



### AGENDA ITEM EXECUTIVE SUMMARY

Agenda Item:	Consider Resolution Awarding Bid to Myers Controlled Power LLC for the construction and delivery of the GBPIII Substation switchgear and building.		
Presenter & Title:	Aaron Holton – Superintendent of Electric Services		
Date:	June 19, 2023		
<b>Please Check Appropriate Box:</b>			
<input checked="" type="checkbox"/>	Committee of the Whole Meeting	<input type="checkbox"/>	Special Committee of the Whole Meeting
<input checked="" type="checkbox"/>	City Council Meeting	<input type="checkbox"/>	Special City Council Meeting
<input type="checkbox"/>	Public Hearing	<input type="checkbox"/>	Other -
Associated Strategic Plan Goal/Objective: EMS II			
Estimated Cost: \$ 1,375,742.00	Budgeted?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	Other Funding? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
<i>If "Other Funding," please explain how the item will be funded:</i>			
<b>Executive Summary:</b>			
Bids were advertised and opened on Monday, April 17, 2023 for the purchase and delivery of the switch gear and building for the Geneva Business Park III substation. One bid was received and four companies declined to submit a bid.			
Myers Controlled Power, LLC	Bid Price 1,201,975.00		
The projected cost of the switch gear and building is below the engineer's estimate. As such and due to lead time, bid response and supply chain constraints it was decided to recommend the current bid.			
<b>Attachments:</b> <i>(please list)</i>			
<ul style="list-style-type: none"> <li>• Resolution</li> <li>• Draft Conformed Contract</li> <li>• Recommendation Letter and Supporting Documents From Stanley Consultants</li> </ul>			
<b>Voting Requirements:</b>			
<i>This motion requires a simple majority of votes for passage.</i>			
<i>The Mayor may vote on three occasions: (a) when the vote of the aldermen or trustees has resulted in a tie; (b) when one half of the aldermen or trustees elected have voted in favor of an ordinance, resolution, or motion even though there is no tie vote; or (c) when a vote greater than a majority of the corporate authorities is required by state statute or local ordinance to adopt an ordinance, resolution, or motion.</i>			
<b>Recommendation / Suggested Action:</b> <i>(how the item should be listed on agenda)</i>			
Recommend resolution awarding bid to Myers Controlled Power LLC for the construction and delivery of the GBPIII Substation switchgear and building in an amount of \$1,375,742.00 and allow the City Administrator to approve change order not to exceed 10% of the contracted amount.			

**RESOLUTION NO. 2023-62**

**AWARDING BID TO MYERS CONTROLLED POWER LLC FOR THE CONSTRUCTION AND DELIVERY OF THE GBPIII SUBSTATION SWITCHGEAR AND BUILDING IN AN AMOUNT OF \$1,375,742.00 AND ALLOW THE CITY ADMINISTRATOR TO APPROVE CHANGE ORDER NOT TO EXCEED 10% OF THE CONTRACTED AMOUNT.**

**BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY OF GENEVA, KANE COUNTY, ILLINOIS, as follows:**

**SECTION 1:** That the City Administrator is hereby authorized to award, on behalf of the City of Geneva, the bid to Myers Controlled Power LLC for the construction and delivery of the GBPIII Substation switchgear and building in an amount of \$1,375,742.00 and allow the City Administrator to approve change order not to exceed 10% of the contracted amount, in the form attached hereto.

**SECTION 2:** This Resolution shall become effective from and after its passage as in accordance with law.

**PASSED** by the City Council of the City of Geneva, Kane County, Illinois, this 19<sup>th</sup> day of June, 2023

**AYES: \_\_ NAYS: \_\_ ABSENT: \_\_ ABSTAINING: \_\_ HOLDING OFFICE: \_\_**

Approved by me this 19<sup>th</sup> day of June, 2023.

\_\_\_\_\_  
Mayor

ATTEST:

\_\_\_\_\_  
City Clerk

**Draft Conformed Contract**

**for**

**Contract 23-03  
Business Park III Substation  
Control Building and Switchgear  
Procurement**

**between**

**City of Geneva  
Geneva, Illinois**

**and**

**Myers Controlled Power LLC  
North Canton, Ohio**

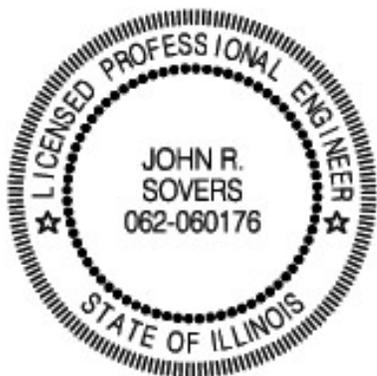
**May 2023**

# Project Manual

for

## Contract 23-03 Business Park III Substation Control Building and Switchgear Procurement

City of Geneva  
Geneva, IL



*John Sovers*  
\_\_\_\_\_  
Signature

3/1/2023  
\_\_\_\_\_  
Date

License Expiration Date: 11-30-2023  
Illinois Firm Registration No. 184-001533

CONTRACT NO. 23-03  
BUSINESS PARK III SUBSTATION CONTROL BUILDING AND SWITCHGEAR PROCUREMENT

CITY OF GENEVA  
GENEVA, ILLINOIS

**PROCUREMENT AND CONTRACTING REQUIREMENTS GROUP**

DIVISION 00      PROCUREMENT AND CONTRACTING REQUIREMENTS

Resp. Charge	Document	Title	Page
	00 01 15	Drawing List	1
	00 52 63	Agreement between Buyer and Seller – EJCDC P-520 (2000 Edition)	1 thru 6
		Exhibit A	1 thru 41
	00 72 63	Procurement General Conditions	1 thru 12

**SPECIFICATIONS GROUP**

**GENERAL REQUIREMENTS SUBGROUP**

DIVISION 01	GENERAL REQUIREMENTS	
01 11 00	Summary of Work	1
01 25 13	Product Substitutions	1 thru 2
	Product Substitution Request Form	1
01 33 00	Submittal Procedures	1 thru 6
	Submittal Transmittal Form	1
01 43 33	Manufacturer's Field Services	1
01 60 00	Product Requirements	1 thru 3
01 70 00	Execution and Closeout Requirements	1
01 78 23	Operating and Maintenance Data	1 thru 4
	Operating and Maintenance Manual Cover Diagram	1

**FACILITY CONSTRUCTION SUBGROUP**

DIVISION 13	SPECIAL CONSTRUCTION	
13 34 23-26	Fabricated Substation Control Building	1 thru 15

**FACILITY SERVICES SUBGROUP**

DIVISION 26	ELECTRICAL	
26 13 13	Medium-Voltage, Metal-Clad Switchgear	1 thru 22

Drawing No.	Title	Rev. No.
GG01	COVER SHEET AND DRAWING INDEX	A
EO04	ONE-LINE DIAGRAM SHEET 2	A
EO05	ONE-LINE DIAGRAM SHEET 3	A
EO06	BUSINESS PARK 3 COMMUNICATION ONE-LINE	A
EP02	12.47kV SWITCHGEAR BUILDING EQUIPMENT LAYOUT	A
EP03	12.47kV SWITCHGEAR PANEL ELEVATIONS	A

**THIS AGREEMENT** is by and between City of Geneva, IL (Buyer) and Myers Controlled Power LLC (Seller).

Buyer and Seller, in consideration of the mutual covenants hereinafter set forth, agree as follows:

**Article 1. GOODS AND SPECIAL SERVICES**

- 1.1 Seller shall furnish the Goods and Special Services as specified or indicated in the Contract Documents. The Goods and Special Services to be furnished are described in Section 01 11 00.

**Article 2. THE PROJECT**

- 2.1 The Project for which the Goods and Special Services to be provided under the Contract Documents may be the whole or only a part is generally described as Business Park III Substation Control Building and Switchgear Procurement Project.

**Article 3. ENGINEER**

- 3.1 The Contract Documents for the Goods and Special Services have been prepared by Stanley Consultants, Inc. who is hereinafter called Engineer and who is to assume all duties and responsibilities and have the rights and authority assigned to Engineer in the Contract Documents in connection with the furnishing of Goods and Special Services.

**Article 4. POINT OF DESTINATION**

- 4.1 The place where the Goods are to be delivered is defined in the General Conditions as the Point of Destination and is designated as: Business Park III Substation address: 1717 Averill Rd, Geneva, IL 60134.

**Article 5. CONTRACT TIMES**

- 5.1 **Time of the Essence.** All time limits for Milestones, if any, for the delivery of Goods and the furnishing of Special Services as stated in the Contract Documents are of the essence of the Contract.
- 5.2 **Days for Submittal of Shop Drawings.** All Shop Drawings and Samples required by the Contract Documents will be submitted to Buyer for Engineer's review within 30 days after the date when the Contract Times commence to run as provided in Paragraph 2.03 of the General Conditions.
- 5.3 **Dates for Delivery of Goods.** The Goods are to be delivered to the Point of Destination and ready for Buyer's receipt of delivery on (or within a period of 15 days prior to or after) December 26, 2024. Coordinate with Owner on exact date at time of shipment.
- 5.4 **Liquidated Damages.** Buyer and Seller recognize that Buyer will suffer financial loss if the Goods are not delivered at the Point of Destination and ready for receipt of delivery by Buyer within the times specified in Paragraph 5.3 above, plus any extensions thereof allowed in accordance with Article 7 of the General Conditions. The parties also recognize that the timely performance of services by others involved in the Project is materially dependent upon Seller's specific compliance with the requirements of Paragraph 6.02. Further, they recognize the delays, expense, and difficulties involved in proving the actual loss suffered by Buyer if complete acceptable Goods are not delivered on time. Accordingly, instead of requiring such proof, Buyer and Seller agree that as liquidated damages for delay (but not as a penalty) Seller shall pay Buyer \$750 for each day that expires after the time specified in Paragraph 5.3.B for delivery of acceptable Goods.

**Article 6. CONTRACT PRICE.**

6.1 Buyer shall pay Seller for furnishing the Goods and Special Services in accordance with the Contract Documents an amount in current funds as follows:

6.1.1 For a Lump Sum of:

One Million Three Hundred Seventy-Five Thousand Seven Hundred Forty-Two Dollars (\$1,375,742.00)

Includes:

Factory Witness Testing Allowance

	Round Trips	\$/ Round Trip	Total
Travel Allowance – Owner		\$2000	
Travel Allowance - Engineer		\$2000	

	Days	\$/ Days	Total
Per Diem Allowance – Owner		\$475	
Per Diem Allowance - Engineer		\$2075	

To be delivered on: September 27, 2024.

Price for extending warranty:

5 years \$ 64,660.00.

Additional Adders:

17 ft Building \$ 106,269.00  
 Second Set of CTs \$ 9,538.00  
 NTX \$ 5,000.00

6.1.2 Unit Adjustment Prices. To adjust Lump Sum for changes from quantities required by Contract Documents.

Item	Unit	Unit Adjustment Price
Site services of service engineer	per day	\$ 1,800.00
Transportation, travel time, and out-of-pocket expenses for travel of service engineer to Site	per round trip	\$ 3,200.00

**Article 7. PAYMENT PROCEDURES.**

7.1 **Submittal and Processing of Payments.** Seller shall submit Applications for Payment in accordance with Article 10 of the General Conditions. Applications for Payment will be processed by Engineer as provided in the General Conditions.

7.2 **Progress Payments; Retainage.**

7.2.1 Buyer shall make progress payments on account of the Contract Price on the basis of Seller's Applications for Payment as follows:

7.2.1.1 Upon receipt of the first Application for Payment submitted in accordance with Paragraph 10.01.A.1 of the General Conditions and accompanied by Engineer's recommendation of payment in accordance with Paragraph 10.02.A of the General

Conditions, an amount equal to 10% of the Contract Price, less such amounts as Engineer may determine in accordance with Paragraph 10.02.A.3 of the General Conditions.

7.2.1.2 Upon receipt of the second such Application for Payment accompanied by Engineer's recommendation of payment in accordance with Paragraph 10.01.A.2 of the General Conditions, an amount sufficient to increase total payments to Seller to 90% of the Contract Price, less such amounts as Engineer may determine in accordance with Paragraph 10.02.A.3 of the General Conditions.

7.3 **Final Payment.** Upon receipt of the final Application for Payment accompanied by Engineer's recommendation of payment in accordance with Paragraph 10.06 of the General Conditions, Buyer shall pay the remainder of the Contract Price as recommended by Engineer.

#### **Article 8. INTEREST.**

8.1 All moneys not paid when due as provided in Article 10 of the General Conditions shall bear interest at the rate of 4% per annum.

#### **Article 9. SELLER'S REPRESENTATIONS.**

9.1 In order to induce Buyer to enter into this Agreement, Seller makes the following representations:

9.1.1 Seller has examined and carefully studied the Contract Documents and the other related data identified in the Bidding Documents.

9.1.2 If specified or if, in Seller's judgment, any local condition may affect cost, progress or the furnishing of the Goods and Special Services, Seller has visited the Point of Destination and become familiar with and is satisfied as to the local conditions that may affect cost, progress or the furnishing of the Goods and Special Services.

9.1.3 Seller is familiar with and is satisfied as to all local federal, state and local Laws and Regulations that may affect cost, progress and the furnishing of the Goods and Special Services.

9.1.4 Seller has carefully studied and correlated the information known to Seller, and information and observations obtained from Seller's visits, if any, to the Point of Destination, with the Contract Documents.

9.1.5 Seller has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Seller has discovered in the Contract Documents, and the written resolution thereof by Engineer is acceptable to Seller.

9.1.6 The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for furnishing Goods and Special Services.

#### **Article 10. CONTRACT DOCUMENTS.**

10.1 The Contract Documents consist of the following:

10.1.1 This Agreement (pages 1 to 5, inclusive).

10.1.2 Exhibits to this Agreement (pages 1 to 41, inclusive).

10.1.3 General Conditions (pages 1 to 12, inclusive).

10.1.4 Specifications as listed in Project Manual table of contents.

10.1.5 Drawings consisting of a cover sheet and sheets as listed in Drawing List and in Standard Drawing List.

- 10.1.6 The following which may be delivered or issued on or after the Effective Date of the Agreement and are not attached hereto:
- 10.1.6.1 Notice to Proceed (pages \_\_\_\_\_ to \_\_\_\_\_, inclusive);
  - 10.1.6.2 Written Amendment(s);
  - 10.1.6.3 Work Change Directive(s);
  - 10.1.6.4 Change Order(s).
- 10.2 The documents listed in paragraph 10.1 are attached to this Agreement (except as expressly noted otherwise above).
- 10.3 There are no Contract Documents other than those listed above in this Article 10.
- 10.4 The Contract Documents may only be amended, modified, or supplemented as provided in paragraph 3.04 of the General Conditions.

#### **Article 11. MISCELLANEOUS.**

- 11.1 **Defined Terms.** Terms used in this Agreement will have the meanings indicated in the General Conditions and the Supplementary Conditions.
- 11.2 **Assignment.** No assignment by a party hereto of any rights under or interests in the Contract Documents will be binding on another party hereto without the written consent of the party sought to be bound. Specifically but without limitation, moneys that may become due and moneys that are due may not be assigned without such consent (except to the extent that the effect of this restriction may be limited by law). Unless specifically stated to the contrary in any written consent to an assignment, no assignment will release or discharge the assignor from any duty or responsibility under the Contract Documents.
- 11.3 **Successors and Assigns.** Buyer and Seller each binds itself, its partners, successors, assigns, and legal representatives to the other party hereto, its partners, successors, assigns, and legal representatives in respect to all covenants, agreements, and obligations contained in the Contract Documents.
- 11.4 **Severability.** Any provision or part of the Contract Documents held to be void or unenforceable under any Law or Regulation shall be deemed stricken, and all remaining provisions shall continue to be valid and binding upon Buyer and Seller, who agree that the Contract Documents shall be reformed to replace such stricken provision or part thereof with a valid and enforceable provision that comes as close as possible to expressing the intention of the stricken provision.
- 11.5 **Waiver.** It is agreed that no waiver or modification of this contract or of any covenant, condition or limitation contained in it shall be valid unless it is in writing and duly executed by the party to be charged with it, and that no evidence of any waiver or modification shall be offered or received in evidence in any proceeding, arbitration, or litigation between the parties arising out of or affecting this contract, or the right or obligations of any party under it, unless such waiver or modification is in writing, duly executed as above. The parties agree that the provisions of this paragraph may not be waived except by a duly executed writing.

- 11.7 **Entire Agreement.** This Agreement states the entire contract between the parties hereto with respect to the subject matter hereof, and all prior and contemporaneous understandings, representations, and agreements are merged herein or superseded hereby. No alterations, modifications, release, or waiver of this contract or any of the provisions hereof shall be effective unless in writing, executed by the parties.

**IN WITNESS WHEREOF**, Buyer and Seller have signed this Agreement in duplicate. One counterpart each has been delivered to Buyer and Seller. All portions of the Contract Documents have been signed or identified by Buyer and Seller or on their behalf.

This Agreement will be effective on \_\_\_\_\_, 20\_\_ (which is the Effective Date of the Agreement).

Buyer:  
\_\_\_\_\_  
\_\_\_\_\_

Seller:  
\_\_\_\_\_  
\_\_\_\_\_

By: \_\_\_\_\_  
(CORPORATE SEAL)

By: \_\_\_\_\_  
(CORPORATE SEAL)

Attest \_\_\_\_\_

Attest \_\_\_\_\_

Address for giving notices:  
\_\_\_\_\_  
\_\_\_\_\_

Address for giving notices  
\_\_\_\_\_  
\_\_\_\_\_

(If Buyer is a corporation, attach evidence of authority to sign. If Buyer is a public body, attach evidence of authority to sign and resolution or other documents authorizing execution of Agreement.)

Agent for service of process: \_\_\_\_\_  
\_\_\_\_\_

(If Seller is a corporation, attach evidence of authority to sign.)

Designated Representative:

Designated Representative:

Name: \_\_\_\_\_

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Title: \_\_\_\_\_

Address: \_\_\_\_\_

Address: \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Phone: .

Phone: .

Facsimile: \_\_\_\_\_

Facsimile: \_\_\_\_\_

END OF SECTION



April 14, 2023

MCPLLC Proposal No. **23114Rev 0**

Attention City of Geneva – City Administrator  
22 South First Street  
Geneva IL 60134

Sealed Bid  
Due: April 17, 2023 Open 10 am

Subject: Project Name: Business Park 111 Substation  
Contract 23-03

38 KV Metalclad Outdoor Non Walk-In Metalclad Switchgear  
MCP Quote No: 23114

Thank you for sending your inquiry to our representative, Mr. Jim Chaggaris of Power One Corp. we are pleased to offer our budget proposal for the following:

Item 1. One Line up of Outdoor 15 KV Metalclad in a 15'w x 25'L Switchgear Control Building complete with Battery System per the attached proposed Bill of Material

We look forward to City of Geneva, . If you have any questions please contact me at 330-834-3200 ext. 2209 or Mr. Jim Chaggaris of Power One Corp. 630-669-2241

Technical and Commercial Exceptions and Clarifications in attached separate sealed envelope

Sincerely,

**Myers Controlled Power, LLC**

*Philip R. Walleck*

Philip R. Walleck  
Manager Application Engineering  
pwalleck@controlledpower.com  
(330) 834-3200 Ext. 2209

cc: Jim Chaggaris – Power One Corp.  
Kal Harrington – Myers Power Products

**Enclosure:** Proposed BOM, Commercial Terms, Cancellation Policy, Progress Payment Schedule, WBENC Cert., ISO 9001:2015 , Users List, MV Swgr. and PDC Descriptive Literature

MYERS POWER PRODUCTS is now WBE/DBE Certified  
CPUC VON: 13080054 WBENC Certificate Number: 2005122921



## CUSTOMER BILL-OF-MATERIAL QUOTATION

CUSTOMER: **City of Geneva IL**

MCP QTE     **23114**  
 REV. #:     **0**  
 REV.

EQUIPMENT: **15 KV Metalclad Switchgear in a PDC**

PROJECT: **Business Park 111 SS**

QTY	DESCRIPTION
<b>Proposed Bill of Materail for the 15 KV 1200A Metalclad Switchgear</b>	
8	Vacuum Breaker, 15kV, 1200A, 40KA, P/N 150VCP-W40 1200
8	MOC and TOC Aux Switches
4	Circuit Breaker Cell, Indoor, 2-High, 1200/1200, with Glass Polyester Primary
1	Switchgear aux cubicle for relays and PT's & fuse drawer
1	Spare 15 KV 1200A 40 KA Breaker
1	PT Rollout, with Polyester Glass Stab Supports
3	Potential Transformer, 7200V:120V, w/Fuses P/N PTW4-2-75-722FF
27	CT's 1200/5A SR C200
30	CT's 1200/5A MR C400
1	Fuse Rollout, with Polyester Glass Stab Supports
1	Kirk Kev Interlock. ner Cvllinder
39	test swiches
5	Main bus 1200A copper silver plated
5	Bus. Ground Bus Rated for 1000A. Bare Conner
5	Main bus support 1200A
5	cubicle and device nameplates
24	arresters Int type
5	Strip Heaters (with guard). per Vertical Section
1	Cubicle and Device Nameplates
1	Portable Lifter, P/N 1C19086G14
1	Electric Levering-In Device, P/N 1A30257G01
1	Lockout relays
9	Bkr control sw Electro sw type 24CSR
1	SEL-587Z
9	SEL-751
1	SEL-0311C2
1	SEL-0387503
1	Axion SEL-2240
1	SEL-2242
1	SEL-2241 RTAC
1	SEL-2244-2
1	SEL-2244-3
1	SEL-2730 Ethernet Sw
1	Standard Breaker Accessories (Standard Levering-In crank, Extension Rails (right & left. 1 set). Set of Rail Clamps. and Manual Charging Handle). P/N 1A30136G02
1	Test Cabinet. P/N 8346A28G21
1	set of spare control fuses



## CUSTOMER BILL-OF-MATERIAL QUOTATION

CUSTOMER: **City of Geneva IL**

MCP QTE     **23114**  
 REV. #:     **0**  
 REV.

EQUIPMENT: **15 KV Metalclad Switchgear in a PDC**

PROJECT: **Business Park 111 SS**

QTY	DESCRIPTION
1	<b>PDC, 15'W x 25'L x 12'H</b>
2	Emergency Light, 2-Head w/ Battery Backup
2	Door, Single, 42" x 84", w/ Panic Hardware [1-Point Latch], Standard Accessories
5	Equipment Access Door
7	Drip Shield Over Door, Required Over All Doors
10	Duplex Receptacle, 20A, Indoor, 120VAC, GFI Type
2	Exit light
2	Duplex Receptacle, 20A, Outdoor, 120VAC, GFI Type
2	Exterior LED Light w photocell
5	LED Light Fixture, 4 ft Long, 2-Bulb
2	Light Switch, 3-Way, Indoor
1	EP Vent Fan with Louvers, Wall Mounted
2	HVAC, Bard Style, up to 5 Ton Max. w/ 9kW Heat
1	Hydrogen Detector Exide Pro Alarm (Required for all wet cell systems) OSHA 29 CFR
1	HVAC controller
1	Manual Transer swtich rated 200A 120/240
1	Vent Fan with Louvers, Wall Mounted
5	Gasketed Entry Plate
5	Install MV Switchgear, per Vertical Section
Lot	EMT conduit
2	30" x 60" Fold down tables wall mounted
Lot	R19 fibergalss insulation in wall and ceiling
1	AC Panelboard 120/240V 1PH/3W 42 Circuit 225A Main Breaker
Lot	Cable tray and wiresay
40	Wireway
8	Bus, Interior Ground Bar, 1/4" x 2" Bare Copper, per 10 ft Length
2	Fire Extinguisher Manual 20lb Carbon Dioxide Type
1	Fused Safety Switch 200A
2	Smoke Detector with Output Contacts
1	DC Panelboard, 125/250VDC, 42 Circuit, 225A Main Breaker
1	Type STT6V200 Tubular Plate 6 Volt,220Ah,Block 125 VDC Battery system Battery
1	Rack w/ Snill containment AT10-130 25A Charger
1	Offloading
2	On site training 2 days



## POWDER PAINT PROCESS

A. The following MCP Powder Paint Process shall be used for all Non-Structural Steel that is fabricated for MCP:

### A1.0 SCOPE

This procedure covers the selection and standard application of exterior finish dry powder paint for MCP supplied equipment.

### A2.0 TYPE OF COATING

Polyurethane or TGIC-free polyester powders for metal surfaces.

### A3.0 SERVICE CONDITION LIMITATION

Maximum service temperature: 65 degrees C/149 degrees F.

### A4.0 PAINT SPECIFICATIONS

A4.1 Various paint suppliers and specifications

A4.1.1 Ferro: No. 155-E-115 gray polyester

A4.1.2 Sherwin Williams: TGIC-free polyester

A4.1.3 Lilly: #303A polyurethane

A4.2 Color: ANSI 61 Gray

A4.2.1 Additional paint colors are available as an option

### A5.0 GENERAL

A5.1 MCP and assigned sub-vendors shall have:

- A copy of this procedure
- Dry film thickness gauges with recent calibration tags
- Temperature and relative humidity gauges with recent calibration tags



## **MCP POWDER PAINT PROCESS**

### A6.0 SURFACE PREPARATION

#### A6.1 Cleaning directions

A6.1.1 All welds, loose scale and rough spots are to be ground and/or sanded to present an acceptable appearance and to provide a surface to promote proper adhesion and application of the powder.

A6.1.2 All surfaces not to be painted should be masked and/or sealed.

A6.1.3 Repair to damaged paint surfaces shall be as follows:

Where mechanical damage occurs and coating is damaged through to base material, lightly sand entire surface and repaint through powder line with parts wiped off and hung immediately prior to the dry-off oven.

### A7.0 APPLICATION

A7.1 Parts to be powder coated are hung on the conveyor line using an assortment of hooks and hangers as required to properly convey the part.

A7.2 The surface shall be free of any viscous or resilient soils (for example: grease, oil, tar, etc.) These soils shall be removed by use of alkaline cleaner agent in Stage #1 of the washer system.

A7.3 Cleaning shall be followed by a complete surface spray of fresh water in Stage 2 of the washer system.

A7.4 After the rinsing in Stage 2 of the washer, the parts are sprayed with an iron phosphate solution in Stage 3. Stage 4 is another clean water rinse. Stage 5 sprays a non-chrome final sealer preventing flash rust and enhancing protection characteristics.

A7.5 The cleaned parts then pass through the drying oven to dry the parts and preheat the metal to approximately 275°F.

A7.6 The conveyed parts travel through the powder booth where compressed air "sprays" electrically charged powder onto the grounded parts.

A7.7 The charged powder particles cling to the part as the parts travel to the cure oven.



### **MCP POWDER PAINT PROCESS**

A7.8 The parts are heated in the convection oven to approximately 425°F which causes the powder to gel and flow to all surfaces in an even thickness.

A7.9 As the parts cool, the powder solidifies to a hard, durable finish. Tested according to ASTM standards.

A7.10 Dry film thickness shall average 1.5 to 2.5 mils.

A7.11 Parts are then inspected and unloaded from the automated conveyor line and properly packaged with protective materials for shipment.



Power Systems • RYCO Switchgear • Power Pedestals • Inverters & Rectifiers • Abacus Controls

## MYERS POWER PRODUCTS, INC.

### Standard Switchgear Limited Warranty

Myers Power Products, Inc., warrants to the original purchaser that the complete switchgear, together with all parts included in the original purchase (the "Switchgear"), has been designed in accordance with the specifications of the original purchaser, and that the Switchgear will be free from defects in material and workmanship under normal use and service for a period of one (1) year from date of delivery of the Switchgear at its destination from the factory. Myers Power Products, Inc.'s liability under this limited warranty does not extend to defects/or damage caused by vandalism, improper installation, improper maintenance, alterations by purchaser, purchaser-furnished materials, or improper operation for this limited warranty to be valid. Customer must comply with Installation, Maintenance, and Storage instruction per our Installation, Operation, and Maintenance Manual for the proposed warranty to apply.

Should defects in material and / or workmanship during the standard limited warranty period occur, Myers Power Products, Inc.'s liability and purchaser's remedies under this limited warranty shall be limited solely to repair or replacement of defect. Purchaser shall give Myers Power Products, Inc. prompt written notice of any claim hereunder. Myers Power Products, Inc. shall be given a reasonable opportunity to investigate all claims, and no parts may be returned to Myers Power Products, Inc. without advance authorization and instructions from the Customer Service Department.

**THIS LIMITED WARRANTY IS EXCLUSIVE AND IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. MYERS POWER PRODUCTS, INC., SHALL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES OR EXPENSES OF ANY KIND, INCLUDING, WITHOUT LIMITATION, LOSS OF PROFITS.**

Myers Power Products, Inc. • 2950 E. Philadelphia Street, Ontario, California 91761 • (909) 923-1800

Contact Vendor: Myers Power Products by phone at 866-MY-MYERS or email [Repairs@MyersPower.com](mailto:Repairs@MyersPower.com)

Provide Product Serial Number \_\_\_\_\_

## Cancellation Policy

An order may be canceled by the purchaser only upon the written notice and upon payment to the company of reasonable and proper cancellation charges. The expenses to be covered by these charges would include an unrecoverable cost incurred by the company. In addition, a one-time charge will be made to compensate for lost profits, disruptions in schedules, planned production and other indirect costs. It is recognized that it is impossible to determine exactly these indirect costs. As such, it is agreed that the one-time charge is acceptable and proper. Total cancellation charges will be calculated as follows:

### **Order Entry:**

After receipt of an order at the factory and order processing, but prior to the start of engineering, there will be a one-time 5 percent charge, with a minimum of \$1,000.00 for any one order.

### **Release for Engineering:**

After an order has been released for engineering, there will be a one-time 10 percent charge for cancellation plus any actual costs incurred including vendor cancellation charges, engineering labor expended plus costs associated with engineering overhead, selling, general and administrative expenses.

### **Release for Manufacture:**

After an order has been released for manufacture and scheduled for production, there will be a one-time 10 percent charge for cancellation plus any actual costs incurred including, but not limited to, vendor cancellation charges, all materials received or expended, shop and engineering labor plus costs associated with manufacturing and engineering overhead, selling, general and administrative expenses.

### **Cancellation within 61-90 days of scheduled completion:**

Cancellation charge will be a minimum of 50 percent of the contract value.

### **Cancellation within 31-60 days of scheduled completion:**

Cancellation charge will be a minimum of 75 percent of the contract value.

### **Cancellation within 30 days of scheduled completion:**

Cancellation charge will be 100 percent of the contract value.

In addition to the above charges, a reasonable profit of 10 percent will be allowed and payable against all identified costs incurred by the time of cancellation. Cancellation costs will be due and payable within 30 days of submittal of a proper invoice for such costs. Any amount not paid within 30 days will be subject to late charges of 1 ½ percent per month for each fraction of a month that payment is received late at MPP.



## **MCP Progress Payment Milestone Schedule**

N30 – pending approved credit

10% Upon Submission of Submittals

10% Approval of Submittals

25% Release for Purchasing of Material

25% Release to Production

20% FAT or When Ready to Ship

10% Shipment



JOIN FORCES. SUCCEED TOGETHER.

hereby grants

# National Women's Business Enterprise Certification

to

Myers Power Products, Inc.

who has successfully met WBENC's standards as a Women's Business Enterprise (WBE). This certification affirms the business is woman-owned, operated and controlled and is valid through the date herein.

Certification Granted: August 31, 2013  
Expiration Date: August 31, 2022  
WBENC National Certification Number: 2005122921

WBENC National WBE Certification was processed and validated by Women's Business Enterprise Council - West, a WBENC Regional Partner Organization.

Authorized by Pamela Williamson, President & CEO Women's Business Enterprise Council - West



NAICS: 335314, 335312, 335313, 335999, 336211  
UNSPSC: 31331200, 31331209, 32121705, 39121007, 39121011, 39121100, 39121101, 39121102, 39121103, 39121104, 39121105, 39121106, 39121107, 39121108, 39121110, 39121111, 39121112, 39121115, 39121116





## Certificate of Registration of Quality Management System to ISO 9001:2015

The National Standards Authority of Ireland Inc. certifies that:

**Myers Controlled Power, LLC**  
**219 East Maple Street**  
**Suite 100/200**  
**North Canton, OH 44720**  
**USA**

has been assessed and deemed to comply with the requirements of the above standard in respect of the scope of operations given below:

**Design, Manufacture, and Servicing of AC & DC Electrical Switchgear and Switchboards, Circuit Breakers, Bus Duct, Relay Panels, Power Control Centers, Metered Service Pedestals, Panel Boards, Battery Analysis, Enclosures, Rectifiers, Inverters, and Related Equipment.**

Geraldine Larkin  
Chief Executive Officer

Lisa Greenleaf  
Operations Manager

Registration Number: 19.4209  
 Certification Granted: January 23, 2006  
 Effective Date: January 23, 2021  
 Expiry Date: January 22, 2024



Bid Clarifications and Exception

For Contract 23-03

Business Park III Substation

Control Building and Switchgear

Myers Controlled Power LLC

Quote . No. 23114

for

**Contract 23-03  
Business Park III Substation  
Control Building and Switchgear  
Procurement**

**City of Geneva  
Geneva, Illinois**

Issued for Bid  
March 2023





April 14, 2023

MCPLLC Proposal No. 23114Rev 0

### **MCPLLC Pricing Summary : For Pricing see completed bid foms**

## **Commercial Exceptions**

See attached Red lined commercial terms.

- Prevailing wage will applies to the Crane and Rigging Contractor providing the offloading and setting the Control Building onto the customer provided foundation. Offloading based on free and clear
- We take exception Article 9.9.1.2 Field Inspection requirements.
- We will only accept L/D's of \$500.00 per week with a 3% cap. On L/D's
- Our , warranty, progress payment cancellation policy shall apply.
- Final Invoice price will be adjusted to reflect BLD and PPI indexes
- Estimated ship date 3<sup>rd</sup> qty of 2024
- Price quoted includes offloading, functional field testing and two days of on site training by a factory field service representative. Prevailing wage does not apply for Our factory field service representative

## **Commercial Clarifications & Exceptions**

Bid validity for this quote is 60 days.

Price is F.O.B. Factory. We have included an estimated freight cost of \$11,500.00 for each item. Final Invoice will be adjusted to reflect actual freight cost at time of shipment.

Payment terms are Progress Payments Net 30 Days from date of each invoice. See the attached for the required Progress Payment schedule.

Order acceptance subject to review of customer's credit and bank references.

If approval of drawings delayed or project on hold for 90 days or more after order is received escalation will apply. Escalation based on the appropriate category of Bureau of Labor Statistics (BLS) Produce Price Index (PPI) exceeds 5% at time this order is in process ( usually within 5 months of delivery there will be a commercial change order added to the base value of the Contract and or Purchase order.

Our standard commercial terms, warranty, progress payment cancellation policy shall apply.

Price quoted does not include any Sales or Use Taxes.

Lead time quoted based on shop loading at time of proposal submittal date. Lead times subject to review and change upon receipt of approved drawing and release to manufacture.



April 14, 2023

MCPLLC Proposal No. 23114Rev 0

## Technical Exceptions

- Technical clarifications and exceptions are stated below:

- - Spec sec. 13.34.23.26 Pg 3. Frame: Para. C MCP does not offer tubular steel welded construction with Galvanized Metal. Our proposal is based on providing our standard bolted interlock design for the walls and roof of the Power Control House
  - We take exception Article 9.9.1.2 Field Inspection requirements.
  - Frame Para E. we do not use galvanized metal, we offer non galvanized metal painted with our standard Powder Coat Paint Process
  - Approval drawing can be submitted 18 to 20 weeks aro, we take exception spec. requirement of submittal drawing 30 days after receipt of contract.

- **Technical Clarifications**

- Note that Myers Controlled Power is an ISO 9001:2015 registered manufacturer.
- Equipment proposed herein will be designed, constructed and tested in accordance with all applicable ANSI, NEMA, and IEEE Standards.
- Relay Programming, setting, calibration, by others.
- The 15'w x 25'L Switchgear Control House will ship assembled in one shipping section. Batteries to be field install into the battery rack by others.
- Price and Proposed scope of supply is limited to the attached BOM.
- Price quoted based on providing our standard design, construction and Paint Process with meets ANSI and NENA Standards
- Price quoted includes Our Standard Production Test, we have not included any Design Tests, we can upon request offer copies of design test from similar jobs.
- Price quoted included offloading, functional testing, and 2 days of on site training by our factory field service representative.
- Price quoted includes offloading, functional field testing and two days of on site training by a factory field service representative. Prevailing wage does not apply for our factory field service representative. Prevailing wage will apply to the Crane and Rigging Contractor the will provide the offloading and setting the Control Building onto the customer provided foundation. Offloading based on free and clear

The City of Geneva is exempt from the Illinois Retailers Sales and Occupation Tax. An exemption certification will be furnished upon request.

Delivery of Goods F.O.B. Substation foundation: Business Park III Substation address: 1717 Averill Rd, Geneva, IL 60134 foundation may be indicated in City's Purchase Order or Notice to Proceed. Should any goods be damaged during shipment, bidder shall repair or replace any damaged equipment or materials.

Provisions for liquidated damages, if any, are set forth in the Agreement.

The City shall be notified 48 hours prior to any shipment of materials or equipment. Please contact Aaron Holton at (630) 232-1503 during the hours of 7:00 AM to 3:00 P.M. Monday through Friday.

All deliveries are to be made during City of Geneva Electric Utility business hours of 7:00 AM to 11:30 A.M. and 12:30 P.M. to 3:00 P.M. Monday through Friday.

Each bidder shall submit a lump sum price for material or equipment covered by the specifications, together with any prices for alternate materials or equipment or other prices or data listed in the Form of Proposal or as specified.

ESCALATION CLAUSES ARE NOT ACCEPTABLE.

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CLAUSES THAT NULLIFY OR VOID CITY CONTRACTUAL OR TECHNICAL REQUIREMENTS ARE NOT ACCEPTABLE AND ARE A BASIS FOR REJECTION OF BIDS.

CLARIFICATIONS OR EXCEPTIONS TO THE SPECIFICATIONS OR CONTRACT DOCUMENTS MUST BE ENCLOSED IN A SEPARATELY SEALED ENVELOPE AND INCLUDED WITH THE BIDDER'S PROPOSAL FORM. Each clarification or exception must be marked as either "clarification" or "exception" and identify the specific section of the Specifications or Contract Documents to which they apply. By signing the Bidder's Proposal Form, the Bidder acknowledges that pre-printed terms and conditions provided by the Bidder do not apply and the only clarifications or exceptions to be recognized by the City of Geneva shall be submitted as identified above.

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The bidder may at his option, base quotes on furnishing substitutions that are equivalent of any item described, named, or specified, provided the selection meets the quality and are direct equals to the item specified. Burden of proof that proposed substitutions are equivalent rests with the bidder.

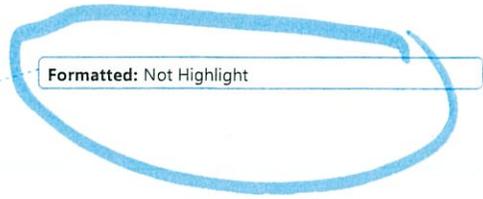
Submit separate prices, alternate prices, or adjusted prices for materials or equipment as requested in the Form of Proposal. Bidders may in addition, submit prices for a combination of these separately priced schedules. If submitting combination quotes, bidders must submit separate schedule bids. Each schedule will be independent and subject to acceptance or rejection without alteration or qualification.

The City may award Purchase Order on basis of separate quotes or combination bids.

A legally authorized representative of bidder shall sign the bid.

Submit manufacturer's specifications and descriptive data on proposed materials.

All laborers, workers, mechanics, etc., employed in any public work in Kane County, Illinois under this contract by Seller shall be paid in accordance with the Prevailing Wage Rates approved by the City of Geneva, Kane County, Illinois as found by the Department of Labor or as are determined by the Court of Appeal , Kane County, Illinois.



A statement certifying that the bidder is not barred from bidding on the Project Specifications as a result of a violation of either Section 33E-3 or 33E-4 of Chapter 38, Illinois Revised Statutes, 1987 (as amended) shall be submitted with the bid prior to the time of the bid opening. The certificate form, ATTACHMENT A, is attached to the Project Specifications.

Bidders must supply a self addressed, stamped envelope for bid results.

Absolutely no results will be given out over the telephone.

Questions regarding this Legal Notice, Instructions to Bidders, and Specifications should be directed to Mr. Philip Schulz, Stanley Consultants, Inc., 225 Iowa Avenue, Muscatine, Iowa 52761, email: [schulzphil@stanleygroup.com](mailto:schulzphil@stanleygroup.com), telephone 563-264-6461.

USE FORM OF PROPOSAL INCLUDED HEREIN

THIS AGREEMENT is by and between \_\_\_\_\_ (Buyer)  
and \_\_\_\_\_ (Seller).

Buyer and Seller, in consideration of the mutual covenants hereinafter set forth, agree as follows:

Article 1. GOODS AND SPECIAL SERVICES

- 1.1 Seller shall furnish the Goods and Special Services as specified or indicated in the Contract Documents. The Goods and Special Services to be furnished are described in Section 01 11 00.

Article 2. THE PROJECT

- 2.1 The Project for which the Goods and Special Services to be provided under the Contract Documents may be the whole or only a part is generally described as Business Park III Substation Control Building and Switchgear Procurement Project.

Article 3. ENGINEER

- 3.1 The Contract Documents for the Goods and Special Services have been prepared by Stanley Consultants, Inc. who is hereinafter called Engineer and who is to assume all duties and responsibilities and have the rights and authority assigned to Engineer in the Contract Documents in connection with the furnishing of Goods and Special Services.

Article 4. POINT OF DESTINATION

- 4.1 The place where the Goods are to be delivered is defined in the General Conditions as the Point of Destination and is designated as: Business Park III Substation address: 1717 Averill Rd, Geneva, IL 60134.

Article 5. CONTRACT TIMES

- 5.1 **Time of the Essence.** All time limits for Milestones, if any, for the delivery of Goods and the furnishing of Special Services as stated in the Contract Documents are of the essence of the Contract.
- 5.2 **Days for Submittal of Shop Drawings.** All Shop Drawings ~~and Samples~~ required by the Contract Documents will be submitted to Buyer for Engineer's review within 30 days after the date when the Contract Times commence to run as provided in Paragraph 2.03 of the General Conditions.
- 5.3 **Dates for Delivery of Goods.** The Goods are to be delivered to the Point of Destination and ready for Buyer's receipt of delivery on (or within a period of 15 days prior to or after) December 26, 2024. Coordinate with Owner on exact date at time of shipment.

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~~5.4~~ **Liquidated Damages.** Buyer and Seller recognize that Buyer will suffer financial loss if the Goods are not delivered at the Point of Destination and ready for receipt of delivery by Buyer within the times specified in Paragraph 5.3 above, plus any extensions thereof allowed in accordance with Article 7 of the General Conditions. The parties also recognize that the timely performance of services by others involved in the Project is materially dependent upon Seller's specific compliance with the requirements of Paragraph 6.02. Further, they recognize the delays, expense, and difficulties involved in proving the actual loss suffered by Buyer if complete acceptable Goods are not delivered on time. Accordingly, instead of requiring such proof, Buyer and Seller agree that as liquidated damages for delay (but not as a penalty) Seller shall pay Buyer ~~\$500~~ ~~\$750~~ for each day that expires after the time specified in Paragraph

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5.3.B for delivery of acceptable Goods. Liquidated damages shall be capped at 3% of Contract.

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**Article 6. CONTRACT PRICE.**

6.1 Buyer shall pay Seller for furnishing the Goods and Special Services in accordance with the Contract Documents an amount in current funds as follows:

6.1.1 Bidding option:

\_\_\_\_\_

For a Lump Sum of:

\_\_\_\_\_ (words)

\_\_\_\_\_ (\$ \_\_\_\_\_) (figures).

6.1.2 Unit Adjustment Prices. To adjust Lump Sum for changes from quantities required by Contract Documents.

Item	Unit	Unit Adjustment Price
Site services of service engineer	per day	\$ _____
Transportation, travel time, and out-of-pocket expenses for travel of service engineer to Site	per round trip	\$ _____

**Article 7. PAYMENT PROCEDURES.**

7.1 **Submittal and Processing of Payments.** Seller shall submit Applications for Payment in accordance with Article 10 of the General Conditions. Applications for Payment will be processed by Engineer as provided in the General Conditions.

7.2 **Progress Payments; Retainage.**

7.2.1 Buyer shall make progress payments in accordance with Seller's Progress Payment Schedule contained in the proposal. ~~on account of the Contract Price on the basis of Seller's Applications for Payment as follows:~~

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~~7.2.1.1 Upon receipt of the first Application for Payment submitted in accordance with Paragraph 10.01.A.1 of the General Conditions and accompanied by Engineer's recommendation of payment in accordance with Paragraph 10.02.A of the General Conditions, an amount equal to 10% of the Contract Price, less such amounts as Engineer may determine in accordance with Paragraph 10.02.A.3 of the General Conditions.~~

~~7.2.1.2 Upon receipt of the second such Application for Payment accompanied by Engineer's recommendation of payment in accordance with Paragraph 10.01.A.2 of the General Conditions, an amount sufficient to increase total payments to Seller to 90% of the Contract Price, less such amounts as Engineer may determine in accordance with Paragraph 10.02.A.3 of the General Conditions.~~

7.3 **Final Payment.** Upon receipt of the final Application for Payment accompanied by Engineer's recommendation of payment in accordance with Paragraph 10.06 of the General Conditions, Buyer shall pay the remainder of the Contract Price as recommended by Engineer. Provided, however, that final payment not exceed 90 days after delivery.

**Article 8. INTEREST.**

- 8.1 All moneys not paid when due as provided in Article 10 of the General Conditions shall bear interest at the rate of 4% per annum.

**Article 9. SELLER'S REPRESENTATIONS.**

- 9.1 In order to induce Buyer to enter into this Agreement, Seller makes the following representations:
- 9.1.1 Seller has examined and carefully studied the Contract Documents and the other related data identified in the Bidding Documents.
- ~~9.1.2 If specified or if, in Seller's judgment, any local condition may affect cost, progress or the furnishing of the Goods and Special Services, Seller has visited the Point of Destination and become familiar with and is satisfied as to the local conditions that may affect cost, progress or the furnishing of the Goods and Special Services.~~
- 9.1.3 Seller is familiar with and is satisfied as to all local federal, state and local Laws and Regulations that may affect cost, progress and the furnishing of the Goods and Special Services.
- 9.1.4 Seller has carefully studied and correlated the information known to Seller, and information and observations obtained from Seller's visits, if any, to the Point of Destination, with the Contract Documents.
- 9.1.5 Seller has given Engineer written notice of all conflicts, errors, ambiguities, or discrepancies that Seller has discovered in the Contract Documents, and the written resolution thereof by Engineer is acceptable to Seller.
- 9.1.6 The Contract Documents are generally sufficient to indicate and convey understanding of all terms and conditions for furnishing Goods and Special Services.

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**Article 10. CONTRACT DOCUMENTS.**

- 10.1 The Contract Documents consist of the following:
- 10.1.1 This Agreement (pages 1 to 5, inclusive).
- 10.1.2 Exhibits to this Agreement (pages 1 to \_\_\_\_\_, inclusive).
- 10.1.3 General Conditions (pages 1 to 12, inclusive).
- 10.1.4 Specifications as listed in Project Manual table of contents.
- 10.1.5 Drawings consisting of a cover sheet and sheets as listed in Drawing List and in Standard Drawing List.
- 10.1.6 Addenda numbers \_\_\_\_\_ to \_\_\_\_\_, inclusive.
- 10.1.7 The following which may be delivered or issued on or after the Effective Date of the Agreement and are not attached hereto:
- 10.1.7.1 Notice to Proceed (pages \_\_\_\_\_ to \_\_\_\_\_, inclusive);
- 10.1.7.2 Written Amendment(s);
- 10.1.7.3 Work Change Directive(s);
- 10.1.7.4 Change Order(s).

## STANDARD GENERAL CONDITIONS FOR PROCUREMENT CONTRACTS

### ARTICLE 1- DEFINITIONS AND TERMINOLOGY

#### 1.1 Defined Terms

A. Whenever used in the Bidding Requirements or Contract Documents and printed with initial capital letters, the terms listed below will have the meanings indicated which are applicable to the singular or plural thereof. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.

1. Addenda-Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.

2. Agreement-The written instrument signed by both Buyer and Seller covering the Goods and Special Services and which lists the Contract Documents in existence on the Effective Date of the Agreement.

3. Application for Payment-The form acceptable to Buyer which is used by Seller in requesting progress and final payments and which is accompanied by such supporting documentation as is required by the Contract Documents.

4. Bid- The offer or proposal of a Seller submitted on the prescribed form setting forth the prices for the Goods and Special Services to be provided.

5. Bidder-The individual or entity that submits a Bid directly to Buyer.

6. Bidding Documents-The Bidding Requirements and the proposed Contract Documents (including all Addenda).

7. Bidding Requirements-The advertisement or invitation to bid, Instructions to Bidders, Bid security of acceptable form, if any, and Bid Form with any supplements.

8. Buyer-~~individual or~~ entity purchasing the Goods and Special Services. The term "Buyer" is used to be consistent with the Uniform Commercial Code (UCC).

9. Change Order-A document which is signed by Seller and Buyer and authorizes an addition, deletion, or revision to the Contract Documents or an adjustment in the Contract Price or the Contract Times, issued on or after the Effective Date of the Agreement. Change Orders may be the result of mutual agreement by Buyer and Seller, or of resolution of a Claim.

10. Actual Legal Claim-A demand or assertion by Buyer or Seller seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract. A demand for money or services by a third party is not a Claim.

11. Contract-The entire and integrated written agreement between Buyer and Seller concerning the Goods and Special Services. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral.

12. Contract Documents-Those items so designated in the Agreement. Shop Drawings and other Seller submittals are not Contract Documents, even if accepted, reviewed, or approved by Engineer or Buyer.

13. Contract Price-The moneys payable by Buyer to Seller for furnishing the Goods and Special Services in accordance with the Contract Documents as stated in the Agreement.

14. Contract Times-The times stated in the Agreement by which the Goods must be delivered and Special Services must be furnished.

15. Drawings-That part of the Contract Documents prepared or approved by Engineer which graphically shows the scope, extent, and character of the Goods and Special Services to be furnished by Seller. Shop Drawings and other Seller submittals are not Drawings as so defined.

16. Effective Date of the Agreement-The date indicated in the Agreement on which it becomes effective, but if no such date is indicated, it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.

17. Engineer-The individual or entity designated as such in the Agreement.

18. Field Order-A written order issued by Engineer which requires minor changes in the Goods or Special Services but which does not involve a change in the Contract Price or Contract Times as mutually agreed between Parties.

19. General Requirements-Sections of Division 01 of the Specifications. The General Requirements pertain to all sections of the Specifications.

20. Goods-The tangible and movable personal property that is described in the Contract Documents, regardless of whether the property is to be later attached to realty.

21. Goods and Special Services-The full scope of materials, equipment, other items, and services to be furnished by Seller, including Goods, as defined herein, and Special Services, if any, as defined herein. This term refers to both the Goods and the Special Services, or to either the Goods or the Special Services, and to any portion of the Goods or the Special Services, as the context requires.

22. Laws and Regulations; Laws or Regulations-~~Any and all~~ applicable laws, rules, regulations, ordinances, codes, and orders of ~~any and all~~ governmental bodies, agencies, authorities, and courts having jurisdiction.

23. Milestone-A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to the Contract Times.

24. Notice of Award-The written notice by Buyer to the Successful Bidder stating that upon timely compliance by the Successful Bidder with the conditions precedent listed therein, Buyer will sign and deliver the Agreement.

25. Notice to Proceed-A written notice given by Buyer to Seller fixing the date on which the Contract Times commence to run and on which Seller shall start to perform under the Contract.

26. Point of Destination-The specific address of the location where delivery of the Goods shall be made, as stated in the Agreement.

27. Project-The total undertaking of which the Goods and Special Services may be the whole, or only a part.

28. Project Manual-The documentary information prepared for bidding and furnishing the Goods and Special Services. A listing of the contents of the Project Manual is contained in its table of contents.

29. ~~Samples-Physical examples of materials, equipment, or workmanship that are representative of some portion of the Goods and Special Services and which establish the standards by which such portion of the Goods and Special Services will be judged.~~

30. Seller-The individual or entity furnishing the Goods and Special Services.

31. Shop Drawings-All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for Seller and submitted by Seller to illustrate some portion of the Goods and Special Services.

32. Special Services-Services associated with the Goods to be furnished by Seller as required by the Contract Documents.

33. Specifications-That part of the Contract Documents consisting of written requirements for materials, equipment, systems, standards and workmanship as applied to the furnishing of the Goods and Special Services, and certain administrative requirements and procedural matters applicable thereto.

34. Successful Bidder-The Bidder submitting a responsive Bid, to whom Buyer makes an award.

35. Supplementary Conditions-That part of the Contract Documents which amends or supplements these General Conditions.

36. Work Change Directive-A written statement to Seller issued on or after the Effective Date of the Agreement and signed by Buyer ordering an addition, deletion, or other revision in the Contract Documents with respect to the Goods and Special Services. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the change ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times.

#### 1.2 Terminology

A. The words and terms discussed in Paragraphs 1.02.B and 1.02.C are not defined, but have the indicated meanings when used in the Bidding Requirements or Contract Documents.

##### B. Intent of Certain Terms or Adjectives:

1. The Contract Documents include the terms "as allowed," "as approved," "as ordered," "as directed" or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives "reasonable," "suitable," "acceptable," "proper," "satisfactory," or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Goods and Special Services. It is intended that such exercise of professional judgment,

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action, or determination will be commercially reasonable and will be solely to evaluate, in general, the Goods and Special Services for compliance with the requirements of and information in the Contract Documents and conformance with the design concept of the completed Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective shall not be effective to assign to Engineer any duty or authority to supervise or direct the furnishing of Goods or Special Services or any duty or authority to undertake responsibility contrary to any other provision of the Contract Documents.

2. The word "non-conforming" when modifying the words "Goods and Special Services," "Goods," or "Special Services," refers to Goods and Special Services that fail to conform to the Contract Documents.

3. The word "receipt" when referring to the Goods, shall mean the physical taking and possession by the Buyer under the conditions specified in Paragraph 8.01.B.3.

4. The word "day" means a calendar day of 24 hours measured from midnight to the next midnight.

5. The word "furnish," when used in connection with the Goods and Special Services shall mean to supply and deliver said Goods to the Point of Destination (or some other specified location) and to perform said Special Services fully, all in accordance with the Contract Documents.

C. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

## **ARTICLE 2 - PRELIMINARY MATTERS**

### **2.1 Delivery of Bonds**

A. When Seller delivers the executed counterparts of the Agreement to Buyer, Seller also shall deliver such bonds as Seller may be required to furnish.

### **2.2 Evidence of Insurance**

A. When Seller delivers the executed counterparts of the Agreement to Buyer, Seller shall deliver to Buyer, with copies to each additional insured identified by name in Paragraph 4.2.C.1, certificates of insurance (and other evidence of insurance which either of them or any additional insured may reasonably request) which Seller is required to purchase and maintain in accordance with Article 4.

### **2.3 Commencement of Contract Times; Notice to Proceed**

A. The Contract Times will commence to run on the thirtieth day after the Effective Date of the Agreement or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Agreement. In no event will the Contract Times commence to run later than the sixtieth day after the day of Bid opening or the thirtieth day after the Effective Date of the Agreement, whichever date is earlier.

### **2.4 Designated Representatives**

A. Buyer and Seller shall each designate its representative at the time the Agreement is signed. Each representative shall have full authority to act on behalf of and make binding decisions in any matter arising out of or relating to the Contract.

### **2.5 Progress Schedule**

A. Within 15 days after the Contract Times start to run, Seller shall submit to Buyer and Engineer an acceptable progress schedule of activities, including at a minimum, Shop Drawing and Sample submittals, tests, and deliveries as required by the Contract Documents. No progress payment will be made to Seller until an acceptable schedule is submitted to Buyer and Engineer.

B. The progress schedule will be acceptable to Buyer and Engineer if it provides an orderly progression of the submittals, tests, and deliveries to completion within the specified Milestones and the

Contract Times. Such acceptance will not impose on Buyer or Engineer responsibility for the progress schedule, for sequencing, scheduling, or progress of the work nor interfere with or relieve Seller from Seller's full responsibility therefor. Such acceptance shall not be deemed to acknowledge the reasonableness and attainability of the schedule.

### **2.7 Preliminary Conference**

A. Within 20 days after the Contract Times start to run, a ~~tele~~ conference attended by Seller, Buyer, Engineer and others as appropriate will be held to establish a working understanding among the parties as to the Goods and Special Services and to discuss the schedule referred to in Paragraph 2.06.A, procedures for handling Shop Drawings and other submittals, processing Applications for Payment, and maintaining required records.

### **2.8 Safety**

A. Buyer and Seller shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss. When Seller's personnel, or the personnel of any subcontractor to Seller, are present at the Point of Destination or any work area or site controlled by Buyer, the Seller shall be responsible for the compliance by such personnel with any applicable requirements of Buyer's safety programs that are made known to Seller.

## **ARTICLE 3- CONTRACT DOCUMENTS: INTENT AND AMENDING**

### **3.1 Intent**

A. The Contract Documents are complementary; what is called for by one is as binding as if called for by all.

B. ~~Any labor, documentation, services, materials, or equipment that may reasonably be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce or furnish the indicated Goods and Special Services will be provided, whether or not specifically called for, at no additional cost to Buyer.~~

C. Clarifications and interpretations of, or notifications of minor variations and deviations in, the Contract Documents, will be issued by Engineer as provided in Article 9.

### **3.2 Standards, Specifications, Codes, Laws and Regulations**

A. Reference to standards, specifications, manuals, or codes of any technical society, organization, or association, or to Laws and Regulations, whether such reference be specific or by implication, shall mean the standard, specification, manual, code, or Laws and Regulations in effect at the time of opening of Bids (or on the Effective Date of the Agreement if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.

B. No provision of any such standard, specification, manual or code, or any instruction of a supplier shall be effective to change the duties or responsibilities of Buyer or Engineer, or any of their subcontractors, consultants, agents, or employees from those set forth in the Contract Documents, nor shall any such provision or instruction be effective to assign to Buyer or Engineer, or any of their consultants, agents, or employees any duty or authority to supervise or direct the performance of Seller's obligations or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.

### **3.3 Reporting and Resolving Discrepancies**

A. Reporting Discrepancies:  
1. Seller's Review of Contract Documents Before the Performance of the Contract: Before performance of the Contract, Seller shall carefully study and compare the Contract Documents and check and verify pertinent figures therein and all applicable field measurements ~~as provided therein~~. Seller shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy which Seller discovers or has actual knowledge of and shall obtain a written interpretation or clarification from Engineer before proceeding with the furnishing of any Goods and Special Services affected thereby.

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2. Seller's Review of Contract Documents During the Performance of the Contract: If, during the performance of the Contract, Seller discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents or between the Contract Documents and any provision of any Law or Regulation applicable to the performance of the Contract, any standard, specification, manual or code, or of any instruction of any Supplier, Seller shall promptly report it to Engineer in writing. Seller shall not proceed with the furnishing of the Goods and Special Services affected thereby until an amendment to or clarification of the Contract Documents has been issued.

3. Seller shall not be liable to Buyer or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Seller had actual knowledge thereof.

B. Resolving Discrepancies: Except as may be otherwise specifically stated in the Contract Documents, the provisions of the Contract Documents shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between the provisions of the Contract Documents and:

1. the provisions of any standard, specification, manual, code, or instruction (whether or not specifically incorporated by reference in the Contract Documents); or

2. the provisions of any Laws or Regulations applicable to the furnishing of the Goods and Special Services (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

3.4 Amending and Clarifying Contract Documents

A. The Contract Documents may be amended to provide for additions, deletions, and revisions to the Goods and Special Services or to modify contractual terms and conditions by a Change Order.

B. Buyer may issue a Work Change Directive providing for additions, deletions, or revisions to the Goods and Special Services, in which case (1) the Contract Price shall be equitably adjusted to account for any reasonable and necessary credits to Buyer for any such deletion, or for costs (including reasonable overhead and profit) incurred by Seller to accommodate such an addition or revision and (2) the Contract Times shall be equitably adjusted to account for any impact on progress and completion of performance. Such adjustments subsequently shall be duly set forth in a Change Order.

C. The requirements of the Contract Documents may be supplemented and minor variations and deviations in the Goods and Special Services may be authorized, by one or more of the following ways:

- 1. Field Order;
2. Engineer's written interpretation or clarification.
2.3. Approved by Seller

ARTICLE 4- BONDS AND INSURANCE

4.1 Bonds

A. Seller shall furnish to Buyer payment bond, each in an amount at least equal to the Contract Price, as security for the faithful performance and payment of all of Seller's obligations under the Contract Documents. This bond shall remain in effect until 1) one year after the date when final payment becomes due or 2) completion of the correction period specified in Paragraph 8.03, whichever is later first, except as provided otherwise by Laws or Regulations or by the Contract Documents. Seller shall also furnish such other bonds as are required by the Contract Documents.

B. Bond shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. Bond signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual's authority to bind the surety. The evidence of authority shall show that it is effective on the date the agent or attorney-in-fact signed each bond.

C. If the surety on any bond furnished by Seller is declared bankrupt or becomes insolvent or its right to do business is terminated

in any state where any part of the Project is located or it ceases to meet the requirements of Paragraph 4.01.B, Seller shall promptly notify Buyer and Engineer and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the requirements of Paragraphs 4.01.B and 4.02.

4.2 Insurance

A. Property Insurance: Seller shall assume all risk of loss or damage to the Goods prior to acceptance of delivery by Buyer at the point of delivery; and shall purchase and maintain insurance on the Goods during the process of fabrication and while in transit to insure against the perils of fire and extended coverage including "all risk" insurance for physical loss and damage including theft, vandalism and malicious mischief, collapse, water damage and such other perils as may be provided herein and as Seller deems appropriate.

B. Liability Insurance Seller shall purchase and maintain such liability and other insurance as is appropriate for the furnishing of Goods and Special Services and as will provide protection from claims set forth below which may arise out of or result from Seller's furnishing of the Goods or Special Services and Seller's other obligations under the Contract Documents, whether the furnishing of Goods or Special Service, or other obligations are to be performed by Seller, any subcontractor or supplier, or by anyone directly or indirectly employed by any of them to furnish the Goods or Special Services, or by anyone for whose acts any of them may be liable:

- 1. claims under workers' compensation, disability benefits, and other similar employee benefit acts;
2. claims for damages because of bodily injury, occupational sickness or disease, or death of Seller's employees;
3. claims for damages because of bodily injury, sickness or disease, or death of any person other than Seller's employees;
4. claims for damages insured by reasonably available personal injury liability coverage which are sustained: (i) by any person as a result of an offense directly or indirectly related to the employment of such person by Seller, or (ii) by any other person for any other reason;
5. claims for damages, other than to the Goods, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom; and
6. claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle.

C. The policies of insurance so required by this Paragraph 4.02 to be purchased and maintained shall:

- 1. with respect to insurance required by Paragraphs 4.02.B.3 through 4.02.B.6 inclusive, include as additional insureds (subject to any customary exclusion in respect of professional liability) City of Geneva, Illinois, Stanley Consultants, Inc., their consultants, shall be listed as additional insureds, and include coverage for the respective officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of all such additional insureds, and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby;
2. include at least the specific coverages and be written for not less than the limits of liability provided below or required by Laws or Regulations, whichever is greater;
3. include completed operations insurance;
4. include contractual liability insurance covering Seller's indemnity obligations under Paragraphs 5.09 and 12.02;
5. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least 30 days prior written notice has been given to Buyer and Seller and to each other additional insured identified in these General Conditions to whom a certificate of insurance has been issued (and the certificates of insurance furnished by Seller pursuant to Paragraph 4.02.E will so provide);
6. remain in effect at least until final payment and at all times thereafter when Seller may be correcting, removing, or replacing nonconforming Goods in accordance with Paragraph 8.03; and
7. with respect to completed operations insurance, and any insurance coverage written on a claims-made basis, remain in effect for at least two years after final payment (and Seller shall furnish Buyer and each other additional insured identified herein, to whom a certificate of insurance has been issued, evidence

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satisfactory to Buyer and any such additional insured of continuation of such insurance at final payment and one year thereafter); and

B. with respect to any delegation of professional design services to Seller pursuant to Paragraph 5.10, include professional liability coverage by endorsement or otherwise.

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D. The limits of liability for the insurance required by Paragraph 4.2.B shall provide coverage for not less than the following amounts or greater where required by Laws and Regulations:

1. Workers' Compensation, and related coverages under Paragraphs 4.02.B.1 and B.2:

- a. State: Statutory
- b. Applicable Federal (e.g., Longshoreman's): Statutory
- c. Employer's Liability: \$1,000,000

2. Seller's General Liability under Paragraphs 4.02.B.3 through B.6 which shall include completed operations and product liability coverages and eliminate the exclusion with respect to property under the care, custody and control of Seller:

- a. General Aggregate: \$3,000,000
- b. Products – Completed Operations Aggregate: \$3,000,000
- c. Personal and Advertising Injury: \$3,000,000
- d. Each Occurrence (Bodily Injury and Property Damage): \$3,000,000
- e. Property Damage liability insurance will provide Explosion, Collapse, and Underground coverages where applicable.
- f. Excess or Umbrella Liability:
  - 1) General Aggregate: \$3,000,000
  - 2) Each Occurrence: \$3,000,000

3. Automobile Liability under Paragraph 4.02.B.6:

- a. Bodily Injury:
  - 1) Each person: \$2,000,000
  - 2) Each Accident: \$2,000,000
- b. Property Damage:
  - 1) Each Accident: \$2,000,000
- c. Combined Single Limit of: \$2,000,000

E. Seller shall deliver to Buyer, with copies to each additional insured identified in Paragraph 4.02.C.1, certificates of insurance (and other evidence of insurance requested by Buyer or any other additional insured) which Seller is required to purchase and maintain.

F. Failure of Buyer to demand certificates of insurance or other evidence of Seller's full compliance with these insurance requirements or failure of Buyer to identify a deficiency in compliance from the evidence provided shall not be construed as a waiver of Seller's obligation to maintain such insurance.

G. If Buyer has any objection to the coverage afforded by or other provisions of the insurance required to be purchased and maintained on the basis of non-conformance with the Contract Documents, Buyer shall notify Seller in writing within 10 days after receipt of the certificates or other evidence required by Paragraph 4.02.J. Seller shall provide such additional information in respect to insurance as Buyer shall reasonably request.

H. Upon assignment of this Contract, Seller shall comply with the written request of assignee to provide certificates of insurance to assignee.

I. Buyer does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Seller.

J. The insurance and insurance limits required herein shall not be deemed as a limitation on Seller's liability under the indemnities granted to Buyer in the Contract Documents.

4.3 Licensed Sureties and Insurers

A. All bonds and insurance required by the Contract Documents to be purchased and maintained by Buyer or Seller shall be obtained from surety or insurance companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds or insurance policies for the limits and coverages so required. Such surety and insurance companies shall also meet such additional requirements and qualifications as may be provided.

ARTICLE 5 - SELLER'S RESPONSIBILITIES

5.1 Supervision and Superintendence

A. Seller shall supervise, inspect, and direct the furnishing of the Goods and Special Services competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform its obligations in accordance with the Contract Documents. Seller shall be solely responsible for the means, methods, techniques, sequences, and procedures necessary to perform its obligations in accordance with the Contract Documents. Seller shall not be responsible for the negligence of Buyer or Engineer in the design or specification of a specific means, method, technique, sequence, or procedure that is shown or indicated in and expressly required by the Contract Documents.

5.2 Labor, Materials and Equipment

A. Seller shall provide competent, qualified and trained personnel in all aspects of its performance of the Contract.

B. All Goods, and all equipment and material incorporated into the Goods, shall be as specified, and unless specified otherwise in the Contract Documents, shall be:

- 1. new, and of good quality;
- 2. protected, assembled, connected, cleaned, and conditioned in accordance with the original manufacturer's instructions; and
- 3. shop assembled to the greatest extent practicable.

5.3 Laws and Regulations

A. Seller shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of its obligations in accordance with the Contract Documents. Except where otherwise expressly required by such Laws and Regulations, neither Buyer nor Engineer shall be responsible for monitoring Seller's compliance with any Laws or Regulations.

B. If Seller furnishes Goods and Special Services knowing or having reason to know that such furnishing is contrary to Laws or Regulations, Seller shall bear all directly related, reasonable and verifiable claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, reasonable attorneys fees, and other professionals and all court or arbitration or other dispute-resolution costs) arising out of or relating to such performance. It shall not be Seller's responsibility to make certain that the Specifications and Drawings are in accordance with Laws and Regulations, but this provision shall not relieve Seller of Seller's obligations under Paragraph 3.03.

C. Changes in Laws or Regulations not known at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids) having an effect on the cost or time of performance shall be the subject of an adjustment in Contract Price or Contract Times. If Buyer and Seller are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 9.06.

5.4 Or Equals

A. Whenever the Goods, or an item of material or equipment to be incorporated into the Goods, are specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular supplier or manufacturer, the specification or description is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or-equal" item is permitted, other items of material or equipment or material or equipment of other suppliers or manufacturers may be submitted to Buyer for Engineer's review.

1. If in Engineer's sole discretion, such an item of material or equipment proposed by Seller is functionally equal to that named and sufficiently similar so that no change in related work will be required, it may be considered by Engineer as an "or-equal" item.

2. For the purposes of this paragraph, a proposed item of material or equipment may be considered functionally equal to an item so named only if:

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a. in the exercise of reasonable judgment, Engineer determines that: 1) it is at least equal in quality, durability, appearance, strength, and design characteristics; 2) it will reliably perform at least equally well the function imposed by the design concept of the completed Project as a functioning whole; 3) it has an acceptable record of performance and availability of responsive service; and

b. Seller certifies that if approved: **1) there will be no increase in any cost, including capital, installation or operating costs, to Buyer;** and 2) the proposed item will conform substantially to the detailed requirements of the item named in the Contract Documents.

B. Engineer's Evaluation: Engineer will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to Paragraph 5.04.A. Engineer will be the sole judge of whether to accept or reject such a proposal or submittal. No "or-equal" will be ordered, manufactured or utilized until Engineer's review is complete, which will be evidenced by an approved Shop Drawing. Engineer will advise Buyer and Seller in writing of any negative determination. Notwithstanding Engineer's approval of an "or-equal" item, Seller shall remain obligated to comply with the requirements of the Contract Documents.

~~C. Special Guarantee: Buyer may require Seller to furnish at Seller's expense a special performance guarantee or other surety with respect to any such proposed "or-equal."~~

D. Data: Seller shall provide all data in support of any such proposed "or-equal" at Seller's expense.

5.5 Taxes

A. Seller shall be responsible for all taxes and duties arising out of the sale of the Goods and the furnishing of Special Services. All taxes are included in the Contract Price.

1. Buyer will furnish the required certificates of tax exemption to Seller with respect to materials and equipment to be incorporated into the Project facilities.

2. Buyer's exemption does not apply to construction tools, machinery, equipment, or other property purchased by or leased by Seller, or to supplies or materials not incorporated into the Project facilities.

3. The Contract Price does not include the cost of sales or compensating use taxes to the extent such are exempted by this paragraph.

5.6 Shop Drawings and Samples

A. Seller shall submit Shop Drawings and Samples to Buyer for Engineer's review in accordance with the schedule required in Paragraph 2.06.A. All submittals will be identified as required and furnished in the number of copies specified in the Contract Documents. The data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Seller proposes to provide.

B. Where a Shop Drawing ~~or Sample~~ is required by the Contract Documents, any related work performed prior to Engineer's review of the pertinent submittal will be at the sole expense and responsibility of Seller.

C. Submittal Procedures:

1. Before submitting each Shop Drawing ~~or Sample~~, Seller shall have determined and verified:

a. all field measurements (if required), quantities, dimensions, specified performance criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto; and

b. that all materials are suitable with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the furnishing of Goods and Special Services.

c. Seller shall also have reviewed and coordinated each Shop Drawing ~~or Sample~~ with the Contract Documents.

2. Each submittal shall bear a stamp or include a written certification from Seller that Seller has reviewed the subject submittal and confirmed that it is in compliance with the requirements of the Contract Documents. Both Buyer and Engineer shall be entitled to rely on such certification from Seller.

3. With each submittal, Seller shall give Buyer and Engineer specific written notice of any variations that the Shop Drawing ~~or Sample~~ may have from the requirements of the Contract Documents. This notice shall be both in a written communication separate from the submittal and by specific notation on each Shop Drawing ~~or Sample~~.

D. Engineer's Review:

1. Engineer will provide timely review of Shop Drawings ~~and Samples~~.

2. Engineer's review will be only to determine if the Goods and Special Services covered by the submittals will, after installation or incorporation in the Project, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole.

3. Engineer's review shall not relieve Seller from responsibility for any variation from the requirements of the Contract Documents; nor will any review by Engineer relieve Seller from responsibility for errors or omissions in the Shop Drawings or from responsibility for having complied with the provisions of paragraph 5.06.C.1.

E. Seller shall furnish required submittals with sufficient information and accuracy in order to obtain required approval of an item with no more than three submittals. Engineer will record Engineer's time for reviewing subsequent submittals of Shop Drawings, ~~samples~~, or other items requiring approval and Seller ~~shall may agree to~~ reimburse Buyer for Engineer's ~~verifiable~~ charges for such time.

F. In the event that Seller requests a change of a previously approved item, Seller shall reimburse Buyer for Engineer's charges for its review time unless the need for such change is beyond the control of Seller.

G. Resubmittal Procedures: Seller shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, ~~new Samples~~ for review and approval. Seller shall direct specific attention in writing to any revisions other than the corrections called for by Engineer on previous submittals.

5.7 Continuing Performance

A. Seller shall adhere to the progress schedule established in accordance with Paragraph 2.06.A., and the Goods shall be delivered and the Special Services furnished within the Contract Times specified in the Agreement.

B. Seller shall carry on furnishing of the ~~undisputed portion of the~~ Goods and Special Services and adhere to the progress schedule during all disputes or disagreements with Buyer. No furnishing of Goods and Special Services ~~for undisputed work~~ shall be delayed or postponed pending resolution of any disputes or disagreements, except as permitted by Paragraphs 11.03 or 11.04, or as Buyer and Seller may otherwise agree in writing.

5.8 Seller's Warranties and Guarantees

A. Seller warrants and guarantees to Buyer that the title to the Goods conveyed shall be proper, its transfer rightful, and free from any security interest, lien, or other encumbrance. Seller shall defend, indemnify, and hold Buyer harmless against ~~any actual~~ liens, claims, or demands contesting or affecting title of the Goods conveyed.

B. Seller warrants and guarantees to Buyer that all Goods and Special Services will conform with the Contract Documents ~~and with the standards established by any Samples approved by Engineer~~. Engineer shall be entitled to rely on Seller's warranty and guarantee. If the Contract Documents do not otherwise specify the characteristics or the quality of the Goods, the Goods shall comply with the requirements of Paragraph 5.02.B.

C. Seller's warranty and guarantee hereunder excludes defects or damage caused by:

1. abuse, improper modification, improper maintenance, or improper operation by persons other than Seller; or
2. corrosion or chemical attack, unless corrosive or chemically-damaging conditions were disclosed by Buyer in the Contract Documents and the Contract Documents required the Goods to withstand such conditions;

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- 3. use in a manner contrary to Seller's written instructions for installation, operation, and maintenance; or
- 4. normal wear and tear under normal usage.

D. Seller's obligation to furnish the Goods and Special Services in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Goods and Special Services that are non-conforming, or a release of Seller's obligation to furnish the Goods and Special Services in accordance with the Contract Documents and within the warranty period:

- 1. observations by Buyer or Engineer;
- 2. recommendation by Engineer or payment by Buyer of any progress or final payment;
- 3. use of the Goods by Buyer;
- 4. any acceptance by Buyer (subject to the provisions of Paragraph 8.02.D.1) or any failure to do so;
- 5. the issuance of a notice of acceptance by Buyer pursuant to the provisions of Article 8;
- 6. any inspection, test or approval by others; or
- 7. any correction of non-conforming Goods and Special Services by Buyer.

E. Buyer shall promptly notify Seller in writing of any breach of Seller's warranties or guarantees within the warranty period.

F. Seller makes no implied warranties under this Contract.

5.9 Indemnification

A. To the fullest extent permitted by Laws and Regulations, Seller shall indemnify and hold harmless Buyer and Engineer, and the officers, directors, members, partners, employees, agents, consultants, contractors, and subcontractors ~~of each and any of them from and against all actual claims, directly related and verifiable costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, reasonable attorneys fees, and other professionals and all court or arbitration or other dispute resolution costs)~~ arising out of or relating to the performance of Seller's obligations under the Contract Documents, provided that any such claim, cost, ~~loss,~~ or damages attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Goods themselves), including the loss of use resulting therefrom, but only to the extent caused by any negligent act or omission of Seller, or any individual or entity directly or indirectly employed by Seller or anyone for whose acts Seller may be liable.

~~B. In any and all claims against Buyer or Engineer or any of their respective assignees, consultants, agents, officers, directors, members, partners, employees, agents, consultants, contractors, or subcontractors, by any employee (or the survivor or personal representative of such employee) of Seller, any subcontractor, any supplier, or any individual or entity directly or indirectly employed by any of them to furnish any of the Goods and Special Services, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 5.09.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for seller or any such subcontractor, supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.~~

~~C. The indemnification obligations of Seller under Paragraph 5.9.A shall not extend to the liability of Engineer and Engineer's officers, directors, partners, employees, agents, and consultants arising out of:~~

- ~~1. the preparation or approval of, or the failure to prepare or approve, maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or~~
- ~~2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.~~

5.10 Delegation of Professional Design Services

A. Seller will not be required to provide professional design services unless such services are specifically required by the Contract Documents or unless such services are required to carry out Seller's responsibilities for furnishing the Goods and Special Services. Seller shall not be required to provide professional services in violation of applicable law.

B. If professional design services or certifications by a design professional related to the Goods and Special Services are specifically required of Seller by the Contract Documents, Buyer and Engineer will specify all performance and design criteria that such services must satisfy. Seller shall cause such services or certifications to be provided by a properly licensed professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Goods and Special Services designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to Engineer. If requirement and criteria for said services were not part of the original specification or contract, then Seller shall have the right to request compensation for such service through change orders.

C. Buyer and Engineer shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications or approvals performed by such design professionals, provided Buyer and Engineer have specified to Seller all performance and design criteria that such services must satisfy.

D. Pursuant to this Paragraph 5.10, Engineer's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Engineer's review and approval of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 5.06.D.2.

E. Seller shall not be responsible for the adequacy of the performance or design criteria required by the Contract Documents.

ARTICLE 6 — SHIPPING AND DELIVERY

6.1 Shipping

A. Seller shall select the carrier and bear all costs of packaging, transportation, insurance, special handling and any other costs associated with shipment and delivery.

6.2 Delivery

A. Seller shall deliver the Goods F.O.B. the Point of Destination in accordance with the Contract Times set forth in the Agreement, or other date agreed to by Buyer and Seller.

B. Seller shall provide written notice to Buyer at least 10 days before shipment of the manner of shipment and the anticipated delivery date. The notice shall also include any instructions concerning special equipment or services required at the Point of Destination to unload and care for the Goods. Seller shall also require the carrier to give Buyer at least 24 hours notice by telephone prior to the anticipated time of delivery.

C. Seller will be responsible and bear all costs for unloading the Goods from carrier.

D. Buyer will assure unfettered access to Seller for delivery of Goods and that adequate facilities are available to receive delivery of the Goods during the Contract Times for delivery set forth in the Agreement, or another date agreed by Buyer and Seller.

E. No partial deliveries shall be allowed, unless permitted or required by the Contract Documents or agreed to in writing by Buyer.

6.3 Risk of Loss

A. Risk of loss and insurable interests transfer from Seller to Buyer upon Buyer's receipt of the Goods.

B. Notwithstanding the provisions of Paragraph 6.03.A, if Buyer rejects the Goods as non-conforming, the risk of loss on such Goods shall remain with Seller until Seller corrects the non-conformity or Buyer

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#### 6.4 Progress Schedule

A. Seller shall adhere to the progress schedule established in accordance with Paragraph 2.06 as it may be adjusted from time to time as provided below.

1. Seller shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.06) proposed adjustments in the progress schedule that will not result in changing the Contract Times. Such adjustments will comply with any provisions of the General Requirements applicable thereto.

2. Proposed adjustments in the progress schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article 7. Adjustments in Contract Times may only be made by a Change Order.

#### ARTICLE 7 - CHANGES: SCHEDULE AND DELAY

##### 7.1 Changes in the Goods and Special Services

A. Buyer may at any time, without notice to any surety, make an addition, deletion, or other revision to the Contract Documents with respect to the Goods and Services, within the general scope of the Contract, by a Change Order or Work Change Directive. Upon receipt of any such document, Seller shall promptly proceed with performance pursuant to the revised Contract Documents (except as otherwise specifically provided).

B. If Seller concludes that a Work Change Directive issued by Buyer affects the Contract Price or Contract Times, then Seller shall notify Buyer within 15 days after Seller has received the Work Change Directive, and submit written supporting data to Buyer within 45 days after such receipt. If Seller fails to notify Buyer within 15 days, Seller waives any Claim for such adjustment. If Buyer and Seller are unable to agree on entitlement to, or on the amount or extent, if any, of an adjustment in the Contract Price or Contract Times, or both, that should be allowed as a result of a Work Change Directive, a Claim may be made therefor as provided in Paragraph 9.06.

C. Seller shall not suspend performance to original work scope while Buyer and Seller are in the process of making such changes and any related adjustments to Contract Price or Contract Times.

##### 7.2 Changing Contract Price or Contract Times

A. The Contract Price or Contract Times may only be changed by a Change Order.

B. Any Claim for an adjustment in the Contract Price or Contract Times shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 9.06.

C. If Seller is prevented from delivering the Goods or performing the Special Services within the Contract Times for any unforeseen reason beyond its control and not attributable to its actions or inactions, then Seller shall be entitled to an adjustment of the Contract Times to the extent attributable to such reason. Such reasons include but are not limited to acts or neglect by Buyer, inspection delays, fires, floods, epidemics, pandemics, abnormal weather conditions, acts of God, and other like matters. If such an event occurs and delays Seller's performance, Seller shall notify Buyer in writing within 15 days of knowing or having reason to know of the beginning of the event causing the delay, stating the reason therefor.

D. Seller shall not be entitled to an adjustment in Contract Price or Contract Times for delays within the control of Seller. Delays attributable to and within the control of Seller's subcontractors or suppliers shall be deemed to be delays within the control of Seller.

E. If Seller is prevented from delivering the Goods or furnishing the Special Services within the Contract Times due to the actions or inactions of Buyer, Seller shall be entitled to any reasonable and necessary additional costs arising out of such delay to the extent directly attributable to Buyer.

F. Neither Buyer nor Seller shall be entitled to any damages arising from delays which are beyond the control of both Buyer and Seller, including but not limited to fires, floods, epidemics, pandemics, abnormal weather conditions, acts of God, and other like matters.

#### ARTICLE 8-BUYER'S RIGHTS

##### 8.1 Inspections and Testing

###### A. General:

1. The Contract Documents specify required inspections and tests. Buyer shall have the right to perform, or cause to be performed, reasonable inspections and require reasonable tests of the Goods at Seller's facility, and at the Point of Destination. Seller shall allow Buyer a reasonable time to perform such inspections or tests.

2. Seller shall reimburse Buyer for all expenses, except for travel, lodging, and subsistence expenses of Buyer's and Engineer's representatives, for inspections and tests specified in the Contract Documents. If as the result of any such specified testing the Goods are determined to be non-conforming, then Seller shall also bear the travel, lodging, and subsistence expenses of Buyer's and Engineer's representatives, and all expenses of re-inspection or retesting.

3. Buyer shall bear all expenses of inspections and tests that are not specified in the Contract Documents (other than any re-inspection or retesting resulting from a determination of non-conformity, as set forth in Paragraph 8.01.A.2 immediately above); provided, however, that if as the result of any such non-specified inspections or testing the Goods are determined to be non-conforming, then Seller shall bear all expenses of such inspections and testing, and of any necessary re-inspection and retesting.

4. Seller shall provide Buyer timely written notice of the readiness of the Goods for all inspections, tests, or approvals which the Contract Documents specify are to be observed by Buyer prior to shipment.

5. Buyer will give Seller timely notice of all specified tests, inspections, and approvals of the Goods which are to be conducted at the Point of Destination.

6. If, on the basis of any inspections or testing, the Goods appear to be conforming, Buyer will give Seller prompt notice thereof. If on the basis of said inspections or testing, the Goods appear to be non-conforming, Buyer will give Seller prompt notice thereof and will advise Seller of the remedy Buyer elects under the provisions of Paragraph 8.02.

7. Neither payments made by Buyer to Seller prior to any tests or inspections, nor any tests or inspections shall constitute acceptance of non-conforming Goods, or prejudice Buyer's rights under the Contract.

###### B. Inspection on Delivery:

1. Buyer or Engineer will visually inspect the Goods upon delivery solely for purposes of identifying the Goods and general verification of quantities and observation of apparent condition in order to provide a basis for a progress payment. Such visual inspection will not be construed as final or as receipt of any Goods and Special Services that, as a result of subsequent inspections and tests within the warranty period, are determined to be non-conforming.

2. Within ten days of such visual inspection, Buyer shall provide Seller with written notice of Buyer's determination regarding conformity of the Goods. In the event Buyer does not provide such notice, it will be presumed that the Goods appear to be conforming and that Buyer has acknowledged their receipt upon delivery.

3. If, on the basis of the visual inspection specified in Paragraph 8.01.B.1, the Goods appear to be conforming, Buyer's notice thereof to Seller will acknowledge receipt of the Goods.

###### C. Final Inspection:

1. After all of the Goods have been incorporated into the Project, tested in accordance with such testing requirements as are specified, and are functioning as indicated, Buyer or Engineer will make a final inspection.

2. If, on the basis of the final inspection, the Goods are conforming, Buyer's notice thereof will constitute Buyer's acceptance of the Goods.

3. If, on the basis of the final inspection, the Goods are non-conforming, Buyer will identify the non-conformity in writing.

##### 8.2 Non-Conforming Goods and Special Services

A. If, on the basis of inspections and testing prior to delivery, the Goods and Special Services are found to be non-conforming, or if at any time after Buyer has acknowledged receipt of delivery and before

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the expiration of the correction period described in Paragraph 8.03, Buyer determines that the Goods and Special Services are non-conforming, then Seller shall promptly, without cost to Buyer and in response to written instructions from Buyer, either correct such non-conforming Goods and Special Services, or, if Goods are rejected by Buyer, remove and replace the non-conforming Goods with conforming Goods, including all work required for reinstallation.

A. The duties and responsibilities and the limitations of authority of Engineer are set forth in the Contract Documents.

B. Buyer's Rejection of Non-Conforming Goods:

1. If Buyer elects to reject the Goods in whole or in part, Buyer's notice to Seller will describe in sufficient detail the non-conforming aspect of the Goods. If Goods have been delivered to Buyer, Seller shall promptly, and within the Contract Times, remove and replace the rejected Goods.

2. Seller shall ~~bear all costs, losses and damages attributable to the removal and~~ arrange for the collection of and replacement of the non-conforming Goods as provided in Paragraph 8.02.E. ~~Buyer shall make goods available with unfettered access to Seller at dock.~~

3. Upon rejection of the Goods, Buyer retains a security interest in the Goods to the extent of any payments made and expenses incurred in their testing and inspection.

C. Remediating Non-Conforming Goods and Special Services:

1. If Buyer elects to permit the Seller to modify the Goods to correct the non-conformance, then Seller shall promptly provide a schedule for such modifications and shall make the Goods conforming within a reasonable time ~~as mutually agreed.~~

2. If Buyer notifies Seller in writing that any of the Special Services are non-conforming, Seller shall promptly provide conforming services acceptable to Buyer. If Seller fails to do so, Buyer may delete the Special Services and reduce the Contract Price ~~by a mutually agreed upon a commensurate~~ amount.

D. Buyer's Acceptance of Non-Conforming Goods: Instead of requiring correction or removal and replacement of non-conforming Goods discovered either before or after final payment, Buyer may accept the non-conforming Goods. Seller shall bear ~~all~~ reasonable ~~and verifiable~~ costs, ~~losses~~, and damages attributable to Buyer's evaluation of and determination to accept such non-conforming Goods as provided in Paragraph 8.02.E.

E. Seller shall pay ~~all directly related, reasonable and verifiable~~ claims, costs, ~~losses~~, and damages, including ~~but not limited to all fees and charges for re-inspection, retesting and for any engineers, architects, reasonable attorneys fees and other professionals, and all court or arbitration or other dispute resolution costs~~ arising out of or relating to the non-conforming Goods and Special Services. Seller's obligations shall include the costs of the correction ~~or removal~~ and replacement of the non-conforming Goods ~~and the replacement of property of Buyer and others destroyed by the correction or removal and replacement of the non-conforming Goods,~~ and obtaining conforming Special Services from others. ~~Seller shall be responsible for arranging freight to pick up and re-delivery non-conforming goods from / to Buyer. Buyer shall make Goods available to Seller with unfettered access at dock.~~

F. Buyer's Rejection of Conforming Goods: If Buyer asserts that Goods and Special Services are non-conforming and such Goods and Special Services are determined to be conforming, or if Buyer rejects as non-conforming Goods and Special Services that are later determined to be conforming, then Seller shall be entitled to reimbursement from Buyer of costs incurred by Seller in inspecting, testing, correcting, removing, or replacing the conforming Goods and Special Services, including but not limited to fees and charges of engineers, architects, attorneys and other professionals, and all court or arbitration or other dispute resolution costs associated with the incorrect assertion of non-conformance or rejection of conforming Goods and Special Services.

8.3 Correction Period

A. Seller's responsibility for correcting all non-conformities in the Goods and Special Services will extend for a period of one year after ~~delivery, the earlier of the date on which Buyer has placed the Goods in continuous service or the date of final payment, or for such longer period of time as may be prescribed by Laws or Regulations or by the terms of any specific provisions of the Contract Documents.~~

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ARTICLE 9- ROLE OF ENGINEER

9.1 Duties and Responsibilities

Claim in accordance with the dispute resolution procedures set forth in Article 13.

Documents or that there may not be other

E. If Article 13 has been amended to delete the mediation requirement, then Buyer or Seller may appeal Engineer's decision within 30 days of issuance by following the alternative dispute resolution process set forth in Article 13, as amended; or if no such alternative dispute resolution process has been set forth, Buyer or Seller may appeal Engineer's decision by 1) delivering to the other party within 30 days of the date of such decision a written notice of intent to submit the Claim to a court of competent jurisdiction, and 2) within 60 days after the date of such decision instituting a formal proceeding in a court of competent jurisdiction.

F. No Claim for an adjustment in Contract Price or Contract Times will be valid if not submitted in accordance with this Paragraph 9.06.

G. The parties agree to endeavor to avoid or resolve Claims through direct, good faith discussions and negotiations whenever practicable. Such discussions and negotiations should at the outset address whether the parties mutually agree to suspend the time periods established in this Paragraph 9.06; if so, a written record of such mutual agreement should be made and jointly executed.

#### **ARTICLE 10- PAYMENT**

##### *10.1 Applications for Progress Payments*

A. Seller shall submit to Buyer for Engineer's review Applications for Payment filled out and signed by Seller and accompanied by such supporting documentation as is required by the Contract Documents and also as Buyer or Engineer may reasonably require. The timing and amounts of progress payments shall be as stipulated in the Agreement as mutually negotiated between Buyer and Seller.

1. The first application for Payment will be submitted after review by Engineer of all Shop Drawings and of all Samples required by the Contract Documents.

~~2. Subsequent application payments to be negotiated between Buyer and Seller.~~

~~3. The second final Application for Payment will be submitted after receipt of the Goods has been acknowledged in accordance with Paragraph 8.01.B and will be accompanied by a bill of sale, invoice, or other documentation reasonably satisfactory to Buyer warranting that Buyer has rightfully received good title to the Goods from Seller and that, upon payment, the Goods will be free and clear of all liens. Such documentation will include releases and waivers from all parties with viable lien rights. In the case of multiple deliveries of Goods, additional Applications for Payment accompanied by the required documentation will be submitted as Buyer acknowledges receipt of additional items of the Goods.~~

##### *10.2 Review of Applications for Progress Payments*

A. Engineer will, within ten days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to Buyer, or return the Application to Seller indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Seller may make the necessary corrections and resubmit the Application.

1. Engineer's recommendation of payment requested in the first Application for Payment will constitute a representation by Engineer, based on Engineer's review of the Application for Payment and the accompanying data that the Shop Drawings ~~and Samples~~ have been reviewed and approved as required by the Contract Documents and Seller is entitled to payment of the amount recommended. Documentation required for subsequent applications for payment shall be mutually agreed upon between Buyer and Seller.

2. Engineer's recommendation of payment requested in the ~~final~~ Application for Payment submitted upon Buyer's acknowledgment of receipt of the Goods will constitute a representation by Engineer, based on Engineer's review of the Application for Payment and the accompanying data Seller is entitled to payment of the amount recommended. Such recommendation will not constitute a representation that Engineer has made a final inspection of the Goods, that the Goods are free from non-conformities, acceptable or in conformance with the Contract Documents, that Engineer has made any investigation as to Buyer's title to the Goods, that exhaustive or continuous inspections have been made to check the quality or the quantity of the Goods beyond the responsibilities specifically assigned to Engineer in the Contract

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matters or issues between the parties that might entitle Seller to additional payments by Buyer or Buyer to withhold payment to Seller.

3. Engineer may refuse to recommend that all or any part of a progress payment be made, or Engineer may nullify all or any part of any payment previously recommended if, in Engineer's opinion, such recommendation would be incorrect or if on the basis of subsequently discovered evidence or subsequent inspections or tests Engineer considers such refusal or nullification necessary to protect Buyer from loss because the Contract Price has been reduced, Goods are found to be non-conforming, or Seller has failed to furnish acceptable Special Services.

#### 10.3 Amount and Timing of Progress Payments

A. Subject to Paragraph 10.02.A., the amounts of the progress payments will be as provided in the Agreement. Buyer shall within 45 days after receipt of each Application for Payment with Engineer's recommendation pay Seller the amount recommended; but, in the case of the Application for Payment upon Buyer's acknowledgment of receipt of the Goods, said 45-day period may be extended for so long as is necessary (but in no event more than 60 days) for Buyer to examine the bill of sale and other documentation submitted therewith. Buyer shall notify Seller promptly of any deficiency in the documentation and shall not unreasonably withhold payment.

#### 10.4 Suspension of or Reduction in Payment

A. Buyer may suspend or reduce the amount of progress payments, even though recommended for payment by Engineer, under the following circumstances:

1. Buyer has reasonable grounds to conclude that Seller will not furnish the Goods or the Special Services in accordance with the Contract Documents, and

2. Buyer has requested in writing assurances from Seller that the Goods and Special Services will be delivered or furnished in accordance with the Contract Documents, and Seller has failed to provide adequate assurances within ten days of Buyer's written request.

B. If Buyer refuses to make payment of the full amount

recommended by Engineer, Buyer will provide Seller and Engineer immediate written notice stating the reason for such action and promptly pay Seller any amount remaining after deduction of the amount withheld. Buyer shall promptly pay Seller the amount withheld when Seller corrects the reason for such action to Buyer's satisfaction.

#### 10.5 Final Application for Payment

A. After Seller has corrected all non-conformities to the reasonable satisfaction of Buyer and Engineer, furnished all Special Services, and delivered all documents required by the Contract Documents, Engineer will issue to Buyer and Seller a notice of acceptance. Seller may then make application for final payment following the procedure for progress payments. The final Application for Payment will be accompanied by all documentation called for in the Contract Documents, a list of all unsettled Claims, and such other data and information as Buyer or Engineer may reasonably require.

#### 10.6 Final Payment

A. If, on the basis of final inspection and the review of the final Application for Payment and accompanying documentation, Engineer is reasonably satisfied that Seller has furnished the Goods and Special Services in accordance with the Contract Documents, and that Seller's has fulfilled all other obligations under the Contract Documents, then Engineer will, within ten days after receipt of the final Application for Payment, recommend in writing final payment subject to the provisions of Paragraph 10.07 and present the Application to Buyer. Otherwise, Engineer will return the Application to Seller, indicating the reasons for refusing to recommend final payment, in which case Seller shall make the necessary corrections and resubmit the Application for payment. If the Application and accompanying documentation are appropriate as to form and substance, Buyer shall, within 45 days after receipt thereof, pay Seller the amount recommended by Engineer, ~~less any sum Buyer is entitled to set off against Engineer's recommendation, including but not limited to liquidated damages to which Buyer is entitled. Back charges or liquidated damages shall be invoiced by Buyer to Seller who shall review and remit payment within 45 days after receipt thereof once approved.~~

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10.7 Waiver of Claims

- A. The making and acceptance of final payment will constitute:
  1. a waiver of all Claims by Buyer against Seller, except Claims arising from unsettled liens from non-conformities in the Goods or Special Services appearing after final payment, from Seller's failure to comply with the Contract Documents or the terms of any special guarantees specified therein, or from Seller's continuing obligations under the Contract Documents; and
  2. a waiver of all Claims by Seller against Buyer (other than those previously made in accordance with the requirements herein and listed by Seller as unsettled as required in Paragraph 10.05.A, and not resolved in writing).

ARTICLE 11 - CANCELLATION, SUSPENSION, AND TERMINATION

11.1 Cancellation

- A. Buyer has the right to cancel the Contract, without cause, at any time prior to delivery of the Goods by written notice. Cancellation pursuant to the terms of this paragraph shall not constitute a breach of contract by Buyer. Upon cancellation:
  1. Buyer shall pay Seller for the direct costs incurred in producing any Goods that Seller has specially manufactured for the Project, plus a fair and reasonable amount for overhead and profit. Cancellation fees shall be in accordance with Seller's Cancellation Policy contained in the proposal.
  2. For Goods that are not specially manufactured for the Project, Seller shall be entitled to a restocking charge of 10 percent of the unpaid Contract Price of such Goods.

11.2 Suspension of Performance by Buyer

- A. Buyer has the right to suspend performance of the Contract for up to a maximum of ninety days, without cause, by written notice. Upon suspension under this paragraph, Seller shall be entitled to an increase in the Contract Times and Contract Price caused by the suspension, provided that performance would not have been suspended or delayed for causes attributable to Seller.

11.3 Suspension of Performance by Seller

- A. Subject to the provisions of Paragraph 5.07.B, Seller may suspend the furnishing of the Goods and Special Services only under the following circumstance:
  1. Seller has reasonable grounds to conclude that Buyer will not perform its future payment obligations under the Contract; and
  2. Seller has requested in writing assurances from Buyer that future payments will be made in accordance with the Contract, and Buyer has failed to provide such assurances within ten days of Seller's written request.

11.4 Breach and Termination

- A. Buyer's Breach:
  1. Buyer shall be deemed in breach of the Contract if it fails to comply with any material provision of the Contract Documents, including ~~but not limited to:~~
    - a. wrongful rejection or revocation of Buyer's acceptance of the Goods,
    - b. failure to make payments in accordance with the Contract Documents, or
    - c. wrongful repudiation of the Contract.
  2. Seller shall have the right to terminate the Contract for cause by declaring a breach should Buyer fail to comply with any material provisions of the Contract. Upon termination, Seller shall be entitled to all remedies provided by Laws and Regulations.
    - a. In the event Seller believes Buyer is in breach of its obligations under the Contract, Seller shall provide Buyer with reasonably prompt written notice setting forth in sufficient detail the reasons for declaring that it believes a breach has occurred. Buyer shall have seven days from receipt of the written notice declaring the breach (or such longer period of time as Seller may grant in writing) within which to cure or to proceed diligently to cure such alleged breach.
- B. Seller's Breach:
  1. Seller shall be deemed in breach of the Contract if it fails to comply with any material provision of the Contract Documents, including, ~~but not limited to:~~

- a. failure to deliver the Goods or perform the Special Services in accordance with the Contract Documents,
  - b. wrongful repudiation of the Contract, or
  - c. delivery or furnishing of non-conforming Goods and Special Services.
2. Buyer may terminate Seller's right to perform the Contract for cause by declaring a breach should Seller fail to comply with any material provision of the Contract Documents. Upon termination, Buyer shall be entitled to all remedies provided by Laws and Regulations. Buyer shall compensate Seller for work completed or delivered.
    - a. In the event Buyer believes Seller is in breach of its obligations under the Contract, and except as provided in Paragraph 11.04.B.2.b, Buyer shall provide Seller with reasonably prompt written notice setting forth in sufficient detail the reasons for declaring that it believes a breach has occurred. Seller shall have seven days from receipt of the written notice declaring the breach (or such longer period of time as Buyer may grant in writing) within which to cure or to proceed diligently to cure such alleged breach.
    - b. If and to the extent that Seller has provided a performance bond under the provisions of Paragraph 4.01, the notice and cure procedures of that bond, if any, shall supersede the notice and cure procedures of Paragraph 11.04.B.2.a.

ARTICLE 12 - LICENSES AND FEES

12.1 Intellectual Property and License Fees

- A. Unless specifically stated elsewhere in the Contract Documents, Seller is not transferring any intellectual property rights, patent rights, or licenses for the Goods delivered. However, in the event the Seller is manufacturing to Buyer's design, Buyer retains all intellectual property rights in such design.

- B. Seller shall pay all license fees and royalties and assume all costs incident to the use or the furnishing of the Goods, unless specified otherwise by the Contract Documents.

12.2 Seller's Infringement

- A. Subject to Paragraph 12.01.A, Seller shall indemnify and hold harmless Buyer, Engineer and their officers, directors, members, partners, employees, agents, consultants, contractors, and subcontractors from and against ~~all actual claims, verifiable and directly related costs, losses, damages, and judgments (including but not limited to all reasonable attorney fees and charges of engineers, architects, attorneys and other professionals and all court or arbitration or other dispute resolution costs)~~ arising out of or relating to any infringement or alleged infringement of any United States or foreign patent or copyright by any of the Goods as delivered hereunder.
- B. In the event of suit or threat of suit for intellectual property infringement, Buyer will promptly notify Seller of receiving notice thereof.
- C. Seller shall promptly defend the claim or suit, including negotiating a settlement. Seller shall have control over such claim or suit, provided that Seller agrees to bear all expenses and to satisfy any adverse judgment thereof.
  1. If Seller fails to defend such suit or claim after written notice by Buyer, Seller will be bound in any subsequent suit or claim against Seller by Buyer by any factual determination in the prior suit or claim.
  2. If Buyer fails to provide Seller the opportunity to defend such suit or claim after written notice by Seller, Buyer shall be barred from any remedy against Seller for such suit or claim.
- D. If a determination is made that Seller has infringed upon intellectual property rights of another, Seller may obtain the necessary licenses for Buyer's benefit, or replace the Goods and provide related design and construction as necessary to avoid the infringement at Seller's own expense.

12.3 Buyer's Infringement

- A. Buyer shall indemnify and hold harmless Seller, and its officers, directors, partners, employees, agents, consultants, contractors, and subcontractors from and against ~~all actual claims, directly related and verifiable costs, losses, damages, and judgments (including but not limited to all reasonable attorney fees and charges of engineers, architects, attorneys and other professionals and all court or arbitration or other dispute~~

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~~resolution costs~~) arising out of or relating to any infringement or alleged infringement of any United States or foreign patent or copyright caused by Seller's compliance with Buyer's design of the Goods or Buyer's use of the Goods in combination with other materials or equipment in any process (unless intent of such use was known to Seller and Seller had reason to know such infringement would result).

B. In the event of suit or threat of suit for intellectual property infringement, Seller must after receiving notice thereof promptly notify Buyer.

C. Upon written notice from Seller, Buyer shall be given the opportunity to defend the claim or suit, including negotiating a settlement. Buyer shall have control over such claim or suit, provided that Buyer agrees to bear all expenses and to satisfy any adverse judgment thereof.

1. If Buyer fails to defend such suit or claim after written notice by Seller, Buyer will be bound in any subsequent suit or claim against Buyer by Seller by any factual determination in the prior suit or claim.

2. If Seller fails to provide Buyer the opportunity to defend such suit or claim after written notice by Buyer, Seller shall be barred from any remedy against Buyer for such suit or claim.

#### 12.4 Reuse of Documents

A. Neither Seller nor any other person furnishing any of the Goods and Special Services under a direct or indirect contract with Seller shall: (1) acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or its consultants, including electronic media versions; or (2) reuse any of such Drawings, Specifications, other documents, or copies thereof on any other project without written consent of Buyer and Engineer and specific written verification or adaptation by Engineer. This prohibition will survive termination or completion of the Contract. Nothing herein shall preclude Seller from retaining copies of the Contract Documents for record purposes.

#### 12.5 Electronic Data

A. Unless otherwise stated, copies of data furnished by Buyer or Engineer to Seller, or by Seller to Buyer or Engineer that may be relied upon are limited to the printed copies (also known as hard copies). Files in electronic media format of text, data, graphics, or other types are furnished only for the convenience of the receiving party. Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.

B. Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures within 60 days, after which the receiving party shall be deemed to have accepted the data thus transferred. The transferring party will correct any errors detected within the 60-day acceptance period.

C. When transferring documents in electronic media format, the transferring party makes no representations as to long term compatibility, usability, or readability of documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used by the data's creator.

### ARTICLE 13 - DISPUTE RESOLUTION

#### 13.1 Dispute Resolution Method

A. Either Buyer or Seller may initiate the mediation of any Claim decided in writing by Engineer under Paragraph 9.06.B or 9.06.C before such decision becomes final and binding. The mediation will be governed by the Construction Industry Mediation Rules of the American Arbitration Association in effect as of the Effective Date of the Agreement. The request for mediation shall be submitted in writing to the American Arbitration Association and the other party to the Contract. Timely submission of the request shall stay the Engineer's decision from becoming final and binding. The venue for any mediation proceeding shall be in an agreed upon location in Kane County, IL.

B. Buyer and Seller shall participate in the mediation process in good faith. The process shall be concluded within 60 days of filing of the request. The date of termination of the mediation shall be determined by application of the mediation rules referenced above.

C. If the mediation process does not result in resolution of the Claim, then Engineer's written decision under Paragraph 9.06.B or a denial pursuant to Paragraph 9.06.C shall become final and binding 30 days after termination of the mediation unless, within that time period, Buyer or Seller:

1. elects in writing to invoke any dispute resolution process provided for in Article 13, or

2. agrees with the other party to submit the Claim to another dispute resolution process, or

3. if no dispute resolution process has been provided for in Article 13, delivers to the other party written notice of the intent to submit the Claim to a court in Kane County Illinois, and within 60 days of the termination of the mediation institutes such formal proceeding.

### ARTICLE 14- MISCELLANEOUS

#### 14.1 Giving Notice

A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if: 1) delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or 2) if delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

#### 14.2 Controlling Law

A. This Contract is to be governed by the law of the state in which the Point of Destination is located.

B. In the case of any conflict between the express terms of this Contract and the Uniform Commercial Code, as adopted in the state whose law governs, it is the intent of the parties that the express terms of this Contract shall apply.

#### 14.3 Computation of Time

A. When any period of time is referred to in the Contract Documents by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day shall be omitted from the computation.

#### 14.4 Cumulative Remedies

A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract Documents, and the provisions of this paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

#### 14.5 Survival of Obligations

A. All representations, indemnifications, warranties and guarantees made in, required by, or given in accordance with the Contract Documents, as well as all continuing obligations indicated in the Contract Documents, will survive final payment, completion, and acceptance of the Goods and Special Services and termination or completion of the Agreement.

#### 14.6 Entire Agreement

A. Buyer and Seller agree that this Agreement is the complete and final agreement between them, and supersedes all prior negotiations, representations, or agreements, either written or oral. This Agreement may not be altered, modified, or amended except in writing signed by an authorized representative of both parties

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## 9.2 Clarifications and Interpretations

A. Engineer will issue with reasonable promptness such written clarifications or interpretations of the Contract Documents as Engineer may determine necessary, which shall be consistent with or reasonably inferable from the overall intent of the Contract Documents. Such written clarifications and interpretations will be binding on Buyer and Seller, as mutually agreed. If either Buyer or Seller believes that a written clarification or interpretation justifies an adjustment in the Contract Price or Contract Times, either may make a Claim therefor.

## 9.3 Authorized Variations

A. Engineer may authorize minor deviations or variations in the Contract Documents by: 1) written approval of specific variations set forth in Shop Drawings when Seller has duly noted such variations as required in Paragraph 5.06.C.4, or 2) a Field Order.

## 9.4 Rejecting Non-Conforming Goods and Special Services

A. Engineer will have the authority to disapprove or reject Goods and Special Services that Engineer believes to be non-conforming. Engineer will also have authority to require special inspection or testing of the Goods or Special Services as provided in Paragraph 8.01 whether or not the Goods are fabricated or installed, or the Special Services are completed.

## 9.5 Decisions on Requirements of Contract Documents

A. Engineer will be the initial interpreter of the Contract Documents and judge of the acceptability of the Goods and Special Services. Claims, disputes and other matters relating to the acceptability of the Goods and Special Services or the interpretation of the requirements of the Contract Documents pertaining to Seller's performance will be referred initially to Engineer in writing with a request for a formal decision in accordance with this paragraph.

B. When functioning as interpreter and judge under this Paragraph 9.05, Engineer will not show partiality to Buyer or Seller and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity. The rendering of a decision by Engineer pursuant to this Paragraph 9.05 with respect to any such Claim, dispute, or other matter (except any which have been waived by the making or acceptance of final payment as provided in Paragraph 10.07) will be a condition precedent to any exercise by Buyer or Seller of such rights or remedies as either may otherwise have under the Contract Documents or by Laws or Regulations in respect of any such Claim, dispute, or other matter.

## 9.6 Claims and Disputes

A. Notice: Written notice of each Claim relating to the acceptability of the Goods and Special Services or the interpretation of the requirements of the Contract Documents pertaining to either party's performance shall be delivered by the claimant to Engineer and the other party to the Agreement within 15 days after the occurrence of the event giving rise thereto, and written supporting data shall be submitted to Engineer and the other party within 45 days after such occurrence unless Engineer allows an additional period of time to ascertain more accurate data.

B. Engineer's Decision: Engineer will review each such Claim and render a decision in writing within 30 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any.

C. If Engineer does not render a formal written decision on a Claim within the time stated in Paragraph 9.06.B., Engineer shall be deemed to have issued a decision denying the Claim in its entirety 31 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any.

D. Engineer's written decision on such Claim or a decision denying the Claim in its entirety that is deemed to have been issued pursuant to Paragraph 9.06.C, will be final and binding upon Buyer and Seller 30 days after it is issued unless within 30 days of issuance Buyer or Seller appeals Engineer's decision by initiating the mediation of such

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## Contract 23-03 Business Park III Substation Control House/Switchgear Procurement

## Bid Review Questions for Meyers Controlled Power, LLC (MCP)

Question	Meyers Controlled Power, LLC Response	4/26/2023 Discussion	Geneva Response	MCP Response	5/3/2023 Status	Myers Response 05/15
1. MCP Progress Payments show all payment due prior to Acceptance of the building on the Site. This is not acceptable. Confirm that final 10% being paid after final acceptance is acceptable to MCP.	We will agree to 5% retainage until acceptance, which shall not exceed 90 days after delivery.	Geneva is requesting 10% but is amenable to 90 days. MCP will review and respond if 10% is acceptable	5% is 'walk away' from the contract money for MCP; the holdback should be closer to its profit margin in order for there to be an incentive to comply.	We agree	Has been agreed to 10% at acceptance not to exceed 90 days after delivery. RESOLVED	
2. Payment of Net 30 is not acceptable. Due to requirement of Council approval on payments Geneva requires additional time. Confirm that payment timing in the Terms and Conditions Article 10 is acceptable.	N45 after date of invoice. To also clarify this clause, "samples" shall be redlined. <del>In addition, said 45-day period may be extended for so long as is necessary (but in no event more than 60 days) for Buyer to examine the bill of sale and other documentation submitted therewith.</del>	Geneva would prefer 60 days due to Engineering review and City Approval. MCP to review and respond.	I recommend 45 days from receipt of invoice and testing of the equipment as a compromise.	N60 days acceptable; however, the first two progress payment milestones will change to 20% each; please confirm acceptance.	Geneva would prefer For N45 Payment terms, the progress payment schedule to be adjusted as follows:  10% Submission of Submittals 10% Upon receipt of Submittal Approvals 25% Release for Purchasing 25% Release for Manufacturing 20% FAT 10% Acceptance not to exceed 90 days after delivery MCP TO RESPOND	Agree
3. Data Sheets Provided in Original documents to be submitted back with bid with Vendor column filled out. These are missing. Please fill out and provide.	<b>See the attached data shts. Per your request</b>	Data sheet have been received, there are a still some blanks. Verify the MCP is agreeable with data sheet information when left blank, or provide revised data sheet.	No comment	Phil Walleck	Updated Data sheet have been supplied See additional question at end on Data sheet. RESOLVED	
4. Clarification states that Price is F.O.B. Factory. Clarification is required. Verify that this is only stating that Shipping prices are estimates only, and that Ownership and responsibility of equipment still does not change from Seller to Buyer until the building	Yes ownership does not transfer to buyer until swgr. delivered and offloaded	No further comment	No comment	Agreed	RESOLVED	

<p>has been installed on the foundations as is requested in the contract documents.</p>						
<p>5. Article 9 Part 9.1.2 MCP struct out “Seller has visited the Point of Destination and become familiar with and is satisfied as to the local conditions that may affect cost, progress or the furnishing if the Goods and Special Services” but did not add any additional text to finish the sentence. Please provide update</p>	<p>Seller shall provide a written change order.</p>	<p>Jim Chaggaris will go to site and take pictures to verify. Phil to provide site layout to MCP. MCP to review and respond.</p>	<p>No comment</p>	<p>MPP received the photos and only asks that the following be included to ensure the future work doesn’t result in issues that make it difficult for access.</p> <p>“confirm in writing that it will be clear and unfettered access to the pad and the gate on the left needs to be wide enough for the load.”</p>	<p>Geneva will confirm access. RESOLVED</p>	
<p>6. Article 4 Part 4.2.B.3 has been removed. Verify MCP is acceptable to the following replacement wording : “Claims for damages because of bodily injury, sickness, disease, or death of any person employed by Buyer.</p>	<p>Actual claims for verifiable damages because of bodily injury, sickness, disease or death of any person employed by Buyer, directly and solely caused by Seller.</p>	<p>Geneva will have this reviewed by legal and respond.</p>	<p>The proximate cause of an injury may be contributory on the part of MCP equipment and not “directly and solely caused by Seller.” For that reason, its language is not acceptable.</p>		<p>Geneva needs to stay with wording as is due to proximity issue. MCP TO RESPOND</p>	<p>Please elaborate; provide an example. An unreasonably dangerous condition need not be the sole proximate cause of an injury to an employee of the City, but it must be a cause. Byrne v. SCM Corp. 182 Ill. App. 3d 521 (1989) Consequently, MCP’s language that it has liability only if the injury is “directly and solely” responsible is contrary to the above principle of law. The language should not be altered.</p>
<p>7. Article 4 Part 4.2.B.4.ii has been removed. Verify MCP is acceptable to the following replacement wording : “ or, by <del>any other</del> persons employed by or an agent of the Buyer”</p>	<p>Such claims for damages will need to be actual, directly related and verifiable</p>	<p>Geneva to review language removing “any other” and added text provided by MCP.</p>	<p>This Article relates to insurance coverage that MCP would purchase to cover the listed claims. It would be up to the insurance carrier to determine if the claim is “actual, directly related and verifiable.” If not, the claim will be denied by the insurance company and the issue may be ended or proceed with some other legal remedy</p>		<p>Insurance company should decide if actual and this should not be in the contract. Need to stay with wording as is. MCP TO RESPOND</p>	<p>There can be no other legal remedy if denied by insurance carrier. Where in the proposed contract does it state that if Seller provides insurance policies claims for damages are barred if the insurance carrier denies a claim? In fact, Paragraph 4.2 I states to the contrary: “Buyer does not represent that the insurance coverages and limits established in this Contract will necessarily be adequate to protect the Seller.” Wording should not be altered.</p>

<p>8. Article 5 Part 5.9 has been edited by MCP. Verify that in place of those changes the following language be use: “To the fullest extent permitted by law, the Seller shall indemnify, defend, and hold harmless the Buyer and Engineer, and their respective officers, directors (or elected and appointed officers in the case of Buyer), members, stockholders, affiliated companies, employees, contractors, consultants, vendors, agents, and representatives from and against any and all liabilities, damages, losses, claims, demands, actions, costs, and expenses, including without limitation attorneys’ fees and expenses, of any nature whatsoever with respect to Seller’s obligations under the Contract documents and arising out of or relating to (1) the acts or omissions of the Seller, any Subcontractor, any sub-subcontractor, and any material supplier or any of their employees, contractors, agents, or representatives or anyone for whose acts they are liable; or</p>	<p>We cannot accept this language.</p>	<p>Geneva requires indemnity MCP to suggest wording for Geneva to review.</p>	<p>Here is the main issue. Liability insurance will probably satisfy most claims. One of the main purposes of the indemnification provision is to have the Seller agree to defend the City in any claims actions, whether covered by insurance or not.</p>	<p>(a) Supplier shall indemnify, defend and hold harmless City of Geneva, its officers, directors, employees, and agents, from and against <del>any and all</del> verifiable claims, losses, liens, demands, reasonable attorneys’ fees, damages, liabilities, costs, expenses, obligations, causes of action, or suits, (collectively “Claims”) to the extent that such Claims are caused by, arise out of, or are connected in any way with (i) any breach by the Supplier of the terms of this Agreement, (ii) bodily injury or death of any person or damage to real and/or tangible personal property arising from the negligence or willful misconduct of Supplier, its employees, agents and subcontractors, or (iii) <del>any</del> verifiable claim that any Materials or Services supplied hereunder (or the use thereof) infringes (whether directly, contributorily, by inducement or otherwise), misappropriates or violates any copyright, patent, trademark, trade secret or other intellectual property right of a third-party. Without limiting the forgoing, if an injunction against City of Geneva’s use of the Materials or Services or any part thereof results from a third party claim of infringement (or, if City of Geneva reasonably believes such an injunction is likely), Supplier shall promptly, at its sole expense (and in addition to Supplier’s other obligations hereunder) obtain for City of Geneva the right to continue using the Materials or Services, or repair, modify or re-perform the Materials or Services so they become non-infringing but functionally equivalent (as determined by City of Geneva).</p> <p>(b) Each party shall indemnify defend and hold harmless the other party and its respective officers, directors, employees, and agents, from</p>	<p>Geneva to review text <b>GENAVA TO RESPOND</b></p>	<p>Our claims “yes”. Other claims “no”.</p>
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<p>(2) any default of the Seller hereunder or under the other Contract Documents”</p>				<p>any Claims by third parties with respect to damage to tangible property, personal injury or death caused by such party's negligence or willful misconduct.</p> <p>(c) Notwithstanding anything to the contrary set forth herein, (i) a party entitled to indemnification under this Agreement (an “Indemnitee”) may participate, at its own expense, in any defense and settlement directly or through counsel of its choice, and (ii) the indemnifying party will not settle or compromise any Claim on terms that would diminish the rights provided to the Indemnitee or increase the obligations assumed by the Indemnitee under this Agreement, without the prior written consent of the Indemnitee</p> <p>IN NO EVENT SHALL EITHER PARTY BE LIABLE TO THE OTHER PARTY IN CONNECTION WITH THIS AGREEMENT OR THE ARRANGEMENTS CONTEMPLATED HEREBY FOR ANY INDIRECT, INCIDENTAL, CONSEQUENTIAL, PUNITIVE, SPECIAL OR OTHER SIMILAR DAMAGES, WHETHER OR NOT DUE TO THE FAULT OR NEGLIGENCE OF A PARTY, AND REGARDLESS OF WHETHER THE OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES OR LOSSES. THE LIMITATIONS OF LIABILITY ABOVE SHALL APPLY TO ANY DAMAGES, HOWEVER CAUSED AND REGARDLESS OF THE THEORY OF LIABILITY, WHETHER DERIVED FROM CONTRACT, TORT (INCLUDING, BUT NOT LIMITED TO, NEGLIGENCE), OR ANY OTHER LEGAL THEORY, EVEN IF A PARTY HAS BEEN ADVISED OF THE</p>		
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				POSSIBILITY OF SUCH DAMAGES AND REGARDLESS OF WHETHER THE LIMITED REMEDIES AVAILABLE UNDER THIS AGREEMENT FAIL OF THEIR ESSENTIAL PURPOSE. NOTWITHSTANDING THE FOREGOING, THE FOREGOING LIMITATIONS OF LIABILITY SHALL NOT APPLY TO A PARTY'S LIABILITY ARISING FROM ANY CLAIMS UNDER SUBSECTIONS 12(A)-(C); FOR PROPERTY DAMAGE, INJURY OR DEATH WHICH RESULTS FROM THE SERVICES; OR FROM ANY BREACH OF SECTION 13 (CONFIDENTIALITY).		
9. Article 8 Part 8.1.B.2 MCP changed wording to state "Buyer shall make goods available with unfettered access to Seller at dock" if defective goods are at the installation site, Seller shall be required to pick up goods there. Verify this is acceptable.	Access to goods shall be unfettered. Seller will not uninstall or dismantle equipment. Defective component shall be at an unfettered location for ease of pickup.	MCP's concern is access, Geneva's concern is MCP transfer location. MCP to review if access is acceptable, transfer point will be at substation location.	No comment	MCP will review	MCP will deliver to pad, Geneva will confirm access. RESOLVED	
10. Article 8 Parts 8.1.D and 8.1.E MCP deleted the word "losses" this word needs to remain. Verify that this is acceptable.	We cannot accept this language	MCP is concerned about business losses (i.e. outage causes service losses and associated costs) Geneva to review language and need for the term losses.	If a switch fails, are we able to re-route to another substation?	We will await your review	Geneva is acceptable to removing losses RESOLVED	
11. The changes to Article 8 part 8.3A are unacceptable. The warranty period should commence after the Goods are installed, tested and approved by the Engineer. The suggested new language should be: "...a period of one (1) year after the Goods	We cannot accept this language.	MCP to review language in regard to warranty from acceptance.	I will wait to see MCP's response, I stand on our original position	MCP cannot control testing and installation; we can include the following after documents:  "...a period of one (1) year after the Goods are installed, tested and approved by Engineer as complying with the Contract documents; not to	Geneva is acceptable to adding additional verbiage. RESOLVED	

are installed, tested and approved by Engineer as complying with the Contract documents." Verify that this is acceptable.				exceed 90 days after delivery.		
12. Article 10 Part 10.1.A.2 was added by MCP to say that subsequent payments would be negotiated between Buyer and Seller. This is not acceptable. These need to be at set times at the time the contract is signed. See item 1 above for suggested timing.	Application for payments shall coincide with the progress payment schedule included in Seller's proposal.	Geneva is amenable to progress payments once final payment percentage has been finalized. Progress payment terms to be complete prior to contract finalization not negotiated after.	No comment	For N60 Payment terms, the progress payment schedule to be adjusted as follows:  20% Submission of Submittals 20% Upon receipt of Submittal Approvals 25% Release for Purchasing 25% Release for Manufacturing 10% Shipping	Geneva would prefer For N45 Payment terms, the progress payment schedule to be adjusted as follows:  10% Submission of Submittals 10% Upon receipt of Submittal Approvals 25% Release for Purchasing 25% Release for Manufacturing 20% FAT 10% Acceptance not to exceed 90 days after delivery <b>MCP TO RESPOND</b>	Agree
13. Article 10 Part 10.2.A.1 change to documents that are required. This needs to be decided prior to contract. Suggested required documents would be Waiver of liens and any instruction and warranty documents that are tied to the payment.	To clarify further, applications for payment shall not be based on Engineers recommended amount. It should be based on the invoice amount, considering everything invoiced for is correct. Not very clear on "documentations required" as relates to this clause. We will review further and respond.	MCP and Geneva agree on payment per progress payment schedule. Review by Engineer is to ensure proper invoice was sent. MCP will review document requirements" and how invoices are reviewed.	No comment	MCP request Article 10 Part 10.2 title of section to read:  "Review of Applications for Final Progress Payment"  The remaining original language in this clause is acceptable.	Geneva requires Engineer review of Application to verify correct amount is being submitted for all applications not just final. Need to keep title as is. <b>MCP TO RESPOND</b>	Agree
14. Article 10 Part 10.6A addition of back charges or liquidated damages is not acceptable. If these exist they need to be determined prior to final payment and deducted from that payment. Verify MCP agrees to this.	We do not accept this language. Seller does not accept set off's. However, if there is a dispute as to how much is owed prior to the final payment, this shall be discussed and mutually agreed upon between both Parties at such time.	<b>MCP is concerned with "set off" language.</b> <b>Geneva is concerned with LD language. Both to review and respond.</b>	Yes	MCP will amend cap on Liquidated Damages to 3.5% contract price and accept the Set Off Language as originally written.	Geneva Requires 10% <b>MCP TO RESPOND</b>	5% LD's (Best and Final). Okay as is, on condition Purchase Order is received no later than June 15, 2023.
15. Article 11 Part 11.4.B.2 addition of "buyer shall compensate Seller for work completed or delivered is not acceptable. If	Defective work is covered under warranty during the warranty period.	Geneva and MCP to re-review and respond.	<b>Your margin note is accurate. If the City cancels the contract during the course of manufacturing without fault by MCP, the City should pay for MCP damages. However, if</b>	MCP accepts language as originally written.	<b>RESOLVED</b>	

switchgear is defective even if it is delivered Buyer should not pay for the defective work.						
16. Article 12 Part 12.2.A need to reinsert losses.	We cannot accept this language.	MCP is concerned about business losses (i.e. outage causes service losses and associated costs) Geneva to review language and need for the term losses.		We will await your review	Geneva is acceptable to removing losses RESOLVED	
17. Article 1 part 1.1.A.10 Adding "Actual Legal" does not change anything as this is a definition for the document and could cause issues other places where Claim is called out. Verify it is acceptable to remove "Actual Legal"	The very existence of a "claim" does not automate guilt on the part of the Party who is being claimed against. The term "claim" is vague as it does not demonstrate that the claim is directly related to a cause of harm or damage by the Seller. An actual legal claim filed in the court of law is a claim that shall be applicable and responded to as directly related to the party the claim is being asserted for their portion of the Work and or services provided.	MCP to review definition of Claim in Article 1.10 for consistency throughout document.		Article 1 Part 1.1.A.10 – MCP agrees to remove "Actual Legal" but would like the wording to read as follows:  Claim – A legal demand or assertion.....  We are inserting Legal in front of demand	Geneva to review text GENAVA TO RESPOND	
18. MCP's cancellation policy is excessive for cancellation at the Order Entry phase. It states that after the order is received but before any engineering or manufacturing occurs, there is a one-time 5% charge---this is approximately \$60,000. This should be changed to \$1,000.	We will review further and respond.	MCP is still reviewing.	No comment	See attached Seller's updated Cancellation Policy.	No updated Cancellation Policy was provided MCP TO PROVIDE FOR REVIEW	See attached
19. Liquidated Damages was changed from \$750/day to \$500 per day per MCP markup. This should stay as \$750/day. Verify that this is acceptable.	\$750/day is acceptable capped at 3% of the contract selling price.	\$750 is agreed upon	No comment	Confirmed	Agree on \$750/day RESOLVED	

20. MCP has noted that Liquidated damages is capped at 3%. Suggest this change to 10%. Verify that this is acceptable.	This is not acceptable.	MCP to review.	No comment	MCP will amend cap on Liquidated Damages to 3.5% contract price and accept the Set Off Language as originally written.	Geneva Requires 10% MCP TO RESPOND	Same response as #14 above
21. Article 6 Part 6.2.D MCP has added that there will be "...Unfettered access to Seller..." Verify that MCP understands that the switchgear/building will be inside a substation that is locked. MCP will have access for delivery, but this delivery must be coordinated with Buyer to allow for this access when equipment arrives. Verify that this is acceptable.	Unfettered access referring to the route from Seller to Buyer's jobsite location. Road closures, damages to the road leading to Buyer's location, low wires, trees, etc. shall be the responsibility of the Buyer; not the Seller.	MCP to further review with site photos and Sub layout drawing being provided and respond.	No comment	MCP to provide	MCP will deliver to pad, Geneva will confirm access. RESOLVED	
22.		New: Building 15ft width was noted in bid. Contract requested 17ft for working space. MCP to review options to resolve working space concerns.		Phil to advise suggest move one of the fold down tables to the battery work space so it will not be in the space in front of the draw out breakers. and move the 2ns fold down table in front of the relay aux cubicle this cubicle. The relay aux section does not have any draw out breakers that would cause clearance issues.	Geneva wants to keep 17 ft width. MCP to provide what the additional cost would be now for a change order after award for increasing from 15 to 17 feet. MCP TO RESPOND	Adder is \$106,269.0
23.					NEW: Data sheet shown only 3 VTs instead of 6 requested. Need 3 for bus and 3 for high side of main. MCP TO RESPOND	To add one set of PT's in a PT pullout \$9538.00

24.					<b>NEW:</b> Data sheet shows ACS NTX-20 Controller by others instead of 1 as requested. Need ACS NTX-20 controller provided in contract. <b>MCP TO RESPOND</b>	<b>Not enough information at time of bid. Rough estimated is \$5000.00; not enough information to fully monetize this request.</b>
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# STANDARD GENERAL CONDITIONS FOR PROCUREMENT CONTRACTS

## ARTICLE 1- DEFINITIONS AND TERMINOLOGY

### *1.01 Defined Terms*

A. Whenever used in the Bidding Requirements or Contract Documents and printed with initial capital letters, the terms listed below will have the meanings indicated which are applicable to the singular or plural thereof. In addition to terms specifically defined, terms with initial capital letters in the Contract Documents include references to identified articles and paragraphs, and the titles of other documents or forms.

1. Addenda-Written or graphic instruments issued prior to the opening of Bids which clarify, correct, or change the Bidding Requirements or the proposed Contract Documents.

2. Agreement-The written instrument signed by both Buyer and Seller covering the Goods and Special Services and which lists the Contract Documents in existence on the Effective Date of the Agreement.

3. Application for Payment-The form acceptable to Buyer which is used by Seller in requesting progress and final payments and which is accompanied by such supporting documentation as is required by the Contract Documents.

4. Bid- The offer or proposal of a Seller submitted on the prescribed form setting forth the prices for the Goods and Special Services to be provided.

5. Bidder-The individual or entity that submits a Bid directly to Buyer.

6. Bidding Documents-The Bidding Requirements and the proposed Contract Documents (including all Addenda).

7. Bidding Requirements-The advertisement or invitation to bid, Instructions to Bidders, Bid security of acceptable form, if any, and Bid Form with any supplements.

8. Buyer- individual or entity purchasing the Goods and Special Services. The term "Buyer" is used to be consistent with the Uniform Commercial Code (UCC).

9. Change Order-A document which is signed by Seller and Buyer and authorizes an addition, deletion, or revision to the Contract Documents or an adjustment in the Contract Price or the Contract Times, issued on or after the Effective Date of the Agreement. Change Orders may be the result of mutual agreement by Buyer and Seller, or of resolution of a Claim.

10. Claim-A demand or assertion by Buyer or Seller seeking an adjustment of Contract Price or Contract Times, or both, or other relief with respect to the terms of the Contract. A demand for money or services by a third party is not a Claim.

11. Contract-The entire and integrated written agreement between Buyer and Seller concerning the Goods and Special Services. The Contract supersedes prior negotiations, representations, or agreements, whether written or oral.

12. Contract Documents-Those items so designated in the Agreement. Shop Drawings and other Seller submittals are not Contract Documents, even if accepted, reviewed, or approved by Engineer or Buyer.

13. Contract Price-The moneys payable by Buyer to Seller for furnishing the Goods and Special Services in accordance with the Contract Documents as stated in the Agreement.

14. Contract Times-The times stated in the Agreement by which the Goods must be delivered and Special Services must be furnished.

15. Drawings-That part of the Contract Documents prepared or approved by Engineer which graphically shows the scope, extent, and character of the Goods and Special Services to be furnished by Seller. Shop Drawings and other Seller submittals are not Drawings as so defined.

16. Effective Date of the Agreement-The date indicated in the Agreement on which it becomes effective, but if no such date is indicated, it means the date on which the Agreement is signed and delivered by the last of the two parties to sign and deliver.

17. Engineer-The individual or entity designated as such in the Agreement.

18. Field Order-A written order issued by Engineer which requires minor changes in the Goods or Special Services but which does not involve a change in the Contract Price or Contract Times.

19. General Requirements-Sections of Division 01 of the Specifications. The General Requirements pertain to all sections of the Specifications.

20. Goods-The tangible and movable personal property that is described in the Contract Documents, regardless of whether the property is to be later attached to realty.

21. Goods and Special Services-The full scope of materials, equipment, other items, and services to be furnished by Seller, including Goods, as defined herein, and Special Services, if any, as defined herein. This term refers to both the Goods and the Special Services, or to either the Goods or the Special Services, and to any portion of the Goods or the Special Services, as the context requires.

22. Laws and Regulations; Laws or Regulations-Any and all applicable laws, rules, regulations, ordinances, codes, and orders of any and all governmental bodies, agencies, authorities, and courts having jurisdiction.

23. Milestone-A principal event specified in the Contract Documents relating to an intermediate completion date or time prior to the Contract Times.

24. Notice of Award-The written notice by Buyer to the Successful Bidder stating that upon timely compliance by the Successful Bidder with the conditions precedent listed therein, Buyer will sign and deliver the Agreement.

25. Notice to Proceed-A written notice given by Buyer to Seller fixing the date on which the Contract Times commence to run and on which Seller shall start to perform under the Contract.

26. Point of Destination-The specific address of the location where delivery of the Goods shall be made, as stated in the Agreement.

27. Project-The total undertaking of which the Goods and Special Services may be the whole, or only a part.

28. Project Manual-The documentary information prepared for bidding and furnishing the Goods and Special Services. A listing of the contents of the Project Manual is contained in its table of contents.

29. Samples-Physical examples of materials, equipment, or workmanship that are representative of some portion of the Goods and Special Services and which establish the standards by which such portion of the Goods and Special Services will be judged.

30. Seller-The individual or entity furnishing the Goods and Special Services.

31. Shop Drawings-All drawings, diagrams, illustrations, schedules, and other data or information which are specifically prepared or assembled by or for Seller and submitted by Seller to illustrate some portion of the Goods and Special Services.

32. Special Services-Services associated with the Goods to be furnished by Seller as required by the Contract Documents.

33. Specifications-That part of the Contract Documents consisting of written requirements for materials, equipment, systems, standards and workmanship as applied to the furnishing of the Goods and Special Services, and certain administrative requirements and procedural matters applicable thereto.

34. Successful Bidder-The Bidder submitting a responsive Bid, to whom Buyer makes an award.

35. Supplementary Conditions-That part of the Contract Documents which amends or supplements these General Conditions.

36. Work Change Directive-A written statement to Seller issued on or after the Effective Date of the Agreement and signed by Buyer ordering an addition, deletion, or other revision in the Contract Documents with respect to the Goods and Special Services. A Work Change Directive will not change the Contract Price or the Contract Times but is evidence that the parties expect that the change ordered or documented by a Work Change Directive will be incorporated in a subsequently issued Change Order following negotiations by the parties as to its effect, if any, on the Contract Price or Contract Times.

### *1.02 Terminology*

A. The words and terms discussed in Paragraphs 1.02.B and 1.02.C are not defined, but have the indicated meanings when used in the Bidding Requirements or Contract Documents.

#### B. Intent of Certain Terms or Adjectives:

1. The Contract Documents include the terms "as allowed," "as approved," "as ordered," "as directed" or terms of like effect or import to authorize an exercise of professional judgment by Engineer. In addition, the adjectives "reasonable," "suitable," "acceptable," "proper," "satisfactory," or adjectives of like effect or import are used to describe an action or determination of Engineer as to the Goods and Special Services. It is intended that such exercise of professional judgment,

action, or determination will be commercially reasonable and will be solely to evaluate, in general, the Goods and Special Services for compliance with the requirements of and information in the Contract Documents and conformance with the design concept of the completed Project as a functioning whole as shown or indicated in the Contract Documents (unless there is a specific statement indicating otherwise). The use of any such term or adjective shall not be effective to assign to Engineer any duty or authority to supervise or direct the furnishing of Goods or Special Services or any duty or authority to undertake responsibility contrary to any other provision of the Contract Documents.

2. The word "non-conforming" when modifying the words "Goods and Special Services," "Goods," or "Special Services," refers to Goods and Special Services that fail to conform to the Contract Documents.

3. The word "receipt" when referring to the Goods, shall mean the physical taking and possession by the Buyer under the conditions specified in Paragraph 8.01.B.3.

4. The word "day" means a calendar day of 24 hours measured from midnight to the next midnight.

5. The word "furnish," when used in connection with the Goods and Special Services shall mean to supply and deliver said Goods to the Point of Destination (or some other specified location) and to perform said Special Services fully, all in accordance with the Contract Documents.

C. Unless stated otherwise in the Contract Documents, words or phrases that have a well-known technical or construction industry or trade meaning are used in the Contract Documents in accordance with such recognized meaning.

## **ARTICLE 2 - PRELIMINARY MATTERS**

### ***2.01 Delivery of Bonds***

A. When Seller delivers the executed counterparts of the Agreement to Buyer, Seller also shall deliver such bonds as Seller may be required to furnish.

### ***2.02 Evidence of Insurance***

A. When Seller delivers the executed counterparts of the Agreement to Buyer, Seller shall deliver to Buyer, with copies to each additional insured identified by name in Paragraph 4.2.C.1, certificates of insurance (and other evidence of insurance which either of them or any additional insured may reasonably request) which Seller is required to purchase and maintain in accordance with Article 4.

### ***2.03 Commencement of Contract Times; Notice to Proceed***

A. The Contract Times will commence to run on the thirtieth day after the Effective Date of the Agreement or, if a Notice to Proceed is given, on the day indicated in the Notice to Proceed. A Notice to Proceed may be given at any time within 30 days after the Effective Date of the Agreement. In no event will the Contract Times commence to run later than the sixtieth day after the day of Bid opening or the thirtieth day after the Effective Date of the Agreement, whichever date is earlier.

### ***2.04 Designated Representatives***

A. Buyer and Seller shall each designate its representative at the time the Agreement is signed. Each representative shall have full authority to act on behalf of and make binding decisions in any matter arising out of or relating to the Contract.

### ***2.05 Progress Schedule***

A. Within 15 days after the Contract Times start to run, Seller shall submit to Buyer and Engineer an acceptable progress schedule of activities, including at a minimum, Shop Drawing and Sample submittals, tests, and deliveries as required by the Contract Documents. No progress payment will be made to Seller until an acceptable schedule is submitted to Buyer and Engineer.

B. The progress schedule will be acceptable to Buyer and Engineer if it provides an orderly progression of the submittals, tests, and deliveries to completion within the specified Milestones and the

Contract Times. Such acceptance will not impose on Buyer or Engineer responsibility for the progress schedule, for sequencing, scheduling, or progress of the work nor interfere with or relieve Seller from Seller's full responsibility therefor. Such acceptance shall not be deemed to acknowledge the reasonableness and attainability of the schedule.

### ***2.07 Preliminary Conference***

A. Within 20 days after the Contract Times start to run, a conference attended by Seller, Buyer, Engineer and others as appropriate will be held to establish a working understanding among the parties as to the Goods and Special Services and to discuss the schedule referred to in Paragraph 2.06.A, procedures for handling Shop Drawings and other submittals, processing Applications for Payment, and maintaining required records.

### ***2.08 Safety***

A. Buyer and Seller shall comply with all applicable Laws and Regulations relating to the safety of persons or property, or to the protection of persons or property from damage, injury, or loss. When Seller's personnel, or the personnel of any subcontractor to Seller, are present at the Point of Destination or any work area or site controlled by Buyer, the Seller shall be responsible for the compliance by such personnel with any applicable requirements of Buyer's safety programs that are made known to Seller.

## **ARTICLE 3- CONTRACT DOCUMENTS: INTENT AND AMENDING**

### ***3.01 Intent***

A. The Contract Documents are complementary; what is called for by one is as binding as if called for by all.

B. Any labor, documentation, services, materials, or equipment that may reasonably be inferred from the Contract Documents or from prevailing custom or trade usage as being required to produce or furnish the indicated Goods and Special Services will be provided, whether or not specifically called for, at no additional cost to Buyer.

C. Clarifications and interpretations of, or notifications of minor variations and deviations in, the Contract Documents, will be issued by Engineer as provided in Article 9.

### ***3.02 Standards, Specifications, Codes, Laws and Regulations***

A. Reference to standards, specifications, manuals, or codes of any technical society, organization, or association, or to Laws and Regulations, whether such reference be specific or by implication, shall mean the standard, specification, manual, code, or Laws and Regulations in effect at the time of opening of Bids (or on the Effective Date of the Agreement if there were no Bids), except as may be otherwise specifically stated in the Contract Documents.

B. No provision of any such standard, specification, manual or code, or any instruction of a supplier shall be effective to change the duties or responsibilities of Buyer or Engineer, or any of their subcontractors, consultants, agents, or employees from those set forth in the Contract Documents, nor shall any such provision or instruction be effective to assign to Buyer or Engineer, or any of their consultants, agents, or employees any duty or authority to supervise or direct the performance of Seller's obligations or any duty or authority to undertake responsibility inconsistent with the provisions of the Contract Documents.

### ***3.03 Reporting and Resolving Discrepancies***

#### **A. Reporting Discrepancies:**

1. Seller's Review of Contract Documents Before the Performance of the Contract: Before performance of the Contract, Seller shall carefully study and compare the Contract Documents and check and verify pertinent figures therein and all applicable field measurements. Seller shall promptly report in writing to Engineer any conflict, error, ambiguity, or discrepancy which Seller discovers or has actual knowledge of and shall obtain a written interpretation or clarification from Engineer before proceeding with the furnishing of any Goods and Special Services affected thereby.

2. Seller's Review of Contract Documents During the Performance of the Contract: If, during the performance of the Contract, Seller discovers any conflict, error, ambiguity, or discrepancy within the Contract Documents or between the Contract Documents and any provision of any Law or Regulation applicable to the performance of the Contract, any standard, specification, manual or code, or of any instruction of any Supplier, Seller shall promptly report it to Engineer in writing. Seller shall not proceed with the furnishing of the Goods and Special Services affected thereby until an amendment to or clarification of the Contract Documents has been issued.

3. Seller shall not be liable to Buyer or Engineer for failure to report any conflict, error, ambiguity, or discrepancy in the Contract Documents unless Seller had actual knowledge thereof.

B. Resolving Discrepancies: Except as may be otherwise specifically stated in the Contract Documents, the provisions of the Contract Documents shall take precedence in resolving any conflict, error, ambiguity, or discrepancy between the provisions of the Contract Documents and:

1. the provisions of any standard, specification, manual, code, or instruction (whether or not specifically incorporated by reference in the Contract Documents); or

2. the provisions of any Laws or Regulations applicable to the furnishing of the Goods and Special Services (unless such an interpretation of the provisions of the Contract Documents would result in violation of such Law or Regulation).

#### 3.04 Amending and Clarifying Contract Documents

A. The Contract Documents may be amended to provide for additions, deletions, and revisions to the Goods and Special Services or to modify contractual terms and conditions by a Change Order.

B. Buyer may issue a Work Change Directive providing for additions, deletions, or revisions to the Goods and Special Services, in which case (1) the Contract Price shall be equitably adjusted to account for any reasonable and necessary credits to Buyer for any such deletion, or for costs (including reasonable overhead and profit) incurred by Seller to accommodate such an addition or revision and (2) the Contract Times shall be equitably adjusted to account for any impact on progress and completion of performance. Such adjustments subsequently shall be duly set forth in a Change Order.

C. The requirements of the Contract Documents may be supplemented and minor variations and deviations in the Goods and Special Services may be authorized, by one or more of the following ways:

1. Field Order;
2. Engineer's written interpretation or clarification.

### **ARTICLE 4- BONDS AND INSURANCE**

#### 4.01 Bonds

A. Seller shall furnish to Buyer payment bond, each in an amount at least equal to the Contract Price, as security for the faithful performance and payment of all of Seller's obligations under the Contract Documents. This bond shall remain in effect until 1) one year after the date when final payment becomes due or 2) completion of the correction period specified in Paragraph 8.03, whichever is later, except as provided otherwise by Laws or Regulations or by the Contract Documents. Seller shall also furnish such other bonds as are required by the Contract Documents.

B. Bond shall be in the form prescribed by the Contract Documents except as provided otherwise by Laws or Regulations, and shall be executed by such sureties as are named in the current list of "Companies Holding Certificates of Authority as Acceptable Sureties on Federal Bonds and as Acceptable Reinsuring Companies" as published in Circular 570 (amended) by the Financial Management Service, Surety Bond Branch, U.S. Department of the Treasury. Bond signed by an agent or attorney-in-fact must be accompanied by a certified copy of that individual's authority to bind the surety. The evidence of authority shall show that it is effective on the date the agent or attorney-in-fact signed each bond.

C. If the surety on any bond furnished by Seller is declared bankrupt or becomes insolvent or its right to do business is terminated

in any state where any part of the Project is located or it ceases to meet the requirements of Paragraph 4.01.B, Seller shall promptly notify Buyer and Engineer and shall, within 20 days after the event giving rise to such notification, provide another bond and surety, both of which shall comply with the requirements of Paragraphs 4.01.B and 4.02.

#### 4.02 Insurance

A. *Property Insurance*: Seller shall assume all risk of loss or damage to the Goods prior to acceptance of delivery by Buyer at the point of delivery; and shall purchase and maintain insurance on the Goods during the process of fabrication and while in transit to insure against the perils of fire and extended coverage including "all risk" insurance for physical loss and damage including theft, vandalism and malicious mischief, collapse, water damage and such other perils as may be provided herein and as Seller deems appropriate.

B. *Liability Insurance* Seller shall purchase and maintain such liability and other insurance as is appropriate for the furnishing of Goods and Special Services and as will provide protection from claims set forth below which may arise out of or result from Seller's furnishing of the Goods or Special Services and Seller's other obligations under the Contract Documents, whether the furnishing of Goods or Special Service, or other obligations are to be performed by Seller, any subcontractor or supplier, or by anyone directly or indirectly employed by any of them to furnish the Goods or Special Services, or by anyone for whose acts any of them may be liable:

1. claims under workers' compensation, disability benefits, and other similar employee benefit acts;
2. claims for damages because of bodily injury, occupational sickness or disease, or death of Seller's employees;
3. claims for damages because of bodily injury, sickness or disease, or death of any person other than Seller's employees;
4. claims for damages insured by reasonably available personal injury liability coverage which are sustained: (i) by any person as a result of an offense directly or indirectly related to the employment of such person by Seller, or (ii) by any other person for any other reason;
5. claims for damages, other than to the Goods, because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom; and
6. claims for damages because of bodily injury or death of any person or property damage arising out of the ownership, maintenance or use of any motor vehicle.

C. The policies of insurance so required by this Paragraph 4.02 to be purchased and maintained shall:

1. with respect to insurance required by Paragraphs 4.02.B.3 through 4.02.B.6 inclusive, include as additional insureds (subject to any customary exclusion in respect of professional liability) City of Geneva, Illinois, Stanley Consultants, Inc., their consultants, shall be listed as additional insureds, and include coverage for the respective officers, directors, partners, employees, agents, and other consultants and subcontractors of each and any of all such additional insureds, and the insurance afforded to these additional insureds shall provide primary coverage for all claims covered thereby;
2. include at least the specific coverages and be written for not less than the limits of liability provided below or required by Laws or Regulations, whichever is greater;
3. include completed operations insurance;
4. include contractual liability insurance covering Seller's indemnity obligations under Paragraphs 5.09 and 12.02.
5. contain a provision or endorsement that the coverage afforded will not be canceled, materially changed or renewal refused until at least 30 days prior written notice has been given to Buyer and Seller and to each other additional insured identified in these General Conditions to whom a certificate of insurance has been issued (and the certificates of insurance furnished by Seller pursuant to Paragraph 4.02.E will so provide);
6. remain in effect at least until final payment and at all times thereafter when Seller may be correcting, removing, or replacing nonconforming Goods in accordance with Paragraph 8.03; and
7. with respect to completed operations insurance, and any insurance coverage written on a claims-made basis, remain in effect for at least two years after final payment (and Seller shall furnish Buyer and each other additional insured identified herein, to whom a certificate of insurance has been issued, evidence

satisfactory to Buyer and any such additional insured of continuation of such insurance at final payment and one year thereafter); and

8. with respect to any delegation of professional design services to Seller pursuant to Paragraph 5.10, include professional liability coverage by endorsement or otherwise.

D. The limits of liability for the insurance required by Paragraph 4.02.B shall provide coverage for not less than the following amounts or greater where required by Laws and Regulations:

1. Workers' Compensation, and related coverages under Paragraphs 4.02.B.1 and B.2:

- |   |             |
|---|-------------|
| a. State:                                     | Statutory   |
| b. Applicable Federal (e.g., Longshoreman's): | Statutory   |
| c. Employer's Liability:                      | \$1,000,000 |

2. Seller's General Liability under Paragraphs 4.02.B.3 through B.6 which shall include completed operations and product liability coverages and eliminate the exclusion with respect to property under the care, custody and control of Seller:

- |  |             |
|--|-------------|
| a. General Aggregate   | \$3,000,000 |
| b. Products – Completed Operations Aggregate   | \$3,000,000 |
| c. Personal and Advertising Injury   | \$3,000,000 |
| d. Each Occurrence (Bodily Injury and Property Damage)   | \$3,000,000 |
| e. Property Damage liability insurance will provide Explosion, Collapse, and Underground coverages where applicable. |             |
| f. Excess or Umbrella Liability:   |             |
| 1) General Aggregate   | \$3,000,000 |
| 2) Each Occurrence   | \$3,000,000 |

3. Automobile Liability under Paragraph 4.02.B.6:

- |                             |             |
|-----------------------------|-------------|
| a. Bodily Injury:           |             |
| 1) Each person              | \$2,000,000 |
| 2) Each Accident            | \$2,000,000 |
| b. Property Damage:         |             |
| 1) Each Accident            | \$2,000,000 |
| c. Combined Single Limit of | \$2,000,000 |

E. Seller shall deliver to Buyer, with copies to each additional insured identified in Paragraph 4.02.C.1, certificates of insurance (and other evidence of insurance requested by Buyer or any other additional insured) which Seller is required to purchase and maintain.

F. Failure of Buyer to demand certificates of insurance or other evidence of Seller's full compliance with these insurance requirements or failure of Buyer to identify a deficiency in compliance from the evidence provided shall not be construed as a waiver of Seller's obligation to maintain such insurance.

G. If Buyer has any objection to the coverage afforded by or other provisions of the insurance required to be purchased and maintained on the basis of non-conformance with the Contract Documents, Buyer shall notify Seller in writing within 10 days after receipt of the certificates or other evidence required by Paragraph 4.02.J. Seller shall provide such additional information in respect to insurance as Buyer shall reasonably request.

H. Upon assignment of this Contract, Seller shall comply with the written request of assignee to provide certificates of insurance to assignee.

I. Buyer does not represent that insurance coverage and limits established in this Contract necessarily will be adequate to protect Seller.

J. The insurance and insurance limits required herein shall not be deemed as a limitation on Seller's liability under the indemnities granted to Buyer in the Contract Documents.

#### 4.03 Licensed Sureties and Insurers

A. All bonds and insurance required by the Contract Documents to be purchased and maintained by Buyer or Seller shall be obtained from surety or insurance companies that are duly licensed or authorized in the jurisdiction in which the Project is located to issue bonds or insurance policies for the limits and coverages so required. Such surety and insurance companies shall also meet such additional requirements and qualifications as may be provided.

## ARTICLE 5 - SELLER'S RESPONSIBILITIES

### 5.01 Supervision and Superintendence

A. Seller shall supervise, inspect, and direct the furnishing of the Goods and Special Services competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform its obligations in accordance with the Contract Documents. Seller shall be solely responsible for the means, methods, techniques, sequences, and procedures necessary to perform its obligations in accordance with the Contract Documents. Seller shall not be responsible for the negligence of Buyer or Engineer in the design or specification of a specific means, method, technique, sequence, or procedure that is shown or indicated in and expressly required by the Contract Documents.

### 5.02 Labor, Materials and Equipment

A. Seller shall provide competent, qualified and trained personnel in all aspects of its performance of the Contract.

B. All Goods, and all equipment and material incorporated into the Goods, shall be as specified, and unless specified otherwise in the Contract Documents, shall be:

1. new, and of good quality;
2. protected, assembled, connected, cleaned, and conditioned in accordance with the original manufacturer's instructions; and
3. shop assembled to the greatest extent practicable.

### 5.03 Laws and Regulations

A. Seller shall give all notices required by and shall comply with all Laws and Regulations applicable to the performance of its obligations in accordance with the Contract Documents. Except where otherwise expressly required by such Laws and Regulations, neither Buyer nor Engineer shall be responsible for monitoring Seller's compliance with any Laws or Regulations.

B. If Seller furnishes Goods and Special Services knowing or having reason to know that such furnishing is contrary to Laws or Regulations, Seller shall bear all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to such performance. It shall not be Seller's responsibility to make certain that the Specifications and Drawings are in accordance with Laws and Regulations, but this provision shall not relieve Seller of Seller's obligations under Paragraph 3.03.

C. Changes in Laws or Regulations not known at the time of opening of Bids (or, on the Effective Date of the Agreement if there were no Bids) having an effect on the cost or time of performance shall be the subject of an adjustment in Contract Price or Contract Times. If Buyer and Seller are unable to agree on entitlement to or on the amount or extent, if any, of any such adjustment, a Claim may be made therefor as provided in Paragraph 9.06.

### 5.04 Or Equals

A. Whenever the Goods, or an item of material or equipment to be incorporated into the Goods, are specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular supplier or manufacturer, the specification or description is intended to establish the type, function, appearance, and quality required. Unless the specification or description contains or is followed by words reading that no like, equivalent, or "or-equal" item is permitted, other items of material or equipment or material or equipment of other suppliers or manufacturers may be submitted to Buyer for Engineer's review.

1. If in Engineer's sole discretion, such an item of material or equipment proposed by Seller is functionally equal to that named and sufficiently similar so that no change in related work will be required, it may be considered by Engineer as an "or-equal" item.

2. For the purposes of this paragraph, a proposed item of material or equipment may be considered functionally equal to an item so named only if:

a. in the exercise of reasonable judgment, Engineer determines that: 1) it is at least equal in quality, durability, appearance, strength, and design characteristics; 2) it will reliably perform at least equally well the function imposed by the design concept of the completed Project as a functioning whole; 3) it has an acceptable record of performance and availability of responsive service; and

b. Seller certifies that if approved: 1) there will be no increase in any cost, including capital, installation or operating costs, to Buyer; and 2) the proposed item will conform substantially to the detailed requirements of the item named in the Contract Documents.

B. **Engineer's Evaluation:** Engineer will be allowed a reasonable time within which to evaluate each proposal or submittal made pursuant to Paragraph 5.04.A. Engineer will be the sole judge of whether to accept or reject such a proposal or submittal. No "or-equal" will be ordered, manufactured or utilized until Engineer's review is complete, which will be evidenced by an approved Shop Drawing. Engineer will advise Buyer and Seller in writing of any negative determination. Notwithstanding Engineer's approval of an "or-equal" item, Seller shall remain obligated to comply with the requirements of the Contract Documents.

C. **Special Guarantee:** Buyer may require Seller to furnish at Seller's expense a special performance guarantee or other surety with respect to any such proposed "or-equal."

D. **Data:** Seller shall provide all data in support of any such proposed "or-equal" at Seller's expense.

#### 5.05 Taxes

A. Seller shall be responsible for all taxes and duties arising out of the sale of the Goods and the furnishing of Special Services. All taxes are included in the Contract Price.

1. Buyer will furnish the required certificates of tax exemption to Seller with respect to materials and equipment to be incorporated into the Project facilities.

2. Buyer's exemption does not apply to construction tools, machinery, equipment, or other property purchased by or leased by Seller, or to supplies or materials not incorporated into the Project facilities.

3. The Contract Price does not include the cost of sales or compensating use taxes to the extent such are exempted by this paragraph.

#### 5.06 Shop Drawings and Samples

A. Seller shall submit Shop Drawings and Samples to Buyer for Engineer's review in accordance with the schedule required in Paragraph 2.06.A. All submittals will be identified as required and furnished in the number of copies specified in the Contract Documents. The data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials, and similar data to show Engineer the services, materials, and equipment Seller proposes to provide.

B. Where a Shop Drawing or Sample is required by the Contract Documents, any related work performed prior to Engineer's review of the pertinent submittal will be at the sole expense and responsibility of Seller.

#### C. Submittal Procedures:

1. Before submitting each Shop Drawing or Sample, Seller shall have determined and verified:

a. all field measurements (if required), quantities, dimensions, specified performance criteria, installation requirements, materials, catalog numbers, and similar information with respect thereto; and

b. that all materials are suitable with respect to the indicated application, fabrication, shipping, handling, storage, assembly, and installation pertaining to the furnishing of Goods and Special Services.

c. Seller shall also have reviewed and coordinated each Shop Drawing or Sample with the Contract Documents.

2. Each submittal shall bear a stamp or include a written certification from Seller that Seller has reviewed the subject submittal and confirmed that it is in compliance with the requirements of the Contract Documents. Both Buyer and Engineer shall be entitled to rely on such certification from Seller.

3. With each submittal, Seller shall give Buyer and Engineer specific written notice of any variations that the Shop Drawing or Sample may have from the requirements of the Contract Documents. This notice shall be both in a written communication separate from the submittal and by specific notation on each Shop Drawing or Sample.

#### D. Engineer's Review:

1. Engineer will provide timely review of Shop Drawings and Samples.

2. Engineer's review will be only to determine if the Goods and Special Services covered by the submittals will, after installation or incorporation in the Project, conform to the information given in the Contract Documents and be compatible with the design concept of the completed Project as a functioning whole.

3. Engineer's review shall not relieve Seller from responsibility for any variation from the requirements of the Contract Documents; nor will any review by Engineer relieve Seller from responsibility for errors or omissions in the Shop Drawings or from responsibility for having complied with the provisions of paragraph 5.06.C.1.

E. Seller shall furnish required submittals with sufficient information and accuracy in order to obtain required approval of an item with no more than three submittals. Engineer will record Engineer's time for reviewing subsequent submittals of Shop Drawings, samples, or other items requiring approval and Seller shall reimburse Buyer for Engineer's charges for such time.

F. In the event that Seller requests a change of a previously approved item, Seller shall reimburse Buyer for Engineer's charges for its review time unless the need for such change is beyond the control of Seller.

G. **Resubmittal Procedures:** Seller shall make corrections required by Engineer and shall return the required number of corrected copies of Shop Drawings and submit, as required, new Samples for review and approval. Seller shall direct specific attention in writing to any revisions other than the corrections called for by Engineer on previous submittals.

#### 5.07 Continuing Performance

A. Seller shall adhere to the progress schedule established in accordance with Paragraph 2.06.A., and the Goods shall be delivered and the Special Services furnished within the Contract Times specified in the Agreement.

B. Seller shall carry on furnishing of the Goods and Special Services and adhere to the progress schedule during all disputes or disagreements with Buyer. No furnishing of Goods and Special Services shall be delayed or postponed pending resolution of any disputes or disagreements, except as permitted by Paragraphs 11.03 or 11.04, or as Buyer and Seller may otherwise agree in writing.

#### 5.08 Seller's Warranties and Guarantees

A. Seller warrants and guarantees to Buyer that the title to the Goods conveyed shall be proper, its transfer rightful, and free from any security interest, lien, or other encumbrance. Seller shall defend, indemnify, and hold Buyer harmless against any liens, claims, or demands contesting or affecting title of the Goods conveyed.

B. Seller warrants and guarantees to Buyer that all Goods and Special Services will conform with the Contract Documents, and with the standards established by any Samples approved by Engineer. Engineer shall be entitled to rely on Seller's warranty and guarantee. If the Contract Documents do not otherwise specify the characteristics or the quality of the Goods, the Goods shall comply with the requirements of Paragraph 5.02.B.

C. Seller's warranty and guarantee hereunder excludes defects or damage caused by:

1. abuse, improper modification, improper maintenance, or improper operation by persons other than Seller; or

2. corrosion or chemical attack, unless corrosive or chemically-damaging conditions were disclosed by Buyer in the Contract Documents and the Contract Documents required the Goods to withstand such conditions;

3. use in a manner contrary to Seller's written instructions for installation, operation, and maintenance; or
4. normal wear and tear under normal usage.

D. Seller's obligation to furnish the Goods and Special Services in accordance with the Contract Documents shall be absolute. None of the following will constitute an acceptance of Goods and Special Services that are non-conforming, or a release of Seller's obligation to furnish the Goods and Special Services in accordance with the Contract Documents:

1. observations by Buyer or Engineer;
2. recommendation by Engineer or payment by Buyer of any progress or final payment;
3. use of the Goods by Buyer;
4. any acceptance by Buyer (subject to the provisions of Paragraph 8.02.D.1) or any failure to do so;
5. the issuance of a notice of acceptance by Buyer pursuant to the provisions of Article 8;
6. any inspection, test or approval by others; or
7. any correction of non-conforming Goods and Special Services by Buyer.

E. Buyer shall promptly notify Seller of any breach of Seller's warranties or guarantees.

F. Seller makes no implied warranties under this Contract.

#### 5.09 Indemnification

A. To the fullest extent permitted by Laws and Regulations, Seller shall indemnify and hold harmless Buyer and Engineer, and the officers, directors, members, partners, employees, agents, consultants, contractors, and subcontractors of each and any of them from and against all claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to the performance of Seller's obligations under the Contract Documents, provided that any such claim, cost, loss, or damages attributable to bodily injury, sickness, disease, or death, or to injury to or destruction of tangible property (other than the Goods themselves), including the loss of use resulting therefrom, but only to the extent cause by any negligent act or omission of Seller, or any individual or entity directly or indirectly employed by Seller or anyone for whose acts Seller may be liable.

B. In any and all claims against Buyer or Engineer or any of their respective assignees, consultants, agents, officers, directors, members, partners, employees, agents, consultants, contractors, or subcontractors, by any employee (or the survivor or personal representative of such employee) of Seller, any subcontractor, any supplier, or any individual or entity directly or indirectly employed by any of them to furnish any of the Goods and Special Services, or anyone for whose acts any of them may be liable, the indemnification obligation under Paragraph 5.09.A shall not be limited in any way by any limitation on the amount or type of damages, compensation, or benefits payable by or for seller or any such subcontractor, supplier, or other individual or entity under workers' compensation acts, disability benefit acts, or other employee benefit acts.

C. The indemnification obligations of Seller under Paragraph 5.09.A shall not extend to the liability of Engineer and Engineer's officers, directors, partners, employees, agents, and consultants arising out of:

1. the preparation or approval of, or the failure to prepare or approve, maps, Drawings, opinions, reports, surveys, Change Orders, designs, or Specifications; or
2. giving directions or instructions, or failing to give them, if that is the primary cause of the injury or damage.

#### 5.10 Delegation of Professional Design Services

A. Seller will not be required to provide professional design services unless such services are specifically required by the Contract Documents or unless such services are required to carry out Seller's responsibilities for furnishing the Goods and Special Services. Seller shall not be required to provide professional services in violation of applicable law.

B. If professional design services or certifications by a design professional related to the Goods and Special Services are specifically required of Seller by the Contract Documents, Buyer and Engineer will specify all performance and design criteria that such services must satisfy. Seller shall cause such services or certifications to be provided by a properly licensed professional, whose signature and seal shall appear on all drawings, calculations, specifications, certifications, Shop Drawings and other submittals prepared by such professional. Shop Drawings and other submittals related to the Goods and Special Services designed or certified by such professional, if prepared by others, shall bear such professional's written approval when submitted to Engineer.

C. Buyer and Engineer shall be entitled to rely upon the adequacy, accuracy and completeness of the services, certifications or approvals performed by such design professionals, provided Buyer and Engineer have specified to Seller all performance and design criteria that such services must satisfy.

D. Pursuant to this Paragraph 5.10, Engineer's review and approval of design calculations and design drawings will be only for the limited purpose of checking for conformance with performance and design criteria given and the design concept expressed in the Contract Documents. Engineer's review and approval of Shop Drawings and other submittals (except design calculations and design drawings) will be only for the purpose stated in Paragraph 5.06.D.2.

E. Seller shall not be responsible for the adequacy of the performance or design criteria required by the Contract Documents.

### **ARTICLE 6 - SHIPPING AND DELIVERY**

#### 6.01 Shipping

A. Seller shall select the carrier and bear all costs of packaging, transportation, insurance, special handling and any other costs associated with shipment and delivery.

#### 6.02 Delivery

A. Seller shall deliver the Goods F.O.B. the Point of Destination in accordance with the Contract Times set forth in the Agreement, or other date agreed to by Buyer and Seller.

B. Seller shall provide written notice to Buyer at least 10 days before shipment of the manner of shipment and the anticipated delivery date. The notice shall also include any instructions concerning special equipment or services required at the Point of Destination to unload and care for the Goods. Seller shall also require the carrier to give Buyer at least 24 hours notice by telephone prior to the anticipated time of delivery.

C. Seller will be responsible and bear all costs for unloading the Goods from carrier.

D. Buyer will assure that adequate facilities are available to receive delivery of the Goods during the Contract Times for delivery set forth in the Agreement, or another date agreed by Buyer and Seller.

E. No partial deliveries shall be allowed, unless permitted or required by the Contract Documents or agreed to in writing by Buyer.

#### 6.03 Risk of Loss

A. Risk of loss and insurable interests transfer from Seller to Buyer upon Buyer's receipt of the Goods.

B. Notwithstanding the provisions of Paragraph 6.03.A, if Buyer rejects the Goods as non-conforming, the risk of loss on such Goods shall remain with Seller until Seller corrects the non-conformity or Buyer accepts the Goods. If rejected Goods remain at the Point of Destination pending modification and acceptance, then Seller shall be responsible for arranging adequate protection and maintenance of the Goods at Seller's expense.

#### 6.04 Progress Schedule

A. Seller shall adhere to the progress schedule established in accordance with Paragraph 2.06 as it may be adjusted from time to time as provided below.

1. Seller shall submit to Engineer for acceptance (to the extent indicated in Paragraph 2.06) proposed adjustments in the progress schedule that will not result in changing the Contract Times. Such adjustments will comply with any provisions of the General Requirements applicable thereto.

2. Proposed adjustments in the progress schedule that will change the Contract Times shall be submitted in accordance with the requirements of Article 7. Adjustments in Contract Times may only be made by a Change Order.

#### **ARTICLE 7 - CHANGES: SCHEDULE AND DELAY**

##### 7.01 Changes in the Goods and Special Services

A. Buyer may at any time, without notice to any surety, make an addition, deletion, or other revision to the Contract Documents with respect to the Goods and Services, within the general scope of the Contract, by a Change Order or Work Change Directive. Upon receipt of any such document, Seller shall promptly proceed with performance pursuant to the revised Contract Documents (except as otherwise specifically provided).

B. If Seller concludes that a Work Change Directive issued by Buyer affects the Contract Price or Contract Times, then Seller shall notify Buyer within 15 days after Seller has received the Work Change Directive, and submit written supporting data to Buyer within 45 days after such receipt. If Seller fails to notify Buyer within 15 days, Seller waives any Claim for such adjustment. If Buyer and Seller are unable to agree on entitlement to, or on the amount or extent, if any, of an adjustment in the Contract Price or Contract Times, or both, that should be allowed as a result of a Work Change Directive, a Claim may be made therefor as provided in Paragraph 9.06.

C. Seller shall not suspend performance while Buyer and Seller are in the process of making such changes and any related adjustments to Contract Price or Contract Times.

##### 7.02 Changing Contract Price or Contract Times

A. The Contract Price or Contract Times may only be changed by a Change Order.

B. Any Claim for an adjustment in the Contract Price or Contract Times shall be based on written notice submitted by the party making the Claim to the Engineer and the other party to the Contract in accordance with the provisions of Paragraph 9.06.

C. If Seller is prevented from delivering the Goods or performing the Special Services within the Contract Times for any unforeseen reason beyond its control and not attributable to its actions or inactions, then Seller shall be entitled to an adjustment of the Contract Times to the extent attributable to such reason. Such reasons include but are not limited to acts or neglect by Buyer, inspection delays, fires, floods, epidemics, abnormal weather conditions, acts of God, and other like matters. If such an event occurs and delays Seller's performance, Seller shall notify Buyer in writing within 15 days of knowing or having reason to know of the beginning of the event causing the delay, stating the reason therefor.

D. Seller shall not be entitled to an adjustment in Contract Price or Contract Times for delays within the control of Seller. Delays attributable to and within the control of Seller's subcontractors or suppliers shall be deemed to be delays within the control of Seller.

E. If Seller is prevented from delivering the Goods or furnishing the Special Services within the Contract Times due to the actions or inactions of Buyer, Seller shall be entitled to any reasonable and necessary additional costs arising out of such delay to the extent directly attributable to Buyer.

F. Neither Buyer nor Seller shall be entitled to any damages arising from delays which are beyond the control of both Buyer and Seller, including but not limited to fires, floods, epidemics, abnormal weather conditions, acts of God, and other like matters.

#### **ARTICLE 8 - BUYER'S RIGHTS**

##### 8.01 Inspections and Testing

A. General:

1. The Contract Documents specify required inspections and tests. Buyer shall have the right to perform, or cause to be performed, reasonable inspections and require reasonable tests of the Goods at Seller's facility, and at the Point of Destination. Seller shall allow Buyer a reasonable time to perform such inspections or tests.

2. Seller shall reimburse Buyer for all expenses, except for travel, lodging, and subsistence expenses of Buyer's and Engineer's representatives, for inspections and tests specified in the Contract Documents. If as the result of any such specified testing the Goods are determined to be non-conforming, then Seller shall also bear the travel, lodging, and subsistence expenses of Buyer's and Engineer's representatives, and all expenses of re-inspection or retesting.

3. Buyer shall bear all expenses of inspections and tests that are not specified in the Contract Documents (other than any re-inspection or retesting resulting from a determination of non-conformity, as set forth in Paragraph 8.01.A.2 immediately above); provided, however, that if as the result of any such non-specified inspections or testing the Goods are determined to be non-conforming, then Seller shall bear all expenses of such inspections and testing, and of any necessary re-inspection and retesting.

4. Seller shall provide Buyer timely written notice of the readiness of the Goods for all inspections, tests, or approvals which the Contract Documents specify are to be observed by Buyer prior to shipment.

5. Buyer will give Seller timely notice of all specified tests, inspections, and approvals of the Goods which are to be conducted at the Point of Destination.

6. If, on the basis of any inspections or testing, the Goods appear to be conforming, Buyer will give Seller prompt notice thereof. If on the basis of said inspections or testing, the Goods appear to be non-conforming, Buyer will give Seller prompt notice thereof and will advise Seller of the remedy Buyer elects under the provisions of Paragraph 8.02.

7. Neither payments made by Buyer to Seller prior to any tests or inspections, nor any tests or inspections shall constitute acceptance of non-conforming Goods, or prejudice Buyer's rights under the Contract.

B. Inspection on Delivery:

1. Buyer or Engineer will visually inspect the Goods upon delivery solely for purposes of identifying the Goods and general verification of quantities and observation of apparent condition in order to provide a basis for a progress payment. Such visual inspection will not be construed as final or as receipt of any Goods and Special Services that, as a result of subsequent inspections and tests, are determined to be non-conforming.

2. Within ten days of such visual inspection, Buyer shall provide Seller with written notice of Buyer's determination regarding conformity of the Goods. In the event Buyer does not provide such notice, it will be presumed that the Goods appear to be conforming and that Buyer has acknowledged their receipt upon delivery.

3. If, on the basis of the visual inspection specified in Paragraph 8.01.B.1, the Goods appear to be conforming, Buyer's notice thereof to Seller will acknowledge receipt of the Goods.

C. Final Inspection:

1. After all of the Goods have been incorporated into the Project, tested in accordance with such testing requirements as are specified, and are functioning as indicated, Buyer or Engineer will make a final inspection.

2. If, on the basis of the final inspection, the Goods are conforming, Buyer's notice thereof will constitute Buyer's acceptance of the Goods.

3. If, on the basis of the final inspection, the Goods are non-conforming, Buyer will identify the non-conformity in writing.

##### 8.02 Non-Conforming Goods and Special Services

A. If, on the basis of inspections and testing prior to delivery, the Goods and Special Services are found to be non-conforming, or if at any time after Buyer has acknowledged receipt of delivery and before

the expiration of the correction period described in Paragraph 8.03, Buyer determines that the Goods and Special Services are non-conforming, then Seller shall promptly, without cost to Buyer and in response to written instructions from Buyer, either correct such non-conforming Goods and Special Services, or, if Goods are rejected by Buyer, remove and replace the non-conforming Goods with conforming Goods, including all work required for reinstallation.

**B. Buyer's Rejection of Non-Conforming Goods:**

1. If Buyer elects to reject the Goods in whole or in part, Buyer's notice to Seller will describe in sufficient detail the non-conforming aspect of the Goods. If Goods have been delivered to Buyer, Seller shall promptly, and within the Contract Times, remove and replace the rejected Goods.

2. Seller shall bear all costs, losses and damages attributable to the removal and replacement of the non-conforming Goods as provided in Paragraph 8.02.E.

3. Upon rejection of the Goods, Buyer retains a security interest in the Goods to the extent of any payments made and expenses incurred in their testing and inspection.

**C. Remediating Non-Conforming Goods and Special Services:**

1. If Buyer elects to permit the Seller to modify the Goods to correct the non-conformance, then Seller shall promptly provide a schedule for such modifications and shall make the Goods conforming within a reasonable time.

2. If Buyer notifies Seller in writing that any of the Special Services are non-conforming, Seller shall promptly provide conforming services acceptable to Buyer. If Seller fails to do so, Buyer may delete the Special Services and reduce the Contract Price a commensurate amount.

**D. Buyer's Acceptance of Non-Conforming Goods:** Instead of requiring correction or removal and replacement of non-conforming Goods discovered either before or after final payment, Buyer may accept the non-conforming Goods. Seller shall bear all reasonable costs, losses, and damages attributable to Buyer's evaluation of and determination to accept such non-conforming Goods as provided in Paragraph 8.02.E.

**E. Seller shall pay all claims, costs, losses, and damages,** including but not limited to all fees and charges for re-inspection, retesting and for any engineers, architects, attorneys and other professionals, and all court or arbitration or other dispute resolution costs arising out of or relating to the non-conforming Goods and Special Services. Seller's obligations shall include the costs of the correction or removal and replacement of the non-conforming Goods and the replacement of property of Buyer and others destroyed by the correction or removal and replacement of the non-conforming Goods, and obtaining conforming Special Services from others.

**F. Buyer's Rejection of Conforming Goods:** If Buyer asserts that Goods and Special Services are non-conforming and such Goods and Special Services are determined to be conforming, or if Buyer rejects as non-conforming Goods and Special Services that are later determined to be conforming, then Seller shall be entitled to reimbursement from Buyer of costs incurred by Seller in inspecting, testing, correcting, removing, or replacing the conforming Goods and Special Services, including but not limited to fees and charges of engineers, architects, attorneys and other professionals, and all court or arbitration or other dispute resolution costs associated with the incorrect assertion of non-conformance or rejection of conforming Goods and Special Services.

**8.03 Correction Period**

**A. Seller's responsibility for correcting all non-conformities in the Goods and Special Services** will extend for a period of one year after the earlier of the date on which Buyer has placed the Goods in continuous service or the date of final payment, or for such longer period of time as may be prescribed by Laws or Regulations or by the terms of any specific provisions of the Contract Documents.

**ARTICLE 9- ROLE OF ENGINEER**

**9.01 Duties and Responsibilities**

**A. The duties and responsibilities and the limitations of authority of Engineer** are set forth in the Contract Documents.

**9.02 Clarifications and Interpretations**

**A. Engineer will issue with reasonable promptness such written clarifications or interpretations of the Contract Documents as Engineer may determine necessary,** which shall be consistent with or reasonably inferable from the overall intent of the Contract Documents. Such written clarifications and interpretations will be binding on Buyer and Seller. If either Buyer or Seller believes that a written clarification or interpretation justifies an adjustment in the Contract Price or Contract Times, either may make a Claim therefor.

**9.03 Authorized Variations**

**A. Engineer may authorize minor deviations or variations in the Contract Documents by:** 1) written approval of specific variations set forth in Shop Drawings when Seller has duly noted such variations as required in Paragraph 5.06.C.4, or 2) a Field Order.

**9.04 Rejecting Non-Conforming Goods and Special Services**

**A. Engineer will have the authority to disapprove or reject Goods and Special Services that Engineer believes to be non-conforming.** Engineer will also have authority to require special inspection or testing of the Goods or Special Services as provided in Paragraph 8.01 whether or not the Goods are fabricated or installed, or the Special Services are completed.

**9.05 Decisions on Requirements of Contract Documents**

**A. Engineer will be the initial interpreter of the Contract Documents and judge of the acceptability of the Goods and Special Services.** Claims, disputes and other matters relating to the acceptability of the Goods and Special Services or the interpretation of the requirements of the Contract Documents pertaining to Seller's performance will be referred initially to Engineer in writing with a request for a formal decision in accordance with this paragraph.

**B. When functioning as interpreter and judge under this Paragraph 9.05,** Engineer will not show partiality to Buyer or Seller and will not be liable in connection with any interpretation or decision rendered in good faith in such capacity. The rendering of a decision by Engineer pursuant to this Paragraph 9.05 with respect to any such Claim, dispute, or other matter (except any which have been waived by the making or acceptance of final payment as provided in Paragraph 10.07) will be a condition precedent to any exercise by Buyer or Seller of such rights or remedies as either may otherwise have under the Contract Documents or by Laws or Regulations in respect of any such Claim, dispute, or other matter.

**9.06 Claims and Disputes**

**A. Notice:** Written notice of each Claim relating to the acceptability of the Goods and Special Services or the interpretation of the requirements of the Contract Documents pertaining to either party's performance shall be delivered by the claimant to Engineer and the other party to the Agreement within 15 days after the occurrence of the event giving rise thereto, and written supporting data shall be submitted to Engineer and the other party within 45 days after such occurrence unless Engineer allows an additional period of time to ascertain more accurate data.

**B. Engineer's Decision:** Engineer will review each such Claim and render a decision in writing within 30 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any.

**C. If Engineer does not render a formal written decision on a Claim within the time stated in Paragraph 9.06.B.,** Engineer shall be deemed to have issued a decision denying the Claim in its entirety 31 days after receipt of the last submittal of the claimant or the last submittal of the opposing party, if any.

**D. Engineer's written decision on such Claim or a decision denying the Claim in its entirety that is deemed to have been issued pursuant to Paragraph 9.06.C,** will be final and binding upon Buyer and Seller 30 days after it is issued unless within 30 days of issuance Buyer or Seller appeals Engineer's decision by initiating the mediation of such

Claim in accordance with the dispute resolution procedures set forth in Article 13.

E. If Article 13 has been amended to delete the mediation requirement, then Buyer or Seller may appeal Engineer's decision within 30 days of issuance by following the alternative dispute resolution process set forth in Article 13, as amended; or if no such alternative dispute resolution process has been set forth, Buyer or Seller may appeal Engineer's decision by 1) delivering to the other party within 30 days of the date of such decision a written notice of intent to submit the Claim to a court of competent jurisdiction, and 2) within 60 days after the date of such decision instituting a formal proceeding in a court of competent jurisdiction.

F. No Claim for an adjustment in Contract Price or Contract Times will be valid if not submitted in accordance with this Paragraph 9.06.

G. The parties agree to endeavor to avoid or resolve Claims through direct, good faith discussions and negotiations whenever practicable. Such discussions and negotiations should at the outset address whether the parties mutually agree to suspend the time periods established in this Paragraph 9.06; if so, a written record of such mutual agreement should be made and jointly executed.

## **ARTICLE 10- PAYMENT**

### *10.01 Applications for Progress Payments*

A. Seller shall submit to Buyer for Engineer's review Applications for Payment filled out and signed by Seller and accompanied by such supporting documentation as is required by the Contract Documents and also as Buyer or Engineer may reasonably require. The timing and amounts of progress payments shall be as stipulated in the Agreement.

1. The first application for Payment will be submitted after review by Engineer of all Shop Drawings and of all Samples required by the Contract Documents.

2. The second Application for Payment will be submitted after receipt of the Goods has been acknowledged in accordance with Paragraph 8.01.B and will be accompanied by a bill of sale, invoice, or other documentation reasonably satisfactory to Buyer warranting that Buyer has rightfully received good title to the Goods from Seller and that, upon payment, the Goods will be free and clear of all liens. Such documentation will include releases and waivers from all parties with viable lien rights. In the case of multiple deliveries of Goods, additional Applications for Payment accompanied by the required documentation will be submitted as Buyer acknowledges receipt of additional items of the Goods.

### *10.02 Review of Applications for Progress Payments*

A. Engineer will, within ten days after receipt of each Application for Payment, either indicate in writing a recommendation of payment and present the Application to Buyer, or return the Application to Seller indicating in writing Engineer's reasons for refusing to recommend payment. In the latter case, Seller may make the necessary corrections and resubmit the Application.

1. Engineer's recommendation of payment requested in the first Application for Payment will constitute a representation by Engineer, based on Engineer's review of the Application for Payment and the accompanying data that the Shop Drawings and Samples have been reviewed and approved as required by the Contract Documents and Seller is entitled to payment of the amount recommended.

2. Engineer's recommendation of payment requested in the Application for Payment submitted upon Buyer's acknowledgment of receipt of the Goods will constitute a representation by Engineer, based on Engineer's review of the Application for Payment and the accompanying data Seller is entitled to payment of the amount recommended. Such recommendation will not constitute a representation that Engineer has made a final inspection of the Goods, that the Goods are free from non-conformities, acceptable or in conformance with the Contract Documents, that Engineer has made any investigation as to Buyer's title to the Goods, that exhaustive or continuous inspections have been made to check the quality or the quantity of the Goods beyond the responsibilities specifically assigned to Engineer in the Contract Documents or that there may not be other

matters or issues between the parties that might entitle Seller to additional payments by Buyer or Buyer to withhold payment to Seller.

3. Engineer may refuse to recommend that all or any part of a progress payment be made, or Engineer may nullify all or any part of any payment previously recommended if, in Engineer's opinion, such recommendation would be incorrect or if on the basis of subsequently discovered evidence or subsequent inspections or tests Engineer considers such refusal or nullification necessary to protect Buyer from loss because the Contract Price has been reduced, Goods are found to be non-conforming, or Seller has failed to furnish acceptable Special Services.

### *10.03 Amount and Timing of Progress Payments*

A. Subject to Paragraph 10.02.A., the amounts of the progress payments will be as provided in the Agreement. Buyer shall within 45 days after receipt of each Application for Payment with Engineer's recommendation pay Seller the amount recommended; but, in the case of the Application for Payment upon Buyer's acknowledgment of receipt of the Goods, said 45-day period may be extended for so long as is necessary (but in no event more than 60 days) for Buyer to examine the bill of sale and other documentation submitted therewith. Buyer shall notify Seller promptly of any deficiency in the documentation and shall not unreasonably withhold payment.

### *10.04 Suspension of or Reduction in Payment*

A. Buyer may suspend or reduce the amount of progress payments, even though recommended for payment by Engineer, under the following circumstances:

1. Buyer has reasonable grounds to conclude that Seller will not furnish the Goods or the Special Services in accordance with the Contract Documents, and

2. Buyer has requested in writing assurances from Seller that the Goods and Special Services will be delivered or furnished in accordance with the Contract Documents, and Seller has failed to provide adequate assurances within ten days of Buyer's written request.

B. If Buyer refuses to make payment of the full amount recommended by Engineer, Buyer will provide Seller and Engineer immediate written notice stating the reason for such action and promptly pay Seller any amount remaining after deduction of the amount withheld. Buyer shall promptly pay Seller the amount withheld when Seller corrects the reason for such action to Buyer's satisfaction.

### *10.05 Final Application for Payment*

A. After Seller has corrected all non-conformities to the reasonable satisfaction of Buyer and Engineer, furnished all Special Services, and delivered all documents required by the Contract Documents, Engineer will issue to Buyer and Seller a notice of acceptance. Seller may then make application for final payment following the procedure for progress payments. The final Application for Payment will be accompanied by all documentation called for in the Contract Documents, a list of all unsettled Claims, and such other data and information as Buyer or Engineer may reasonably require.

### *10.06 Final Payment*

A. If, on the basis of final inspection and the review of the final Application for Payment and accompanying documentation, Engineer is reasonably satisfied that Seller has furnished the Goods and Special Services in accordance with the Contract Documents, and that Seller's has fulfilled all other obligations under the Contract Documents, then Engineer will, within ten days after receipt of the final Application for Payment, recommend in writing final payment subject to the provisions of Paragraph 10.07 and present the Application to Buyer. Otherwise, Engineer will return the Application to Seller, indicating the reasons for refusing to recommend final payment, in which case Seller shall make the necessary corrections and resubmit the Application for payment. If the Application and accompanying documentation are appropriate as to form and substance, Buyer shall, within 45 days after receipt thereof, pay Seller the amount recommended by Engineer, less any sum Buyer is entitled to set off against Engineer's recommendation, including but not limited to liquidated damages to which Buyer is entitled.

### 10.07 *Waiver of Claims*

- A. The making and acceptance of final payment will constitute:
1. a waiver of all Claims by Buyer against Seller, except Claims arising from unsettled liens from non-conformities in the Goods or Special Services appearing after final payment, from Seller's failure to comply with the Contract Documents or the terms of any special guarantees specified therein, or from Seller's continuing obligations under the Contract Documents; and
  2. a waiver of all Claims by Seller against Buyer (other than those previously made in accordance with the requirements herein and listed by Seller as unsettled as required in Paragraph 10.05.A, and not resolved in writing).

## **ARTICLE 11 - CANCELLATION, SUSPENSION, AND TERMINATION**

### 11.01 *Cancellation*

A. Buyer has the right to cancel the Contract, without cause, at any time prior to delivery of the Goods by written notice. Cancellation pursuant to the terms of this paragraph shall not constitute a breach of contract by Buyer. Upon cancellation:

1. Buyer shall pay Seller for the direct costs incurred in producing any Goods that Seller has specially manufactured for the Project, plus a fair and reasonable amount for overhead and profit.
2. For Goods that are not specially manufactured for the Project, Seller shall be entitled to a restocking charge of 10 percent of the unpaid Contract Price of such Goods.

### 11.02 *Suspension of Performance by Buyer*

A. Buyer has the right to suspend performance of the Contract for up to a maximum of ninety days, without cause, by written notice. Upon suspension under this paragraph, Seller shall be entitled to an increase in the Contract Times and Contract Price caused by the suspension, provided that performance would not have been suspended or delayed for causes attributable to Seller.

### 11.03 *Suspension of Performance by Seller*

A. Subject to the provisions of Paragraph 5.07.B, Seller may suspend the furnishing of the Goods and Special Services only under the following circumstance:

1. Seller has reasonable grounds to conclude that Buyer will not perform its future payment obligations under the Contract; and,
2. Seller has requested in writing assurances from Buyer that future payments will be made in accordance with the Contract, and Buyer has failed to provide such assurances within ten days of Seller's written request.

### 11.04 *Breach and Termination*

#### A. Buyer's Breach:

1. Buyer shall be deemed in breach of the Contract if it fails to comply with any material provision of the Contract Documents, including but not limited to:
  - a. wrongful rejection or revocation of Buyer's acceptance of the Goods,
  - b. failure to make payments in accordance with the Contract Documents, or
  - c. wrongful repudiation of the Contract.
2. Seller shall have the right to terminate the Contract for cause by declaring a breach should Buyer fail to comply with any material provisions of the Contract. Upon termination, Seller shall be entitled to all remedies provided by Laws and Regulations.

a. In the event Seller believes Buyer is in breach of its obligations under the Contract, Seller shall provide Buyer with reasonably prompt written notice setting forth in sufficient detail the reasons for declaring that it believes a breach has occurred. Buyer shall have seven days from receipt of the written notice declaring the breach (or such longer period of time as Seller may grant in writing) within which to cure or to proceed diligently to cure such alleged breach.

#### B. Seller's Breach:

1. Seller shall be deemed in breach of the Contract if it fails to comply with any material provision of the Contract Documents, including, but not limited to:

- a. failure to deliver the Goods or perform the Special Services in accordance with the Contract Documents,
- b. wrongful repudiation of the Contract, or
- c. delivery or furnishing of non-conforming Goods and Special Services.

2. Buyer may terminate Seller's right to perform the Contract for cause by declaring a breach should Seller fail to comply with any material provision of the Contract Documents. Upon termination, Buyer shall be entitled to all remedies provided by Laws and Regulations.

a. In the event Buyer believes Seller is in breach of its obligations under the Contract, and except as provided in Paragraph 11.04.B.2.b, Buyer shall provide Seller with reasonably prompt written notice setting forth in sufficient detail the reasons for declaring that it believes a breach has occurred. Seller shall have seven days from receipt of the written notice declaring the breach (or such longer period of time as Buyer may grant in writing) within which to cure or to proceed diligently to cure such alleged breach.

b. If and to the extent that Seller has provided a performance bond under the provisions of Paragraph 4.01, the notice and cure procedures of that bond, if any, shall supersede the notice and cure procedures of Paragraph 11.04.B.2.a.

## **ARTICLE 12 - LICENSES AND FEES**

### 12.01 *Intellectual Property and License Fees*

A. Unless specifically stated elsewhere in the Contract Documents, Seller is not transferring any intellectual property rights, patent rights, or licenses for the Goods delivered. However, in the event the Seller is manufacturing to Buyer's design, Buyer retains all intellectual property rights in such design.

B. Seller shall pay all license fees and royalties and assume all costs incident to the use or the furnishing of the Goods, unless specified otherwise by the Contract Documents.

### 12.02 *Seller's Infringement*

A. Subject to Paragraph 12.01.A, Seller shall indemnify and hold harmless Buyer, Engineer and their officers, directors, members, partners, employees, agents, consultants, contractors, and subcontractors from and against all claims, costs, losses, damages, and judgments (including but not limited to all reasonable fees and charges of engineers, architects, attorneys and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to any infringement or alleged infringement of any United States or foreign patent or copyright by any of the Goods as delivered hereunder.

B. In the event of suit or threat of suit for intellectual property infringement, Buyer will promptly notify Seller of receiving notice thereof.

C. Seller shall promptly defend the claim or suit, including negotiating a settlement. Seller shall have control over such claim or suit, provided that Seller agrees to bear all expenses and to satisfy any adverse judgment thereof.

1. If Seller fails to defend such suit or claim after written notice by Buyer, Seller will be bound in any subsequent suit or claim against Seller by Buyer by any factual determination in the prior suit or claim.

2. If Buyer fails to provide Seller the opportunity to defend such suit or claim after written notice by Seller, Buyer shall be barred from any remedy against Seller for such suit or claim.

D. If a determination is made that Seller has infringed upon intellectual property rights of another, Seller may obtain the necessary licenses for Buyer's benefit, or replace the Goods and provide related design and construction as necessary to avoid the infringement at Seller's own expense.

### 12.03 *Buyer's Infringement*

A. Buyer shall indemnify and hold harmless Seller, and its officers, directors, partners, employees, agents, consultants, contractors, and subcontractors from and against all claims, costs, losses, damages, and judgments (including but not limited to all reasonable fees and charges of engineers, architects, attorneys and other professionals and all court or arbitration or other dispute

resolution costs) arising out of or relating to any infringement or alleged infringement of any United States or foreign patent or copyright caused by Seller's compliance with Buyer's design of the Goods or Buyer's use of the Goods in combination with other materials or equipment in any process (unless intent of such use was known to Seller and Seller had reason to know such infringement would result).

B. In the event of suit or threat of suit for intellectual property infringement, Seller must after receiving notice thereof promptly notify Buyer.

C. Upon written notice from Seller, Buyer shall be given the opportunity to defend the claim or suit, including negotiating a settlement. Buyer shall have control over such claim or suit, provided that Buyer agrees to bear all expenses and to satisfy any adverse judgment thereof.

1. If Buyer fails to defend such suit or claim after written notice by Seller, Buyer will be bound in any subsequent suit or claim against Buyer by Seller by any factual determination in the prior suit or claim.

2. If Seller fails to provide Buyer the opportunity to defend such suit or claim after written notice by Buyer, Seller shall be barred from any remedy against Buyer for such suit or claim.

#### 12.04 *Reuse of Documents*

A. Neither Seller nor any other person furnishing any of the Goods and Special Services under a direct or indirect contract with Seller shall: (1) acquire any title to or ownership rights in any of the Drawings, Specifications, or other documents (or copies of any thereof) prepared by or bearing the seal of Engineer or its consultants, including electronic media versions; or (2) reuse any of such Drawings, Specifications, other documents, or copies thereof on any other project without written consent of Buyer and Engineer and specific written verification or adaptation by Engineer. This prohibition will survive termination or completion of the Contract. Nothing herein shall preclude Seller from retaining copies of the Contract Documents for record purposes.

#### 12.05 *Electronic Data*

A. Unless otherwise stated, copies of data furnished by Buyer or Engineer to Seller, or by Seller to Buyer or Engineer that may be relied upon are limited to the printed copies (also known as hard copies). Files in electronic media format of text, data, graphics, or other types are furnished only for the convenience of the receiving party. Any conclusion or information obtained or derived from such electronic files will be at the user's sole risk. If there is a discrepancy between the electronic files and the hard copies, the hard copies govern.

B. Because data stored in electronic media format can deteriorate or be modified inadvertently or otherwise without authorization of the data's creator, the party receiving electronic files agrees that it will perform acceptance tests or procedures within 60 days, after which the receiving party shall be deemed to have accepted the data thus transferred. The transferring party will correct any errors detected within the 60-day acceptance period.

C. When transferring documents in electronic media format, the transferring party makes no representations as to long term compatibility, usability, or readability of documents resulting from the use of software application packages, operating systems, or computer hardware differing from those used by the data's creator.

### **ARTICLE 13 - DISPUTE RESOLUTION**

#### 13.01 *Dispute Resolution Method*

A. Either Buyer or Seller may initiate the mediation of any Claim decided in writing by Engineer under Paragraph 9.06.B or 9.06.C before such decision becomes final and binding. The mediation will be governed by the Construction Industry Mediation Rules of the American Arbitration Association in effect as of the Effective Date of the Agreement. The request for mediation shall be submitted in writing to the American Arbitration Association and the other party to the Contract. Timely submission of the request shall stay the Engineer's decision from becoming final and binding. The venue for any mediation proceeding shall be in an agreed upon location in Kane County, IL.

B. Buyer and Seller shall participate in the mediation process in good faith. The process shall be concluded within 60 days of filing of the request. The date of termination of the mediation shall be determined by application of the mediation rules referenced above.

C. If the mediation process does not result in resolution of the Claim, then Engineer's written decision under Paragraph 9.06.B or a denial pursuant to Paragraph 9.06.C shall become final and binding 30 days after termination of the mediation unless, within that time period, Buyer or Seller:

1. elects in writing to invoke any dispute resolution process provided for in Article 13, or

2. agrees with the other party to submit the Claim to another dispute resolution process, or

3. if no dispute resolution process has been provided for in Article 13, delivers to the other party written notice of the intent to submit the Claim to a court in Kane County Illinois, and within 60 days of the termination of the mediation institutes such formal proceeding.

### **ARTICLE 14- MISCELLANEOUS**

#### 14.01 *Giving Notice*

A. Whenever any provision of the Contract Documents requires the giving of written notice, it will be deemed to have been validly given if: 1) delivered in person to the individual or to a member of the firm or to an officer of the corporation for whom it is intended, or 2) if delivered at or sent by registered or certified mail, postage prepaid, to the last business address known to the giver of the notice.

#### 14.02 *Controlling Law*

A. This Contract is to be governed by the law of the state in which the Point of Destination is located.

B. In the case of any conflict between the express terms of this Contract and the Uniform Commercial Code, as adopted in the state whose law governs, it is the intent of the parties that the express terms of this Contract shall apply.

#### 14.03 *Computation of Time*

A. When any period of time is referred to in the Contract Documents by days, it will be computed to exclude the first and include the last day of such period. If the last day of any such period falls on a Saturday or Sunday or on a day made a legal holiday by the law of the applicable jurisdiction, such day shall be omitted from the computation.

#### 14.04 *Cumulative Remedies*

A. The duties and obligations imposed by these General Conditions and the rights and remedies available hereunder to the parties hereto are in addition to, and are not to be construed in any way as a limitation of, any rights and remedies available to any or all of them which are otherwise imposed or available by Laws or Regulations, by special warranty or guarantee, or by other provisions of the Contract Documents, and the provisions of this paragraph will be as effective as if repeated specifically in the Contract Documents in connection with each particular duty, obligation, right, and remedy to which they apply.

#### 14.05 *Survival of Obligations*

A. All representations, indemnifications, warranties and guarantees made in, required by, or given in accordance with the Contract Documents, as well as all continuing obligations indicated in the Contract Documents, will survive final payment, completion, and acceptance of the Goods and Special Services and termination or completion of the Agreement.

#### 14.06 *Entire Agreement*

A. Buyer and Seller agree that this Agreement is the complete and final agreement between them, and supersedes all prior negotiations, representations, or agreements, either written or oral. This Agreement may not be altered, modified, or amended except in writing signed by an authorized representative of both parties

\*\*\*\*\*

**PART 1 GENERAL**

## 1.01 WORK COVERED BY CONTRACT DOCUMENTS

- A. Work of this Agreement comprises manufacturing, testing, delivering, and field assembling, of control building, switchgear, and miscellaneous equipment for Business Park III Substations, Geneva, IL.

## 1.02 AGREEMENT

- A. Construct Work under single lump sum Agreement.

## 1.03 WORK BY OTHERS

- A. Work on Project which will be executed prior to start of Work of this Agreement, and which is excluded from this Agreement, as follows:
  - 1. Grading.
  - 2. Control building foundation.
- B. Work on Project which will be executed after completion of Work of this Agreement, and which is excluded from this Agreement, as follows:
  - 1. Connection of power cable connections.
  - 2. Control cable connections to external equipment.

## 1.04 CONTRACTOR USE OF PREMISES

- A. Limit Contractor's use of premises for Work and for storage, to allow for Work by other contractors.
- B. Coordinate use of premises under direction of Engineer. Contractor shall confine construction equipment, storage of materials and equipment and operations of workers to areas permitted by law, ordinances, permits, or requirements of Contract Documents, and shall not unreasonably encumber premises with construction equipment or other material or equipment.
- C. Assume full responsibility for protection and safekeeping of items under this Agreement, stored on Site.
- D. Move any stored items, under Contractor's control, which interfere with operations of Owner or separate contractor.
- E. Obtain and pay for use of additional storage or Work areas needed for operations.

**PART 2 PRODUCTS**

NOT USED

**PART 3 EXECUTION**

NOT USED

END OF SECTION

## PART 1 GENERAL

### 1.01 SUBSTITUTIONS

- A. For period of 30 days after effective date of Agreement, Engineer will consider formal requests from Contractor for substitution of products in place of those specified. After end of that period, requests will be considered only in case of product unavailability or other conditions beyond control of Contractor.
- B. Submit 3 copies of request for substitution for consideration using attached Product Substitution Request Form. Limit each request to one proposed Substitution. Support each request with:
  - 1. Complete data substantiating compliance of proposed substitutions with requirements stated in Contract Documents. Burden of proof is on proposer.
    - a. Product identification, including manufacturer's name and address.
    - b. Manufacturer's literature; identify:
      - 1) Product description.
      - 2) Reference standards.
      - 3) Performance and test data.
    - c. Samples, as applicable.
    - d. Name and address of similar projects on which product has been used, and date of each installation.
  - 2. Itemized comparison of proposed substitution with product specified; list significant variations.
  - 3. Data relating to changes in construction schedule.
  - 4. Any effect of substitution on separate contracts.
  - 5. List of changes required in other work or products.
  - 6. Accurate cost data comparing proposed substitution with product specified. Amount of any net change to Contract Price.
  - 7. Designation of required license fees or royalties.
  - 8. Designation of availability of maintenance services, sources, or replacement materials.
- C. Substitutions will not be considered for acceptance when:
  - 1. They are indicated or implied on Shop Drawings.
  - 2. They are requested directly by Subcontractor or supplier.
  - 3. Acceptance will require substantial revision of Contract Documents.
- D. Substitute products shall not be ordered or installed without written notification from Engineer of Owner's acceptance.
- E. Engineer will determine acceptability of proposed substitutions.

### 1.02 CONTRACTOR'S REPRESENTATION

- A. In making formal request for substitution Contractor represents that:
  - 1. It has investigated proposed product and has determined that it is equal to or superior in all respects to that specified.
  - 2. It will provide same warranties or Bonds for substitution as for product specified or as required by Owner.
  - 3. It will coordinate installation of accepted substitution into Work, and will make such changes as may be required for Work to be complete in all respects.
  - 4. It waives claims for additional costs caused by substitution which may subsequently become apparent.
  - 5. Cost data is complete and includes related costs under its Agreement, but not:
    - a. Costs under separate contracts.
    - b. Engineer's costs for redesign or revision of Contract Documents.
  - 6. It will reimburse Owner for charges of Engineer or Engineer's consultants for evaluating any proposed substitute, whether proposed substitute is accepted or rejected.

**1.03 ENGINEER DUTIES**

- A. Review Contractor's requests for substitution with reasonable promptness and advise Owner.
- B. Notify Contractor in writing of Owner's decision to accept or reject requested substitution.

**PART 2 PRODUCTS**

NOT USED

**PART 3 EXECUTION**

NOT USED

END OF SECTION

To: \_\_\_\_\_

Project: \_\_\_\_\_

Specified Item:	Section	Page	Paragraph	Description
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The undersigned request consideration of the following:

PROPOSED SUBSTITUTION \_\_\_\_\_

Attached data includes product description, specifications, drawings, photographs, performance, and test data adequate for evaluation of the request; applicable portions of the data are clearly identified.

Attached data also includes a description of changes to the Contract Documents that the proposed substitution will require for its proper installation.

The undersigned certifies that the following paragraphs, unless modified by attachments are correct:

1. The proposed substitution does not affect dimensions shown on Drawings.
2. The undersigned will pay for changes to the building design, including engineering design, detailing, and construction costs caused by the requested substitution.
3. The proposed substitution will have no adverse affect on other trades, the construction schedule, or specified warranty requirements.
4. Maintenance and service parts will be locally available for the proposed substitution.

The undersigned further states that the function, appearance, and quality of the proposed substitution are equivalent or superior to the specified item.

Submitted by:

Signature \_\_\_\_\_

Firm \_\_\_\_\_

Address \_\_\_\_\_

\_\_\_\_\_

Date \_\_\_\_\_

Telephone \_\_\_\_\_

Attachments

For use by Engineer/Architect

Approved       Approved as noted

Not Approved     Received too late

By \_\_\_\_\_

Date \_\_\_\_\_

Remarks \_\_\_\_\_

## **PART 1 GENERAL**

### 1.01 SUBMITTAL PROCEDURES

- A. Submit electronically when required by Specification Sections. Contact Engineer as listed below for submittal instructions. An FTP/FTA site or direct posting site will be provided after award to post submittals and to receive return submittals:

Mr. Philip Schulz, P. E.  
Email: [schulzphil@stanleygroup.com](mailto:schulzphil@stanleygroup.com)  
Office Phone: 563-264-6461  
Stanley Consultants, Inc.  
Stanley Building  
225 Iowa Avenue  
Muscatine, Iowa 52761-3764

- B. Engineer will make internal distribution to the Owner and other interested parties.
- C. Submittals shall be in English language.
- D. Weights, measures, and units shall be English units with SI metric values following in parenthesis.
- E. Symbols and drawings shall conform to ANSI Y32.2/IEEE 315/CSA Z99.

### 1.02 CONTRACTOR RESPONSIBILITIES

- A. Review submittals prior to submission.
- B. Determine and verify:
  - 1. Field measurements.
  - 2. Field construction criteria.
  - 3. Catalog numbers and similar data.
  - 4. Conformance to Specifications.
- C. Coordinate each submittal with other submittals and with requirements of Work and of Contract Documents.
- D. Notify Engineer in writing, at time of submission, of any deviations in submittals from requirements of Contract Documents. Any such deviations permitted by Engineer will require modifications of Contract Documents.
- E. Provide space on Shop Drawings for Contractor and Engineer stamps.
- F. When Shop Drawings are revised for resubmission, identify all changes made since previous submission.
- G. Submittals containing language imposing duties on others (such as verification of dimensions or supply of related information) inconsistent with contract language shall be null and void.
- H. Submittals shall not be used as media for inquiries for information or for verification of information that must be supplied by others to Contractor. Inquiries or verification of information shall be made by separate Contractor submittal using Request for Information (RFI) process.
- I. Begin no fabrication or Work which requires submittal review until return of submittals by Engineer with stamp, as either "Reviewed", "Reviewed as Noted", or "Reviewed as Noted-Resubmit."

- J. Distribute copies of reviewed submittals that carry Engineer stamp as either "Reviewed" or "Reviewed as Noted" as appropriate. Instruct parties to promptly report any inability to comply with requirements.
- K. Submittals not requested will not be recognized or processed.

### 1.03 ENGINEER DUTIES

- A. Review required submittals with reasonable promptness and in accord with schedule, only for general conformance to design concept of Project and compliance with information given in Contract Documents. Review shall not extend to means, methods, sequences, techniques, or procedures of construction or to safety precautions or program incident thereto. Review of a separate item as such will not indicate approval of assembly in which item functions.
- B. Affix stamp and initials or signature, and indicate requirements for resubmittal, or review of submittal. Engineer's action on submittals is classified as follows:
  1. Reviewed: Submittal has been reviewed and appears to be in conformance to design concept of Project and Contract Documents. Contractor may proceed with fabrication of work in submittal.
  2. Reviewed As Noted: Submittal has been reviewed and appears to be in conformance to design concept of Project and Contract Documents, except as noted by reviewer. Contractor may proceed with fabrication of work in submittal with modifications and corrections as indicated by reviewer.
  3. Reviewed As Noted-Resubmit: Submittal has been reviewed and appears to be in conformance to design concept of Project and Contract Documents, except as noted by reviewer. Contractor may proceed with fabrication of work in submittal with modifications and corrections as indicated by reviewer. Contractor shall make any corrections indicated by reviewer and resubmit for review.
  4. Resubmit: Submittal has been reviewed and appears not to be in conformance to design concept of Project or with Contract Documents. Contractor shall not proceed with fabrication of work in submittal, but instead shall make any corrections required by reviewer and resubmit for review.
  5. Returned without Review: Submittal is being returned without having been reviewed because: 1) not required by Contract Documents; 2) grossly incomplete; 3) indicates no attempt at conformance to Contract Documents; 4) cannot be reproduced; 5) lacks Contractor's completed approval stamp; or 6) lacks design professional's seal when required by law or Contract Documents. If submittal is required by Contract Documents, Contractor shall not proceed with Work as detailed in submittal, but instead shall correct defects and resubmit for review.
  6. For Information Only: Submittal has not been reviewed but is being retained for informational purposes only.
  7. Void: Submittal is voided because it is no longer required or has been superseded by another submittal.
- C. Return one electronic copy of submittals to Contractor. Contractor shall make additional distribution as required.
- D. Review of submittals shall not relieve Contractor from responsibility for any variation from Contract Documents unless Contractor has, in writing, called Engineer's attention to such variation at time of submission, and Engineer has given written concurrence pursuant to Contract Documents to specific variation, nor shall any concurrence by Engineer or other reviewer relieve Contractor from responsibility for errors or omissions in submittals.

### 1.04 SHOP DRAWINGS SUBMITTALS

- A. Submit for review for limited purpose of checking for conformance to information given and design concept expressed in Contract Documents. Produce copies and distribute in accordance with article "Submittal Procedures" and for record documents purposes as described in Section 01 70 00.
- B. Designate in construction schedule, or in separate coordinated submittal schedule, dates for submission and dates that reviewed submittals will be needed.

- C. Do not ship equipment until return of shop test results by Engineer as "Reviewed" or "Reviewed as Noted"
- D. Make submittals promptly in accordance with approved schedule, and in such sequence as to cause no delay in Work or in work of other contractors.
- E. Present in clear and thorough manner, complete with respect to dimensions, design criteria, materials of construction, and like information to enable review of information as required.
- F. Details shall be identified by reference to sheet and detail, schedule or room numbers shown on Drawings.
- G. Indicate special utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
- H. Equipment which is identified on Contract Documents with tag number or name shall be identified on Shop Drawing with same tag.
- I. Schedule submittals to expedite Project. Coordinate submission of related items.
- J. For each submittal for review, allow 15 days to complete review process.
- K. Identify variations from Contract Documents and product or system limitations which may be detrimental to successful performance of completed Work.
- L. Shop Drawings shall be submitted in electronic format.
  - 1. Submittal Transmittal form (see pdf attached) shall be provided in Word format for each submittal. MSWord template will be provided after award.
  - 2. Text documents shall be submitted in .pdf or .doc format except for the shop drawing Transmittal Form.
  - 3. Drawings shall be submitted in .pdf or .tif format.
  - 4. Electronic submittal shall be suitable for reproduction in black and white.
  - 5. Samples may be submitted to Engineer at address given above.
- M. Submittals shall contain:
  - 1. Date of submission and dates of any previous submissions.
  - 2. Project title and number.
  - 3. Contract identification.
  - 4. Names of:
    - a. Contractor.
    - b. Supplier.
    - c. Manufacturer.
  - 5. Identification of product, with Specification section number and article number.
  - 6. Field dimensions, clearly identified as such.
  - 7. Relation to adjacent or critical features of Work or materials.
  - 8. Applicable standards, such as ASTM or Federal Specification numbers.
  - 9. Identification of deviations from Contract Documents.
  - 10. Identification of revisions on resubmittals.
  - 11. An 8" x 3" blank space for Contractor and reviewer stamps.
  - 12. Indication of Contractor's approval, initialed or signed, with wording substantially as follows:
 

"Contractor represents to Owner and Engineer that Contractor has either determined and verified all quantities, dimensions, field construction criteria, materials, catalog numbers, and similar data, or assumes full responsibility for doing so and has reviewed or coordinated each submittal with requirements of Work and Contract Documents."
- 13. If Contract Documents include performance specifications stating required results which can be verified as meeting stipulated criteria, so that further design by Contractor prior to fabrication is

necessary, Submittal depicting such design must be prepared under seal of professional engineer registered in appropriate state and Submittal shall be signed and sealed in accordance with applicable regulations and with following certification statement:

"I hereby certify that this engineering document was prepared by me or under my direct personal supervision, that I am a duly licensed professional engineer under laws of state of Iowa and I accept responsibility for adequacy of this document to meet criteria stipulated in Contract Documents."

N. Product Data:

1. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.
2. Indicate product utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.

O. Design data:

1. Submit for Engineer's knowledge as contract administrator or for Owner.
2. Submit for information for limited purpose of assessing conformance with information given and design concept expressed in Contract Documents.

P. Data sheets:

1. Data sheets may require information not known until Contractor's engineering is complete. Furnish estimated values based on good engineering judgment. Estimated values shall be identified by placement of "(est.)" next to value.
2. Data Sheets shall be updated and resubmitted by Contractor once final values are known.
3. Do not leave items blank or labeled "To Be Determined" or "Later."
4. Do not submit manufacturer Product Data instead of completed data sheets.

Q. Test reports:

1. Submit for Engineer's knowledge as contract administrator or for Owner.
2. Submit test reports for information for limited purpose of assessing conformance with information given and design concept expressed in Contract Documents.

R. Certificates:

1. When specified in individual specification sections, submit certification by manufacturer, installation/application subcontractor.
2. Indicate material or product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
3. Certificates may be recent or previous test results on material or product, but must be acceptable to reviewer.

S. Manufacturer's instructions:

1. When specified in individual specification sections, submit printed instructions for delivery, storage, assembly, installation, adjusting, and finishing, to Engineer for delivery to Owner in quantities specified for Product Data.
2. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.

T. Samples:

1. Samples for selection as specified in product sections:
  - a. Submit for aesthetic, color, or finish selection.
  - b. Submit samples of finishes \*from full range of manufacturers' standard colors, textures, and patterns for selection.
2. Submit to illustrate functional and aesthetic characteristics of product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
3. Include identification on each sample, with full Project information.
4. Submit number specified in individual Specification Sections; one of which will be retained by Engineer.

5. Reviewed Samples which may be used in Work are indicated in individual Specification Sections.
6. Samples will not be used for testing purposes unless specifically stated in specification section.

U. Proposed products list:

1. Within 15 days after date of Notice to Proceed, submit list of major products proposed to Engineer for use, with name of manufacturer, trade name, and model number of each product.
2. For products specified only by reference standards, give manufacturer, trade name, model or catalog designation, and reference standards.

V. Operations and maintenance manuals:

1. Designate in construction schedule, or in separate coordinated schedule, dates for submission and dates that reviewed operations and maintenance manuals will be needed.
2. Operations and maintenance manuals shall be presented in clear and thorough manner, complete with respect to dimensions, design criteria, materials of construction, and like information to enable reviewer to review information as required. Details shall be identified by reference to sheet and detail, schedule or room numbers shown on Drawings.

#### 1.05 RESUBMISSION REQUIREMENTS

- A. Make any corrections or changes in submittals required by Engineer and resubmit until stamped as either "Reviewed," "Reviewed as Noted," or "For Information Only."
- B. Text and depictions changed on Submittal shall be back-circled (clouded).
- C. Engineer will assume that portions of Submittal not back-circled have not been changed by Contractor from previous submission.
- D. Indicate revision number and date in document revision block.

#### 1.06 DISTRIBUTION

- A. Distribute reproductions of Shop Drawings which carry Engineer stamp as either "Reviewed" or "Reviewed as Noted" to:
  1. Record Documents file.
  2. Other affected contractors.
  3. Subcontractors.
  4. Supplier or fabricator.
- B. Distribute Samples which carry Engineer stamp as either "Reviewed" or "Reviewed as Noted" as directed by Engineer.

#### 1.07 CONSTRUCTION PROGRESS DOCUMENTATION

- A. Construction progress schedules: Submit initial schedules to Engineer within 15 days after date of Notice to Proceed. After review, resubmit required revised data within ten days.
- B. Form of schedules:
  1. Prepare schedules in form of horizontal bar chart.
    - a. Provide separate horizontal bar for each trade or operation.
    - b. Horizontal time scale: Identify first work day of each week.
    - c. Scale and spacing: To allow space for notations and future revisions.
    - d. Minimum sheet size: 11 x 17.
  2. Format of listings: Chronological order of start of each item of Work.
  3. Identification of listings: By major Specification Section numbers.
- C. Submittal schedule shall show dates for Contractor's submittals.

- D. Progress revisions:
  - 1. Indicate progress of each activity to date of submission.
  - 2. Show changes occurring since previous submission of schedule:
    - a. Major changes in scope.
    - b. Activities modified since previous submission.
    - c. Revised projections of progress and completion.
    - d. Other identifiable changes.
  - 3. Provide narrative report as needed to define:
    - a. Problem areas, anticipated delays, and impact on schedule.
    - b. Corrective action recommended, and its effect.
    - c. Effect of changes on schedules of other prime contractors.
- E. Distribution copies of reviewed schedules to:
  - 1. Subcontractors.
  - 2. Other concerned parties.
- F. Instruct recipients to report promptly to Contractor, in writing, any problems anticipated by projects shown in schedules.

#### 1.08 SUBMITTAL TRANSMITTAL FORM PROCEDURES

- A. Submittals shall be accompanied by completed copies of Submittal Transmittal form, bound herein. An electronic version of transmittal form is available and may be obtained from Engineer. Reproduce additional copies required.
- B. Submit one copy of transmittal form for initial submittals and resubmittals. Sequentially number transmittal form. Revise submittals with original number and sequential alphabetic suffix.
- C. Prior to submittal, complete information under heading "Contractor's Transmittal."
- D. Engineer will complete information under "Reviewer's Action."
- E. Do not include submittals for more than one section of Specifications on Submittal Transmittal form.
- F. Identify project title, location, and number and contract title and number.
- G. Identify preparer name and, submittal number, including preparer's submittal revision number.
- H. A brief description under "Title" should clearly identify specific application of equipment or material covered by Submittal, utilizing where possible same title used in Drawings and Specifications.
- I. Identify Specification Section number.
- J. Apply Contractor's stamp, signed or initialed certifying that review, approval, verification of products required, field dimensions, adjacent construction Work, and coordination of information is in accordance with requirements of Work and Contract Documents.

#### **PART 2 PRODUCTS**

NOT USED

#### **PART 3 EXECUTION**

NOT USED

END OF SECTION



**PART 1 GENERAL**

## 1.01 SERVICE ENGINEER RESPONSIBILITIES

- A. Contractor shall provide qualified Service Engineer(s), as necessary to:
  - 1. Supervise assembly of equipment.
  - 2. Inspect equipment after it is installed to assure that all details of installation are correct and that equipment is prepared for operation in accordance with manufacturer's instructions and recommendations.
  - 3. Check connections to equipment and adjust, or supervise adjustment of, control and indicating devices after equipment has been installed and connected.
  - 4. Fully instruct Owner's operating personnel in operation and maintenance of equipment.
- B. Presence of Service Engineer will in no way relieve Contractor of any responsibility assumed under Agreement.
- C. Work and abilities of Service Engineer shall be subject to review of Engineer. If Engineer determines that any Service Engineer is not properly qualified, Contractor shall replace Service Engineer upon written notification by Engineer.
- D. Contractor shall provide continuity in assignment of Service Engineer to Work. In event substitution of Service Engineer is made which is not at request of Engineer, substitute's time for "familiarization" shall be at Contractor's expense.

**PART 2 PRODUCTS**

NOT USED

**PART 3 EXECUTION**

NOT USED

END OF SECTION

## **PART 1 GENERAL**

### 1.01 PRODUCTS

- A. Provide products of qualified manufacturers suitable for intended use. Provide products of each type by a single manufacturer unless specified otherwise.
- B. Do not use materials and equipment removed from existing premises, except as specifically permitted by the Contract Documents.
- C. Provide interchangeable components of the same manufacturer for components being replaced.

### 1.02 PRODUCT DELIVERY REQUIREMENTS

- A. Transport and handle products in accordance with manufacturer's instructions.
- B. Promptly inspect shipments to ensure that products comply with requirements, quantities are correct, and products are undamaged.
- C. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage.

### 1.03 RECEIVING, UNLOADING AND STORING

- A. Contractor shall take custody of equipment and materials received and shall be solely responsible for damage and shortages until acceptance of Contractor's work by Owner.
- B. Unload equipment as soon as possible after arrival. Contractor shall pay freight railcar and truck demurrage, detention, and any other costs which may be billed to Owner due to failure to unload railcars or trucks within time required by freight companies.
- C. Use of bare wire rope slings for unloading and handling equipment and materials is prohibited without Owner approval.
- D. Equipment and materials shall be stored and maintained in accordance with manufacturer's recommendations and these specifications.
- E. Provide physical protection for equipment placed in storage.
  - 1. Stored equipment shall be supported above ground and shall be covered with canvas or other heavy-duty sheeting. Cover shall be securely fastened and shall be replaced if torn or otherwise damaged during storage period.
  - 2. Following items shall be stored in weatherproof, heated (minimum 50°F) building complete with bins for storage of small pieces of equipment. Storage inside of existing plant will not be available.
    - a. Electronic instruments and cabinets.
    - b. Electrical equipment with general purpose enclosures.
    - c. Insulation materials.
    - d. Rotating equipment.
    - e. Miscellaneous electronic equipment, gaskets, and small machined parts.
    - f. Instruments and controls.
    - g. Protection panels.
- F. Inspect stored equipment weekly and document activities performed. Renew protective coatings as necessary to preserve fitness of equipment.
- G. Contractor shall provide materials, equipment, and labor required for such storage and maintenance. Contractor shall be accountable for any deterioration of materials or equipment occasioned by

improper storage or maintenance, and shall recondition, repair, or replace any such materials or equipment without additional cost to Owner.

- H. Electrical equipment or equipment with any electrical components stored outdoors shall be supported at least 12" above ground.

#### 1.04 GENERAL STORAGE

- A. Store products immediately on delivery in accordance with manufacturer's instructions, with seals and labels intact. Protect until installed.
- B. Arrange storage in manner to provide access for maintenance of stored items and for inspection.

#### 1.05 ENCLOSED STORAGE

- A. Store products subject to damage by elements in substantial weathertight enclosures.
- B. Maintain temperature and humidity within ranges required by manufacturer's instructions.
- C. Provide humidity control and ventilation for sensitive products, as required by manufacturer's instructions.
- D. Store unpacked and loose products on shelves, in bins, or in neat groups of like items.

#### 1.06 EXTERIOR STORAGE

- A. Provide substantial platforms, blocking, or skids, to support fabricated products above ground; slope to provide drainage. Protect products from soiling and staining.
- B. For products subject to discoloration or deterioration from exposure to elements, cover with impervious sheet material. Provide ventilation to avoid condensation.
- C. Store loose granular materials on clean, solid surfaces such as pavement, or on rigid sheet materials, to prevent mixing with foreign matter.
- D. Provide surface drainage to prevent flow or ponding of rainwater.
- E. Prevent mixing of refuse or chemically injurious materials or liquids.

#### 1.07 MAINTENANCE OF STORAGE

- A. Periodically inspect stored products on scheduled basis. Maintain log of inspections, make available to Engineer on request.
- B. Verify storage facilities comply with manufacturer's product storage requirements.
- C. Verify manufacturer required environmental conditions are maintained continually.
- D. Verify surfaces of products exposed to elements are not adversely affected and if weathering of finishes is acceptable under requirements of Contract Documents.

#### 1.08 MAINTENANCE OF EQUIPMENT STORAGE

- A. For mechanical and electrical equipment in long-term storage, manufacturer's service instructions shall accompany each item, with notice of enclosed instructions shown on exterior of package.
- B. Service equipment on regularly scheduled basis, maintaining log of services; submit as record document.

## 1.09 PRODUCTS LIST

- A. Within 30 days after effective date of Agreement, submit complete list of major products which are proposed for installation electronically to Engineer.
- B. Tabulate products by Specification section number and title.
- C. For products specified only by reference standards, list for each such product:
  - 1. Name and address of manufacturer.
  - 2. Trade name.
  - 3. Model or catalog designation.
  - 4. Manufacturer's data:
    - a. Reference standards.
    - b. Performance test data.

## 1.10 PRODUCT OPTIONS

- A. For products specified only by reference standard, select product meeting that standard, by any manufacturer. For products specified by naming several products or manufacturers, select any one of products and manufacturers named which complies with Specifications.
- C. For products specified by naming one or more products or manufacturers and stating "or equal," submit request as for substitutions for any product or manufacturer which is not specifically named in accordance with Section 01 25 13.
- D. For products specified by naming only one product and manufacturer, there is no option and no substitution will be allowed.
- E. Whenever Specifications call for item by manufacturer's name and type and additional features of item are specifically required by Specifications, additional features specified shall be provided whether or not they are normally included in standard manufacturer's item listed.

## **PART 2 PRODUCTS**

NOT USED

## **PART 3 EXECUTION**

NOT USED

END OF SECTION

**PART 1 GENERAL**

## 1.01 CLOSEOUT PROCEDURES

- A. Submit written certification that Contract Documents have been reviewed, Work has been inspected, and that Work is complete in accordance with Contract Documents and ready for Engineer's review.
- B. Provide submittals to Engineer that are required by governing or other authorities.
- C. Submit final Application for Payment identifying total adjusted Contract Sum, previous payments, and sum remaining due.

## 1.02 PROJECT RECORD DOCUMENTS

- A. Maintain on site one set of the following record documents; record actual revisions to the Work:
  - 1. Drawings.
  - 2. Specifications.
  - 3. Addenda.
  - 4. Change Orders and other modifications to the Contract.
  - 5. Reviewed Shop Drawings, Product Data, and Samples.
  - 6. Manufacturer's instruction for assembly, installation, and adjusting.
- B. Ensure entries are complete and accurate, enabling future reference by Owner.
- C. Store record documents separate from documents used for construction.
- D. Record information concurrent with construction progress, not less than weekly.
- E. Specifications: Legibly mark and record at each product section description of actual products installed, including the following:
  - 1. Manufacturer's name and product model and number.
  - 2. Product substitutions or alternates utilized.
  - 3. Changes made by Addenda and modifications.
- F. Record Drawings and Shop Drawings: Legibly mark each item to record actual construction including:
  - 1. Field changes of dimension and detail.
  - 2. Details not on original Contract Drawings.
- G. Submit documents to Engineer for final Application for Payment.

## 1.03 SPARE PARTS AND MAINTENANCE PRODUCTS

- A. Provide spare parts, maintenance, and extra products in quantities specified in individual specification sections.
- B. Deliver to Project site; obtain receipt prior to final payment.

**PART 2 PRODUCTS**

NOT USED

**PART 3 EXECUTION**

NOT USED

END OF SECTION

## PART 1 GENERAL

### 1.01 OPERATING AND MAINTENANCE DATA REQUIREMENTS

- A. Operating and maintenance data shall be in English language.
- B. Compile product data and related information appropriate for Owner's maintenance and operation of products furnished under Agreement.
- C. Prepare operating and maintenance data as specified in this section and as referenced in other pertinent sections of Specifications.
- D. Instruct Owner's personnel in maintenance of products and in operation of equipment and systems.

### 1.02 QUALITY ASSURANCE

- A. Preparation of data shall be done by personnel:
  1. Trained and experienced in maintenance and operation of described products.
  2. Familiar with requirements of this section.
  3. Skilled as technical writers to extent required to communicate essential data.
  4. Skilled as draftsmen competent to prepare required drawings.

### 1.03 FORM OF SUBMITTALS

- A. Prepare data in form of an instructional manual for use by Owner's personnel.
- B. Format:
  1. Sheet size: 8-1/2" x 11" minimum.
  2. Paper: 20 lb minimum, white, for typed pages.
  3. Text: Manufacturer's printed data, or neatly typewritten.
  4. Drawings:
    - a. Provide reinforced punched binder tab, bind in with text.
    - b. Larger size drawings shall be folded to 8-1/2" x 11", and inserted into pockets.
  5. Provide fly-leaf for each separate product, or each piece of operating equipment.
    - a. Provide typed description of product, and major component parts of equipment.
    - b. Provide indexed tabs.
  6. Cover: Identify each volume with typed or printed title "OPERATING AND MAINTENANCE INSTRUCTIONS." List:
    - a. Title of Project.
    - b. Identity of separate structure as applicable.
    - c. Identity of general subject matter covered in manual.
  7. Binders:
    - a. Commercial quality 3-ring binders with durable and cleanable plastic covers.
    - b. Maximum ring size: 3".
    - c. When multiple binders are used, correlate data into related consistent groupings.

### 1.04 CONTENT OF MANUAL

- A. Neatly typewritten table of contents for each volume, arranged in systematic order.
  1. Contractor, name of responsible principal, address, and telephone number.
  2. List of each product required to be included, indexed to content of volume.
  3. List, with each product, name, address, and telephone number of:
    - a. Subcontractor or installer.
    - b. Maintenance contractor, as appropriate.
    - c. Identify area of responsibility of each.
    - d. Local source of supply for parts and replacement and list of recommended spare parts.

4. Identify each product by product name and other identifying symbols as set forth in Contract Documents, including nameplate information and shop order numbers for each item of equipment furnished.

B. Product data:

1. Include only those sheets which are pertinent to specific product.
2. Annotate each sheet to:
  - a. Clearly identify specific product or part installed.
  - b. Clearly identify data applicable to installation.
  - c. Delete references to inapplicable information.

C. Drawings:

1. Supplement product data with Drawings as necessary to clearly illustrate:
  - a. Relations of component parts of equipment and systems.
  - b. Control and flow diagrams.
2. Coordinate Drawings with information in Project record documents to assure correct illustration of completed installation.
3. Do not use Project record documents as maintenance Drawings.

D. Written text, as required to supplement product data for particular installation.

1. Organize in consistent format under separate headings for different procedures.
2. Provide logical sequence of instructions for each procedure.

E. Copy of each warranty, Bond, and service contract issued.

1. Provide information sheet for Owner's personnel, giving:
  - a. Proper procedures in event of failure.
  - b. Instances which might affect validity of warranties or Bonds.

#### 1.05 MANUAL FOR MATERIALS AND FINISHES

A. Submit 3 copies of complete manual in final form.

B. Contents, for architectural products, applied materials and finishes:

1. Manufacturer's data, giving full information on products.
  - a. Catalog number, size, composition.
  - b. Color and texture designations.
  - c. Information required for re-ordering special-manufactured products.

C. Contents, for moisture protection and weather-exposed products:

1. Manufacturer's data, giving full information on products.
  - a. Applicable standards.
  - b. Chemical composition.
  - c. Details of installation.
2. Instructions for inspection, maintenance, and repair.

D. Additional requirements for maintenance data: Respective sections of Specifications.

#### 1.06 MANUAL FOR EQUIPMENT AND SYSTEMS

A. Submit 3 hard copies and 1 PDF copy of complete manual in final form

B. Contents, for each unit of equipment and system, as appropriate:

1. Description of unit and component parts:
  - a. Function, normal operating characteristics, and limiting conditions.
  - b. Performance curves, engineering data, and tests.
  - c. Complete nomenclature and commercial number of replaceable parts.
2. Operating procedures:
  - a. Startup, break-in, routine, and normal operating instructions.
  - b. Regulation, control, stopping, shutdown, and emergency instructions.

- c. Summer and winter operating instructions.
    - d. Special operating instructions.
  - 3. Maintenance procedures:
    - a. Maintenance schedule:
      - 1) Show required maintenance for all equipment in package on one document, broken out by day, week, month, year, 5 years, etc.
      - 2) Set up as a checklist to be used by owner to verify maintenance is being completed.
    - b. Routine operations.
    - c. Guide to "trouble-shooting."
    - d. Disassembly, repair, and reassembly.
    - e. Alignment, adjusting, and checking.
  - 4. Servicing and lubrication schedule: List of lubricants required.
  - 5. Manufacturer's printed operating and maintenance instructions.
  - 6. Description of sequence of operation by control manufacturer.
  - 7. Original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.
    - a. Predicted life of parts subject to wear.
    - b. Items recommended to be stocked as spare parts.
  - 8. As-installed control diagrams by controls manufacturer.
  - 9. List of original manufacturer's spare parts, manufacturer's current prices, and recommended quantities to be maintained in storage.
  - 10. Other data as required under pertinent sections of Specifications.
- C. Content, for each electrical and electronic system, as appropriate.
- 1. Description of system and component parts:
    - a. Function, normal operating characteristics, and limiting conditions.
    - b. Performance curves, engineering data, and tests.
    - c. Complete nomenclature and commercial number of replacement parts.
  - 2. Circuit directories of panelboards:
    - a. Electrical service.
    - b. Controls.
    - c. Communications.
  - 3. As-installed color-coded wiring diagrams.
  - 4. Operating procedures:
    - a. Routine and normal operating instructions.
    - b. Sequences required.
    - c. Special operating instructions.
  - 5. Maintenance procedures:
    - a. Routine operations.
    - b. Guide to "trouble-shooting."
    - c. Disassembly, repair, and assembly.
    - d. Adjustment and checking.
  - 6. Manufacturer's printed operating and maintenance instructions.
  - 7. List of original manufacturer's spare parts, manufacturer's current prices, and recommended quantities to be maintained in storage.
  - 8. Other data as required under pertinent sections of Specifications.
- D. Prepare and include additional data when need for such data becomes apparent during instruction of Owner's personnel.
- E. Additional requirements for operating and maintenance data: Respective sections of Specifications.

## 1.07 SUBMITTAL SCHEDULE

- A. Preliminary draft:
  - 1. Provide 2 copies with shipped equipment.
  - 2. Submit 2 copies to Owner.
  - 3. Submit 2 copies to Engineer of proposed formats and outlines of contents prior to start of Work. Engineer will review draft and return 1 copy with comments.

- B. Submit 1 copy of completed data in final form 15 days prior to final inspection or acceptance. Copy will be returned after final inspection or acceptance, with comments.
- C. Submit specified copies of approved data in final form 10 days after final inspection or acceptance.

**PART 2 PRODUCTS**

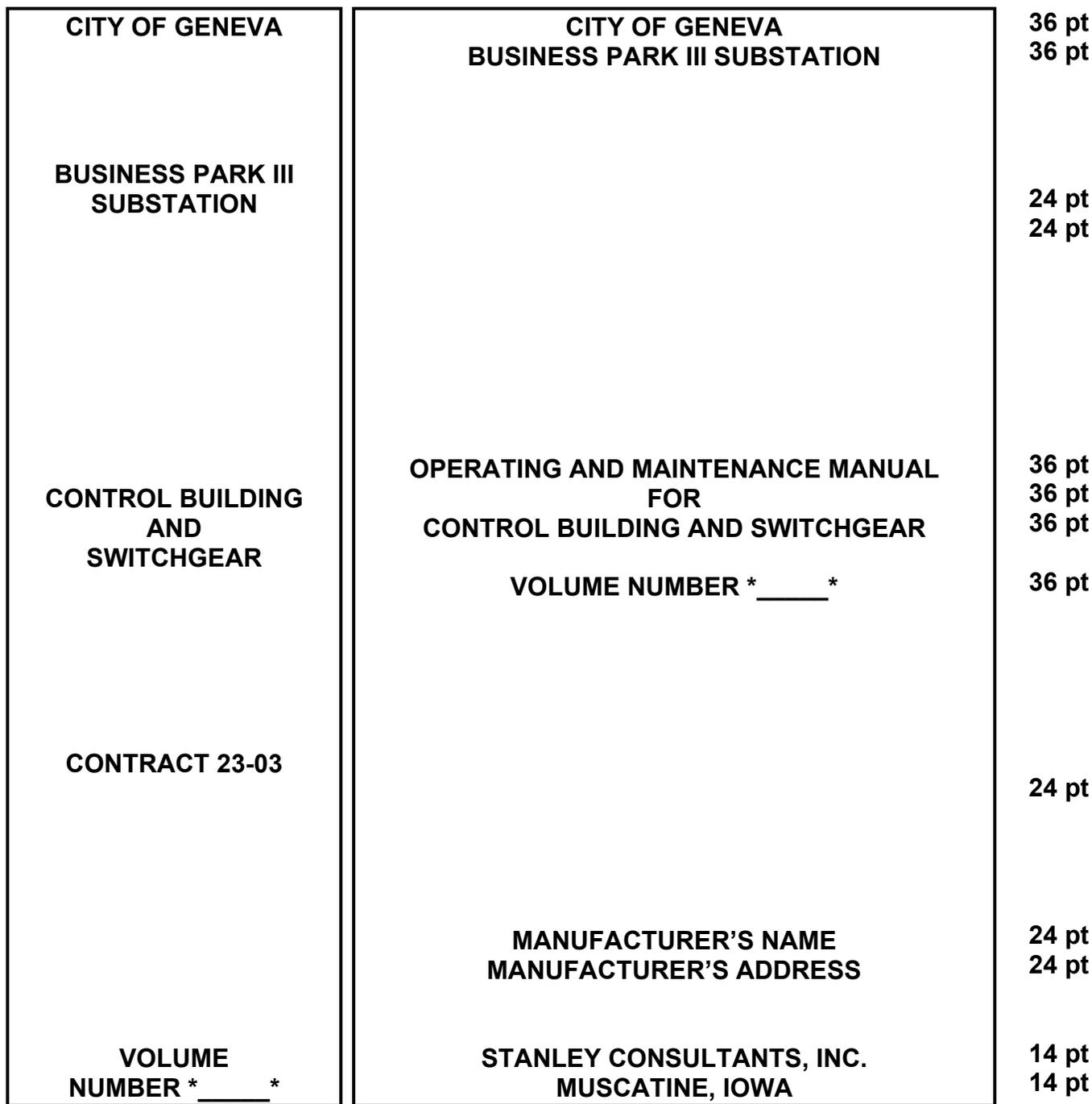
NOT USED

**PART 3 EXECUTION**

NOT USED

END OF SECTION

# OPERATING AND MAINTENANCE MANUAL COVER DIAGRAM



**SPINE**

**COVER**

1. Imprinting shall be in Arial font.
  2. Spine printing shall be 12-point.
  3. Cover printing shall be in point sizes indicated.
- \* If more than one volume is necessary, imprint cover with volume numbers.

## **PART 1 GENERAL**

### **1.01 SECTION INCLUDES**

- A. Furnishing, testing, and delivery of one prefabricated and/or prepackaged substation control building complete with equipment as shown, including:
  - 1. Medium voltage switchgear.
  - 2. Batteries and chargers.
  - 3. Dc and ac panels.
  - 4. Field wiring interface panels.
  - 5. Cable tray, conduit, wireway, lighting, wiring, HVAC and miscellaneous equipment.

### **1.02 SUBMITTALS**

- A. Product Data:
  - 1. Catalog data and parts lists on equipment.
  - 2. Two bound sets of drawings, catalog data, and parts list. Ship with control buildings.
- B. Shop Drawings:
  - 1. Prepare Shop Drawings and calculations under seal of Professional Structural Engineer.
  - 2. Submit within 30 days after Notice to Proceed: Base frame and foundation and anchor bolt requirements.
  - 3. Submit within 45 days after Notice to Proceed:
    - a. Control building outline, plan, and elevations and equipment placement within control building. Provide detail outline and structural drawings of exterior terminal cabinet.
    - b. Wiring point schedule for terminal blocks in interior terminal cabinet.
    - c. Wiring diagrams of all equipment and panels.
- C. Quality assurance data:
  - 1. Factory testing plan demonstrating and documenting required factory test steps and operations.
  - 2. Test results:
    - a. Document "as-tested" condition.
    - b. Include printouts, oscillographs, event logs, and phasor diagrams downloaded from relays, meters, and controls.
    - c. Provide 6 certified copies of test data and reports for tests (5 hard copies and 1 electronic copy).
    - d. Provide typewritten test reports listing circuit or equipment tested, date, equipment used, person or persons performing and witnessing tests, and results of tests.
  - 3. Unloading and handling instructions.

### **1.03 QUALITY ASSURANCE**

- A. Control building, except where specifically stated otherwise, shall conform to the latest applicable standards of AISC, ANSI, ASCE, ASTM, IEEE, NEC, and NEMA.
- B. Test equipment shall have recent calibration checks by equipment manufacturer or authorized facility to assure accuracy of commissioning process.
- C. Test shall be performed by qualified test engineer.

### **1.04 DELIVERY, STORAGE AND HANDLING**

- A. Provide suitable crating, blocking, anchoring, and supports so equipment withstands normal domestic shipping and handling shocks and vibration.

## 1.05 EXISTING CONDITIONS

- A. Ambient temperatures: Not to exceed 42°C.
- B. Expected minimum temperature: -25°C.

## 1.06 WARRANTY

- A. Assembled control buildings shall be guaranteed completely weathertight under all weather conditions for a period of five years after acceptance of control building by Contractor.
- B. Leaks which occur during warranty period, whether through roofs, floors, walls, doors, windows, or accessory equipment shall be repaired at no cost to Owner.

## PART 2 PRODUCTS

### 2.01 DESIGN REQUIREMENTS

- A. Overall control building dimensions and layout indicated are nominal and may vary slightly to meet Contractor's standard sizes, subject to approval by Owner.
- B. Interior of control building shall be "clear span" structure with a minimum floor to ceiling height of 10'.
- C. Preferred location of doors shall be as indicated. Position of doors may be adjusted slightly to best fit Contractor's standard design, subject to approval by Owner.
- D. Design loads:
  - 1. Building shall be designed in accordance with AISC and result in a rigid structure that will maintain its shape and alignment against all design loads as specified by ASCE 7-16, "Minimum Design Loads for Buildings and Other Structures" for wind, snow, and earthquake loads and be classified as Risk Category II for determination of importance factors.
  - 2. Dead load:
    - a. Design ceiling to support four-foot LED light fixtures attached to lighting raceway channel and cable tray system loaded to 87 lb/ft.
    - b. Design base frame and floor to support a minimum uniform load of 250 lb/sq ft.
    - c. Floor and walls shall be capable of supporting equipment specified and/or shown on Drawings.
    - d. Snow loads:
      - 1) Ground snow load: 35 psf.
      - 2) Snow load exposure factor due to wind effects shall not be less than 0.9.
      - 3) Snow load thermal factor shall not be less than 1.05.
    - e. Wind loads:
      - 1) Basic strength level wind speed: 115 mph.
      - 2) Exposure category: C.
  - 3. Seismic:
    - a. Seismic peak acceleration coefficients (ASCE 7-16 Figure 22-1 and 22-2):  $S_s = 0.055$ ,  $S_1 = 0.039$ .
    - b. Site Class D.

### 2.02 MATERIALS AND CONSTRUCTION

- A. Base:
  - 1. All-welded construction of ASTM A36, A53, A500, or A992 structural steel members.
  - 2. Deflection during lifting shall not exceed 0.25" per 10'. Base shall be designed for mounting on concrete wall or piers.

3. Base shall have removable lifting devices to facilitate handling and installation. Lifting devices shall be placed symmetrically around center of gravity of control building. Center of gravity shall be figured with all internal and external equipment in place.
  4. Provide clip plates for anchoring base frame to foundation.
- B. Floor: Minimum of 3/16" steel plate welded to base frame.
- C. Frame:
1. Frame with minimum 3" square ASTM A500 tubular steel with all-welded connections to provide rigid moment-resisting frame.
  2. Openings shall be similarly framed with 3" square tubular steel.
- D. Walls:
1. Exterior and interior walls: 16-gage minimum, paint-quality galvanized steel.
  2. Design interior walls to support interior loads of 400 lb/lin ft of wall length.
- E. Roof and ceiling:
1. Exterior of roof: 16-gage minimum, paint-quality galvanized steel panels, rated for 85 psf plus 250 lb concentrated load at center of any panel. Roof shall be sloped a minimum of 2°.
  2. Ceiling: Formed 16-gage minimum paint quality galvanized steel panels.
- F. Doors:
1. Each 7'-0" (2 m) high x 3'-6" (1.1 m) wide clear opening.
  2. Equip door with nonlocking knob and latch both inside and outside.
  3. Equip with panic hardware.
  4. Provide doors with deadbolt lock keyed to Owner's master key. Information shall be provided after award of Contract.
  5. Provide door with door alarm providing hard contact status to RTU if door is open.
- G. Battery area:
1. Comply with requirements of NESC Section 14 and NEC Article 480 for battery rooms.
  2. Provide one exhaust fans in battery area with cycle timers. Cycle timer shall be adjustable from 2-55 minutes per hour. In addition, provide "On-Off-Auto" switch.
  3. Provide portable eye wash equipment.
- H. Wall louvers:
1. 25" high x 12" wide, adjustable.
  2. Cover outside of louvers with 1/4" x 1/4" wire mesh.
  3. Provide 2 air filters sized 25"H x 12"W x 1"D for each louver.
  4. Provide insulated covers with gaskets for each louver for use in cold weather. Covers shall have fasteners to secure them in place and also provide a weathertight seal.
- I. Wall seams and areas where metal-to-metal contact is made shall be calked with butyl rubber or equivalent. Roof seams shall be sealed to assure watertightness.
- J. Insulation:
1. Polyurethane insulation providing R-19 value shall be provided in roof and exterior walls.
  2. Install 3" of foam sprayed-on insulation on underside of floor providing R-19 value. Cover insulation with 1/16" galvanized steel panel.
  3. Insulation system shall be durable, weatherproof, insectproof, and rodentproof.
- K. Lighting:
1. Equip building with receptacles, LED lights, and 3-way switches at each entrance door. Provide minimum level of 50 foot candles horizontally at 30" above floor level and vertically at 5' from floor level on control panels.
  2. Emergency lighting will be powered from 125-volt dc system with a switch and timer to prevent inadvertent operation for more than 3 hours.

- L. Provide LED wall pack outside light with photocell at side of each entrance to building and 5' maximum from door. Provide switch inside door for each light.
- M. HVAC:
1. Provide commercial-type, wall mounted HVAC unit(s) to maintain interior high temperature of 104°F and electric-type, wall-mounted heater(s) to maintain interior low temperature of 60°F, taking into consideration the site conditions, heat load present, and future conditions when operating at 100% capacity. Nominal temperature shall be 78°F.
  2. Equipment shall include wall-mount unit(s), lockable circuit breaker or disconnect switch, manual thermostat, and a one inch disposable air filter.
  3. HVAC system shall consist of 2 independent units each sized at 60%, when system is operating at 100%. Provide system with electronic automatic changeover thermostat.
  4. Controls:
    - a. High pressure control.
    - b. Low pressure control.
    - c. Low ambient control.
    - d. Compressor anti-cycle relay.
    - e. Alarm relay.
  5. Condenser and evaporator coils shall be phenolic coated.
- N. Provide 30" x 60" wall mounted fold down table and drawing storage rack.
- O. Paint:
1. Prepare surfaces in accordance with SSPC.
  2. Coat interior wall and ceiling panels with minimum of 2-1/2 mil of white industrial epoxy paint.
  3. Coat exterior wall and roofing panels and base with a minimum of 1 mil of wash primer and finished with a minimum of 3 mil of Hi-Build aliphatic polyurethane paint.
  4. Floor shall be epoxy primed and coated with a gray nonskid, scuff-resistant urethane coating.
  5. Exterior color of building: Selected after award of contract from manufacturer's standard colors.

## 2.03 ELECTRICAL AUXILIARY SYSTEMS

- A. Circuit breaker panels:
1. Panels: Dead-front with molded case breakers, mounting location as shown. Box shall be NEMA 1 galvanized steel with painted steel front, hinged door, catch, cardholder, nameplate, lock, and keys.
  2. Circuit breakers: Bolted-on thermal-magnetic protective, quick-make, trip free from handle, trip indicating type.
    - a. Molded-case, thermal-magnetic, bolt-in, individually front replaceable, and shall visibly indicate "On," "Off," and "Tripped" position.
    - b. Branch circuit breakers used for lighting circuits shall be switch duty rated, "SWD."
    - c. Breakers having multiple poles shall be manufactured as common trip type.
    - d. Interrupting rating shall be not less than interrupting rating of panelboards, and not series rated to achieve required short circuit interrupting rating.
    - e. Provide handle clips for 10%, or minimum of 2 whichever is greater, for breakers to prevent casual operation. If no breakers are indicated for installation, then provide on breakers labeled as spare.
    - f. Breakers, and provisions for future breakers, shall be provided in quantities, poles, and ampere ratings shown on Drawings.
    - g. Molded-case circuit breakers used in ac and dc panelboards and ac load centers shall be bolt-on type, G-frame size.
      - 1) Typed panel directory located inside door shall have panel and circuits function clearly identified. Handwritten panel schedules not allowed.
      - 2) Provide main and neutral buses insulated from cabinet with separate ground bus. Bus material shall be copper. Ground bus shall be similar to neutral bus in size and number of conductor terminating positions.

- a) Bond ground bus to panelboard enclosure by copper ground strap or copper conductor of appropriate size. Bond neutral bus to ground bus in accordance with requirements of NEC.
  - b) Grounding bus connection to enclosure by removable screws not allowed.
  - c) Bus shall be capable of terminating clamp type lugs for neutral cable in each supply conduit, and connections for neutral cable in each load circuit.
  - d) Neutral bus shall be fully rated, unless specified otherwise.
  - e) Isolated ground panelboards: As specified above, except isolated ground bus shall be bonded, by insulated ground conductor, back to source of separately derived system. Do not bond isolated ground bus to panelboard enclosure unless this is first point of grounding for separately derived system.
3. Manufacturer: Square-D, or equal.
- B. Battery and charger:
- 1. Battery:
    - a. Quantity: 1.
    - b. Type: Flooded lead-selenium.
    - c. Number of cells: 60.
    - d. Capacity: Size per load requirements.
    - e. Battery accessories:
      - 1) One complete set of cell numbers.
      - 2) Intercell connectors and cable connectors as required.
      - 3) Plastic trays and absorbent pillows for battery spill prevention.
    - f. Housing: 2 step rack Zone 2A seismic construction for each set of batteries.
    - g. Covers: Removable transparent safety shield to cover all electrical connections and live parts.
    - h. Battery Casing: Use multi-cell blocks when possible to reduce footprint.
    - i. Manufacturer: SBS.
  - 2. Battery charger, compatible with battery:
    - a. Type: Silicon diode, automatic, adjustable, self-regulating, with battery eliminator feature.
    - b. Quantity: 1
    - c. Ratings:
      - 1) Input: 240-volt, 60 Hz, single-phase.
      - 2) Output voltage: Variable, approximately 120 to 140-volts dc; filtered to limit ripple to 30 millivolts.
      - 3) Ac input breaker and dc output breaker shall be included integral to the charger.
    - d. Output current: Capacity as required to fully charge a totally discharged battery in 8 hours or less while simultaneously supplying continuous loads.
    - e. Voltage regulation: 1.0% maximum from 0 to 100% load.
    - f. Accessories:
      - 1) Output ammeter and voltmeter.
      - 2) Variable control for adjusting output voltage.
      - 3) 72-hour timer for controlling "equalizing" charge.
      - 4) Input ac circuit breaker
      - 5) Output dc circuit breaker.
      - 6) Low dc alarm relay and indicating light.
      - 7) Ac failure relay and indicating light.
      - 8) Ground detector relay to close alarm contacts upon occurrence of dc system ground.
      - 9) Ground detector indicating light.
      - 10) Contact shall start exhaust fan in battery room when charger is on equalize.
    - g. Manufacturer: LaMarche, or equal.
- C. Ac panels:
- 1. Rating: 120/240-volt, single-phase, 3-wire, 200-ampere mains minimum, 14,000 AIC.
  - 2. Size: 18-position minimum.
  - 3. Quantity: 1.

4. Circuit breakers: As required with spare positions filled with spare circuit breakers.
5. Manufacturer: Square-D, or equal.

D. Main disconnect:

1. Rating: 120/240 volts, single-phase, 200-ampere.
2. Quantity: 2.

E. Ac transfer switch:

1. Rating: 120/240 volts, single-phase, 200-ampere.
2. Quantity: 1.
3. Type: Manual.

F. DC panels:

1. Rating: 125-volts dc, 2-wire, 200-ampere main minimum.
2. Quantity: 1.
3. Circuit breakers: As required with spare positions filled with spare circuit breakers.
4. Manufacturer: Square-D, or equal.

G. High temperature alarm:

1. Provide hard contacts to provide status to RTAC
2. Rating: 125-volts dc, 15A Contacts
3. Set at 85°F
4. Manufacturer: Dayton, or equal.

H. Low temperature alarm:

1. Provide hard contacts to provide status to RTAC
2. Rating: 125-volts dc, 15A Contacts
3. Set at 50°F
4. Manufacturer: Dayton, or equal.

I. Grounding and bonding:

1. Provide ground bus, grounding facilities, and grounding and bonding connections in accordance with ANSI C37.20 and NEC.
2. Provide NEMA 2-hole ground pad at each corner of building.

## 2.04 SHOP ASSEMBLY

- A. Provide as shown on Drawings. Substitution of equipment shall be approved by Owner prior to installation.
- B. After assembly and installation of electrical equipment, perform tests as required to assure that equipment functions properly.
- C. Provide terminal cabinets mounted on interior of control buildings. Provide full length double doors with 3-point latch suitable for locking. Inside of box shall be painted white; exterior shall be painted same as control building exterior. Provide interconnecting wiring between switchgear, ac and dc panels, SCADA RTUs, and terminal cabinet.

## 2.05 WIRING

A. Indoor lighting and power:

1. NEC Type THW rated 600-volt, moisture and heat-resistant thermoplastic, 75°C operating temperature. Solid for No. 12 AWG and smaller; stranded for No. 10 AWG and larger.
2. Indoor building wiring shall be laid out such that there is no more than one wire on a terminal.
3. Splices shall only be permitted for receptacle and lighting circuits at designated junction boxes.
4. Provide separate grounding conductor.
5. Color code:

- a. Black - Phase (X).
  - b. White - Neutral (N).
  - c. Red - Phase (Y).
  - d. Green - Grounding conductor.
- B. Multiconductor control cable:
1. Use for wiring between termination cabinet and equipment located in building.
  2. Multi-conductor, rated 600-volt, cross-linked poly-ethylene insulation with overall copper shield and neoprene sheath.
  3. Conductors shall be annealed coated copper in accordance with ASTM B33 or B189 and shall be either 7-strand or 19-strand.
  4. Shall be designated Type TC for installation in cable trays.
  5. Color coding shall be compounded in insulation, not surface coated.
  6. Color coding to follow NEMA WC-57/IECA S-73532 Method 1, Table EI.
  7. Ac color code:
    - a. Black - Phase (X).
    - b. White - Neutral (N).
    - c. Green - Grounding conductor.
  8. Dc color code:
    - a. Black – Positive.
    - b. White – Negative.
  9. CT and VT color code:
    - a. Black – Phase A.
    - b. Red – Phase B.
    - c. Green – Phase C.
    - d. White – Neutral.
- C. Terminations:
1. Conductor terminal connectors shall be insulated, ring tongue, compression type connectors properly sized for conductor and terminal.
    - a. Connectors shall be constructed of copper and shall be tin-plated.
    - b. Interior surface of connector wire barrel shall be serrated; exterior surface of connector wire barrel shall be furnished with crimp guides.
  2. Insulated terminal connectors shall be used.
  3. Connections requiring disconnect plug and receptacle type devices shall be provided with factory-terminated conductors on each plug and receptacle.
    - a. Plugs and receptacles shall be factory wired into junction boxes containing terminal blocks for external connections.
    - b. Conductors on disconnect portion of plug-receptacle assemblies shall be in common jacket.
  4. Prior to shipment of equipment, remove temporary wiring installed in factory for equipment testing.
  5. Current transformers shall terminate on shorting type terminal blocks. Ship with shorting jumpers installed.
- D. Identification and labeling:
1. Provide conductor identification sleeve on each end of each internal conductor. Mark each sleeve with terminal end and opposite end destination identification with nonsmudging, permanent black ink. Sleeves shall be non-shrinking, not less than 1/2" long.
  2. Permanently label each terminal block, terminal, conductor, relay, breaker, fuse block, and other auxiliary devices to coincide with identification indicated on manufacturer's drawings.
- E. Category 6 communication cable circuited in tray, conduit or used for field wiring internal to cabinets.
1. Conductor: Solid, bare copper minimum No. 23 AWG.
  2. Insulation: Fluorinated ethylene propylene (FEP) insulated singles.
  3. Insulated conductors: Unshielded, twisted 4 pairs enclosed with spline fluorinated ethylene propylene shall be integrally installed to allow easy removal of jacket material.

4. Each communication cable shall be identified by means of surface ink printing indicating manufacturer, model, or catalog number. Cable shall meet TIA/EIA Draft 9A CAT6.
  5. Cables shall be capable filler material.
  6. Cable assembly shall be covered with clear "Flamearrest" jacket, sequentially marked at 2' (600 mm) intervals. Ripcord of passing UL flame test Type CMP.
  7. Manufacturer: Belden "DataTwist" 7852A.
- F. Twin-axial communication cable installed indoors in cable tray and conduit:
1. Voltage rating: 600-volt.
  2. Conductor: One pair, bare copper, No. 18 AWG with 7 x 26 stranding.
  3. Insulation: Flame-retardant polyolefin.
  4. Assembly: Aluminum foil-polyester tape shield with No. 20 AWG, 7 x 28 stranded tinned copper drain wire with 100% shield coverage, and tinned copper braid shield with minimum 55% coverage. Overall cable assembly shall be Type "PLTC."
  5. Jacket: Polyvinyl chloride (PVC).
  6. Cable shall be UL-listed 1581 for flame resistance.
  7. Temperature rating shall be 75°C in dry maximum operating temperatures in dry locations.
  8. Manufacturer: Belden, "DataTray" 600-volt, industrial twin-axial cable, Catalog Number 3072F.

## 2.06 SPLICES AND TERMINATIONS

- A. Splices, except as in lighting and general-purpose power circuits specified below, not allowed unless specifically indicated on Drawings or required for connection to equipment.
- B. Temperature rating of splices and terminations shall be rated no less than 75°C.
- C. Splices allowed shall be UL-listed for intended use, location, and voltage by manufacturer.
- D. Termination of conductors to equipment with bolted lighting and general-purpose power circuits.
  1. Provide wire and cable connectors of high-conductivity, corrosion-resistant material with contact area equal to at least current carrying capacity of wire or cable.
  2. General lighting and general-purpose building power circuits:
    - a. Twist-type, insulated spring connectors for splices on solid or stranded conductors smaller than No. 6 AWG.
    - b. Use indent, hex screw, or bolt clamp-type connectors, with or without tongue for splices on solid or stranded conductors No. 6 AWG and larger.
    - c. Apply insulating 600-volt tape.
- E. Insulating tapes and compounds for terminations connections:
  1. Use compression type lugs:
  2. Compression lugs for cables 250 kcmil and larger shall have at least 2 clamping elements of compression indents, and provision for at least 2 bolts for joining to apparatus terminals.
  3. Crimping hand tools used for securing conductors in compression type connectors or terminal lugs shall be made for purpose and conductor sizes involved.
  4. Crimping tools shall be ratchet-type preventing tool from opening until crimp action is completed.
  5. Tools shall be product approved by connector manufacturer.
- F. Terminals:
  1. Conductors No. 10 AWG and smaller: Marathon 1500 Series.
  2. Conductors larger than No. 4/0 AWG: Terminate to tinned copper bus bar drilled and tapped with standard NEMA sized and spaced holes.
- G. Coordinate sizes and types of conductor terminals for 600-volt power cable terminations in equipment with furnished conductor and terminal connector data.

- H. Provide 600-volt rated terminal blocks for instrumentation and control conductors for connection to circuits external to specified equipment, and for internal circuits crossing shipping splits.
  - 1. Use crimp-on terminals matching termination point terminations in manufacturer-furnished panels. Splices not allowed.
  - 2. Terminal blocks for thermocouple extension wire: Buchanan "Medium Duty" with thermocouple contacts or Marathon 200 Series with Omega Engineering, Inc. Type TL terminal lugs.
  - 3. Furnish with white marking strips.
  - 4. Where permitted by safety codes and standards, provide without covers. Neither step-type terminal blocks nor angle mounting of terminal blocks allowed.
  - 5. Fuses may be mounted on terminal blocks.
  - 6. Maximum 2 conductors in accordance with termination point.
- I. Terminal blocks for external connections shall leave from centrally mounted location, not from individual devices in enclosure.
  - 1. Group-in instrument and control compartment for easy accessibility.
  - 2. Provide sufficient space on each side of each terminal block to allow orderly arrangement of leads to be terminated on block.
  - 3. Locate auxiliary equipment in compartments, enclosures, or junction boxes so service personnel will have direct access without interference from structural members and instruments without removal of barriers, cover plates, or wiring.
  - 4. Do not mount terminal blocks in compartments containing cables or buses operating at voltages above 600 volts.
  - 5. Size for wire sizes of incoming conductors as necessary.
- J. Install shorting-type terminal blocks nearest current transformer in accessible location for each set of CTs supplied with equipment furnished, no other shorting-type terminal blocks allowed, unless specified otherwise.
- K. Install din-rail mounted miniature circuit breakers (MCB) for protection of VT circuits on line and load side. Breakers shall have alarm contacts wired to terminal blocks.
- L. Terminate each conductor in multiconductor control cable. Provide 10% spare terminals for circuit modifications.
- M. Each control switch and lockout relay shall have minimum of 4 spare normally open and 4 spare normally closed contacts wired out to terminal blocks.
- N. Circuit identification number listed on either circuit schedule or panel schedule shall be used to identify circuit, positioned as near as possible to end of each conductor on multiple single wire circuits and on cable jacket for multiconductor cables.
- O. Cable designations shall be visible after installation without requiring physical movement of cable.

## 2.07 CABLE TRAY

- A. Provide cable tray with arrangement shown on Drawings. Size as required.
- B. Construction:
  - 1. Material: Roll-form structural steel in accordance with ASTM A570 or ASTM A611; hot-dip galvanized after fabrication in accordance with ASTM A386.
  - 2. Ladder-type with solid longitudinal side rails.
  - 3. Side rails: Nominally 4" high of either channel or I-beam shape.
  - 4. Edges: Finished smooth to prevent injury to cables.
- C. Tray shall meet NEMA 8C load/span designation (minimum).

- D. Internal bend radius 30" wide tray: 36".
- E. Provide supports, couplings, elbows, tees, dropouts, and other fittings required. Support assemblies shall support at least 200% of tray system allowable load.
- F. Supports: Trapeze-type, galvanized.
- G. Provide bolts, clamps, and other required mounting hardware.
- H. Standard: NEMA VE1.
- I. Manufacturer: Husky/Burndy, T.J. Cope, B-Line Systems.

## 2.08 CONDUIT

- A. Conduit within control buildings shall be Type EMT or rigid galvanized steel (RGS).
- B. Conduit shall be neatly installed in accordance with NEC Article 348.
- C. Rigid galvanized conduit terminating in a wireway shall have plastic bushings installed on threaded ends.

## 2.09 WIREWAY

- A. Provide wireways with hinged covers. Wireway shall extend around building perimeter and shall be mounted at junction of walls and ceiling. Wireway shall contain interior building wiring.
- B. Description: NEMA 1; minimum 16-gage steel with baked enamel finish, screw-fastened hinged cover with captive screws.
- C. Provide supports, closure plates, and other fittings required.
- D. Standard: UL 870.
- E. Manufacturer: Square D, Hoffman Engineering Co.

## 2.10 ELECTRICAL ENCLOSURES

- A. Size junction boxes, pull boxes, and enclosures in accordance with requirements of NEC. Junction boxes and pull boxes 4" (100 mm) trade size or smaller in any dimension shall be galvanized malleable iron, or cast ferrous metal NEMA rated for installed location. Do not use concentric knockouts.
- B. Junction boxes, pull boxes, and electrical enclosures 4" (100 mm) trade size and larger in any dimension shall be as follows, unless required otherwise.
  - 1. NEMA rating for electrical enclosures installed in nonhazardous locations:
    - a. Indoor:
      - 1) Dry environmentally controlled area: NEMA 12.
      - 2) Noncorrosive wet or hose-down area: NEMA 4.
      - 3) Corrosive wet or hose-down area: NEMA 4X
    - b. Outdoor:
      - 1) Corrosive area: NEMA 4X.
      - 2) Noncorrosive area hose-down or spray area: NEMA 4.
      - 3) Noncorrosive area nonhose-down area NEMA 3R.
  - 2. Construct noncast-metal electrical enclosures from reinforced steel plate capable of supporting devices mounted on or within enclosure without deflection. Steel plate thickness shall conform to UL requirements.

3. Enclosures shall be of adequate strength to support mounted components during shipment and installation.
  4. Conduit entrances shall be field drilled.
  5. Electrical enclosures located in outdoor, wet, or hose down areas shall be provided with space heaters. Provide space heaters completely wired within enclosure. Provide following:
    - a. Space heater.
    - b. Adjustable thermostat with set point temperature indicator.
    - c. One miniature circuit breaker protective device.
    - d. Space heaters, thermostat, and protection shall not interfere with cable into or out of enclosure, or with maintenance or replacement of devices within enclosure.
    - e. Use of space heaters shall not change or discolor any painted surface.
    - f. Space heater capacity shall maintain enclosure internal temperature above dew point under specified service conditions.
    - g. Space heaters shall be rated for 240 volts ac minimum, and shall be sized for operation on applied voltage of 120 volts ac.
- C. Outdoor electrical enclosures with ventilating openings:
1. Louver on outdoor electrical equipment and protect in accordance with NEMA type.
  2. Equip openings on outdoor electrical equipment with fine mesh filters and stainless steel bug screens.

## 2.11 OUTLET BOXES

- A. Outlet boxes for concealed wiring systems shall be sheet metal, galvanized or cadmium plated.
- B. Boxes shall be minimum 4" (100 mm) square, 1-1/2" (38 mm) deep, sized to accommodate devices and number of conductors in accordance with NEC. Equip with plaster ring or cover as necessary for flush finish.
- C. Exposed conduit systems shall have surface-mounted boxes unless specified otherwise. Boxes for exposed wiring in nonhazardous, noncorrosive, and nonweatherproof locations shall be malleable iron, cadmium finish or cast aluminum alloy, minimum 4" (100 mm) square, 1-1/2" (38 mm) deep.
- D. Enclosures shall be as required for areas in which they are installed and as specified.
  1. Boxes shall be installed flush in masonry construction and be designed for intended use.
  2. Recessed boxes where fixture will be mounted shall be minimum 4" (100 mm) and octagonal in shape or 4" (100 mm) square by 1-1/2" (38 mm) deep with round plaster ring. Where used as junction box, boxes shall be minimum 4" (100 mm) square by 2-1/8" (53 mm) deep.
  3. Outlet boxes for wall concealed telephone and signaling systems shall be 4" (100 mm) square by 1-1/2" (38 mm) deep, minimum. Furnish with plaster ring and cover plate.
  4. Floor boxes for floor outlets shall be cast-metal with threaded conduit entrances, brass flange ring and brass duplex flap cover plate. Boxes shall be watertight and have leveling and adjustment screws for adjusting cover plate to finished floor. Boxes shall be minimum 4" (100 mm) diameter and 3-1/2" (88 mm) deep with approved gasket or seal between adjusting ring and box.
  5. Floor outlets for combination signaling, data, and power outlets shall be constructed of steel base, PVC housing, and steel bracket to allow feed through wiring as well as activation load-bearing support. Box construction shall meet UL 514A requirements.
    - a. Entire housing shall be removable for unrestricted access.
    - b. Once assembled, PVC housing shall be capable of carrying 6,000 lb load.
    - c. Coordinate outlet requirements with communication system requirements.
  6. Floor boxes in 2-hour rated floors shall be secured in cored hole and shall be UL classified and listed for 2-hour rated floors.

## 2.12 PULL AND JUNCTION BOXES

- A. Furnish junction boxes and pull boxes where shown on Drawings, and where necessary to facilitate pulling wires and cables without damage.

- B. Above ground boxes shall be formed from sheet steel, with corners folded in and securely welded with inward flange on each of 4 edges.
- C. Drill box for mounting and attachment of cover; galvanize after fabrication.
- D. Cover shall be made of one-piece galvanized steel and provided with stainless steel round head machine screws.
- E. Box and cover shall be made of code gage steel, or heavier if shown on Drawings.
- F. Boxes shall be minimum 4-1/2" (100 mm) deep. Size shall be in accordance with NEC. Use next larger standard size when necessary in accordance with manufacturer standard sizes.
- G. Pull and junction boxes shall be furnished without knockouts for field drilling.
- H. Enclosures shall be as required for areas in which installed and in accordance with requirements specified.
- I. Underground boxes shall be specifically designed and constructed for intended installed location, and shall be either pre-formed concrete or PVC. Covers shall be capable of withstanding, without failure, type of traffic in general area.
- J. If pull and junction boxes are exposed in and around architecturally finished surfaces, paint box to match finish of nearby surfaces, unless indicated otherwise.
- K. Bolt-on junction box covers 3'-0" square or larger, or heavier than 25 lb. shall have permanent rigid handles. Covers larger than 3'-0" x 4'-0" shall be split.

#### 2.13 EQUIPMENT SAFETY GROUNDING

- A. Install exposed raceway electrically continuous. Conduit and tray shall not be considered to be the only ground conductor.
- B. Furnish equipment that is part of integral shipping unit or assembly with bare copper ground conductor extending to central ground connection lug. Lug shall be suitable for field connection to local ground. Electrical equipment shall be considered any device that is energized.
- C. Single-point ground connections required for proper operation of electronic equipment shall be insulated from equipment safety ground. Such connections shall be extended, using insulated cable, to single insulated termination point suitable for field connection to appropriate ground system.
- D. Conduits that contain power circuits shall have ground conductor installed inside conduit. Ground conductor shall be bonded to equipment or tray or duct ground at both ends.
- E. Provide ground bushing on each conduit containing power circuit. Connect ground bushings together inside enclosure and to enclosure ground lug or ground bus.
  - 1. Use No. 8 AWG conductor for ground bushings trade size 1-1/2" (38 mm) and smaller.
  - 2. Ground bushings larger than 1-1/2" (38 mm) shall be sized in accordance with requirements of NEC, but in no case shall they be smaller than No. 8 AWG.
- F. Ground conductor: Uninsulated, Class B standard, round soft drawn uncoated copper as defined in ICEA S-19-81, unless specified otherwise.
- G. Hardware: Clamps, bolts, washers, nuts, and other hardware used with grounding conductor shall be copper, copper alloy, high copper alloy, or silicon bronze.

## 2.14 PIN AND SOCKET CONNECTORS

- A. Unless shown on Drawings, not allowed.

## 2.15 LOCAL SEPARATE DISCONNECT SWITCHES

- A. Three-pole, nonfuseable, heavy-duty, rated 600-volt with continuous current rating as shown on Drawings and as required by load.
  - 1. Type: Either molded-case or blade.
  - 2. Switches shall use high-conductivity copper for current carrying parts.
- B. Switches shall be positive, quick-make, and quick-break mechanisms.
  - 1. Switch assembly plus operating handle shall be integral part of enclosure base.
  - 2. Each switch shall have handle whose position is easily recognizable and which can be locked in "On" and "Off" position with 3 padlocks. "On" and "Off" positions shall be clearly marked.
- C. Switches shall be UL-listed and horsepower rated. Where applicable, switches shall have defeatable door interlocks that prevent door from being opened while operating handle is in "On" position.

## 2.16 PLATES AND COVERS

- A. Provide finish plates and covers of appropriate type and size for wiring and control devices, signal, and communication outlets.
- B. Mark each plate and cover to show circuit and panel designation. Unless indicated to be engraved plate, use self-sticking, clear membrane, UV-resistant labels with typed black letters. Handwritten labels not allowed.
- C. Coordinate color with adjacent surfaces.
- D. Raised cover galvanized steel plates shall be acceptable for use on surface-mounted outlet boxes in unfinished areas where weatherproof plates are not required.
- E. For weatherproof installations, cover plates shall be gasketed and rated for NEMA Type 4 installation.
- F. Device plate mounting hardware shall be countersunk and finished to match plate.

## 2.17 WIRING DEVICES

- A. Where more than one flush device is indicated in same location, mount devices in gangs under common plate.
- B. Switches for control of ac lighting panel load circuits, single-pole, 3-way, and 4-way, shall be premium, heavy-duty specification-grade, and meet FS W-S-896E. Switches shall be rated for use at 120 or 277 volts and 20 amperes minimum.
- C. Device color, if not shown on Drawings, shall be coordinated to match adjacent finishes.
- D. Wall switches requiring pilot light indication shall have red LED pilot light when toggled "On."
- E. Pulse control of lighting contactors shall be 20 amperes, 120/277 volts, momentary, double-throw, and center "Off."
- F. Standard convenience outlets: Premium, heavy-duty, specification-grade, duplex, 3-wire, grounding, 20-ampere, 125-volt for 120-volt circuits, and rated 250-volts for 240 or 208-volt circuits.

- G. Ground fault circuit interrupter (GFI) receptacles: Duplex, 20-ampere, and 125 volts, feed-through type.
- H. Isolated ground (IG) outlets: Duplex, 3-wire, with isolated grounding terminal, 20-ampere, and 125 volts. Outlets shall be orange in color, unless specified otherwise.

## 2.18 WELDING

- A. If special welding requirements are required for any piece of equipment during installation, requirements shall be stated on manufacturer's shop drawing of affected part.
- B. Furnish detailed welding requirements with equipment shipment.

## 2.19 WIRING INTERFACE PANELS

- A. Provide wiring interface panels as shown on control building layout drawings to provide an interface point for external cable connections including power, control, and fiber optics.
- B. Wiring interface panels shall be 12" minimum depth and shall extend upward to include cable tray.
- C. Cables entering wiring interface panels from the field will enter from the bottom from a manhole or cable vault. Cable trays shall extend upward to terminal blocks to support cables entering building.
- D. Wiring interface panels shall be provided with doors that provide full access to the interior of the panel.
- E. Wiring interface panels shall be the same color as the control building.
- F. Terminal blocks:
  - 1. Terminal blocks for connection of control cables shall be readily accessible. Terminal blocks should face the doors of individual panel to provide ease of connection of control cables in field.
  - 2. Washer-head connecting screw type; Marathon 1500 Series, or equal; mount terminal blocks on vertical surfaces; provide legible, permanent marking on terminals; plug-in or stab-type terminal blocks not acceptable. Current transformer secondary leads shall be terminated on short-circuiting type terminal blocks.
- G. Final size of wiring interface panels and quantity of terminal blocks will be provided by Engineer during the detailed design phase. Minimum terminations equal to one-half of Contractor's listed field terminations plus a minimum of 20% spare terminals interspersed with wire terminals and out-going terminal blocks.

## 2.20 NAMEPLATES

- A. Nameplates shall meet the following requirements.
- B. Material: Black plastic engraving stock, 1/16" thick with white core.
- C. Lettering: Engraved approximately 3/16" high.
- D. Wording:
  - 1. Furnished by manufacturer after award of Contract for Engineer review.
  - 2. Test switch nameplates to specify each switch designation.
- E. Locations. Unique nameplates shall be furnished for all equipment, panels, and devices at each of the following locations as a minimum (not all-inclusive list):
  - 1. Front and rear each unit.
  - 2. Each exterior door.

3. Each piece of equipment.
4. Each panel.
5. Each wiring interface panel.

## 2.21 SOURCE QUALITY CONTROL

- A. After assembly of building, perform following tests, as applicable, to ensure proper functioning assemblies will be shipped to construction site:
  1. Wet spray test at joints, doors, etc., for water leaks.
  2. Continuity and/or functional checks of electrical devices and wiring installed.
  3. Check conduit and/or cable tray installation.
  4. Check ac and dc panels to ensure circuits are appropriately identified and operational.
  5. Ensure raceway covers are tightly secured in place.
  6. Check to lighting fixtures and photocell are firmly mounted and operational.
  7. Verify operation of HVAC system installed.

## **PART 3 EXECUTION**

### 3.01 EXAMINATION

- A. Verify site conditions.

### 3.02 PREPARATION

- A. Interior and exterior of equipment shall be cleaned prior to placing into service. Debris shall be removed and appropriately discarded.

### 3.03 INSTALLATION

- A. Install in accordance with manufacturer's recommendations.

END OF SECTION

- 1) Grant P. Askren
- 2) Philip E. Schulz

## PART 1 GENERAL

### 1.01 SECTION INCLUDES

- A. Medium-voltage, metal-clad switchgear and accessories, rated 27 kV and below.

### 1.02 WORK BY OTHERS

- A. External power, control, and grounding terminations.

### 1.03 INFORMATIONAL SUBMITTALS

- A. Submit with Bid:
  1. Completed Data Sheets.
  2. Preliminary outline drawings of switchgear including, but not limited to:
    - a. Approximate dimensions of complete line-up.
    - b. Maximum achievable shipping split sections with dimensions.
    - c. Weight of complete line-up.
    - d. Weight of each shipping section.
  3. List of proposed equipment including model numbers, description of breakers, current transformers, voltage transformers, fuses, relays, control switches, and other devices.
  4. Information as defined in ANSI C37.12.
  5. List of special equipment required for operation and maintenance of switchgear.
  6. List of recommended "start-up" and "running" spare parts with prices.
  7. List of items requiring field assembly.
  8. Recommended long term and short-term storage requirements, and procedures.
  9. Copies of warranties.
  10. Geographical location of switchgear and breaker manufacturing facilities.
  11. Manufacturing schedule.
  12. Nearest geographical location of field service personnel.
  13. For arc-resistant switchgear, copies of type tests to meet IEEE C37.20.7.
  14. For arc-resistant switchgear typical information on size and type of arc relief ducting, including typical support information.
- B. Product Data: Complete instruction manuals and software for protective relays, metering equipment, instrumentation.
- C. Quality assurance data:
  1. Certified shop test reports.
  2. Proposed test schedules.

### 1.04 ACTION SUBMITTALS

- A. Shop Drawings:
  1. Complete and accurate Data Sheets.
  2. Certified outline and general arrangement drawing including front view, dimensions, floor plan, weight (shipping and installed), anchor locations, lifting points, center of gravity, enclosure construction, layout of accessories and shipping sections. For arc-resistant switchgear, provide certified drawings showing arc chute routing, type of material, supports, venting and signage.
  3. Certified drawings of cable termination compartments showing preferred locations for conduit entry/exit locations and indicating space available for cable terminations.
  4. Nameplate drawing.
  5. Nameplate schedule prior to fabricating nameplates.
  6. Mimic diagram prior to fabrication
  7. Support details.
  8. Equipment heat loss (Watts). Elementary 3-line diagrams for switchgear, showing voltage transformer and current transformer primary and secondary circuits. Terminal block terminations,

device terminal numbers, and internal diagrams shall be shown in detail. Typical drawings are not acceptable.

9. Breaker and relay schematic control diagrams. Provide specific schematic diagram for each breaker. Typical drawings not acceptable.
10. Complete wiring diagrams showing connections of component devices and equipment.

B. Product Data:

1. Complete Bill of Materials.
2. Interface coordination details.
3. Information to be furnished as defined in ANSI C37.12.

C. Quality assurance data:

1. Inspection and factory testing schedule.
2. Current transformer saturation, excitation and ratio correction factor curves.
3. Certified copies of factory final test reports.

### 1.05 CLOSEOUT SUBMITTALS

A. Operation and maintenance manuals. Provide at a minimum:

1. General description and technical data, including actual weights and dimensions.
2. List of instruments and accessories supplied, listing manufacturer, model number, operating ranges, and equipment tag numbers.
3. Receiving, storage, installation, handling, and testing instructions.
4. Operating and maintenance procedures.
5. Complete set of reviewed drawings that require no further action.
6. Data Sheets modified to include field installation conditions.
7. Complete documentation of inspections and tests performed, including logs, curves, and certificates. Documentation shall note any replacement of equipment or components that failed during testing.
8. Recommended spare parts list, including circuit breakers.
9. Bill of Materials including nameplate information and shop order numbers for each item of equipment furnished.
10. Material Safety Data Sheets.
11. Instruction manuals including detailed erection sequence and procedures.

### 1.06 MAINTENANCE MATERIALS

A. Provide complete set of special tools required for installation of equipment.

B. Tools and their intended use shall be detailed in manufacturer's assembly instructions.

### 1.07 QUALITY ASSURANCE

A. Qualifications: Manufacturer shall have produced similar equipment for minimum period of 10 years.

B. Regulatory requirements:

1. Metal-clad switchgear and related components shall be designed, manufactured, and tested in accordance with latest applicable standards of NEMA SG-4, NEMA SG-5, ANSI/IEEE C37.09, ANSI/IEEE C37.12 and ANSI/IEEE C37.20.2.
2. For arc-resistant switchgear, standard ANSI/IEEE C37.20.7 applies in addition to above.
3. Equipment manufactured and tested to other standards shall not be used without written approval from Engineer.

### 1.08 DELIVERY, STORAGE, AND HANDLING

A. Store in accordance with manufacturers' recommendations.

B. Coordinate transportation with requirements of pertinent authorities.

- C. Ship switchgear for installation as completely assembled as practicable. Where switchgear is installed in separate building ship enclosure as complete as practicable with switchgear and components installed inside for ease of installation in field. If shipping splits are required, connections between splits for enclosure circuits and switchgear splits shall be clearly identified; junction and terminal boxes shall be provided at each connection point.
- D. Prepare detailed packing lists and shipping notification.
- E. Cover equipment and accessories and protected from damage during shipment. Materials used for shipping shall be acceptable for protecting equipment when manufacturer's recommended storage procedures are maintained.
- F. Power circuit breakers shall be shipped and packaged separately from switchgear structure.

#### 1.09 TEMPORARY POWER

- A. Space heaters shall be connected to temporary source of power; capable of being monitored.
- B. Maintain temporary power until switchgear is installed and normal power source is permanently energized.

### **PART 2 PRODUCTS**

#### 2.01 MANUFACTURERS

- A. ABB.
- B. AZZ.
- C. Eaton Cutler-Hammer.
- D. Meyers Power Products.
- E. Powell Electric.
- F. Siemens.
- G. Square D.

#### 2.02 SYSTEM DESCRIPTION

- A. Switchgear shall be a complete, coordinated factory assembly ready for installation, connection, and designed for operation at site ambient temperatures and elevations. Switchgear shall include instruments and equipment as specified herein and detailed on Data Sheets and Drawings.
- B. Attached Data Sheets specify major components and accessories to be provided. Data Sheets do not provide complete parts list or Bill of Materials for scope of work.
- C. When one-line drawings, control schematics and layout drawings are furnished with specifications, drawings are preliminary and intended as an aid in understanding scope of equipment to be provided, unless specifically noted otherwise.
- D. If arrangement has been furnished, and detailed engineering design by manufacturer requires rearrangement, coordinate new arrangement with Engineer prior to Bid or Drawing submittal.
- E. If arrangement changes after award of Contract, submit Drawings reflecting actual scope of work and configuration.

#### 2.03 ENCLOSURE

- A. Switchgear assembly shall consist of individual free-standing vertical sections to form a rigid, metal-clad switchgear assembly.
- B. Vertical sections shall have metal side sheets of minimum 12-gage steel.
- C. Solid removable metal barriers shall isolate major primary sections.
- D. Provide safety shutter between bus compartment and breaker cubicle, which will close automatically when circuit breaker is disconnected from bus and removed from connected position.
- E. Metal work shall be free from burrs and sharp edges.
- F. Expandability:
  - 1. Switchgear shall be capable of future expansion as specified on Data Sheet without modification to existing switchgear structural members or bus work.
  - 2. Documentation shall provide adequate information for design of future extensions.
- G. Operating height for unit disconnects and other operable controls shall not be more than 6'-6" (2 m) above finished floor.
- H. Switchgear enclosure rating: As specified on Data Sheets.
- I. Gaskets shall be provided to seal doors, and filters shall be provided on all louvers to impede entrance of dust, and falling dirt. Filters shall be easily removable for maintenance.
- J. Cable entrances: Depth of finished equipment shall be sufficient to allow for entrance, bending, and termination of cables.
- K. Provide minimum clearance between terminal pads and cable entrance, as shown on Data Sheets for either top or bottom entrance. Provide minimum distance of 36" (0.9 m) for termination of cables between cable termination point and window-type current transformer, or cable termination point and cable entrance location if window-type current transformers are not used.

#### 2.04 DOORS

- A. Switchgear doors shall open minimum of 110° to allow for breaker removal with door-mounted relays.
- B. Doorstops and brackets with detents shall hold doors in fully open position.
- C. Front doors shall not open so far as to allow damage to devices mounted on adjacent doors.
- D. Front and rear doors shall be made from 12-gage heavy-duty formed steel with hand-operated triple door latches, and triple-hinges with provisions for padlocking.
  - 1. Front doors for switchgear with 2-high construction shall have separate doors for each compartment.
  - 2. Rear doors of vertical sections for single-high and 2-high construction shall have single, full-height removable door.
  - 3. Rear doors shall have provision for paddle locks.
  - 4. Doors should have signs that read "Danger High Voltage".

#### 2.05 CUBICLE SPACE HEATERS

- A. Each cubicle of switchgear shall be furnished with space heater to prevent condensation of moisture.
- B. Locate heater in interior of cubicle.
- C. Thermally insulate from metal enclosure so no painted surface will be damaged or discolored.

- D. Space heaters shall maintain compartment internal temperature at no less than 5° above dew point connected through an adjustable humidistat, factory set.
- E. Wire individual heaters to accessible common terminal blocks for connection to single external power source.
- F. Refer to Data Sheets for heater rating and power supply information.
- G. Protect heater circuits with fuses.
- H. When auxiliary power transformer is required by Data Sheets:
  1. Size transformer to accommodate cubicle space heater and cubicle lighting power requirements.
  2. External power source not required.

## 2.06 MOTOR SPACE HEATER POWER SUPPLY

- A. Where motor space heaters are specified on Data Sheets or Drawings, provide set of common, internally wired motor space heater bus and terminal blocks for connection to Contractor-furnished multiphase external power source.
  1. Provide main circuit breaker or fusing for external power source.
  2. Coordinate external power source requirements with Engineer.
  3. Incorporate requirements on manufacturer-furnished drawings.
  4. Manufacturer shall balance current loading on multiphase space heater buses.
- B. Each individual motor space heater circuit shall include:
  1. Switchgear breaker 'b' auxiliary contact (52) control wiring.
  2. Connections to terminal blocks for field external connections.
  3. Internally wired fuses.
- C. Wire such that motor space heater operates only when breaker is in open and connected position and disconnected when breaker is closed, drawn-out, or test positions.
- D. When auxiliary power transformer is required by Data Sheets:
  1. Size transformer to accommodate motor space heater power requirements.
  2. External power source not required.
- E. When specified on Data Sheets, a 3-pole 480 volt interposing relay shall be provided and wired to power circuit breaker a contact to close when breaker is closed.

## 2.07 AUXILIARY COMPARTMENTS

- A. Bus voltage and current transformer mounted devices shall be wired to terminal blocks located in compartment. Overall switchgear-indicating instruments shall be mounted on door of compartment.
- B. Provide wiring required to termination points for outgoing supervisory connections.

## 2.08 CIRCUIT BREAKER COMPARTMENTS

- A. Each compartment shall have screw-type racking mechanism capable of manual operation by field-engaged crank. Each breaker shall have 3 defined stop positions in enclosure: "Connected," "Test," and "Withdrawn."
  1. Racking mechanism shall have mechanical interlocks to prevent insertion, or withdrawal, of circuit breaker with contacts closed.
  2. Provide interlocks to prevent breaker from closing between connected and test positions.
  3. If breaker contacts are closed, contacts shall be opened automatically and stored energy mechanism discharged prior to either inserting or removing breaker from connected position.
  4. Provisions shall be made for padlocking breaker in withdrawn position.
  5. Provisions shall be made to allow breaker-racking operation with compartment door closed.
  6. Each cubicle door shall be capable of being fully closed with breaker in withdrawn position.

- 7. Breaker frame shall maintain ground connection in any position.
- B. Secondary control circuit contacts shall be stationary mounted within breaker compartment to mate with control circuit contacts on circuit breaker. Contacts shall remain engaged when breaker is racked into test position.
- C. Provide remote racking device(s) if specified on Data Sheets.

## 2.09 CIRCUIT BREAKERS

- A. Circuit breakers shall be vacuum interrupting horizontal draw-out type capable of being withdrawn. Ratings shall be as specified on Data Sheets. Breakers shall not be forced cooled in order to achieve maximum rating. Comply with latest version of ANSI C37.04 and C37.06. MVA rated breakers not acceptable.
- B. Operating mechanism:
  - 1. Operating voltage shall be in accordance with Data Sheets.
  - 2. Mechanically and electrically trip free.
  - 3. Mechanical operations counter: Visible at front of breaker assembly.
  - 4. Mechanism shall be capable of manual charging by use of handle.
- C. Mechanical indicator shall show breaker position and condition of stored-energy mechanism.
- D. Each breaker shall contain 3 vacuum interrupters, separately mounted in self-contained and self-aligning unit, which can easily be removed. Breaker shall be hermetically sealed in high-vacuum and be maintenance free.
  - 1. Mount unit on either glass polyester or epoxy supports.
  - 2. Provide contact wear gap indicator for each vacuum interrupter requiring no tools to indicate available contact life. Indicator shall be easily visible.
- E. Contacts:
  - 1. Contact surfaces shall be silver-to-silver, designed and fabricated to be self-aligning and to resist burning and deterioration.
  - 2. Breaker main contacts shall not touch or arc across into faulted circuit when breaker close signal is received while trip signal is being applied.
  - 3. Closing speed of moving contacts shall be independent of both control voltage and operator.
  - 4. Contacts shall have low current chopping characteristics.
  - 5. Primary disconnect contacts shall be "fingers" engaging cubicle stationary contacts when breaker is moved into operating position.
  - 6. Secondary control circuit contacts on breaker shall engage stationary control circuit contacts when breaker is moved into connected position.
- F. Breaker units of same type and ampere capacity shall be wired alike and shall be mechanically and electrically interchangeable.
- G. Grounding:
  - 1. Provide breaker frame grounding facility for grounding in connected and test positions.
  - 2. Power circuit breaker ground connection shall be capable of carrying short-circuit rating of circuit breaker for minimum of 2 seconds and also be capable of withstanding peak current value or 2.7 times rated short circuit current of circuit breaker.
- H. Provisions on breaker shall be made for operating mechanism-operated auxiliary switch contacts (MOC) (Device 52) and stationary truck-operated cell switch contacts (TOC) (Device 33).
- I. Testing:
  - 1. Provide testing station to permit checking of breaker controls and operation with breakers high-voltage side de-energized and isolated from switchgear bus.
  - 2. Testing shall be done in fully withdrawn position. Control station shall be wall-mounted.

## 2.10 AUXILIARY CONTACTS

- A. Each breaker shall be furnished with circuit breaker auxiliary contacts, MOCs, and TOCs as required to provide interlocking or control of auxiliary devices. In addition, provide spare contacts in quantities as specified on Data Sheets.
1. All spare contacts shall be wired to terminal blocks for ease of maintenance and access to external connection.
  2. Furnish no less than 2 Type "a" and 2 Type "b" spare electrically separate auxiliary contacts mounted on breaker for remote interlocking service.
- B. Auxiliary contacts shall be electrically separate. Each contact shall have 125VDC, 20-ampere minimum continuous current rating.
- C. MOC contacts shall be activated by circuit breaker mechanism when circuit breaker is in "connected" position only. A minimum of 4 Type "a" and 4 Type "b" spare MOC contacts shall be provided unless larger quantity is specified on Data Sheets.
- D. TOC contacts shall be activated by circuit breaker mechanism when circuit breaker is in "connected," "test," or "disconnected" position. A minimum of 4 Type "a" and 4 Type "b" spare TOC contacts shall be provided unless larger quantity is specified on Data Sheets.

## 2.11 BREAKER CONTROL

- A. Location:
1. When specified on Data Sheet, a separate breaker control cubicle section shall be provided with all breaker control switches for that switchgear lineup; otherwise, provide breaker control switch on breaker cubicle.
  2. For arc-resistant switchgear, breaker control switches, CT and VT test switches shall be mounted on instrument compartment associated with that breaker cubicle.
  3. When provided as part of this specification control shall be in accordance with typical schematic diagrams in regards to local trip, close, alarms, remote/local control switches etc.

B. Breaker control switches:

1. Provide each breaker with local control switch and breaker truck position switches arranged to provide following control of breaker operation.

Breaker Position	Remote		Local	
	Close	Trip	Close	Trip
Connected	Yes	Yes	Yes	Yes
Test	Yes	Yes	Yes	Yes

2. Each circuit breaker local control switch shall have trip-close escutcheon, center normal position, and spring return to normal from close and trip. Furnish with red and green indication lights as shown on Data Sheets. Circuit breaker control switches shall have pistol-grip handles.
  3. Manufacturer: Electroswitch Series 24 or equal with indication as shown on Data Sheet.
- C. Trip and close circuits:
1. Provide terminal pairs wired in trip and close circuits of each breaker for Owner furnished remote trip and close contacts.
  2. Terminals shall be grouped adjacent to each other.

3. Unless specified otherwise, quantities shall be:
  - a. Trip circuit: 2 pairs.
  - b. Close circuit: 2 pairs.

## 2.12 CONTROL POWER

- A. Furnish internal switchgear wiring to distribute single source of control power to each switchgear unit.
- B. Control power voltage: As specified on Data Sheets.
- C. For ac control power:
  1. When required by Data Sheets, provide control power transformer integral to switchgear line-up capable of providing required power.
  2. Provide each breaker with capacitive trip device that stores a minimum of two breaker operations in event of loss of ac control power.
  3. Each breaker shall be furnished with 1- or 2-pole, as required, DIN rail-mounted, miniature circuit breakers (MCB) as control power disconnecting and protective device.
  4. Provide one for closing circuit and one for tripping circuit.
  5. MCBs shall have contacts wired to I/O blocks for common external alarm indication of tripped MCB.
- D. For dc control power:
  1. Each breaker shall be furnished with 1- or 2-pole, as required, DIN rail-mounted, miniature circuit breakers (MCB) as control power disconnecting and protective device. Provide one set for closing circuit and one set for tripping circuit.
  2. MCBs shall have contacts wired to I/O blocks for common external alarm indication of tripped MCB.
- E. Power source for closing circuit shall be derived from load side of tripping circuit, such that open trip circuit will render closing circuit inoperable.
- F. Provide loss of voltage relay for breaker closing control voltage.
  1. Form C contact shall be wired to terminal blocks.
  2. Contact shall be used for remote indication.
- G. If required on Data Sheets provide self-contained dc control power system within line-up:
  1. Provide with voltage as indicated on Data Sheets.
  2. Batteries:
    - a. Use sealed-type, maintenance-free, lead-acid, gel cell type batteries.
    - b. Batteries furnished with minimum 10-year, pro-rated warranty.
  3. Battery charger: Size to fully recharge batteries within 8 hours with batteries fully discharged, while simultaneously providing rated power for dc loads.
  4. Provide separate, full-height switchgear section for dc control power system.
  5. Dc distribution panel with required number of dc rated breakers.
  6. Provide required interface between breaker circuitry and relaying for compatibility with dc voltage supply.
  7. Provide ventilation or air conditioning for batteries in accordance with code requirements and to meet battery manufacturer's recommendations.
  8. Alarms:
    - a. Provide Form C contact for remote indication common alarm.
    - b. Common alarm shall, at a minimum, include charger malfunction, overload on battery, low-battery voltage, and loss of dc power output.

## 2.13 MAIN BUS

- A. Switchgear main bus shall be copper bar, designed to continuously carry current as specified on Data Sheets without exceeding temperature rise requirements
- B. Bus shall meet requirements of latest version of ANSI C37.04, C37.06, and C37.09.

- C. Install with rigid, nontracking, fire-resistant, and nonhygroscopic insulating supports capable of withstanding mechanical forces imposed by short-circuit currents greater than or equal to momentary current rating of switchgear.
- D. To prevent destructive mechanical strains in bus supports and connections throughout full ambient temperature range as stated on Data Sheets, furnish expansion joints where necessary.
- E. Current-carrying connections shall be flat bar and completed by bolting together.
- F. Unless otherwise stated on Data Sheets joints shall have silver-to-silver contact surfaces with minimum contact resistance.
- G. Design instrument transformer connections to permit removal and replacement of transformers without damage to connections.
- H. Insulation:
  - 1. Except at bolted terminations and connection points, coat bus with fluidized bed epoxy-type insulating material molded around and bonded to bus.
  - 2. Voltage rating of insulation shall be greater than or equal to highest voltage rating of switchgear.
  - 3. Bolted joints, expansion joints, external bus connections, terminals for external power cable connectors, and instrument transformer connections shall be insulated with removable boots.
  - 4. Design removable boots to overlap permanent bus or cable insulation minimum of 1" upon each conductor in connection insulated by boot.
  - 5. Furnish materials required to complete field connections, insulation of switchgear bus, and terminals.
- I. Orientation of bus when viewed from front of switchgear shall be A-B-C top-to-bottom, front-to-back, and left-to-right.
- J. Provide molded epoxy inserts for bus passing through barriers.

#### 2.14 GROUND BUS

- A. Provide uninsulated copper ground bus with momentary rating at least equal to momentary rating of Switchgear.
- B. Connect switchgear equipment grounds to ground bus.
- C. Location of ground bus shall be as indicated on Data Sheets.
- D. Provide 2 ground cable connectors for attachment of stranded copper cable to each end of ground bus for external connection to grounding system in copper cable size as specified on Data Sheet.
- E. Each switchgear unit containing terminals for connection of metal-enclosed bus duct shall have provision for connecting bus duct ground bus to switchgear ground bus.
- F. Each feeder exit shall have provisions for connection between ground bus and feeder exit with owner supplied grounding cables. Cable connections in rear compartment shall have grounding lugs installed for Owner to connect safety grounds for maintenance purposes.

#### 2.15 FACTORY WIRING

- A. Low-voltage control and instrument wiring shall be installed and tested at factory.
- B. Provide manufactured wiring harnesses to complete interconnection of switchgear groups in field for wiring across shipping splits.
- C. Contractor shall furnish and install, at own expense, missing wires or termination points, wiring not matching interconnection diagrams, or other deficiencies.

- D. Cable shall be selected for electrical and environmental conditions of installation, and suitable for unusual service conditions where encountered.
  - 1. Proper temperature application cable shall be used throughout, but shall not be less than 90°C rated.
  - 2. Conductors routed over hinges shall utilize extra flexible stranding.
  - 3. Cable insulation shall be rated for maximum service voltage utilized, but not less than 600 volts.
  - 4. Splices not acceptable.
  
- E. Panel, control cabinet, switchboard, motor control center, and switchgear wiring shall use flame-retardant, cross-linked polyethylene (XLP) or flame-retardant ethylene-propylene rubber (EPR) insulation meeting or exceeding requirements of UL 44 for Types SIS, and XHHW.
  - 1. Minimum size: No. 14 AWG.
  - 2. Conductors: Annealed bare copper Class B stranding passing IEEE 1202 and UL VW-1 flame test.
  
- F. Instrumentation wire shall use twisted shielded pairs/triads having flame-retardant, cross-linked polyethylene (XLPE) insulation, and chlorinated polyethylene (CPE) jacket.
  - 1. Minimum size: No. 16 AWG
  - 2. Conductor type: Annealed copper Class B stranding.
  - 3. Provide each pair/triad with shield.
  - 4. Shielding shall consist of aluminum-polyester tape and a flexible strand tin-coated No.18 AWG copper drain wire.
  - 5. Drain wire for each instrument cable shall be insulated with spaghetti sleeve. Terminate one end of shield wire on grounded terminal.
  - 6. Cables shall pass IEEE 1202 and ICEA 70,000 Btu/hr vertical tray flame test. Each conductor shall pass UL VW-1 flame test.
  
- G. Terminations:
  - 1. Conductor terminal connectors: Insulated, ring tongue, compression type connectors properly sized for conductor and terminal.
    - a. Construct connectors of copper and tin-plate.
    - b. Interior surface of connector wire barrel shall be serrated; exterior surface of connector wire barrel shall be furnished with crimp guides.
  - 2. Use noninsulated terminal connectors for conductors terminated on devices equipped with individual fitted covers, such as, but not limited to, control switches and lockout relays.
  - 3. Provide connections requiring disconnect plug and receptacle type devices with factory-terminated conductors on each plug and receptacle.
    - a. Plugs and receptacles shall be factory-wired into junction boxes containing terminal blocks for external connections.
    - b. Conductors on disconnect portion of plug-receptacle assemblies shall be in common jacket.
  - 4. Temporary wiring installed in factory for equipment testing shall be removed prior to shipment of equipment.
  - 5. Current transformers shall terminate on shorting type terminal blocks and shall be shipped with shorting jumpers installed.
  - 6. Terminal blocks: General Electric EB-25, or equal.
  - 7. Spare auxiliary contacts, meter outputs, multifunction relay outputs and inputs, and spare control switch contacts shall be connected to terminal points to facilitate external connection.
  
- H. If indicated on Data Sheets wire all internal wiring designated for connection to external control wiring to a terminal box located on top of switchgear or on side as designated.

- I. Identification and labeling.
  - 1. Provide preprinted conductor identification sleeve on each end of each internal conductor.
  - 2. Mark each sleeve with terminal end and opposite end destination identification.
  - 3. Conductor identification sleeves shall be UV-resistant, non-shrinking type, not less than 1/2" long.
  - 4. Conductor identification shall be computer printed on sleeve with nonsmudging, permanent black ink. Hand written identification is not acceptable.
  - 5. Each terminal block, terminal, conductor, relay, breaker, fuse block, and other auxiliary devices shall be permanently labeled to coincide with identification indicated on manufacturer's drawings.
- J. Cable supports shall be bolted or welded to switchgear frame or doors. Stick on cable supports are not acceptable.

## 2.16 CURRENT TRANSFORMERS (CT)

- A. In accordance with requirements of ANSI C57.13.
- B. CT mechanical and thermal limits shall withstand without damage momentary and short time ratings of circuit breakers with which used.
- C. Multi-ratio type, unless specified otherwise.
- D. Wire secondary leads out to shorting terminal blocks including leads from spare CTs and unused multiratio CT leads.
- E. Ground in accordance with C57.13.3.
- F. CT secondary circuits identified for metering or relaying devices not located in switchgear shall be grounded in switchgear using easily removable secondary ground straps.
- G. Manufacturer's drawings shall specifically state ground straps that should be removed if circuit will be grounded remotely.
- H. Unless indicated otherwise, CT polarity markings shall be toward circuit breaker.
- I. Separate CTs shall provide metering and protection functions, unless specified otherwise.

## 2.17 VOLTAGE TRANSFORMERS (VT)

- A. In accordance with requirements of ANSI C57.13.
- B. Each set shall be draw-out type and removable with 4-stage cell interlock switch.
- C. Where physical size restrictions do not allow VTs to be mounted as draw-out assembly, VTs may be stationary mounted with primary fuses mounted as draw-out unit.
- D. Provide appropriate interlocks in accordance with ANSI standards for operator safety.
  - 1. Provide continuously maintained ground for transformer primary windings and fuses that is clearly visible when assembly is moved to "withdrawn" position.
  - 2. Disconnect and ground secondary circuit in "draw-out" position.
- E. Protect each transformer primary and secondary.
  - 1. Primary circuit:
    - a. Current-limiting fuses mounted on draw-out type removable carriage unit designed to isolate and ground potential circuits when unit is in fully withdrawn position.
    - b. Fuses shall meet requirements of NEMA SG2.

2. Secondary circuit:
  - a. Relays and meters shall be kept on separate circuits, unless specified otherwise.
  - b. Each secondary circuit shall be protected by use of separate DIN rail-mounted miniature circuit breaker (MCB).
  - c. Each MCB shall be furnished with dry contact that changes state when breaker is tripped.
  - d. Contacts shall be wired to terminal blocks for use as alarm signal.
  - e. Wire contacts in parallel at terminal blocks to allow single external connection for common alarm condition.

F. Ground in accordance with C57.13.3.

G. Voltage transformers shall have accuracy rating as indicated on Data Sheets.

## 2.18 LOCKOUT RELAYS

A. Mount lockout relays on breaker or breaker auxiliary compartment door.

B. Wire to trip breaker and simultaneously block closing of breaker.

C. Rated operating trip voltage shall be capable of allowing coil operation at 75% of rated voltage.

D. Furnish with required number of contacts to perform functions and with additional spare contacts for customer use in quantities as indicated on Data Sheets.

E. Wire normal and spare contacts to terminal blocks.

F. Provide all used and spare contacts with test switches wired in series to facilitate relay testing.

G. Provide with local tripped indication and pistol-grip handle.

H. Lockout relays shall be manually reset.

I. Manufacturer: Electroswitch Series 24 LOR with lighted target nameplate, or equal.

## 2.19 PROTECTIVE RELAYS

A. Provide relays as shown on one-line diagrams. Relays shall be solid-state microprocessor-type; flush panel mounted self-contained units; operable from designated control power source.

B. Relay functions, type and manufacturer: In accordance with Data Sheet.

C. Programming of relay shall be from face of unit without requiring additional equipment. Programming of relay shall also be possible from lap top computer.

D. Provide all software required for relay settings, communications, and oscillography as a Corporate perpetual license.

E. Operation, troubleshooting, and trip indication information shall be displayed on unit face.

F. Relays shall have built-in self-test functions with Form C relay failure alarm contact for remote indication. Separate Form C trip alarm contact shall also be furnished for remote trip indication.

G. Auxiliary relays shall be surface-mounted inside same switchgear cubicle in which it is used. Provide with following ratings:

1. Relay: 300-volt minimum.
2. Coil: 115-volt.

3. Continuous duty.
4. Number of poles as required or as indicated on Drawings.

H. Contacts shall be universal or convertible type for connection as either normally open or normally closed, rated NEMA B150, minimum.

## 2.20 COMMUNICATIONS EQUIPMENT

- A. Provide equipment as shown on communication one-line diagram and as indicated on Data Sheet. Communications equipment shall be microprocessor-based.
- B. NTX-20 shall be located in separate RTU enclosure as shown on the Equipment Layout drawing.
  1. RTU enclosure shall have front and rear door access.

## 2.21 METERS

- A. Provide meter as shown on one-line diagrams and as indicated on Data Sheets. Meters shall be microprocessor-based, multifunction type.
- B. Metering unit shall provide local indication and be capable of remote communication for all functions.
- C. Programming of meters shall be from face of unit without requiring additional equipment.
- D. Provide all software required for meter settings or setup, communications, and oscillography as a Corporate perpetual license.
- E. Revenue quality meters shall have accuracy guaranteed by testing traceable to NBS. Revenue power meters shall meet requirements of ANSI C12.20.

## 2.22 INDICATING LIGHTS

- A. Provide LED-colored indicating lights as manufactured by Data Display Products, or equal. Clear LEDs with colored caps are not acceptable. Provide each breaker control switch with at least the following LEDs
  1. Red LED: Illuminated when breaker is closed. Wire red light to monitor trip coil such that light will be out if trip coil continuity is lost.
  2. Green LED: Illuminated when breaker is open.
- B. Provide each lockout relay with an amber monitoring light.
  1. LEDs may be optionally integrated into LOR faceplate.
  2. Wire as follows:
    - a. Continuity light shall be illuminated to indicate LOR is ready to respond and coil continuity is intact. If coil fails, light shall go out and contact shall close to initiate alarm.
    - b. Trip indicator light shall illuminate when LOR has tripped, and shall stay lit until relay is reset regardless of whether trip signal is maintained or not.

## 2.23 TEST SWITCHES

- A. Provide test switches for all relay and meter VT, CT, and trip circuits.
- B. Relay and meter switches shall be industrial grade, manually operated, knife-blade type, 10-pole with voltage and current elements with screw-on cover for personnel protection. Switches shall be ABB FT-1, or equal.
- C. Identify each voltage and current switch by group and phase. Orientation shall be Phase A-B-C, left-to-right when looking at test switch from front. Extend voltage and current wiring for each relay and meter for incorporation into single test block.

- D. Lockout relay test switches shall be 10 single-pole voltage elements wired in series with coils and normally open contacts of relays. Provide screw-on cover for protection when not in use.
- E. Back-wire, unless installed in location requiring front-wired type.

#### 2.24 SURGE ARRESTERS

- A. Provide station class, metal oxide surge arresters in quantities, and ratings as indicated on Data Sheets.
- B. Manufacturer: Ohio Brass, Cooper Power Systems, or equal.

#### 2.25 SWITCHGEAR ACCESSORY SET

- A. Provide accessories for test, inspection, maintenance, and operation.
- B. Minimum one hand-crank or racking handle per switchgear line-up for moving breakers into "Connected," "Test," or "Disconnected" position.
- C. Wall-mounted test cabinet for testing electrically operated breakers complete with connecting cables and secondary couplers. Provide quantity as specified on Data Sheets.
- D. Tool for manually charging breaker closing spring and manually opening shutter.
- E. Test jumper for electrically operating breaker while out of compartment.
- F. One breaker maintenance closing device per switchgear line-up.
- G. One test plug for draw-out relays per switchgear line-up.
- H. Provide dolly for circuit breaker transport for switchgear as indicated on Data Sheets. Dolly shall be combination cart and lifting device capable of removing and inserting breakers in both single- and 2-high switchgear. Dolly shall be suitable for transporting vacuum contactors or switchgear circuit breakers; portable, floor-supported with roller base.

#### 2.26 NAMEPLATES

- A. Laminated black letters on white background, with 1/8" (3 mm) engraved letters securely fastened with minimum of 2 self-tapping, stainless steel screws. Coordinate nameplate information with Engineer after award of Contract.
- B. Provide nameplates to identify:
  - 1. Each externally visible devices including, but not limited to, protective relays, lockout relays, meters, switches, instruments, and indicating lights shall have nameplate on outside of switchgear and on inside of switchgear.
  - 2. Each externally invisible device shall have nameplate identifying device.
  - 3. Each vertical section shall have nameplate located on front and rear of switchgear. Nameplates shall include equipment description and identification number of equipment being served.
  - 4. Each switchgear line-up shall have main nameplate located on front and rear of switchgear with switchgear name and identification number.
- C. Caution nameplates: Yellow with black letters.
- D. Warning nameplates: Red with white letters.
- E. Provide nameplates for terminal blocks. Mark in accordance with manufacturer's instructions.
- F. Each internal device or component shall have identification marking in accordance with manufacturer's instructions.

- G. Nameplates and placards including warning signs and safety placards shall meet NFPA 70E requirements.

## 2.27 BREAKER BUS TEST TERMINALS

- A. If specified on Data Sheets, provide means for connecting test equipment directly to bus, located on load side of each breaker. Terminal shall be accessible without having to remove conductor insulation material.
- B. Protect connection point with removable insulating boot material rated same voltage class as switchgear main bus.
- C. Provide same connection point on ground bus so phase conductors may be grounded for protection of personnel during maintenance.

## 2.28 MIMIC DIAGRAMS

- A. If specified on Data Sheets, provide mimic diagrams on front of each switchgear door that depicts interconnection of switchgear and associated equipment.
- B. Mimic diagrams shall be acceptable to Engineer prior to fabrication.

## 2.29 SOURCE QUALITY CONTROL

- A. Manufacturer shall submit proposed testing plan for complete switchgear and accessories for review and approval prior to performing testing.
- B. Switchgear shall be electrically and mechanically assembled into single line-up, installed in prefab building, inspected, and tested as single unit with actual project breakers installed in switchgear at factory prior to shipment. Notify Owner at least 30 days prior to final testing so arrangements can be made for Owner to witness tests.
- C. Perform following tests on equipment specified in accordance with latest edition of ANSI standards.
  1. Manufacturer's standard production inspections and testing on switchgear assemblies.
  2. Complete wiring check including function operation. Provide Engineer with certified copies of test data and reports.
  3. Polarity verification of phase-sensitive circuits including VT and CT circuitry.
  4. Test communications of devices including control devices, relays and meters.
  5. High-potential insulation check of main bus.
  6. Control wiring insulation check.
  7. Install in relays and test Owner provided relay settings for proper operation and function.
  8. Install Owner provided communications settings and test communications for proper operation.
- D. Test breakers in accordance with ANSI C37.09.
- E. Arc-resistant design testing shall be performed in accordance with IEEE C37.20.7 using maximum short circuit current available for system or device rating as perspective current available at incoming bus terminals of test sample.
- F. Relays shall have latest software/firmware installed and tested for functionality. Relays shall be programmed with protective function settings furnished by Engineer. Information needed from manufacturer by Engineer to set protection functions shall be furnished at least 4 weeks prior to factory testing of line-up.
- G. Relay and meter communications settings shall be selected and set according to equipment furnished. Coordinate with Engineer. Communications shall be shown to be fully functional prior to shipment.
- H. Test results shall indicate equipment meets specified standards before shipment can be made.

**PART 3 EXECUTION**

## 3.01 EXAMINATION

- A. Verify building conditions are acceptable for switchgear installation.

## 3.02 INSTALLATION

- A. Install in premanufactured building in accordance with manufacturer's requirements.

## 3.03 MANUFACTURER'S FIELD SERVICES

- A. Provide manufacturer's field service representative to perform wiring interconnections between shipping splits.
- B. Provide manufacturer's field service representative for field commissioning services Relays shall be programmed in the factory using settings furnished by Engineer or Owner.

## 3.04 TRAINING

- A. If specified on Data Sheet, provide authorized representative of switchgear manufacturer to train Owner's maintenance personnel on procedures for startup and shutdown, troubleshooting, servicing, and preventive maintenance as follows:
  - 1. Duration: 2 days minimum.
  - 2. Review data in operating and maintenance manuals.
  - 3. Review normal maintenance and operating procedures.
- B. Instruction shall be provided on site and include all training documents.

<b>DATA SHEETS MV METAL- CLAD SWITCHGEAR</b>		<b>Equipment Name: Business Park 3 12.5kV Switchgear</b>	
		<b>Tag No.:</b>	
DESCRIPTION	QTY/UNITS	SPEC DATA	VENDOR DATA
Switchgear Manufacturer	-	By Manufacturer	
Switchgear Catalog No.	-	By Manufacturer	
<b>ENVIRONMENTAL CONDITIONS:</b>			
Maximum Design Ambient Temperature	°C	40	
Minimum Design Ambient Temperature	°C	-30	
Site Altitude	ft	Less than 3,300	
High Humidity	Y/N	N	
Corrosive	Y/N	N	
Salt-Laden	Y/N	N	
Seismic Condition			
<b>CHARACTERISTICS:</b>			
Rated Maximum Voltage	kV	15	
Nominal System Operating Voltage	kV	12.47	
Voltage Range Factor, K	n/a	K=1.0	
System Configuration	Delta/Wye	WYE	
Phase, Wire	Phase/Wire	3 Phase/3 Wire	
System Grounding Method		Solidly Grounded	
Frequency	Hz	60	
Rated Basic Impulse Lightning Level	kV BIL	95	
Main and Load Side Bus:			
Continuous Current Rating	A	1200	
Short-Circuit Current – Sym	kA (rms)	31.5	
Momentary Current Withstand Capability	kA, (peak)	85	
Arc-Resistant Switchgear:	Y/N	N	
Arc-Resistant Construction in accordance with IEEE C37.20.7 (Type 2 or 2C)	-	-	
Site visit required for field measurements to support ductwork design.	Y/N	-	
Provide terminal box for termination of all external wiring.	Y/N	-	
<b>BUS BAR:</b>			
Phase and Ground Bus Material	-	Copper	
Phase Connection Plating Material	-	Silver	
Ground Bus Location	-	Bottom/Rear	
Phase Bus Dimensions	In.	By Manufacturer	
Ground Bus Dimensions	In.	By Manufacturer	
Ground cable lug size	AWG	4/0	
<b>STRUCTURE:</b>			
Arrangement	-	Two-high	
Enclosure Rating	NEMA	12	
Enclosure Type	-	Indoor	
Number of Vertical Sections	Qty.	5	
Vertical Section Dimension (L x W x H)	In.	By Manufacturer	
Fully Assembled Structure Dimension (L x W x H)	In.	By Manufacturer	
External Control Wiring Terminal Box Required	Y/N	Y	
Total Installed Weight	Lb.	By Manufacturer	
Color	-	Standard Gray	

<b>DATA SHEETS MV METAL- CLAD SWITCHGEAR</b>		<b>Equipment Name: Business Park 3 12.5kV Switchgear</b>	
<b>DESCRIPTION</b>		<b>QTY/UNITS</b>	<b>SPEC DATA</b>
Expansion Capability (Right, Left, Right and Left, Neither)		-	Neither
Incoming Section		Bus/Cable	Cable
<b>DOORS:</b>			
Dimension (L x W x H)		In.	By Manufacturer
Hinged and Removable		Y/N	Y
Lockable		Y/N	Y
<b>AUXILIARY COMPARTMENT:</b>			
Terminals Wired in Close Circuit For Owner Use		Pairs	2
Terminals Wired in Trip Circuit For Owner Use		Pairs	2
Control Power:			
Voltage		Vac or Vdc	125 Vdc
External Control Power Source		Y/N	Y
Self-Contained DC Control Power System		Y/N	N
Control Power Transformer-		Y/N	N
Rating		kVA	N/A
Secondary Voltage		V	N/A
<b>MOTOR AND SPACE HEATER POWER</b>			
Voltage		Vac	120/240 Vac
External Heater Power Source		Y/N	Y
Internal Heater Power Source		Y/N	N
Estimated Motor Space Heater Load		KW	N/A
480V interposing relay required for space heater circuits.		Y/N	N
<b>RELAYS – MAIN/TIE/FEEDER</b>			
Manufacturer and Model Number			SEL-751401A1A0A7085BFA0
Quantity			8
Test Switches		Qty	2 per relay
Manufacturer/Model		-	ABB FT-1
Application		-	All current and voltage inputs as well as all digital inputs and outputs
<b>RELAYS – 34.5KV LINE</b>			
Manufacturer and Model Number			SEL-0311C213H3E54X1
Quantity			1
Test Switches		Qty	2 per relay
Manufacturer/Model		-	ABB FT-1
Application		-	All current and voltage inputs as well as all digital inputs and outputs
<b>RELAYS – TRANSFORMER</b>			
Manufacturer and Model Number			SEL-0387503X55XX4XX
Quantity			1
Test Switches		Qty	3 per relay
Manufacturer/Model		-	ABB FT-1
Application		-	All current and voltage

DATA SHEETS MV METAL- CLAD SWITCHGEAR		Equipment Name: Business Park 3 12.5kV Switchgear	
DESCRIPTION		QTY/UNITS	SPEC DATA
			VENDOR DATA
			inputs as well as all digital inputs and outputs
<b>RELAYS – BUS</b>			
Manufacturer and Model Number			SEL-0587Z0X325312XX
Quantity			1
Test Switches		Qty	2 per relay
Manufacturer/Model		-	ABB FT-1
Application		-	All current and voltage inputs as well as all digital inputs and outputs
<b>INDICATION METERS</b>			
Manufacturer and Model Number		-	
Quantity		-	NONE
Installation Locations		-	
Revenue Metering Quality		Y/N	
Mounting		-	
Drawout		Y/N	
Data Communication		-	
Quantity of Analog Outputs		-	
Test Switches		Qty	
Manufacturer/Model		-	
Application		-	
<b>METERING</b>			
Manufacturer and Model Number			
Quantity		-	NONE
Revenue Metering Quality		Y/N	
Mounting		-	
Drawout		Y/N	
Data Communication		-	
Quantity of Analog Outputs		-	
Test Switches		Qty	
Manufacturer/Model		-	
Application		-	
<b>CONTROL SWITCHES:</b>			
Manufacturer and Model Number		-	Electroswitch Series 24 with lighted nameplate
<b>LOCAL/REMOTE SWITCHES:</b>			
Manufacturer and Model Number		-	Electroswitch 24203B with Escutcheon Code 010D-2L24
<b>RECLOSE CUTOUT SWITCHES:</b>			
Manufacturer and Model Number		-	24203B with Escutcheon Code 010D-2R14AE
<b>LOCKOUT RELAYS:</b>			
Manufacturer and Model Number		-	Electroswitch Series 24

DATA SHEETS MV METAL- CLAD SWITCHGEAR		Equipment Name: Business Park 3 12.5kV Switchgear	
DESCRIPTION		QTY/UNITS	SPEC DATA
			with Lighted nameplate
Quantity			1
Test Switches	Qty		1 per lockout
Manufacturer/Model	-		ABB FT-1
Application	-		All used NO contacts
<b>VOLTAGE TRANSFORMERS:</b>			
Manufacturer and Model Number	-		By Manufacturer
Voltage Ratio	-		7200-155/67
Accuracy Rating	-		0.3WXYZ, 1.2ZZ
VT Quantity	-		6
<b>COMMUNICATIONS EQUIPMENT</b>			
ACS NTX-20 Controller (Located in separate cabinet)	Qty		1
Relay Communications Processor			Y
AXION 2240 Backplane			SEL-2242R1X0
AXION 2240 RTAC			SEL-2241X0X211X0XXXXXX
AXION 2240 Power Coupler			SEL-224311X0
AXION 2240 Input Card			SEL-22442424X0
AXION 2240 Output Card			SEL-22443131X0
Managed Ethernet Switch			SEL-2730M0ARAX1111AAAA X
Relay Connection Interface			Ethernet
Provide Cables between Processor and Relays	Y/N		Y
Metering Communications Multiplexer			N/A
Control Processor			N/A
Fiber Optic Transceivers (NTX Communication)			H&L Instruments 560/561
I/O Blocks			N/A
Spare Terminal Blocks	Qty		10%
<b>ACCESSORIES:</b>			
Wall Mounted Test Cabinets	Qty		0
Breaker Racking Crank	Qty		1
Breaker Dolly	Qty		1
Remote Racking Device	Y/N		Y
Length of Cord	ft		50
<b>BREAKER CUBICLE: MAIN BREAKER (52-M3)</b>			
Model Number	-		By Manufacturer
Continuous Current Rating	A		1200
Voltage Range Factor, K	n/a		K=1.0
Short Circuit Interrupting Current	kA, sym		20
Closing and Latching Capability	kA, peak		52
Current Transformers -			
Bus Side:	Qty		2
Ratio			1200/5 MR
Accuracy			C400

<b>DATA SHEETS MV METAL- CLAD SWITCHGEAR</b>		<b>Equipment Name: Business Park 3 12.5kV Switchgear</b>	
		<b>Tag No.:</b>	
DESCRIPTION	QTY/UNITS	SPEC DATA	VENDOR DATA
Source Side:	Qty	2	
Ratio		1200/5 SR 1200/5 MR	
Accuracy		C400	
Trip Coil Monitor	Y/N	Y	
Spare MOC contacts	Qty	8 N.C and 8 N.O.	
Spare TOC contacts	Qty	4 N.C and 4 N.O.	
Breaker Test Terminals	n/a	N	
Cable or Bus Entry Location		Below	
Surge Protection:	Y/N	Y	
Surge Arrester Class	Type	Station	
Surge Arrester Duty Cycle Voltage	kV rms	9	
Surge Arrester MCOV	kV rms	7.65	
Surge Arrester TOV	kV rms		
Surge Capacitors	Qty/Type	NONE	
Cable Lug Size/Qty Per Phase		2-1000 kcmil Cu/PH	
Minimum Clearance Between Terminal Pads and Cable Entrance	in	33	
<b>BREAKER CUBICLE: FEEDER BREAKERS (52-F31, 52-F32, 52-F33, 52-F34, 52-F35, 52-F36, 52-F37)</b>			
Model Number	-	By Manufacturer	
Continuous Current Rating	A	1200	
Voltage Range Factor, K	n/a	K=1.0	
Short Circuit Interrupting Current	kA, sym	20	
Closing and Latching Capability	kA, peak	52	
Current Transformers -			
Bus Side:	Qty	1	
Ratio		1200/5 MR	
Accuracy		C400	
Load Side:	Qty	1	
Ratio		1200/5 SR	
Accuracy		C400	
Trip Coil Monitor	Y/N	Y	
Spare MOC contacts	Qty	8 N.C and 8 N.O.	
Spare TOC contacts	Qty	4 N.C and 4 N.O.	
Breaker Test Terminals	n/a	N	
Cable or Bus Entry Location		Below	
Surge Protection:	Y/N	Y	
Surge Arrester Class	Type	Station	
Surge Arrester Duty Cycle Voltage	kV rms	9	
Surge Arrester MCOV	kV rms	7.65	
Surge Arrester TOV	kV rms		
Surge Capacitors	Qty/Type	NONE	
Cable Lug Size/Qty Per Phase		1-750 kcmil Cu/PH	
Minimum Clearance Between Terminal Pads and Cable Entrance	in	33	
<b>SPECIAL REQUIREMENTS</b>			

<b>DATA SHEETS MV METAL- CLAD SWITCHGEAR</b>		<b>Equipment Name: Business Park 3 12.5kV Switchgear</b>	
		<b>Tag No.:</b>	
<b>DESCRIPTION</b>	<b>QTY/UNITS</b>	<b>SPEC DATA</b>	<b>VENDOR DATA</b>
Provide Spare 1200A Circuit Breaker	Qty	1	

END OF SECTION

- 1) Grant P. Askren
- 2) Phillip E. Schulz

May 31, 2023

Aaron Holton  
Electric Division Superintendent  
City of Geneva  
1800 South Street  
Geneva, IL 60134

**SUBJECT: Contract 23-03 Business Park III Control Building and Switchgear Procurement – Letter of Recommendation**

Dear Aaron:

On April 14, 2023, one (1) bid was received and opened at the City of Geneva (Geneva) in response to the request for proposal for the Business Park III Control Building and Switchgear Procurement Contract. The bid was opened and read aloud by Geneva. The bid was then sent to Stanley Consultants to be reviewed in their office. A bid tabulation of this review is enclosed for your review (Attachment A). The bid tabulation also shows bidders that were invited to bid that declined to bid. Copies of the no bid responses can be provided upon request.

The bid had a few technical exceptions. The ones of concern were the following:

- A 15 ft wide building was bid instead of 17ft as had been requested.
- One set of CTs was provided instead of two sets as required.
- NTX was not included in the bid.

When questioned on these items the bidder provided the following price adders.

- 17ft wide building: \$106,269
- Second set of CTs: \$9538
- NTX: \$5000

With these changes the new total bid price would be \$1,375,742

There were also contractual exceptions for the City of Geneva to review.

Stanley Consultants recommends that Contract 23-03 Business Park III Control Building and Switchgear Procurement be awarded to Myers Controlled Power, LLC. for the bid price of \$1,375,742.

A draft conformed contract between the City of Geneva and Myers Controlled Power, LLC has been provided (Attachment B). Please review and if Geneva is in agreement with the recommendation of awarding this contract to Myers Controlled Power, LLC please print and sign three originals of the

Agreement Between Buyer and Seller page 5 and prepare a Notice-to-Proceed letter for Myers Controlled Power, LLC. Send the Notice-to-Proceed letter with the signed signature pages to Myers Controlled Power, LLC with the direction to sign and date all three originals and send to me to be used in creating the conformed contract. Also, in this letter request that Myers Controlled Power, LLC provide a copy of their certificate of insurance.

If you have any questions, please contact me at 563.264.6461.

Sincerely,

A handwritten signature in blue ink, appearing to read "Philip E. Schulz". The signature is fluid and cursive, with the first name "Philip" being the most prominent.

Philip E. Schulz  
Project Manager  
Stanley Consultants, Inc.

cc: Jose Ruiz  
Jennifer Hilkemann  
Files

Attachments: Attachment A - Bid Tabulation  
Attachment B – Draft Conformed Contract

City of Geneva

Business Park III Substation Building/Switchgear Procurement  
Contract 23-03

Manufacturer	Meyers Controlled Power, LLC	Powercon. Corp.	Eaton Omaha Power Center	Avail	Crown Technical Systems
Bid Document is Signed	Y	NO BID	NO BID	NO BID	NO BID
Bid Bond	Y				
Warranty	60/66MO				
Data Sheets	Y				
Clarifications	Y				
Delivery	17-Jun-23				
Bid Price	\$ 1,190,275.00				
Owner Travel Allowance	\$ 2,000.00				
Engineer Travel Allowance	\$ 2,000.00				
Owner Per Diem Allowance	\$ 1,475.00				
Engineer Per Diem Allowance	\$ 6,225.00				
Additional Cost to Attend Witness Tests					
Cost to Offload Assemble and Test in Field					
Cost of Required Spare Parts	Included above				
Total Bid Price	\$ 1,201,975.00				
2YR Warranty Adder	\$ 21,660.00				
Total Bid Price (with 2YR Warranty)	\$ 1,223,635.00				
5YR Warranty Adder	\$ 64,660.00				
Total Bid Price (with 5YR Warranty)	\$ 1,254,935.00				
Adder for 17ft Building	\$ 106,269.00				
Adder for Second Set of CTs	\$ 9,538.00				
Adder for NTX	\$ 5,000.00				
Total Cost With Adders	\$ 1,375,742.00				
Service Engineer Requirement					
- Cost per day	\$ 1,800.00				
- Travel per round trip	\$ 3,200.00				
payment	10% onSubmittals submission, 10% on Submittlas Approval, 25% with material order 25% with Release for Production, 20% FAT/Ready to ship, 10% at shipment.				
Comments	- Price includes 2 day of onsite training - Freight price to be determined at time of shipment - Built in North Canton, Ohio - FOB Factory - Price subject to cost based escalation - Replaced terms and conditions with Meyers T&C				