contractor shall test the panels to ensure operation in the desired manner with appropriate targets, lights, inputs, and outputs. Test the panels for control, indication, and data acquisition. The panel Contractor shall functionally test each component separately. Additionally, the Contractor shall perform polarity and phase checks, check the wiring for continuity and the absence of shorts and grounds. These tests are not intended to replace any tests that the Contractor would normally perform to verify the integrity of the panels, but will be included in the standard test.

7.3 Contractor shall check all wiring for loose wires, improper crimps and other workmanship defects.

7.4 Austin Energy will provide AC and DC schematics to facilitate testing after bid award.

7.5 Relay panels must pass all AC, DC and performance tests stated in this specification prior to delivery to AE.

8.0 DOCUMENTATION REQUIREMENTS

8.1 The Contractor shall provide with each panel delivery, a copy of the AC, DC, and functional tests performed on the panel, demonstrating its compliance with all AE requirements.

8.2 Quality control and assurance tests results for panel fabrication shall be made available to AE upon request.

8.3 All reports shall be in English and in standard non-metric units of measure.

9.0 SHIPMENT

9.1 The Contractor shall be responsible for manufacturing and shipping the relay panels such that it will withstand, without damage, all forces encountered during shipment.

9.2 Shipment shall be made F.O.B destination with full freight allowed and prepaid. The delivery destination shall be 2526 Kramer Lane, Building E, Austin, TX 78758, unless otherwise stated at time of order.

9.3 An additional delivery cost will be allowed if the delivery destination is outside of Austin Energy service area. The Contractor shall justify the additional delivery cost by providing written explanation prior to delivery.

9.4 The Contractor shall be responsible for packing all parts for shipment so that they will not be damaged and can be stored outside for a reasonable period of time. The Contractor shall be responsible for and make good any and all damage due to improper preparation or loading for shipment.

10.0 DELIVERY

10.1 The Contractor is responsible for scheduling delivery and offload of relay panels and all accessories, including contracting and coordinating forklift services for offload. Austin Energy will be on hand to allow access to facilities only.

10.2 All deliveries must be scheduled. Delivery locations are not manned. Unscheduled deliveries cannot be accepted.

10.3 Deliveries must be scheduled Monday through Thursday between 8:00 a.m. and 3:00 p.m. Unless requested by the City, deliveries shall not be made on City-recognized legal holidays.

10.4 Deliveries shall be scheduled 48 hours prior to delivery with Neal Ashmore at (512) 505-3787 at neal.ashmore@austinenergy.com.

10.5 Deliveries shall be confirmed 24 hours prior to delivery with Neal Ashmore at (512) 505-3787.

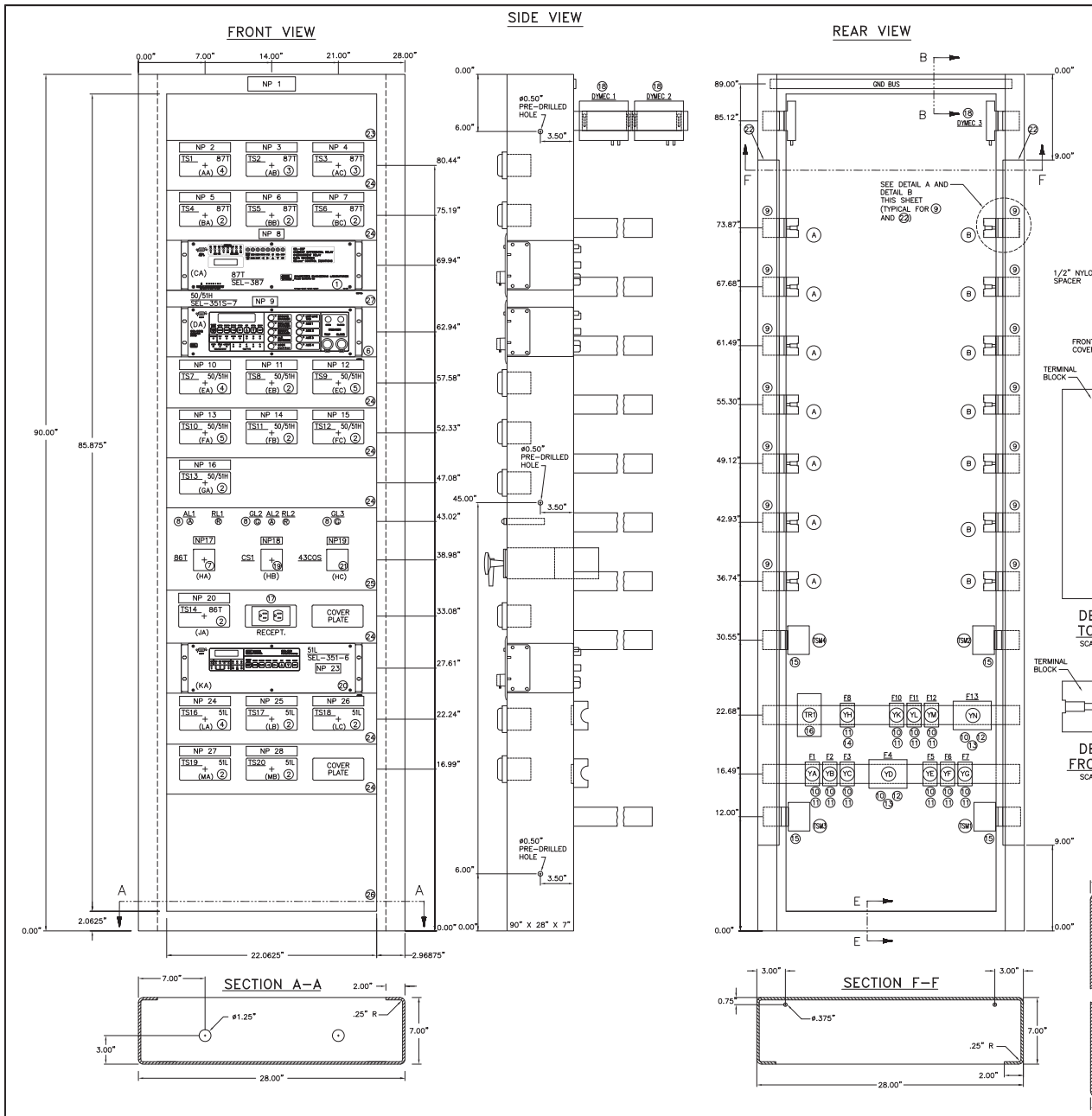
10.6 Delivery locations do not have loading docks. Unloading at delivery location will be done with a lift gate or forklift. When delivering to Kramer location: 2526 Kramer Lane, Building E, Austin, TX 78758, delivery shall be made by lift gate or other means as forklift will not be available. Unloading instructions shall be very clearly posted on the equipment. They must also be provided to Austin Energy when the delivery is scheduled.

10.7 The Contractor shall be responsible for strictly complying with all City of Austin and Austin Energy spill prevention, control, and containment regulations and guidelines. Exceptions will not be allowed.

10.8 The Contractor shall also be responsible for strictly complying with all OSHA, City of Austin, and Austin Energy safety rules and regulations. The Contractor shall be responsible for ensuring that all subcontractors comply with OSHA, City of Austin, and Austin Energy safety rules and regulations. This includes use of all required safety equipment such as hard hats, safety harnesses, safety eyewear, and steel toe footwear. Exceptions will not be allowed.

10.9 The Contractor shall provide, with each delivery, a shipping, or Delivery Ticket showing the description of each item, quantity, and unit price.

Attachment I
Relay Panel Master Drawings



ITEM	DEVICE NAME	QTY	BILL OF MATERIALS DESCRIPTION	STYLE OR MODEL NO.
1	87T	1	SEL-387 TRANSFORMER DIFFERENTIAL RELAY	0387613X5H2X4X1
2	TS4,5,6,8,11,12,13 14,17,18,19,20	12	STATES TYPE FMS TEST SWITCH 10 POLE WITH CLEAR COVER (NOTE 1.)	2FMS-10A1
3	TS2,3	2	STATES TYPE FMS TEST SWITCH 6 CURRENT 4 POTENTIAL POLE WITH CLEAR COVER (NOTE 1.)	2FMS-10E1
4	TS1,7,16	3	STATES TYPE FMS TEST SWITCH 8 CURRENT 2 POTENTIAL POLE WITH CLEAR COVER (NOTE 1.)	2FMS-10E4
5	TS9,10	2	STATES TYPE FMS TEST SWITCH 2 CURRENT 8 POTENTIAL POLE WITH CLEAR COVER (NOTE 1.)	2FMS-10GB
6	50/51H	1	SEL-351S7 OVERCURRENT RELAY WITH PUSH BUTTONS AND PILOT LIGHTS	0351S7XH63A5421
7	86T	1	ELECTROSWITCH TYPE 7810D LOCKOUT RELAY	7810D
8	GL2, GL3 RL1,2 AL1,2	6	G.E. TYPE ET-16 INDICATING LIGHTS W/RED, AMBER & GREEN LENS & LED'S (NOTE 2.)	0116B6708
9	A & B	14	G.E. TERMINAL BLOCK, 12 CIRCUIT, 600V, 30A WITH MOUNTING BRACKET	EB25B12
10	F1-7,10-13	24	BUSSMAN FRN-R SERIES, 3 AMP FUSE, 250V AC/125V DC, RK5 CLASS	FRN-R-3
11	F1-3,F5-8, F10-12	10	FERRAZ SHAWMUT FUSE BLOCK; PHENOLIC BASE, 2 POLE, 30 AMP, 250 VOLT	20317
12	F4,F13	2	FERRAZ SHAWMUT FUSE BLOCK; PHENOLIC BASE, 4 POLE, 30 AMP, 250 VOLT	20318 20315
13	F4,F13	2	SLUGS; CONDUCTIVE NEUTRAL	
14	F8	2	BUSSMAN FRN-R SERIES, 10 AMP FUSE, 250V AC/125V DC, RK5 CLASS	FRN-R-10
15	TSM1,2,3,4	4	STATES TYPE MTS TEST SWITCH, 12 POTENTIAL POLE WITH CLEAR COVER (NOTE 3.)	C3-212-A
16	TR1	1	ABB TYPE TRB-2 ZENER TRIPPING & BLOCKING UNIT	408C003G01
17	RECPT.	1	GFCI RECEPTACLE, 20A 120V AC, NEMA 5-20R	
18	DYMEC 1,2,3	3	DYMEC SERIAL COPPER TO FIBER MEDIA CONVERTER AND LINK/ REPEATER RS-485	5846HRT-H
19	CS1	1	ELECTROSWITCH CONTROL SWITCH TYPE 24	2444D
20	51L	1	SEL-351-6 TIME OVERCURRENT RELAY	035163A3A542X1
21	43COS	1	ELECTROSWITCH TYPE ROTARY SWITCH 24203B - SWITCH PLATE 10D-2X5A	24203B
22	-	2	6' PANDUIT WIREWAY (6'x2.25"x4.5")	
23	INSERT PLATE	1	BLANK PLATE, 3RU	BLPL-03-00-A
24	INSERT PLATE	8	TEST SWITCH MOUNTING PLATE, 3RU	TSSW-03-03-A
25	INSERT PLATE	1	CONTROL SWITCH MOUNTING PLATE, 3 POSITION, 5RU	CTRL-05-03-A
26	INSERT PLATE	1	BLANK PLATE, 7RU	BLPL-07-00-A
27	INSERT PLATE	1	BLANK PLATE, 1RU	BLPL-01-00-A

NAME PLATE SCHEDULE

IDENT.	*	FIRST LINE	SECOND LINE	THIRD LINE
NP 1	-	PANEL X	TRANSFORMER XXX	
NP 2	-	(SEE R10.Xb)		
NP 3	-	(SEE R10.Xb)		
NP 4	-	(SEE R10.Xb)		
NP 5	-	(SEE R10.Xb)		
NP 6	-	(SEE R10.Xb)		
NP 7	-	(SEE R10.Xb)		
NP 8	-	XX-XXX	XFMR DIFF RELAY	87T
NP 9	-	XX-XXX	XFMR HI SIDE O/C RELAY	50/51H
NP 10	-	(SEE R10.Xb)		
NP 11	-	(SEE R10.Xb)		
NP 12	-	(SEE R10.Xb)		
NP 13	-	(SEE R10.Xb)		
NP 14	-	(SEE R10.Xb)		
NP 15	-	(SEE R10.Xb)		
NP 16	-	(SEE R10.Xb)		
NP 17	-	XX-XXX	XFMR DIFF LOCKOUT	86T
NP 18	-	XX-60XM	CONTROL SWITCH	CS1
NP 19	-		SUPERVISORY	DISABLE
NP 20	-	(SEE R10.Xb)		
NP 21	-			
NP 22				
NP 23		XX-XXX	XFMR LO SIDE O/C RELAY	51L
NP 24		(SEE R10.Xb)		
NP 25		(SEE R10.Xb)		
NP 26		(SEE R10.Xb)		
NP 27		(SEE R10.Xb)		
NP 28		(SEE R10.Xb)		
NP 29				

NOTES:

1. ALL TEST SWITCHES INSTALLED SHOULD HAVE ALL BLACK COLORED HANDLES.
2. LED LIGHTS AND LENS PART NUMBER
   --RED: 116B6708G43R73R4
   --GREEN: 116B6708G43G73G4
   --AMBER: 116B6708G43A73A4
3. TSM1-TSM4 ARE FRONT CONNECTED SWITCHES WITH ALL RED COLORED HANDLES.

NO	DATE	REVISION	TASKNUM	DSGN	CHK	DWN	CHK	AS-BUILT	BY
6									
5									
4									
3									
2									
1		REVISION C - UPDATE BILL OF MATERIALS		JP	TL	PKW			
0	12-18-09	REVISION B - 43COS ADDITION, DNP CNTL, & MISCELLANEOUS		DCS	XG	JDC	-		

FOR CONSTRUCTION / DATE

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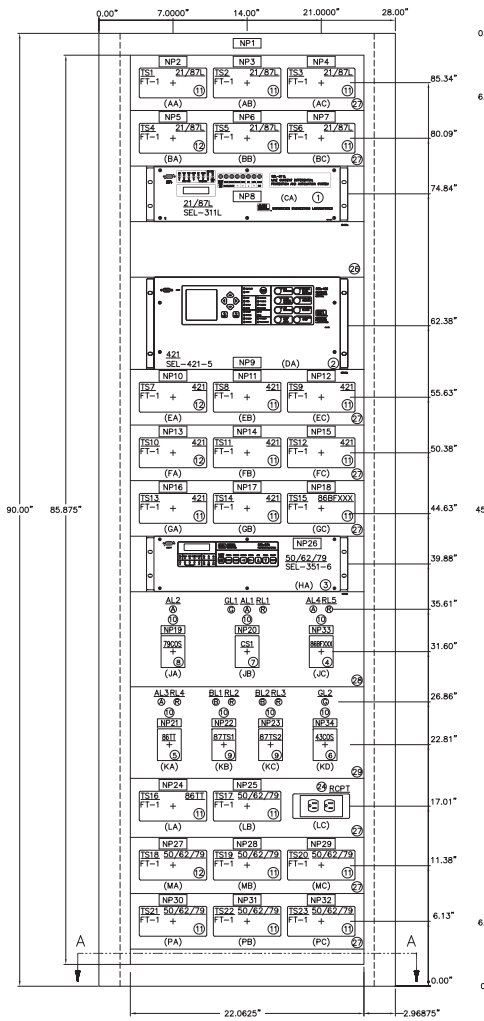
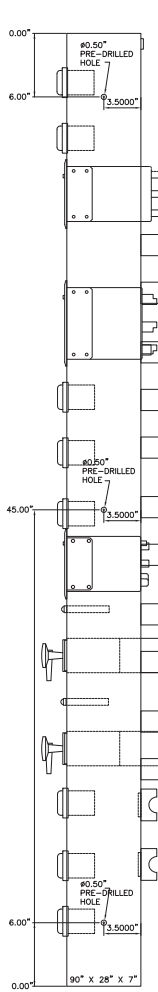
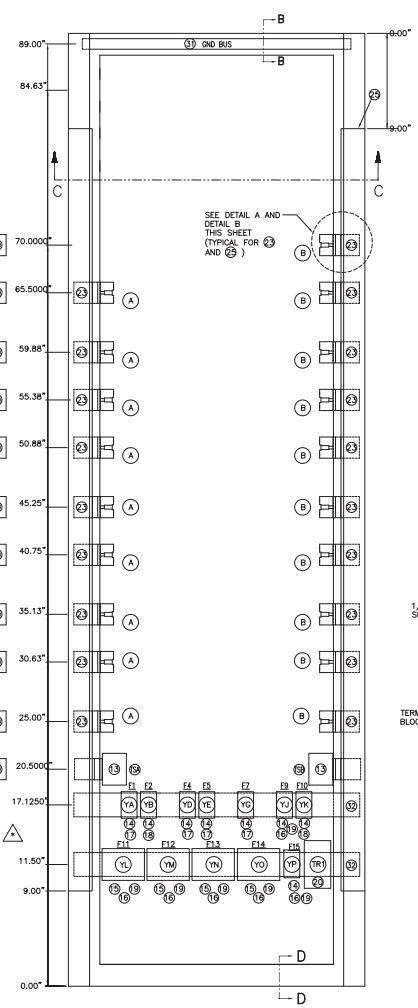
AUSTIN ENERGY
POWER DELIVERY DIVISION
TRANSMISSION ENGINEERING

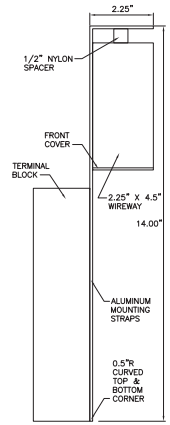
TITLE :
XXXX SUBSTATION
PANEL LAYOUT
XX-XXX UNIT SUB DIFF REL PNL X

MASTER NO.	SCALE
R10_387_USD_Xa_REV C	3/16"=1"
FILE NAME	
XXXX_10_Xa.DWG	
DRAWING NUMBER	
7B XXXX R10.Xa	

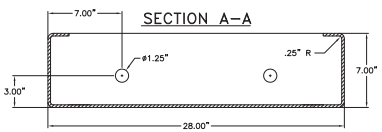


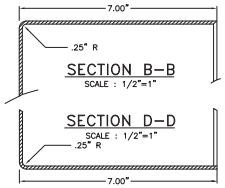


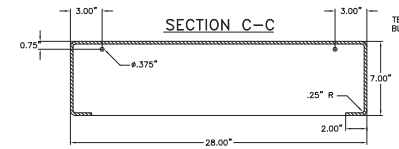


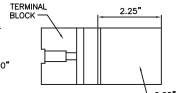


DETAIL A
TOP VIEW
SCALE : 1/2"=1"









DETAIL B
FRONT VIEW
SCALE : 1/2"=1"

BILL OF MATERIALS

ITEM	DEVICE NAME	QTY	DESCRIPTION	STYLE/MODEL NO.
1	21/87L	1	SEL-311L CURRENT DIFFERENTIAL AND DISTANCE RELAY	0311L0HCC3254X1XX
2	421	1	SEL-421 DISTANCE RELAY	04215615XB2X4H68484XX
3	50/62/79	1	SEL-351-6 OVERCURRENT RELAY	035163C3D542X2
4	86BFXXX	1	ELECTROSWITCH TYPE 7810D LOCKOUT RELAY	7810D
5	86TT	1	ELECTROSWITCH ELECTRONIC RESET LOCKOUT RELAY	7828DD
6	43COS	1	ELECTROSWITCH TYPE ROTARY SWITCH WITH ENABLE/DISABLE FACEPLATE ENGRAVING CODE:010D-2X13DB	24203B
7	CS1	1	ELECTROSWITCH CONTROL SWITCHES TYPE 24	2444D
8	79COS	1	ELECTROSWITCH TAGGING OR CUT-OUT RELAY WITH ON/OFF FACEPLATE ENGRAVING CODE:088D-2X5A	92230DE
9	87TS1,2	2	ELECTROSWITCH ROTARY SWITCH	24304B
10	AL1-4, BL1,2, GL1,2, RL1-5	13	GE TYPE ET-16 INDICATING LIGHTS W/RED, GREEN, AMBER LENS & LED'S (NOTE 2.)	116B6708G4
11	TS1-3,5,6,8,9, 11-17,19-23	19	STATES TYPE FMS TEST SWITCH 10 POTENTIAL POLE WITH CLEAR COVER (NOTE 1.)	2FMS-10A1
12	TS4,7,10,18	4	STATES TYPE FMS TEST SWITCH 6 CURRENT 4 POTENTIAL POLE WITH CLEAR COVER (NOTE 1.)	2FMS-10E1
13	TSA & TSB	2	STATES TYPE MTS TEST SWITCH, 12 POTENTIAL POLE WITH CLEAR COVER (NOTE 3.)	C3-212-A
14	F1,2,4,5,7,9,10,15	8	FERRAZ SHAWMUT FUSE BLOCK; PHENOLIC BASE, 2 POLE, 30 AMP, 250 VOLT	20317
15	F11-F14	4	FERRAZ SHAWMUT FUSE BLOCK; PHENOLIC BASE, 4 POLE, 30 AMP, 250 VOLT	20318, 20315
16	F9,11-15	14	BUSSMAN FRN-R SERIES, 3 AMP FUSE, 250 VAC/125 VDC, RK5 CLASS	FRN-R-3
17	F1,F4,F5,F7	8	BUSSMAN FRN-R SERIES, 6 AMP FUSE, 250 VAC/125 VDC, RK5 CLASS	FRN-R-6
18	F2,F10	4	BUSSMAN FRN-R SERIES, 10 AMP FUSE, 250 VAC/ 125 VDC, RK5 CLASS	FRN-R-10
19	F9,F11-F15	6	SLUGS, CONDUCTIVE NEUTRAL	
20	TR1	1	ABB TYPE TRB-2 ZENER TRIPPING & BLOCKING UNIT	408C003G01
21				
22				
23	A & B	19	G.E. TERMINAL BLOCK, 12 CIRCUIT, 600V, 30A WITH MOUNTING BRACKET	EB25B12
24	RCPT	1	GFCI RECEPT, 20A 120 VAC, NEMA 5-20R	
25	-	2	6' PANDUIT WIREWAY (6' X 2.25" X 4.5")	
26	INSERT PLATE	1	BLANK PLATE, 3RU	BLPL-03-00-A
27	INSERT PLATE	8	TEST SWITCH MOUNTING PLATE, 3 POSITION, 3RU	TSSW-03-03-A
28	INSERT PLATE	1	CONTROL SWITCH MOUNTING PLATE, 3 POSITION, 5RU	CTRL-05-03-A
29	INSERT PLATE	1	CONTROL SWITCH MOUNTING PLATE, 4 POSITION, 5RU	CTRL-05-04-A
30		21	TERMINAL BLOCK MOUNTING STRIP	
31	GND BUS	1	GROUND BAR	AE-GBAR-27
32		2	FUSE BLOCK MOUNTING STRAP	

NAME PLATE SCHEDULE

IDENT.	FIRST LINE	SECOND LINE	THIRD LINE
NP1	PANEL X	CKT XXX	
NP2	SEE R10.Xb		
NP3	SEE R10.Xb		
NP4	SEE R10.Xb		
NP5	SEE R10.Xb		
NP6	SEE R10.Xb		
NP7	SEE R10.Xb		
NP8		LINE DIFF. RELAY	21/87L
NP9		DISTANCE RELAY	421
NP10	SEE R10.Xb		
NP11	SEE R10.Xb		
NP12	SEE R10.Xb		
NP13	SEE R10.Xb		
NP14	SEE R10.Xb		
NP15	SEE R10.Xb		
NP16	SEE R10.Xb		
NP17	SEE R10.Xb		
NP18	SEE R10.Xb		
NP19	XX-XXX	RECLOSE CUT-OFF	79COS
NP20	XX-XXX	CONTROL SWITCH	CS1
NP21		TRANSFER TRIP LOCKOUT RELAY	86TT
NP22		21/87L XFER TRIP TS	87TS1
NP23		421 XFER TRIP TS	87TS2
NP24	SEE R10.Xb		
NP25	SEE R10.Xb		
NP26		BREAKER FAILURE/RECLOSE	50/62/79
NP27	SEE R10.Xb		
NP28	SEE R10.Xb		
NP29	SEE R10.Xb		
NP30	SEE R10.Xb		
NP31	SEE R10.Xb		
NP32	SEE R10.Xb		
NP33		BREAKER FAIL LOCKOUT RELAY	86BFXXX
NP34	XX-XXX	SUPERVISORY	43COS

NOTES:
1. ALL TEST SWITCHES INSTALLED SHOULD HAVE ALL BLACK COLORED HANDLES.
2. LED LIGHTS AND LENS PART NUMBER
--RED: 116B6708G43R73R4
--AMBER: 116B6708G43A73A4
--GREEN: 116B6708G43G73G4
--BLUE: 116B6708G43B73B4
3. TSA & TSB ARE FRONT CONNECTED SWITCHES WITH ALL RED COLORED HANDLES

*DIMENSIONS CHANGED PER PANEL MANUFACTURER REQUIREMENTS

△0 NEW DRAWING

NO	DATE	REVISION	TASKNUM	DSGN	CHK	DWN	AS-BUILT	BY
8								
7								
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4								
3								
2								
1								
0		LINE RELAYING STANDARD (421) - REVISION L		JP		AM		

FOR CONSTRUCTION / DATE

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AUSTIN ENERGY

ELECTRIC SERVICE DELIVERY
RELAY ENGINEERING

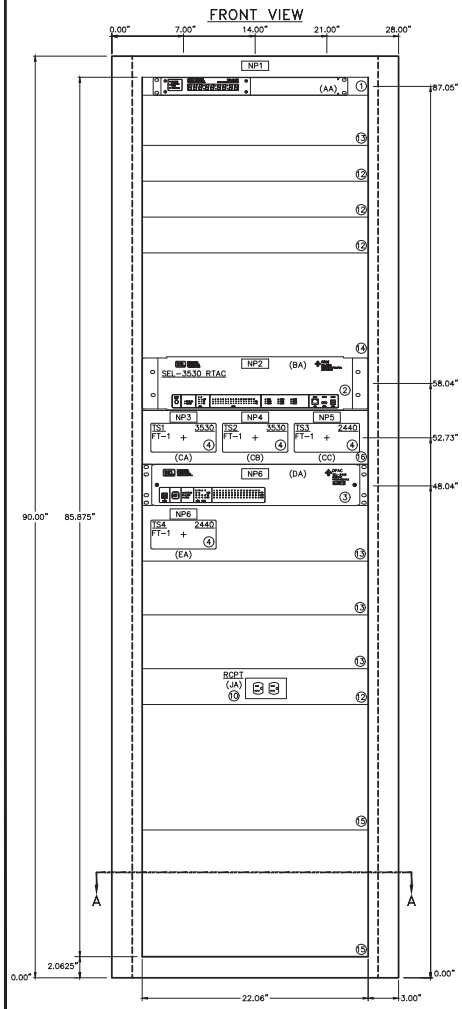
TITLE :

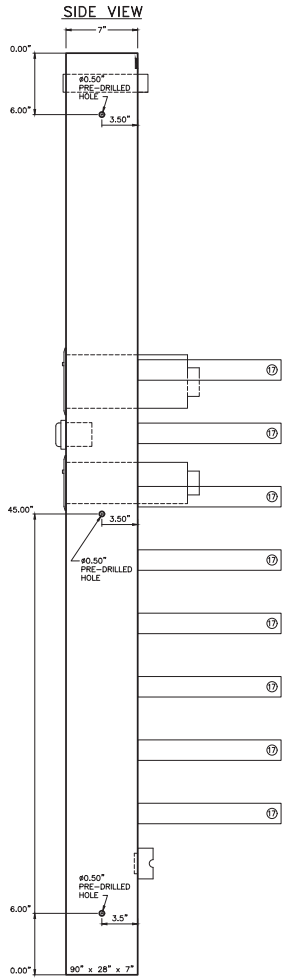
SUBNAME SUBSTATION
PANEL LAYOUT
CKT XXX LINE RELAY PANEL X

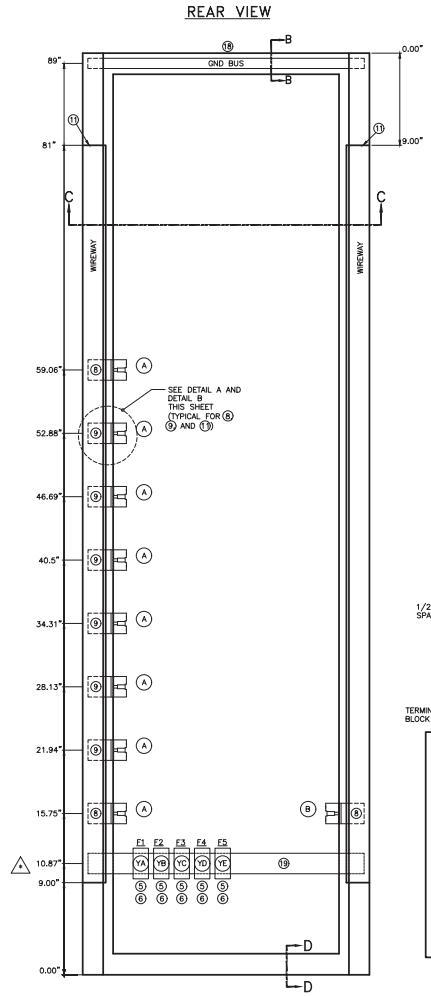
MASTER DWG NUMBER	SCALE
R10_421_Xa_Rev L	3/16"=1"

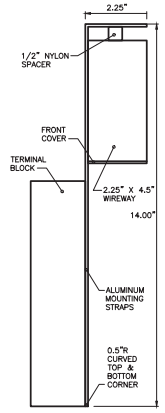
FILE NAME: R10_421_Xa_Rev L.dwg

DRAWING NUMBER: **7B SUB# R10.Xa**

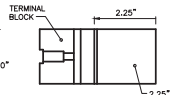




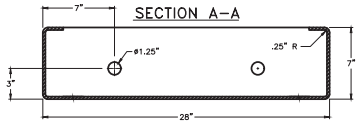


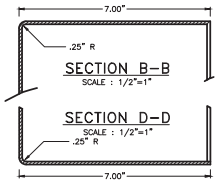


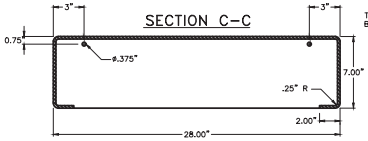
DETAIL A
TOP VIEW
SCALE : 1/2"=1"



DETAIL B
FRONT VIEW
SCALE : 1/2"=1"







BILL OF MATERIALS

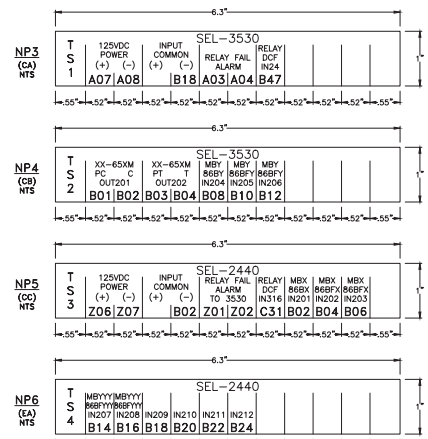
ITEM	DEVICE NAME	QTY	DESCRIPTION	STYLE/MODEL NO.
1	2407	1	SEL-2407 GPS CLOCK , 110-275VDC + ANTENNA & BASIC INSTALL KIT.	24070A01B
2	3530	1	SEL-3530 REAL TIME AUTOMATION CONTROLLER (RTAC), 48/125V DC, TWO 100 BASE-FX, 8 OUT, 24 IN	3530HB2D1211X0XXXXXX
3	2440	1	SEL-2440 I/O EXPANDER, 48/125V DC, TWO BASE-FX, 16 OUT, 32 IN	24402H11A1A11830
4	TS1-3	4	STATES TYPE FMS TEST SWITCH 10 POTENTIAL POLE WITH CLEAR COVER (NOTE 1.)	2FMS-10A1
5	F1-5	5	FERREZ SHAWMUT FUSE BLOCK; PHENOLIC BASE, 2 POLE, 30 AMP, 250 VOLT	20317
6	F1-5	10	BUSSMAN FRN-R SERIES, 3 AMP FUSE, 250 VAC/ 125 VDC, RK5 CLASS	FRN-R-3
7				
8	A,B	3	G.E. TERMINAL BLOCK, 12 CIRCUIT, 600V, 30A WITH MOUNTING BRACKET	EB25B12
9	A-20	6	BUSSMANN TERMINAL BLOCK, 20 CIRCUIT, 600V, 30A WITH MOUNTING BRACKET	TB200HB20 L1
10	RCPT	1	GFCI RECEPT, 20A 120 VAC, NEMA 5-20R	
11	–	2	6" PANDUIT WIREWAY (6"x2.25"x4.5")	
12	INSERT PLATE	4	BLANK PLATE, 2RU	BLPL-02-00-A
13	INSERT PLATE	4	BLANK PLATE, 3RU	BLPL-03-00-A
14	INSERT PLATE	1	BLANK PLATE, 6RU	BLPL-06-00-A
15	INSERT PLATE	2	BLANK PLATE, 7RU	BLPL-07-00-A
16	INSERT PLATE	1	TEST SWITCH MOUNTING PLATE, 3 POSITION, 3RU	TSSW-03-03-A
17		8	TERMINAL BLOCK MOUNTING STRIP	
18	GND BUS	1	GROUND BAR	AE-GBAR-27
19		1	FUSE BLOCK MOUNTING STRAP	
20				

NAME PLATE SCHEDULE

IDENT.	FIRST LINE	SECOND LINE	THIRD LINE
NP1	PANEL C	COMMUNICATION	RELAY PANEL
NP2	SEL-3530 (RTAC)		
NP3	SEE BELOW (THIS DWG)		
NP4	SEE BELOW (THIS DWG)		
NP5	SEE BELOW (THIS DWG)		
NP6	SEL-2440 (I/O EXPANDER)		
NP7	SEL-3530 (RTAC)		

NOTES:
1. ALL TEST SWITCHES INSTALLED SHOULD HAVE ALL BLACK COLORED HANDLES.

*DIMENSIONS CHANGED PER PANEL MANUFACTURER REQUIREMENTS



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7								
6								
5								
4								
3								
2								
1								
0		RELAY COMMUNICATION STANDARD (3530)-REVISION F		JP		AM		

FOR CONSTRUCTION / DATE

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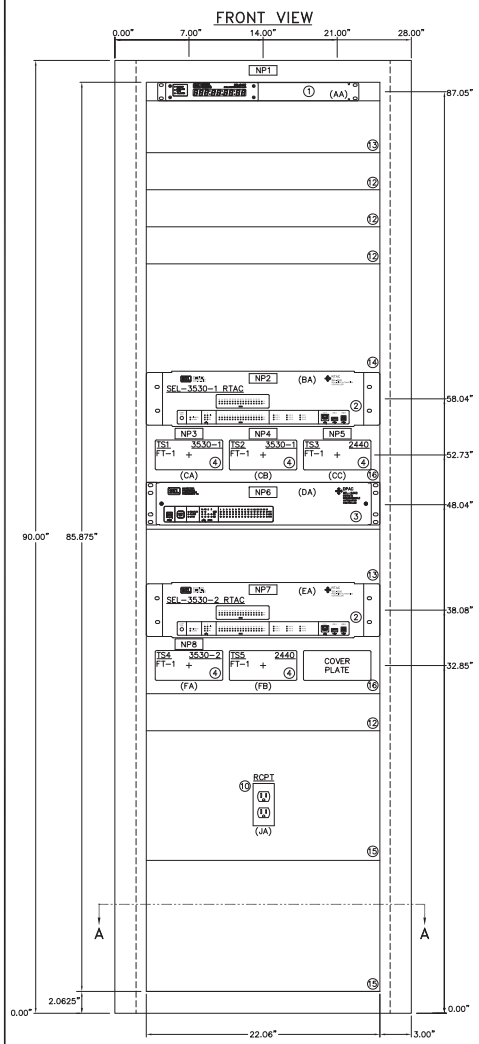
AUSTIN ENERGY

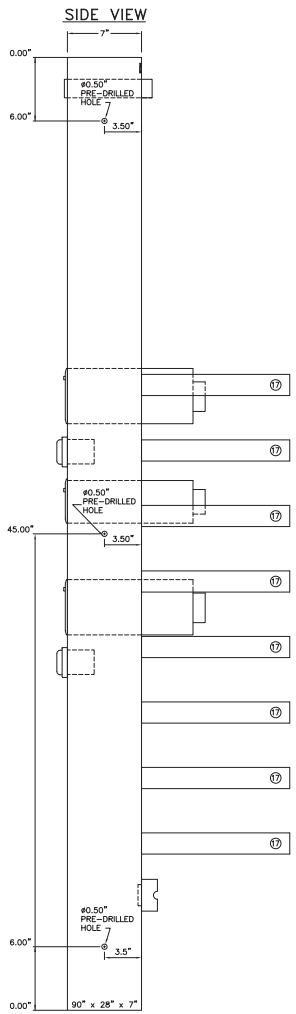
ELECTRIC SERVICE DELIVERY
RELAY ENGINEERING

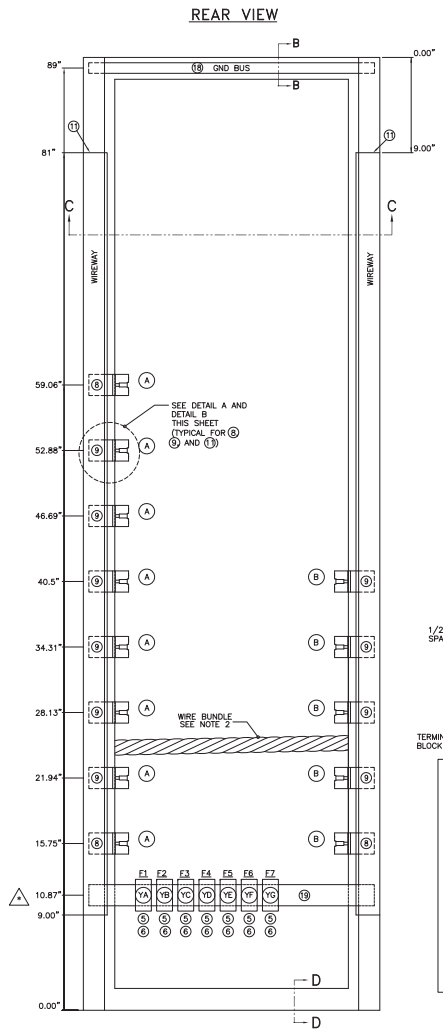
TITLE :

SUBNAME SUBSTATION
PANEL LAYOUT & NAMEPLATES
RELAY COMMUNICATION PANEL C

MASTER DWG NUMBER	SCALE
R10_RTAC_C_Rev F	3/16"=1"
FILE NAME	
R10_RTAC_C_Rev F.dwg	
DRAWING NUMBER	
7B SUB# R10.C	







BILL OF MATERIALS

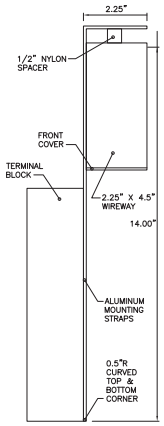
ITEM	DEVICE NAME	QTY	DESCRIPTION	STYLE/MODEL NO.
1	2407	1	SEL-2407 GPS CLOCK , 110-275VDC & ANTENNA	24070A01B
2	3530-1,3530-2	2	SEL-3530 REAL TIME AUTOMATION CONTROLLER (RTAC), 48/125V DC, TWO BASE-FX, 8 OUT, 24 IN, 33 PORT, EIA-232/EIA-485	3530HB2D1211A0XXXXXX
3	2440	1	SEL-2440 I/O EXPANDER, 48/125V DC, TWO BASE-FX, 16 OUT, 32 IN	24402H11A1A11B30
4	TS1-4	5	STATES TYPE FMS TEST SWITCH 10 POTENTIAL POLE WITH CLEAR COVER (NOTE 1.)	2FMS-10A1
5	F1-7	7	FERREZ SHAWMUT FUSE BLOCK; PHENOLIC BASE, 2 POLE, 30 AMP, 250 VOLT	20317
6	F1-7	14	BUSSMAN FRN-R SERIES, 3 AMP FUSE, 250 VAC/ 125 VDC, RK5 CLASS	FRN-R-3
7				
8	A,B	3	G.E. TERMINAL BLOCK, 12 CIRCUIT, 600V, 30A WITH MOUNTING BRACKET	EB25B12
9	A-20,B-20	10	BUSSMANN TERMINAL BLOCK, 20 CIRCUIT, 600V, 30A WITH MOUNTING BRACKET	TB200HB20 L1
10	RCPT	1	GFCI RECEPT, 20A 120 VAC, NEMA 5-20R	
11	-	2	6' PANDUIT WIREWAY (6'x2.25"x4.5")	
12	INSERT PLATE	4	BLANK PLATE, 2RU	BLPL-02-00-A
13	INSERT PLATE	2	BLANK PLATE, 3RU	BLPL-03-00-A
14	INSERT PLATE	1	BLANK PLATE, 6RU	BLPL-06-00-A
15	INSERT PLATE	2	BLANK PLATE, 7RU	BLPL-07-00-A
16	INSERT PLATE	2	TEST SWITCH MOUNTING PLATE, 3 POSITION, 3RU	TSSW-03-03-A
17		12	TERMINAL BLOCK MOUNTING STRIP	
18	GND BUS	1	GROUND BAR	AE-GBAR-27
19		1	FUSE BLOCK MOUNTING STRAP	
20				

NAME PLATE SCHEDULE

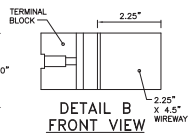
IDENT.	FIRST LINE	SECOND LINE	THIRD LINE
NP1	PANEL C	COMMUNICATION	RELAY PANEL
NP2	SEL-3530-1 (RTAC)		
NP3	SEE BELOW (THIS DWG)		
NP4	SEE BELOW (THIS DWG)		
NP5	SEE BELOW (THIS DWG)		
NP6	SEL-2440 (I/O EXPANDER)		
NP7	SEL-3530-2 (RTAC)		
NP8	SEE BELOW (THIS DWG)		

*DIMENSIONS CHANGED PER PANEL MANUFACTURER REQUIREMENTS

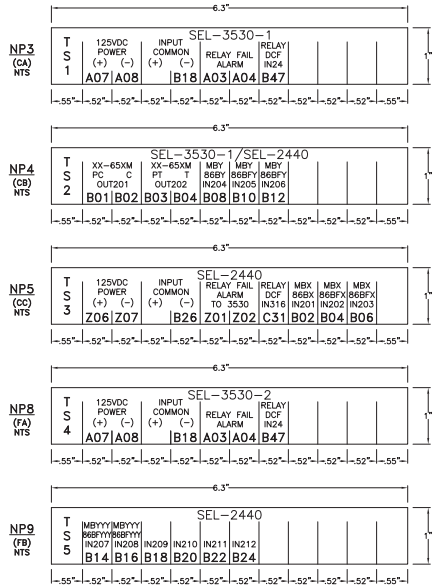
NOTES:
1. ALL TEST SWITCHES INSTALLED SHOULD HAVE ALL BLACK COLORED HANDLES.
2. WIRE BUNDLES, INSTALLED AS NEEDED TO CONNECT TERMINALS FROM THE A SIDE OF THE PANEL, TO THE B SIDE OF THE PANEL.

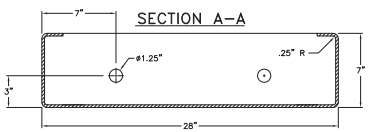


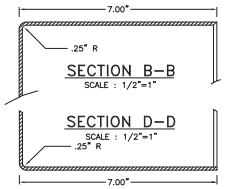
DETAIL A
TOP VIEW
SCALE : 1/2"=1"

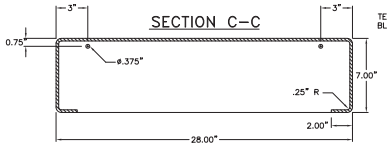


DETAIL B
FRONT VIEW
SCALE : 1/2"=1"









0 NEW DRAWING

NO	DATE	REVISION	TASKNUM	DSGN	CHK	DWN	AS-BUILT	BY
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1								
0		RELAY COMMUNICATION STANDARD (DOUBLE 3530)-REVISION E		JP		AM		

FOR CONSTRUCTION / DATE

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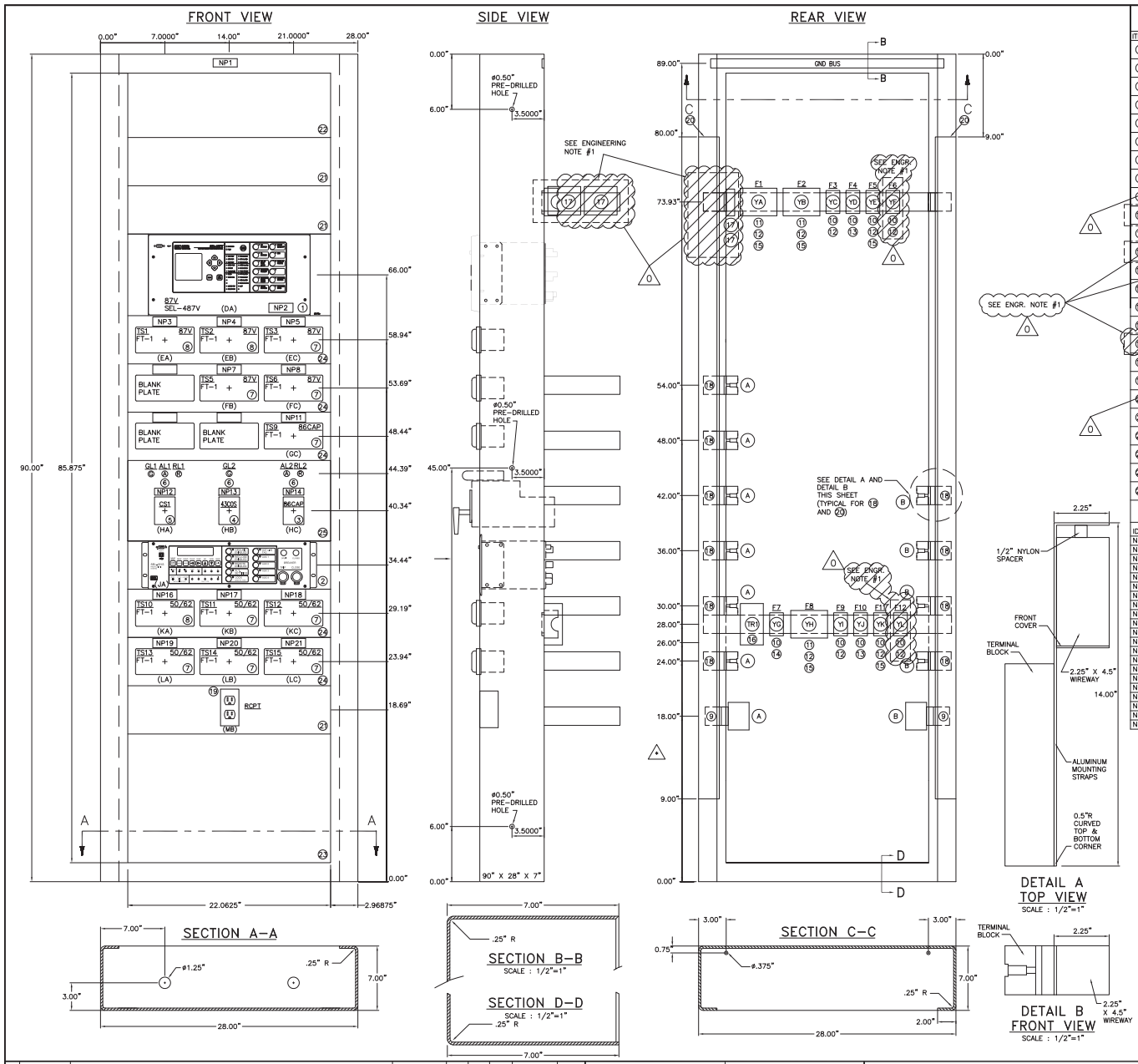
ELECTRIC SERVICE DELIVERY
RELAY ENGINEERING

TITLE :

SUBNAME SUBSTATION
PANEL LAYOUT & NAMEPLATES
RELAY COMMUNICATION PANEL C

MASTER DWG NUMBER: R10_2RTAC_C_Rev E
SCALE: 3/16"=1"
FILE NAME: R10_2RTAC_C_Rev E.dwg
DRAWING NUMBER: 7B SUB# R10.C



BILL OF MATERIALS

ITEM	DEVICE NAME	QTY	DESCRIPTION	STYLE/MODEL NO.
1	87V	1	SEL-487V CAPACITOR PROTECTION & CONTROL SYSTEM RELAY	0487V1X6151XB2X4H58484X
2	50/62	1	SEL-351S-7 OVERCURRENT RELAY WITH OUT106 & OUT211 "b" CONTACTS.	0351S7XHDJD5422
3	86CAP	1	ELECTROSWITCH TYPE 7810D LOCKOUT RELAY	7810D
4	43COS	1	ELECTROSWITCH TYPE ROTARY SWITCH WITH ENABLE/DISABLE FACEPLATE ENGRAVING CODE:0100-2X130B	24203B
5	CS1	1	ELECTROSWITCH CONTROL SWITCHES TYPE 24	2444D
6	AL1,AL2,GL1,GL2, RL1,RL2	6	GE TYPE ET-16 INDICATING LIGHTS W/RED, GREEN, AMBER LENS & LED'S (NOTE 2)	0116B6708G43
7	TS3, TS5, TS6, TS9, TS11-15	9	STATES TYPE FMS TEST SWITCH 10 POTENTIAL POLE WITH CLEAR COVER (NOTE 1)	2FMS-10A1
8	TS1,2,10	3	STATES TYPE FMS TEST SWITCH 6 CURRENT 4 POTENTIAL POLE WITH CLEAR COVER (NOTE 1)	2FMS-10E1
9	TSA & TSB	2	STATES TYPE MTS TEST SWITCH, 12 POTENTIAL POLE WITH CLEAR COVER (NOTE 3)	C3-212-A
10	F3-F5,F7,F8, F9-F11,	7	FERRAZ SHAWMUT FUSE BLOCK; PHENOLIC BASE, 2 POLE, 30 AMP, 250 VOLT	20317
11	F1,F2,F6	3	FERRAZ SHAWMUT FUSE BLOCK; PHENOLIC BASE, 4 POLE, 30 AMP, 250 VOLT	20316, 20315
12	F1-F3,F5,F7, F8,F9,F11,F12	14	BUSSMAN FRN-R SERIES, 3 AMP FUSE, 250 VAC/125 VDC, RK5 CLASS	FRN-R-3
13	F4,10	4	BUSSMAN FRN-R SERIES, 6 AMP FUSE, 250 VAC/125 VDC, RK5 CLASS	FRN-R-6
14	F7	2	BUSSMAN FRN-R SERIES, 10 AMP FUSE, 250 VAC/ 125 VDC, RK5 CLASS	FRN-R-10
15	F1,F2,F5,F8,F11	5	SLUGS, CONDUCTIVE NEUTRAL	
16	TR1	1	ABB TYPE TRB-2 ZENER TRIPPING & BLOCKING UNIT	408C003G01
17	DYMEC 1,2	2	DYMEC SERIAL COPPER TO FIBER MEDIA CONVERTER AND LINK/ REPEATER RS-232	5834HRT-H
18	A & B	10	G.E. TERMINAL BLOCK, 12 CIRCUIT, 600V, 30A WITH MOUNTING BRACKET	EB25B12
19	RCPT	1	GFCI RECEPT, 20A 120 VAC, NEMA 5-20R	
20	–	2	6' PANDUIT WIREWAY (6' X 2.25" X 4.5")	
21	INSERT PLATE	3	BLANK PLATE, 3RU	BLPL-03-00-A
22	INSERT PLATE	1	BLANK PLATE, 4RU	BLPL-04-00-A
23	INSERT PLATE	1	BLANK PLATE, 8RU	BLPL-08-00-A
24	INSERT PLATE	5	TEST SWITCH MOUNTING PLATE, 3 POSITION, 3RU	TSSW-03-03-A
25	INSERT PLATE	1	CONTROL SWITCH MOUNTING PLATE, 3 POSITION, 5RU	CTRL-05-03-A

NAME PLATE SCHEDULE

IDENT.	FIRST LINE	SECOND LINE	THIRD LINE
NP1	PANEL V	XX-900	
NP2		VOLTAGE DIFFERENTIAL RELAY	87V
NP3	SEE R10.Vb		
NP4	SEE R10.Vb		
NP5	SEE R10.Vb		
NP6			
NP7	SEE R10.Vb		
NP8	SEE R10.Vb		
NP9			
NP10			
NP11	SEE R10.Vb		
NP12	XX-900	CONTROL SWITCH	CS1
NP13	XX-900	SUPERVISORY	43COS
NP14		CAPACITOR LOCKOUT RELAY	86CAP
NP15		BREAKER FAILURE RELAY	50/62
NP16	SEE R10.Vb		
NP17	SEE R10.Vb		
NP18	SEE R10.Vb		
NP19	SEE R10.Vb		
NP20	SEE R10.Vb		
NP21	SEE R10.Vb		

NOTES:
1. ALL TEST SWITCHES INSTALLED SHOULD HAVE ALL BLACK COLORED HANDLES.
2. LED LIGHTS AND LENS PART NUMBER
--RED: 116B6708G43R73R4
--AMBER: 116B6708G43A73A4
--GREEN: 116B6708G43G73G4
3. TSA & TSB ARE FRONT CONNECTED SWITCHES WITH ALL RED COLORED HANDLES

ENGINEERING NOTES:
1. REMOVE ALL DYMECS AND ASSOCIATED FUSES WHEN CONNECTING TO AN SEL-3530.

*DIMENSIONS CHANGED PER PANEL MANUFACTURER REQUIREMENTS

0 NEW DRAWING

NO	DATE	REVISION	TASKNUM	DSGN	CHK	DWN	AS-BUILT	BY
8								
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1								
0		CAPACITOR BANK STANDARD – REVISION L		JP		AM		

FOR CONSTRUCTION / DATE

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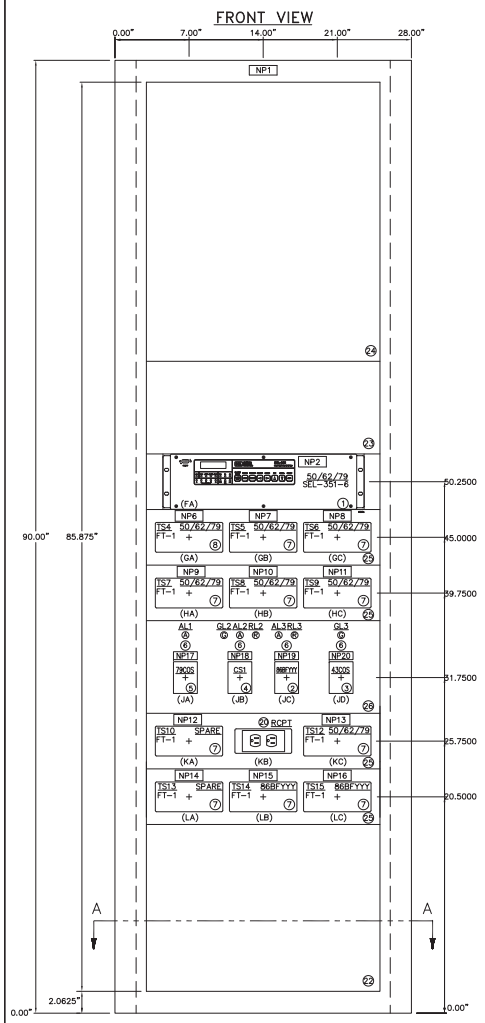
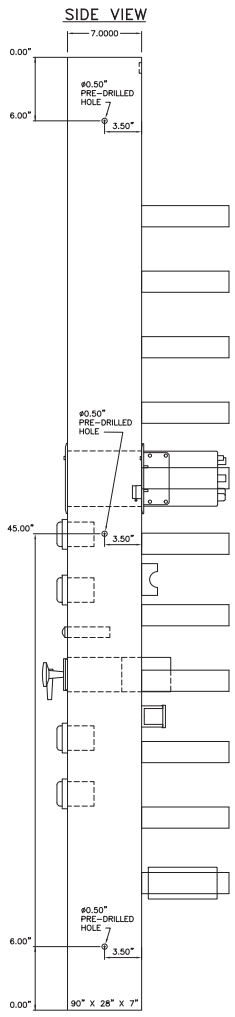
ELECTRIC SERVICE DELIVERY
RELAY ENGINEERING

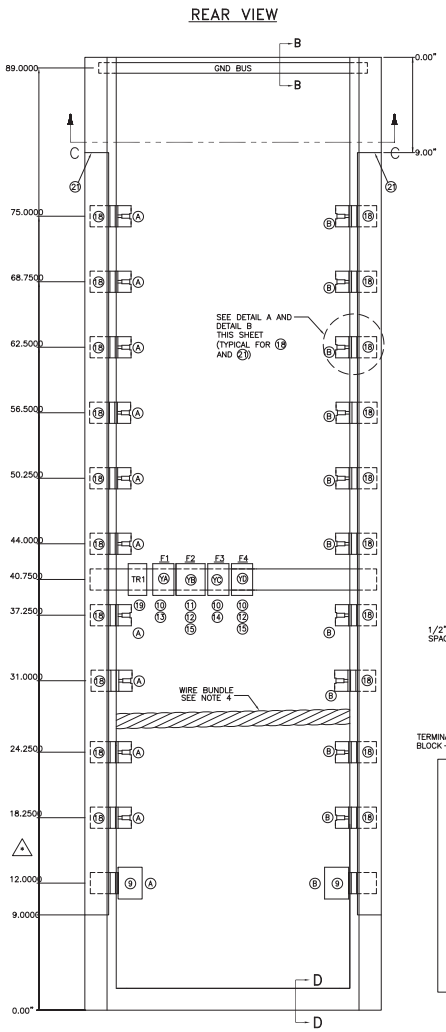
TITLE :

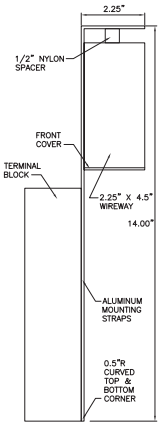
SUBNAME SUBSTATION
PANEL LAYOUT
XX-900 CAPACITOR BANK PANEL V

MASTER DWG NUMBER	SCALE
R10_CAP_487V_Va_Rev L	3/16"=1"
FILE NAME	
R10_CAP_487V_Va_Rev L.dwg	
DRAWING NUMBER	
7B SUB# R10.Va	

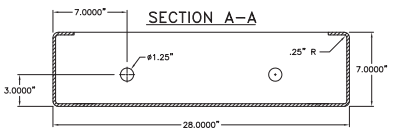


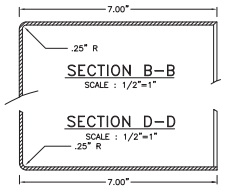


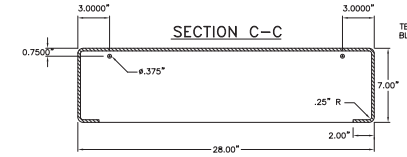


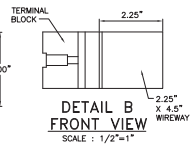


DETAIL A
TOP VIEW
SCALE : 1/2"=1"









DETAIL B
FRONT VIEW
SCALE : 1/2"=1"

BILL OF MATERIALS

ITEM	DEVICE NAME	QTY	DESCRIPTION	STYLE/MODEL NO.
1	50/62/79	1	SEL-351-6 BREAKER FAILURE/RECLOSING RELAY	035163C3D542X2
2	86BFYYY	1	ELECTROSWITCH TYPE 7810D LOCKOUT RELAY	7810D
3	43COS	1	ELECTROSWITCH TYPE ROTARY SWITCH WITH ENABLE/DISABLE FACEPLATE ENGRAVING CODE:01OD-2X13OB	24203B
4	CS1	1	ELECTROSWITCH CONTROL SWITCHES TYPE 24	2444D
5	79COS	1	ELECTROSWITCH TAGGING OR CUT-OUT RELAY WITH ON/OFF FACEPLATE ENGRAVING CODE:08BO-2X5A	9223DE
6	AL1-3,GL2 GL3,RL2,RL3	7	GE TYPE ET-16 INDICATING LIGHTS W/RED & AMBER LENS & LED'S (NOTE 2.)	116B6708G4
7	TS5-10, TS12-15	10	STATES TYPE FMS TEST SWITCH 10 POTENTIAL POLE WITH CLEAR COVER (NOTE 1.)	2FMS-10A1
8	TS4	1	STATES TYPE FMS TEST SWITCH 6 CURRENT 4 POTENTIAL POLE WITH CLEAR COVER (NOTE 1.)	2FMS-10E1
9	TSA & TSB	2	STATES TYPE MTS SWITCH,12 POTENTIAL POLE WITH CLEAR COVER (NOTE 3.)	C3-212-A
10	F1,F3,F4	3	FERREZ SHAWMUT FUSE BLOCK; PHENOLIC BASE, 2 POLE, 30 AMP, 250 VOLT	20317
11	F2	1	FERRAZ SHAWMUT FUSE BLOCK; PHENOLIC BASE, 4 POLE, 30 AMP, 250 VOLT	20315, 20318
12	F2,F4	4	BUSSMAN FRN-R SERIES, 3 AMP FUSE, 250 VAC/ 125 VDC, RK5 CLASS	FRN-R-3
13	F1	2	BUSSMAN FRN-R SERIES, 6 AMP FUSE, 250V AC/125V DC, RK5 CLASS	FRN-R-6
14	F3	2	BUSSMAN FRN-R SERIES, 10 AMP FUSE, 250 VAC/ 125 VDC, RK5 CLASS	FRN-R-10
15	F2,F4	2	SLUGS; CONDUCTIVE NEUTRAL	
16				
17				
18	A & B	20	G.E. TERMINAL BLOCK, 12 CIRCUIT, 600V, 30A WITH MOUNTING BRACKET	EB25B12
19	TR1	1	ABB TYPE TRB-2 ZENER TRIPPING & BLOCKING UNIT	408C003G01
20	RCPT	1	GFCI RECEPT, 20A 120 VAC, NEMA 5-20R	
21	–	2	6' PANDUIT WIREWAY (6'x2.25"x4.5")	
22	INSERT PLATE	1	BLANK PLATE, 9RU	BLPL-09-00-A
23	INSERT PLATE	1	BLANK PLATE, 5RU	BLPL-05-00-A
24	INSERT PLATE	1	BLANK PLATE, 15RU	BLPL-15-00-A
25	INSERT PLATE	4	TEST SWITCH MOUNTING PLATE, 3 POSITION, 3RU	TSSW-03-03-A
26	INSERT PLATE	1	CONTROL SWITCH MOUNTING PLATE, 4 POSITION, 5RU	CTRL-05-04-A

NAME PLATE SCHEDULE

IDENT.	FIRST LINE	SECOND LINE	THIRD LINE
NP1	PANEL Y	XX-YYY	
NP2		BREAKER FAILURE RELAY	50/62/79
NP3			
NP4			
NP5			
NP6	SEE R10.Yb		
NP7	SEE R10.Yb		
NP8	SEE R10.Yb		
NP9	SEE R10.Yb		
NP10	SEE R10.Yb		
NP11	SEE R10.Yb		
NP12	SEE R10.Yb		
NP13	SEE R10.Yb		
NP14	SEE R10.Yb		
NP15	SEE R10.Yb		
NP16	SEE R10.Yb		
NP17	XX-YYY	RECLOSE CUT-OFF	79COS
NP18	XX-YYY	CONTROL SWITCH	CS1
NP19		BREAKER FAIL LOCKOUT RELAY	86BFYYY
NP20	XX-YYY	SUPERVISORY	43COS

NOTES:
1. ALL TEST SWITCHES INSTALLED SHOULD HAVE ALL BLACK COLORED HANDLES.
2. LED LIGHTS AND LENS PART NUMBER
   --RED: 116B6708G43R73R4
   --AMBER: 116B6708G43A73A4
   --GREEN: 116B6708G43G73G4
3. TSA & TSB ARE FRONT CONNECTED SWITCHES WITH ALL RED COLORED HANDLES.
4. WIRE BUNDLES, INSTALLED AS NEEDED TO CONNECT TERMINALS FROM THE A SIDE OF THE PANEL, TO THE B SIDE OF THE PANEL.

*DIMENSIONS CHANGED PER PANEL MANUFACTURER REQUIREMENTS

0 NEW DRAWING

NO	DATE	REVISION	TASKNUM	DSGN	CHK	DWN	AS-BUILT	BY
8								
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0		BREAKER CONTROL STANDARD-REVISION K		BP		BP		

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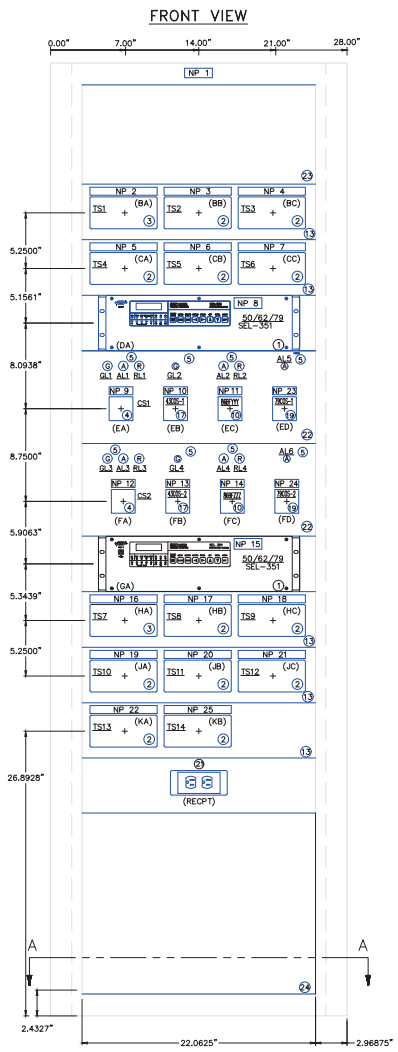
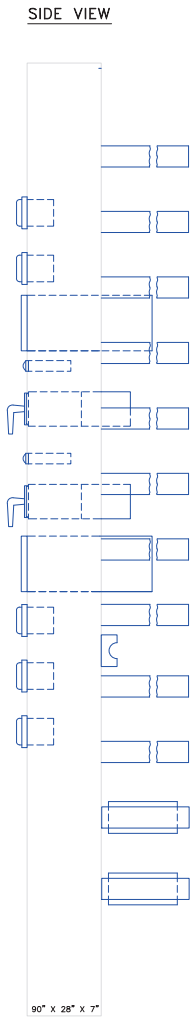
ELECTRIC SERVICE DELIVERY
RELAY ENGINEERING

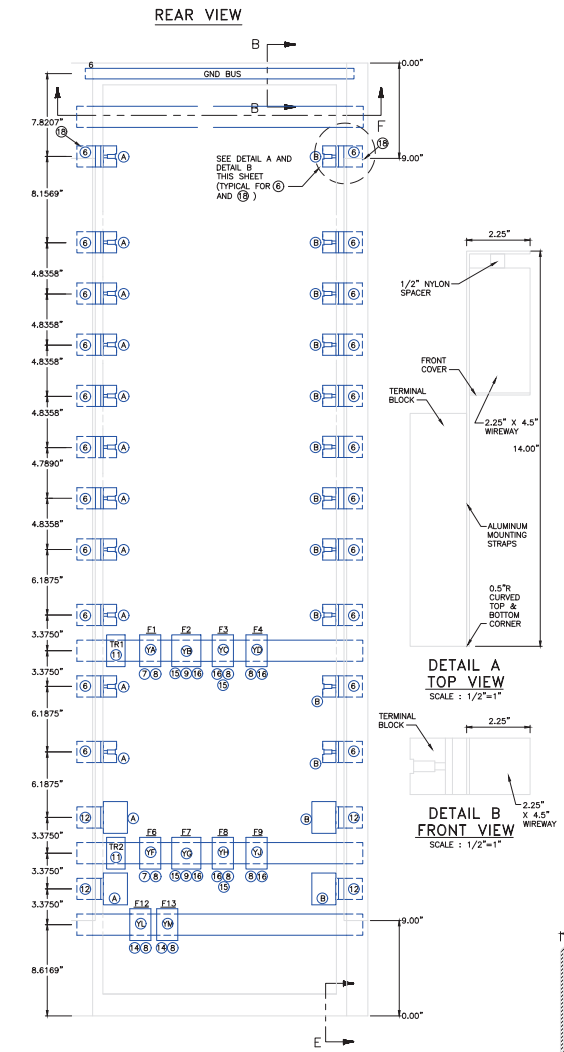
TITLE :

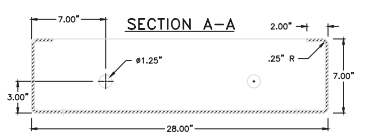
SUBNAME SUBSTATION
PANEL LAYOUT
XX-YYY BREAKER CONTROL PANEL Y

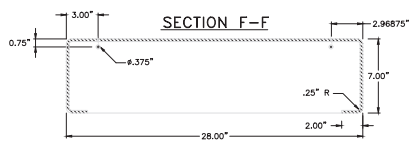
MASTER DWG NUMBER: R10_BKR_Ya_Rev K
SCALE: 3/16"=1"
FILE NAME: R10_BKR_Ya_Rev K.dwg
DRAWING NUMBER: **7B SUB# R10.Ya**

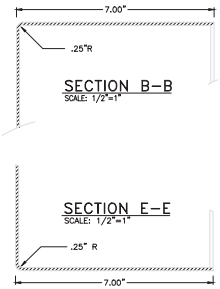












BILL OF MATERIALS

ITEM	DEVICE NAME	QTY	DESCRIPTION	STYLE OR MODEL NO.
1	50/62/79 50/62/79	2	SEL-351-6 – BREAKER FAILURE & CONTROL RELAY	035163A3C542X1
2	TS2-6,TS8-12 TS13,TS14	12	STATES TYPE FMS TEST SWITCH 10 POTENTIAL POLEWITH CLEAR COVER (NOTE 1.)	2FMS-10A1
3	TS1,7	2	STATES TYPE FMS TEST SWITCH 6 CURRENT 4 POTENTIAL POLE WITH CLEAR COVER (NOTE 1.)	2FMS-10E1
4	CS1,2	2	ELECTROSWITCH CONTROL SWITCHES TYPE 24	2444D
5	RL1-4 AL1-6,GL1-4	14	GE TYPE ET-16 INDICATING LIGHTS W/RED, GREEN, AMBER LENS & LED'S (NOTE 2.)	0116B6708
6	A & B TBD	22	G.E. TERMINAL BLOCK, 12 CIRCUIT, 600V, 30A WITH MOUNTING BRACKET	EB25B12
7	F1,6	4	BUSSMAN FRN-R SERIES, 6 AMP FUSE, 250 VAC/125 VDC, RK5 CLASS	FRN-R-6
8	F1,3,4,6,8,9 F12,13	8	FERREZ SHAWMUT FUSE BLOCK; PHENOLIC BASE, 2 POLE, 30 AMP, 250 VOLT	20317
9	F2,7	2	FERRAZ SHAWMUT FUSE BLOCK; PHENOLIC BASE, 4 POLE, 30 AMP, 250 VOLT	20318 20315
10	86BFYYY 86BFZZZ	2	ELECTROSWITCH TYPE 7810D LOCKOUT RELAY 20 NO & 20 NC CONTACTS	7810D
11	TR1,2	2	ABB TYPE TRB-2 ZENER TRIPPING & BLOCKING UNIT	408C003G01
12	A & B	4	STATES TYPE MTS TEST SWITCH, 12 POTENTIAL POLE WITH CLEAR COVER (NOTE 3.)	C3-212-A
13	INSERT PLATE	5	TEST SWITCH MOUNTING PLATE, 3RU	TSSW-03-03-A
14	F12,13	4	BUSSMAN FRN-R SERIES, 10 AMP FUSE, 250 VAC/ 125 VDC, RK5 CLASS	FRN-R-20
15	F2,F3 F7,F8	4	SLUGS, CONDUCTIVE NEUTRAL	
16	F2-4,F7-9	14	BUSSMAN FRN-R SERIES, 3 AMP FUSE, 250 VAC/125 VDC, RK5 CLASS	FRN-R-3
17	43COS-1 43COS-2	2	ELECTROSWITCH TYPE ROTARY SWITCH WITH ENABLE/DISABLE FACEPLATE ENGRAVING CODE: 010D-2X13DB	24203B
18	–	2	6' PANDUIT WIREWAY (6' X 2.25" X 4.5")	
19	79COS-1 79COS-2	2	ELECTROSWITCH TAGGING OR CUT-OUT RELAY WITH ON/OFF FACEPLATE ENGRAVING CODE: 08BD-2X5A	9223DE
20				
21	RECPT	1	GFCI RECEPTACLE, 20A, 120V AC, NEMA 5-20R	
22	INSERT PLATE	2	CONTROL SWITCH MOUNTING PLATE, 4 POSITION, 5RU	CTRL-05-04-A
23	INSERT PLATE	1	BLANK PLATE, 5RU	BLPL-05-00-A
24	INSERT PLATE	1	BLANK PLATE, 10RU	BLPL-10-00-A
25				
26				
27				

NAME PLATE SCHEDULE

IDENT.	*	FIRST LINE	SECOND LINE	THIRD LINE
NP 1	–	PANEL XX		
NP 2	–	(SEE R10.Xa)		
NP 3	–	(SEE R10.Xa)		
NP 4	–	(SEE R10.Xa)		
NP 5	–	(SEE R10.Xa)		
NP 6	–	(SEE R10.Xa)		
NP 7	–	(SEE R10.Xa)		
NP 8	–	BREAKER FAILURE	XX-YYY	50/62/79
NP 9	–	XX-YYY	CONTROL SWITCH	CS1
NP 10	–	XX-YYY	SUPERVISORY REMOTE	43COS-1
NP 11	–		BREAKER FAIL LOCKOUT RELAY	86BFYYY
NP 12	–	XX-ZZZ	CONTROL SWITCH	CS2
NP 13	–	XX-ZZZ	SUPERVISORY REMOTE	43COS-2
NP 14	–		BREAKER FAIL LOCKOUT RELAY	86BFZZZ
NP 15	–	BREAKER FAILURE	XX-ZZZ	50/62/79
NP 16	–	(SEE R10.Xa)		
NP 17	–	(SEE R10.Xa)		
NP 18	–	(SEE R10.Xa)		
NP 19	–	(SEE R10.Xa)		
NP 20	–	(SEE R10.Xa)		
NP 21	–	(SEE R10.Xa)		
NP 22	–	(SEE R10.Xa)		
NP 23	–		RECLOSE CUT-OFF	79COS-1
NP 24	–		RECLOSE CUT-OFF	79COS-2
NP 25	–	(SEE R10.Xa)		

NOTES:

1. ALL TEST SWITCHES INSTALLED SHOULD HAVE ALL BLACK COLORED HANDLES.
2. LED LIGHTS AND LENS PART NUMBER
   --RED: 116B6708G43R73R4
   --GREEN: 116B6708G43G73G4
   --AMBER: 116B6708G43A73A4
   --BLUE: 116B6708G43B73B4
3. TSA & TSB ARE FRONT CONNECTED SWITCHES WITH ALL RED COLORED HANDLES.

NO	DATE	REVISION	TASKNUM	DSGN	CHK	DWN	AS-BUILT	BY
8								
7								
6								
5								
4								
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2								
1								
0		REVISION A – UPDATE 351-6 & BILL OF MATERIALS		JP		AM		

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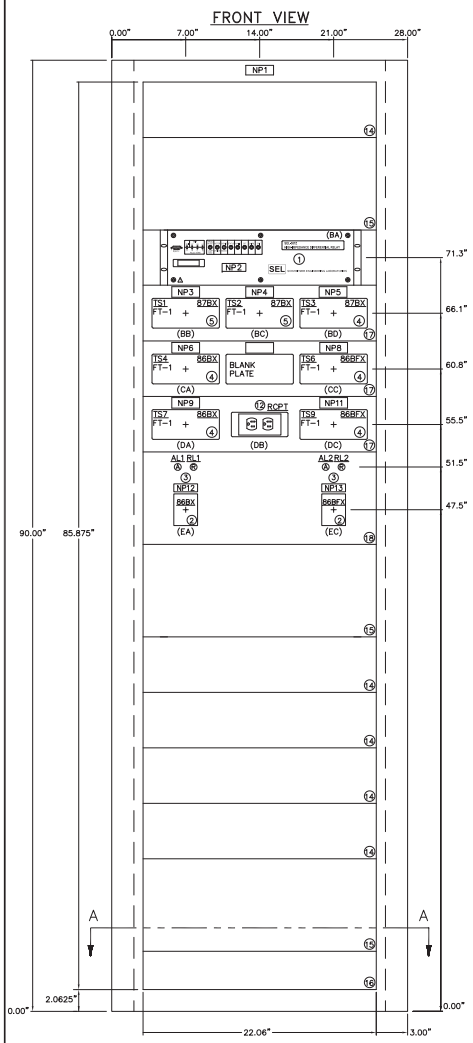
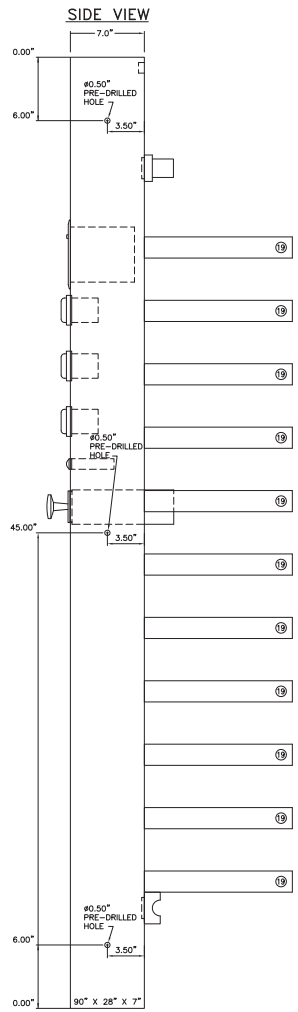
ELECTRIC SERVICE DELIVERY
RELAY ENGINEERING

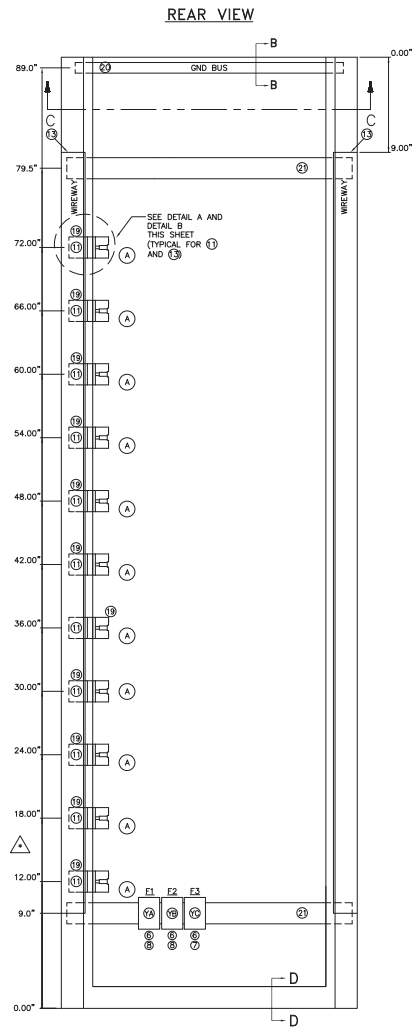
TITLE :

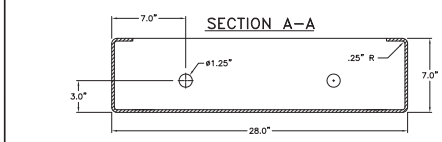
SUBNAME SUBSTATION
PANEL LAYOUT
XX-YYY & XX-ZZ BRK CONTROL PANEL X

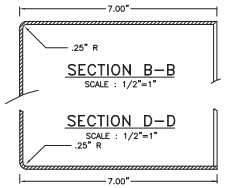
MASTER DWG NUMBER: R10_DUAL_BKR_CNTL_Xa.Rev A
SCALE: 3/16"=1"
FILE NAME: R10_DUAL_BKR_CNTL_Xa.Rev A.dwg
DRAWING NUMBER: **7B SUB# R10.Xa**

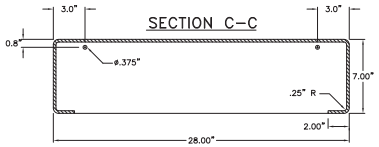


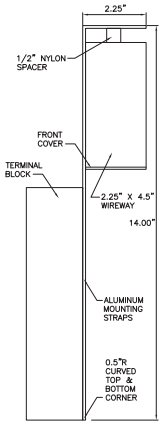




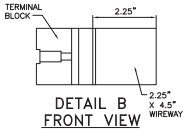








DETAIL A
TOP VIEW
SCALE : 1/2"=1"



DETAIL B
FRONT VIEW
SCALE : 1/2"=1"

BILL OF MATERIALS

ITEM	DEVICE NAME	QTY	DESCRIPTION	STYLE/MODEL NO.
1	87BX	1	SCHWEITZER ENGINEERING LABORATORIES: (SEL-587Z) HIGH-IMPEDANCE DIFFERENTIAL AND OVERCURRENT RELAY	0587Z0X325H12XX
2	86BX,86BFX	2	ELECTROSWITCH TYPE 7810D LOCKOUT RELAY	7810D
3	AL1, AL2, RL1, RL2	4	GE TYPE ET-16 INDICATING LIGHTS W/RED & AMBER LENS & LED'S (NOTE 2.)	116B6708G4
4	TS3,4,6,7,9	5	STATES TYPE FMS TEST SWITCH 10 POTENTIAL POLE WITH CLEAR COVER (NOTE 1.)	2FMS-10A1
5	TS1.TS2	2	STATES TYPE FMS TEST SWITCH 6 CURRENT 4 POTENTIAL POLE WITH CLEAR COVER (NOTE 1.)	2FMS-10E1
6	F1,F2,F3	3	FERREZ SHAWMUT FUSE BLOCK; PHENOLIC BASE, 2 POLE, 30 AMP, 250 VOLT	20317
7	F3	2	BUSSMAN FRN-R SERIES, 3 AMP FUSE, 250 VAC/ 125 VDC, RK5 CLASS	FRN-R-3
8	F1,F2	4	BUSSMAN FRN-R SERIES, 10 AMP FUSE, 250 VAC/ 125 VDC, RK5 CLASS	FRN-R-10
9				
10				
11	A	11	G.E. TERMINAL BLOCK, 12 CIRCUIT, 600V, 30A WITH MOUNTING BRACKET	EB25B12
12	RCPT	1	GFCI RECEPT, 20A 120 VAC, NEMA 5-20R	
13	–	2	6' PANDUIT WIREWAY (6'x2.25"x4.5")	
14	INSERT PLATE	5	BLANK PLATE, 3RU	BLPL-03-00-A
15	INSERT PLATE	3	BLANK PLATE, 5RU	BLPL-05-00-A
16	INSERT PLATE	1	BLANK PLATE, 2RU	BLPL-02-00-A
17	INSERT PLATE	3	TEST SWITCH MOUNTING PLATE, 3 POSITION, 3RU	TSSW-03-03-A
18	INSERT PLATE	1	CONTROL SWITCH PLATE, 2 POSITION, 5RU	CTRL-05-02-A
19		11	TERMINAL BLOCK MOUTING STRIP	
20	GND BUS	1	GROUND BAR	AE-GBAR-27
21		2	FUSE BLOCK MOUNTING STRAP	

NAME PLATE SCHEDULE

IDENT.	FIRST LINE	SECOND LINE	THIRD LINE
NP1	PANEL Z	BUS PROTECTION	
NP2	MBX	DIFFERENTIAL RELAY	87BX
NP3	SEE R10.Zb		
NP4	SEE R10.Zb		
NP5	SEE R10.Zb		
NP6	SEE R10.Zb		
NP8	SEE R10.Zb		
NP9	SEE R10.Zb		
NP11	SEE R10.Zb		
NP12	MBX BUS DIFF	LOCKOUT RELAY	86BX
NP13	MBX BREAKER FAILURE	LOCKOUT RELAY	86BFX

NOTES:
1. ALL TEST SWITCHES INSTALLED SHOULD HAVE ALL BLACK COLORED HANDLES.
2. LED LIGHTS AND LENS PART NUMBER
--RED: 116B6708G43R73R4
--AMBER: 116B6708G43A73A4

•DIMENSIONS CHANGED PER PANEL MANUFACTURER REQUIREMENTS

0 NEW DRAWING

NO	DATE	REVISION	TASKNUM	DSGN	CHK	DWN	AS-BUILT	BY
8								
7								
6								
5								
4								
3								
2								
1								
0		SINGLE BUS DIFFERENTIAL STANDARD (587Z) – REVISION 1		JDC		JDC		

FOR CONSTRUCTION / DATE

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ELECTRIC SERVICE DELIVERY
RELAY ENGINEERING

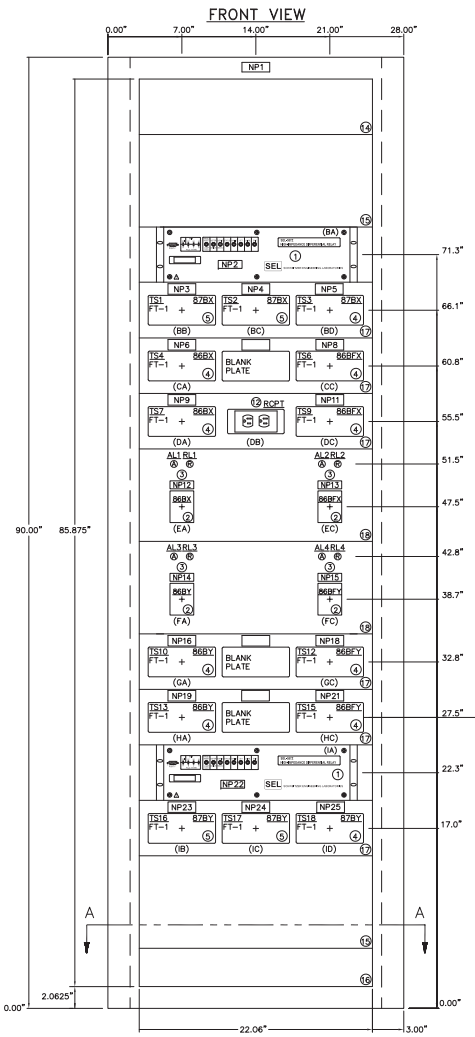
TITLE :

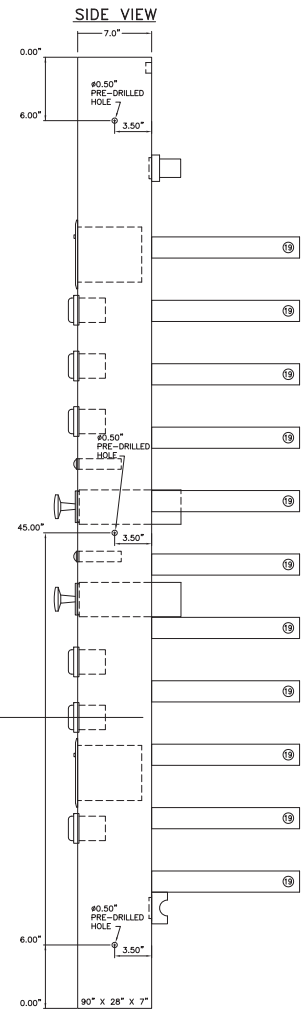
SUBNAME SUBSTATION
PANEL LAYOUT
MBX DIFFERENTIAL RELAY PANEL Z

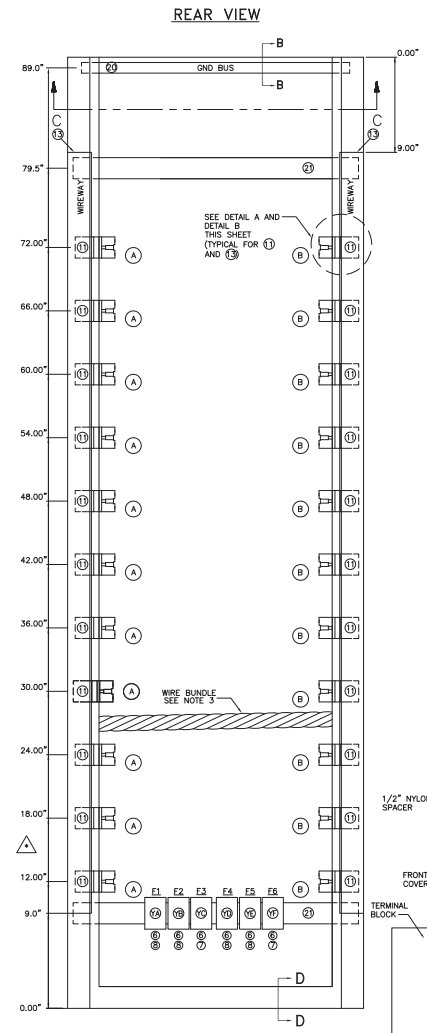
MASTER DWG NUMBER	SCALE
R10_587ZSB_Za_Rev 1	3/16"=1"

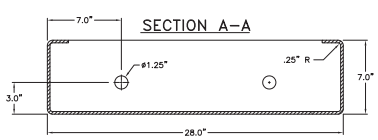
FILE NAME: R10_587ZSB_Za_Rev 1.dwg

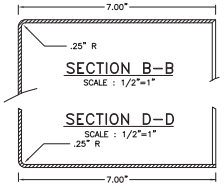
DRAWING NUMBER: **7B SUB# R10.Za**

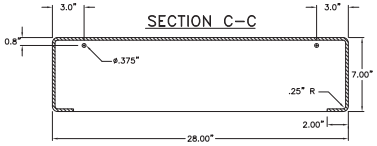


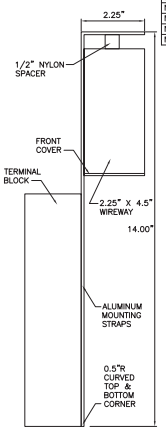




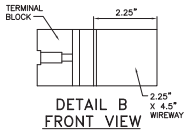








DETAIL A
TOP VIEW
SCALE : 1/2"=1"



DETAIL B
FRONT VIEW
SCALE : 1/2"=1"

BILL OF MATERIALS

ITEM	DEVICE NAME	QTY	DESCRIPTION	STYLE/MODEL NO.
1	87BX 87BY	2	SCHWEITZER ENGINEERING LABORATORIES: (SEL-587Z) HIGH-IMPEDANCE DIFFERENTIAL AND OVERCURRENT RELAY	0587Z0X325H12XX
2	86BX,86BFX 86BY,86BFY	4	ELECTROSWITCH TYPE 7810D LOCKOUT RELAY	7810D
3	AL1-4, RL1-4	8	GE TYPE ET-16 INDICATING LIGHTS W/RED & AMBER LENS & LED'S (NOTE 2.)	116B6708G4
4	TS3,4,6,7,9,10 TS12,13,15,18	10	STATES TYPE FMS TEST SWITCH 10 POTENTIAL POLE WITH CLEAR COVER (NOTE 1.)	2FMS-10A1
5	TS1,TS2 TS16,TS17	4	STATES TYPE FMS TEST SWITCH 6 CURRENT 4 POTENTIAL POLE WITH CLEAR COVER (NOTE 1.)	2FMS-10E1
6	F1,F2,F3,F4 F5,F6	6	FERREZ SHAWMUT FUSE BLOCK; PHENOLIC BASE, 2 POLE, 30 AMP, 250 VOLT	20317
7	F3,F6	4	BUSSMAN FRN-R SERIES, 3 AMP FUSE, 250 VAC/ 125 VDC, RK5 CLASS	FRN-R-3
8	F1,F2,F4,F5	8	BUSSMAN FRN-R SERIES, 10 AMP FUSE, 250 VAC/ 125 VDC, RK5 CLASS	FRN-R-10
9				
10				
11	A & B	22	G.E. TERMINAL BLOCK, 12 CIRCUIT, 600V, 30A WITH MOUNTING BRACKET	EB25B12
12	RCPT	1	GFCI RECEPT, 20A 120 VAC, NEMA 5-20R	
13	–	2	6' PANDUIT WIREWAY (6"x2.25"x4.5")	
14	~~INSERT PLATE~~	~~1~~ 2	BLANK PLATE, 3RU	BLPL-03-00-A
15	INSERT PLATE	2	BLANK PLATE, 5RU	BLPL-05-00-A
16	INSERT PLATE	1	BLANK PLATE, 2RU	BLPL-02-00-A
17	INSERT PLATE	6	TEST SWITCH MOUNTING PLATE, 3 POSITION, 3RU	TSSW-03-03-A
18	INSERT PLATE	2	CONTROL SWITCH PLATE, 2 POSITION, 5RU	CTRL-05-02-A
19		22	TERMINAL BLOCK MOUTING STRIP	
20	GND BUS	1	GROUND BAR	AE-GBAR-27
21		2	FUSE BLOCK MOUNTING STRAP	
22				

NAME PLATE SCHEDULE

IDENT.	FIRST LINE	SECOND LINE	THIRD LINE
NP1	PANEL Z	BUS PROTECTION	
NP2	MBX	DIFFERENTIAL RELAY	87BX
NP3	SEE R10.Zb		
NP4	SEE R10.Zb		
NP5	SEE R10.Zb		
NP6	SEE R10.Zb		
NP8	SEE R10.Zb		
NP9	SEE R10.Zb		
NP11	SEE R10.Zb		
NP12	MBX BUS DIFF	LOCKOUT RELAY	86BX
NP13	MBX BREAKER FAILURE	LOCKOUT RELAY	86BFX
NP14	MBY BUS DIFF	LOCKOUT RELAY	86BY
NP15	MBY BREAKER FAILURE	LOCKOUT RELAY	86BFY
NP16	SEE R10.Zb		
NP18	SEE R10.Zb		
NP19	SEE R10.Zb		
NP21	SEE R10.Zb		
NP22	MBY	DIFFERENTIAL RELAY	87BY
NP23	SEE R10.Zb		
NP24	SEE R10.Zb		
NP25	SEE R10.Zb		

NOTES:
1. ALL TEST SWITCHES INSTALLED SHOULD HAVE ALL BLACK COLORED HANDLES.
*2. LED LIGHTS AND LENS PART NUMBER
---RED: 116B6708G43R73R4
---AMBER: 116B6708G43A73A4
3. WIRE BUNDLES, INSTALLED AS NEEDED TO CONNECT TERMINALS FROM THE A SIDE OF THE PANEL, TO THE B SIDE OF THE PANEL.

DIMENSIONS CHANGED PER PANEL MANUFACTURER REQUIREMENTS

0 NEW DRAWING

NO	DATE	REVISION	TASKNUM	DSGN	CHK	DWN	AS-BUILT	BY
8								
7								
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1								
0		DOUBLE BUS DIFFERENTIAL STANDARD-REVISION 1		JP		AM		

FOR CONSTRUCTION / DATE

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ELECTRIC SERVICE DELIVERY
RELAY ENGINEERING

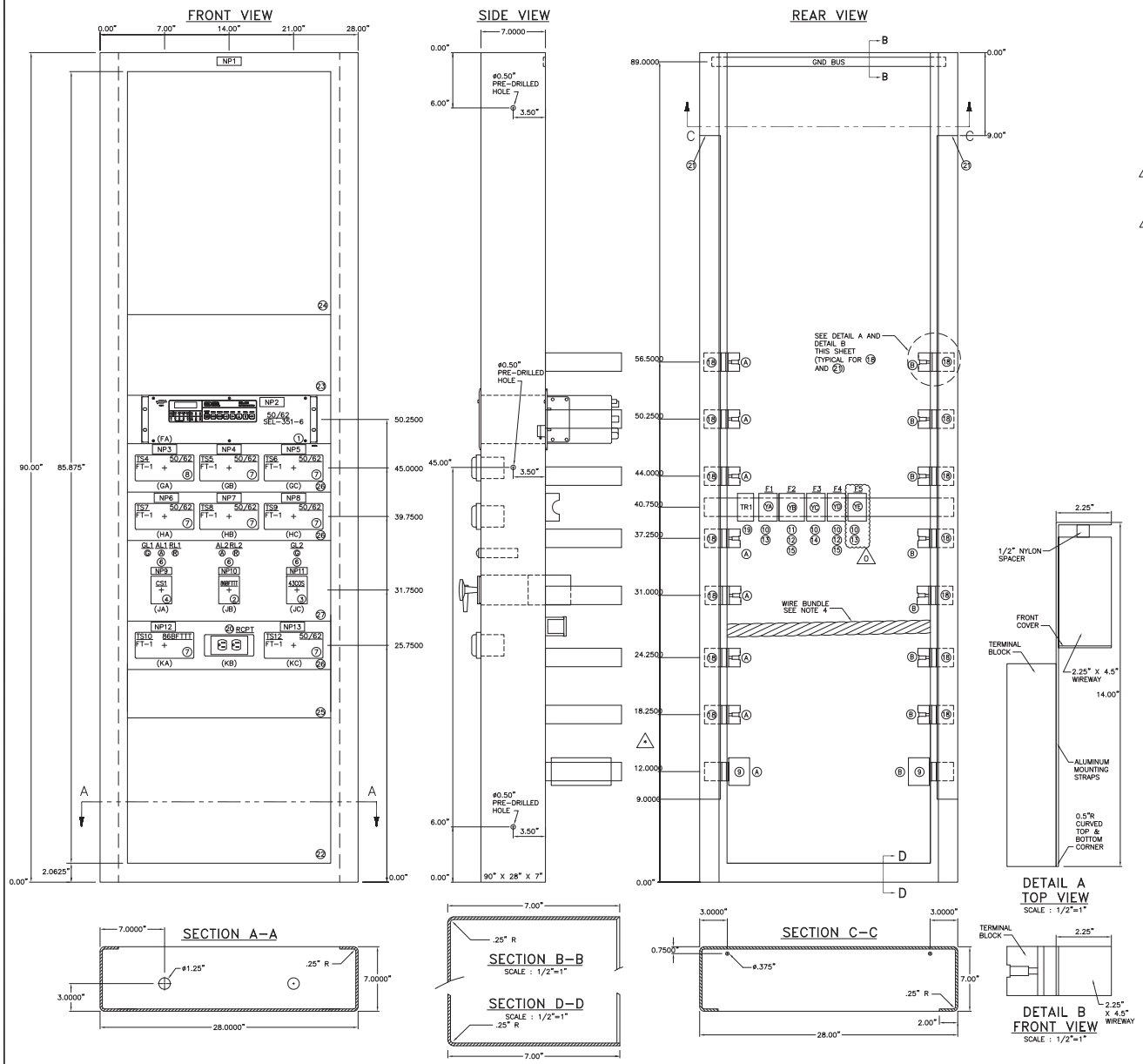
TITLE :

SUBNAME SUBSTATION
PANEL LAYOUT
MBX & MBY DIFFERENTIAL RELAY PANEL Z

MASTER DWG NUMBER	SCALE
R10_587ZDB_Za_Rev 1	3/16"=1"

FILE NAME: R10_587ZDB_Za_Rev 1.dwg

DRAWING NUMBER: **7B SUB# R10.Za**



BILL OF MATERIALS

ITEM	DEVICE NAME	QTY	DESCRIPTION	STYLE/MODEL NO.
1	50/62	1	SEL-351-6 BREAKER FAILURE/RECLOSING RELAY	035163A3A542X1
2	86BFTTT	1	ELECTROSWITCH TYPE 7810D LOCKOUT RELAY	7810D
3	43COS	1	ELECTROSWITCH TYPE ROTARY SWITCH WITH ENABLE/DISABLE FACEPLATE ENGRAVING CODE:010D-2X130B	24203B
4	CS1	1	ELECTROSWITCH CONTROL SWITCHES TYPE 24	2444D
5				
6	AL1,AL2,GL1 GL2,RL1,RL2	6	GE TYPE ET-16 INDICATING LIGHTS W/RED & AMBER LENS & LED'S (NOTE 2.)	116B6708G4
7	TS5-10,TS12	7	STATES TYPE FMS TEST SWITCH 10 POTENTIAL POLE WITH CLEAR COVER (NOTE 1.)	2FMS-10A1
8	TS4	1	STATES TYPE FMS TEST SWITCH 6 CURRENT 4 POTENTIAL POLE WITH CLEAR COVER (NOTE 1.)	2FMS-10E1
9	TSA & TSB	2	STATES TYPE MTS SWITCH,12 POTENTIAL POLE WITH CLEAR COVER (NOTE 3.)	C3-212-A
10	F1,F3,F4,F5	4	FERREZ SHAWMUT FUSE BLOCK; PHENOLIC BASE, 2 POLE, 30 AMP, 250 VOLT	20317
11	F2	1	FERRAZ SHAWMUT FUSE BLOCK; PHENOLIC BASE, 4 POLE, 30 AMP, 250 VOLT	20315, 20318
12	F2,F4	4	BUSSMAN FRN-R SERIES, 3 AMP FUSE, 250 VAC/ 125 VDC, RK5 CLASS	FRN-R-3
13	F1,F5	4	BUSSMAN FRN-R SERIES, 6 AMP FUSE, 250V AC/125V DC, RK5 CLASS	FRN-R-6
14	F3	2	BUSSMAN FRN-R SERIES, 10 AMP FUSE, 250 VAC/ 125 VDC, RK5 CLASS	FRN-R-10
15	F2,F4	2	SLUGS; CONDUCTIVE NEUTRAL	
16				
17				
18	A & B	14	G.E. TERMINAL BLOCK, 12 CIRCUIT, 600V, 30A WITH MOUNTING BRACKET	EB25B12
19	TR1	1	ABB TYPE TRB-2 ZENER TRIPPING & BLOCKING UNIT	408C003G01
20	RCPT	1	GFCI RECEPT, 20A 120 VAC, NEMA 5-20R	
21	–	2	6' PANDUIT WIREWAY (6'x2.25"x4.5")	
22	INSERT PLATE	1	BLANK PLATE, 9RU	BLPL-09-00-A
23	INSERT PLATE	1	BLANK PLATE, 5RU	BLPL-05-00-A
24	INSERT PLATE	1	BLANK PLATE, 15RU	BLPL-15-00-A
25	INSERT PLATE	1	BLANK PLATE, 3RU	BLPL-3-00-A
26	INSERT PLATE	3	TEST SWITCH MOUNTING PLATE, 3 POSITION, 3RU	TSSW-03-03-A
27	INSERT PLATE	1	CONTROL SWITCH MOUNTING PLATE, 3 POSITION, 5RU	CTRL-05-03-A

NAME PLATE SCHEDULE

IDENT.	FIRST LINE	SECOND LINE	THIRD LINE
NP1	PANEL T	XX-TTT	MBX/MBY BUS TIE
NP2		BREAKER FAILURE RELAY	50/62
NP3	SEE R10.Tb		
NP4	SEE R10.Tb		
NP5	SEE R10.Tb		
NP6	SEE R10.Tb		
NP7	SEE R10.Tb		
NP8	SEE R10.Tb		
NP9	XX-TTT	CONTROL SWITCH	CS1
NP10		BREAKER FAIL LOCKOUT RELAY	86BFTTT
NP11	XX-TTT	SUPERVISORY	43COS
NP12	SEE R10.Tb		
NP13	SEE R10.Tb		

NOTES:
1. ALL TEST SWITCHES INSTALLED SHOULD HAVE ALL BLACK COLORED HANDLES.
2. LED LIGHTS AND LENS PART NUMBER
   --RED: 116B6708G43R73R4
   --AMBER: 116B6708G43A73A4
   --GREEN: 116B6708G43G73G4
3. TSA & TSB ARE FRONT CONNECTED SWITCHES WITH ALL RED COLORED HANDLES.
4. WIRE BUNDLES, INSTALLED AS NEEDED TO CONNECT TERMINALS FROM THE A SIDE OF THE PANEL, TO THE B SIDE OF THE PANEL.

*DIMENSIONS CHANGED PER PANEL MANUFACTURER REQUIREMENTS

0 NEW DRAWING

NO	DATE	REVISION	TASKNUM	DSGN	CHK	DWN	AS-BUILT	BY
8								
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1								
0		BUS TIE STANDARD – REVISION D		BP		BP		

FOR CONSTRUCTION / DATE

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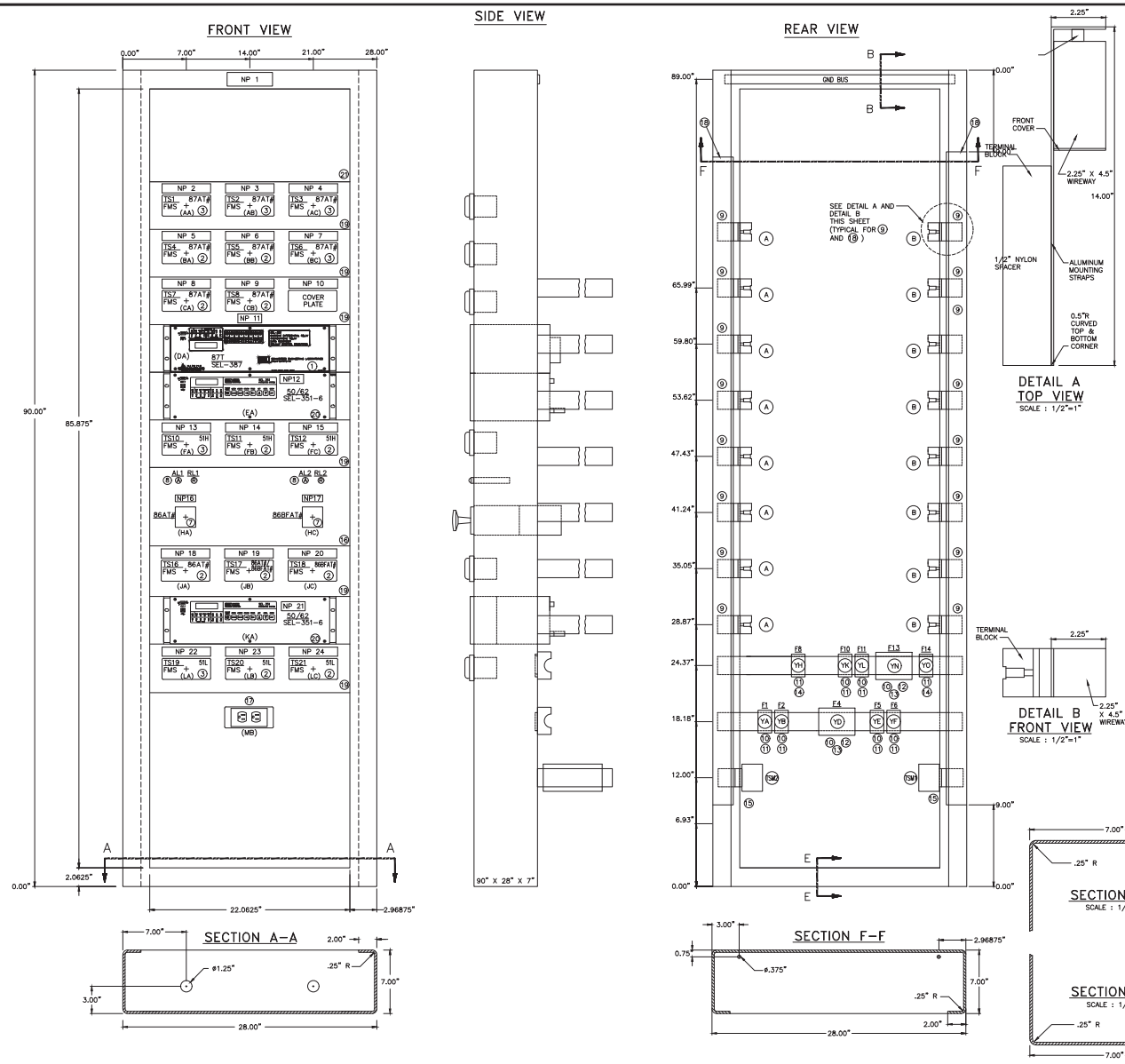
ELECTRIC SERVICE DELIVERY
RELAY ENGINEERING

TITLE :

SUBNAME SUBSTATION
PANEL LAYOUT
XX-TTT MBX/MBY BUS TIE PANEL T

MASTER DWG NUMBER: R10_BTIE_Ta_Rev D
SCALE: 3/16"=1"
FILE NAME: R10_BTIE_Ta_Rev D.dwg
DRAWING NUMBER: **7B SUB# R10.Ta**



ITEM	DEVICE NAME	QTY	BILL OF MATERIALS DESCRIPTION	STYLE OR MODEL NO.
1	87AT#	1	SEL-387 TRANSFORMER DIFFERENTIAL RELAY	0387613X5H2X4X1
2	TS4,5,7,8,11,12,16 17,18,20,21	11	STATES TYPE FMS TEST SWITCH 10 POTENTIAL POLE WITH CLEAR COVER (NOTE 1.)	2FMS-10A1
3	TS1-3,6,10,19	6	STATES TYPE FMS TEST SWITCH 6 CURRENT 4 POTENTIAL POLE WITH CLEAR COVER (NOTE 1.)	2FMS-10E1
4				
5				
6				
7	86AT#,86BFAT#	2	ELECTROSWITCH TYPE 7810D LOCKOUT RELAY	7810D
8	RL1,2 AL1,2	4	GE TYPE ET-16 INDICATING LIGHTS W/RED, AMBER LENS & LED'S (NOTE 2.)	116B6708G4
9	A & B	16	G.E. TERMINAL BLOCK, 12 CIRCUIT, 600V, 30A WITH MOUNTING BRACKET	EB25B12
10	F1,2,4-6,8,10-11 13	18	BUSSMAN FRN-R SERIES, 3 AMP FUSE, 250 VAC/125 VDC, RK5 CLASS	FRN-R-3
11	F1,2,5,6,8,10,11,14	8	FERREZ SHAWMUT FUSE BLOCK; PHENOLIC BASE, 2 POLE, 30 AMP, 250 VOLT	20317
12	F4,F13	2	FERRAZ SHAWMUT FUSE BLOCK; PHENOLIC BASE, 4 POLE, 30 AMP, 250 VOLT	20318 20315
13	F4,F13	2	SLUGS, CONDUCTIVE NEUTRAL	
14	F8,F14	4	BUSSMAN FRN-R SERIES, 10 AMP FUSE, 250 VAC/125 VDC, RK5 CLASS	FRN-R-10
15	TSM1,2	2	STATES TYPE MTS TEST SWITCH, 12 POTENTIAL POLE WITH CLEAR COVER (NOTE 3.)	C3-212-A
16	INSERT PLATE	1	CONTROL SWITCH MOUNTING PLATE, 2 POSITION, 5RU	CTRL-05-02-A
17	RECPT	1	GFI RECEPT	
18	–	2	6' PANDUIT WIREWAY (6' X 2.25" X 4.5")	
19	INSERT PLATE	6	TEST SWITCH MOUNTING PLATE, 3RU	TSSW-03-03-A
20	50/51L, 50/51H	2	SEL-351-6 OVERCURRENT RELAY	035163C3D542X2
21	INSERT PLATE	1	BLANK PLATE, 6RU	BLPL-06-00-A

NAME PLATE SCHEDULE

IDENT.	*	FIRST LINE	SECOND LINE	THIRD LINE
NP 1	–	PANEL 19	XX-AT# TRANSFORMER	
NP 2	–	(SEE R10.Xb)		
NP 3	–	(SEE R10.Xb)		
NP 4	–	(SEE R10.Xb)		
NP 5	–	(SEE R10.Xb)		
NP 6	–	(SEE R10.Xb)		
NP 7	–	(SEE R10.Xb)		
NP 8	–	(SEE R10.Xb)		
NP 9	–	(SEE R10.Xb)		
NP 10	–			
NP 11	–	XX-AT#	AUTO XFMR DIFF RELAY	87AT#
NP 12	–	XX-AT#	AUTO XFMR HI SIDE O/C RELAY	50/51H
NP 13	–	(SEE R10.Xb)		
NP 14	–	(SEE R10.Xb)		
NP 15	–	(SEE R10.Xb)		
NP 16	–	XX-AT#	AUTO XFMR DIFF LOCKOUT	86AT#
NP 17	–	XX-AT#	AUTO BF LOCKOUT	86BFAT#
NP 18	–	(SEE R10.Xb)		
NP 19	–	(SEE R10.Xb)		
NP 20	–	(SEE R10.Xb)		
NP 21	–	XX-AT#	XFMR LO SIDE O/C RELAY	50/51L
NP 22		(SEE R10.Xb)		
NP 23		(SEE R10.Xb)		
NP 24		(SEE R10.Xb)		
NP 25				
NP 26				
NP 27				
NP 28				
NP 29				

* CHECK ALL PINS

NOTES:

1. ALL TEST SWITCHES INSTALLED SHOULD HAVE ALL BLACK COLORED HANDLES.
2. LED LIGHTS AND LENS PART NUMBER
   --RED: 116B6708G43R73R4
   --AMBER: 116B6708G43A73A4
3. TSA & TSB ARE FRONT CONNECTED SWITCHES WITH ALL RED COLORED HANDLES.

NEW DRAWING

NO	DATE	REVISION	TASKNUM	DSGN	CHK	DWN	AS-BUILT	BY
8								
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2								
1								
0		REVISION A – AUTO XFMR DIFF STANDARD		JP		AM		

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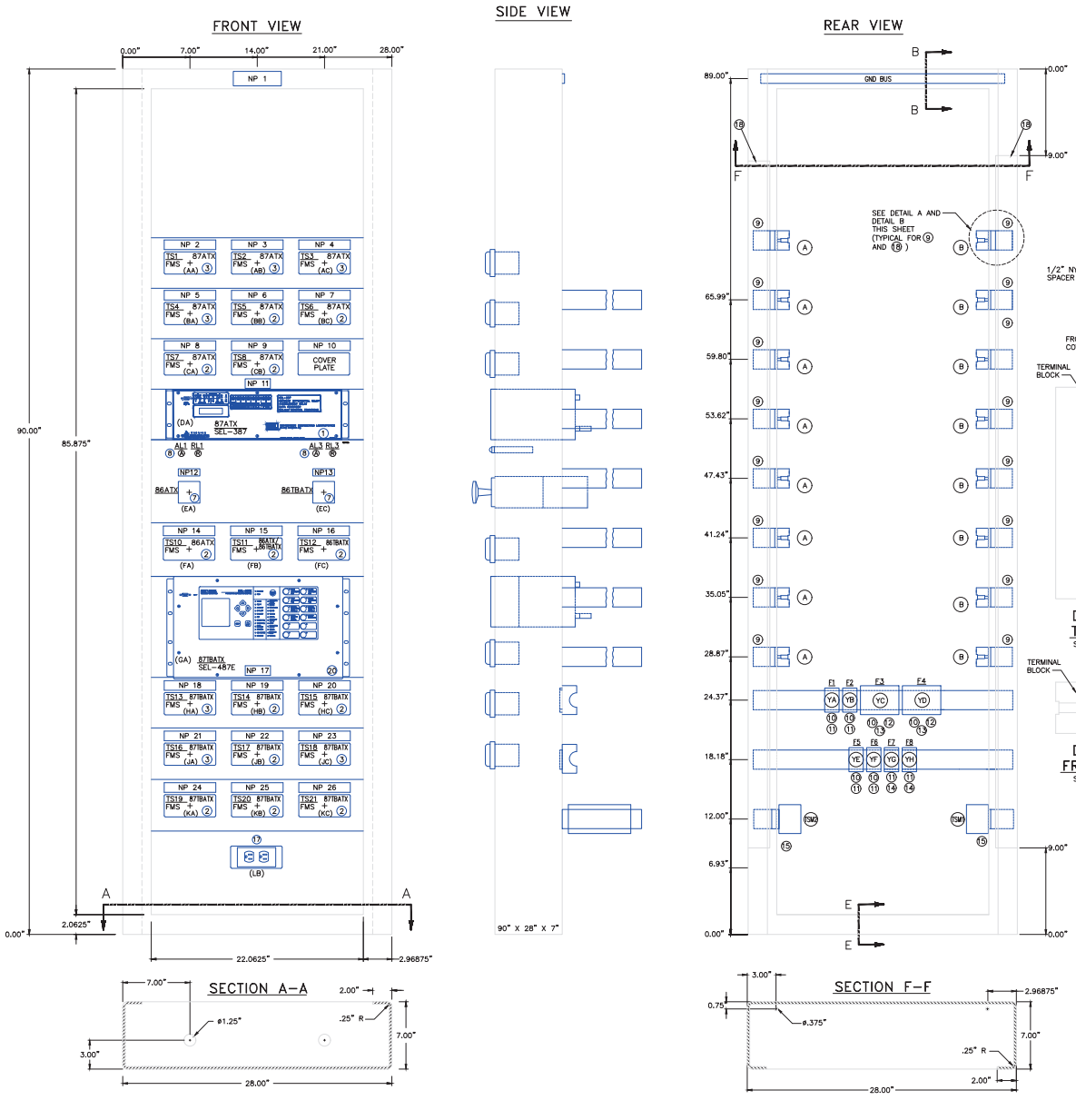
AUSTIN ENERGY

ELECTRIC SERVICE DELIVERY
RELAY ENGINEERING

TITLE :

XXXX SUBSTATION
PANEL LAYOUT
XX-AUTO XFMR DIFF REL PNL X

MASTER DWG NUMBER: R10_AT_XFR_Rev A
SCALE: 3/16"=1"
FILE NAME: R10_AT_XFR_Rev A.dwg
DRAWING NUMBER: 7B XXX R10.Xa



ITEM	DEVICE NAME	QTY	BILL OF MATERIALS DESCRIPTION	STYLE OR MODEL NO.
1	87ATX	1	SEL-387 TRANSFORMER DIFFERENTIAL RELAY	0387613X5H2X4X1
2	TS5,6,7,8,10,11,12,14 15,17,19,20,21	13	STATES TYPE FMS TEST SWITCH 10 POTENTIAL POLEWITH CLEAR COVER (NOTE 1.)	2FMS-10A1
3	TS1-2,3,4,16,18,19	7	STATES TYPE FMS TEST SWITCH 6 CURRENT 4 POTENTIAL POLE WITH CLEAR COVER (NOTE 1.)	2FMS-10E1
4				
5				
6				
7	86ATX,86TBATX	2	ELECTROSWITCH TYPE 7810D LOCKOUT RELAY	7810D
8	RL1,3 AL1,3	4	GE TYPE ET-16 INDICATING LIGHTS W/RED, AMBER LENS & LED'S (NOTE 2.)	116B6708G4
9	A & B	16	G.E. TERMINAL BLOCK, 12 CIRCUIT, 600V, 30A WITH MOUNTING BRACKET	EB25B12
10	F1,2,4-6,8,13	14	BUSMAN FRN-R SERIES, 3 AMP FUSE, 250 VAC/125 VDC, RK5 CLASS	FRN-R-3
11	F1,2,5,6,7,8	6	FERREZ SHAWMUT FUSE BLOCK; PHENOLIC BASE, 2 POLE, 30 AMP, 250 VOLT	20317
12	F4,F13	2	FERRAZ SHAWMUT FUSE BLOCK; PHENOLIC BASE, 4 POLE, 30 AMP, 250 VOLT	20318 20315
13	F3,F4	2	SLUGS, CONDUCTIVE NEUTRAL	
14	F7,F8	4	BUSMAN FRN-R SERIES, 10 AMP FUSE, 250 VAC/125 VDC, RK5 CLASS	FRN-R-10
15	TSM1,2	2	STATES TYPE MTS TEST SWITCH, 12 POTENTIAL POLE WITH CLEAR COVER (NOTE 3.)	C3-212-A
16				
17	RECPT	1	GFI RECEPT	
18	–	2	6' PANDUIT WIREWAY (6' X 2.25" X 4.5")	
19				
20	87TBATX	1	SEL-487E TRANSFORMER DIFFERENTIAL RELAY	0487E3X411XXB0X4H674XXX

NAME PLATE SCHEDULE

IDENT.	*	FIRST LINE	SECOND LINE	THIRD LINE
NP 1	–	PANEL X	XX-ATX TRANSFORMER	
NP 2	–	(SEE R10.Xa)		
NP 3	–	(SEE R10.Xa)		
NP 4	–	(SEE R10.Xa)		
NP 5	–	(SEE R10.Xa)		
NP 6	–	(SEE R10.Xa)		
NP 7	–	(SEE R10.Xa)		
NP 8	–	(SEE R10.Xa)		
NP 9	–	(SEE R10.Xa)		
NP 10	–	(SEE R10.Xa)		
NP 11	–	XX-ATX	AUTO XFMR DIFF RELAY	87ATX
NP 12		XX-ATX	AUTO XFMR DIFF LOCKOUT	86ATX
NP 13		XX-ATX	AUTO BF LOCKOUT	86TBATX
NP 14	–	(SEE R10.Xa)		
NP 15	–	(SEE R10.Xa)		
NP 16	–	(SEE R10.Xa)		
NP 17	–	XX-ATX	AUTO XFMR DIFF RELAY	487E
NP 18	–	(SEE R10.Xa)		
NP 19	–	(SEE R10.Xa)		
NP 20	–	(SEE R10.Xa)		
NP 21	–	(SEE R10.Xa)		
NP 22	–	(SEE R10.Xa)		
NP 23	–	(SEE R10.Xa)		
NP 24		(SEE R10.Xa)		
NP 25		(SEE R10.Xa)		
NP 26		(SEE R10.Xa)		
NP 27				
NP 28				
NP 29				

* CHECK ALL PINS

NOTES:

1. ALL TEST SWITCHES INSTALLED SHOULD HAVE ALL BLACK COLORED HANDLES.
2. LED LIGHTS AND LENS PART NUMBER
   --RED: 116B6708G43R73R4
   --AMBER: 116B6708G43A73A4
3. TSA & TSB ARE FRONT CONNECTED SWITCHES WITH ALL RED COLORED HANDLES.

NO	DATE	REVISION	TASKNUM	DSGN	CHK	DWN	AS-BUILT	BY
8								
7								
6								
5								
4								
3								
2								
1								
0		REV A – AUTO XFMR DIFFERENTIAL (487E)		JP		AM		

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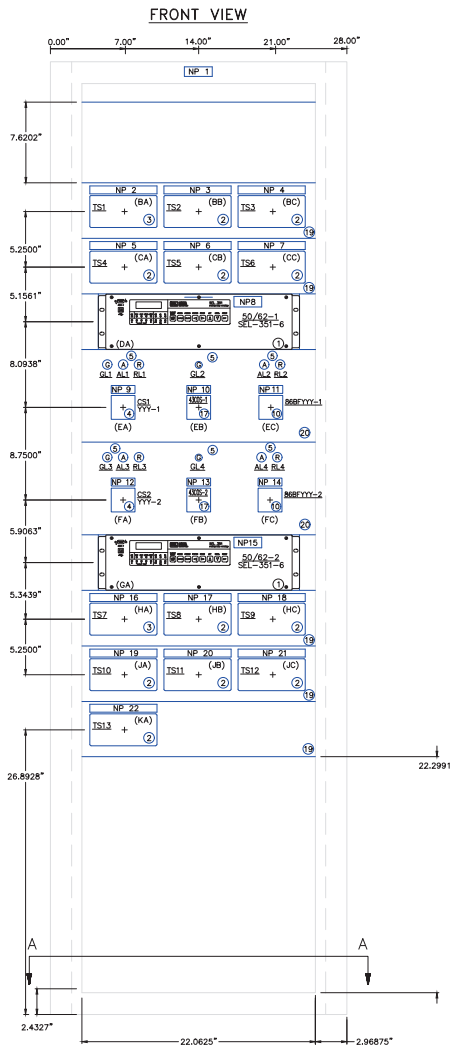
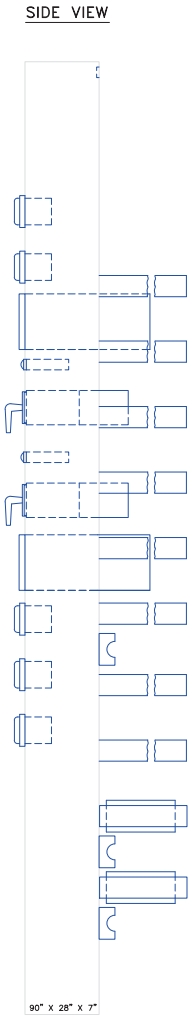
ELECTRIC SERVICE DELIVERY
RELAY ENGINEERING

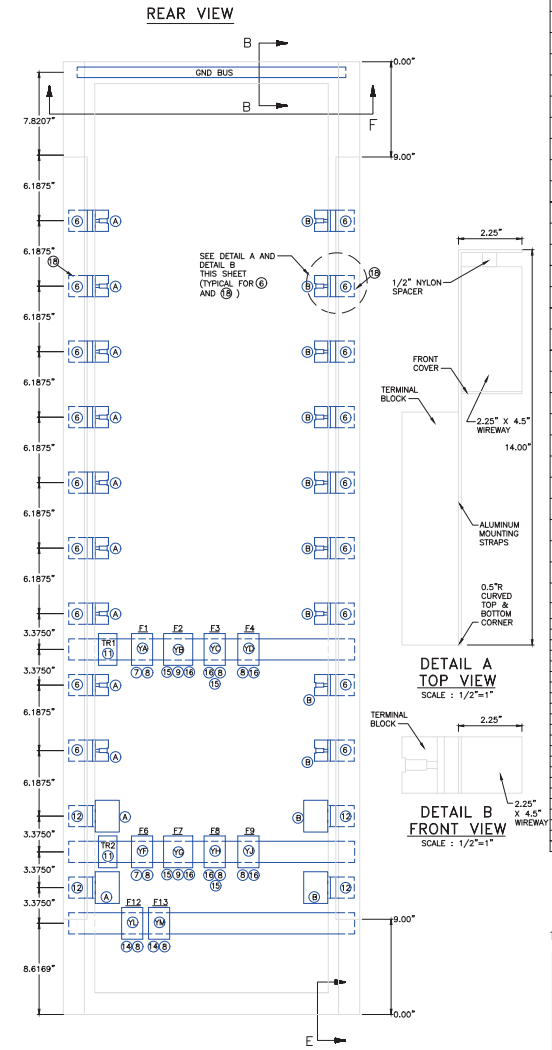
TITLE :

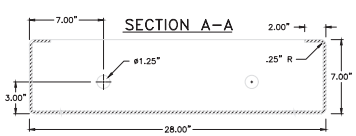
NAME SUBSTATION
PANEL LAYOUT
XX-ATX DIFF REL PNL X

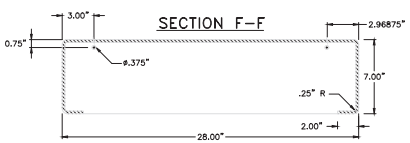
MASTER DWG NUMBER: R10.14FRM_A_1_00
SCALE: 3/16"=1"
FILE NAME: R10_AT_487E_X.Rev A.dwg
DRAWING NUMBER: 7B XXX R10.X

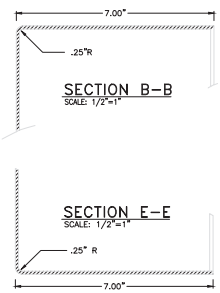












BILL OF MATERIALS

ITEM	DEVICE NAME	QTY	DESCRIPTION	STYLE OR MODEL NO.
1	50/62-1 50/62-2	2	SEL-351-6 – BREAKER FAILURE & CONTROL RELAY	035163A3C542X1
2	TS2-6,TS8-12 TS13	11	STATES TYPE FMS TEST SWITCH 10 POTENTIAL POLE WITH CLEAR COVER (NOTE 1.)	2FMS-10A1
3	TS1,7	2	STATES TYPE FMS TEST SWITCH 6 CURRENT 4 POTENTIAL POLE WITH CLEAR COVER (NOTE 1.)	2FMS-10E1
4	CS1,2	2	ELECTROSWITCH CONTROL SWITCHES TYPE 24	2444D
5	RL1-4 AL1-4,GL1-4	12	GE TYPE ET-16 INDICATING LIGHTS W/RED, GREEN, AMBER LENS & LED'S (NOTE 2.)	116B6708
6	A & B TBD	22	G.E. TERMINAL BLOCK, 12 CIRCUIT, 600V, 30A WITH MOUNTING BRACKET	EB25A12
7	F1,6	4	BUSSMAN FRN-R SERIES, 6 AMP FUSE, 250 VAC/125 VDC, RK5 CLASS	FRN-R-6
8	F1,3,4,6,8,9 F12,13	8	FERREZ SHAWMUT FUSE BLOCK; PHENOLIC BASE, 2 POLE, 30 AMP, 250 VOLT	20317
9	F2,7	2	FERRAZ SHAWMUT FUSE BLOCK; PHENOLIC BASE, 4 POLE, 30 AMP, 250 VOLT	20318 20315
10	86BFYYY-1 86BFYYY-2	2	ELECTROSWITCH TYPE 7810D LOCKOUT RELAY 20 NO & 20 NC CONTACTS	7810D
11	TR1,2	2	ABB TYPE TRB-2 ZENER TRIPPING & BLOCKING UNIT	408C003G01
12	A & B	4	STATES TYPE MTS TEST SWITCH, 12 POTENTIAL POLE WITH CLEAR COVER (NOTE 3.)	C3-212-A
13				
14	F12,13	4	BUSSMAN FRN-R SERIES, 10 AMP FUSE, 250 VAC/ 125 VDC, RK5 CLASS	FRN-R-10
15	F2,F3 F7,F8	4	SLUGS, CONDUCTIVE NEUTRAL	
16	F2-4,F7-9	12	BUSSMAN FRN-R SERIES, 3 AMP FUSE, 250 VAC/125 VDC, RK5 CLASS	FRN-R-3
17	43COS-1 43COS-2	2	ELECTROSWITCH TYPE ROTARY SWITCH WITH ENABLE/DISABLE FACEPLATE ENGRAVING CODE:010D-2X13DB	24203B
18	–	2	6' PANDUIT WIREWAY (6' X 2.25" X 4.5")	
19	INSERT PLATE	5	TEST SWITCH MOUNTING PLATE, 3RU	TSSW-03-03-A
20	INSERT PLATE	2	CONTROL SWITCH MOUNTING PLATE, 3 POSITION, 5RU	CTRL-05-03-A
21				
22				
23				
24				
25				
26				
27				

NAME PLATE SCHEDULE

IDENT.	*	FIRST LINE	SECOND LINE	THIRD LINE
NP 1	–	PANEL X	XX-YYY-1 & XX-YYY-2	
NP 2	–	(SEE R10.Xb)		
NP 3	–	(SEE R10.Xb)		
NP 4	–	(SEE R10.Xb)		
NP 5	–	(SEE R10.Xb)		
NP 6	–	(SEE R10.Xb)		
NP 7	–	(SEE R10.Xb)		
NP 8	–	BREAKER FAILURE	XX-YYY-1	50/62-1
NP 9	–	XX-YYY-1	CONTROL SWITCH	CS1
NP 10	–	XX-YYY-1	SUPERVISORY REMOTE	43COS-1
NP 11	–		BREAKER FAIL LOCKOUT RELAY	86BFYYY-1
NP 12	–	XX-YYY-2	CONTROL SWITCH	CS2
NP 13	–	XX-YYY-2	SUPERVISORY REMOTE	43COS-2
NP 14	–		BREAKER FAIL LOCKOUT RELAY	86BFYYY-2
NP 15	–	BREAKER FAILURE	XX-YYY-2	50/62-2
NP 16	–	(SEE R10.Xb)		
NP 17	–	(SEE R10.Xb)		
NP 18	–	(SEE R10.Xb)		
NP 19	–	(SEE R10.Xb)		
NP 20	–	(SEE R10.Xb)		
NP 21	–	(SEE R10.Xb)		
NP 22	–	(SEE R10.Xb)		

NOTES:

1. ALL TEST SWITCHES INSTALLED SHOULD HAVE ALL BLACK COLORED HANDLES.
2. LED LIGHTS AND LENS PART NUMBER
   --RED: 116B6708G43R73R4
   --GREEN: 116B6708G43G73G4
   --AMBER: 116B6708G43A73A4
   --BLUE: 116B6708G43B73B4
3. TSA & TSB ARE FRONT CONNECTED SWITCHES WITH ALL RED COLORED HANDLES.

NO	DATE	REVISION	TASKNUM	DSGN	CHK	DWN	AS-BUILT	BY
8								
7								
6								
5								
4								
3								
2								
1								
0		REVISION A – AUTO XFMR DOUBLE BKR CNTL.		JP		AM		

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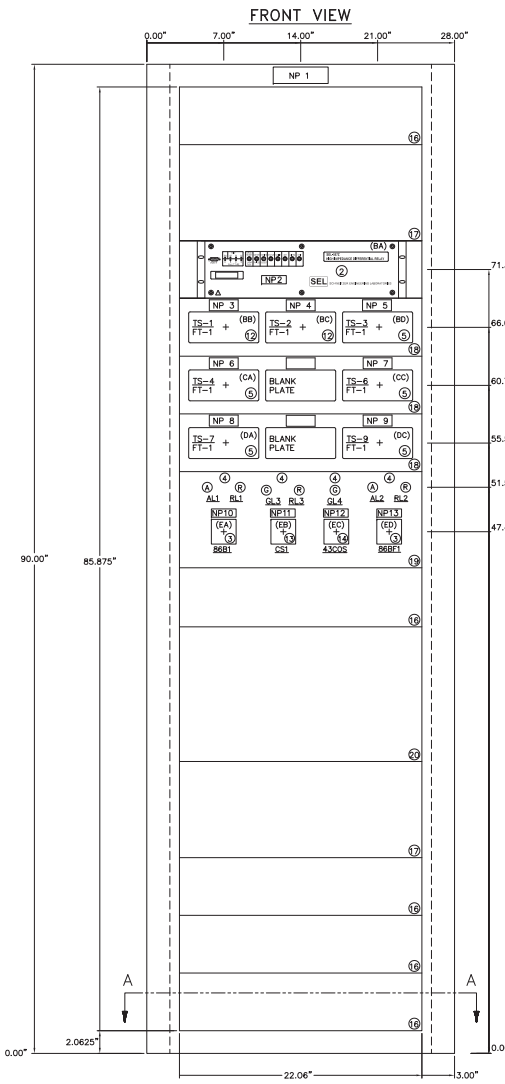
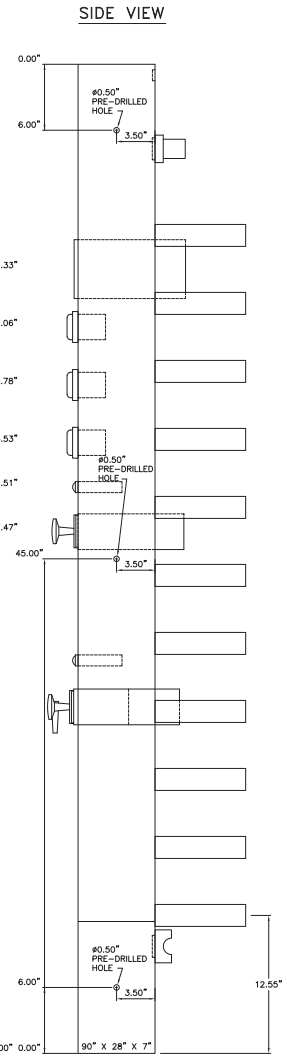
ELECTRIC SERVICE DELIVERY
RELAY ENGINEERING

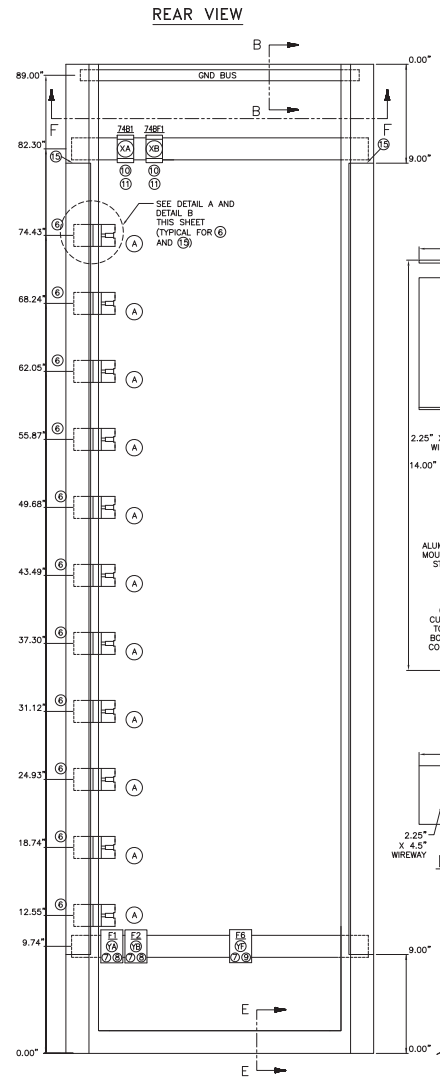
TITLE :

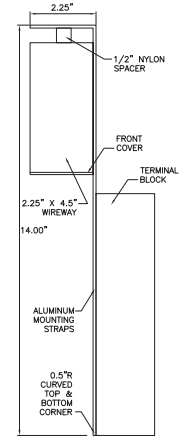
XXXX SUBSTATION
PANEL LAYOUT
BKRS XX-YYY-1 & XX-YYY-2 CONTROL PNL X

MASTER DWG NUMBER: R10_AT_DUAL_BKR_CNTL_X.Rev A
SCALE: 3/16"=1"
FILE NAME: R10_AT_DUAL_BKR_CNTL_X.Rev A.dwg
DRAWING NUMBER: 7B XXX R10.Xa

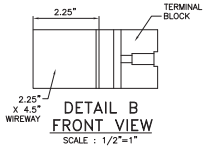




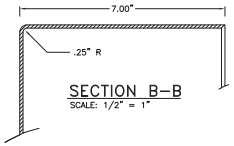




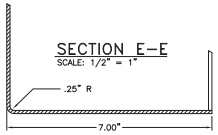
DETAIL A
TOP VIEW
SCALE : 1/2"=1"



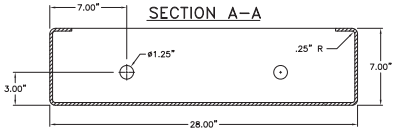
DETAIL B
FRONT VIEW
SCALE : 1/2"=1"



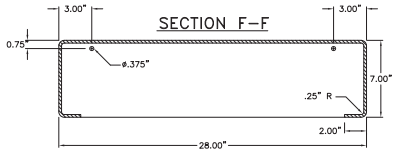
SECTION B–B
SCALE: 1/2" = 1"



SECTION E–E
SCALE: 1/2" = 1"



SECTION A–A



SECTION F–F

BILL OF MATERIALS

ITEM	DEVICE NAME	QTY	DESCRIPTION	STYLE OR MODEL NO.
1				
2	87B1	1	SCHWEITZER ENGINEERING LABORATORIES: (SEL-5872) HIGH-IMPEDANCE DIFFERENTIAL AND OVERCURRENT RELAY W/ N.O. ALM CONTACT	0587Z0X325H12XX
3	86B1,86BF1	2	ELECTROSWITCH TYPE 7810D LOCKOUT RELAY	7810D
4	RL1,RL2,RL3 AL1,AL2,GL3,GL4	7	GE TYPE ET-16 INDICATING LIGHTS W/RED, AMBER, & GREEN LENS & LED'S (NOTE 2.)	0116B6708
5	TS3, 4, 6, 7, 9	5	STATES TYPE FMS SWITCH, 10 POTENTIAL POLE WITH CLEAR COVER (NOTE 1.)	2FMS-10A1
6	A , B	12	G.E. TERMINAL BLOCK , 12 CIRCUIT, 600V, 30A, W/ MOUNTING BRACKET	EB25B12
7	F1, F2, F6	3	FERRAZ SHAWMUT FUSE BLOCK; PHENOLIC BASE, 2 POLE, 30 AMP, 250 VOLT	20317
8	F1, F2	4	BUSSMAN FRN-R SERIES, 10 AMP FUSE, 250V AC/125V DC, RK5 CLASS	FRN-R-10
9	F6	2	BUSSMAN FRN-R SERIES, 3 AMP FUSE, 250V AC/125V DC, RK5 CLASS	FRN-R-6
10	74B1,74BF1	2	SQUARE D TYPE KP ALARM RELAY	KPD12P14V63
11		2	SQUARE D TYPE KP SOCKET CLASS 8501	NR-51
12	TS1, 2	2	STATES TYPE FMS TEST SWITCH, 6 CURRENT 4 POTENTIAL POLE WITH CLEAR COVER (NOTE 1.)	2FMS-10E1
13	CS1	1	ELECTROSWITCH CONTROL SWITCHES TYPE 24	2444D
14	43COS	1	ELECTROSWITCH TYPE ROTARY SWITCH WITH ENABLE/DISABLE FACEPLATE ENGRAVING CODE:010D-2X13DB	24203B
15	–	2	6' PANDUIT WIREWAY (6'x2.25"x4.5")	
16	INSERT PLATE	5	BLANK PLATE, 3RU	BLPL-03-00-A
17	INSERT PLATE	2	BLANK PLATE, 5RU	BLPL-05-00-A
18	INSERT PLATE	3	TEST SWITCH PLATE, 3RU	TSSW-03-03-A
19	INSERT PLATE	1	CONTROL SWITCH MOUNTING PLATE, 4 POSITION, 5RU	CNTRL-05-04-A
20	INSERT PLATE	1	BLANK PLATE, 7RU	BLPL-07-00-A

NAME PLATE SCHEDULE

IDENT.	*	FIRST LINE	SECOND LINE	THIRD LINE
NP 1	–	PANEL X	BUS PROTECTION	
NP 2	–	MBX	DIFFERENTIAL RELAY	87B1
NP 3	–	SEE R10.Xb		
NP 4	–	SEE R10.Xb		
NP 5	–	SEE R10.Xb		
NP 6	–	SEE R10.Xb		
NP 7	–	SEE R10.Xb		
NP 8	–	SEE R10.Xb		
NP 9	–	SEE R10.Xb		
NP 10	–	MBX BUS	DIFF LOCKOUT RELAY	86B1
NP 11	–	XX-65XM	CONTROL SWITCH	CS1
NP 12	–		SUPERVISORY	CONTROL
NP 13	–	MBX BREAKER FAILURE	LOCKOUT RELAY	86BF1

NOTES:

1. ALL TEST SWITCHES INSTALLED SHOULD HAVE ALL BLACK COLORED HANDLES.
2. LED LIGHTS AND LENS PART NUMBER
   --RED: 116B6708G43R73R4
   --GREEN: 116B6708G43G73G4
   --AMBER: 116B6708G43A73A4

NO	DATE	REVISION	TASKNUM	DSGN	CHK	DWN	CHK	AS-BUILT	BY
6									
5									
4									
3									
2									
1		UPDATE BILL OF MATERIALS		JP		JP			
0		REVISION A-MOD CONTROL STANDARD		JP	AR	HLD	–	–	–

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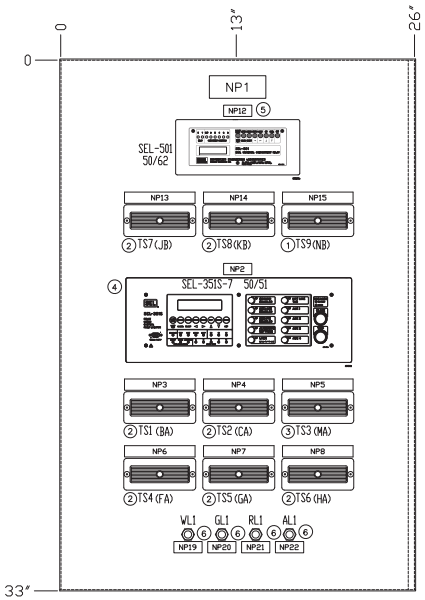
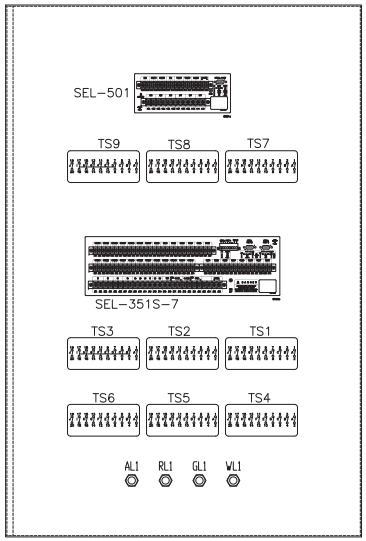
AUSTIN ENERGY
POWER DELIVERY DIVISION
TRANSMISSION ENGINEERING

TITLE :
NAME SUBSTATION
PANEL LAYOUT
MBX DIFF & BF L/O RELAY PANEL X

MASTER NO. R10_MOD_X_Rev A
SCALE 3/16"=1"
FILE NAME XXXX_10_X.DWG
DRAWING NUMBER 7B XXXX R10.X



FEEDER BREAKER DOOR PLATE (INSIDE UNIT 2)
(FRONT VIEW)



FEEDER BREAKER DOOR PLATE (INSIDE UNIT 2)
(REAR VIEW)

BILL OF MATERIALS

ITEM	DEVICE NAME	QTY	DESCRIPTION	STYLE / MODEL NO.
①	TS9	1	STATES TYPE FMS TEST SWITCHES 6 CURRENT 4 POTENTIAL POLE WITH CLEAR COVER (NOTE 1.)	2FMS-10E1
②	TS1,TS2 TS4-TS8	7	STATES TYPE FMS TEST SWITCHES 10 POTENTIAL POLE WITH CLEAR COVER (NOTE 1.)	2FMS-10A1
③	TS3	1	STATES TYPE FMS TEST SWITCH 8 CURRENT 2 POTENTIAL POLE WITH CLEAR COVER (NOTE 1.)	2FMS-10E4
④	50/51	1	SEL-351S7 OVERCURRENT RELAY EXCEPT THE OUTPUT CONTACT 106 TO BE CONVERTED TO N.C FROM N.O AND ALARM CONTACT (TERM A15,A16) TO CONVERTED TO N.O IN LIEU OF N.C FROM THE FACTORY.	0351S7X3E3D5422
⑤	50/62	1	SEL-501 OVERCURRENT RELAY EXCEPT ALARM CONTACT (TERM 213, 214) TO BE CONVERTED TO N.O IN LIEU OF N.C FROM FACTORY.	0501003X5613XC
⑥	RL1, GL1 AL1, WL1	4	GE TYPE ET-16 INDICATING LIGHTS W/RED, GREEN, AMBER, WHITE LENS & LED'S (NOTE 2.)	116B6708G43
⑦	DYMEC1	1	DYMEC SERIAL COPPER TO FIBER MEDIA CONVERTER AND LINK\REPEATER RS-485	5846HRT-H
⑧	F3-F7	5	FERRAZ SHAWMUT FUSE BLOCK; PHENOLIC BASE, 2 POLE, 30 AMP, 250 VOLT	20317
⑨	F1,F3-F6	12	BUSSMAN FRN-R SERIES, 3 AMP FUSE, 250V AC/125V DC, RK5 CLASS	FRN-R-3
⑩	F1,F2	2	FERRAZ SHAWMUT FUSE BLOCK; PHENOLIC BASE, 4 POLE, 30 AMP, 250 VOLT	20315 20318
⑪	F2,F7	6	BUSSMAN FRN-R SERIES, 15 AMP FUSE, 250V AC/125V DC, RK5 CLASS	FRN-R-15
⑫	D1, D2	2	ABB TYPE TRB-2 ZENER TRIPPING & BLOCKING UNIT	408C003G01
⑬	F1	1	SLUG, CONDUCTIVE NEUTRAL	
⑭	BLANK PLATE	1	BLANK PLATE 9" X 29" TO COVER OPENING	
⑮	BLANK PLATE	1	BLANK PLATE 9" X 13" TO COVER OPENING	

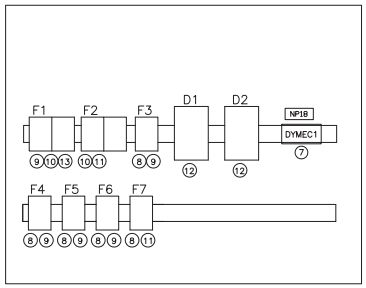
BY AE (NOTE 8.)

BY AE (NOTE 4.)

NAME PLATE SCHEDULE

IDENT.	*	FIRST LINE	SECOND LINE	THIRD LINE
NP 1		XX-X	FEEDER BREAKER	
NP 2		50/51	PRIMARY RELAYING	SEL 351S-7
NP 3		SEE R14X.1a	TEST SWITCHES	
NP 4		SEE R14X.1a	TEST SWITCHES	
NP 5		SEE R14X.1a	TEST SWITCHES	
NP 6		SEE R14X.1a	TEST SWITCHES	
NP 7		SEE R14X.1a	TEST SWITCHES	
NP 8		SEE R14X.1a	TEST SWITCHES	
NP 9				
NP 10				
NP 11				
NP 12		50/62	SECONDARY RELAYING	SEL 501
NP 13		SEE R14X.1a	TEST SWITCHES	
NP 14		SEE R14X.1a	TEST SWITCHES	
NP 15		SEE R14X.1a	TEST SWITCHES	
NP 16				
NP 17				
NP 18		DYMEC1		
NP 19		MOTOR RUN	CHARGING	
NP 20		BREAKER	OPEN	
NP 21		BREAKER	CLOSED	TC1
NP 22		BREAKER	CLOSED	TC2
NP 23				
NP 24				

(BY AE)
(NOTE 8.)



MOUNT FUSES AND DIODES BEHIND INNER PART OF UNIT DOOR

NOTES:

1. ALL TEST SWITCHES INSTALLED SHOULD HAVE ALL BLACK COLORED HANDLES.
2. LED LIGHTS AND LENS PART NUMBER
   --RED: 116B6708G43R73R4
   --GREEN: 116B6708G43G73G4
   --AMBER: 116B6708G43A73A4
   --WHITE: 116B6708G43A3W5
4. BLANK PLATES ARE TO BE PROVIDED AND INSTALLED BY AE.
5. WIRE LEADS CONNECTING TO TERMINALS IN SWITCHGEAR CUBICLE SHOULD BE 12 FT. LONG AND MARKED WITH (YELLOW) COLORED TAPE
6. WIRE LEADS CONNECTING TO GROUND BUS IN SWITCHGEAR CUBICLE SHOULD BE 15 FT. LONG AND MARKED WITH (GREEN) COLORED TAPE
7. WIRE LEADS CONNECTING TO TERMINALS IN SWITCHGEAR SHOULD BE LEFT SEPARATED AND REBUNDLED BY AE AT THE TIME OF INSTALLATION
8. DIODES AND FUSES WILL BE PROVIDED BY MANUFACTURE AND INSTALLED BY AE.
9. MANUFACTURE TO PROVIDE ADEQUATE STRAIN RELIEF ON BUNDLED WIRE IN ORDER TO ALLOW DOOR TO OPEN OUTWARD.
10. SUB PLATE DIMENSIONS WILL VARY BASED ON TYPE OF SWITCHGEAR DOOR INNER BRACING.

NEW DRAWING
A

NO	DATE	REVISION	TASKNUM	DSGN	CHK	DWN	AS-BUILT	BY
8								
7								
6								
5								
4								
3								
2								
1								
0		FEEDER RELAY DOOR PLATES (351S & 501) REVISION C		JP		AM		

FOR CONSTRUCTION / DATE

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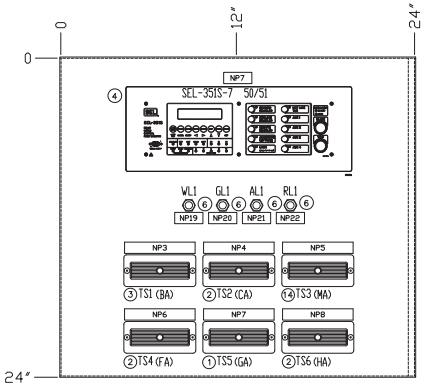
AUSTIN ENERGY

ELECTRIC SERVICE DELIVERY
RELAY ENGINEERING

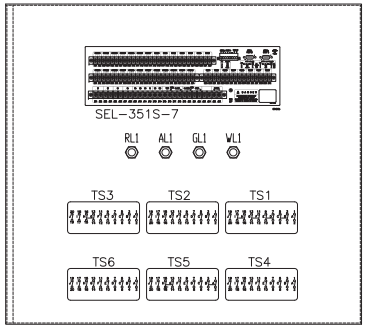
TITLE :

NAME SUBSTATION
MANUFACTURE DRAWING
SWGR XXX (UNIT 2) DOOR PLATE DETAIL

MASTER DWG NUMBER: R14X.01a_FDR_351S_501_Rev C
SCALE: N.T.S.
FILE NAME: R14X.01a_FDR_351S_501_Rev C.dwg
DRAWING NUMBER: **7B XXXX R14X.1a**



FEEDER BREAKER DOOR PLATE (INSIDE CUBICLE 2)
(FRONT VIEW)



FEEDER BREAKER SUB PLATE (INSIDE CUBICLE 2)
(REAR VIEW)

BILL OF MATERIALS

ITEM	DEVICE NAME	QTY	DESCRIPTION	STYLE / MODEL NO.
①	TS5	1	ABB TYPE FT-1 TEST SWITCH 4 CURRENT 6 POTENTIAL POLE WITH CLEAR COVER (NOTE 1.) ORDER BY ARRANGEMENT CURRENT POLES A;1-2, B;3-4, G;13-14 AND H;15-16	
②	TS2,TS4,TS6	3	STATES TYPE FMS TEST SWITCHES 10 POTENTIAL POLE WITH CLEAR COVER (NOTE 1.)	2FMS-10A1
③	TS1	2	STATES TYPE FMS TEST SWITCH 8 CURRENT 2 POTENTIAL POLE WITH CLEAR COVER (NOTE 1.)	2FMS-10E4
④	50/51	1	SEL-351S7 OVERCURRENT RELAY EXCEPT THE OUTPUT CONTACT 106 TO BE CONVERTED TO N.C FROM N.O AND ALARM CONTACT (TERM A15,A16) TO CONVERTED TO N.O IN LIEU OF N.C FROM THE FACTORY.	0351S7X3E3D5422
⑤				
⑥	RL1, GL1 AL1, WL1	4	GE TYPE ET-16 INDICATING LIGHTS W/RED, GREEN, AMBER, WHITE LENS & LED'S (NOTE 2.)	116B6708G43
⑦	DYMEC1	1	DYMEC SERIAL COPPER TO FIBER MEDIA CONVERTER AND LINK\REPEATER RS-485	5846HRT-H
⑧	F1-F3	3	FERRAZ SHAWMUT FUSE BLOCK; PHENOLIC BASE, 2 POLE, 30 AMP, 250 VOLT	20317
⑨	F1-F3	6	BUSSMAN FRN-R SERIES, 3 AMP FUSE, 250V AC/125V DC, RK5 CLASS	FRN-R-3
⑩				20315 20318
⑪				
⑫	TR1	1	ABB TYPE TRB-2 ZENER TRIPPING & BLOCKING UNIT	408C003G01
⑬				
⑭	TS3	1	ABB TYPE FT-1 TEST SWITCH 2 CURRENT 8 POTENTIAL POLE WITH CLEAR COVER (NOTE 1.) ORDER BY ARRANGEMENT CURRENT POLES G;13-14 AND H;15-16	
⑮				

BY AE (NOTE 6.)

NAME PLATE SCHEDULE

IDENT.	*	FIRST LINE	SECOND LINE	THIRD LINE
NP 1		SEE R12.Xb	TEST SWITCHES	
NP 2		SEE R12.Xb	TEST SWITCHES	SEL 351S-7
NP 3		SEE R12.Xb	TEST SWITCHES	
NP 4		SEE R12.Xb	TEST SWITCHES	
NP 5		SEE R12X.b	TEST SWITCHES	
NP 6		SEE R12.Xb	TEST SWITCHES	
NP 7		50/51	PRIMARY RELAYING	
NP 8				
NP 9				
NP 10				
NP 11				
NP 12				SEL 501
NP 13				
NP 14				
NP 15				
NP 16				
NP 17				
NP 18				
NP 19		MOTOR RUN	CHARGING	
NP 20		BREAKER	OPEN	
NP 21		BREAKER	CLOSED	TC2
NP 22		BREAKER	CLOSED	TC1
NP 23				
NP 24				

NOTES:

1. ALL TEST SWITCHES INSTALLED SHOULD HAVE ALL BLACK COLORED HANDLES.
2. LED LIGHTS AND LENS PART NUMBER
--RED: 116B6708G43R73R4
--GREEN: 116B6708G43G73G4
--AMBER: 116B6708G43A73A4
--WHITE: 116B6708G43A3W5
3. WIRE LEADS CONNECTING TO TERMINALS IN SWITCHGEAR CUBICLE SHOULD BE 12 FT. LONG AND MARKED WITH (YELLOW) COLORED TAPE
4. WIRE LEADS CONNECTING TO GROUND BUS IN SWITCHGEAR CUBICLE SHOULD BE 15 FT. LONG AND MARKED WITH (GREEN) COLORED TAPE
5. WIRE LEADS CONNECTING TO TERMINALS IN SWITCHGEAR SHOULD BE LEFT SEPARATED AND REBUNDLED BY AE AT THE TIME OF INSTALLATION
6. DIODES AND FUSES WILL BE PROVIDED BY MANUFACTURE AND INSTALLED BY AE.
7. MANUFACTURE TO PROVIDE ADEQUATE STRAIN RELIEF ON BUNDLED WIRE IN ORDER TO ALLOW DOOR TO OPEN OUTWARD.
8. PLATE DIMENSIONS WILL VARY BASED ON TYPE OF SWITCHGEAR DOOR INNER BRACING.

NEW DRAWING

NO	DATE	REVISION	TASKNUM	DSGN	CHK	DWN	AS-BUILT	BY
8								
7								
6								
5								
4								
3								
2								
1								
0		REVISION C – FEEDER DOOR PLATE (351S)		JP		AM		

FOR CONSTRUCTION / DATE

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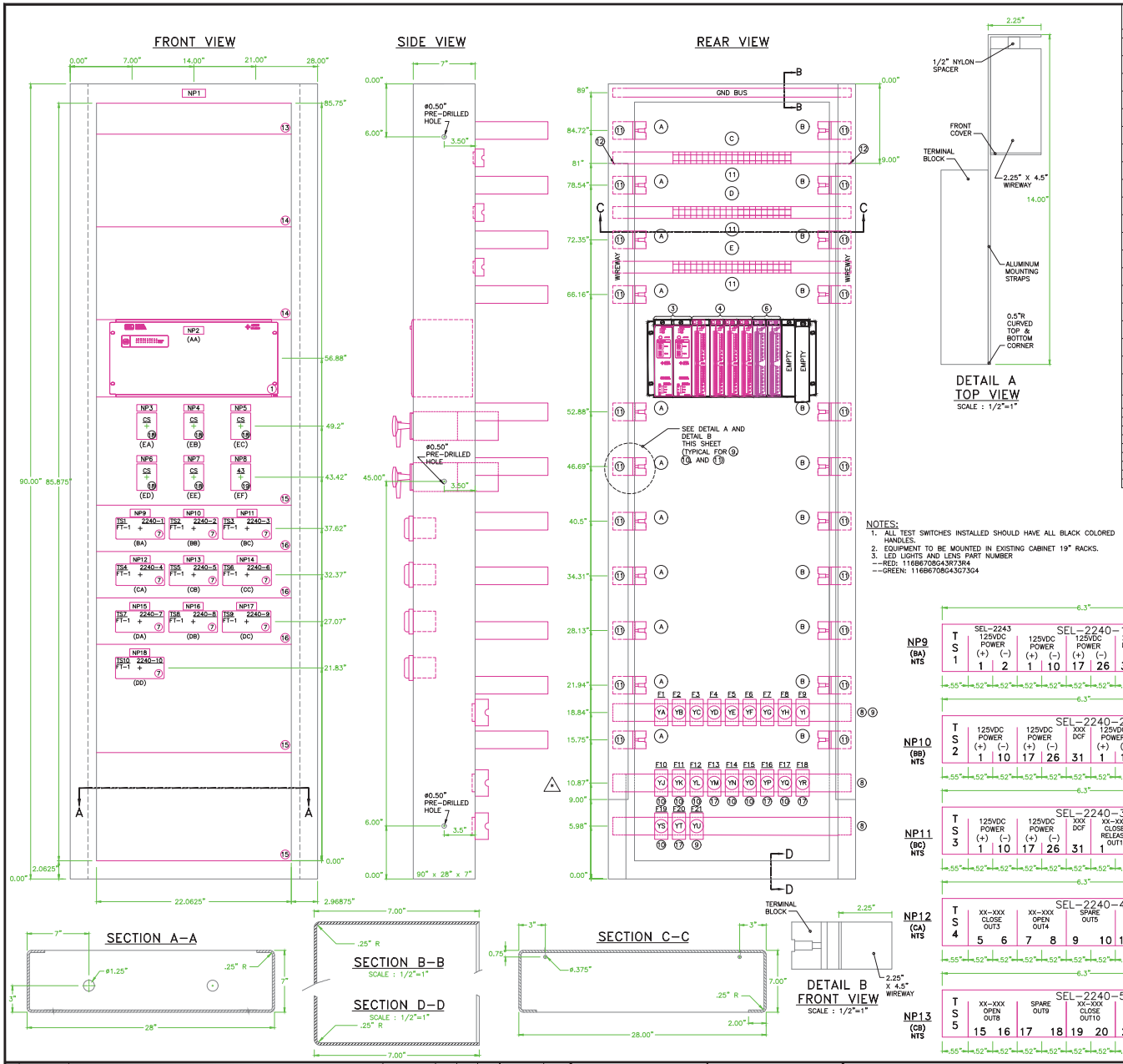
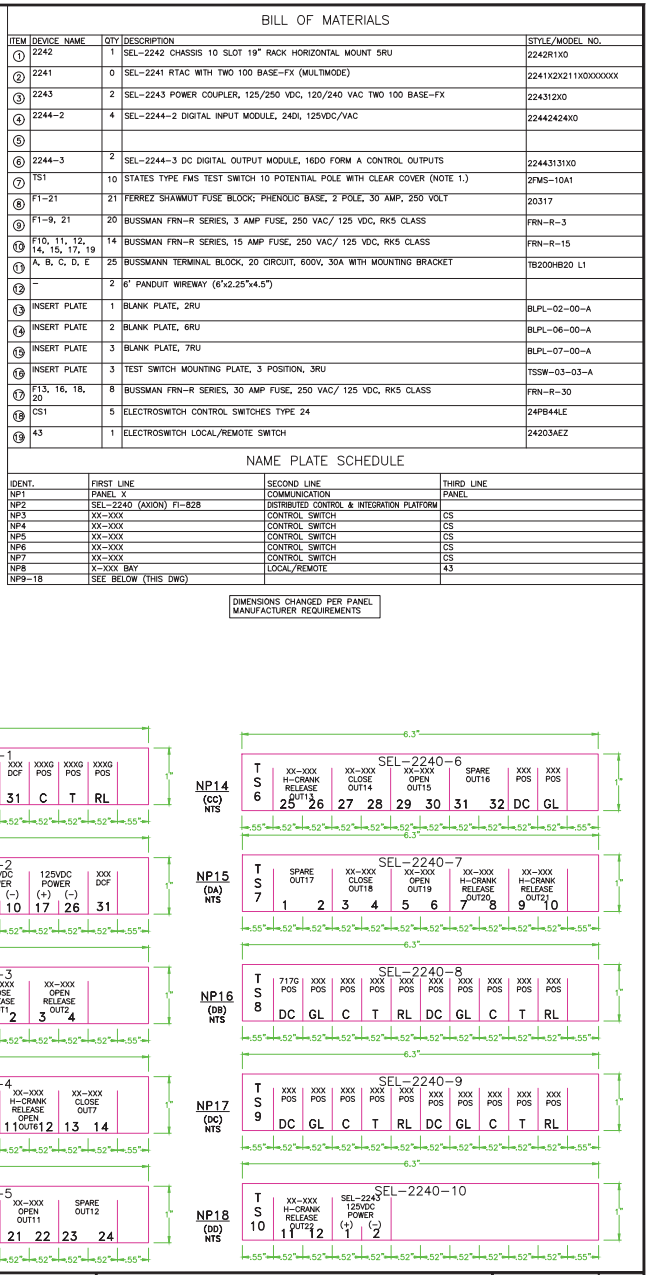
ELECTRIC SERVICE DELIVERY
RELAY ENGINEERING

TITLE :

NAME SUBSTATION
MANUFACTURE DRAWING
SWGR XXX (CUB 2) DOOR PLATE DETAIL

MASTER DWG NUMBER	SCALE
R12_FDR_351-S_Xc_Rev C	N.T.S.
FILE NAME	
R12_FDR_351-S_Xc_Rev C.dwg	
DRAWING NUMBER	
7B XXXX R12.Xc	





BILL OF MATERIALS

ITEM	DEVICE NAME	QTY	DESCRIPTION	STYLE/MODEL NO.
1	2242	1	SEL-2242 CHASSIS 10 SLOT 19" RACK HORIZONTAL MOUNT 5RU	2242R1X0
2	2241	0	SEL-2241 RTAC WITH TWO 100 BASE-FX (MULTIMODE)	2241X2X211X0XXXXXX
3	2243	2	SEL-2243 POWER COUPLER, 125/250 VDC, 120/240 VAC TWO 100 BASE-FX	224312X0
4	2244-2	4	SEL-2244-2 DIGITAL INPUT MODULE, 24DI, 125VDC/VAC	22442424X0
5				
6	2244-3	2	SEL-2244-3 DC DIGITAL OUTPUT MODULE, 16DO FORM A CONTROL OUTPUTS	22443131X0
7	TS1	10	STATES TYPE FMS TEST SWITCH 10 POTENTIAL POLE WITH CLEAR COVER (NOTE 1.)	2FMS-10A1
8	F1-21	21	FERREZ SHAWMUT FUSE BLOCK; PHENOLIC BASE, 2 POLE, 30 AMP, 250 VOLT	20317
9	F1-9, 21	20	BUSSMAN FRN-R SERIES, 3 AMP FUSE, 250 VAC/ 125 VDC, RK5 CLASS	FRN-R-3
10	F10, 11, 12, 14, 15, 17, 19	14	BUSSMAN FRN-R SERIES, 15 AMP FUSE, 250 VAC/ 125 VDC, RK5 CLASS	FRN-R-15
11	A, B, C, D, E	25	BUSSMANN TERMINAL BLOCK, 20 CIRCUIT, 600V, 30A WITH MOUNTING BRACKET	TB200HB20 L1
12	–	2	6' PANDUIT WIREWAY (6"x2.25"x4.5")	
13	INSERT PLATE	1	BLANK PLATE, 2RU	BLPL-02-00-A
14	INSERT PLATE	2	BLANK PLATE, 6RU	BLPL-06-00-A
15	INSERT PLATE	3	BLANK PLATE, 7RU	BLPL-07-00-A
16	INSERT PLATE	3	TEST SWITCH MOUNTING PLATE, 3 POSITION, 3RU	TSSW-03-03-A
17	F13, 16, 18, 20	8	BUSSMAN FRN-R SERIES, 30 AMP FUSE, 250 VAC/ 125 VDC, RK5 CLASS	FRN-R-30
18	CS1	5	ELECTROSWITCH CONTROL SWITCHES TYPE 24	24PB44LE
19	43	1	ELECTROSWITCH LOCAL/REMOTE SWITCH	24203AEZ

NAME PLATE SCHEDULE

IDENT.	FIRST LINE	SECOND LINE	THIRD LINE
NP1	PANEL X	COMMUNICATION	PANEL
NP2	SEL-2240 (AXION) FI-828	DISTRIBUTED CONTROL & INTEGRATION PLATFORM	
NP3	XX-XXX	CONTROL SWITCH	CS
NP4	XX-XXX	CONTROL SWITCH	CS
NP5	XX-XXX	CONTROL SWITCH	CS
NP6	XX-XXX	CONTROL SWITCH	CS
NP7	XX-XXX	CONTROL SWITCH	CS
NP8	X-XXX BAY	LOCAL/REMOTE	43
NP9-18	SEE BELOW (THIS DWG)		

DIMENSIONS CHANGED PER PANEL MANUFACTURER REQUIREMENTS

NOTES:
1. ALL TEST SWITCHES INSTALLED SHOULD HAVE ALL BLACK COLORED HANDLES.
2. EQUIPMENT TO BE MOUNTED IN EXISTING CABINET 19" RACKS.
3. LED LIGHTS AND LENS PART NUMBER
--RED: 116B6708G43673B4
--GREEN: 116B6708G43G73G4

NO	DATE	REVISION	TASKNUM	DSGN	CHK	DWN	AS-BUILT	BY
8								
7								
6								
5								
4								
3								
2								
1								
0	12-3-18	REV A – COMM DISTRIBUTED CONTROL (AXION)		JP		AM		

FOR CONSTRUCTION / DATE

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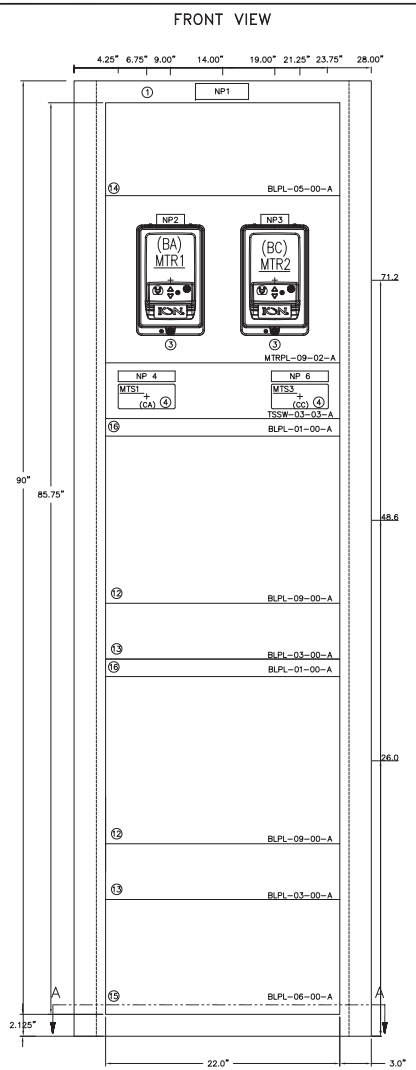
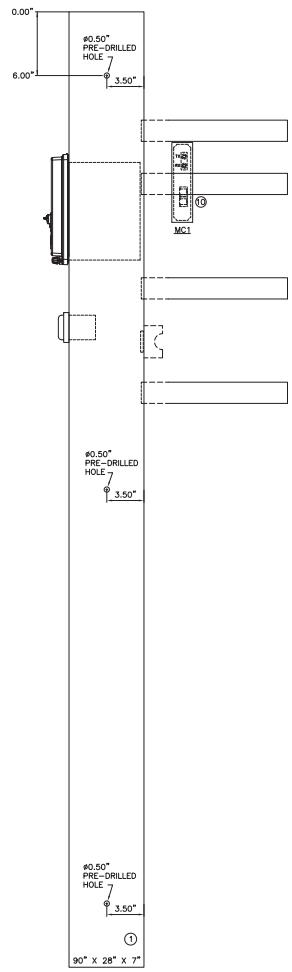
ELECTRIC SERVICE DELIVERY
RELAY ENGINEERING

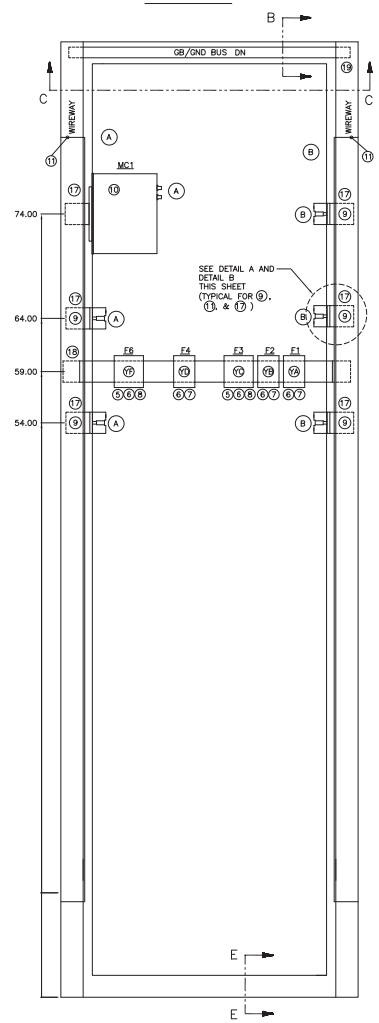
TITLE :

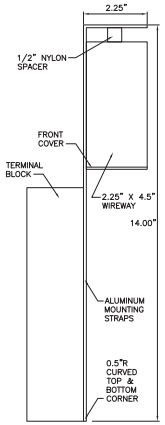
NAME SUBSTATION
PANEL LAYOUT & NAMEPLATES
SEL-2240 AXION-1
DISTRIBUTED CONTROL & INTEGRATION PLATFORM
PANEL X

MASTER DWG NUMBER: R10_2RTAC_C_Rev B
SCALE: 3/16"=1"
FILE NAME: R10_COMM_AXION_REV A.dwg
DRAWING NUMBER: 7B XXX R10.X

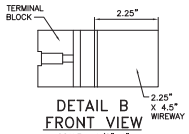




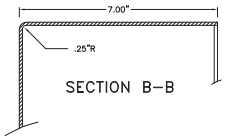




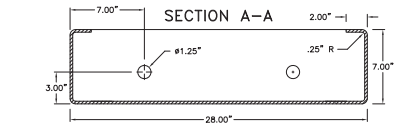
DETAIL A
TOP VIEW
SCALE : 1/2"=1"

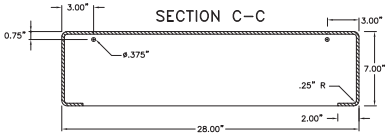


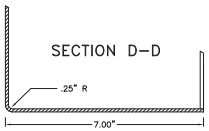
DETAIL B
FRONT VIEW
SCALE : 1/2"=1"



SECTION B-B







BILL OF MATERIALS

ITEM	DEVICE NAME	QTY	DESCRIPTION	STYLE OR MODEL NO.
1		1	SWITCHBOARD PANEL , BLANK , 90"X28"X7" W/HARDWARE	
2				
3	MTR1-2	2	ION 8650-A CLASS 2 METER, FORM 9 W/BASE	S8650A7C0H6C7A0A
4	MTS1,3	2	METER DEVICES TEST SWITCH , 6 CURRENT 4 POTENTIAL POLE , 30AMP, 600VAC (NOTE 1)	2FMS-10E1
5	F3,6	2	BUSSMAN FUSE NEUTRALS, 250VAC/125A/DC, Class R/H, 30A MAX	NTN-R-30
6	F1-4,6	12	BUSSMAN FRN-R SERIES, 3 AMP FUSE, 250 VAC/125 VDC, RK5 CLASS	FRN-R-3
7	F1,2,4	3	FERREZ SHAWMUT FUSE BLOCK; PHENOLIC BASE, 2 POLE, 30 AMP, 250 VOLT	20317
8	F3,6	2	FERRAZ SHAWMUT FUSE BLOCK; PHENOLIC BASE, 4 POLE, 30 AMP, 250 VOLT	20318 20315
9	A & B TBD	9	G.E. TERMINAL BLOCK, 12 CIRCUIT, 600V, 30A WITH MOUNTING BRACKET	EB25B12
10	MC1	1	RUGGEDCOM MEDIA CONVERTER OR EQUIVALENT	RMC40-HI-MI00
11	–	2	6' PANDUIT WIREWAY (6"x2.25"x4.5")	
12		2	BLANK PLATE, 9 RACK UNITS	BLPL-09-00-A
13		2	BLANK PLATE, 3 RACK UNITS	BLPL-03-00-A
14		1	BLANK PLATE, 5 RACK UNITS	BLPL-05-00-A
15		1	BLANK PLATE, 6 RACK UNITS	BLPL-06-00-A
16		2	BLANK PLATE, 1 RACK UNITS	BLPL-01-00-A
17		6	TERMINAL BLOCK MOUNTING STRAP	
18		1	FUSE BLOCK MOUNTING STRAP	
19	GND BUS	1	GROUND BAR	AE-GBAR-27

NAME PLATE SCHEDULE

IDENT.	*	FIRST LINE	SECOND LINE	THIRD LINE
NP 1	–	PANEL X	POWER QUALITY METERING	
NP 2	–	CKT MTR1	MTR1	POWER QUALITY METERING
NP 3	–	CKT MTR2	MTR2	POWER QUALITY METERING
NP 4	–	(SEE R10.Xa)		
NP 5	–			
NP 6	–			
NP 7	–			
NP 8	–			
NP 9	–			
NP 10	–			
NP 11	–			
NP 12	–			
NP 13	–			
NP 14	–			
NP 15	–			
NP 16	–			

NOTES:

1. ALL TEST SWITCHES INSTALLED SHOULD HAVE ALL BLACK COLORED HANDLES.

0 NEW DRAWING

NO	DATE	REVISION	TASKNUM	DSGN	CHK	DWN	AS-BUILT	BY
8								
7								
6								
5								
4								
3								
2								
1								
0		POWER QUALITY METERING STANDARD-REV B		BP		BP		

FOR CONSTRUCTION / DATE

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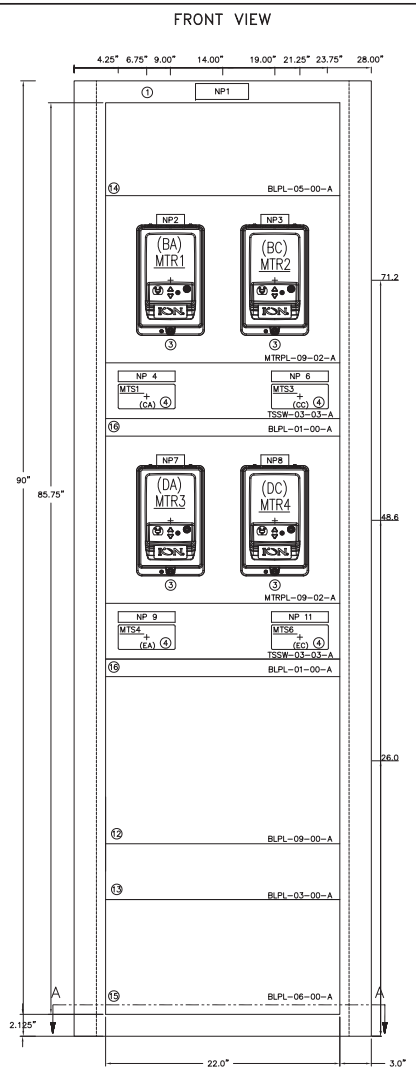
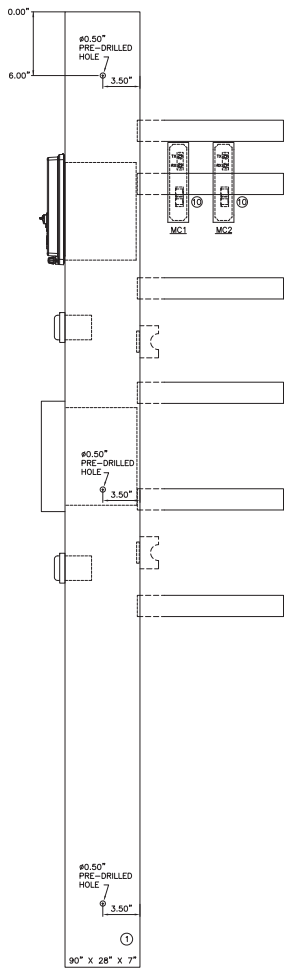
ELECTRIC SERVICE DELIVERY
RELAY ENGINEERING

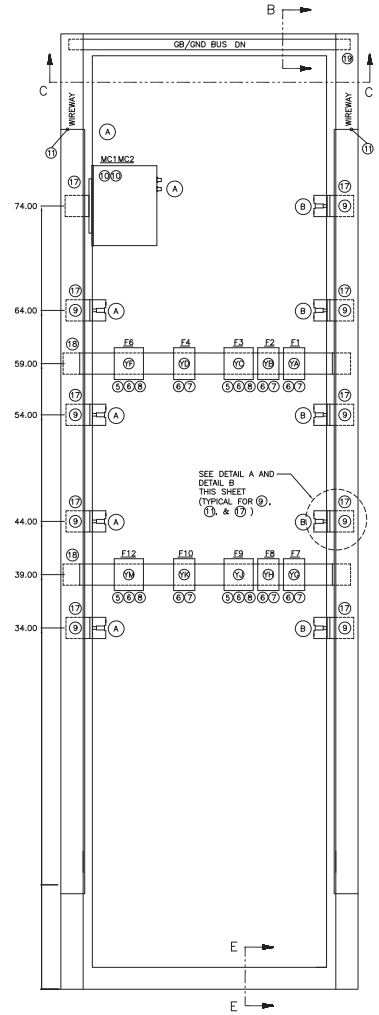
TITLE :

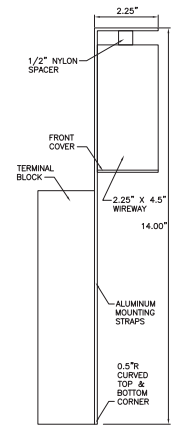
XXXX SUBSTATION
PANEL LAYOUT
2 CKT POWER QUALITY METERING PANEL X

MASTER DWG NUMBER: R10_PQ_2_MET_X_Rev B.dwg
SCALE: N.T.S.
FILE NAME: R10_PQ__2__MET_X_Rev B.dwg
DRAWING NUMBER: **7B XXYY R10.X**

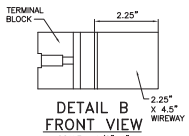




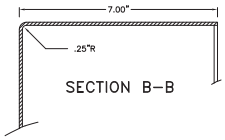




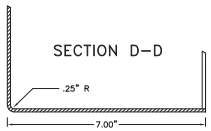
DETAIL A
TOP VIEW
SCALE : 1/2"=1"



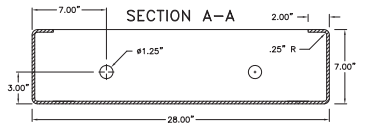
DETAIL B
FRONT VIEW
SCALE : 1/2"=1"



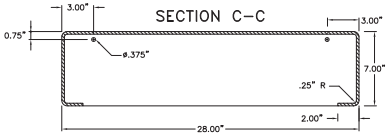
SECTION B-B



SECTION D-D



SECTION A-A



SECTION C-C

BILL OF MATERIALS

ITEM	DEVICE NAME	QTY	DESCRIPTION	STYLE OR MODEL NO.
1		1	SWITCHBOARD PANEL , BLANK , 90"X28"X7" W/HARDWARE	
2				
3	MTR1-4	4	ION 8650-A CLASS 2 METER, FORM 9 W/BASE	S8650A7C0H6C7A0A
4	MTS1,3,4,6	4	METER DEVICES TEST SWITCH , 6 CURRENT 4 POTENTIAL POLE , 30AMP, 600VAC (NOTE 1)	2FMS-10E1
5	F3,6,9,12	4	BUSSMAN FUSE NEUTRALS, 250VAC/125A/DC, Class R/H, 30A MAX	NTN-R-30
6	F1-4,6-10,12	24	BUSSMAN FRN-R SERIES, 3 AMP FUSE, 250 VAC/125 VDC, RK5 CLASS	FRN-R-3
7	F1,2,4,7,8,10	6	FERREZ SHAWMUT FUSE BLOCK; PHENOLIC BASE, 2 POLE, 30 AMP, 250 VOLT	20317
8	F3,6,9,12	4	FERRAZ SHAWMUT FUSE BLOCK; PHENOLIC BASE, 4 POLE, 30 AMP, 250 VOLT	20318 20315
9	A & B TBD	9	G.E. TERMINAL BLOCK, 12 CIRCUIT, 600V, 30A WITH MOUNTING BRACKET	EB25B12
10	MC1-2	2	RUGGEDCOM MEDIA CONVERTER OR EQUIVALENT	RMC40-HI-MI00
11	–	2	6' PANDUIT WIREWAY (6"x2.25"x4.5")	
12		1	BLANK PLATE, 9 RACK UNITS	BLPL-09-00-A
13		1	BLANK PLATE, 3 RACK UNITS	BLPL-03-00-A
14		1	BLANK PLATE, 5 RACK UNITS	BLPL-05-00-A
15		1	BLANK PLATE, 6 RACK UNITS	BLPL-06-00-A
16		2	BLANK PLATE, 1 RACK UNITS	BLPL-01-00-A
17		10	TERMINAL BLOCK MOUNTING STRAP	
18		2	FUSE BLOCK MOUNTING STRAP	
19	GND BUS	1	GROUND BAR	AE-GBAR-27

NAME PLATE SCHEDULE

IDENT.	*	FIRST LINE	SECOND LINE	THIRD LINE
NP 1	–	PANEL X	POWER QUALITY METERING	
NP 2	–	CKT MTR1	MTR1	POWER QUALITY METERING
NP 3	–	CKT MTR2	MTR2	POWER QUALITY METERING
NP 4	–	(SEE R10.Y@)		
NP 5	–			
NP 6	–	(SEE R10.Y@)		
NP 7	–	CKT MTR3	MTR3	POWER QUALITY METERING
NP 8	–	CKT MTR4	MTR4	POWER QUALITY METERING
NP 9	–	(SEE R10.Y@)		
NP 10	–			
NP 11	–			
NP 12	–			
NP 13	–			
NP 14	–			
NP 15	–			
NP 16	–			

NOTES:

1. ALL TEST SWITCHES INSTALLED SHOULD HAVE ALL BLACK COLORED HANDLES.

0 NEW DRAWING

NO	DATE	REVISION	TASKNUM	DSGN	CHK	DWN	AS-BUILT	BY
8								
7								
6								
5								
4								
3								
2								
1								
0		POWER QUALITY METERING STANDARD-REV B		BP		BP		

FOR CONSTRUCTION / DATE

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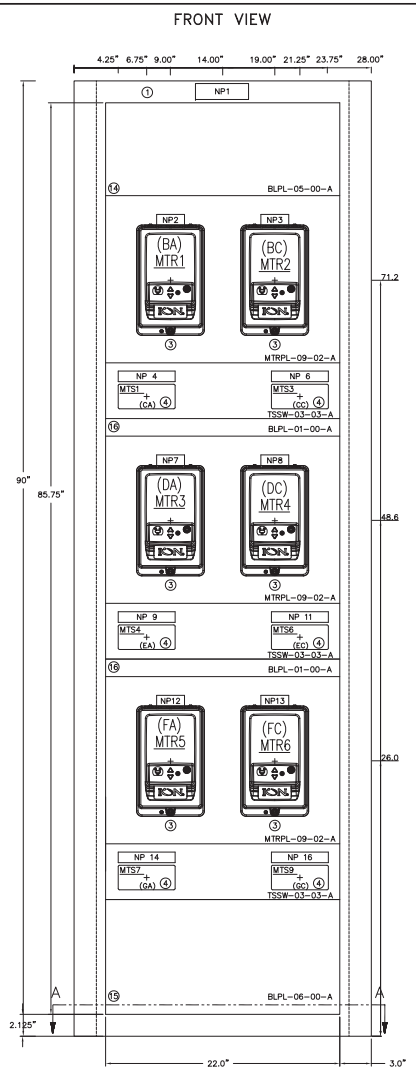
AUSTIN ENERGY

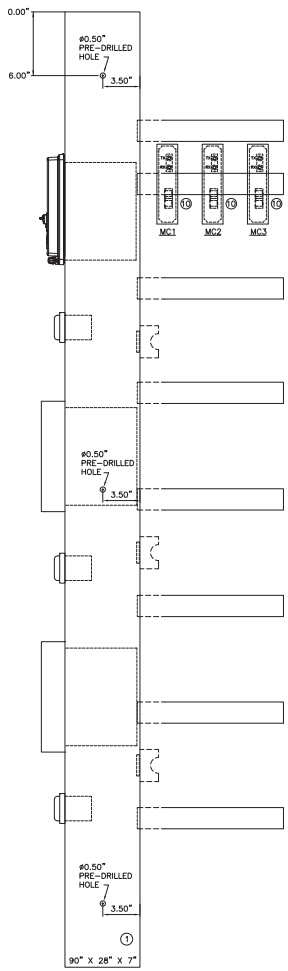
ELECTRIC SERVICE DELIVERY
RELAY ENGINEERING

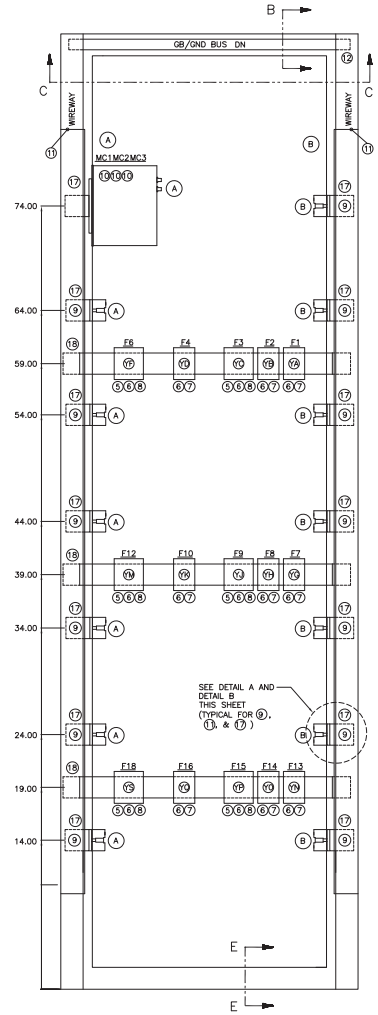
TITLE :

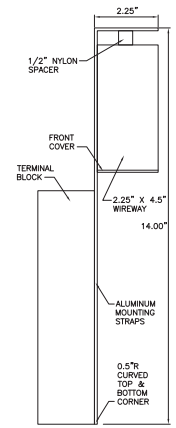
XXXX SUBSTATION
PANEL LAYOUT
4 CKT POWER QUALITY METERING PANEL X

MASTER DWG NUMBER: R10_PQ_4_MET_Y_Rev B.dwg
SCALE: N.T.S.
FILE NAME: R10_PQ_4_MET_Y_Rev B.dwg
DRAWING NUMBER: 7B XXYY R10.Y

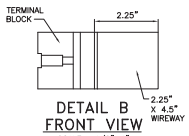




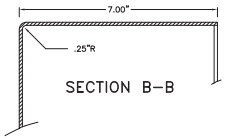




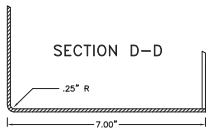
DETAIL A
TOP VIEW
SCALE : 1/2"=1"



DETAIL B
FRONT VIEW
SCALE : 1/2"=1"



SECTION B-B



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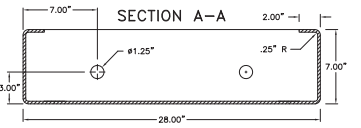
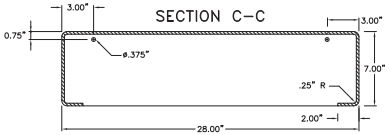


SECTION A-A



SECTION C-C

BILL OF MATERIALS

ITEM	DEVICE NAME	QTY	DESCRIPTION	STYLE OR MODEL NO.
1		1	SWITCHBOARD PANEL , BLANK , 90"X28"X7" W/HARDWARE	
2				
3	MTR1-6	6	ION 8650-A CLASS 2 METER, FORM 9 W/BASE	S8650A7C0H6C7A0A
4	MTS1,3,4,6,7,9	6	METER DEVICES TEST SWITCH , 6 CURRENT 4 POTENTIAL POLE , 30AMP, 600VAC (NOTE 1)	2FMS-10E1
5	F3,6,9,12,15,18	6	BUSSMAN FUSE NEUTRALS, 250VAC/125A/DC, Class R/H, 30A MAX	NTN-R-30
6	F1-4,12-16,18	36	BUSSMAN FRN-R SERIES, 3 AMP FUSE, 250 VAC/125 VDC, RK5 CLASS	FRN-R-3
7	F1,2,4,7,8,10,13,14,16	9	FERREZ SHAWMUT FUSE BLOCK; PHENOLIC BASE, 2 POLE, 30 AMP, 250 VOLT	20317
8	F3,6,9,12,15,18	6	FERRAZ SHAWMUT FUSE BLOCK; PHENOLIC BASE, 4 POLE, 30 AMP, 250 VOLT	20318 20315
9	A & B TBD	13	G.E. TERMINAL BLOCK, 12 CIRCUIT, 600V, 30A WITH MOUNTING BRACKET	EB25B12
10	MC1-3	3	RUGGEDCOM MEDIA CONVERTER OR EQUIVALENT	RMC40-HI-MI00
11	–	2	6' PANDUIT WIREWAY (6"x2.25"x4.5")	
12	GND BUS	1	GROUND BAR	AE-GBAR-27
13				
14		1	BLANK PLATE, 5 RACK UNITS	BLPL-05-00-A
15		1	BLANK PLATE, 6 RACK UNITS	BLPL-06-00-A
16		2	BLANK PLATE, 1 RACK UNITS	BLPL-01-00-A
17		14	TERMINAL BLOCK MOUNTING STRAP	
18		3	FUSE BLOCK MOUNTING STRAP	
19				

NAME PLATE SCHEDULE

IDENT.	*	FIRST LINE	SECOND LINE	THIRD LINE
NP 1	–	PANEL X	POWER QUALITY METERING	
NP 2	–	CKT MTR1	MTR1	POWER QUALITY METERING
NP 3	–	CKT MTR2	MTR2	POWER QUALITY METERING
NP 4	–	(SEE R10.Za)		
NP 5	–			
NP 6	–	(SEE R10.Za)		
NP 7	–	CKT MTR3	MTR3	POWER QUALITY METERING
NP 8	–	CKT MTR4	MTR4	POWER QUALITY METERING
NP 9	–	(SEE R10.Za)		
NP 10	–			
NP 11	–	(SEE R10.Za)		
NP 12	–	CKT MTR5	MTR5	POWER QUALITY METERING
NP 13	–	CKT MTR6	MTR6	POWER QUALITY METERING
NP 14	–	(SEE R10.Za)		
NP 15	–			
NP 16	–	(SEE R10.Za)		

NOTES:

1. ALL TEST SWITCHES INSTALLED SHOULD HAVE ALL BLACK COLORED HANDLES.

0 NEW DRAWING

NO	DATE	REVISION	TASKNUM	DSGN	CHK	DWN	AS-BUILT	BY
8								
7								
6								
5								
4								
3								
2								
1								
0		POWER QUALITY METERING STANDARD-REV B		BP		BP		

FOR CONSTRUCTION / DATE

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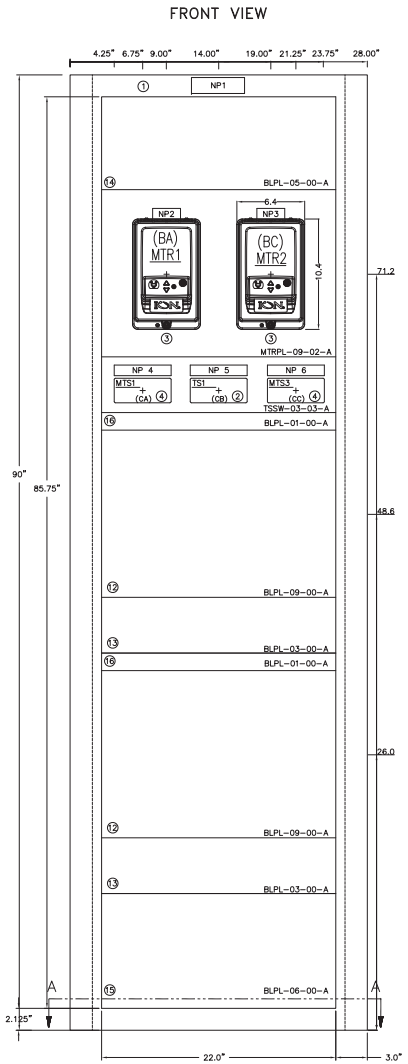
AUSTIN ENERGY

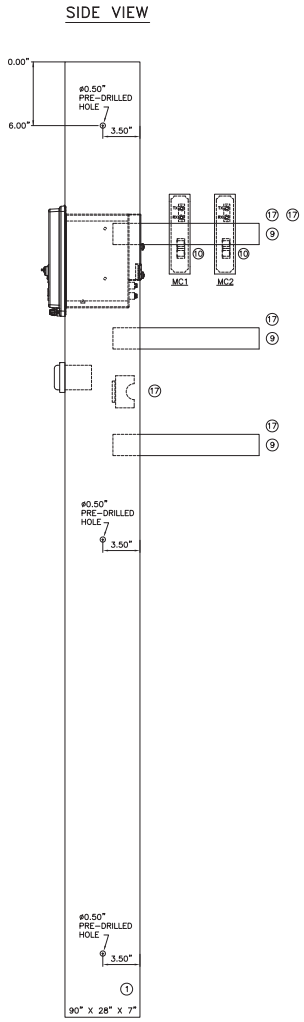
ELECTRIC SERVICE DELIVERY
RELAY ENGINEERING

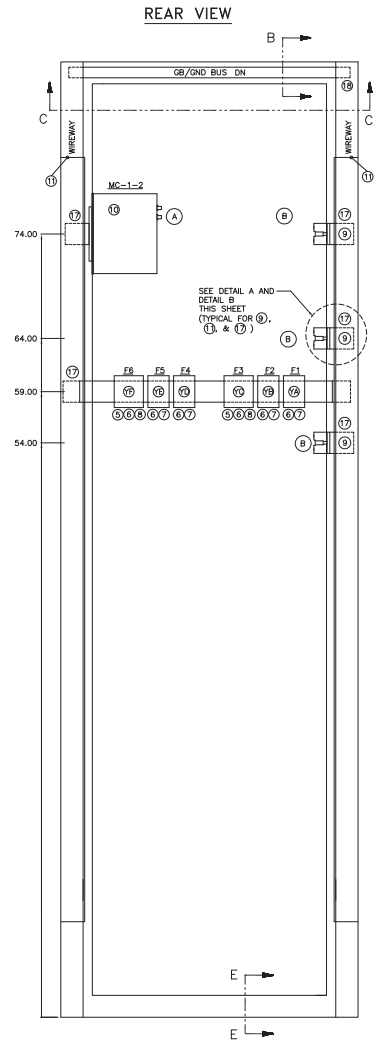
TITLE :

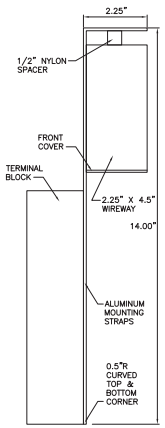
XXXX SUBSTATION
PANEL LAYOUT
6 CKT POWER QUALITY METERING PANEL X

MASTER DWG NUMBER: R10_PQ_6_MET_Z_Rev B.dwg
SCALE: N.T.S.
FILE NAME: R10_PQ_6_MET_Z_Rev B.dwg
DRAWING NUMBER: 7B XXYY R10.Z

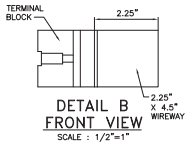




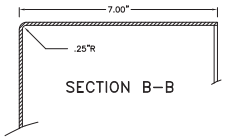




DETAIL A
TOP VIEW
SCALE : 1/2"=1"



DETAIL B
FRONT VIEW
SCALE : 1/2"=1"



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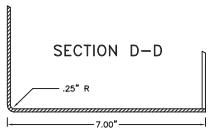

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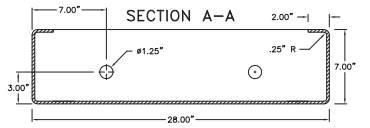
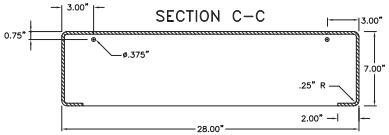


SECTION A-A



SECTION C-C

BILL OF MATERIALS

ITEM	DEVICE NAME	QTY	DESCRIPTION	STYLE OR MODEL NO.
1		1	SWITCHBOARD PANEL , BLANK , 90"X28"X7" W/HARDWARE	
2	TS1	1	TYPE FMS SEMIFLUSH-MOUNTED TEST SWITCHES, 10 CURRENT TEST JACKS (NOTE 1)	2FMS-10B
3	MTR1-2	2	ION 8650-A CLASS 2 METER, FORM 9 W/BASE	S8650A7C0H6C7A0A
4	MTS1,3	2	METER DEVICES TEST SWITCH , 6 CURRENT 4 POTENTIAL POLE , 30AMP, 600VAC (NOTE 1)	2FMS-10E1
5	F3,6	2	BUSSMAN FUSE NEUTRALS, 250VAC/125A/DC, Class R/H, 30A MAX	NTN-R-30
6	F1-6	14	BUSSMAN FRN-R SERIES, 3 AMP FUSE, 250 VAC/125 VDC, RK5 CLASS	FRN-R-3
7	F1,2,4,5	4	FERREZ SHAWMUT FUSE BLOCK; PHENOLIC BASE, 2 POLE, 30 AMP, 250 VOLT	20317
8	F3,6	2	FERRAZ SHAWMUT FUSE BLOCK; PHENOLIC BASE, 4 POLE, 30 AMP, 250 VOLT	20318 20315
9	B TBD	3	G.E. TERMINAL BLOCK, 12 CIRCUIT, 600V, 30A WITH MOUNTING BRACKET	EB25B12
10	MC-1-2	2	RUGGEDCOM MEDIA CONVERTER OR EQUIVALENT	RMC40-HI-MI00
11	–	2	6' PANDUIT WIREWAY (6"x2.25"x4.5")	
12		2	BLANK PLATE, 9 RACK UNITS	BLPL-09-00-A
13		2	BLANK PLATE, 3 RACK UNITS	BLPL-03-00-A
14		1	BLANK PLATE, 5 RACK UNITS	BLPL-05-00-A
15		1	BLANK PLATE, 6 RACK UNITS	BLPL-06-00-A
16		2	BLANK PLATE, 1 RACK UNITS	BLPL-01-00-A
17		5	ALUMINUM MOUNTING STRAP	
18	GND BUS	1	GROUND BAR	AE-GBAR-27
19				

NAME PLATE SCHEDULE

IDENT.	*	FIRST LINE	SECOND LINE	THIRD LINE
NP 1	–	PANEL X	EPS METERING	
NP 2	–	CKT MTR1	MTR1	PRIMARY EPS METERING
NP 3	–	CKT MTR2	MTR2	BACKUP EPS METERING
NP 4	–	(SEE R10.Xa)		
NP 5	–	(SEE R10.Xa)		
NP 6	–	(SEE R10.Xa)		
NP 7	–			
NP 8	–			
NP 9	–			
NP 10	–			
NP 11	–			
NP 12	–			
NP 13	–			
NP 14	–			
NP 15	–			
NP 16	–			

NOTES:

1. ALL TEST SWITCHES INSTALLED SHOULD HAVE ALL BLACK COLORED HANDLES.

0 NEW DRAWING

NO	DATE	REVISION	TASKNUM	DSGN	CHK	DWN	AS-BUILT	BY
8								
7								
6								
5								
4								
3								
2								
1								
0	IFCDATE	EPS METERING STANDARD-REV C		JP		AM		

FOR CONSTRUCTION / DATE

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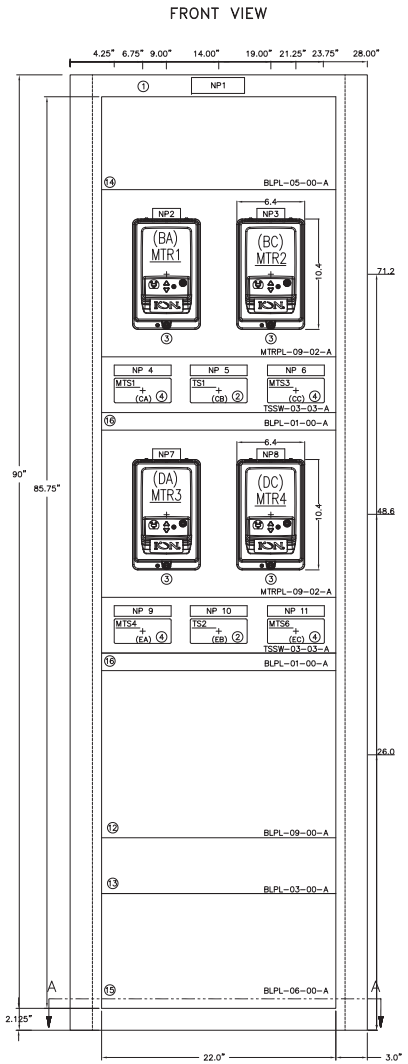
AUSTIN ENERGY

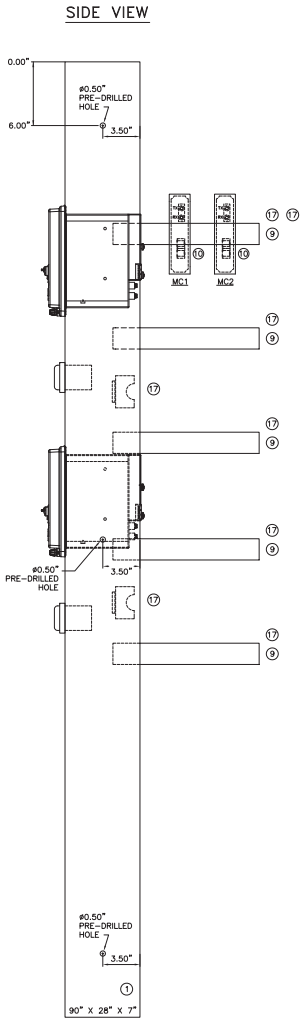
ELECTRIC SERVICE DELIVERY
RELAY ENGINEERING

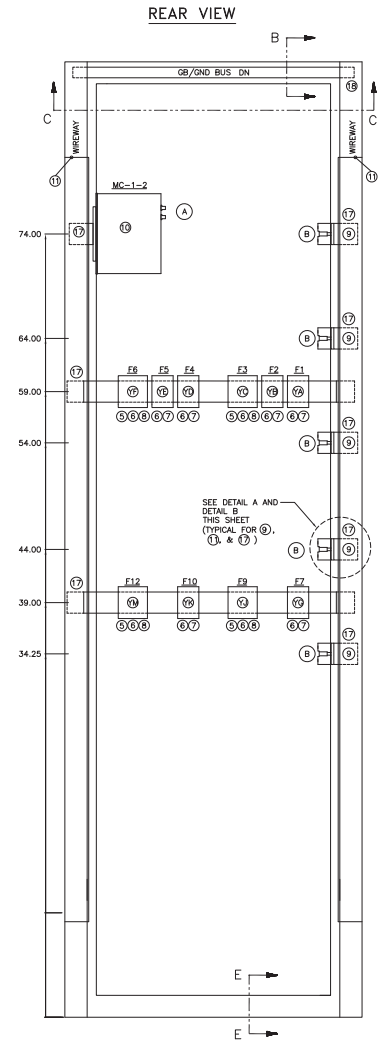
TITLE :

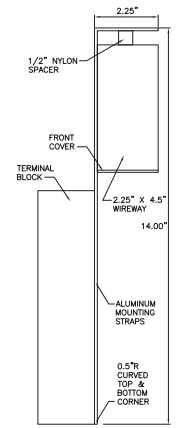
XXXX SUBSTATION
PANEL LAYOUT
CKT XXX EPS METERING PANEL X

MASTER DWG NUMBER: R10_EPS_2_MET_X_Rev C.dwg
SCALE: N.T.S.
FILE NAME: R10_EPS_2_MET_X_Rev C.dwg
DRAWING NUMBER: 7B XXYY R10.X

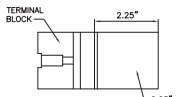




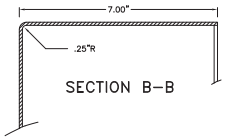




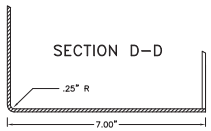
DETAIL A
TOP VIEW
SCALE : 1/2"=1"



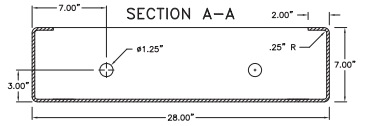
DETAIL B
FRONT VIEW
SCALE : 1/2"=1"



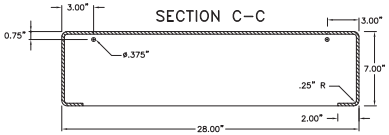
SECTION B-B



SECTION D-D



SECTION A-A



SECTION C-C

BILL OF MATERIALS

ITEM	DEVICE NAME	QTY	DESCRIPTION	STYLE OR MODEL NO.
1		1	SWITCHBOARD PANEL , BLANK , 90"X28"X7" W/HARDWARE	
2	TS1-2	2	TYPE FMS SEMIFLUSH-MOUNTED TEST SWITCHES, 10 CURRENT TEST JACKS (NOTE 1)	2FMS-10B
3	MTR1-4	4	ION 8650-A CLASS 2 METER, FORM 9 W/BASE	S8650A7C0H6C7A0A
4	MTS1,3,4,6	4	METER DEVICES TEST SWITCH , 6 CURRENT 4 POTENTIAL POLE , 30AMP, 600VAC (NOTE 1)	2FMS-10E1
5	F3,6,9,12	4	BUSSMAN FUSE NEUTRALS, 250VAC/125A/DC, Class R/H, 30A MAX	NTN-R-30
6	F1-12	24	BUSSMAN FRN-R SERIES, 3 AMP FUSE, 250 VAC/125 VDC, RK5 CLASS	FRN-R-3
7	F1,2,4,5,7,8,10,11	8	FERREZ SHAWMUT FUSE BLOCK; PHENOLIC BASE, 2 POLE, 30 AMP, 250 VOLT	20317
8	F3,6,9,12	4	FERRAZ SHAWMUT FUSE BLOCK; PHENOLIC BASE, 4 POLE, 30 AMP, 250 VOLT	20318 20315
9	B TBD	5	G.E. TERMINAL BLOCK, 12 CIRCUIT, 600V, 30A WITH MOUNTING BRACKET	EB25B12
10	MC-1-2	2	RUGGEDCOM MEDIA CONVERTER OR EQUIVALENT	RMC40-HI-MI00
11	–	2	6' PANDUIT WIREWAY (6'x2.25"x4.5")	
12		1	BLANK PLATE, 9 RACK UNITS	BLPL-09-00-A
13		1	BLANK PLATE, 3 RACK UNITS	BLPL-03-00-A
14		1	BLANK PLATE, 5 RACK UNITS	BLPL-05-00-A
15		1	BLANK PLATE, 6 RACK UNITS	BLPL-06-00-A
16		2	BLANK PLATE, 1 RACK UNITS	BLPL-01-00-A
17		8	ALUMINUM MOUNTING STRAP	
18	GND BUS	1	GROUND BAR	AE-GBAR-27
19				

NAME PLATE SCHEDULE

IDENT.	*	FIRST LINE	SECOND LINE	THIRD LINE
NP 1	–	PANEL X	EPS METERING	
NP 2	–	CKT MTR1	MTR1	PRIMARY EPS METERING
NP 3	–	CKT MTR2	MTR2	BACKUP EPS METERING
NP 4	–	(SEE R10.Y9)		
NP 5	–	(SEE R10.Y9)		
NP 6	–	(SEE R10.Y9)		
NP 7	–	CKT MTR3	MTR3	PRIMARY EPS METERING
NP 8	–	CKT MTR4	MTR4	BACKUP EPS METERING
NP 9	–	(SEE R10.Y9)		
NP 10	–	(SEE R10.Y9)		
NP 11	–	(SEE R10.Y9)		
NP 12	–			
NP 13	–			
NP 14	–			
NP 15	–			
NP 16	–			

NOTES:

1. ALL TEST SWITCHES INSTALLED SHOULD HAVE ALL BLACK COLORED HANDLES.

0 NEW DRAWING

NO	DATE	REVISION	TASKNUM	DSGN	CHK	DWN	AS-BUILT	BY
8								
7								
6								
5								
4								
3								
2								
1								
0	IFCDATE	EPS METERING STANDARD-REV C		JP		AM		

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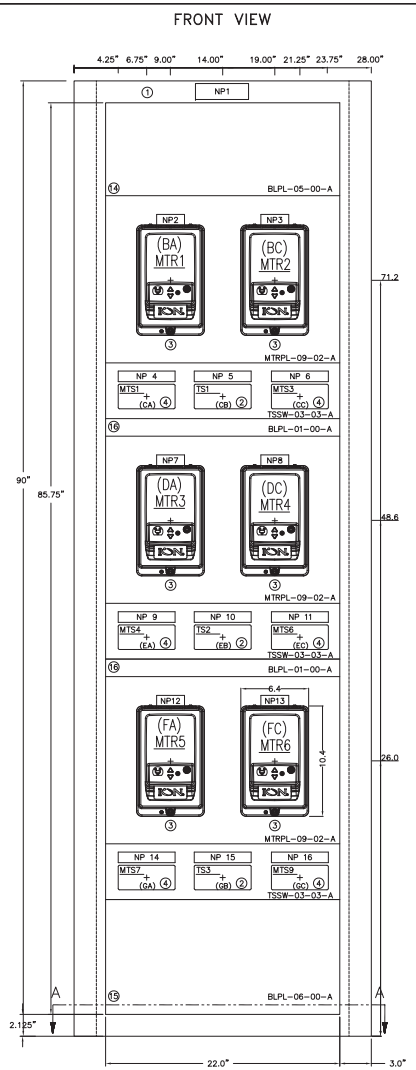
AUSTIN ENERGY

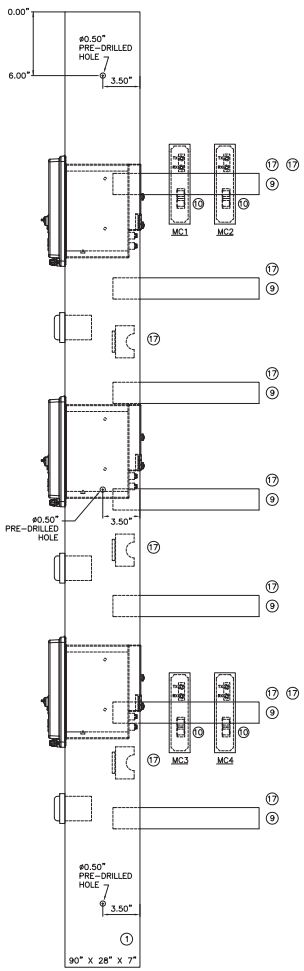
ELECTRIC SERVICE DELIVERY
RELAY ENGINEERING

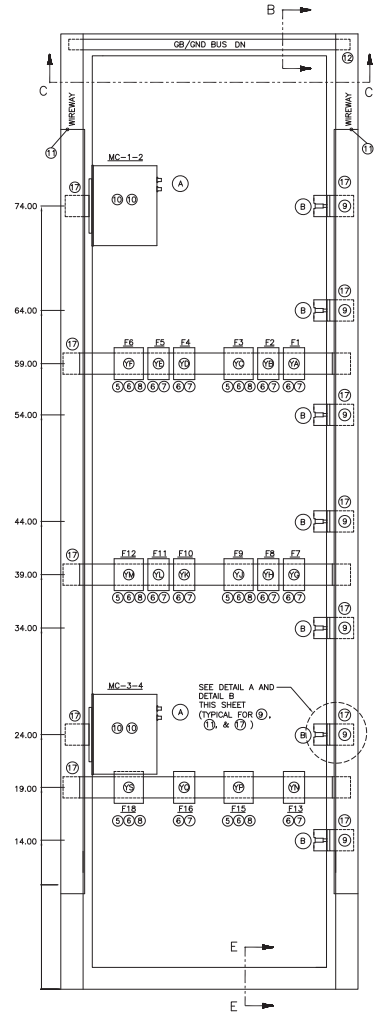
TITLE :

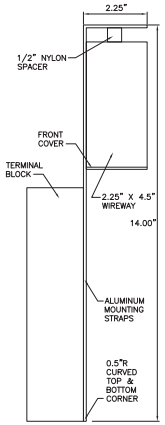
XXXX SUBSTATION
PANEL LAYOUT
CKT XXX & YYY EPS METERING PANEL X

MASTER DWG NUMBER: R10_EPS_4_MET_Y_Rev C.dwg
SCALE: N.T.S.
FILE NAME: R10_EPS_4_MET_Y_Rev C.dwg
DRAWING NUMBER: 7B XXYY R10.Y

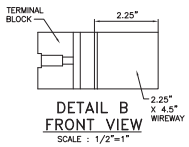




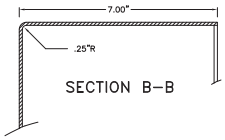




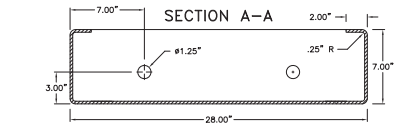
DETAIL A
TOP VIEW
SCALE : 1/2"=1"



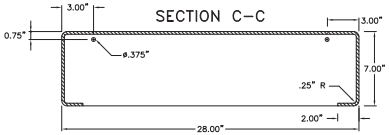
DETAIL B
FRONT VIEW
SCALE : 1/2"=1"



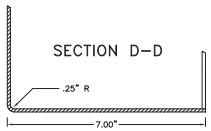
SECTION B-B



SECTION A-A



SECTION C-C



SECTION D-D

ITEM	DEVICE NAME	QTY	BILL OF MATERIALS DESCRIPTION	STYLE OR MODEL NO.
1		1	SWITCHBOARD PANEL , BLANK , 90"X28"X7" W/HARDWARE	
2	TS1,2,3	3	TYPE FMS SEMIFLUSH-MOUNTED TEST SWITCHES, 10 CURRENT TEST JACKS (NOTE 1)	2FMS-10B
3	MTR1-4	6	ION 8650-A CLASS 2 METER, FORM 9 W/BASE	S8650A7C0H6C7A0A
4	MTS1,3,4,6,7,9	6	METER DEVICES TEST SWITCH , 6 CURRENT 4 POTENTIAL POLE , 30AMP, 600VAC (NOTE 1)	2FMS-10E1
5	F3,6,9,12,15,18	6	BUSSMAN FUSE NEUTRALS, 250VAC/125A/DC, Class R/H, 30A MAX	NTN-R-30
6	F1-18	38	BUSSMAN FRN-R SERIES, 3 AMP FUSE, 250 VAC/125 VDC, RK5 CLASS	FRN-R-3
7	F12,4,5,7,8,10,11,13,16	10	FERREZ SHAWMUT FUSE BLOCK; PHENOLIC BASE, 2 POLE, 30 AMP, 250 VOLT	20317
8	F3,6,9,12,15,18	6	FERRAZ SHAWMUT FUSE BLOCK; PHENOLIC BASE, 4 POLE, 30 AMP, 250 VOLT	20318 20315
9	B TBD	7	G.E. TERMINAL BLOCK, 12 CIRCUIT, 600V, 30A WITH MOUNTING BRACKET	EB25B12
10	MC1-4	4	RUGGEDCOM MEDIA CONVERTER OR EQUIVALENT	RMC40-HI-MI00
11	–	2	6' PANDUIT WIREWAY (6'x2.25"x4.5")	
12	GND BUS	1	GROUND BAR	AE-GBAR-27
13				
14		1	BLANK PLATE, 5 RACK UNITS	BLPL-05-00-A
15		1	BLANK PLATE, 6 RACK UNITS	BLPL-06-00-A
16		2	BLANK PLATE, 1 RACK UNITS	BLPL-01-00-A
17		12	ALUMINUM MOUNTING STRAP	
18				
19				

NAME PLATE SCHEDULE

IDENT.	*	FIRST LINE	SECOND LINE	THIRD LINE
NP 1	–	PANEL X	EPS METERING	
NP 2	–	CKT MTR1	MTR1	PRIMARY EPS METERING
NP 3	–	CKT MTR2	MTR2	BACKUP EPS METERING
NP 4	–	(SEE R10.Za)		
NP 5	–	(SEE R10.Za)		
NP 6	–	(SEE R10.Za)		
NP 7	–	CKT MTR3	MTR3	PRIMARY EPS METERING
NP 8	–	CKT MTR4	MTR4	BACKUP EPS METERING
NP 9	–	(SEE R10.Za)		
NP 10	–	(SEE R10.Za)		
NP 11	–	(SEE R10.Za)		
NP 12	–	CKT MTR5	MTR5	PRIMARY EPS METERING
NP 13	–	CKT MTR6	MTR6	BACKUP EPS METERING
NP 14	–	(SEE R10.Za)		
NP 15	–	(SEE R10.Za)		
NP 16	–	(SEE R10.Za)		

NOTES:

1. ALL TEST SWITCHES INSTALLED SHOULD HAVE ALL BLACK COLORED HANDLES.

0 NEW DRAWING

NO	DATE	REVISION	TASKNUM	DSGN	CHK	DWN	AS-BUILT	BY
8								
7								
6								
5								
4								
3								
2								
1								
0	IFCDATE	EPS METERING STANDARD-REV C		JP		AM		

FOR CONSTRUCTION / DATE

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ELECTRIC SERVICE DELIVERY
RELAY ENGINEERING

TITLE :

XXXX SUBSTATION
PANEL LAYOUT
CKT XXX, YYY, ZZZ EPS METERING PANEL X

MASTER DWG NUMBER: R10_EPS_6_MET_Z_Rev C.dwg
SCALE: N.T.S.
FILE NAME: R10_EPS_6_MET_Z_Rev C.dwg
DRAWING NUMBER: **7B XXYY R10.Z**