

City of Statesville 915 Winston Ave Statesville, NC 28677 <i>Refer ALL Inquiries to:</i> Michael Straw Phone# 704-832-3824	REQUEST FOR QUOTES: 530 Warehouse Stock
	Quotes will be due: July 7, 2023 BY 5PM EST
	Department: 530 ELECTRIC DEPARTMENT
E-Mail: mstraw@statesvillenc.net	

NOTICE TO VENDOR

It is the intent of this bid invitation to obtain proposals for supplying the materials, supplies and/or equipment listed on the Proposal Sheet. You must be in strict compliance with the specifications and offer the same or equal if so quoted. Any additions terms and conditions regarding specifications by the offeror shall have no force or effect.

EXECUTION

In compliance with this Request for Quotes, and subject to all the conditions herein, the undersigned offers and agrees to furnish and deliver any or all items upon which prices are offered, at the prices set opposite each item within the time specified herein.

Failure to execute/sign quote prior to submittal shall render quote invalid. Late quotes are not acceptable.

VENDOR:		PHONE NUMBER:
TYPE OR PRINT NAME & TITLE OF PERSON SIGNING:		FAX NUMBER:
AUTHORIZED SIGNATURE:	DATE:	E-MAIL:

OFFER VALID FOR 30 DAYS FROM DATE OF OPENING.

ACCEPTANCE OF QUOTE

If any or all parts of this quote are accepted, a purchase order will be issued to the vendor within 30 days of quote.

INSTRUCTIONS FOR QUOTES

- READ, REVIEW AND COMPLY:** It shall be the offeror's responsibility to read, review and comply with all requirements specified herein.
- NOTICE TO OFFERORS:** By execution and delivery of this document, the offeror agrees that any additional terms and conditions, whether submitted purposely or inadvertently, shall have no force or effect.
- TIME FOR CONSIDERATION:** Unless otherwise indicated on the first page of this document, the offer shall be valid for 30 days from the date of award.
- SPECIFICATIONS:** Any deviation from specifications indicated herein must be clearly pointed out; otherwise, it will be considered that items offered are in strict compliance with these specifications, and offeror will be held responsible, therefore. Deviations shall be explained in detail. **The offeror shall not construe this paragraph as inviting deviation or implying that any deviation will be acceptable.**
- CLARIFICATIONS/INTERPRETATIONS:** Any and all questions regarding this document must be addressed to the purchaser named on the cover sheet of this document.

6. **ACCEPTANCE AND REJECTION:** The City of Statesville reserves the right to reject any and all quotes, to waive any informality in quotes and, unless otherwise specified by the offeror, to accept any item in the quote.
7. **HISTORICALLY UNDERUTILIZED BUSINESSES:** Pursuant to General Statute 143-48 and Executive Order #150, The City of Statesville invites and encourages participation in this procurement process by businesses owned by minorities, women, disabled, disabled business enterprises and non-profit work centers for the blind and severely disabled.
8. **AWARD OF CONTRACT:** Qualified quotes will be evaluated and acceptance may be made of the lowest and best quote most advantageous to the City of Statesville as determined upon consideration of such factors as: prices offered; the quality of the articles offered; the substantial conformity with the specifications and other conditions set forth in the quote; the suitability of the items for the intended use; the related services needed; the date or dates of delivery and performance; and such other factors deemed by the City of Statesville to be pertinent or peculiar to the purchase in question. The City of Statesville reserves the right to make partial, progressive, or multiple awards: where it is advantageous to award separately by items; or where more than one supplier is needed to provide the contemplated requirements as to quantity, quality, delivery, service, other factors deemed by City of Statesville.
9. **TAXES:**
 - Do not include any Federal Excise tax in your quote.
 - The City of Statesville pays sales tax; taxes will not be included on purchase order, but vendor is to bill on invoice.
10. **TERMS AND CONDITIONS:** By bidding of these items, vendor, contractors, and/or subcontractors affirm they have read and accept our Purchasing Terms and Conditions. Our Terms and Conditions can be found at: www.statesvillenc.net/vendors
11. **PRICE INCREASES:** Bidder should consider the manufacturer's pricing at time of bid and quote accordingly. ***If additional costs occur from the time bid is received by the City to the time bidder receives the City's purchase order, the bidder may request a change order for the unforeseen increase.*** The change order request shall include backup documentation showing the date the materials were ordered and a letter from the manufacturer, on the manufacturer's letterhead, indicating the amount and date of price increase. The amount of the change order request shall be limited to the exact amount of increase; profit and overhead expenses will not be accepted.
12. **SUBMITTAL:** Quotes can be returned by email to: mstraw@statesvillenc.net. Bid is due ***FRIDAY, JULY 7, 2023 by 5pm EST*** If you have any questions about this bid request, please contact Michael Straw at the email above or call 704-832-3824.

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1.0 General

1.1 Scope: This specification covers electrical, mechanical, and dimensional characteristics for single-phase, 60-Hz, 65° C rise, mineral-oil immersed, overhead-type distribution transformers, rated 500kVA and smaller.

1.2 Description: Two-bushing outdoor, single-phase 60-Hz single voltage, conventional pole-mounted, certified non-PCB mineral-oil insulated ONAN transformer with interlaced secondary windings for use on 2400/4180Y or 13200/22860Y grounded wye system under usual service conditions.

1.3 Standards:

1.3.1 General: Unless otherwise specified on this document all general construction, characteristics, requirements, tests, voltage designations, and terminology shall adhere to the latest edition of the American National Standards Institute (ANSI) C57.12.20 IEEE Standard for Overhead-Type Distribution Transformers 500 kVA and Smaller. Other industry and ANSI/IEEE standards shall apply even when not referenced.

1.3.2 Efficiency: All transformers furnished shall meet minimum efficiency standards set by Department of Energy (DOE) 2016 Energy Efficiency Standard of the Energy Policy and Conservation Act.

1.4 Betterment of Design: The City of Statesville recognizes that manufacturers continuously improve their products through engineering review. The City encourages manufacturers to discuss these improvements with the City electrical engineer at jkiger@statesvillenc.net

2.0 Inventory Information

2.1 General: See Table 1 below for City of Statesville stock number and voltages. The City of Statesville operates two grounded wye voltage classes of distribution feeders at 13200/22860Y and 2400/4180Y.

Table 1: City of Statesville Conventional Transformer Information

Stock Number	High Voltage (V)	BIL (kV)	Secondary Voltage (V)	BIL (kV)	Rating (kVA)
99504	4160GY/2400	60	240/120	30	15
99536	4160GY/2400	60	240/120	30	25
99664	4160GY/2400	60	240/120	30	37.5
99728	4160GY/2400	60	240/120	30	50
99792	4160GY/2400	60	240/120	30	75
99920	4160GY/2400	60	240/120	30	100
90048	4160GY/2400	60	240/120	30	167
22064	22860GY/13200	125	240/120	30	10
22096	22860GY/13200	125	240/120	30	15
22160	22860GY/13200	125	240/120	30	25
22176	22860GY/13200	125	240/120	30	37.5
22192	22860GY/13200	125	240/120	30	50
22224	22860GY/13200	125	240/120	30	75
22256	22860GY/13200	125	240/120	30	100
22288	22860GY/13200	125	240/120	30	167
22368	22860GY/13200	125	240/120	30	333
22384	22860GY/13200	125	240/120	30	500
22621	22860GY/13200	125	277	30	25
22700	22860GY/13200	125	277	30	50
22720	22860GY/13200	125	277	30	75
22728	22860GY/13200	125	277	30	100

22736	22860GY/13200	125	277	30	167
23590	22860GY/13200	125	277	30	250
22800	22860GY/13200	125	277	30	333
22832	22860GY/13200	125	277	30	500

3.0 Design

3.1 Bushing and Terminal: Per IEEE C57.12.20-6.1

3.1.1 Primary:

- For 13200/22860Y primary: Two TOP COVER-mounted primary bushing (porcelain or hard polymer)
- For 2400/4160Y primary: Two SIDEWALL-mounted primary bushing (porcelain or hard polymer)

3.1.2 Secondary:

- For 240/120 secondaries: 3 clamp-type secondary terminals per IEEE C57.12.20-6.1
- For 277 secondaries: 2 clamp-type secondary terminals per IEEE C57.12.20-6.1

3.2 Polarity and Terminal Markings: Per IEEE C57.12.20-6.3

3.3 Oil Preservation: Per IEEE C57.12.20-6.4. With non-PCB oil that is certified to be less than 2PPM.

Transformers shall be identified by stamping a non-PCB label on the nameplate.

3.4 Accessories:

3.4.1 General: Lifting lugs, pressure relief device per IEEE C57.12.20-6.2.7.1, surge arrester mounting provisions on H1, a minimum #6 Cu RHH or better insulated (UV protected) arrester lead.

3.4.2 MOV Arrester: Transformer shall be supplied with one pre-installed direct connect heavy duty MOV polymer lighting arrester wild-life protected rated at 18KV for 13200/22860Y primary and rated at 6KV for 2400/4160Y primary.

3.4.3 Taps: Transformer shall have an external gasketed switch for de-energized selection of taps 2-2 ½ % above and below rated primary voltage (five positions total)

3.4.4 Internal Fault Detector: Transformer shall be equipped with a non-resettable device which detects and provides external indication of internal transformer faults, this device also incorporates a pressure relief valve. The approved device is manufactured by IFD corporation or approved equal.

3.4.5 Nameplate: Nameplate per IEEE C57.12.00.5.12.2 made of laser imprinted anodized aluminum with serial number. The nameplate shall state the non-PCB status of the fluid used.

3.4.6 Labeling: A label located on the tank side middle portion furthest from/facing away from the mounting provisions that indicates transformer KVA rating (to be viewable from the ground after pole mounting) (2.5” characters, black text on yellow background, font: Arial Black) and the five-digit stock number label (2.5” characters, black text on yellow background, font: Arial Black) underneath the KVA rating. An external label to indicate the non-PCB fluid used under the stock number. All labels shall be acrylic and engineer grade, if possible, to ensure a minimum of 10+ years of outdoor durability with high resistance to UV, abrasion, water, and heat with great adhesion properties to prevent peeling from pole mount transformers or tampering. See Appendix A for general placement.

3.5 Tank: Cylindrical carbon steel welded-seam with one-piece removable gasketed self-venting insulated cover, support lugs, and tank grounding pad/connector per IEEE C57.12.20-6.5. The height of the tank cannot vary by more than plus or minus six inches from unit to unit in the same stock number.

3.6 Tank Finish: Electrostatically applied zinc-rich primer and light gray IEEE No. 70 alkyd finish coat per C57.12.31 completely covering exterior of tank and extending down inside the tank to a point well below the marked 25°C oil level.

3.7 Performance Standards:

Rated Capacity: KVA as indicated per IEEE C57.12.20 (Design Test)

Basic Impulse Level: 125/30 kV Primary/Secondary or 60kV/30 kV Primary/Secondary (Design Test)

Successful completion of routine tests per IEEE C57.12.00-8.2

4.0 Additional Responsibilities

4.1 Losses: Manufacturer shall provide guaranteed excitation losses (no load loss) and guaranteed load losses for all transformers.

4.1.1 True Ownership Cost: Seller shall evaluate the true ownership cost (T.O.C.) of the transformers using the following formula when submitting quote:

$$T.O.C. = \text{Unit Price} + A * \text{No Load Loss} + B * \text{Load Loss}$$

$$A = \$4.87$$

$$B = \$0.93$$

4.2 Test Reports: All transformers shall receive tests in accordance with the methods found in IEEE C57.12.90. The successful bidder shall be required to electronically submit certified test results in IEEE C57.12.37 format (comma delimited or Excel worksheet format) for each transformer ordered pursuant to this bid before shipment can be considered complete and accepted by the City. Payment for any shipment will be withheld until certified test results for all transformers are submitted and accepted by a City representative.

4.2.1 City Recipient: Certified tests to be emailed to jkiger@statesvillenc.net

4.3 Tolerances for Losses: No transformer supplied shall exceed 10% of the quoted average No Load Losses or 6% of the quoted average Total Losses, i.e., No Load + Load Loss. IF the actual losses do exceed these tolerances the City may exercise one of the two options below, all freight paid by seller:

- a) Return any transformers up to and including all the shipment, Freight Collect, to be replaced by the seller with transformers that meet the quoted losses on the bid, or
- b) Invoice seller liquidated damages based on the definition in section 4.4.

4.4 Liquidated Damages: Liquidated Damage (L.D.) shall equal two times the difference between the actual true ownership cost (A.T.O.C.) and the quoted true ownership cost (Q.T.O.C.). IF A.T.O.C. is greater than Q.T.O.C. (i.e.):

$$L.D. = 2 * (A.T.O.C.-Q.T.O.C.)$$

4.5 Drawings and Design Information: Prior to transformer construction, the transformer manufacturer must:

- a) Furnish mechanical and electrical data, along with dimensional outline drawings for approval (preferred for dimensional drawings to be submitted with bid).
- b) Submit minimum design information that includes: The volume of air and oil within the sealed tank, primary and secondary fault current withstand capacity of the transformer, the impulse voltage of the transformer, means by which the core and coil assembly is clamped and supported, the type of insulating medium used throughout the transformer coil construction.

Any changes in the design will need the re-approval of the City before manufacturing.

4.6 Evaluation: All transformers will be evaluated on the lowest initial unit cost ALONG with reputation of manufacturer in providing a quality product, lead times, or the product that is most advantageous for the City.

4.7 Delivery Standards: Transformers will be securely strapped to pallets, in an upright position, and delivered FOB destination as directed by City Warehouse personnel. All transformers shall be accompanied by certified loss reports paper copies as well those emailed in section 4.2. Transformers shall be shipped on open-body trailers to be unloaded by crane, line truck or forklift from trailer side.

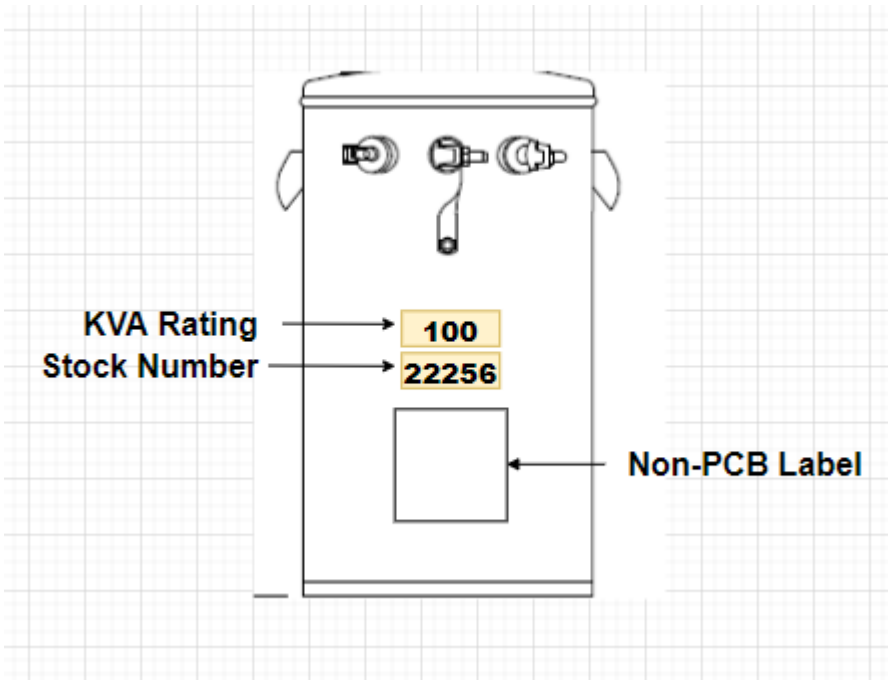
Appointments are required for all deliveries - Call 704-832-3824 or 704-832-3846.

Delivery hours 8:00AM to 2:00PM local time during business days.

4.8 Exemptions: Any exemption to this specification shall be explicitly noted in sellers bid. Otherwise it is understood that seller agrees to all conditions set in this document.

Appendix

Appendix A: Example Label Placement for 100KVA Stock #22256 (NTS)



1.0 General

1.1 Scope: This specification covers electrical, mechanical, and dimensional characteristics for single-phase, 60-Hz, 65° C rise, mineral-oil immersed, overhead-type distribution transformers, rated 500 kVA and smaller.

1.2 Description: Single-bushing outdoor, single-phase 60-Hz single voltage completely self-protected (CSP) pole-type non-PCB mineral-oil insulated, ONAN transformer with interlaced secondary windings for use on 2400/4180Y or 13200/22860Y grounded wye system under usual service conditions.

1.3 Standards:

1.3.1 General: Unless otherwise specified on this document all general construction, characteristics, requirements, tests, voltage designations, and terminology shall adhere to the latest edition of the American National Standards Institute (ANSI) C57.12.20 IEEE Standard for Overhead-Type Distribution Transformers 500 kVA and Smaller. Other industry and ANSI standards shall apply even when not referenced.

1.3.2 Efficiency: All transformers furnished shall meet minimum efficiency standards set by Department of Energy (DOE) 2016 Energy Efficiency Standard of the Energy Policy and Conservation Act.

1.4 Betterment of Design: The City of Statesville recognizes that manufacturers continuously improve their products through engineering review. The City encourages manufacturers to discuss these improvements with the City electrical engineer at jkiger@statesvillenc.net

2.0 Inventory Information

2.1 General: See Table 1 below for City of Statesville stock number and voltages. The City of Statesville operates two grounded wye voltage classes of distribution feeders at 13200/22860Y and 2400/4180Y.

Table 1: City of Statesville CSP Transformer Information

Stock Number	High Voltage (V)	BIL (kV)	Secondary Voltage (V)	BIL (kV)	Rating (kVA)
98960	4160GY/2400	60	240/120	30	25
99024	4160GY/2400	60	240/120	30	37.5
99152	4160GY/2400	60	240/120	30	50
21792	22860GY/13200	125	240/120	30	10
21808	22860GY/13200	125	240/120	30	15
21840	22860GY/13200	125	240/120	30	25
21841	22860GY/13200	125	240/120	30	37.5
21968	22860GY/13200	125	240/120	30	50

3.0 Design

3.1 Bushing and Terminal: Per IEEE C57.12.20-6.1

3.1.1 Primary:

- For 13200/22860Y primary: one TOP COVER-mounted primary bushing (porcelain or hard polymer)
- For 2400/4160Y primary: one SIDEWALL-mounted primary bushing (porcelain or hard polymer)

3.1.2 Secondary: 3 clamp-type secondary terminals per IEEE C57.12.20-6.1

3.2 Polarity and Terminal Markings: Per IEEE C57.12.20-6.3

3.3 Oil Preservation: Per IEEE C57.12.20-6.4. With non-PCB oil that is certified to be less than 2PPM. Transformers shall be identified by stamping a non-PCB label on the nameplate.

3.4 Accessories:

3.4.1 General: Lifting lugs, pressure relief device per IEEE C57.12.20-6.2.7.1 (incorporated into section 3.4.4), surge arrester mounting provisions, protective link primary fuse, a secondary oil immersed circuit breaker operable externally with a hot stick, a minimum #6 Cu RHH or better insulated (UV protected) arrester lead.

3.4.2 MOV Arrester: Transformer shall be supplied with one pre-installed direct connect heavy duty MOV polymer lighting arrester with wild-life protection rated at 18KV for 13200/22860Y primary and rated at 6KV for 2400/4160Y primary.

3.4.3 Taps: Transformer shall have an external gasketed switch for de-energized selection of taps 2-2 ½ % above and below rated primary voltage (five positions total).

3.4.4 Internal Fault Detector: Transformer shall be equipped with a non-resettable device which detects and provides external indication of internal transformer faults, this device also incorporates a pressure relief valve. The approved device is manufactured by IFD corporation or approved equal.

3.4.5 Nameplate: Nameplate per IEEE C57.12.00.5.12.2 made of laser imprinted anodized aluminum with serial number. The nameplate shall state the non-PCB status of the fluid used.

3.4.6 Labeling: A label located on the tank side middle portion furthest from/facing away from the mounting provisions that indicates transformer KVA rating (to be viewable from the ground after pole mounting) (2.5” characters, black text on yellow background) and the five-digit stock number label (2.5” characters, black text on yellow background) underneath the KVA rating. An external label to indicate the non-PCB fluid used under the stock number. All labels shall be acrylic and engineer grade, if possible, to ensure a minimum of 10+ years of outdoor durability with high resistance to UV, abrasion, water, and heat with great adhesion properties to prevent peeling from pole mount transformers or tampering. See Appendix A for general placement.

It is preferred that the seller provides decal labels for the KVA rating and stock number, however when decals are not available, the following exceptions are allowed. **Acceptable Exceptions:** Stencils are allowed in lieu of decals, but their use must be noted in quote. Stencils shall adhere to size and placement specifications for labels stated above in section 3.4.6 and be as uniform as plausible.

3.5 Tank: Cylindrical carbon steel welded-seam with one-piece removable gasketed insulated cover, lifting lugs, and tank grounding pad/connector per IEEE C57.12.20-6.5. The height of the tank cannot vary by more than plus or minus six inches from unit to unit in the same item number.

3.5.1 Mounting Provisions: One (1) set of hanger brackets with standard upper and lower provisions on single set.

3.6 Tank Finish: Electrostatically applied zinc-rich primer and light gray IEEE No. 70 alkyd finish coat per C57.12.31 completely covering exterior of tank and extending down inside the tank to a point well below the marked 25°C oil level.

3.7 Performance Standards:

Rated Capacity: KVA as indicated per IEEE C57.12.20 (Design Test)

Basic Impulse Level: 125/30 kV Primary/Secondary or 60kV/30 kV Primary/Secondary (Design Test)

Successful completion of routine tests per IEEE C57.12.00-8.2

4.0 Additional Responsibilities

4.1 Losses: Manufacturer shall provide guaranteed excitation losses (no load loss) and guaranteed load losses for all transformers.

4.1.1 True Ownership Cost: Seller understands that the City evaluates true ownership cost (T.O.C.) of the transformers using the following formula when submitting quote:

$$\text{T.O.C.} = \text{Unit Price} + A * \text{No Load Loss} + B * \text{Load Loss}$$

$$A = \$4.87$$

$$B = \$0.93$$

4.2 Test Reports: All transformers shall receive tests in accordance with the methods found in IEEE C57.12.90. The successful bidder shall be required to electronically submit certified test results in IEEE C57.12.37 format (comma delimited or Excel worksheet format) for each transformer ordered pursuant to this bid before shipment can be considered complete and accepted by the City. Payment for any shipment will be withheld until certified test results for all transformers are submitted and accepted by a City representative.

4.2.1 City Recipient: Certified tests to be emailed to jkiger@statesvillenc.net

4.3 Tolerances for Losses: No transformer supplied shall exceed 10% of the quoted average No Load Losses or 6% of the quoted average Total Losses, i.e., No Load + Load Loss. IF the actual losses do exceed these tolerances the City may exercise one of the two options below, all freight paid by seller:

- a) Return any transformers up to and including all the shipment, Freight Collect, to be replaced by the seller with transformers that meet the quoted losses on the bid, or
- b) Invoice seller liquidated damages based on the definition in section 4.4.

4.4 Liquidated Damages: Liquidated Damage (L.D.) shall equal two times the difference between the actual true ownership cost (A.T.O.C.) and the quoted true ownership cost (Q.T.O.C.). IF A.T.O.C. is greater than Q.T.O.C. (i.e.):

$$L.D. = 2 * (A.T.O.C.-Q.T.O.C.)$$

4.5 Drawings and Design Information: Prior to transformer construction, the transformer manufacturer must:

- a) When submitting quote: The seller shall furnish basic mechanical and electrical data, along with dimensional outline drawings for approval (a simple dimensional drawing is acceptable).
- b) After award of bid: The seller shall provide design information that includes, approval drawings with City specifications (labeling, accessories, etc.) incorporated into drawings and nameplate drawings. The volume of oil within the sealed tank, total weight of transformer, and the type of insulating medium used throughout the transformer coil construction shall be noted or shown in drawings.

Any changes in the design will need the re-approval of the City before manufacturing.

4.6 Evaluation: All transformers will be evaluated on the lowest initial unit cost ALONG with reputation of manufacturer in providing a quality product, lead times, or the product that is most advantageous for the City.

4.7 Delivery Standards: Transformers will be securely strapped to pallets, in an upright position, and delivered FOB destination as directed by City Warehouse personnel. All transformers shall be accompanied by certified loss reports paper copies as well those emailed in section 4.2. Transformers shall be shipped on open-body trailers to be unloaded by crane, line truck or forklift from trailer side.

Appointments are required for all deliveries - Call 704-832-3824 or 704-832-3846.

Delivery hours 8:00AM to 2:00PM local time during business days.

4.8 Exemptions: Any exemption to this specification shall be explicitly noted in sellers bid. Otherwise it is understood that seller agrees to all conditions set in this document.

Appendix

Appendix A: Example Label Placement for 25KVA Stock #21840 (NTS)

