

## REQUEST FOR PROPOSALS

NOTICE IS HEREBY GIVEN; that the Undersigned, on behalf of the Essex County Board of Supervisors, will accept sealed proposals at the Office of the Purchasing Agent until April 3, 2013 at 2:00 P.M. for a Radio Communications System Tower.

Specifications are available by contacting the Office of the Purchasing Agent, Linda M. Wolf, CPA, Government Center, 7551 Court St., Elizabethtown, New York 12932 or by calling 518-873-3332. Specifications are also available on the website at: [www.co.essex.ny.us](http://www.co.essex.ny.us).

All proposals submitted in response to this notice shall be marked "SEALED PROPOSAL – RADIO COMMUNICATIONS SYSTEM TOWER" clearly on the outside of the envelope.

Each proposal must be accompanied by either a Certified Check or a Bid Bond, in a form acceptable to the Essex County Attorney, payable to Essex County Treasurer in the amount of five percent (5%) of amount of the proposal.

All Certified Checks and Bid Bonds, except those of the three (3) low bidders will be returned within ten (10) days after the bids are opened. The checks or bonds of the three (3) low bidders will be returned after the execution of the Contract.

In addition to the proposal, the proposer shall submit executed non-collusion bid certificates signed by the proposer or one of its officers as required by the General Municipal Law Sec. 103d. The bidder shall also submit an executed certificate of compliance with the Iran Divestment Act signed by the bidder or one of its officers as required by the General Municipal Law Sec. 103g.

The successful proposer will be notified promptly by letter and must be prepared to enter into a contract to furnish the materials or services.

Essex County reserves the right to reject any and all proposals not considered to be in the best interest of Essex County, and to waive any technical or formal defect in the proposals which is considered by Essex County to be merely irregular, immaterial, or unsubstantial.

PLEASE TAKE FURTHER NOTICE that Essex County affirmatively states that in regard to any contract entered into pursuant to this notice, without regard to race, color, sex, religion, age, national origin, disability, sexual preference or Vietnam Era veteran status, disadvantaged and minority or women-owned business enterprises will be afforded equal opportunity to submit bids in response hereto.

Dated: March 14, 2013

Linda M. Wolf, CPA  
Purchasing Agent  
Essex County Government Center  
Elizabethtown, New York 12932  
(518) 873-3332



# **Essex County, New York Request for Proposals For**

**Public Safety Radio Communications System Tower**

**March 14, 2013**

**Essex County Purchasing Department**

**Linda Wolf, CPA, CPPB**

**Purchasing Agent**

**7551 Court Street**

**Elizabethtown, NY 12932**

**518-873-3332**

**[lwolf@co.essex.ny.us](mailto:lwolf@co.essex.ny.us)**

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## 1. General RFP Information

Essex County, New York (COUNTY), solicits, through this Request for Proposals (RFP), qualified vendors (VENDOR) to supply a radio communications tower and associated components for the proposed Essex County Public Safety Radio Communication System. *All equipment provided under any contract resulting from this specification will be installed by other parties who have been contracted for site development services.*

The COUNTY will enter negotiations to contract with a VENDOR whose proposal, in the judgment of the COUNTY best serves the COUNTY'S needs considering the following factors:

- Compliance with RFP requirements
- Cost to the COUNTY
- VENDOR references
- VENDOR warranty

Trade secrets or proprietary information submitted by a VENDOR in connection with a procurement transaction shall not be subject to public disclosure under the New York State Freedom of Information Act. However, the VENDOR must invoke the protection of this section prior to or upon submission of the proposal response information. The VENDOR must also identify the specific content or other materials requiring protection and state the reasons why protection is necessary. Disposition of material after award(s) is/are made should be stated by the VENDOR.

### 1.1 *Submission of Proposals*

- A. Proposal submissions must be received no later than the date and time specified on the RFP cover page and shall be submitted to:

Linda M. Wolf, CPA, CPPB  
Purchasing Agent  
Essex County Government Center  
Elizabethtown, New York 12932

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- B. Three bound hard copies and three electronic copies (i.e., CD/DVD-ROM) of each proposal must be received in a sealed package with the designation **“SEALED PROPOSAL – Belfry Mountain Tower”** conspicuously marked on the outer envelope.
  - C. The COUNTY will open and log all proposals on the date and time specified on the RFP cover page. All proposals submitted will be a matter of public record unless the PROPOSER invokes the protection of the New York State Freedom of Information Act for all or portions of their proposal.
  - D. The COUNTY will not be liable for any costs incurred by firms associated with the development, delivery, and possible time required to provide clarifications/responses to questions in response to this RFP. PROPOSERS should direct any questions concerning this RFP to Linda M. Wolf, CPA, CPPB, Purchasing Agent via e-mail at [lwolf@co.essex.ny.us](mailto:lwolf@co.essex.ny.us).

## **1.2 Proposal Format**

All proposals must be submitted according to the following requirements and the requirements defined in Attachment E – *County Terms and Conditions* and include the following:

- A. Executive Summary – include proposal structure, pricing summary, assumptions and constraints, and any other pertinent information.
- B. Point-by-point compliance:
  - 1. VENDORS shall demonstrate compliance with the requirements herein by completing the matrix provided in Attachment A – *RFP Compliance Matrix*.
  - 2. The **fully completed compliance matrix** must be included in the proposal response.
  - 3. VENDORS shall mark an “X” in the appropriate column for each line of the matrix. VENDORS are not required to address rows of the matrix that are marked with “N/A,” as these rows do not require a statement of compliance. Compliance statements are limited to the following three choices:

- a. COMPLY – The proposal meets or exceeds the specified requirement.
  - b. COMPLY WITH CLARIFICATION – The proposal does not meet the exact stated requirement; however, meets a substantial portion of or meets the intent of the requirement. PROPOSER must provide a detailed explanation in the “Remarks” column when using this statement.
  - c. EXCEPTION – The proposal does not meet the specified requirements. PROPOSER must provide a detailed explanation when using this statement.
- C. Description of the products and services to be provided as described in this RFP:
  - 1. New 180-foot self-supporting radio communications tower, hardware, and associated accessories meeting or exceeding the requirements set forth in Section 2.
  - 2. The following radio communications tower engineering drawings meeting or exceeding the requirement set forth in Section 3:
    - a. Foundation design certified and sealed by New York State licensed Professional Engineer (PE).
    - b. Assembly and erection drawings certified and sealed by a New York State licensed PE.
  - 3. Radio communications tower warranty:
    - a. No deductible warranty against all defects in materials and workmanship for a minimum period of 5 years from the date of installation and acceptance of the radio communications tower.
    - b. Should the warranty period start upon delivery, the VENDOR shall warranty the radio communications tower for an additional 6 months from the delivery date.

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4. Radio communications tower storage and delivery:
- Manufacture and storage of the radio communications tower at the SELECTED VENDOR'S facility at NO ADDITIONAL COST to the COUNTY until the site becomes ready for the installation of the radio communications tower.
  - Delivery and offload of the radio communications tower to Belfry Mountain as listed in Table 1 in accordance with the requirements set forth in Section 2.12. Note – Table 1 provides both the site access and proposed radio communications tower locations for reference.

**Table 1 – Radio Communications Site Location**

Site Name	Site Address	Site Coordinates
Belfry Mountain	<b>Site Access –</b> 729 Dalton Hill Road Witherbee, New York 12998  <b>Site Location –</b> Summit of Belfry Mountain Moriah, New York 12960	44°05'57" N 73°32'52" W

5. Documentation meeting the requirements set forth in Section 3:
- Radio communications tower warranty documentation and maintenance manuals.
  - Radio communications tower training documentation (if applicable).

D. Price proposal:

- VENDORS shall provide a fixed-priced cost proposal using the form provided in Attachment D – Proposal Pricing Form. Other forms are NOT ACCEPTABLE. The itemized price proposal shall include all of the materials, equipment, and services proposed to meet the RFP requirements. 5% Retainage will be withheld until final approval of project.

E. Radio communications tower manufacturing and delivery schedule:

1. VENDORS shall provide a proposed schedule including, but not limited to the following tasks:
  - a. Preparation of foundation design, assembly, and erection drawings.
  - b. Manufacturing schedule identifying lead times, production duration, etc.
  - c. Storage and delivery schedule.

### **1.3 Proposal Evaluation**

During the evaluation process, the COUNTY reserves the right, where it may serve the COUNTY'S best interest, to request additional information or clarifications from VENDORS, or to allow corrections of errors or omissions.

For additional information on proposal evaluation, reference *Attachment E – County Terms and Conditions*.

### **1.4 Alternate Proposal**

VENDORS may submit alternate proposals. Such an alternate proposal can consist of any submittal that the VENDOR feels will meet the needs of the COUNTY. The COUNTY will not consider a submittal that does not substantially meet the intent of the requirements set forth in the specification. To the extent the proposal deviates from the requirements set forth in the RFP, the VENDOR should explain the economic, technical, environmental, or other benefit(s) to the COUNTY of such deviation(s). The COUNTY reserves the right to reject any or all proposals, including the alternative proposals.

### **1.5 RFP Clarifications**

In the event that requirements are stated in more than one section of this RFP and/or attachments and appear to conflict, the more stringent requirement shall apply. For additional information regarding proposal clarifications and revisions, reference *Attachment E – County Terms and Conditions*.

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**1.6    *Modification and Withdrawal of Proposals***

For additional information regarding modification and withdrawal of proposals, reference Attachment E – *County Terms and Conditions*.

**1.7    *Permits***

- A.    The COUNTY has secured the appropriate environmental and building permits to construct the radio communications site at the location identified in Table 1.
- B.    VENDORS are not required to obtain permits of any kind. Refer to Section 2.1B and Section 3.2 for product compliance requirements.

## **2. Radio Communications Tower Specification**

The proposed radio communications tower and associated components shall be compliant with the detailed requirements described throughout this specification.

### **References**

Reference the following attachments included with this RFP for additional information:

- Attachment A – *RFP Compliance Matrix*
- Attachment B – *Tower Elevation, Schedule, and Specifications*
- Attachment C – *Geotechnical Report*
- Attachment D – *Proposal Pricing Form*
- Attachment E – *County Terms and Conditions*

### **2.1 Radio Communications Tower General Requirements**

- A. VENDORS shall propose a radio communications tower designed and configured to support the proposed loads with the specified growth margins. Reference Attachment B – *Tower Elevation, Schedule, and Specifications* for the proposed elevation drawing, antenna and transmission line schedule, and equipment specifications.
- B. VENDORS shall propose a radio communications tower that complies with all applicable federal, state, and local laws, ordinances, and regulations along with the latest versions of the standards, rules, codes, regulations, and industry guidelines set forth in Section 3.2.

### **2.2 Foundation Design, Assembly, and Erection Drawings**

- A. The SELECTED VENDOR shall employ a professional engineer (PE) licensed in the State of New York to prepare the radio communications tower foundation design.
  - 1. The radio communications tower foundation design shall be provided in accordance with the completed geotechnical report provided in Attachment C – *Geotechnical Report*.

- B. The VENDOR shall employ a PE licensed in the State of New York to prepare the radio communications tower assembly and erection drawings.
- C. The VENDOR shall have the radio communications tower foundation design, assembly, and erection drawings certified and sealed by a PE licensed in the State of New York. See Section 3 – *Documentation Deliverable Requirements*, for additional information on project drawings.
- D. ***The VENDOR shall deliver the initial draft of the radio communications tower foundation design, assembly, and erection drawings to the COUNTY within 15 business days after contract award.***
- E. Another party will construct the foundation, stack, assemble, and erect the radio communications tower in accordance with the SELECTED VENDOR'S foundation design, assembly, and erection drawings.

### **2.3 Radio Communications Tower Design**

***NOTE – Reference Attachment B – Tower Elevation, Schedule, and Specifications.***

- A. Construction:
  - 1. Solid rod construction is preferred, but not required.
  - 2. VENDORS shall clearly state whether the proposed radio communications tower is solid, hollow rod (i.e., tubular), or angular construction.
- B. Materials:
  - 1. All steel materials used in the construction of the radio communications tower shall be of galvanized composition, new, and shall conform to the provisions of the Telecommunications Industry Association (TIA) and Electronic Industries Alliance (EIA) – TIA/EIA-222-G Standard pertaining to physical properties, manufacture, workmanship, and factory finishes for Class-III towers.
- C. Height:
  - 1. The radio communications tower height shall be 180-feet.

D. Loads and stresses:

1. The radio communications tower design shall take into account dead and live loads induced by the structure itself, all proposed equipment (with a 25% margin for future growth and/or to accommodate configuration changes), and all stress applied to the tower and its associated components by wind and ice forces. The minimum safety factors listed by TIA/EIA-222-G shall apply under the most severe combination of dead load plus live loading for Class-III towers.

E. Proposed equipment:

1. The radio communications tower shall be designed to support all proposed equipment plus a 25% margin for future growth and/or to accommodate configuration changes.
2. Proposed equipment includes, but is not limited to, antennas, mounts, and platforms; cable ladders; climbing ladder and safety device; conduits; diplexers; lightning rods; microwave radio antennas, radomes, and ice shields; remote radio units (RRUs); surge arrestors; tower top amplifiers (TTAs); transmission lines, transmission line hangers.

F. Antenna and transmission line loading:

1. The radio communications tower shall be designed to support, at a minimum, the equipment proposed in Attachment B – *Tower Elevation, Schedule, and Specifications* plus a 25% margin for future growth and/or to accommodate configuration changes.

G. Wind loading:

1. Wind loading shall be calculated per TIA/EIA-222-G for Class-III towers with all proposed components installed plus a 25% margin for future growth and/or to accommodate configuration changes.

## H. Ice loading:

1. The radio communications tower shall be designed per TIA/EIA-222-G for Class-III towers to withstand additional horizontal wind pressures and dead loading produced by accumulated radial ice with all associated components installed plus a 25% margin for future growth and/or to accommodate configuration changes.

## I. Tower twist, sway, and displacement:

1. The radio communications tower shall be designed to meet twist, sway, and displacement specifications for all loading conditions as recommended by TIA/EIA-222-G for Class-III towers with all proposed components plus a 25% margin for future growth and/or to accommodate configuration changes.

**2.4 Radio Communications Tower Grounding and Bonding**

- A. The proposed radio communications tower and associated components shall meet or exceed the guidelines recommended in Motorola R56 – *Standards and Guidelines for Communications Sites* (latest revision).

## B. Radio communications tower ground ring, radials, and electrodes:

1. The COUNTY shall contract with others to design and install the tower ground ring, radials, and electrodes based on the SELECTED VENDOR'S radio communications tower design.

## C. Radio communications tower ground bus bar:

1. The radio communications tower shall be equipped with a tower ground bus bar.
2. The tower ground bus bar shall be an integral part of the tower construction.
3. The tower ground bus bar shall be large enough to support all proposed transmission lines plus a 25% margin for future growth and/or to accommodate configuration changes.

**2.5 Radio Communications Tower Lighting**

- A. Since the radio communications tower and associated antennas will not reach or exceed 200-feet above mean sea level (AMSL) and the COUNTY has secured an FAA no-hazard determination, *no lighting is required*.

**2.6 Radio Communications Tower Cable Ladder**

- A. The radio communications tower shall include a transmission line cable ladder capable of supporting the attachment of the transmission lines using stainless steel hangers and adapters of the appropriate size for the transmission lines specified in Attachment B – *Tower Elevation, Schedule, and Specifications*.
- B. The transmission lines shall be supported on the cable ladder at intervals of no more than 3-feet or as recommended by cable manufacturers' specifications.
1. VENDORS are responsible for ensuring that their proposals account for closer support spacing if required by the cable manufacturers' specifications.
- C. The cable ladder shall be of galvanized steel construction and shall have mounting hardware of stainless steel or galvanized steel construction.

**2.7 Radio Communications Tower Ice Bridges**

- A. The COUNTY will contract with others to provide the ice bridges between the radio communications tower and equipment shelters.

**2.8 Radio Communications Tower Climbing Ladder**

- A. The radio communications tower shall be equipped with an Occupational Safety and Health Administration (OSHA)-approved climbing ladder and safety climbing cable with adjustable belt.
1. Where possible and preferred (as long as a climber is able to cross out and safely service antennas from a reachable distance), the ladder shall be placed inside the tower structure. Step bolts on the outside of the tower structure are not to be the primary climbing device.

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2. Tower installation and maintenance climbers shall be able to climb the entire height of the structure without disconnecting from the cable.

## **2.9 Radio Communications Tower Hardware**

- A. VENDORS shall provide all hardware and accessories as required for complete installation of the radio communications tower meeting all requirements of this specification and in accordance with the SELECTED VENDOR'S warranty requirements.

## **2.10 Radio Communications Tower Warranty**

- A. VENDORS shall provide a no deductible warranty against all defects in materials and workmanship for a minimum period of 5 years from the date of installation and acceptance of the tower. Should the warranty period start upon delivery, the VENDOR shall warranty the tower for an additional 6 months from the delivery date.

## **2.11 Radio Communications Tower Documentation**

- A. Upon tower acceptance by the COUNTY, the SELECTED VENDOR shall supply three complete sets of warranty documentation and maintenance manuals for the tower.
- B. The SELECTED VENDOR shall provide training documentation (if applicable).
- C. All documentation shall be submitted in accordance with Section 3 – *Documentation Deliverable Requirements*

## **2.12 Radio Communications Tower Storage and Delivery**

- A. The SELECTED VENDOR shall manufacture and store the radio communications tower at their facility at NO ADDITIONAL COST to the COUNTY until the site becomes ready for the installation of the radio communications tower.
  - B. The SELECTED VENDOR shall deliver and offload the tower at the location specified in Table 1 within 30 calendar days after the COUNTY notifies the SELECTED VENDOR of the shipment initiation date.
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### 3. Documentation Deliverable Requirements

Following award of a contract to the SELECTED VENDOR, all documentation deliverables produced per this RFP shall meet the following requirements.

#### 3.1 *Format and Submission*

- A. All documentation deliverables shall be provided in hard copy (triplicate), properly bound, and CD-ROM (single) (the COUNTY desires Microsoft Office and/or pdf file formats, dwg file format shall not be accepted).
- B. All documentation deliverables shall include a cover letter or letter of transmittal, signed, dated, and fully describing the contents of the submittal.
- C. The radio communications tower foundation design, assembly, erection, and grounding drawings shall contain the following minimum information:
  - 1. Name of firm or entity that prepared each submittal on label or title block
  - 2. A space approximately 3-1/2 by 5 inches on label or beside title block to record the COUNTY'S review and approval markings
  - 3. Project name and date
  - 4. Submittal number or other unique identifier, including revision identifier
  - 5. Drawing number and detail references, as appropriate
  - 6. Communications site name
  - 7. Name and seal of a PE licensed in the State of New York
  - 8. Other necessary identification
- D. All project drawings shall be marked as draft until the COUNTY reviews and provides written approval for the drawings.
- E. *The SELECTED VENDOR shall deliver the initial draft of the radio communications tower foundation design, assembly, erection, and grounding drawings to the COUNTY within 15 business days after a contract is awarded.*

### **3.2 Compliance**

- A. The SELECTED VENDOR shall adhere to all applicable federal, state, and local laws, ordinances, or regulations governing the products and services provided.
- B. The products provided by the SELECTED VENDOR shall comply with the latest versions of the following standards, rules, codes, regulations, and industry guidelines (presented in alphabetical order; not reflective of priority):
- American Concrete Institute (ACI)
  - American National Standards Institute (ANSI)
  - American Society of Testing Materials (ASTM)
  - Building Officials and Code Administrators (BOCA)
  - Electronic and Telecommunications Industry Associations (EIA-TIA)
  - Federal Aviation Administration (FAA)
  - Federal Communications Commission (FCC)
  - Institute of Electrical and Electronics Engineers (IEEE)
  - Motorola R56 *Standards and Guidelines for Communications Sites*
  - National Electrical Code (NEC)
  - National Electrical Manufacturer's Association (NEMA)
  - National Fire Protection Association (NFPA)
  - New York State Uniform Fire Prevention and Building Code
  - Occupational Safety and Health Administration (OSHA)
  - Standard Mechanical Code (SMC)
  - Telecommunications Distribution Methods Manual (TDMM)
  - Underwriters Laboratories, Inc. (UL)

## **4. Deliverable Review and Acceptance**

### **4.1 Deliverable Review**

- A. The SELECTED VENDOR shall allow a minimum of two weeks for drawing and documentation deliverable review, including time for re-submittals (instances where the COUNTY deems the initial submittal unacceptable), as follows:
1. Time for review shall commence on COUNTY'S receipt of deliverable.
  2. The COUNTY will not authorize contract extensions because of failure to transmit deliverables enough in advance of the work to permit processing, including re-submittals.
  3. All deliverables shall be subject to review and written approval by the COUNTY and its consultants.

### **4.2 Deliverable Acceptance**

- A. The COUNTY shall consider the radio communications tower and associated components, foundation design and build-to (installation) drawings, warranty, and tower documentation ready for final acceptance following successful completion and approval of the following:
1. Resolution of all revision requests, questions, comments, and concerns
  2. Final tower foundation, assembly and erection drawings, and build-to (installation) drawings certified and sealed by a PE licensed in the State of New York
  3. Final deliverables submitted to the COUNTY per the requirements in Section 3 – *Documentation Deliverable Requirements*

**5. Project Management**

- A. The SELECTED VENDOR shall identify in writing the primary and secondary points of contact (POCs) who shall be responsible for coordinating all project activities with the COUNTY'S project manager and the COUNTY'S consultant.
- B. The SELECTED VENDOR shall address all written and verbal correspondence from the COUNTY and/or the COUNTY'S consultant during normal business hours on the same day or following business day. Response time shall not exceed 24-hours from receipt of correspondence except on weekends and official holidays.

## **Attachment A – RFP Compliance Matrix**

Provided as Attachment A of this RFP is the *Belfry Mountain Tower RFP Compliance Matrix*

Specification Section	Description	N/A	Comply	Comply with Clarification	Exception	Remarks
		54	0	0	0	
<b>SECTION 1</b>	<b>GENERAL RFP INFORMATION</b>	X				
	Essex County, New York (COUNTY), solicits, through this Request for Proposals (RFP), qualified vendors (VENDOR) to supply a radio communications tower and associated components for the proposed Essex County Public Safety Radio Communication System. All equipment provided under any contract resulting from this specification will be installed by other parties who have been contracted for site development services. The COUNTY will enter negotiations to contract with a VENDOR whose proposal, in the judgment of the COUNTY best serves the COUNTY'S needs considering the following factors: • Compliance with RFP requirements • Cost to the COUNTY • VENDOR references • VENDOR warranty	X				
	Trade secrets or proprietary information submitted by a VENDOR in connection with a procurement transaction shall not be subject to public disclosure under the New York State Freedom of Information Act. However, the VENDOR must invoke the protection of this section prior to or upon submission of the proposal response information. The VENDOR must also identify the specific content or other materials requiring protection and state the reasons why protection is necessary. Disposition of material after award(s) is/are made should be stated by the VENDOR.					
<b>1.1</b>	<b>Submission of Proposals</b>	X				
1.1.A	Proposal submissions must be received no later than the date and time specified on the RFP cover page and shall be submitted to: Linda M. Wolf, CPA, CPPB Purchasing Agent Essex County Government Center Elizabethtown, New York 12932					
1.1.B	Three bound hard copies and three electronic copies (i.e., CD/DVD-ROM) of each proposal must be received in a sealed package with the designation "SEALED PROPOSAL – Belfry Mountain Tower" conspicuously marked on the outer envelope.					
1.1.C	The COUNTY will open and log all proposals on the date and time specified on the RFP cover page. All proposals submitted will be a matter of public record unless the PROPOSER invokes the protection of the New York State Freedom of Information Act for all or portions of their proposal.					
1.1.D	The COUNTY will not be liable for any costs incurred by firms associated with the development, delivery, and possible time required to provide clarifications/responses to questions in response to this RFP. PROPOSERS should direct any questions concerning this RFP to Linda M. Wolf, CPA, CPPB, Purchasing Agent via e-mail at lwolf@co.essex.ny.us.					
<b>1.2</b>	<b>Proposal Format</b>	X				
	All proposals must be submitted according to the following requirements and the requirements defined in Attachment E – County Terms and Conditions and include the following:	X				
1.2.A	Executive Summary – include proposal structure, pricing summary, assumptions and constraints, and any other pertinent information.					
1.2.B.1-3	Point-by-point compliance: 1. VENDORS shall demonstrate compliance with the requirements herein by completing the matrix provided in Attachment A – RFP Compliance Matrix. 2. The fully completed compliance matrix must be included in the proposal response. 3. VENDORS shall mark an "X" in the appropriate column for each line of the matrix. VENDORS are not required to address rows of the matrix that are marked with "N/A," as these rows do not require a statement of compliance. Compliance statements are limited to the following three choices: a. COMPLY – The proposal meets or exceeds the specified requirement. b. COMPLY WITH CLARIFICATION – The proposal does not meet the exact stated requirement; however, meets a substantial portion of or meets the intent of the requirement. PROPOSER must provide a detailed explanation in the "Questions/Comments" column when using this statement. c. EXCEPTION – The proposal does not meet the specified requirements. PROPOSER must provide a detailed explanation when using this statement.					
1.2.C	Description of the products and services to be provided as described in this RFP:	X				
1.2.C.1	New 180-foot self-supporting radio communications tower, hardware, and associated accessories meeting or exceeding the requirements set forth in Section 2.					
1.2.C.2	The following radio communications tower engineering drawings meeting or exceeding the requirement set forth in Section 3:	X				
1.2.C.2.a&b	a. Foundation design certified and sealed by New York State licensed Professional Engineer (PE). b. Assembly and erection drawings certified and sealed by a New York State licensed PE.					
1.2.C.3	Radio communications tower warranty:	X				
1.2.C.3.a&b	a. No deductible warranty against all defects in materials and workmanship for a minimum period of 5 years from the date of installation and acceptance of the radio communications tower. b. Should the warranty period start upon delivery, the VENDOR shall warranty the radio communications tower for an additional 6 months from the delivery date.					
1.2.C.4	Radio communications tower storage and delivery:	X				
1.2.C.4.a&b	a. Manufacture and storage of the radio communications tower at the SELECTED VENDOR'S facility at NO ADDITIONAL COST to the COUNTY until the site becomes ready for the installation of the radio communications tower. b. Delivery and offload of the radio communications tower to Belfry Mountain as listed in Table 1 in accordance with the requirements set forth in Section 2.12. Note – Table 1 provides both the site access and proposed radio communications tower locations for reference.					
1.2.C.5	Documentation meeting the requirements set forth in Section 3:	X				
1.2.C.5.a&b	a. Radio communications tower warranty documentation and maintenance manuals. b. Radio communications tower training documentation (if applicable).					
1.2.D	Price proposal:	X				

Specification Section	Description	N/A	Comply	Comply with Clarification	Exception	Remarks
1.2.D.1	VENDORS shall provide a fixed-priced cost proposal using the form provided in Attachment D. Other forms are NOT ACCEPTABLE. The itemized price proposal shall include all of the materials, equipment, and services proposed to meet the RFP requirements.					
1.2.E	Radio communications tower manufacturing and delivery schedule:	X				
1.2.E.1	VENDORS shall provide a proposed schedule including, but not limited to the following tasks: Foundation design, assembly, and erection drawings, Manufacturing schedule identifying lead times, production duration, etc., Storage/delivery schedule.					
1.3	<b>PROPOSAL EVALUATION</b> During the evaluation process, the COUNTY reserves the right, where it may serve the COUNTY'S best interest, to request additional information or clarifications from VENDORS, or to allow corrections of errors or omissions. For additional information on proposal evaluation, reference Attachment E.	X				
1.4	<b>ALTERNATE PROPOSAL</b> VENDORS may submit alternate proposals. Such an alternate proposal can consist of any submittal that the VENDOR feels will meet the needs of the COUNTY. The COUNTY will not consider a submittal that does not substantially meet the intent of the requirements set forth in the specification. To the extent the proposal deviates from the requirements set forth in the RFP, the VENDOR should explain the economic, technical, environmental, or other benefit(s) to the COUNTY of such deviation(s). The COUNTY reserves the right to reject any or all proposals, including the alternative proposals.	X				
1.5	<b>RFP CLARIFICATIONS</b> In the event that requirements are stated in more than one section of this RFP and/or attachments and appear to conflict, the more stringent requirement shall apply. For additional information regarding proposal clarifications and revisions, reference Attachment E.	X				
1.6	<b>MODIFICATION AND WITHDRAWAL OF PROPOSALS</b> For additional information regarding modification and withdrawal of proposals, reference Attachment E.	X				
1.7	<b>PERMITS</b>	X				
1.7.A&B	A. The COUNTY has secured the appropriate environmental and building permits to construct the radio communications site at the location identified in Table 1. B. VENDORS are not required to obtain permits of any kind. Refer to Section 2.1B and Section 3.2 for product compliance requirements.	X				
<b>SECTION 2</b>	<b>RADIO COMMUNICATIONS TOWER SPECIFICATION</b>	X				
	The proposed radio communications tower and associated components shall be compliant with the detailed requirements described throughout this specification.					
2.1	<b>Radio Communications Tower General Requirements</b>	X				
2.1.A	VENDORS shall propose a radio communications tower designed and configured to support the proposed loads with the specified growth margins.					
2.1.B	VENDORS shall propose a radio communications tower that complies with all applicable federal, state, and local laws, ordinances, regulations and latest versions of the standards, rules, codes, regulations, and industry guidelines.					
2.2	<b>Foundation Design, Assembly, and Erection Drawings</b>	X				
2.2.A	The SELECTED VENDOR shall employ a professional engineer (PE) licensed in the State of New York to prepare the radio communications tower foundation design.					
2.2.A.1	The radio communications tower foundation design shall be provided in accordance with the completed geotechnical report provided in Attachment C.					
2.2.B	The VENDOR shall employ a PE licensed in the State of New York to prepare the radio communications tower assembly and erection drawings.					
2.2.C	The VENDOR shall have the radio communications tower foundation design, assembly, and erection drawings certified and sealed by a PE licensed in the State of New York.					
2.2.D	The VENDOR shall deliver the initial draft of the radio communications tower foundation design, assembly, and erection drawings to the COUNTY within 15 business days after contract award.					
2.2.E	Another party will construct the foundation, stack, assemble, and erect the radio communications tower in accordance with the SELECTED VENDOR'S foundation design, assembly, and erection drawings.	X				
2.3	<b>Radio Communications Tower Design</b>	X				
2.3.A	Construction:	X				
2.3.A.1&2	1. Solid rod construction is preferred, but not required. 2. VENDORS shall clearly state whether the proposed radio communications tower is solid, hollow rod (i.e., tubular), or angular construction.					
2.3.B	Materials:	X				
2.3.B.1	All steel materials used in the construction of the radio communications tower shall be of galvanized composition, new, and shall conform to the provisions of the Telecommunications Industry Association (TIA) and Electronic Industries Alliance (EIA) – TIA/EIA-222-G Standard pertaining to physical properties, manufacture, workmanship, and factory finishes for Class-III towers.					
2.3.C	Height:	X				
2.3.C.1	The radio communications tower height shall be 180-feet.					
2.3.D	Loads and stresses:	X				
2.3.D.1	The radio communications tower design shall take into account dead and live loads induced by the structure itself, all proposed equipment (with a 25% margin for future growth and/or to accommodate configuration changes), and all stress applied to the tower and its associated components by wind and ice forces. The minimum safety factors listed by TIA/EIA-222-G shall apply under the most severe combination of dead load plus live loading for Class-III towers.					
2.3.E	Proposed equipment:	X				
2.3.E.1	The radio communications tower shall be designed to support all proposed equipment plus a 25% margin for future growth and/or to accommodate configuration changes.					
2.3.E.2	Proposed equipment includes, but is not limited to, antennas, mounts, and platforms; cable ladders; climbing ladder and safety device; conduits; diplexers; lightning rods; microwave radio antennas, radomes, and ice shields; remote radio units (RRUs); surge arrestors; tower top amplifiers (TTAs); transmission lines, transmission line hangers.	X				
2.3.F	Antenna and transmission line loading:	X				
2.3.F.1	The radio communications tower shall be designed to support, at a minimum, the equipment proposed in Attachment B plus a 25% margin for future growth and/or to accommodate configuration changes.					

Specification Section	Description	N/A	Comply	Comply with Clarification	Exception	Remarks
<b>2.3.G</b>	<b>Wind loading:</b>	X				
2.3.G.1	Wind loading shall be calculated per TIA/EIA-222-G for Class-III towers with all proposed components installed plus a 25% margin for future growth and/or to accommodate configuration changes.					
<b>2.3.H</b>	<b>Ice loading:</b>	X				
2.3.H.1	The radio communications tower shall be designed per TIA/EIA-222-G for Class-III towers to withstand additional horizontal wind pressures and dead loading produced by accumulated radial ice with all associated components installed plus a 25% margin for future growth and/or to accommodate configuration changes.					
<b>2.3.I</b>	<b>Tower twist, sway, and displacement:</b>	X				
2.3.I.1	The radio communications tower shall be designed to meet twist, sway, and displacement specifications for all loading conditions as recommended by TIA/EIA-222-G for Class-III towers with all proposed components plus a 25% margin for future growth and/or to accommodate configuration changes.					
<b>2.4</b>	<b>Radio Communications Tower Grounding and Bonding</b>	X				
2.4.A	The proposed radio communications tower and associated components shall meet or exceed the guidelines recommended in Motorola R56 – Standards and Guidelines for Communications Sites (latest revision).					
2.4.B.1	Radio communications tower ground ring, radials, and electrodes: 1. The COUNTY shall contract with others to design and install the tower ground ring, radials, and electrodes based on the SELECTED VENDOR'S radio communications tower design.	X				
2.4.C	Radio communications tower ground bus bar:	X				
2.4.C.1	The radio communications tower shall be equipped with a tower ground bus bar.					
2.4.C.2	The tower ground bus bar shall be an integral part of the tower construction.					
2.4.C.3	The tower ground bus bar shall be large enough to support all proposed transmission lines plus a 25% margin for future growth and/or to accommodate configuration changes.					
<b>2.5</b>	<b>Radio Communications Tower Lighting</b>	X				
2.5.A	Since the radio communications tower and associated antennas will not reach or exceed 200-feet above mean sea level (AMSL) and the COUNTY has secured an FAA no-hazard determination, no lighting is required.	X				
<b>2.6</b>	<b>Radio Communications Tower Cable Ladder</b>	X				
2.6.A	The radio communications tower shall include a transmission line cable ladder capable of supporting the attachment of the transmission lines using stainless steel hangers and adapters of the appropriate size for the transmission lines specified in Attachment B.					
2.6.B	The transmission lines shall be supported on the cable ladder at intervals of no more than 3-feet or as recommended by cable manufacturers' specifications.					
2.6.B.1	VENDORS are responsible for ensuring that their proposals account for closer support spacing if required by the cable manufacturers' specifications.					
2.6.C	The cable ladder shall be of galvanized steel construction and shall have mounting hardware of stainless steel or galvanized steel construction.					
<b>2.7</b>	<b>Radio Communications Tower Ice Bridges</b>	X				
2.7.A	The COUNTY will contract with others to provide the ice bridges between the radio communications tower and equipment shelters.	X				
<b>2.8</b>	<b>Radio Communications Tower Climbing Ladder</b>	X				
2.8.A	The radio communications tower shall be equipped with an Occupational Safety and Health Administration (OSHA)-approved climbing ladder and safety climbing cable with adjustable belt.					
2.8.A.1	Where possible and preferred (as long as a climber is able to cross out and safely service antennas from a reachable distance), the ladder shall be placed inside the tower structure. Step bolts on the outside of the tower structure are not to be the primary climbing device.					
2.8.A.2	Tower installation and maintenance climbers shall be able to climb the entire height of the structure without disconnecting from the cable.					
<b>2.9</b>	<b>Radio Communications Tower Hardware</b>	X				
2.9.A	VENDORS shall provide all hardware and accessories as required for complete installation of the radio communications tower meeting all requirements of this specification and in accordance with the SELECTED VENDOR'S warranty requirements.					
<b>2.10</b>	<b>Radio Communications Tower Warranty</b>	X				
2.10.A	VENDORS shall provide a no deductible warranty against all defects in materials and workmanship for a minimum period of 5 years from the date of installation and acceptance of the tower. Should the warranty period start upon delivery, the VENDOR shall warranty the tower for an additional 6 months from the delivery date.					
<b>2.11</b>	<b>Radio Communications Tower Documentation</b>	X				
2.11.A	Upon tower acceptance by the COUNTY, the SELECTED VENDOR shall supply three complete sets of warranty documentation and maintenance manuals for the tower.					
2.11.B	The SELECTED VENDOR shall provide training documentation (if applicable).					
2.11.C	All documentation shall be submitted in accordance with Section 3.					
<b>2.12</b>	<b>Radio Communications Tower Storage and Delivery</b>	X				
2.12.A	The SELECTED VENDOR shall manufacture and store the radio communications tower at their facility at NO ADDITIONAL COST to the COUNTY until the site becomes ready for the installation of the radio communications tower.					
2.12.B	The SELECTED VENDOR shall deliver and offload the tower at the location specified in Table 1 within 30 calendar days after the COUNTY notifies the SELECTED VENDOR of the shipment initiation date.					
<b>SECTION 3</b>	<b>DOCUMENTATION DELIVERABLE REQUIREMENTS</b>	X				
<b>3.1</b>	<b>Format and Submission</b>	X				
3.1.A	All documentation deliverables shall be provided in hard copy (triplicate), properly bound, and in electronic format via email and CD-ROM (the COUNTY desire Microsoft Office and/or pdf file formats, .dwg file format shall not be accepted).					
3.1.B	All documentation deliverables shall include a cover letter or letter of transmittal, signed, dated, and fully describing the contents of the submittal.					

Specification Section	Description	N/A	Comply	Comply with Clarification	Exception	Remarks
3.1.C.1-8	The radio communications tower foundation design, assembly, erection, and grounding drawings shall contain the following minimum information: 1. Name of firm or entity that prepared each submittal on label or title block 2. A space approximately 3-1/2 by 5 inches on label or beside title block to record the COUNTY'S review and approval markings 3. Project name and date 4. Submittal number or other unique identifier, including revision identifier 5. Drawing number and detail references, as appropriate 6. Communications site name 7. Name and seal of a PE licensed in the State of New York 8. Other necessary identification					
3.1.D	All project drawings shall be marked as draft until the COUNTY reviews and provides written approval for the drawings.					
3.1.E	The SELECTED VENDOR shall deliver the initial draft of the radio communications tower foundation design, assembly, erection, and grounding drawings to the COUNTY within 15 business days after a contract is awarded.					
<b>3.2</b>	<b>Compliance</b>	X				
3.2.A	The SELECTED VENDOR shall adhere to all applicable federal, state, and local laws, ordinances, or regulations governing the products and services provided.					
3.2.B	The products provided by the SELECTED VENDOR shall comply with the latest versions of the standards, rules, codes, regulations, and industry guidelines listed in Section 3.2B.					
<b>SECTION 4</b>	<b>DELIVERABLE REVIEW AND ACCEPTANCE</b>	X				
4.1	Deliverable Review	X				
4.1.A.1-3	The SELECTED VENDOR shall allow a minimum of two weeks for drawing and documentation deliverable review, including time for re-submittals (instances where the COUNTY deems the initial submittal unacceptable), as follows: 1. Time for review shall commence on COUNTY'S receipt of deliverable. 2. The COUNTY will not authorize contract extensions because of failure to transmit deliverables enough in advance of the work to permit processing, including re-submittals. 3. All deliverables shall be subject to review and written approval by the COUNTY and its consultants.					
4.2	Deliverable Acceptance	X				
4.2.A.1-3	A. The COUNTY shall consider the radio communications tower and associated components, foundation design and build-to (installation) drawings, warranty, and tower documentation ready for final acceptance following successful completion and approval of the following: 1. Resolution of all revision requests, questions, comments, and concerns 2. Final tower foundation, assembly and erection drawings, and build-to (installation) drawings certified and sealed by a PE licensed in the State of New York 3. Final deliverables submitted to the COUNTY per the requirements in Section 3.					
<b>SECTION 5</b>	<b>PROJECT MANAGEMENT</b>	X				
5.2.A	The SELECTED VENDOR shall identify in writing the primary and secondary points of contact (POCs) who shall be responsible for coordinating all project activities with the COUNTY'S project manager and the COUNTY'S consultant.					
5.2.B	The SELECTED VENDOR shall address all written and verbal correspondence from the COUNTY and/or the COUNTY'S consultant during normal business hours on the same day or following business day. Response time shall not exceed 24-hours from receipt of correspondence except on weekends and official holidays.					

## **Attachment B – Tower Elevation, Schedule, and Specifications**

Provided as Attachment B of this RFP is the *Tower Elevation, Schedule, and Specifications* containing the proposed radio communications tower elevation drawing, antenna and transmission line schedule, and equipment specifications

Schematic Reference	Tower Leg	Proposed/Relocated	Description	Height (AGL) (Feet)	Referenced Height	Quantity	Antennas	Transmission Lines	Antenna Cutsheet IDs	Comments
1	A	Proposed	County VHF - Rx	199.66	Tip	1	SC229-SFXLDF-DI	LDF4-50A	C.1	n/a
2	A	Proposed	Wireless Carrier 8' panel w/ TMA, RRU, & Surge Suppression	175	Tip	3	(2) SBNH-1D8585C (1) SBNH-1D6565C	AVA7-50	WC.a1	3 antennas per sector on 12' wide sector frame with 4' standoff
3	A	Proposed	VHF Low Band - Paging	165	Tip	1	SD110-SFXPASNM-DI	LDF4-50A	C.2	n/a
4	A	Proposed	Wireless Carrier	148	Tip	4	(2) V7C-880 (1) X7C-880	AVA7-50	WC.b1	3 antennas per sector on 12' wide sector frame with 4' standoff
5	A	Proposed	NYSP VHF	138	Tip	1	Comprod 874F-70SMHDB	LDF5-50A	NYSP.1	Quarter-wave spacing, bays facing 320 Degrees TN, 67 lbs. plus clamps
6	A	Proposed	VHF High Band Interoperability (future)	115	Tip	1	Dipole array (typical)	LDF4-50A	n/a	Future growth
7	A	Relocated	RACES - Warren County	102	Centerline	1	Directional yagi (typical)	LDF5-50A	n/a	n/a
8	A	Proposed	Hospital Monitor	98	Tip	1	Folded dipole (typical)	LDF5-50A	n/a	n/a
9	A	Proposed	County VHF - Tx	92	Tip	1	SD110-SFXPASNM-DI	LDF4-50A	C.2	n/a
10	A	Relocated	John A. Deming - Yagi	65	Centerline	1	Directional yagi (typical)	LDF5-50A	n/a	n/a
11	A	Relocated	National Weather Service	56	Tip	1	54" J-Pole (typical)	LDF5-50A	n/a	n/a
12	B	Proposed	VHF - Rx (future)	199.66	Tip	1	SC229-SFXLDF-DI	LDF4-50A	C.1	Future growth
13	B	Proposed	Wireless Carrier 8' panel w/ TMA, RRU, & Surge Suppression	175	Tip	3	(2) SBNH-1D8585C (1) SBNH-1D6565C	AVA7-50	WC.a1	3 antennas per sector on 12' wide sector frame with 4' standoff
14	B	Proposed	10' High-Performance Dish to Terry Mountain	160	Centerline	1	DA10-59A	E60	C.3	349.2 Degrees TN. ADD 649 lbs. for potential ice shield
15	B	Relocated	Palmer Hill UHF - Rx Yagi	152	Centerline	1	Directional yagi (typical)	LDF5-50A	n/a	n/a
16	B	Proposed	Wireless Carrier	148	Tip	4	(2) V7C-880 (1) X7C-880	AVA7-50	WC.b1	3 antennas per sector on 12' wide sector frame with 4' standoff
17	B	Relocated	Palmer Hill UHF - Tx Yagi	137	Centerline	1	Directional yagi (typical)	LDF5-50A	n/a	n/a
18	B	Proposed	6' High-Performance Dish to Wells Hill	130	Centerline	1	DA6-W57B	E60	C.4	347.1 Degrees TN. ADD 443 lbs. for potential ice shield
19	B	Proposed	8' High-Performance Dish to Terry Mountain - Rx	121	Centerline	1	DA8-59A	E60	C.5	349.2 Degrees TN. ADD 571 lbs. for potential ice shield
20	B	Relocated	Serkil Solid Waste VHF (Old County Highway)	115	Tip	1	13' whip (typical)	LDF5-50A	n/a	n/a
21	B	Relocated	NYS DOT VHF	100	Tip	1	13' whip (typical)	LDF5-50A	n/a	n/a
22	B	Proposed	10' High-Performance Dish (future)	80	Centerline	1	DA10-59A	E60	C.3	Future growth. ADD 649 lbs. for potential ice shield
23	B	Proposed	Whip antenna (future)	73	Tip	1	20' whip (typical)	LDF4-50A	n/a	Future growth
24	B	Relocated	County Highway	51	Tip	1	10' exposed dipole (typical)	LDF5-50A	n/a	n/a
25	C	Proposed	VHF - Rx (future)	199.66	Tip	1	SC229-SFXLDF-DI	LDF4-50A	C.1	Future growth
26	C	Proposed	Wireless Carrier 8' panel w/ TMA, RRU, & Surge Suppression	175	Tip	3	(2) SBNH-1D8585C (1) SBNH-1D6565C	AVA7-50	WC.a1	3 antennas per sector on 12' wide sector frame with 4' standoff

27	C	Proposed	8' High-Performance Dish to Grandpas Knob	160	Centerline	1	E15Z01P13	E60	C.5	143.9 Degrees TN. <b>ADD</b> 571 lbs. for potential ice shield
28	C	Proposed	Wireless Carrier	148	Tip	4	(2) V7C-880 (1) X7C-880	AVA7-50	WC.b1	3 antennas per sector on 12' wide sector frame with 4' standoff
29	C	Relocated	RACES - Essex County	138	Tip	1	13' whip (typical)	LDF5-50A	n/a	n/a
30	C	Proposed	6' High-Performance Dish to Grandpas Knob	120	Centerline	1	PAD6-59B	E60	C.6	143.9 Degrees TN. <b>ADD</b> 443 lbs. for potential ice shield
31	C	Proposed	National Grid 9.5' VHF Dipole	115	Tip	1	9.5' exposed dipole (typical)	LDF5-50A	n/a	n/a
32	C	Proposed	6' High-Performance Dish (future)	100	Centerline	1	DA6-W57B	E60	C.4	Future growth. <b>ADD</b> 443 lbs. for potential ice shield
33	C	Relocated	John A. Deming - 20' VHF Omni	95	Tip	1	20' whip (typical)	LDF5-50A	n/a	n/a
34	C	Relocated	Contact Paging - 18' Omni	70	Tip	1	18' whip (typical)	LDF5-50A	n/a	n/a
35	C	Proposed	Whip antenna (future)	43	Tip	1	20' whip (typical)	LDF5-50A	n/a	Future growth

**NOTES:**

1. For Wireless Carriers (Sketch References 2, 13, 26 / 4, 16, 28) equipment, ADD the following to the loading analysis:

- Three (3) D&D welded boom gates – Twelve feet (12') for Sketch References 2, 13, 26 = 212 lbs. each
- Three (3) welded boom gates (typical) - Twelve feet (12') for Sketch References 4, 16, 28 = 336 lbs. each
- Twelve (12) Andrew Tower Mount Amplifiers (aka TMA's), Model #EE15Z01P13, or equivalent
- Six (6) KMW Diplexers, Model KDXCV0012017, or equivalent
- Eighteen (18) Ericsson RRU's, Model #RBS6000, or equivalent (3 per sector)
- Twenty-Four (24) runs of Andrew 1 5/8" coaxial cable Model #AVA7-50 or equivalent = .7 Lbs./per Ft
- Four (4) Rosenberg Fiber Cable run, model #FB-L98B-005-5000 (.28") or equivalent = 38 kg/per km
- Six (6) runs of Rosenberger UL Standard 1277 (0.795") power runs WR-VG86ST-BRD = 584 lbs. per MFT
- Three (3) Ret cable runs
- Three (3) Raycap Squid mounted at antenna rad centers, Model #DC6-48-60-RM or equivalent = 23.5" Long x 9.7" in diameter

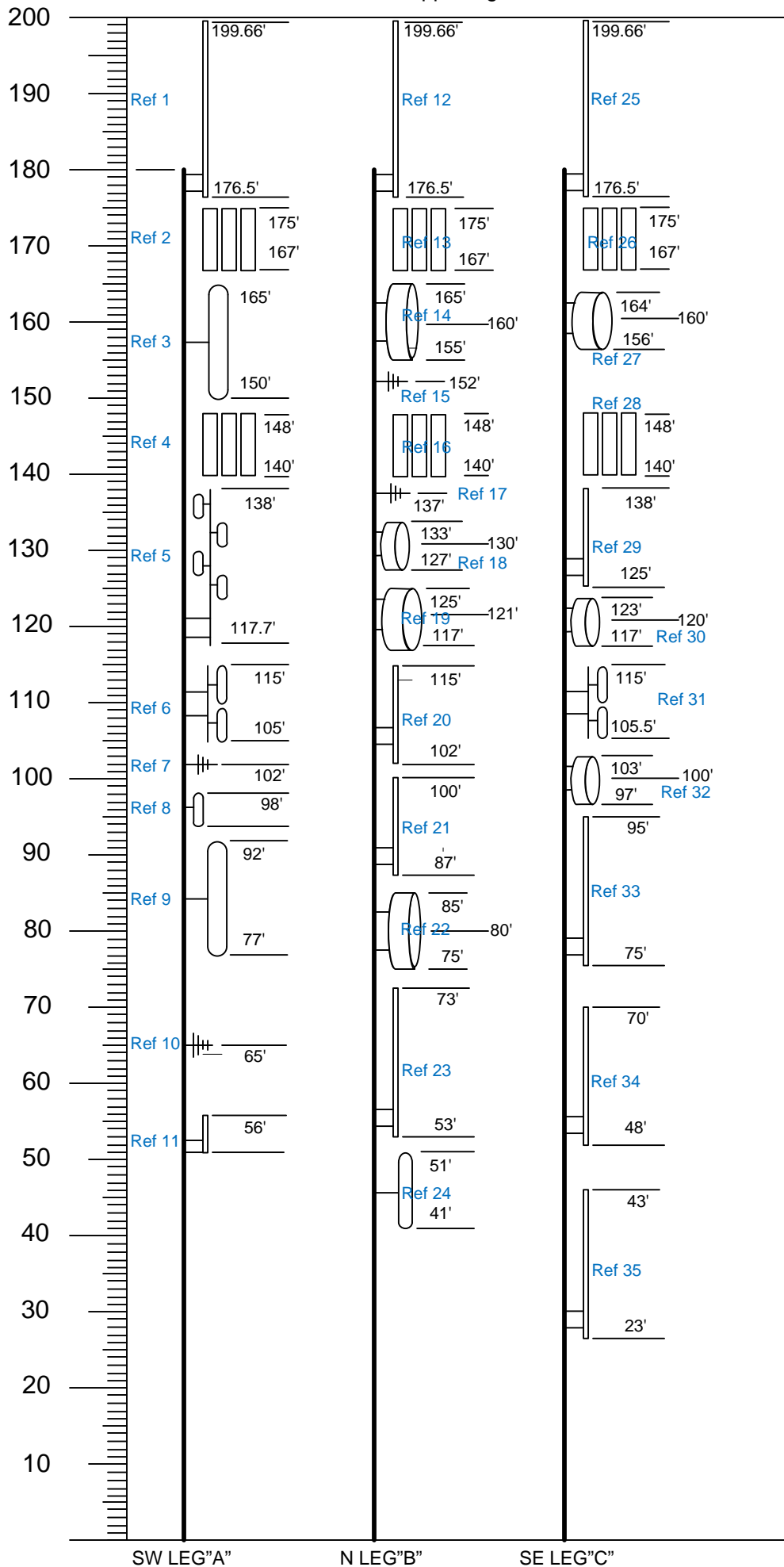
2. Add typical antenna mounts for all apparatus. Add typical boom gates and clamps for Wireless Carriers (see #1 above)

3. Add microwave dish ice shields to load analysis per weights listed in the comments field

4. Refer to cut sheets for antennas, transmission lines, ice shields, and other equipment specifications. Antenna cutsheets are labeled with the respective IDs pe the second column from the right.

5. Loading analysis shall be in accordance with Telecommunications Industry Association (TIA) and Electronic Industries Alliance (EIA) – TIA/EIA-222-G Standard pertaining to physical properties, manufacture, workmanship, and factory finishes for Class-III towers.

# Belfry Mountain, New York 180-Foot Self-Supporting Tower





Antennas  
Low Band, Aviation, and VHF Antennas  
SC229-L - PIM Certified Series

SC229-SFXLDF

Collinear omni antenna, 6 dBd gain, low PIM, 138-225 MHz

(SC229DFLN)

- Rugged fiberglass radome
- High gain, omni-directional
- Designed to withstand severe environmental conditions
- Broad band- 6 MHz Bandwidth with 1.5:1 VSWR

**SMK-225-A3 or SMK-225-A7 kits MUST be used when side mounting antenna.**

The SC229-L series of antennas have been specifically designed for VHF applications requiring high performance, wideband and exceptional electrical and mechanical specifications. This series of omni-directional antennas are constructed of a rugged fiberglass radome which allows them to withstand severe environmental conditions.

It is enclosed in fiberglass radome with lightning spike projecting through the top of the radome to protect the antenna from a lightning strike. This series of antenna also utilizes a tapered radome, which results in less wind resistance, decreases the overall weight, and results in lower tip deflection at high wind speeds.

The SC229-L is also high-performance low PIM collinear omni's which use industry-leading designs that offer high gain, excellent bandwidth and high reliability.



Region	United States	Europe, Middle East and Africa	Caribbean and Latin America	Canada and rest of the world
Telephone	USA: 1 800 263 3275	International: +44 (0) 1487 84 28 19	International: +1 905 726 7676	Canada: 1 800 263 3275 International: +1 905 727 0165
E-mail	salesusa@sinctech.com	salesuk@sinctech.com	salesla@sinctech.com	salescan@sinctech.com

Product Specification Sheet  
EPR 018162

SC229-SFXLDF

Issue: 2

Dated: 27-07-10  
Dated: 13-02-09

### Electrical Specifications

Frequency Range	MHz	138 to 225	*1
Gain (nominal)	dBd (dBi)	6 (8.1)	
Input VSWR (max)		1.5:1	
Polarization		vertical	
Impedance	$\Omega$	50	
Pattern		Omni-directional	
Vertical beamwidth (typ)	degrees	17	
Average Power Input (max)	W	300	
Passive intermod. (2x20W, 3rd ord.)	dBc	-150	
Lightning protection		DC ground	
Bandwidth	MHz	6	

### Notes

- \*1 : "Fxxxx" option specifies center frequency to nearest 0.5MHz. 220MHz version also available.
- \*2 : incl. ground plane reflectors
- \*3 : may vary with frequency
- \*4 : 100mph, no ice
- \*5 : 100mph, no ice
- \*6 : 100mph, no ice

### Ordering Information

Specify center frequency.  
Gain and vertical beamwidth will change with downtilt option.

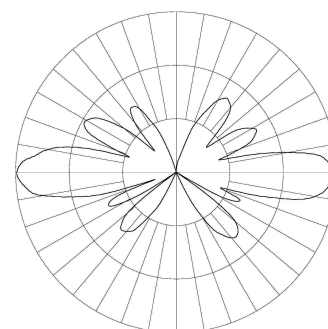
### Mechanical Specifications

Connector		7/16 DIN (female)	
Length/ Height	in (mm)	278 (7061)	
Width	in (mm)	29.75 (756)	*2
Depth	in (mm)	29.75 (756)	
Base pipe diameter	in (mm)	2.88 (73)	
Base pipe mounting length	in (mm)	24 (610)	
Weight	lbs (kg)	32 (14.53)	
Weight iced	lbs (kg)	73 (33.14)	
Actual Shipping weight	lbs (kg)	75 (34.05)	
Shipping dimensions	in (mm)	248x4x4 (6299x102x102)	
Length	in (mm)	238 (6045)	*3
Mounting hardware		#5 clamp	

### Environmental Specifications

Temperature range	°F (°C)	-40 to +140 (-40 to +60)	
Wind Loading Area (Flat Plate Equivalent)	ft² (m²)	2.88 (0.27)	
Wind Loading Area (ice)	ft² (m²)	5.36 (0.5)	
Rated wind velocity (no ice)	mph (km/h)	150 (242)	
Rated wind velocity (1/2" radial ice)	mph (km/h)	115 (185)	
Lateral thrust (100mph)	lbs (N)	110 (489.3)	*4
Bending moment	ft-lbs (Nm)	950 (1282.5)	*5
Tip deflection	degrees	6	*6

### SINCLAIR TECHNOLOGIES



MEASURED RADIATION PATTERN  
VERTICAL POLARIZATION

Elevation  
Relative Gain - 10 dB per Division

# Product Specifications



## SBNH-1D8585C

DualPol® Dual Band Antenna, 698–896 MHz and 1710–2180 MHz, 85° horizontal beamwidth, RET compatible variable electrical tilt



- Two DualPol® antennas under one radome
- Patented dipole technology
- Interleaved dipole technology providing for attractive, low wind load mechanical package
- Each antenna is independently capable of field adjustable electrical tilt
- Internal next generation actuator eliminates field installation and defines new standards for reliability
- Fully compatible with Andrew Teletilt® remote control system

## CHARACTERISTICS

### General Specifications

Antenna Type	SmartBeam®
Brand	DualPol®   SmartBeam®   Teletilt®
Operating Frequency Band	1710 – 2180 MHz   698 – 896 MHz

### Electrical Specifications

Frequency Band, MHz	698–806	806–896	1710–1880	1850–1990	1920–2180
Beamwidth, Horizontal, degrees	88	85	85	85	85
Beamwidth, Horizontal Tolerance, degrees	±4	±4	±4	±4	±4
Gain, dBd	13.1	13.4	14.9	15.0	15.3
Gain, dBi	15.2	15.5	17.0	17.1	17.4
Beamwidth, Vertical, degrees	9.1	8.1	5.2	4.7	4.5
Beam Tilt, degrees	0–9	0–9	0–6	0–6	0–6
Upper Sidelobe Suppression (USLS), typical, dB	16	15	17	18	19
Front-to-Back Ratio at 180°, dB	23	22	27	27	28
Front-to-Back Total Power at 180° ± 20°, dB	16	16	23	23	21
Cross Polarization Ratio (CPR) at Boresight, dB	25	21	21	24	24
Cross Polarization Ratio (CPR) at Sector, dB	12	11	8	9	12
Isolation, dB	30	30	30	30	30
Isolation, Intersystem, dB	30	30	30	30	30
VSWR   Return Loss, db	1.5:1   14.0	1.5:1   14.0	1.5:1   14.0	1.5:1   14.0	1.5:1   14.0
Intermodulation Products, 3rd Order, 2 x 20 W, dBc	-150	-150	-150	-150	-150
Input Power, maximum, watts	400	400	300	300	300
Polarization	±45°	±45°	±45°	±45°	±45°
Impedance, ohms	50	50	50	50	50
Lightning Protection	dc Ground	dc Ground	dc Ground	dc Ground	dc Ground

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9/22/2010

# Product Specifications

SBNH-1D8585C



## Mechanical Specifications

---

Color	Light gray
Connector Interface	7-16 DIN Female
Connector Location	Bottom
Connector Quantity	4
Wind Loading, maximum	879.0 N @ 150 km/h 197.6 lbf @ 150 km/h
Wind Speed, maximum	241.0 km/h   149.8 mph

## Dimensions

---

Depth	181.0 mm   7.1 in
Length	2449.0 mm   96.4 in
Width	301.0 mm   11.9 in
Net Weight	26.0 kg   57.3 lb

## Remote Electrical Tilt (RET) Information

---

RET System	Teletilt®
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## INCLUDED PRODUCTS



### **DB380**

Pipe Mounting Kit for 2.4 - 4.5 in (60 - 115 mm) OD round members



### **DB5083**

Downtilt Mounting Kit for 2.4 - 4.5 in (60 - 115 mm) OD round members

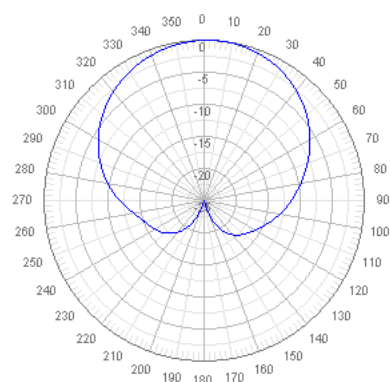
# Product Specifications

SBNH-1D8585C

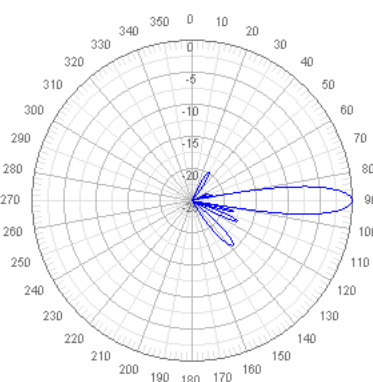


## Horizontal Pattern

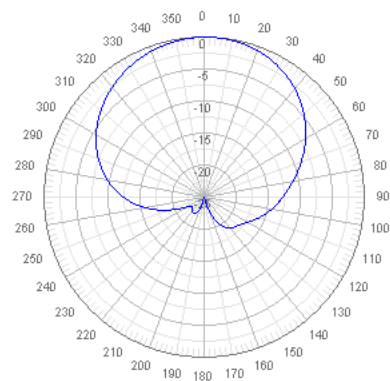
## Vertical Pattern



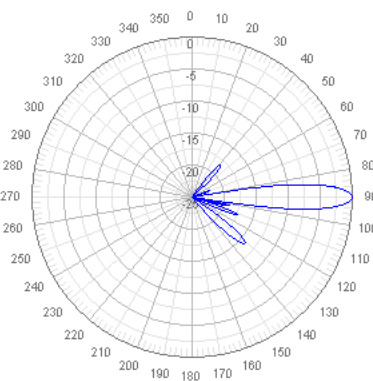
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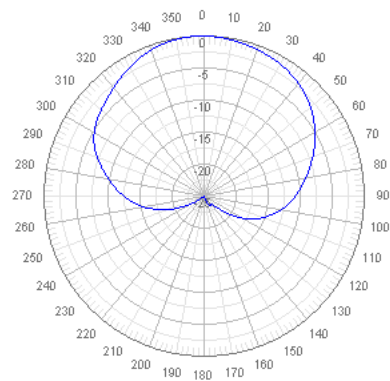
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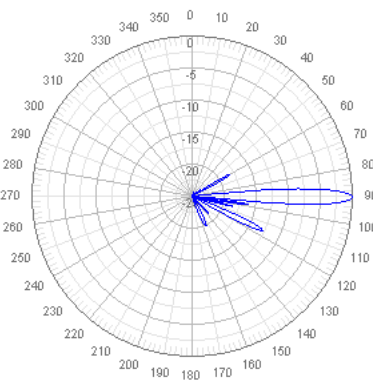
Freq: 850 MHz, Tilt: 0°



Freq: 850 MHz, Tilt: 0°



Freq: 1730 MHz, Tilt: 0°



Freq: 1730 MHz, Tilt: 0°

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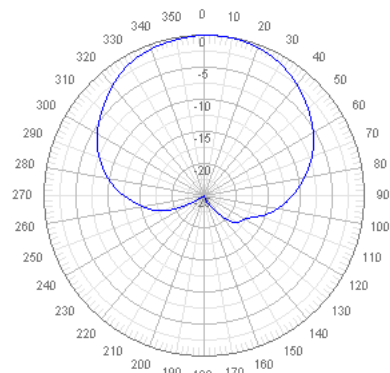
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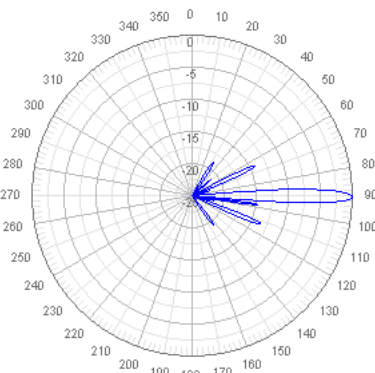
page 3 of 4  
9/22/2010

# Product Specifications

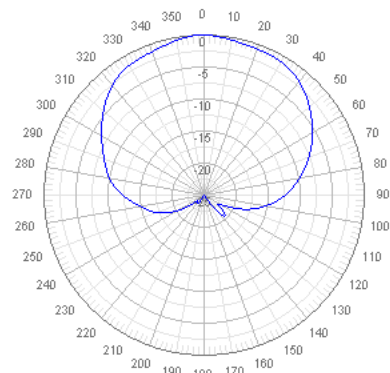
SBNH-1D8585C



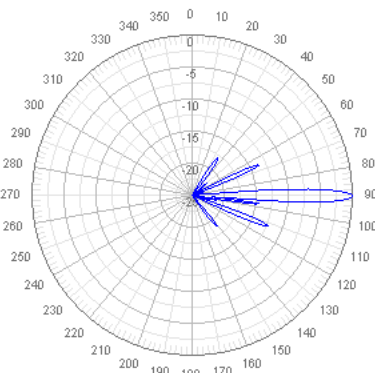
Freq: 1920 MHz, Tilt: 0°



Freq: 1920 MHz, Tilt: 0°



Freq: 2130 MHz, Tilt: 0°



Freq: 2130 MHz, Tilt: 0°

[www.commscope.com/andrew](http://www.commscope.com/andrew)

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# Product Specifications



## SBNH-1D6565C

Smartbeam® DualPol® Dual Band Teletilt® Antenna, 698–896 MHz and 1710–2180 MHz, 65° horizontal beamwidth, RET compatible



- Interleaved dipole technology providing for attractive, low wind load mechanical package
- Internal next generation actuator eliminates field installation and defines new standards for reliability

## CHARACTERISTICS

### General Specifications

Antenna Type	SmartBeam®
Brand	DualPol®   SmartBeam®   Teletilt®
Operating Frequency Band	1710 – 2180 MHz   698 – 896 MHz

### Electrical Specifications

Frequency Band, MHz	698–806	806–896	1710–1880	1850–1990	1920–2180
Beamwidth, Horizontal, degrees	71	67	58	57	59
Beamwidth, Horizontal Tolerance, degrees	±3	±6	±3	±3	±3
Gain, dBd	13.6	14.3	15.9	15.9	15.9
Gain, dBi	15.7	16.4	18.0	18.0	18.0
Beamwidth, Vertical, degrees	8.6	7.8	5.5	5.1	4.8
Beam Tilt, degrees	0–11	0–11	0–7	0–7	0–7
Upper Sidelobe Suppression (USLS), typical, dB	15	15	16	16	16
Front-to-Back Ratio at 180°, dB	25	28	34	31	31
Front-to-Back Total Power at 180° ± 20°, dB	21	22	30	27	26
Cross Polarization Ratio (CPR) at Boresight, dB	24	21	17	17	17
Cross Polarization Ratio (CPR) at Sector, dB	11	8	9	8	9
Isolation, dB	30	30	30	30	30
Isolation, Intersystem, dB	35	35	35	35	35
VSWR   Return Loss, db	1.5:1   14.0	1.5:1   14.0	1.5:1   14.0	1.5:1   14.0	1.5:1   14.0
Intermodulation Products, 3rd Order, 2 x 20 W, dBc	-150	-150	-150	-150	-150
Input Power per Port, maximum, watts	400	400	300	300	300
Polarization	±45°	±45°	±45°	±45°	±45°
Impedance	50 ohm	50 ohm	50 ohm	50 ohm	50 ohm
Lightning Protection	dc Ground	dc Ground	dc Ground	dc Ground	dc Ground

# Product Specifications

SBNH-1D6565C



## Mechanical Specifications

Color	Light gray
Connector Interface	7-16 DIN Female
Connector Location	Bottom
Connector Quantity	4
Radome Material	Fiberglass, UV resistant
Wind Loading, maximum	879.0 N @ 150 km/h 197.6 lbf @ 150 km/h
Wind Speed, maximum	241.0 km/h   149.8 mph

## Dimensions

Depth	181.0 mm   7.1 in
Length	2449.0 mm   96.4 in
Width	301.0 mm   11.9 in
Net Weight	27.6 kg   60.8 lb

## Remote Electrical Tilt (RET) Information

Adjustment Time, full range, maximum	30 s
Annual Failure Rate, maximum	0.01%
Power Consumption, during motor movements, maximum	11.0 W
Power Consumption, idle state, maximum	2.0 W
Power Input	10-30 V
Protocol	3GPP/AISG 2.0 Multi-RET
RET Interface	RS-485 Male (input port, 1)   RS-485 Female (daisy chain port ,1)
RET System	Teletilt®

## Regulatory Compliance/Certifications

### Agency

RoHS 2002/95/EC  
China RoHS SJ/T 11364-2006

### Classification

Compliant by Exemption  
Above Maximum Concentration Value (MCV)



## INCLUDED PRODUCTS



### DB380

Pipe Mounting Kit for 2.4 - 4.5 in (60 - 115 mm) OD round members

# Product Specifications

SBNH-1D6565C



## **DB5083**

Downtilt Mounting Kit for 2.4 - 4.5 in (60 - 115 mm) OD round members

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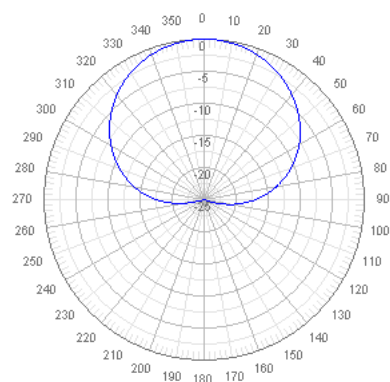
# Product Specifications

SBNH-1D6565C

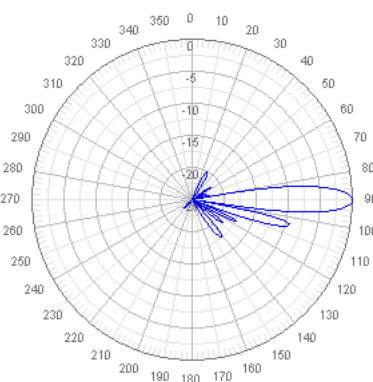


## Horizontal Pattern

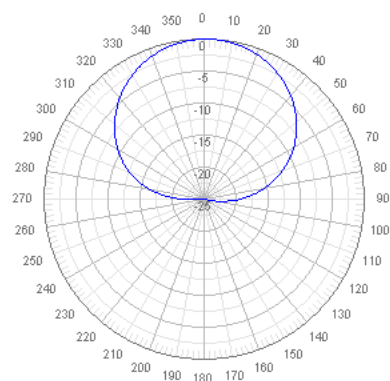
## Vertical Pattern



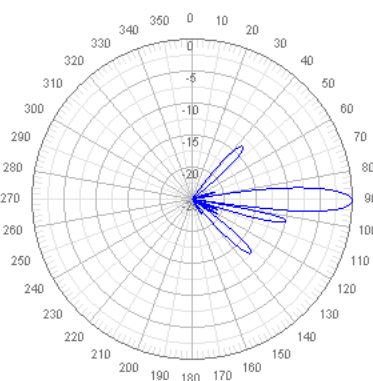
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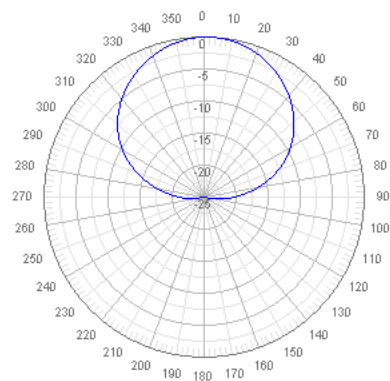
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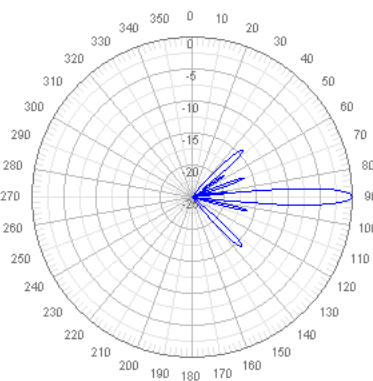
Freq: 850 MHz, Tilt: 0°



Freq: 850 MHz, Tilt: 0°



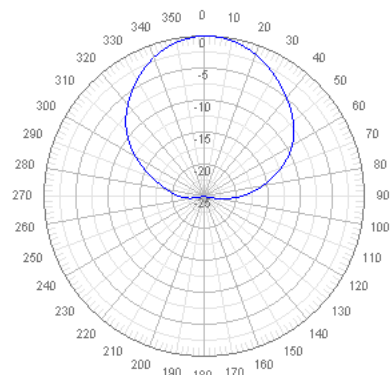
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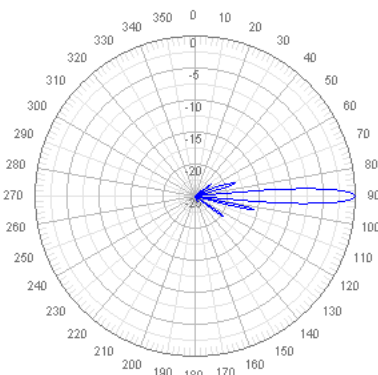
Freq: 1730 MHz, Tilt: 0°

# Product Specifications

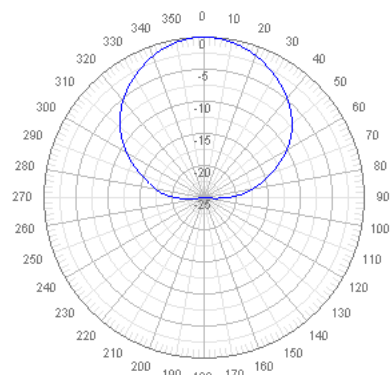
SBNH-1D6565C



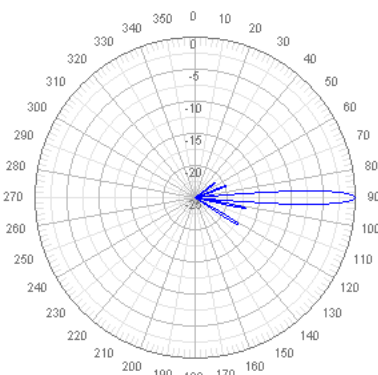
Freq: 1920 MHz, Tilt: 0°



Freq: 1920 MHz, Tilt: 0°



Freq: 2130 MHz, Tilt: 0°



Freq: 2130 MHz, Tilt: 0°

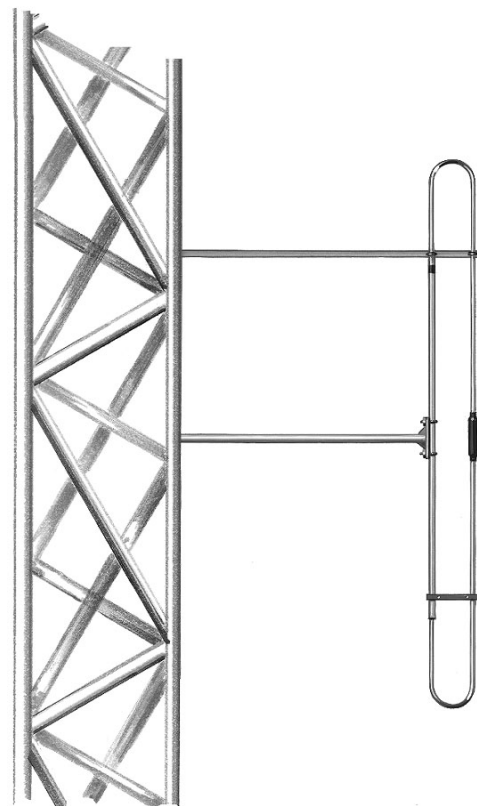
## SD110-SFXPASNM

(SRL110A)

Exposed dipole directive antenna, 2.5 dBd gain, 30-76 MHz

- Covers 30-76 MHz in 0.5MHz Increments, this antenna has a 10% BW at 1.5:1 VSWR.
- 2.5 dBd gain, offset pattern (1/8 wave)
- 100mph/161kph rated wind rating
- 300W power handling

The SD110 is a single broadband dipole for side mounting on a supporting structure. The SD110 series is supplied with a special welded boom and anti-torque support. Due to the many mounting possibilities, mounting hardware is not supplied with these antennas. Engineering assistance will be provided in the selection of the proper hardware.



Region	United States	Europe, Middle East and Africa	Caribbean and Latin America	Canada and rest of the world
Telephone	USA: 1 800 263 3275	International: +44 (0) 1223 42 03 03	International: +1 905 726 7676	Canada: 1 800 263 3275 International: +1 905 727 0165
E-mail	salesusa@sinctech.com	salesuk@sinctech.com	salesla@sinctech.com	salescan@sinctech.com

#### Electrical Specifications

Frequency Range	MHz	30 to 76
Gain (nominal)	dBd (dBi)	2.5 (4.6)
Input VSWR (max)		1.5:1
Polarization		vertical
Pattern		Offset
Vertical beamwidth	degrees	68
Average Power Input (max)	W	300
Lightning protection		DC ground

#### Ordering Information

Specify frequency band of operation.

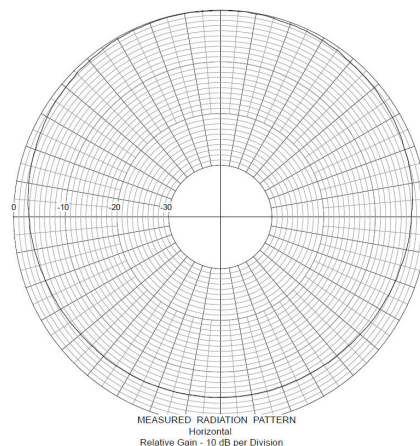
#### Mechanical Specifications

Connector		N (male)
Length/ Height	in (mm)	190 (4826)
Weight	lbs (kg)	25 (11.4)
Actual Shipping weight	lbs (kg)	45 (20.4)
Shipping dimensions	in (mm)	195x4x55 (4953x102x1397)

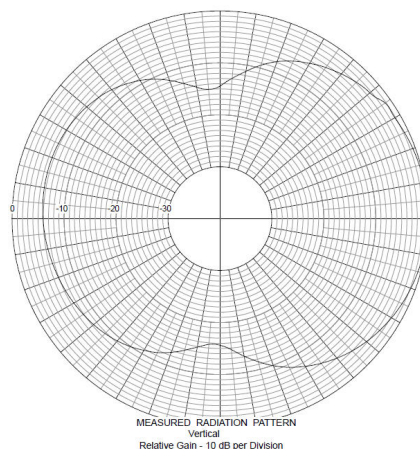
#### Environmental Specifications

Rated wind velocity (no ice)	mph (km/h)	100 (161)
Rated wind velocity (1/2" radial ice)	mph (km/h)	85 (137)
Lateral thrust (100mph)	lbs (N)	200 (889.6)

#### SINCLAIR TECHNOLOGIES



#### SINCLAIR TECHNOLOGIES

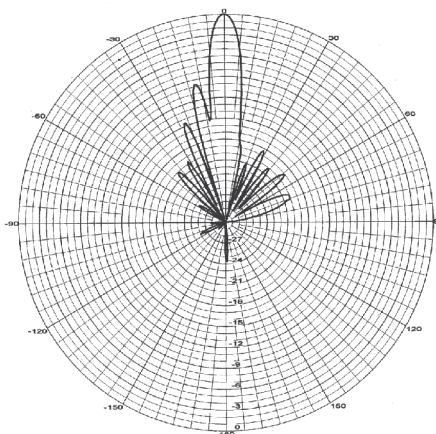
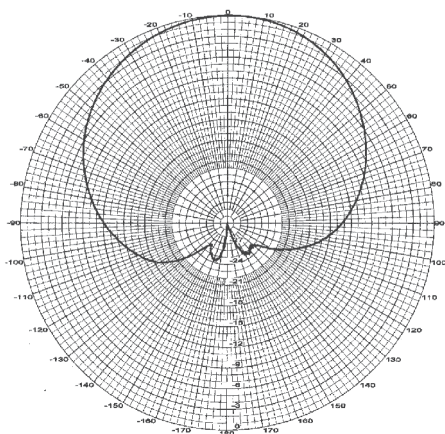


**Electrical Specifications**

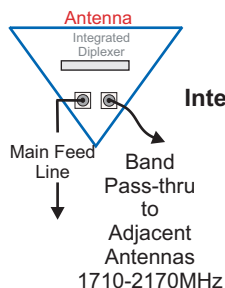
Frequency	698-896 MHz
Polarization	Vertical
Gain @ 800 MHz	16.1 dBi
Horizontal Beam (3dB Points)	80°
Vertical Beam (3dB Points)	7.9°
Elect. Downtilt Range, 2° Increments	0-10°
VSWR / Return Loss	<1.45:1 / 14.7 dB
VSWR / Return Loss w/tp	<1.50:1 / 14.0 dB
Front-to-Back at Horizon	>27 dB
Upper Side Lobe Suppression	<-16 dB
Impedance	50 Ohms
Power Input Per Connector	500 CW at 800 MHz
Intermodulation (2x20W)	<-150 dBc

**Mechanical Specifications**

Input Connector (female)	Back 7/16 DIN or w/bot. opt.
Antenna Dimensions (LxWxD)	96.0 x 12.5 x 7.1 in. (2438 x 318 x 180mm)
*Antenna Weight	35.2 lbs
Bracket Weight	18.2 lbs
RF Distribution	Printed Microstrip Substrate
Radome	Ultra High-Strength Luran
Weatherability	UV Stabilized, ASTM D1925
Radome Water Absorption	ASTM D570, 0.45%
Environmental	MIL-STD-810E
Wind Survival	150 mph
Front Wind Load @100mph	236.5 lbf
Equivalent Flat Plate @100mph	4.81 sq-ft. (c=2)
Mounting Brackets <a href="#">(919032)</a>	Fits 3.5 Inch Max. O.D. Pipe
Mechanical Downtilt Range	0-6°
Clamps/Bolts	Galvanized Steel/Stainless Steel



**Available with  
Integrated Pass-Thru Diplexers  
to reduce mainline cables  
and eliminate separate  
external devices**



**Integrated Pass-Thru Diplexers will work with TMA's**

Recommended Connector Coupling Torque  
7/16 DIN: 220-265 lbf-in (25-30 N-m)

Return Loss at pass-thru port  
into 50Ω load  $\geq 17.7$  dB

**Ordering Information & Options**

V7C-880-x	"-x" is a placeholder for the built-in fixed electrical downtilt in degrees, set to 0, 2, 4, 6, 8 or 10
V7C-880-xip	"ip" option includes pass-thu integrated diplexer(s) which pass DC to the diplexer port(s)
V7C-880-xip-bot	for bottom mounted connectors, add "-bot" (otherwise antenna comes standard with back mounted connectors)

\*Antenna Weight may vary slightly with options.



Cutsheet ID: WC.b1

# X7C-880

## Xpol, 80° H-Beam

698-896 MHz

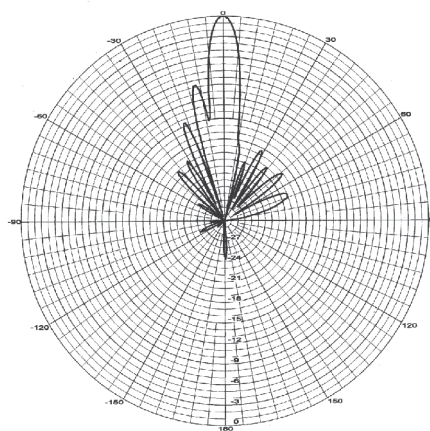
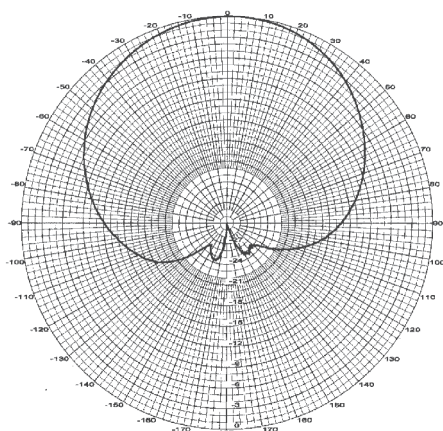
### Electrical Specifications

Frequency	698-896 MHz
Polarization	Slant +/- 45
Gain @ 800 MHz	16.1 dBi
Horizontal Beam (3dB Points)	80°
Vertical Beam (3dB Points)	7.9°
Elect. Downtilt Range, 2° Increments	0-10°
VSWR / Return Loss	<1.45:1 / 14.7 dB
VSWR / Return Loss w/ip	<1.50:1 / 14.0 dB
Front-to-Back at Horizon	>27 dB
Upper Side Lobe Suppression	<-16 dB
Impedance	50 Ohms
Power Input Per Connector	500 CW at 800 MHz
Isolation	<-28 dB
Intermodulation (2x20W)	<-150 dBc

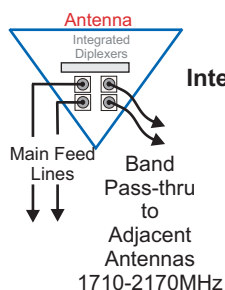
### Mechanical Specifications

Input Connector (female)	Back 7/16 DIN or w/bot. opt.
Antenna Dimensions (LxWxD)	96.0 x 12.5 x 7.1 in. (2438 x 318 x 180mm)
*Antenna Weight	approx. 37 lbs
Bracket Weight	18.2 lbs
RF Distribution	Printed Microstrip Substrate
Radome	Ultra High-Strength Luran
Weatherability	UV Stabilized, ASTM D1925
Radome Water Absorption	ASTM D570, 0.45%
Environmental	MIL-STD-810E
Wind Survival	150 mph
Front Wind Load @100mph	236.5 lbf
Equivalent Flat Plate @100mph	4.81 sq-ft. (c=2)
Mounting Brackets <a href="#">(919032)</a>	Fits 3.5 Inch Max. O.D. Pipe
Mechanical Downtilt Range	0-6°
Clamps/Bolts	Galvanized Steel/Stainless Steel

[\(Link to Mechanical Drawing\)](#)



Available with  
Integrated Pass-Thru Diplexers  
to reduce mainline cables  
and eliminate separate  
external devices



Integrated Pass-Thru Diplexers will work with TMA's

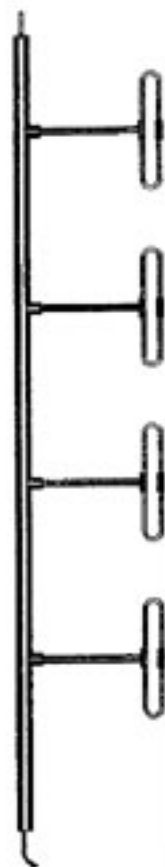
Recommended Connector Coupling Torque  
7/16 DIN: 220-265 lbf-in (25-30 N-m)

Return Loss at pass-thru port  
into 50Ω load  $\geq 17.7$  dB

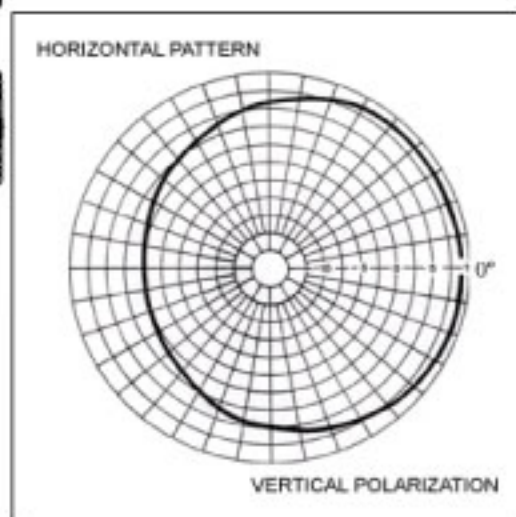
### Ordering Information & Options

X7C-880-x	"-x" is a placeholder for the built-in fixed electrical downtilt in degrees, set to 0, 2, 4, 6, 8 or 10
X7C-880-xip	"ip" option includes pass-thru integrated diplexer(s) which pass DC to the diplexer port(s)
X7C-880-xip-bot	for bottom mounted connectors, add "-bot" (otherwise antenna comes standard with back mounted connectors)

\*Antenna Weight may vary slightly with options.



- Heavy-duty wide band four dipole array well suited for multicoupled systems due to its wide bandwidth.
- Choice of fixed or adjustable dipole-to-mast spacings of 1/4, 3/8 or 1/2 wave for controlled radiation pattern based on system applications.
- Extremely rugged design for use in severe environmental conditions.
- The 874-70 has external cabling and a field adjustable pattern and the 874F-70 has internal cabling and fixed dipole-to mast spacing.
- Both versions can be ordered for either sidemount or topmount application. Add suffix SM or TM to model of your choice. (ex: 874-70TM)
- Heavier duty versions also available for extreme wind and ice conditions.



1/4 wave spacing

**Electrical Specifications:****874-70**

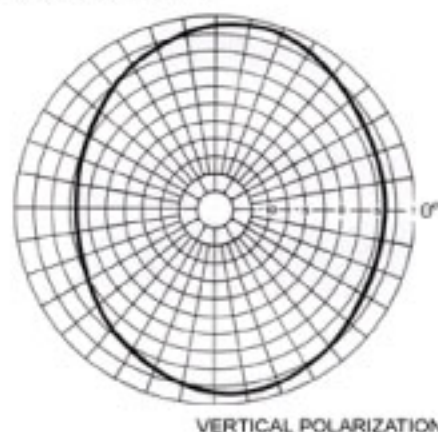
Frequency Range:	138-174 MHz
Nominal Gain:	8.0 to 8.5 dBd
Bandwidth: 1.5:1 VSWR	36 MHz
Polarization:	Vertical
Pattern:	Offset
Power Rating:	300 Watts
Nominal Impedance:	50 Ohms
Lightning Protection:	DC Ground
Standard Termination:	Type « N » Male

NOTE: VSWR is referenced to 50 ohms.

**Mechanical Specifications:****874-70**

Length:	246" (6248mm)
Width: (at 1/2 wave spacing)	41" (1041mm)
Weight:	67 lbs. (30kg)
Rated Wind Velocity: No ice	145 mph (233km/h)
Rated Wind Velocity with 0.5" (13mm) ice:	95 mph (153km/h)
Lateral Thrust at 100 mph wind:	(72.6kg)
Bending Moment at top clamp: (100 mph)	1364 ft*lb(188.7kg*m)
Equiv. Flat Plate Area:	4.65 ft² (0.432m²)
Mounting Information:	Mast is 2.9" (73mm) O.D. Pipe.

HORIZONTAL PATTERN



1/2 wave spacing

## Technical Data Sheet

DA10-59AC



Microwave Antenna, High Performance, Single Polarized, 10 ft  
5.925 - 6.425 GHz

## Product Description

RFS Microwave Antennas are designed for microwave systems in all common frequency ranges from 4 GHz to 15 GHz. Different options of survival windspeeds are available. This allows the use of antennas in areas where extreme wind conditions are normal. The antennas utilise a conventional feed system and are available in three performance classes offering complete flexibility when designing a network. High Performance antennas are ideally suited for systems where a good level of side lobe suppression is required. These antennas are required for use in networks where there is a high interference potential. Antennas are available in 2 ft (0.6m) to 12 ft (3.7m) diameters. The High Performance antennas are available in dual polarised (DAX) as well as in single polarised versions (DA). All antennas include a radome which is specially shaped (2 ft) or flexible (4 to 12 ft) to minimise its impact on the antenna's electrical characteristics.



Antenna

## Technical Features

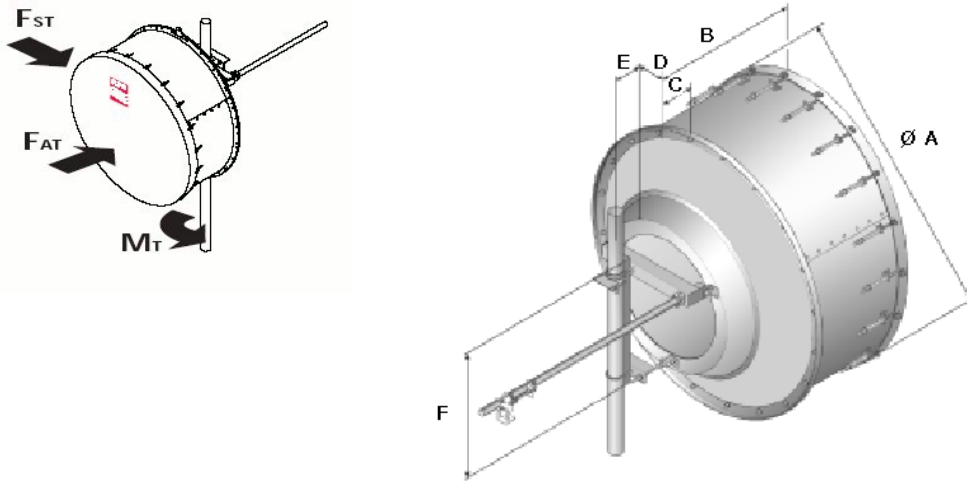
Product Type	Point to point antennas
Frequency, GHz	5.925 - 6.425
Diameter, ft (m)	10 (3.0)
Profile	Standard
Performance	High
Polarization	Single
Regulatory Compliance	Standard, EN 302217, FCC
3dB beamwidth, (degrees)	1.2
Antenna Input	CPR137G
Low Band Gain, dBi	43
Mid Band Gain, dBi	43.4
High Band Gain, dBi	43.7
F/B Ratio, dB	69
XPD, dB	30
Max VSWR / R L, dB	1.06 / 30.7
FCC Standard	A
ETSI Standard	Range 1, class 2
Elevation Adjustment, degrees	± 5
Azimuth Adjustment, degrees	± 5
Polarization Adjustment, degrees	± 5
Pressure, bar (psi)	0.3 (4.3)
Radome	Included
Antenna color	White
Mounting Pipe Diameter minimum, mm (in)	114 (4.5)
Mounting Pipe Diameter maximum, mm (in)	114 (4.5)
Approximate Weight, kg (lb)	290 (638)
Survival Windspeed, km/h (mph)	200 (125)
Operational Windspeed, km/h (mph)	190 (118)

All information contained in the present datasheet is subject to confirmation at time of ordering



Microwave Antenna, High Performance, Single Polarized, 10 ft  
5.925 - 6.425 GHz

$F_{ST}$ Side force max. at 110 km/h (68 mph), N (lb)	2900 (650)
$F_{AT}$ Axial force max. at 110 km/h (68 mph), N (lb)	5860 (1312)
M Torque max. at 110 km/h (68 mph), Nm (ft lb)	3100 (2300)
$F_{ST}$ Side force max. at 200 km/h (125 mph), N (lb)	9590 (2148)
$F_{AT}$ Axial force max. at 200 km/h (125 mph), N (lb)	19370 (4340)
M Torque max. at 200 km/h (125 mph), Nm (ft lb)	10240 (7600)



All dimensions in mm (in)

ØA	B	C	ØD for mounting pipe diam.				E	F
			219 (8.5)	114 (4.5)	89 (3.5)	51 (2.0)		
3220 (126.8)	1640 (64.6)	550 (21.7)		190 (7.5)			370 (14.6)	1440 (56.9)

## Notes

includes 1 sway bar (3.0 m x Ø60 mm)

## Documentation

[Complete Antenna installation](#)

[Radiation pattern: \(NSMA format\)](#)

[Radiation pattern: \(PDF format\)](#)

All information contained in the present datasheet is subject to confirmation at time of ordering



Microwave Antenna, High Performance, Single Polarized, 6 ft  
5.725 - 6.875 GHz

### Product Description (Only available in North America)

RFS Microwave Antennas are designed for microwave systems in all common frequency ranges from 4 GHz to 15 GHz. Different options of survival windspeeds are available. This allows the use of antennas in areas where extreme wind conditions are normal. The antennas utilise a conventional feed system and are available in three performance classes offering complete flexibility when designing a network. High Performance antennas are ideally suited for systems where a good level of side lobe suppression is required. These antennas are required for use in networks where there is a high interference potential. Antennas are available in 2 ft (0.6m) to 12 ft (3.7m) diameters. The High Performance antennas are available in dual polarised (DAX) as well as in single polarised versions (DA). All antennas include a radome which is specially shaped (2 ft) or flexible (4 to 12 ft) to minimise its impact on the antenna's electrical characteristics.



Antenna

### Technical Features

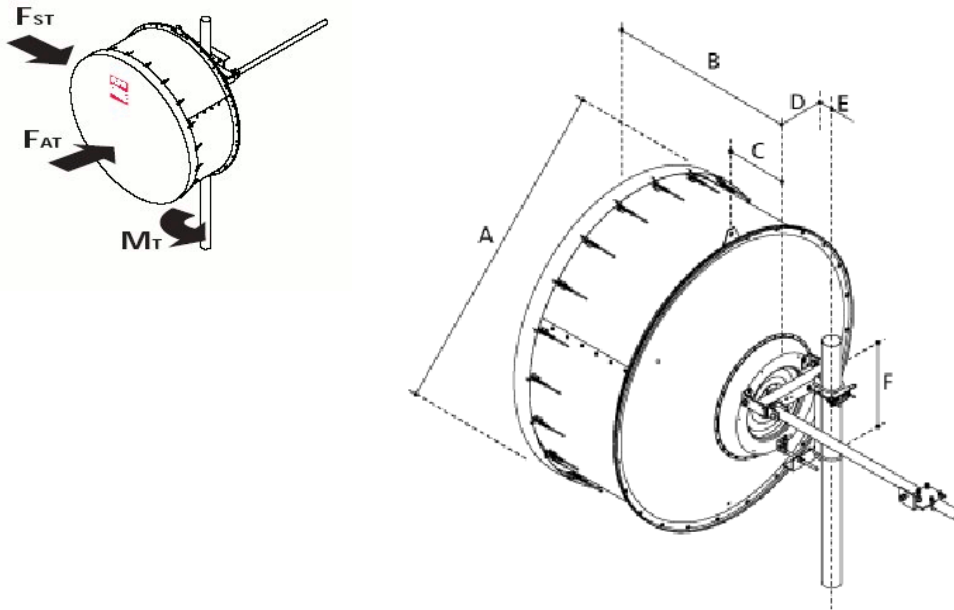
Product Type	Point to point antennas
Frequency, GHz	5.725 - 6.875
Diameter, ft (m)	6 (1.8)
Profile	Standard
Performance	High
Polarization	Single
Regulatory Compliance	Standard, EN 302217, FCC
3dB beamwidth, (degrees)	1.9
Antenna Input	CPR137G
Low Band Gain, dBi	38.2
Mid Band Gain, dBi	39.0
High Band Gain, dBi	39.8
F/B Ratio, dB	64
XPD, dB	30
Max VSWR / R L, dB	1.15 / 23.1
FCC Standard	—
ETSI Standard	Range 1, class 2
Elevation Adjustment, degrees	± 5
Azimuth Adjustment, degrees	± 5
Polarization Adjustment, degrees	± 5
Pressure, bar (psi)	0.3 (4.3)
Radome	Included
Antenna color	White
Mounting Pipe Diameter minimum, mm (in)	114 (4.5)
Mounting Pipe Diameter maximum, mm (in)	114 (4.5)
Approximate Weight, kg (lb)	95 (209)
Survival Windspeed, km/h (mph)	200 (125)
Operational Windspeed, km/h (mph)	190 (118)

All information contained in the present datasheet is subject to confirmation at time of ordering



Microwave Antenna, High Performance, Single Polarized, 6 ft  
5.725 - 6.875 GHz

F <sub>ST</sub> Side force max. at 110 km/h (68 mph), N (lb)	1125 (252)
F <sub>AT</sub> Axial force max. at 110 km/h (68 mph), N (lb)	2270 (508)
M Torque max. at 110 km/h (68 mph), Nm (ft lb)	860 (640)
F <sub>ST</sub> Side force max. at 200 km/h (125 mph), N (lb)	3715 (832)
F <sub>AT</sub> Axial force max. at 200 km/h (125 mph), N (lb)	7500 (1680)
M Torque max. at 200 km/h (125 mph), Nm (ft lb)	2835 (2100)



All dimensions in mm (in)

ØA	B	C	ØD for mounting pipe diam.				E	F
			219 (8.5)	114 (4.5)	89 (3.5)	51 (2.0)		
2000 (79)	1242 (48.9)	364 (14.3)		175 (6.9)			283 (11.1)	590 (23.2)

## Notes

includes 1 sway bar (2.0 m x Ø60 mm)

## Documentation

[Complete Antenna installation](#)

[Radiation pattern: \(NSMA format\)](#)

[Radiation pattern: \(PDF format\)](#)

All information contained in the present datasheet is subject to confirmation at time of ordering

## Product Data Sheet for DA8-59AC

### Solid Microwave Parabolic Antenna, High Performance, Single Polarized, 8 ft

RFS Microwave Antennas are designed for microwave systems in all common frequency ranges from 4 GHz to 40 GHz. Different options of survival windspeeds are available. This allows the use of antennas in areas where extreme wind conditions are normal. The antennas utilise a conventional feed system and are available in three performance classes offering complete flexibility when designing a network. High Performance antennas are ideally suited for systems where a good level of side lobe suppression is required. These antennas are required for use in networks where there is a high interference potential. Antennas are available in 2 ft (0.6m) to 15 ft (4.5m) diameters. The High Performance antennas are available in dual polarised (DAX) as well as in single polarised versions (DA). All antennas include a radome which is specially shaped (2 ft) or flexible (4 to 15 ft) to minimise its impact on the antenna's electrical characteristics.



#### Product Specifications

Product Type	Point to point antennas
Frequency, GHz	5.925 - 6.425
Diameter, ft (m)	8 (2.4)
Profile	Standard
Performance	High
Polarization	Single
Regulatory Compliance	Standard, EN 300833, FCC
3dB beamwidth, (degrees)	1.5
Antenna Input	CPR137G
Low Band Gain, dBi	41.2
Mid Band Gain, dBi	41.6
High Band Gain, dBi	42
F/B Ratio, dB	66
XPD, dB	30
Max VSWR / R L, dB	1.06 / 30.7
FCC Standard	A
ETSI Standard	Range 1, class 2
Elevation Adjustment, degrees	± 5
Azimuth Adjustment, degrees	± 5

**RADIO FREQUENCY SYSTEMS**



[www.rfsworld.com](http://www.rfsworld.com)

## Product Data Sheet for DA8-59AC (Cont.)

### Solid Microwave Parabolic Antenna, High Performance, Single Polarized, 8 ft

Polarization Adjustment, degrees	± 5
Pressure, bar (psi)	0.3 (4.3)
Radome	Included
Antenna color	light blue
Mounting Pipe Diameter minimum, mm (in)	114 (4.5)
Mounting Pipe Diameter maximum, mm (in)	114 (4.5)
Minimum Length Pipe, m (ft)	1.2 (3.9)
Approximate Weight, kg (lb)	200 (440)
Survival Windspeed, kph (mph)	200 (125)
Operational Windspeed, kph (mph)	190 (118)
Fs Side force maximum at 110 kph (68 mph), N (lb)	1920 (7740)
F a Axial force max. at 110 kph (68 mph), N (lb)	3880 (17300)
M Torque maximum at 110 kph (68 mph), N•m (ft lb)	1800 (1340)
Fs Side force max. at 200 kph (125 mph), N (lb)	6350 (28300)
Fa Axial force max. at 200 kph (125 mph), N (lb)	12380 (55000)
M Torque maximum at 200 kph (125 mph), N•m (ft lb)	5960 (4400)

**RADIO FREQUENCY SYSTEMS**



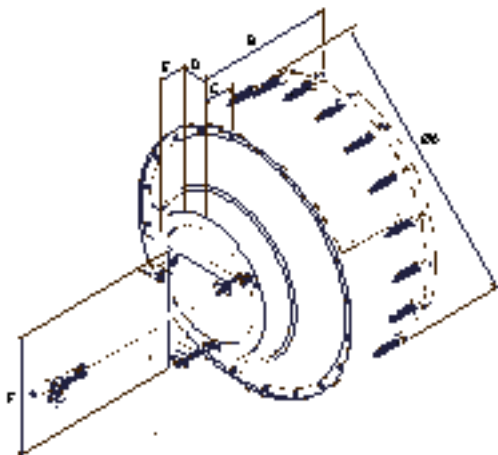
[www.rfsworld.com](http://www.rfsworld.com)

## Product Data Sheet for DA8-59AC (Cont.)

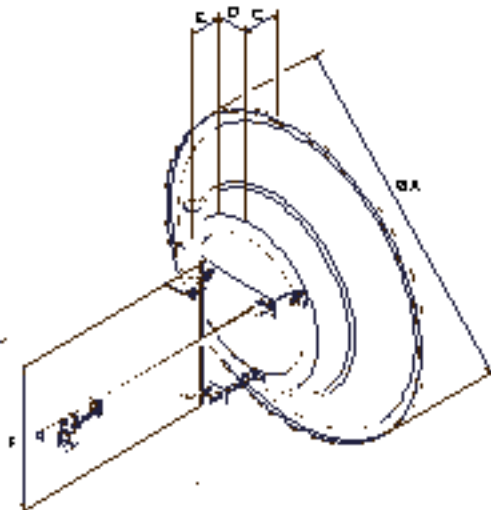
Solid Microwave Parabolic Antenna, High Performance, Single Polarized, 8 ft

**8 ft antenna mount outline**

**UA, UDA, UXA, DA, DAX**



**PA, PAL, PAX**



All dimensions in mm (inch)

Ø A	B	C	D Ø114	E	F
2616 (103.0)	1455 (57.5) / 1645 (65) *f < 4.4GHz	465 (18.4)	190 (7.5)	310 (12.3)	1125 (44.5)

**RADIO FREQUENCY SYSTEMS**



[www.rfsworld.com](http://www.rfsworld.com)



Microwave Antenna, Standard (FCC 101, Cat A) , Single Polarized, 6 ft  
5.925 - 6.425 GHz

## Product Description

(Local product. Only in North America available. For further information contact Sales in North America)

RFS Microwave Antennas are designed for microwave systems in all common frequency ranges from 4 GHz to 24 GHz. Different options of survival windspeeds are available. This allows the use of antennas in areas where extreme wind conditions are normal. The antennas utilise a conventional feed system and are available in three performance classes offering complete flexibility when designing a network. Standard Performance antennas are economical solutions for systems where side lobe suppression is of less importance. These antennas are required for use in networks where there is a low interference potential. Antennas are available in 2 ft (0.6m) to 12 ft (3.7m) diameters. The Standard Performance antennas are available in single polarised version (PAL). The PAL version offers a low VSWR value for low echo distortion. Antennas from 4ft up to 12 ft (3.7m) can be equipped with a moulded radome to reduce wind load and to protect the feed against the accumulation of ice and snow.



Antenna

## Technical Features

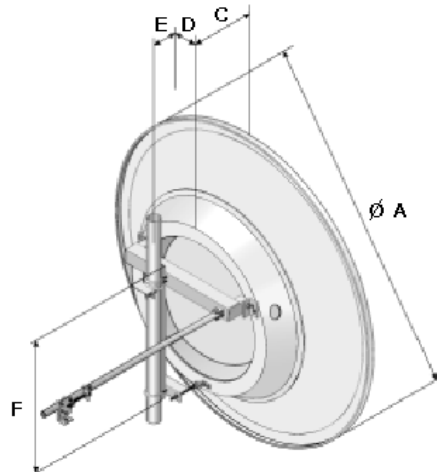
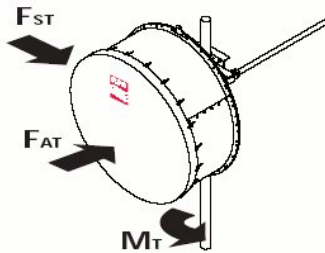
Product Type	Point to point antennas
Frequency, GHz	5.925 - 6.425
Diameter, ft (m)	6 (1.8)
Profile	Standard
Performance	Improved Performance
Polarization	Single
Regulatory Compliance	Standard, FCC
3dB beamwidth, (degrees)	1.8
Antenna Input	CPR137G
Low Band Gain, dBi	38.4
Mid Band Gain, dBi	38.7
High Band Gain, dBi	39.1
F/B Ratio, dB	55
XPD, dB	30
Max VSWR / R L, dB	1.06 / 30.7
FCC Standard	A
Elevation Adjustment, degrees	± 5
Azimuth Adjustment, degrees	± 5
Polarization Adjustment, degrees	± 5
Pressure, bar (psi)	0.3 (4.3)
Radome	Optional
Antenna color	White
Mounting Pipe Diameter minimum, mm (in)	114 (4.5)
Mounting Pipe Diameter maximum, mm (in)	114 (4.5)
Approximate Weight, kg (lb)	84 (185)
Survival Windspeed, km/h (mph)	200 (125)
Operational Windspeed, km/h (mph)	190 (118)

All information contained in the present datasheet is subject to confirmation at time of ordering



Microwave Antenna, Standard (FCC 101, Cat A) , Single Polarized, 6 ft  
5.925 - 6.425 GHz

$F_{ST}$ Side force max. at 110 km/h (68 mph), N (lb)	880 (197)
$F_{AT}$ Axial force max. at 110 km/h (68 mph), N (lb)	2995 (670)
M Torque max. at 110 km/h (68 mph), Nm (ft lb)	925 (690)
$F_{ST}$ Side force max. at 200 km/h (125 mph), N (lb)	2910 (651)
$F_{AT}$ Axial force max. at 200 km/h (125 mph), N (lb)	9900 (2217)
M Torque max. at 200 km/h (125 mph), Nm (ft lb)	3055 (2270)



All dimensions in mm (in)

$\varnothing A$	B	C	$\varnothing D$ for mounting pipe diam.			E	F
			219 (8.5)	114 (4.5)	89 (3.5)	51 (2.0)	
2000 (79)		364 (14.3)		175 (6.9)		283 (11.1)	590 (23.2)

## Notes

includes 1 sway bar (2.0 m x  $\varnothing 60$  mm)

## Documentation

Complete Antenna installation  
[NMT628-00.pdf](#)

Radiation pattern: (NSMA format)  
[PAD6-59B, 000301.txt](#)  
Radiation pattern: (PDF Format)  
[PAD6-59B, 000301.pdf](#)

All information contained in the present datasheet is subject to confirmation at time of ordering

## Twin Diplexed Dual Band Tower Mounted Amplifier

Twin 850/1900 MHz TMA with AISG



Designed for the highest reliability even in the most demanding installation environments.

The tower mounted amplifiers from Andrew Solutions help optimize network performance and represent the ideal solution for coverage and capacity enhancement.

By improving uplink performance, Andrew Solutions Tower Mounted Amplifiers (TMAs) ensure optimum coverage of fringe areas, weak spots, and indoor locations. The unit is easy to install in any wireless system and provides:

Improved sensitivity—reducing dropped calls and failed connection attempts. Enhanced signal quality—improving voice clarity and data transmission speed. Lower handset output—extending talk time and reducing interference in GSM/EDGE, UMTS, and CDMA systems.

The self-contained body is engineered to ensure the highest reliability in severe environments while featuring a very compact size and attractive appearance.

The 850/1900 twin diplexed dual band TMA includes pole mounting hardware. It can be wall mounted with user-provided fasteners.

- 
- Rejection of SMR/trunking interference
- Failsafe low noise amplifier (LNA) bypass
- Dual protocol AISG 1.1/2.0 support
- RET antenna port
- Conventional PDU compatible
- Legacy dual band TMA compatible
- Field upgradeable firmware

# Product Specifications



E15Z01P13

Tower Mounted Amplifier, Twin Duplexed Dual Band 850/1900 with AISG

## CHARACTERISTICS

### Electrical Specifications Rx (Uplink)

---

Bandwidth	60.00 MHz
License Band	PCS
Frequency Band	1850 – 1910 MHz
Gain	12 dB
Gain Tolerance	+1.3/-1.0
Noise Figure, Mid Band, typical	1.50 dB @ 12 dB
Noise Figure, Full Band, typical	2.10 dB @ 12 dB
Input P1dB, typical	-1 dBm
Output IP3, minimum	21 dBm @ 12 dB
Return Loss, minimum	18 dB
Insertion Loss, Bypass Mode, typical	3.00 dB
Return Loss, Bypass Mode, typical	18 dB
Tx Band Rejection	80 dB
Group Delay Variation, maximum	50 ns @ 5 MHz
Total Group Delay, maximum	180 ns

### Electrical Specifications Tx (Downlink)

---

Bandwidth	60.00 MHz
Insertion Loss, maximum	0.90 dB
License Band	PCS
Frequency Band	1930 – 1990 MHz
Return Loss, minimum	18 dB
3rd Order IMD	-112 dBm
3rd Order IMD Test Method	Two +43 dBm carriers
Input Power, RMS, maximum	300 W
Input Power, PEP, maximum	3000 W
Group Delay Variation, maximum	20 ns @ 5 MHz
Total Group Delay, maximum	60 ns

### Electrical Specifications 2 Rx (Uplink)

---

License Band	Cellular
Frequency Band	824 – 849 MHz
Bandwidth	25.00 MHz
Gain	12 dB
Gain Tolerance	+1.3/-1.0
Noise Figure, Mid Band, typical	1.10 dB @ 12 dB
Noise Figure, Full Band, typical	1.70 dB @ 12 dB
Input P1dB, typical	2 dBm

# Product Specifications



E15Z01P13

Output IP3, minimum	25 dBm
Return Loss, minimum	18 dB
Insertion Loss, Bypass Mode, typical	2.00 dB
Return Loss, Bypass Mode, typical	18 dB
Tx Band Rejection	80 dB
Group Delay Variation, maximum	270 ns @ 5 MHz
Total Group Delay, maximum	370 ns

## Electrical Specifications 2 Tx (Downlink)

---

Bandwidth	25.00 MHz
Insertion Loss, maximum	0.50 dB
License Band	Cellular
Frequency Band	869 – 894 MHz
Return Loss, minimum	18 dB
3rd Order IMD	-112 dBm
3rd Order IMD Test Method	Two +43 dBm carriers
Input Power, RMS, maximum	500 W
Input Power, PEP, maximum	5000 W
Group Delay Variation, maximum	25 ns @ 5 MHz
Total Group Delay, maximum	65 ns

## Electrical Specifications

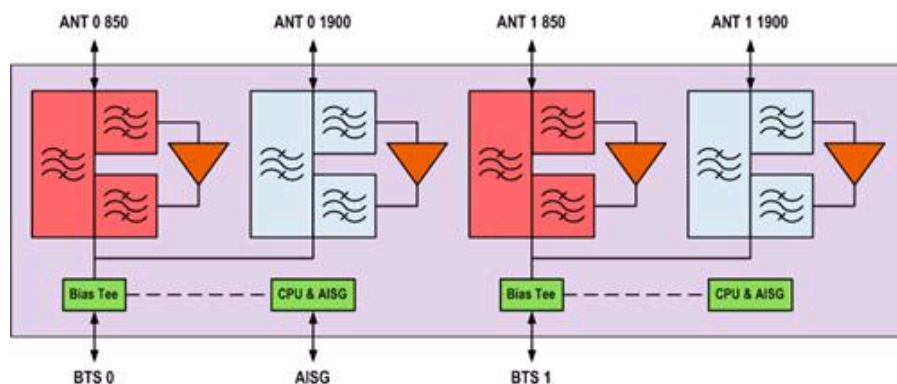
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Protocol	AISG 1.1   AISG 2.0
Default Protocol	AISG 2.0
Operating Current at Voltage	240 mA @ 10–18 V
Voltage	7–30 Vdc
Operating Current Tolerance	±30
Alarm Functionality	AISG   Failure current
Failure Current Consumption	30–170 mA @ 10–18 V
RET System Compatible	1 Output, 24 Vdc and RS-485
Lightning Surge Capability Test Method	IEEE C62.42-1991
Lightning Surge Capability Waveform	8/20 waveform
Lightning Surge Current	5 kA

# Product Specifications

E15Z01P13

## Block Diagram



## Mechanical Specifications

Connector Interface	7-16 DIN Female
Connector Interface Style	Long neck
Ground Screw Diameter	6.00 mm
Wind Loading, maximum	60 N @ 115 km/h 13 lbf @ 115 km/h
Wind Speed, maximum	200 km/h   124 mph
AISG Connector Standard	IEC 60130-9
Finish	Painted
Color	Gray
Mounting Pipe Hardware	Bolt clamps
Mounting Pipe Diameter	50–120 mm

## Environmental Specifications

Operating Temperature	-40 °C to +65 °C (-40 °F to +149 °F)
Relative Humidity	Up to 100%
Ingress Protection Test Method	IEC 60529:2001, IP67

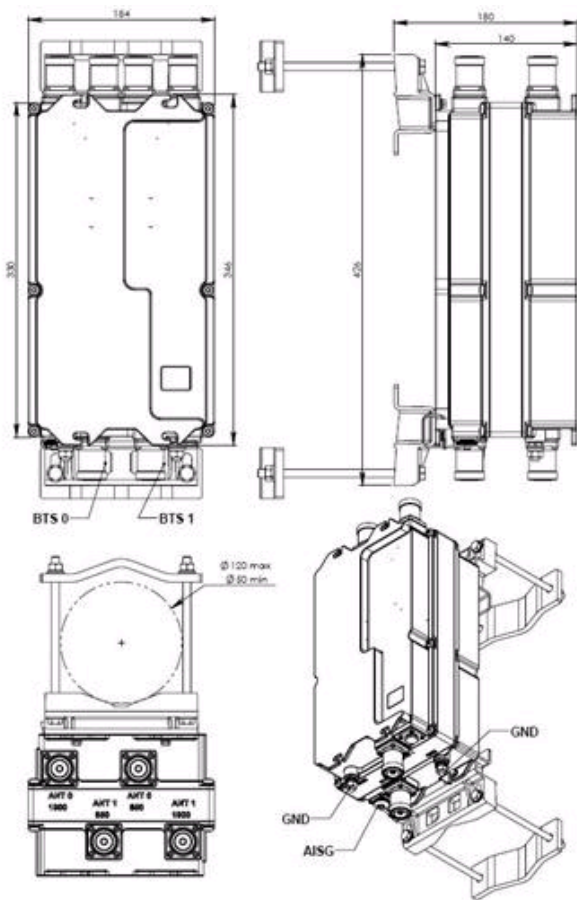
## Dimensions

Height	330.0 mm   13.0 in
Width	184.0 mm   7.2 in
Depth	140.0 mm   5.5 in
Weight	10.9 kg   24.0 lb

# Product Specifications

E15Z01P13

## Outline Drawing



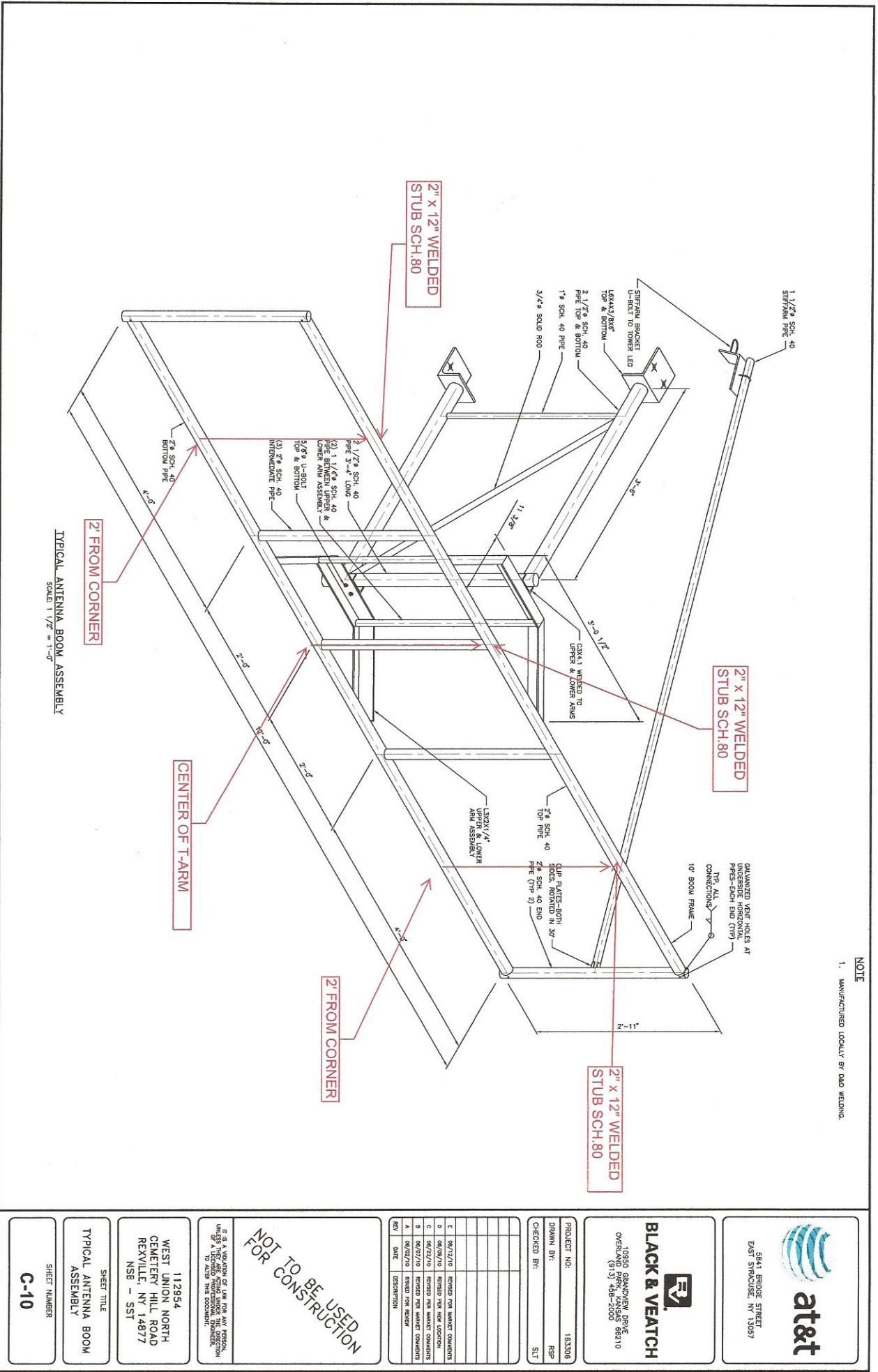
## Regulatory Compliance/Certifications

### Agency

ISO 9001:2008

### Classification

Designed, manufactured and/or distributed under this quality management system



NOTE  
1. MANUFACTURED LOCALLY BY OAD WELDING.



5841 BRIDGE STREET  
EAST SPENCER, NY 13057



**BLACK & VEATCH**  
10950 GRANVIEW DRIVE  
OVERLAND PARK, KS 66210  
(913) 498-2000

PROJECT NO. 163308  
DRAWN BY: RSP  
CHECKED BY: SLJ

REV	DATE	DESCRIPTION
1	06/22/75	ISSUED FOR MARKET COMMENTS
2	06/22/75	ISSUED FOR MARKET COMMENTS
3	06/22/75	ISSUED FOR MARKET COMMENTS
4	06/22/75	ISSUED FOR MARKET COMMENTS
5	06/22/75	ISSUED FOR MARKET COMMENTS
6	06/22/75	ISSUED FOR MARKET COMMENTS
7	06/22/75	ISSUED FOR MARKET COMMENTS
8	06/22/75	ISSUED FOR MARKET COMMENTS
9	06/22/75	ISSUED FOR MARKET COMMENTS
10	06/22/75	ISSUED FOR MARKET COMMENTS

**NOT TO BE USED  
FOR CONSTRUCTION**

IT IS A VIOLATION OF LAW FOR ANY PERSON  
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TO WHOM IT IS REFERRED.

112954  
WEST UNION NORTH  
CEMETERY HILL ROAD  
REXVILLE, NY 14877  
NSB - SST

SHEET TITLE  
TYPICAL ANTENNA BOOM  
ASSEMBLY

SHEET NUMBER  
C-10

# BRANCH STUB SCHEDULE

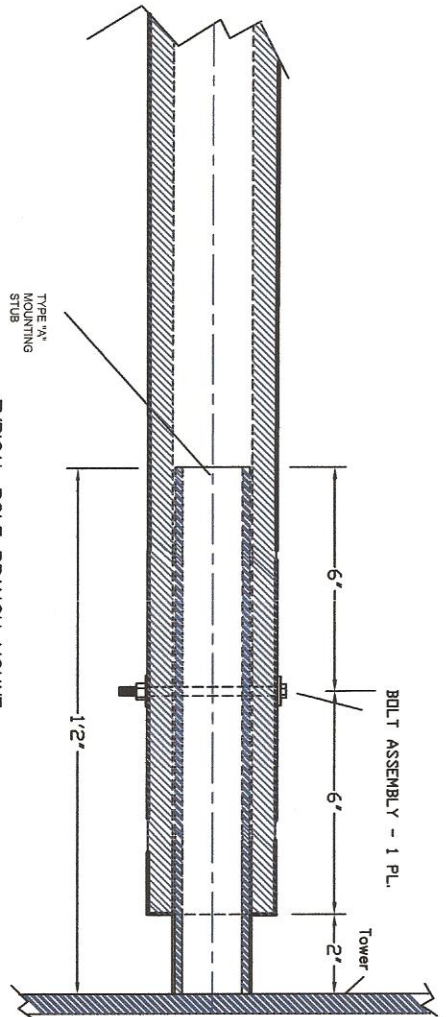
SCALE: N.T.S.

TYPE	BRANCH LENGTH	BRANCH MOUNT	BOLT SIZE	BOLT HOLE	PLATE SIZE	WELD MNT.
B	TOWER BRANCHES	3" SCH 80 x 18"	1/2" SS	3/4"	4"	70 KSI
A	TOWER BRANCHES	2" SCH 80 x 12"	1/2" SS	3/4"	3"	70 KSI

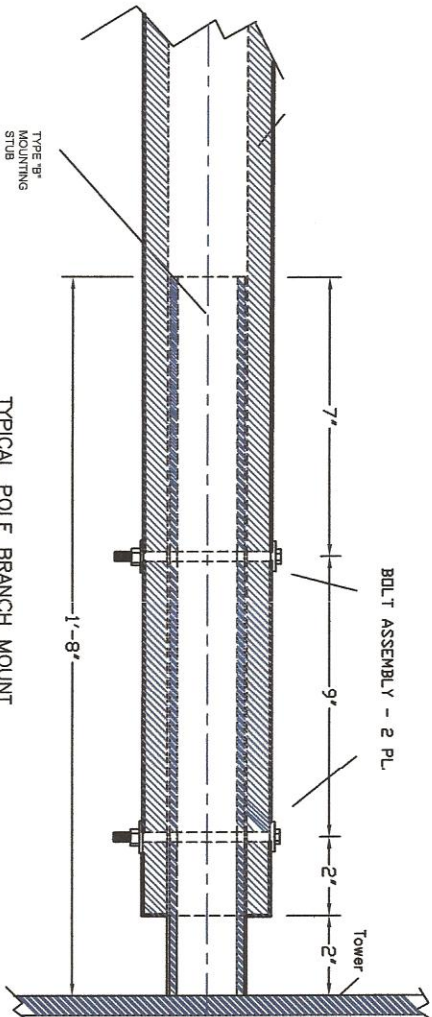
NOTE: ALL BRANCH STUB MNT. ASTM A53 GRADE B (35 KSI)

## REVISIONS

DATE	CHANGE	INITIALS



TYPICAL POLE BRANCH MOUNT  
SECTION AT CENTER LINE TYPE A



TYPICAL POLE BRANCH MOUNT  
SECTION AT CENTER LINE TYPE B



**The Holbek Group**

38 Chase Court  
Georgetown, MA 01460  
www.holbekgroup.com  
info@holbekgroup.com  
781.444.7000 / 781.444.7117

PROJECT:  
**LONG LAKE, NY INDEPENDENT TOWERS, LLC**

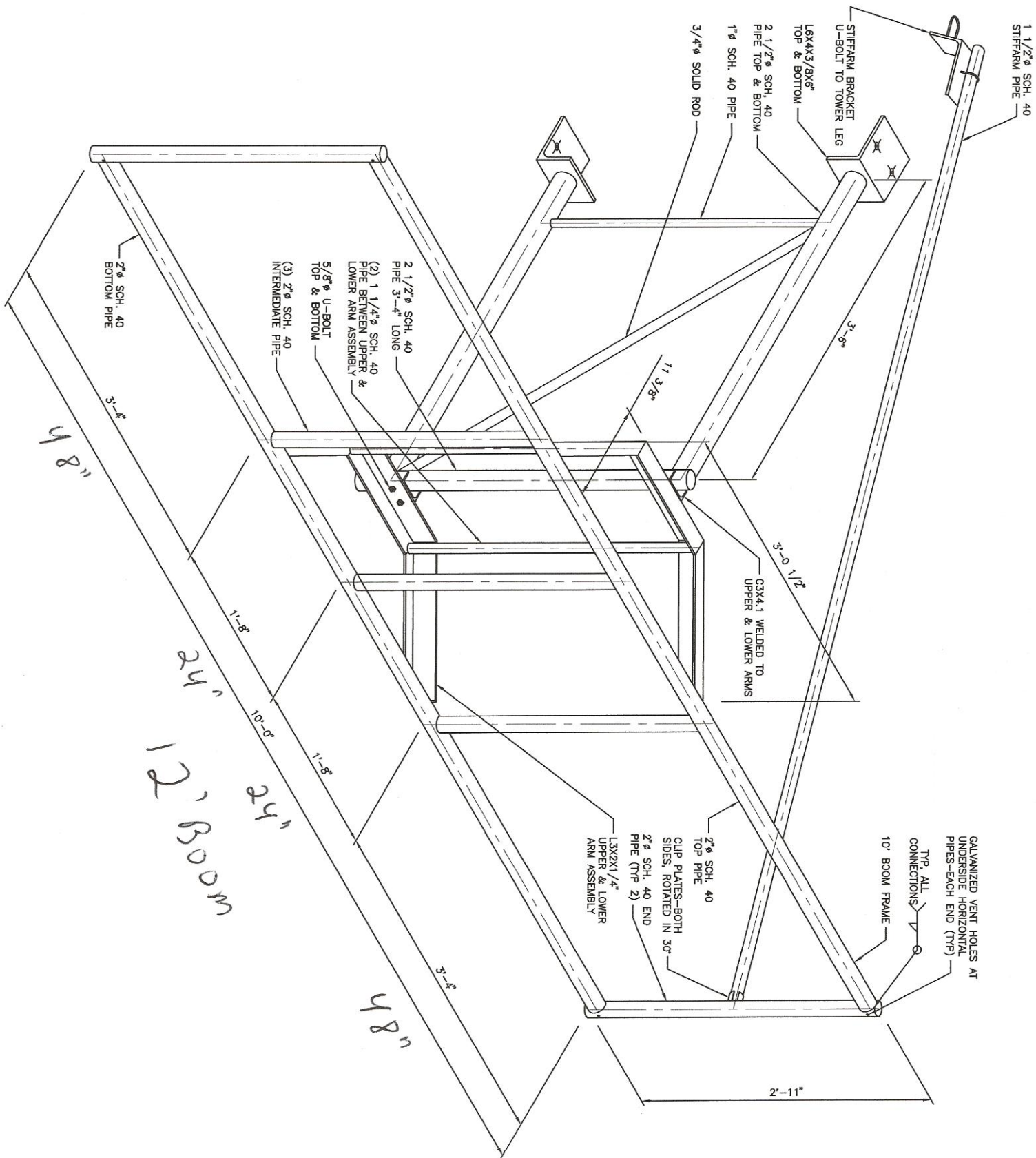
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DATE: **APRIL 4, 2010**

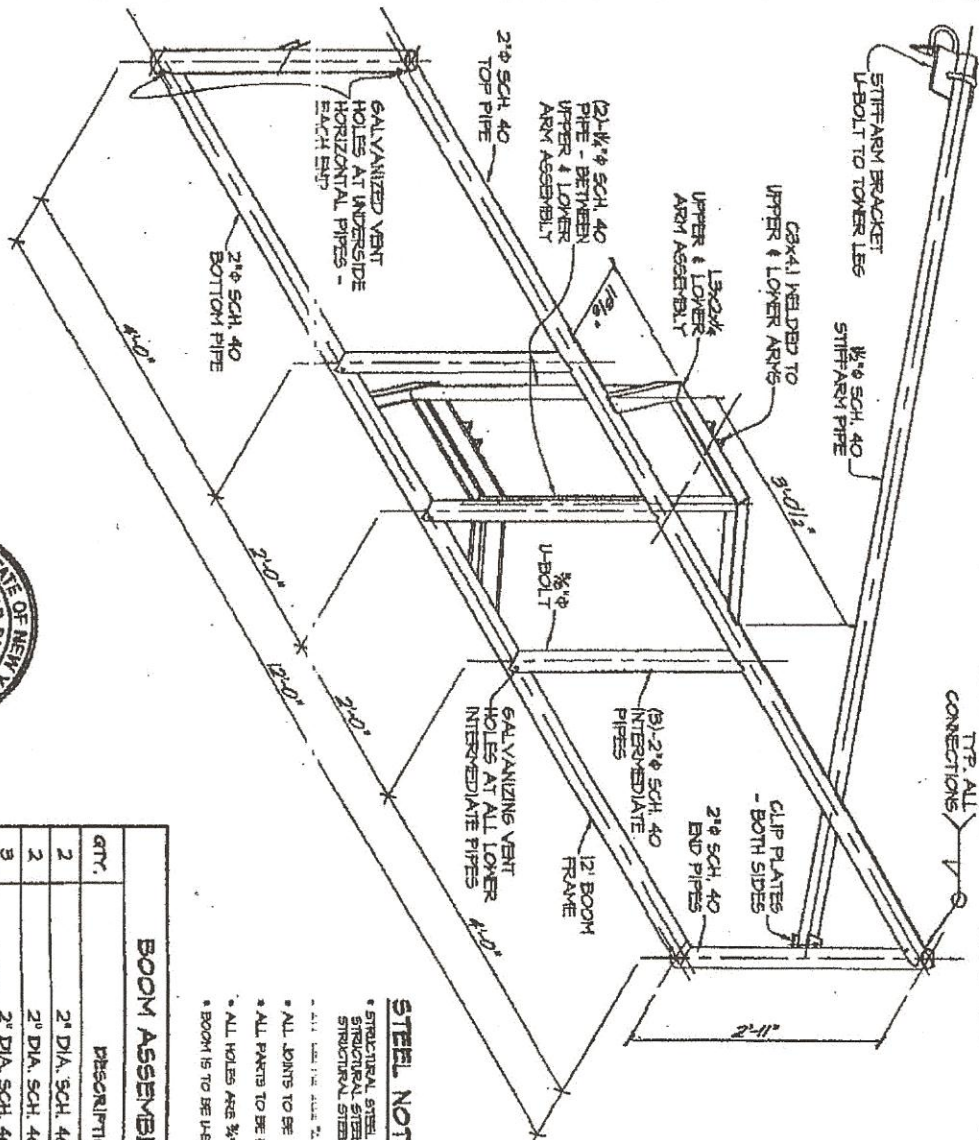
DRAWN BY: **Thor Holbek**

CHECKED BY: **Thor Holbek**

SHEET: **1 OF 1**



BOOM AREAS (MIN/EA-222-F)	
CODE (R2)	
BOOM ASSEMBLY	NO ICE
	1/2 ICE
	10R2
	16R12



5-7-07

# STEEL NOTES

- \* STRUCTURAL STEEL GRADES: PLATES & CHANNELS, ASTM A572, GRADE 50; STRUCTURAL STEEL PIPES, ASTM A501 or ASTM A501, TYPE E or S, GRADE B.
- \* ALL JOINTS TO BE SEAL WELDED FOR GALVANIZING.
- \* ALL PARTS TO BE NOT DEFECT GALVANIZED AFTER FABRICATION.
- \* ALL HOLES ARE 3/4" DIA. FOR 3/4" DIA. BOLTS, UNLESS NOTED.
- \* BOOM IS TO BE U-BOLTED TO CELL ARM IN FIELD.

## BOOM ASSEMBLY MATERIAL SCHEDULE

QTY.	DESCRIPTION	CUT LENGTH	WEIGHT
2	2" DIA. SCH. 40 PIPE	14'11"	86 lbs.
2	2" DIA. SCH. 40 PIPE	35'	21 lbs.
3	2" DIA. SCH. 40 PIPE	32'8"	90 lbs.
2	1 3/8" DIA. SCH. 40 PIPE	47'11"	32 lbs.
2	1 3/8" DIA. SCH. 40 PIPE	34'11"	19 lbs.
2	1 3/8" DIA. SCH. 40 PIPE	24'11"	2 lbs.
4	STIFFARM CLIP	9"	2 lbs.
1	1 1/2" DIA. SCH. 40 STIFFARM PIPE	120"	27 lbs.
TOTAL BOOM ASSEMBLY WEIGHT			212.4 lbs.

Project Name: 12' Antenna Boom Assembly

Project No. 4907.1

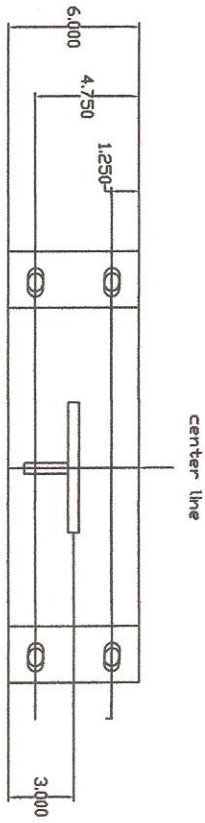
Sheet No. S-1

Drawing of Origin

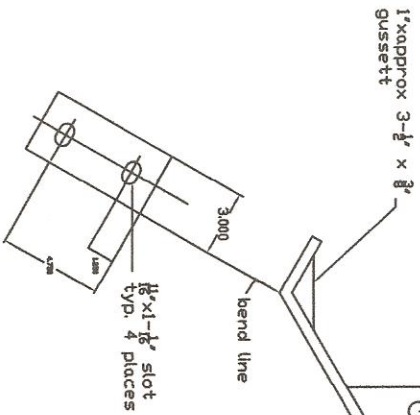
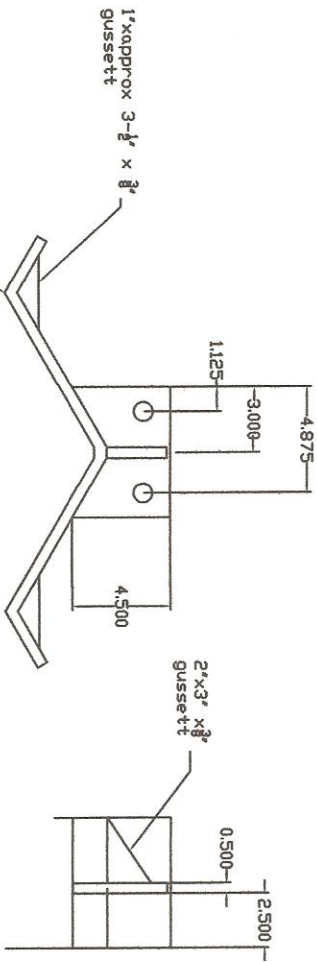
**JENSEN ENGINEERING, P.C.**  
Structural Engineering Consultants  
1680 EAST MAIN STREET  
ROCHESTER, NEW YORK 14604  
phone: (585) 482-6120  
fax: (585) 482-0440  
web site: www.jenseneng.com

Drawn By: JTB  
Checked By: JTB  
Scale: 3/4" = 1'-0"  
Date: 4/18/07

No.	Revisions	By	Date



Clamp Size	width	length	thickness
Large	6'	41- $\frac{1}{2}$ '	$\frac{1}{2}$ "
Medium	6'	31- $\frac{1}{2}$ '	$\frac{1}{2}$ "
Small	6'	23'	$\frac{1}{2}$ "
Extra-small	6'	20- $\frac{1}{2}$ '	$\frac{1}{2}$ "



Monoploe Bottom Clamp

D&D Welding, Inc.

Date: 9.10.2008 DRW No.: A-20080901-1

Scale: Full

Material: A36HRS

Page No. 1 of 2

# POWER

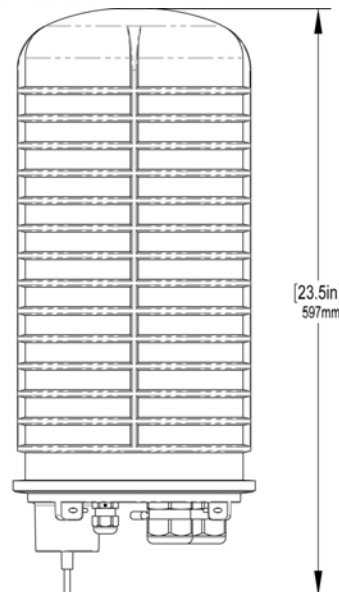
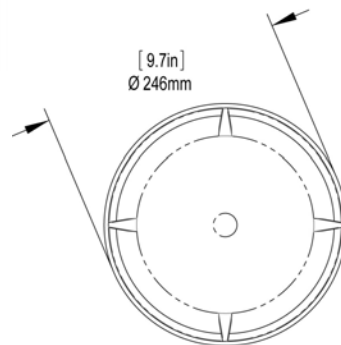
## DC6-48-60-18-8F

### DC Surge Suppression Solution

The DC6-48-60-18 is a dual chambered, DC surge suppression system for use in multi-circuit, Distributed Antenna Systems. The system will protect up to 6 Remote Radio Heads from voltage surges and lightning, and connect up to 18 fiber pairs. The system is enclosed in a NEMA 4 rated, waterproof enclosure.

#### FEATURES

- Protects up to 6 Remote Radio Heads, each with its own protection circuit.
- Flexible design allows for installation at the top of a tower for Remote Radio Head protection.
- Includes fiber connections for up to 18 pairs of fiber.
- LED indicators on individual circuits provide visual indication of suppressor status.
- Form 'C' relays allow for remote monitoring of the suppressor status.
- Patented Strikesorb technology provides over 60 kA of surge current capacity per circuit.
- Strikesorb suppression modules are fully recognized to UL 1449-3rd Edition Safety Standard, meeting all intermediate and high current fault requirements to facilitate use in OEM applications.
- Raycap recommends that DC protection system be installed within 2 meters or 6 feet of the radio.
- Dome design is lightweight and aerodynamic providing maximum flexibility for installation on top of towers.





# DC6-48-60-18-8F

## DC Power Surge Protection

Electrical Specifications	
Model Number	DC6-48-60-18-8F
Nominal Operating Voltage	48 VDC
Nominal Discharge Current ( $I_n$ )	20 kA 8/20 $\mu$ s
Maximum Discharge Current ( $I_{max}$ ) per NEMA LS-1	60 kA 8/20 $\mu$ s
Maximum Continuous Operating Voltage ( $U_c$ )	75 VDC
Voltage Protection Rating	400 V

Mechanical Specifications	
Suppression Connection Method	Compression lug, #2-#14 AWG Copper, #2-#12 Aluminum
Fiber Connection Method	LC-LC Single mode duplex
Environmental Rating	IP 68, 7m 72hrs
Operating Temperature	-40° C to + 80° C
Storage Temperature	-70° C to + 80° C
Cold Temperature Cycling	IEC 61300-2-22e -30° C to + 60° C 200 hrs @ 5 psi
Resistance to Aggressive Materials	CEI IEC 61073-2 including acids and bases
UV Protection	ISO 4892-2 Method A Xenon-Arc 2160 hrs
Weight	20 lbs without Mounting Bracket

### STANDARDS

Strikesorb modules are compliant to the following Surge Protection Device (SPD) Standards:

- ANSI/UL 1449 – 3rd Edition
- IEEE C62.41
- NEMA LS-1, IEC 61643-1:2005 2nd Edition:2005
- IEC 61643-12
- EN 61643-11:2002 (including A11:2007)



**Raycap**

GS02-00-068 REV 050610



GS-07F-0435V



Certified to  
ISO 9001:2000



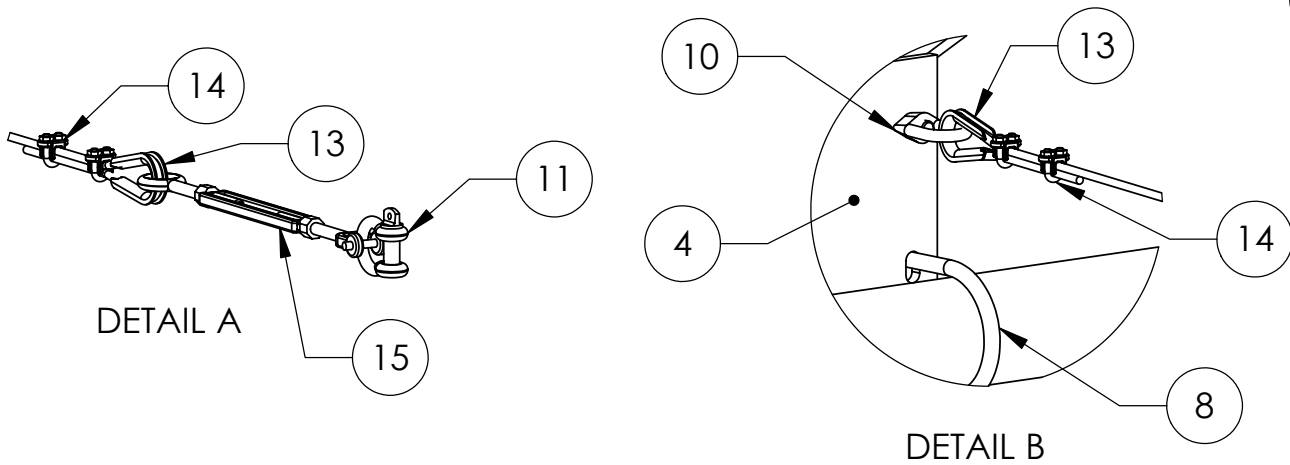
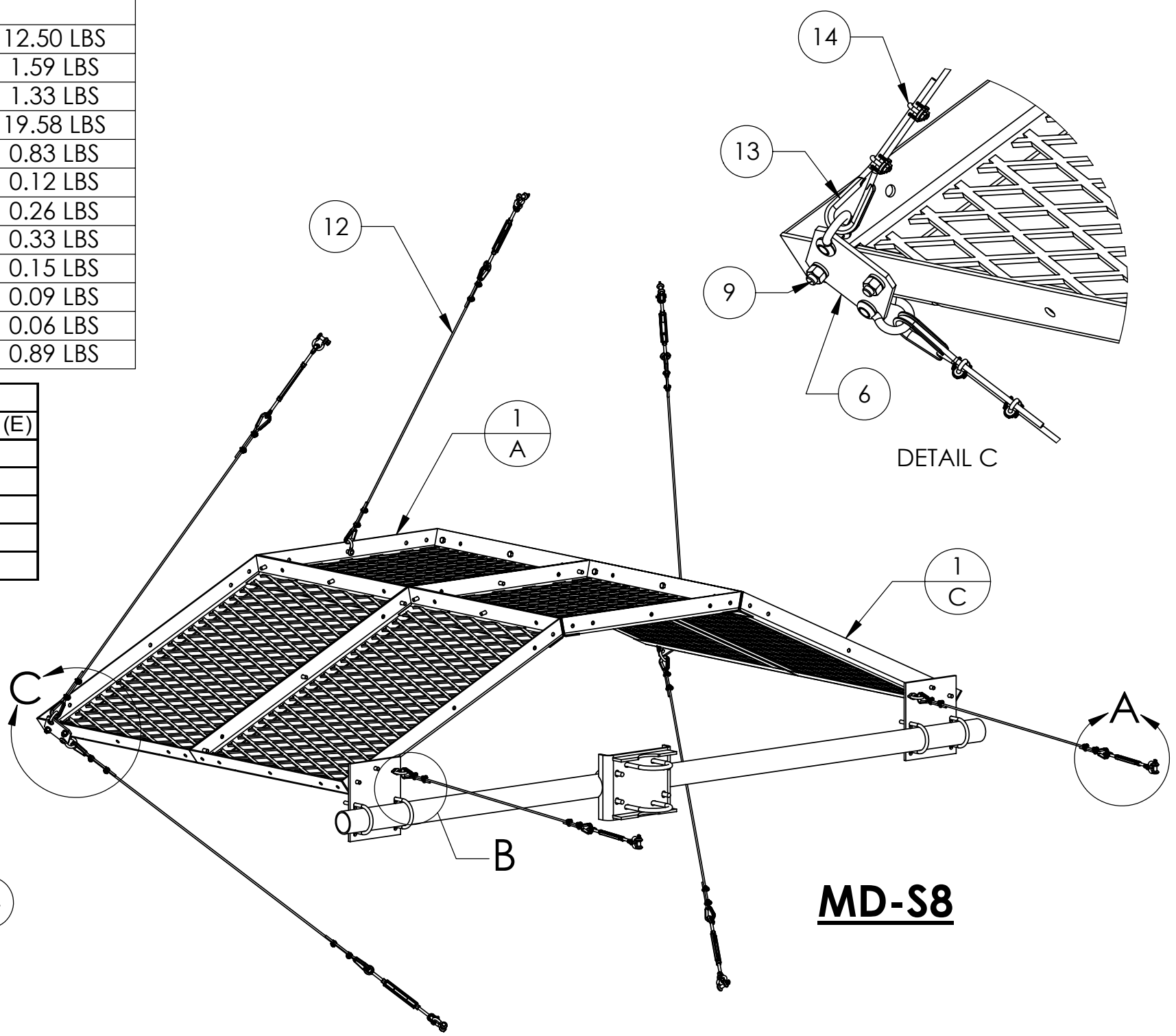
TUV Rheinland  
of North America

Raycap, Inc. 806 W. Clearwater Loop • Post Falls • Idaho • 83854 • USA  
Phone 208.777.1166 • Toll Free 800.890.2569 • Fax 208.777.4466 • [www.raycapsurgeprotection.com](http://www.raycapsurgeprotection.com)


ITEM NO.	PART NUMBER	DESCRIPTION	QTY.	WEIGHT
1	MDS.XX	PANELS (SEE TABLE)	-	-
2	MT-XXX	GALV. PIPE (SEE TABLE)	1	-
3	MDSH	HARDWARE KIT (ITEM#4-15)	1	
4	MDS.16	MOUNT PLATE	2	12.50 LBS
5	MDS.15	CENTER PLATE	1	1.59 LBS
6	MDS.17	SHACKLE PLATE	2	1.33 LBS
7	MT216NSH	MT-216 HARDWARE KIT	1	19.58 LBS
8	GUB-4356	1/2" X 3-5/8" X 6" GALV U-BOLT KIT	4	0.83 LBS
9	GB-04125	1/2" X 1-1/4" GALV BOLT KIT	32	0.12 LBS
10	MT-309	EYE NUT 3/8" WITH 1/2" THREAD	2	0.26 LBS
11	MT-345	3/8 SHACKLE	12	0.33 LBS
12	MT-296	EHS GUY CABLE 1/4" (PER FOOT)	200	0.15 LBS
13	MT-301	5/16" THIMBLE	14	0.09 LBS
14	MT32414	1/4" CABLE CLIP	28	0.06 LBS
15	MT-318	3/8" X 6" LONG JAW/EYE TURNBUCKLE	7	0.89 LBS

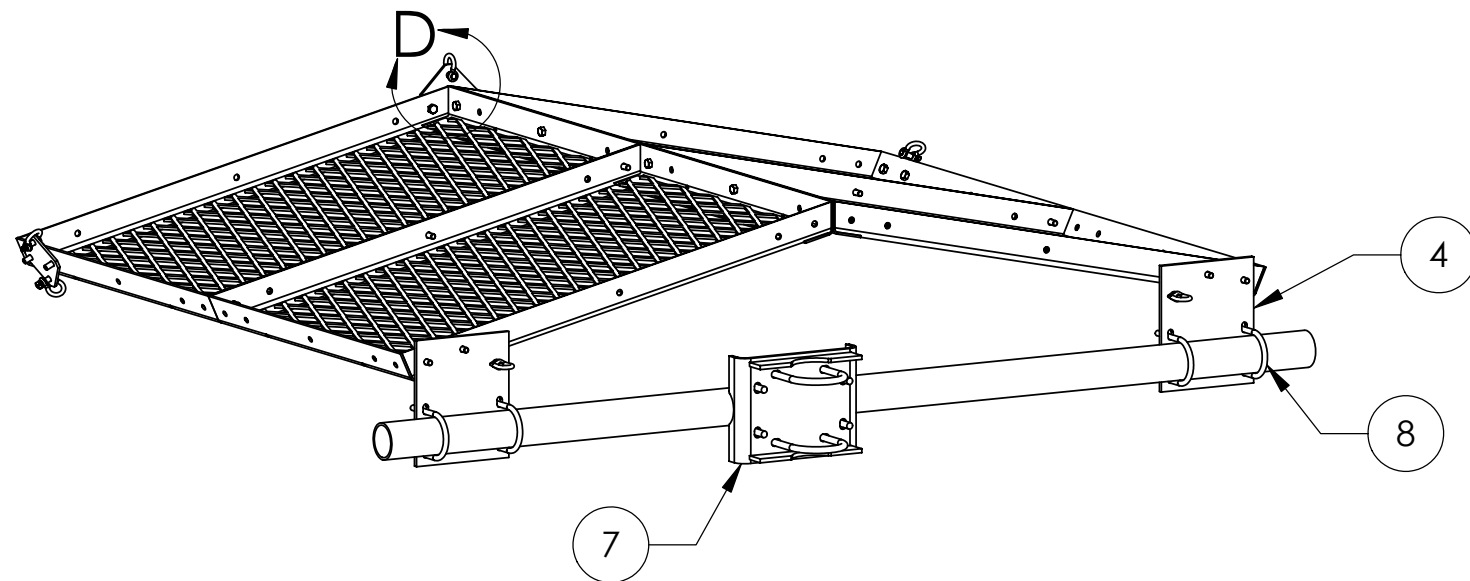
		PANELS					
PART #	WEIGHT	GALV PIPE	MDS.01 (A)	MDS.02 (B)	MDS.03 (C)	MDS.04 (D)	MDS.05 (E)
MD-S4	290 LBS	MT54775	-	2	-	-	-
MD-S6	443 LBS	MT547100	-	-	4	-	-
MD-S8	571 LBS	MT547126	2	-	4	-	-
MD-S10	649 LBS	MT547140	-	-	3	3	-
MD-S12	763 LBS	MF130	-	-	-	2	4

REVISIONS				
REV.	ZONE	DESCRIPTION	BY	DATE
A				4/13/2006

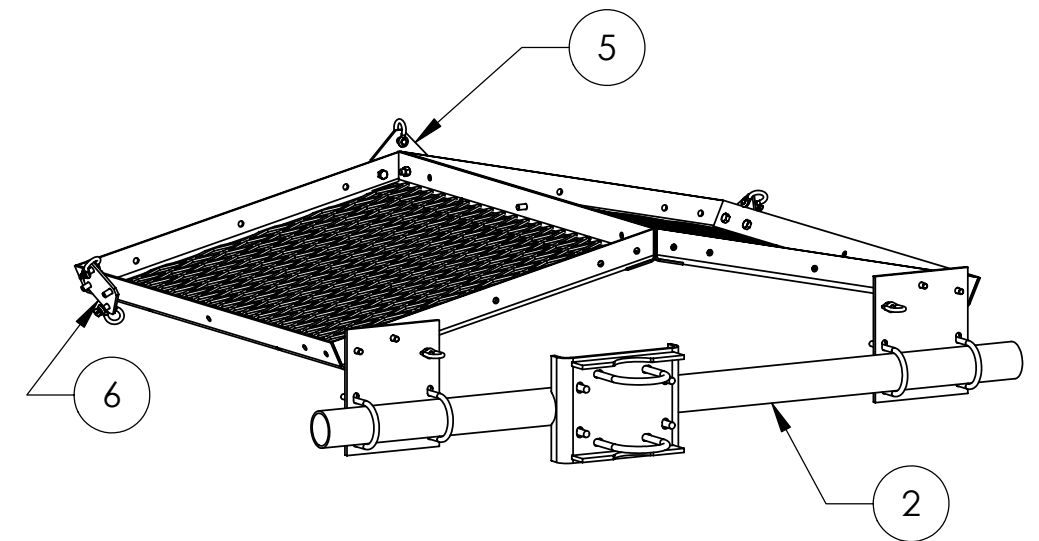


- NOTES:
- 1. 3 BOLTS AT EACH PANEL CONNECTION
  - 2. MINIMUM 15 FT. LBS OF TORQUE ON CABLE CLIPS
  - 3. MUST HAVE ALL 7 GUY CABLE LOCATIONS.

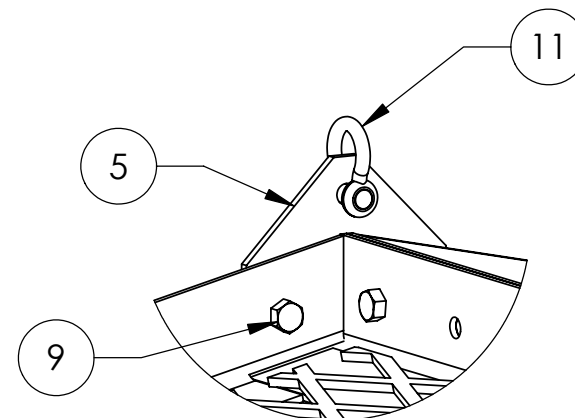
These drawings and specifications are the proprietary property of ANDREW CORPORATION and may be used only for the specific purpose authorized in writing by Andrew Corporation.  ALL DIMENSIONS ARE IN INCHES U.O.S. TOLERANCES UNLESS OTHERWISE SPECIFIED: .X = ± .06      ANGLES ± 2° .XX = ± .03      FRACTIONS ± 1/32 .XXX = ± .010  REMOVE BURRS AND BREAK EDGES .005  DO NOT SCALE THIS PRINT	DRAWN BY: AW	SHEET: 1 of 3	PART NUMBER: MD-S
	CHECKED BY: TP	SCALE: NTS	DESCRIPTION: MICROWAVE DISH SHIELD
	DATE: 04/13/06	MATERIAL: A36	DRAWING TYPE: ASSEMBLY DRAWING
	REVISION: A	FINISH: GALV A123	 ORLAND PARK, IL. 60462 U.S.A.
	WEIGHT: SEE TABLE		



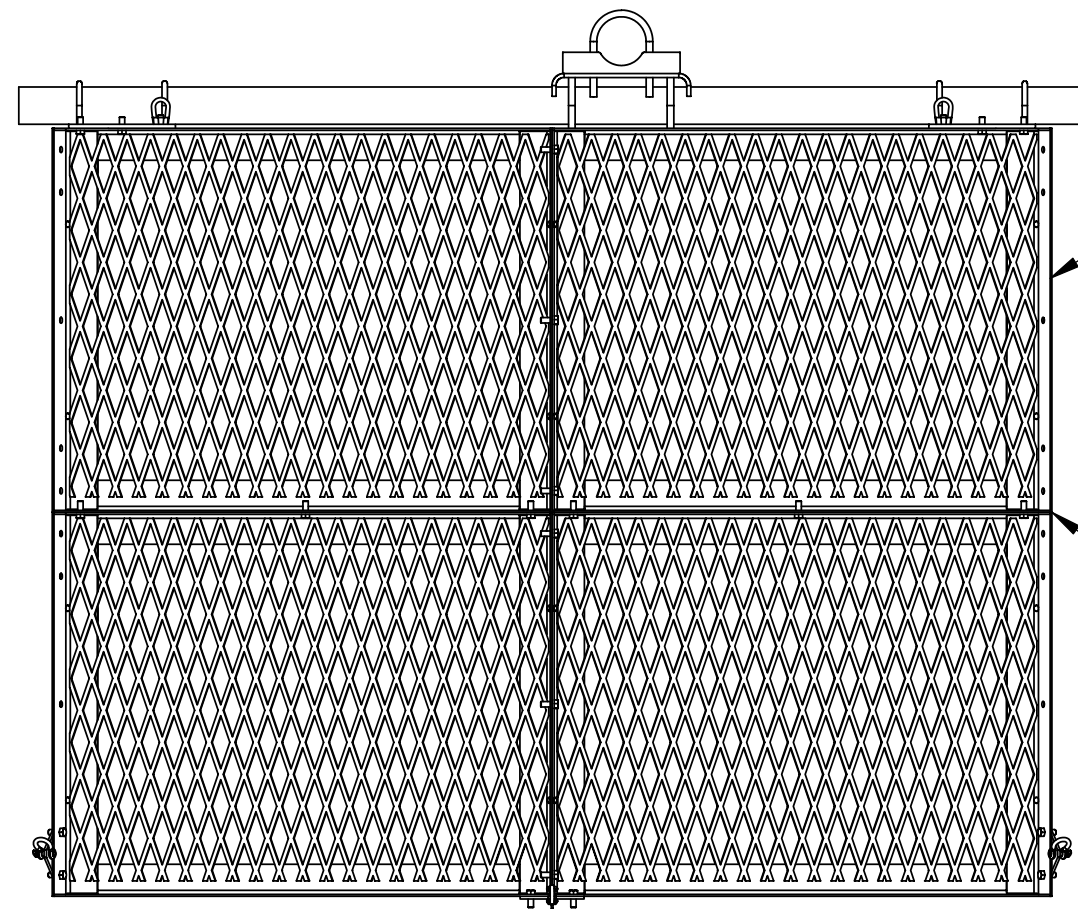
**MD-S6**



**MD-S4**

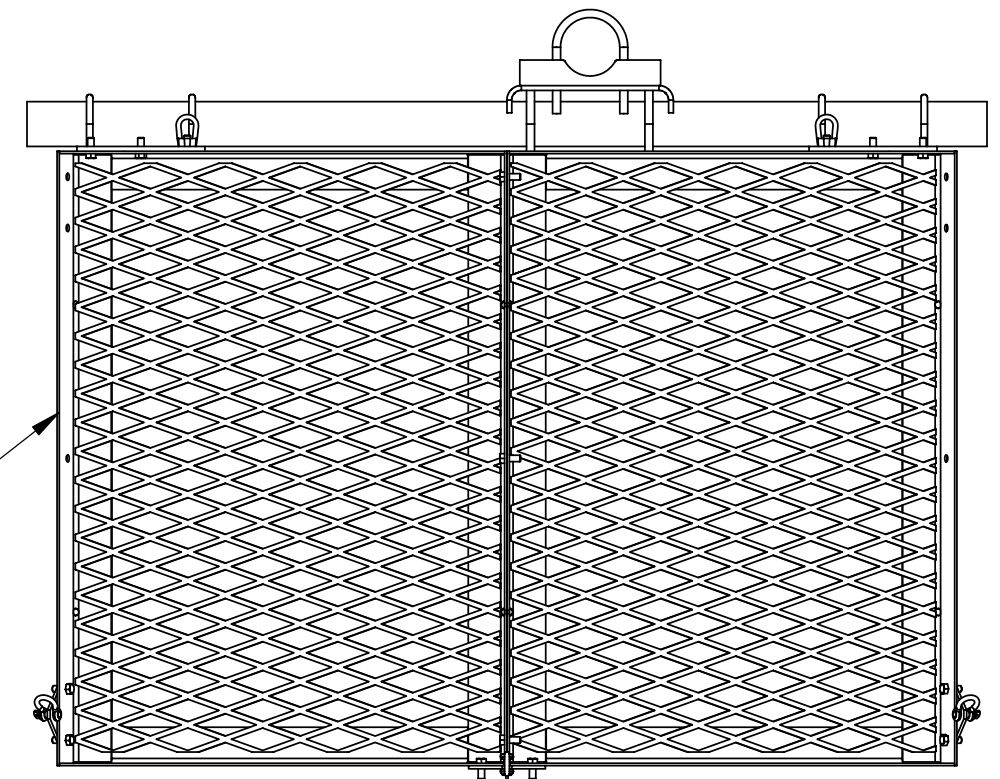



DETAIL D

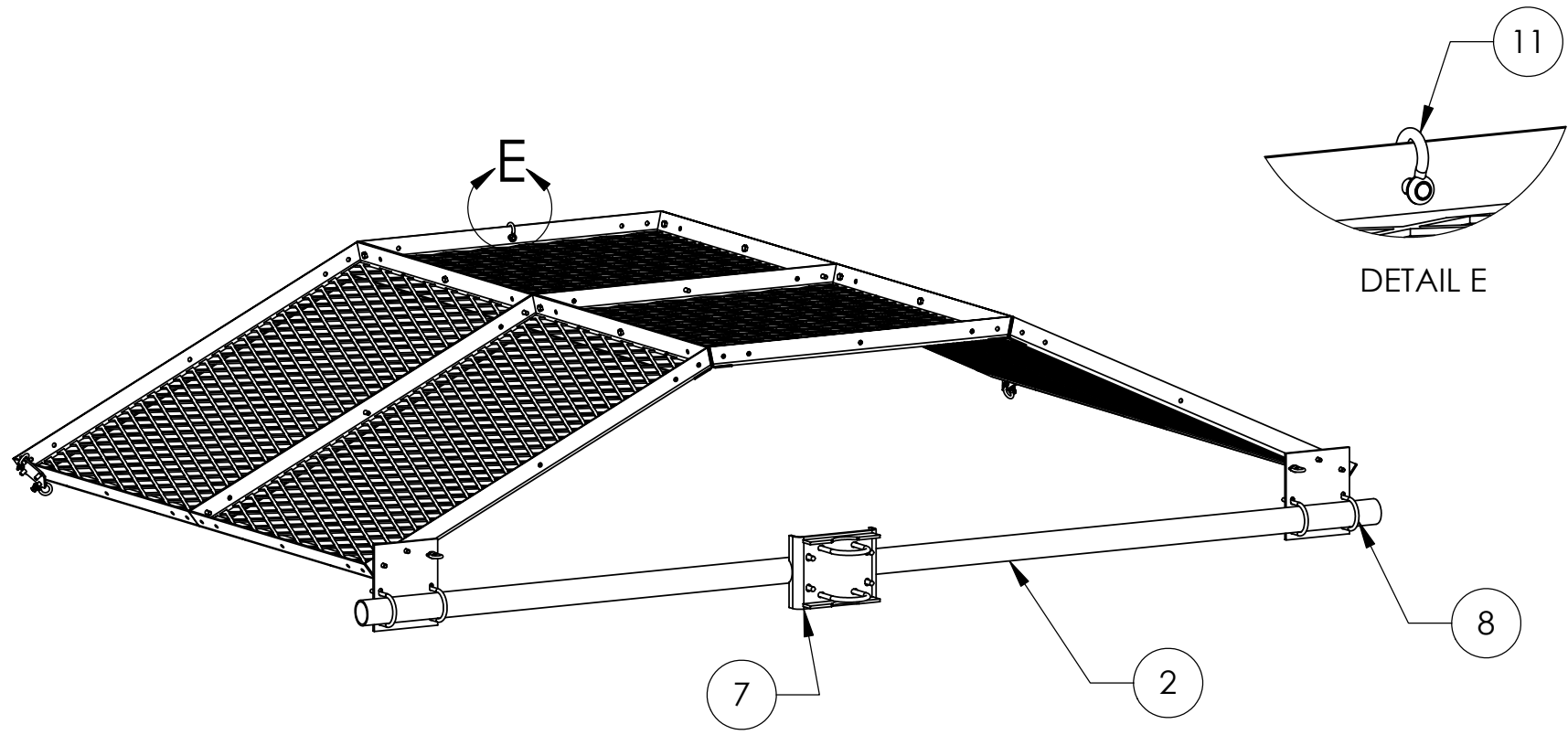


3 BOLTS AT EACH PANEL  
CONNECTION

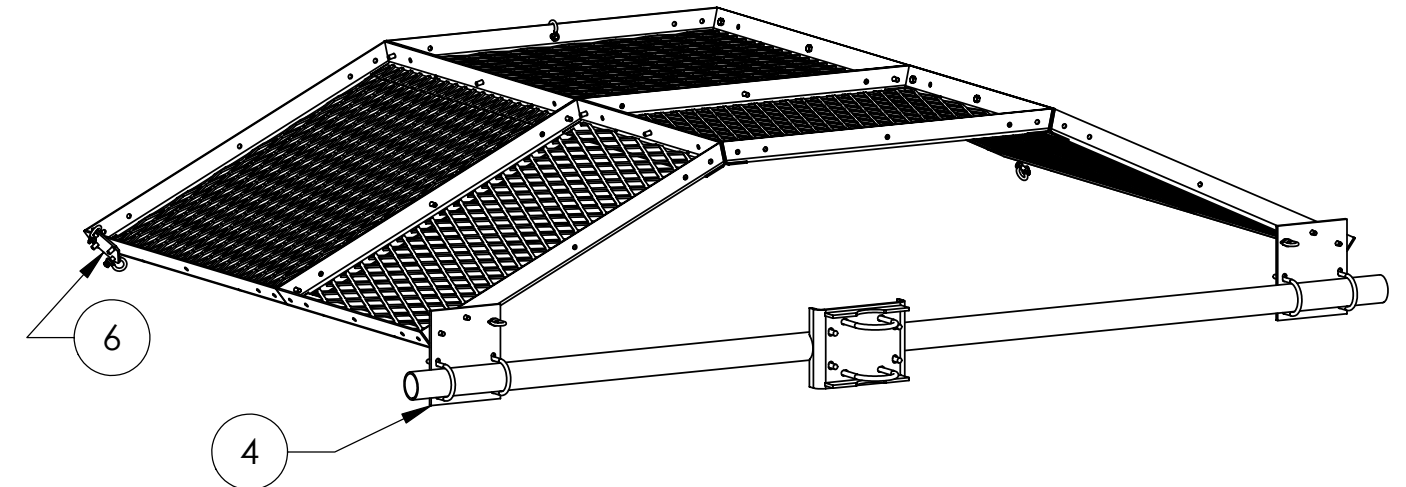
1  
B



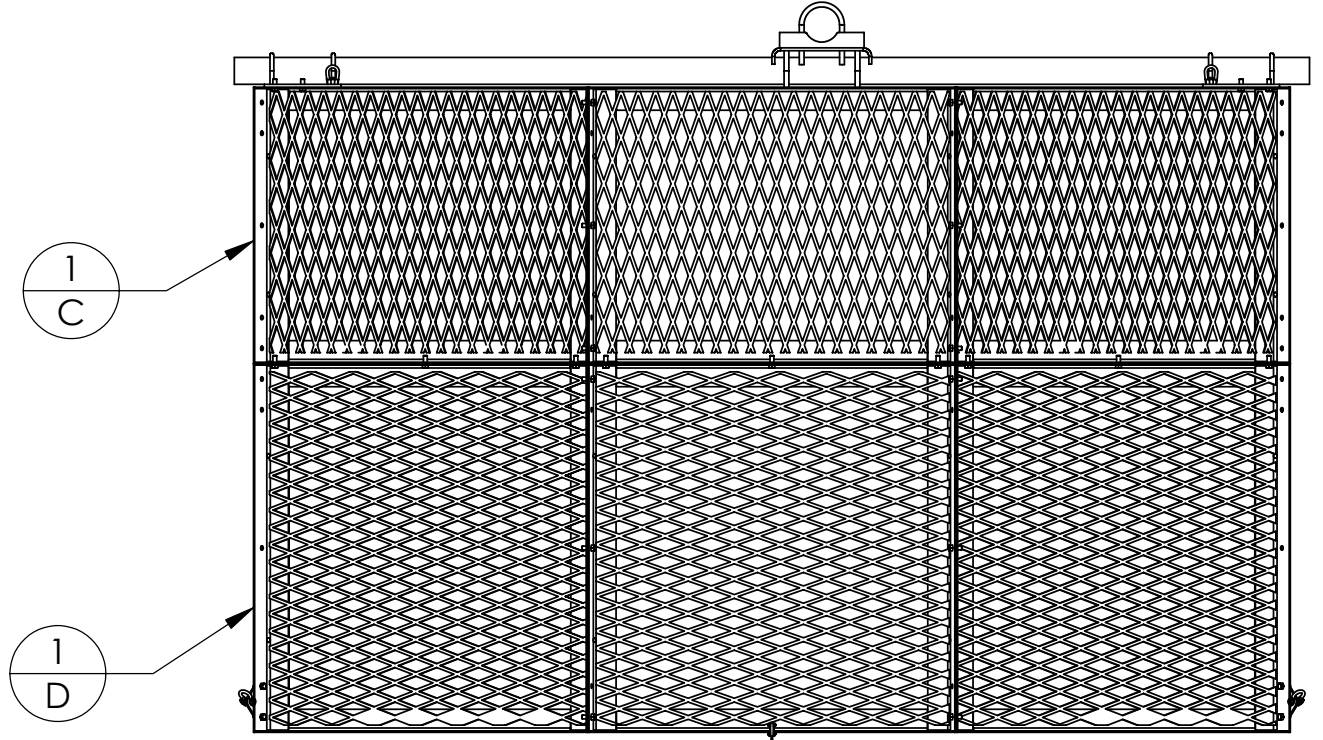
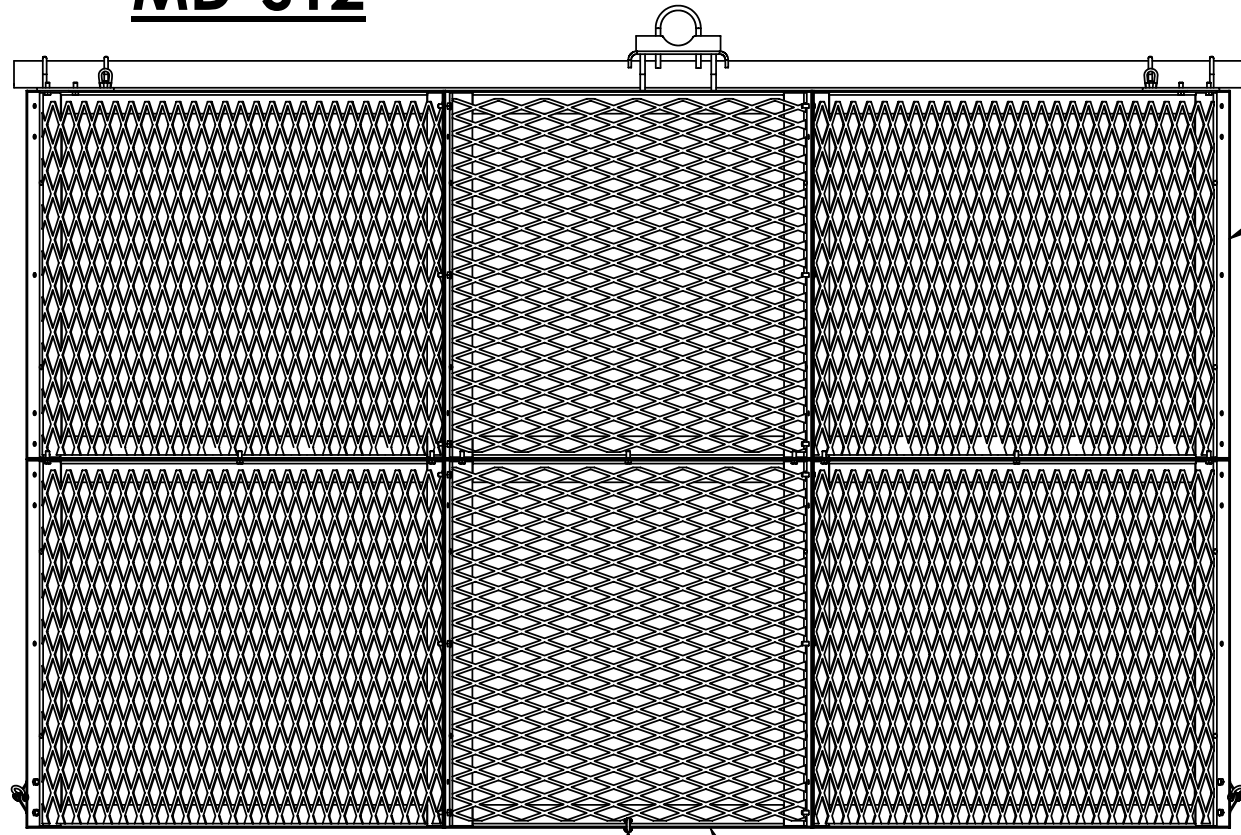
<div>These drawings and specifications are the proprietary property of ANDREW CORPORATION and may be used only for the specific purpose authorized in writing by Andrew Corporation.</div> <div>ALL DIMENSIONS ARE IN INCHES U.O.S. TOLERANCES UNLESS OTHERWISE SPECIFIED:</div> <div><div><div>.X = ± .06</div><div>ANGLES ± 2°</div></div><div><div>.XX = ± .03</div><div>FRACTIONS ± 1/32</div></div><div><div>.XXX = ± .010</div></div></div> <div>REMOVE BURRS AND BREAK EDGES .005</div> <div>DO NOT SCALE THIS PRINT</div>	<div>DRAWN BY:</div> <div>AW</div>	<div>SHEET:</div> <div>2 of 3</div>	<div>PART NUMBER:</div> <div>MD-S</div>
	<div>CHECKED BY:</div> <div>TP</div>	<div>SCALE:</div> <div>NTS</div>	<div>DESCRIPTION:</div> <div>MICROWAVE DISH SHIELD</div>
	<div>DATE:</div> <div>04/13/06</div>	<div>MATERIAL:</div> <div>A36</div>	<div>DRAWING TYPE:</div> <div>ASSEMBLY DRAWING</div>
	<div>REVISION:</div> <div>A</div>	<div>FINISH:</div> <div>GALV A123</div> <div>WEIGHT:</div> <div>SEE TABLE</div>	<div><div>ORLAND PARK, IL. 60462 U.S.A.</div></div>




**MD-S12**



**MD-S10**



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	CHECKED BY: TP	SCALE: NTS	DESCRIPTION: MICROWAVE DISH SHIELD
	DATE: 04/13/06	MATERIAL: A36	DRAWING TYPE: ASSEMBLY DRAWING
	REVISION: A	FINISH: GALV A123	 <b>ANDREW®</b> ORLAND PARK, IL. 60462 U.S.A.
		WEIGHT: 624.20	

## RRUS 11 – Dual PA RRU.

### Technical Data



RBS6000

- › Multi standard
- › RF: 2x30 Watts
- › Carrier BW: 1.4 – 20 MHz
- › Alarms: 2
- › Dimensions (with sunshield):
  - Width: 17.0 in
  - Height: 17.8 in
  - Depth: 7.2 in
  - Weight: 55 lbs (Band 12)
  - Weight: 50 lbs (Band 4)
- › Temperature: -40 to +131 F
- › Cooling: Self convection
- › Power: -48 VDC
- › Rec. fuse size 20 Amp
  - Rec. DC cable:
    - › 6 mm<sup>2</sup> up to 60 meters
    - › 10 mm<sup>2</sup> over 60 meters
    - › Shielded
- › Power Cons: 200 Watts typ.



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Page 1

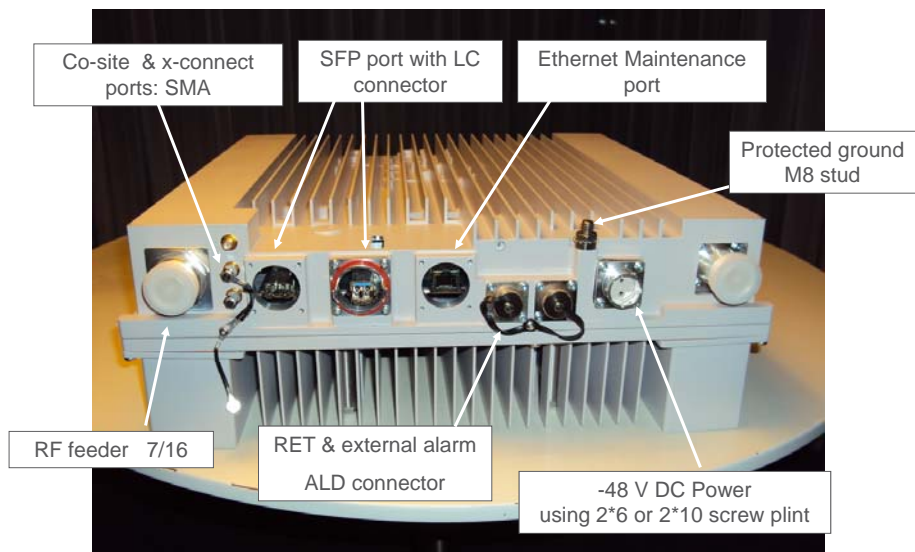
pA1

2010-05-13

## RRUS-11 I/F



RBS6000



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Page 2

pA1

2010-05-13



# HELIAX® AVA7-50 Coaxial Cable

1-5/8" Andrew Virtual Air™ Cable for Wireless Applications

NEW PRODUCT  
ANNOUNCEMENT



UMTS and GSM 1800  
System Users—Lower  
attenuation means less line  
loss!

**H**ELIAX AVA7-50 from Andrew Corporation is the lowest attenuation coaxial cable in the industry.

With HELIAX AVA7-50, system designers and operators can cut cable subsystem costs by up to 38% and gain tower height at the same time. Engineers can now meet system link budgets using HELIAX AVA7-50 1-5/8" coaxial cable in site applications that would normally require 2-1/4" cable. In addition, it can be used in typical 1-5/8" applications with the benefit of lower system loss.

Manufactured worldwide, HELIAX AVA7-50 cables can be at your site quickly via our global distribution network. Or simply order an Andrew OnePack<sup>SM</sup> Site Kit with AVA7-50 for even faster, more consistent site buildouts.

Designed and engineered with both your link and cost budgets in mind, AVA7-50 cable continues the long-standing tradition of quality and excellence that HELIAX has delivered to the communication industry for decades.

UMTS and GSM 1800 System users—lower attenuation means less line loss:

GSM 1800 mid-band (1798 MHz)

LDF7-50A @ 60 m = 2.08 dB

AVA7-50 @ 60 m = 1.83 dB

UMTS mid-band (2035 MHz)

LDF7-50A @ 60 m = 2.25 dB

AVA7-50 @ 60 m = 1.98 dB

Also available in 7/8" (AVA5-50). Patent pending.

One Company. A World of Solutions.

## SPECIFICATIONS

# Specifications for HELIAX® AVA7-50 Low Density Foam Dielectric Coaxial Cable

### Mechanical

Nominal size	1-5/8 inch
Jacket O.D., in (mm)	1.98 (50.29)
Outer conductor O.D., in (mm)	1.83 (46.36)
Foam dielectric O.D., in (mm)	1.74 (44.07)
Inner conductor O.D., in (mm)	0.72 (18.16)
Weight, lb/ft (kg/m)	0.72 (1.07)
Tensile strength, lb (kg)	400 (181.44)
Crush, lb/in (kg/mm)	90 (1.61)
Minimum bend radius, in (mm)	15 (381)
One time minimum bend radius, in (mm)	8 (203.2)
Bending moment, lb-ft (N-m)	35 (47.45)
Number of bends, min. (typical)	15 (50)

### Environmental

Operating temperature, °F (°C)	-67 to +185° (-55 to +85°)
--------------------------------	----------------------------

### Electrical

Impedance, ohms	50±1.00
Pulse reflection, maximum %	0.5
Frequency, maximum MHz	2500
Velocity, %	92
Peak power, kW	302
DC resistance, ohm/kft (ohm/km)	inner 0.41 (1.35) outer 0.16 (0.52)
Capacitance, pF/ft (pF/m)	22 (72.18)
Inductance, microH/ft (microH/m)	0.06 (0.19)
DC breakdown, volts	11,000
Jacket spark, volts RMS	10,000
Insulation resistance, Mohm	100,000
Lengths to 610 m (2000 ft)	
Phase trim, degrees minimum/GHz	±6.7

Frequency MHz	Attenuation dB/100 ft	Attenuation dB/100 m	Average Power, kW
30	0.105	0.346	28.00
150	0.243	0.799	12.10
450	0.439	1.44	6.72
824	0.614	2.02	4.80
894	0.643	2.11	4.59
960	0.670	2.20	4.41
1500	0.865	2.84	3.41
1700	0.930	3.05	3.17
2000	1.02	3.36	2.88
2300	1.11	3.65	2.65
2500	1.17	3.84	2.52

Rating temperature (attenuation), °F (°C)	68 (20)
Rating temperature (power)-inner, °F (°C)	212 (100)
Rating temperature (power)-ambient, °F (°C)	104 (40)

### Accessories

Standard Hangers, kit of 10	42396A-2
Hardware, kit of 10	
3/4" (19 mm) long	31769-5
1" (25 mm) long	31769-1
SnapStak™ Hangers, kit of 10	SSH-158
Click-On Hangers, kit of 10	L7CLICK
Support Hoisting Grip	
Grip with one clamp	L7SGRIP
Support clamp, kit of 10	L7SGRIP-71K
Standard Hoisting Grip	24312A
SureGround™ Grounding Kit	
0.6 m lead, lug attached	SGL7-06B2
1.5 m lead, unattached lug	SGL7-15B4
3M™ Cold Shrink™ Weatherproofing Kit	
1-5/8" to 1/2" cables	245172
Entry Systems	
Standard 4" cable entry boot, 1 hole	204679A-4

### AVA7-50 Connectors

Connectors	Part Number
DIN Female Positive Stop™	AL7DF-PS
DIN Male Positive Stop	AL7DM-PS
N Female Positive Stop	AL7NF-PS
N Male Positive Stop	AL7NM-PS



Order Andrew  
OnePack™ Site Kit with  
AVA7-50 for even faster,  
more consistent site  
buildouts.



One Company. A World of Solutions.

Andrew Corporation  
3 Westbrook Corporate Center  
Suite 900  
Westchester, IL 60154 US  
www.andrew.com

Customer Support Center  
From North America  
Telephone: 1-800-255-1479  
Fax: 1-800-349-5444  
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Telephone: +1-708-873-2307  
Fax: +1-708-349-5444  
Internet: www.andrew.com

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Bulletin PA-100393.1-EN (9/07)  
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## FLEXWELL® Standard Elliptical Waveguide

## Product Description

FLEXWELL® elliptical waveguide is constructed of longitudinally continuous seam welded, highly conductive copper tube, corrugated and precision formed into an elliptical cross section. It is manufactured in continuous lengths using a special seam welding process developed by the RFS organization.

The corrugation design achieves high transverse stability, flexibility and crush strength for superior handling and forming at an installation. The inherent strength and flexibility of FLEXWELL waveguide allows on location, a continuous length of waveguide to be run directly from a tower-mounted antenna to the equipment building, eliminating flange joint discontinuities and the use of bends, twists and flex sections associated with a rigid rectangular waveguide system. Because of its flexibility, FLEXWELL elliptical waveguide can be easily transported to an installation site in coils or on reels and then uncoiled as required during installation.

FLEXWELL elliptical waveguide has set an industry standard for excellent electrical performance. Each waveguide has been carefully designed for low loss and low VSWR in specific frequency bands. For optimum system performance, there is no substitute for FLEXWELL waveguide.

As part of the RFS manufacturing process, all elliptical waveguides undergo several different electrical tests. Prior to shipping, every length is 100% tested again for input VSWR, and undergoes a twenty-four hour pressure test. This additional testing is performed to guarantee conformance with published specifications and to avoid any problems in the field.

A FLEXWELL elliptical waveguide feeder requires less planning and reduces installation costs when compared to a feeder system using a rigid rectangular waveguide. FLEXWELL waveguide is available cut to length with factory attached connectors or in continuous lengths for termination in the field.



## Features/Benefits

## Technical Specifications

Typical Operating Band, GHz	5.6 - 6.425
Performance	Standard
Dimension over Jacket, mm (in)	56 x 33 (2.2 x 1.3)
Weight, kg/m (lb/ft)	1.1 (0.74)
Minimum Bending Radius E Plane, without rebending, mm (in)	200 (8)
Minimum Bending Radius H Plane, without rebending, mm (in)	550 (22)
Minimum Bending Radius E Plane, with rebending, mm (in)	300 (12)
Minimum Bending Radius H Plane, with rebending, mm (in)	800 (31)
Maximum Twist, degree/m (degree/ft)	4 (1.2)
Max. Operating Pressure, bar (psi)	0.5 (7)
Max. Pulling Length per Hoisting Grip, m (ft)	100 (305)
Standard Hanger Spacing, m (ft)	0.9 (3)
Recommended Installation Temperature Range, °C (°F)	-40 to +60 (-40 to +140)
Max. VSWR / Return Loss, dB	1.15 / 23.1
Cut-off Frequency, GHz	3.65

## Notes

VSWR values include connectors and are valid for frequency band of connectors.

Max. Operating Band: 4.50 - 6.425 GHz

## Other Documentation



## FLEXWELL® Standard Elliptical Waveguide

## E60/EP60

## ATTENUATION, AVERAGE POWER, GROUP VELOCITY, GROUP DELAY

Frequency GHz	Attenuation dB / 100 m (ft)	Avg. Pow. kW	Group Vel. %c	Group Delay ns/100 m (ft)
5.60	4.15 (1.27)	6.89	75.8	439.8 (134.1)
5.70	4.09 (1.25)	6.99	76.8	434.3 (132.4)
5.80	4.04 (1.23)	7.08	77.7	429.2 (130.8)
5.90	3.99 (1.22)	7.16	78.6	424.6 (129.4)
6.00	3.95 (1.20)	7.24	79.4	420.3 (128.1)
6.10	3.91 (1.19)	7.31	80.1	416.3 (126.9)
6.20	3.88 (1.18)	7.38	80.8	412.7 (125.8)
6.30	3.84 (1.17)	7.44	81.5	409.2 (124.7)
6.40	3.81 (1.16)	7.50	82.1	406.1 (123.8)
6.425	3.80 (1.16)	7.52	82.3	405.3 (123.5)

For attenuation: VSWR 1.0, ambient temperature 20° C (68° F).

For average power: VSWR 1.0 and 42° C (76° F) temperature rise over 40° C (104° F) ambient.

Attenuation, Average Power, Group Velocity, Group Delay



# Coaxial Cable



## PRODUCT SPECIFICATION

### FSJ4-50B

Superflexible coaxial cable, 1/2", 50 ohm foam HELIAX (Wideband from 0.5-10200 MHz)

#### CHARACTERISTICS

##### Mechanical Specifications

Pressurizable	No
Weight lb/ft (kg/m)	0.14 (0.21)
Tensile Strength lb (kg)	175.00 (79.00)
Flat Plate Crush Strength lb/in (kg/mm)	110.00 (2.00)
Minimum Bending Radius in (mm)	1.25 (32.00)
Bending Moment lb-ft (N-m)	2.00 (2.70)
Number of Bends minimum (typical)	20.00 (50.00)

##### Electrical Specifications

Cable Impedance (ohms)	50.00
Maximum Frequency (GHz)	10.20
Velocity percentage	81.00
Peak Power Rating (kW)	15.60
DC Resistance Inner ohms/1000ft (ohms/1000m)	0.82 (2.69)
DC Resistance Outer ohms/1000ft (ohms/1000m)	1.00 (3.28)
Cable Test Voltage (VDC)	2500.00
Jacket Spark volts (RMS)	5000.00
Capacitance pF/ft (pF/m)	25.20 (82.70)
Inductance microH/ft (microH/m)	0.06 (0.20)
Insulation Resistance (Meg-Ohms)	100000.00

##### Construction Materials

Dielectric Type	Foam Dielectric, Superflexible
Dielectric Material	Polyethylene Foam
Jacket Color	Black
Jacket Description	Polyethylene
Jacket Material	Polyethylene
Outer Conductor Material	Corrugated Copper
Inner Conductor Material	Copper-Clad Aluminum Wire

##### Dimensions

Diameter Over Jacket in (mm)	0.52 (13.20)
Outer Conductor Outside Diameter in (mm)	0.48 (12.20)
Outer Conductor Inside Diameter in (mm)	0.46 (11.70)
Inner Conductor Outside Diameter in (mm)	0.14 (3.60)

Customer Support Center:  
From North America: 1-800-255-1479  
International: +1-708-873-2307

[www.andrew.com](http://www.andrew.com)

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# Coaxial Cable



## PRODUCT SPECIFICATION

### FSJ4-50B

Superflexible coaxial cable, 1/2", 50 ohm foam HELIAX (Wideband from 0.5-10200 MHz)

#### CHARACTERISTICS

##### General Specifications

Cable Grade	Standard
NEC Classification Type	N/A
Nominal Size (inches)	1/2

##### Connectors

Part Number	Connector Type	Special Characteristics	Inner Contact Attachment	Grade
44ASJ	HN Male	N/A	Solder	Standard
44ASP	UHF Male	N/A	Solder	Standard
44ASR	7/8 EIA Flange	N/A	Solder	Standard
44ASU	UHF Female	N/A	Solder	Standard
44SPCW	SC Male	N/A	Solder	Standard
F4PDF	7-16 DIN Female	N/A	Solder	Plated
F4PDF-A	7-16 DIN Female	N/A	Solder	Plated
F4PDF-BH	7-16 DIN Female	Bulkhead	Solder	Plated
F4PDF-BHC	7-16 DIN Female	Bulkhead	Captivated	Plated
F4PDF-C	7-16 DIN Female	N/A	Captivated	Plated
F4PDF-PM	7-16 DIN Female	Panel Mount	Solder	Plated
F4PDF-PMC	7-16 DIN Female	Panel Mount	Captivated	Plated
F4PDM-A	7-16 DIN Male	N/A	Solder	Plated
F4PDMV2	7-16 DIN Male	N/A	Solder	Plated
F4PDMV2-C	7-16 DIN Male	N/A	Captivated	Plated
F4PDR	7-16 DIN Male	Right Angle	Solder	Plated
F4PDR-A	7-16 DIN Male	Right Angle	Solder	Plated
F4PDR-C	7-16 DIN Male	Right Angle	Captivated	Plated
F4PKM-C	4.1-9.5 DIN Male	Outdoor Use	Captivated	Plated
F4PKR-A	4.1-9.5 DIN Male	Right Angle	Solder	Plated
F4PKR-C	4.1-9.5 DIN Male	Right Angle, Outdoor Use	Captivated	Plated
F4PNF	N Female	N/A	Solder	Plated
F4PNF-A	N Female	N/A	Solder	Plated
F4PNF-BH	N Female	Bulkhead	Solder	Plated
F4PNF-C	N Female	N/A	Captivated	Plated
F4PNMV2-H	N Male	Hex Head	Solder	Plated
F4PNMV2-HC	N Male	Hex Head	Captivated	Plated
F4PNR-H	N Male	Right Angle	Solder	Plated

Customer Support Center:  
From North America: 1-800-255-1479  
International: +1-708-873-2307

[www.andrew.com](http://www.andrew.com)

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# Coaxial Cable



## PRODUCT SPECIFICATION

### FSJ4-50B

Superflexible coaxial cable, 1/2", 50 ohm foam HELIAX (Wideband from 0.5-10200 MHz)

#### CHARACTERISTICS

##### Connectors

Part Number	Connector Type	Special Characteristics	Inner Contact Attachment	Grade
F4PNR-HC	N Male	Right Angle	Captivated	Plated
F4PDF-SX	7-16 DIN Female		Solder	Plated
F4PDF-SXBH	7-16 DIN Female		Solder	Plated
F4TQCM-A			Captivated	Standard
F4PDM-SX	7-16 DIN Male		Solder	Plated
F4PDR-T	7-16 DIN Male	Hex Head	Solder	Plated
F4TDMV2-C	7-16 DIN Male		Captivated	Standard
F4TNMV2-HC	N Male		Captivated	Standard
F4XNM-TU	N Male		Solder	Plated
F4XNF-TU	N Female			

##### Performance

Frequency (MHz)	Attenuation (dB/100 ft)	Attenuation (dB/100 m)	Average Power (kW)
0.5	0.07	0.231	15.6
1	0.1	0.327	15.6
1.5	0.122	0.401	15.6
2	0.141	0.463	15.6
10	0.318	1.04	10.1
20	0.453	1.49	7.07
30	0.557	1.83	5.75
50	0.724	2.38	4.42
88	0.971	3.19	3.3
100	1.04	3.41	3.08
108	1.08	3.55	2.96
150	1.28	4.21	2.49
174	1.39	4.56	2.3
200	1.5	4.91	2.14
300	1.86	6.09	1.72
400	2.17	7.12	1.48
450	2.31	7.59	1.38
500	2.45	8.04	1.31
512	2.48	8.15	1.29

Customer Support Center:  
From North America: 1-800-255-1479  
International: +1-708-873-2307

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# Coaxial Cable



## PRODUCT SPECIFICATION

### FSJ4-50B

Superflexible coaxial cable, 1/2", 50 ohm foam HELIAX (Wideband from 0.5-10200 MHz)

#### CHARACTERISTICS

##### Performance

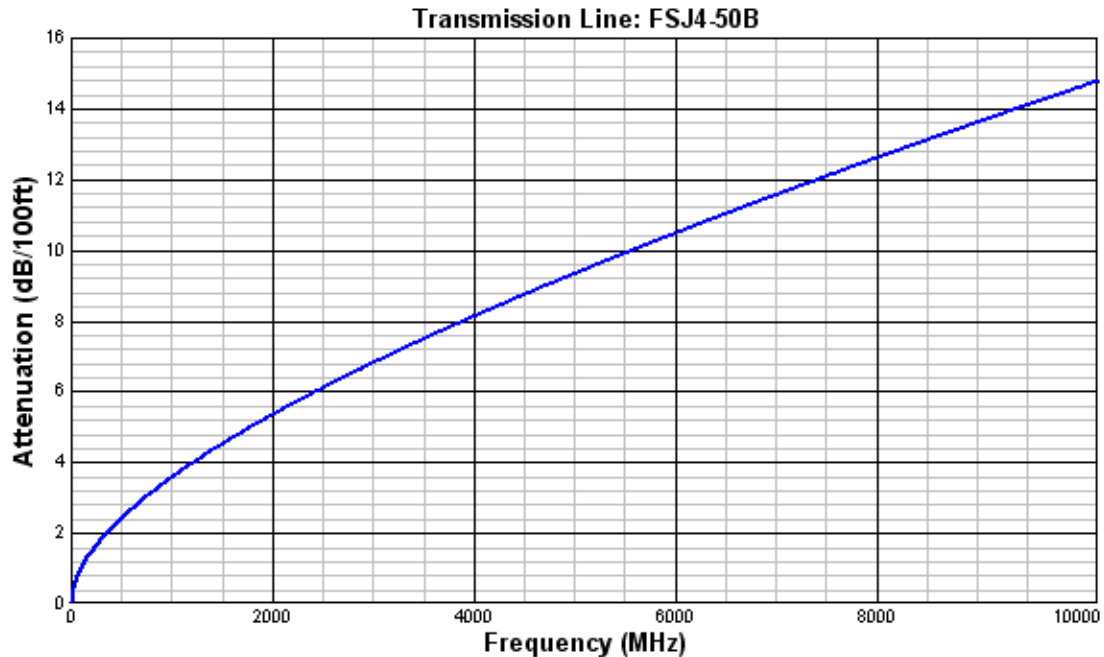
Frequency (MHz)	Attenuation (dB/100 ft)	Attenuation (dB/100 m)	Average Power (kW)
600	2.71	8.89	1.18
700	2.95	9.68	1.09
800	3.18	10.4	1.01
824	3.23	10.6	0.991
894	3.38	11.1	0.947
960	3.52	11.6	0.909
1000	3.6	11.8	0.889
1250	4.09	13.4	0.783
1500	4.54	14.9	0.705
1700	4.88	16	0.656
1800	5.05	16.6	0.634
2000	5.37	17.6	0.597
2100	5.53	18.1	0.58
2200	5.68	18.6	0.564
2300	5.83	19.1	0.549
3000	6.84	22.4	0.469
3400	7.38	24.2	0.435
4000	8.15	26.7	0.394
5000	9.35	30.7	0.343
6000	10.5	34.4	0.306
8000	12.6	41.4	0.254
10000	14.6	47.9	0.22
10200	14.8	48.5	0.217

## PRODUCT SPECIFICATION

### FSJ4-50B

Superflexible coaxial cable, 1/2", 50 ohm foam HELIAX (Wideband from 0.5-10200 MHz)

#### CHARACTERISTICS



Standard Conditions:

For Attenuation. VSWR 1.0, ambient temperature 20°C (68°F).

For Average Power. VSWR 1.0, ambient temperature 40°C (104°F), inner conductor temperature 100°C (212°F); no solar loading.



## 1/2" Foam Dielectric, LDF Series – 50-ohm



### LDF4-50A

Description	Type No.
<b>Cable Ordering Information</b>	
Standard Cable	
1/2" Standard Cable, Standard Jacket	<b>LDF4-50A</b>
<b>Fire Retardant Cables</b>	
1/2" Fire Retardant Jacket (CATVX)	<b>LDF4RN-50A</b>
1/2" Fire Retardant Jacket (CATVR)	<b>LDF4RN-50A</b>
<b>Low VSWR and Specialized Cables</b>	
1/2" Low VSWR, specify operating band	<b>LDF4P-50A-(**)</b>
Phase Stabilized and Phase Measured Cable	See page 590
<b>Jumper Cable Assemblies</b> – See page 584	
** Insert suffix number from "Low VSWR Specifications" table, page 498	
<b>Characteristics</b>	
<b>Electrical</b>	
Impedance, ohms	50 ± 1
Maximum Frequency, GHz	8.8
Velocity, percent	88
Peak Power Rating, kW	40
dc Resistance, ohms/1000 ft (1000 m)	
Inner	0.45 (1.48)
Outer	0.58 (1.90)
dc Breakdown, volts	4000
Jacket Spark, volts RMS	8000
Capacitance, pF/ft (m)	23.1 (75.8)
Inductance, µH/ft (m)	0.058 (0.19)
<b>Mechanical</b>	
Outer Conductor	Copper
Inner Conductor	Copper-Clad Aluminum
Diameter over Jacket, in (mm)	0.63 (16)
Diameter over Copper Outer Conductor, in (mm)	0.55 (14)
Diameter Inner Conductor, in (mm)	0.189 (4.6)
Nominal Inside Transverse Dimensions, cm	1.11
Minimum Bending Radius, in (mm)	5 (125)
Number of Bends, minimum (typical)	15 (50)
Bending Moment, lb-ft (N·m)	2.8 (3.8)
Cable Weight, lb/ft (kg/m)	0.15 (0.22)
Tensile Strength, lb (kg)	250 (113)
Flat Plate Crush Strength, lb/in (kg/mm)	110 (2.0)

### Attenuation and Average Power Ratings

Frequency MHz	Attenuation dB/100 ft	Attenuation dB/100 m	Average Power, kW
0.5	0.045	0.149	40.0
1	0.064	0.211	35.8
1.5	0.079	0.259	29.2
2	0.091	0.299	25.3
10	0.205	0.672	11.3
20	0.291	0.954	7.93
30	0.357	1.17	6.46
50	0.463	1.52	4.98
88	0.619	2.03	3.73
100	0.661	2.17	3.49
108	0.688	2.26	3.36
150	0.815	2.67	2.83
174	0.880	2.89	2.62
200	0.946	3.10	2.44
300	1.17	3.83	1.97
400	1.36	4.46	1.70
450	1.45	4.75	1.59
500	1.53	5.02	1.51
512	1.55	5.08	1.49
600	1.69	5.53	1.37
700	1.83	6.01	1.26
800	1.97	6.46	1.17
824	2.00	6.56	1.15
894	2.09	6.85	1.10
960	2.17	7.12	1.06
1000	2.22	7.28	1.04
1250	2.51	8.23	0.921
1500	2.77	9.09	0.833
1700	2.97	9.74	0.777
1800	3.07	10.1	0.753
2000	3.25	10.7	0.710
2100	3.34	11.0	0.691
2200	3.43	11.2	0.673
2300	3.52	11.5	0.657
3000	4.09	13.4	0.565
3400	4.39	14.4	0.526
4000	4.82	15.8	0.479
5000	5.49	18.0	0.421
6000	6.11	20.1	0.378
8000	7.26	23.8	0.318
8800	7.69	25.2	0.300

#### Standard Conditions:

For attenuation, VSWR 1.0, ambient temperature 20°C (68°F).

For Average Power, VSWR 1.0, ambient temperature 40°C (104°F), inner conductor temperature 100°C (212°F), no solar loading.

**Andrew Solutions****LDF5-50A****LDF5-50A, HELIAX® Low Density Foam Coaxial Cable, corrugated copper, 7/8 in, black PE jacket****OBSOLETE****Replaced By:**

AVA5-50	AVA5-50, HELIAX® Andrew Virtual Air™ Coaxial Cable, corrugated copper, 7/8 in, black PE jacket
AVA5-50FX	AVA5-50FX, HELIAX® Andrew Virtual Air™ Coaxial Cable, corrugated copper, 7/8 in, black PE jacket
AVA5RK-50FX	AVA5RK-50FX, HELIAX® Andrew Virtual Air™ Coaxial Cable, corrugated copper, 7/8 in, black, Non-halogenated, fire retardant polyolefin jacket

## Construction Materials

Jacket Material	PE
Outer Conductor Material	Corrugated copper
Dielectric Material	Foam PE
Flexibility	Standard
Inner Conductor Material	Copper tube
Jacket Color	Black

## Dimensions

Nominal Size	7/8 in
Cable Weight	0.33 lb/ft   0.49 kg/m
Diameter Over Dielectric	23.622 mm   0.930 in
Diameter Over Jacket	26.162 mm   1.030 in
Inner Conductor OD	8.7122 mm   0.3430 in
Outer Conductor OD	24.892 mm   0.980 in

## Electrical Specifications

Cable Impedance	50 ohm $\pm$ 1 ohm
Capacitance	22.8 pF/ft   74.8 pF/m
dc Resistance, Inner Conductor	0.320 ohms/kft   1.049 ohms/km
dc Resistance, Outer Conductor	0.360 ohms/kft   1.181 ohms/km
dc Test Voltage	6000 V
Inductance	0.187 $\mu$ H/m   0.057 $\mu$ H/ft
Insulation Resistance	100000 Mohms•km
Jacket Spark Test Voltage (rms)	8000 V
Operating Frequency Band	1 – 5000 MHz
Peak Power	91.0 kW
Pulse Reflection	0.5%
Velocity	89%

## Environmental Specifications

IDF5-50A



Installation Temperature	-40 °C to +60 °C (-40 °F to +140 °F)
Operating Temperature	-55 °C to +85 °C (-67 °F to +185 °F)
Storage Temperature	-70 °C to +60 °C (-94 °F to +140 °F)

## General Specifications

Brand	HELIAX®
-------	---------

## Mechanical Specifications

Bending Moment	22.4 N-m   16.5 ft lb
Flat Plate Crush Strength	80.0 lb/in   1.4 kg/mm
Minimum Bend Radius, Multiple Bends	254.00 mm   10.00 in
Minimum Bend Radius, Single Bend	127.00 mm   5.00 in
Number of Bends, minimum	15
Number of Bends, typical	50
Tensile Strength	159 kg   350 lb

## Note

Performance Note	Values typical, unless otherwise stated
------------------	---

## Standard Conditions

Attenuation, Ambient Temperature	20 °C   68 °F
Average Power, Ambient Temperature	40 °C   104 °F
Average Power, Inner Conductor Temperature	100 °C   212 °F

## Return Loss/VSWR

Frequency Band	VSWR	Return Loss (dB)
806–960 MHz	1.13	24.30
1700–2000 MHz	1.13	24.30

## Attenuation

Frequency (MHz)	Attenuation (dB/100 m)	Attenuation (dB/100 ft)	Average Power (kW)
0.5	0.081	0.025	91.00
1	0.115	0.035	79.19
1.5	0.141	0.043	64.60
2	0.163	0.05	55.89
10	0.366	0.112	24.81
20	0.521	0.159	17.44
30	0.641	0.195	14.18
50	0.833	0.254	10.91
88	1.116	0.34	8.14
100	1.193	0.364	7.62
108	1.242	0.378	7.32
150	1.475	0.449	6.16
174	1.595	0.486	5.70
200	1.716	0.523	5.30
300	2.13	0.649	4.27
400	2.486	0.758	3.66
450	2.65	0.808	3.43
500	2.806	0.855	3.24
512	2.843	0.866	3.20
600	3.1	0.945	2.93
700	3.375	1.029	2.69
800	3.633	1.107	2.50
824	3.694	1.126	2.46
894	3.865	1.178	2.35
960	4.022	1.226	2.26
1000	4.115	1.254	2.21
1250	4.667	1.423	1.95
1500	5.178	1.578	1.76
1700	5.565	1.696	1.63
1800	5.751	1.753	1.58
2000	6.114	1.863	1.49
2100	6.29	1.917	1.44
2200	6.464	1.97	1.41
2300	6.634	2.022	1.37
2500	6.968	2.124	1.30
2700	7.293	2.223	1.25
3000	7.764	2.366	1.17
3400	8.369	2.551	1.09
3700	8.808	2.684	1.03
4000	9.235	2.815	0.98
5000	10.59	3.228	0.86

\* Values typical, guaranteed within 5%

## Regulatory Compliance/Certifications

Agency	Classification
RoHS 2002/95/EC	Compliant
China RoHS SJ/T 11364-2006	Below Maximum Concentration Value (MCV)

LDF5-50A



# Technical Data Sheet

## 8 AWG 6 Conductor Shielded 600V Power Cable

Part Number: WR- VG86ST-BRD

**Description:** 8 AWG, 6 conductor shielded 600V power tray cable constructed with stranded tinned copper, polyvinylchloride and nylon insulation, an uninsulated tinned copper ground conductor, an aluminum/mylar shield with a stranded tinned copper drain wire, a tinned copper braid shield and an overall polyvinylchloride jacket. Individual conductors are manufactured in accordance with UL Standard 83, Type THHN/THWN/VW-1. Cable is manufactured in the USA in accordance with UL Standard 1277 and NEC listed Type TC, suitable for use in Class I Division II hazardous locations and approved for installation in cable trays per Article 336 of the National Electric Code. Cable may be installed in open air, in ducts or conduits, in trays or troughs and is approved for direct burial and outdoor applications. Jacket is sunlight and oil I resistant and cable is (UL) TC-ER approved for 600V, 75°C Wet or 90°C Dry, and meets or exceeds the requirements of UL 1581 and 1202 (FT-4) 70,000 BTU/HR and ICEA T-29-520 210,000 BTU/HR flame tests.

### 1. Conductor

- 1.1 AWG Size & Stranding: 8 AWG, Class B 7 Strands
- 1.2 Material: Annealed Tinned Copper
- 1.3 DC Resistance: 0.66 ohms/1000 ft @ 20°C

### 2. Insulation

- 2.1 Material: Polyvinylchloride & Nylon per UL Standard 83, Type THHN/THWN/VW-1
- 2.2 Wall Thickness: 0.030" PVC & 0.006" Nylon - The minimum at any point shall not be less than 90% of the specified wall thickness

### 3. Color Code

- 3.1 Code: Red/Blue, Black/Blue, Red/Orange, Black/Orange, Red/Green, Black/Green

### 4. Assembly

- 4.1 Lay Length: Per UL Standard 1277
- 4.2 Fillers: Non-Hygroscopic Polypropylene - As required for a circular cross-section
- 4.3 Binder: Clear Mylar
- 4.4 Shield: Aluminum/Mylar Tape - 100% coverage
- 4.5 Drain Wire: 12 AWG, 7 Strand Tinned Copper
- 4.6 Shield: 36 AWG Tinned Copper Braid - 65% minimum coverage
- 4.7 Ground: Uninsulated - 10 AWG, 7 Strand Tinned Copper
- 4.8 2<sup>ND</sup> Binder: Clear Mylar

### 5. Jacket

- 5.1 Material: Polyvinylchloride per UL Standard 1277
- 5.2 Wall Thickness: 0.060" - The minimum at any point shall not be less than 80% of the specified wall thickness
- 5.3 Diameter: 0.795"
- 5.4 Color: Black
- 5.5 Weight: 584 lbs./Mft.
- 5.6 Bending Radius: 9.29"

### 6. Markings

- 6.1 Type: Cable shall be permanently identified via surface inkjet print
- 6.2 Legend: .Rosenberger: 8AWG 6C SHIELDED (UL) TC-ER PVC/NYLON UNINSULATED GROUND  
600V 90°C DRY 75°C WET PVC JACKET SUN RES DIR BUR OIL RES I FT4 "ROHS"

### 7. Standards

- 7.1 UL listed as Type TC-ER per UL Standard 1277 for tray cables
- 7.2 UL approved for Direct Burial, Sunlight and Oil I Resistant applications
- 7.3 Individual conductors pass UL VW-1 flame test, rated THHN/THWN/VW-1
- 7.4 Cable meets UL 1581 & 1202 (FT-4) 70,000 BTU/HR & ICEA T-29-520 210,000 BTU/HR requirements
- 7.5 Meets ICEA S-95-658, where applicable
- 7.6 Cold Temperature Rating: -40°C
- 7.7 All materials used in the manufacture of this cable are RoHS compliant

**ALL SPECIFIED PARAMETERS ARE NOMINAL AND SUBJECT TO VERIFICATION**

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Rosenberger Hochfrequenztechnik GmbH & Co. KG  
P.O. Box 1260 D-84526 Tittmoning Germany  
Tel. +49 8684 18-0

Rosenberger Site Solutions, LLC  
102 Dupont Drive, Lake Charles, LA 70606  
Ph. 1.866.598.5250 Fax: 337.5983.5290  
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Page 1 of 1


## **Attachment C – Geotechnical Report**

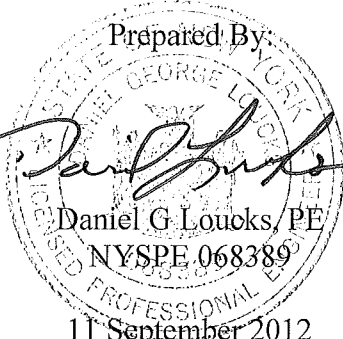
Provided as Attachment C of this RFP is the *Belfry Mountain Geotechnical Report*

Geotechnical Report  
For  
Belfry Mountain Tower  
Wetherbee, New York

File No. 2476

Prepared For:  
Infinigy Engineering

Prepared By:  
  
Daniel G. Loucks, PE  
NYSPE 068389  
11 September 2012

A circular professional seal for Daniel G. Loucks, a Professional Engineer in the State of New York. The seal contains the text "STATE OF NEW YORK", "DANIEL GEORGE LOUCKS", "NYSPE 068389", and "PROFESSIONAL ENGINEER".

## **INTRODUCTION:**

The subsurface investigation for the proposed Belfry Mountain Cell Tower, Witherbee, New York, has been completed. One (1) soil boring has been completed at the site by Aquifer Drilling and Testing of Troy, New York. The log of this boring has been included in the appendix of this report.

It is my understanding that the proposed construction will include a 195 foot high self supported tower located as staked in the field by the owner. The boring was performed at the tower center.

The vertical loads will be light. Overturning loads were not known at the time of this report. The settlement tolerances are normal. Settlement tolerances are considered to include up to 1/2 inch of total settlement and differential settlement in the foundation.

The base of the proposed tower will be placed within 3 feet of the existing ground surface at the site.

The purpose of this report is to describe the investigation conducted and the results obtained; to analyze and interpret the data obtained; and to make recommendations for the design and construction of the feasible foundation types and earthworks for the project. Any environmental aspects of the project should be performed by qualified others. The recommendations contained in this report are based on the information that was provided up to the date the report was completed. Any changes in the design of the project should be brought to my attention to determine if there needs to be any revision of the geotechnical recommendations.

## **FIELD INVESTIGATION PROCEDURES:**

The borings were performed with an ATV mounted drilling rig using 3.25 inch ID hollow stem augers and various bits to advance the casing.

Representative samples were obtained from the boring holes by means of the split-spoon sampling procedure performed in accordance with ASTM D 1586. The standard penetration values obtained from this procedure have been indicated on the soil boring logs.

Representative samples of the rock materials were obtained by means of the diamond-bit sampling procedure performed in accordance with ASTM D 2113. NQ2-size core barrels were used for this sampling procedure. Rock samples obtained from this procedure were examined in the field, placed in wooden core-sample boxes and shipped to the laboratory for further examination and classification.

Soil samples obtained from these procedures were examined in the field, sealed in containers, and shipped to the driller's office for further examination and classification as applicable.

During the investigation, water level readings were obtained at various times where water accumulated in the boring hole. The water level readings, along with an indication of the time of the reading relative to the boring procedure, have been indicated on the soil boring logs.

In addition to the field boring investigation, the soil engineer visited the site to observe the surface conditions.

#### **LABORATORY INVESTIGATION:**

All samples were examined in the laboratory by the soil engineer and classified according to the Unified Soil Classification System. In this system, the soils are visually classified according to texture and plasticity. The appropriate group symbol is indicated on the soil boring logs.

No formal laboratory testing was performed on the soil samples recovered at the site.

Representative rock core was tested for unconfined compressive strength in accordance with ASTM Specification D-2938. The result of this test has been included in the appendix of this report.

#### **SITE CONDITIONS:**

At the time of my site visit I observed that the ground surface sloped down fairly gently to the northeast and it had numerous cobbles and boulders at the surface. The area was wooded. There was an existing tower located to the southwest of the proposed tower.

## **SUBSURFACE CONDITIONS:**

The specific subsurface conditions encountered at each of the boring locations are indicated on the individual soil boring logs. However, to aid in the evaluation of this data, I have prepared a generalized description of the soil conditions based on the boring data.

The borings at the site show an upper layer of topsoil that extends to approximately 2.8 feet. This topsoil contained weathered rock starting at approximately 2.0 feet. The driller drilled into weathered rock to a depth of approximately 3.5 feet where sound rock was then encountered. Two, 5 foot long rock cores were taken. The core indicate that the rock is granitic gneiss. The rock was hard and sound with the Rock Quality Designations (RQD) varying between 88 and 89 percent.

Bedrock mapping indicated that the bedrock in the area is typically granitic gneiss.

## **GROUNDWATER CONDITIONS:**

No groundwater was observed during the boring investigation. Actual water levels may vary at the time of construction.

## **ANALYSIS AND RECOMMENDATIONS:**

### *Site Work:*

The proposed construction areas should be cleared and grubbed and all organic topsoil and vegetation. The proposed footing areas should be stripped to sound rock. Sound rock is considered to be rock that can not be removed with a large excavator with a rock bucket. I would estimate that this sound rock could be as deep as 3.5 feet to 4.5 feet, based on the boring results. The depth to rock for the foundation may vary depending on the dip of the rock surface in the field.

### *Controlled Fill:*

Controlled fill should be used to backfill the exterior portions of the proposed footing foundation. Controlled, relatively clean, granular fill can be spread in lifts not exceeding 12 inches in loose thickness. These materials should be compacted to a minimum of 90 percent of the maximum ASTM Specification D 1557-91 density, modified proctor.

If crushed stone is used as controlled fill it should have a layer of geotextile (Amoco 2006 or equal) placed between the stone and existing soils. The stone should be placed in lifts not exceeding 12 inches in thickness and should be compacted with a min. of 5 passes of a vibratory roller rated at 5 tons.

Free Draining Controlled Fill Material: Naturally or artificially graded mixture of sand, natural or crushed stone or gravel conforming to NYS DOT Item 304-2.03, Type 4 or 2 as follows:

<u>U.S. Sieve No.</u>	<u>Percent Passing by Weight</u>
2 inch	100
1/4 inch	30-60
No. 40	5-40
No. 200	0-10

NYS DOT Table 703-4, Size 2 crushed stone, clean, durable, angular, and of uniform quality throughout:

<u>U.S. Sieve No.</u>	<u>Percent Passing by Weight</u>
1 1/2 inch	100
1 inch	90-100
1/4 inch	0-15

All controlled fill should be free of organic and/or frozen material. If on-site material is used as controlled fill adjacent to the tower footings it should not contain particles greater than 6 inches in diameter.

#### *Tower/Leg Support & Building Foundations:*

I recommend that the proposed tower structure be supported by spread footing foundations resting on bedrock. Footings resting on sound bedrock can be designed for a maximum, net, allowable rock bearing pressure of 20 ksf. This rock could be as deep as 4 feet below existing grade. The soil engineer should observe the footing subgrade to verify the allowable rock bearing pressure.

The proposed building can be designed to rest on soils and/or weathered bedrock. Footings resting on virgin soil/weathered bedrock can be designed for a maximum, net, allowable soil/rock bearing pressure of 3 ksf. This reduced bearing pressure is recommended to minimize possible differential settlements due to non-uniform bearing conditions.

Exterior footings or footings in unheated areas should have a minimum of 4.0 feet of embedment for protection from frost action or placed and pinned to sound bedrock if it is shallower. Building footings should be a minimum of 16 inches wide.

To resist sliding a static lateral passive pressure of 250 psf per foot of embedment can be used, provided foundations are backfilled with controlled fill. This static, passive pressure resistance value has been reduced from the calculated full passive pressure because of stress/strain characteristics of the soil. To develop the full, calculated resistance a certain amount of movement or deflection in the structure is required. The amount of movement required to generate this resistance generally greater than is acceptable for structures. I therefore recommend that the full passive pressure not be used. A coefficient of base sliding of 0.45 can also be used.

A moist unit weight of soil of 115 pcf can be assumed if sand and gravel are used as controlled fill over the tower foundation locations. If crushed stone is used a moist unit weight of 100 pcf can be used for design.

The passive resistance of the upper two feet of soil should be ignored due to surface effects of frost and moisture.

#### *Tension Loads:*

Grouted rock bolts embedded in the bedrock rock or oversized concrete foundations are recommended to resist tension loads. Because of the depth of weathered bedrock and the high strength of the gneiss bedrock, oversized concrete foundations maybe more economical than rock bolts. The weight of the concrete and overburden soils would be used to resist uplift loads.

If grouted rock bolts are used the prestress in the bolts can also be used to resist the shear loads. Hollow-core rock bolts similar to those manufactured by Williams Form Engineering Corporation or equivalent are recommended. The grout provides an extra margin of safety and protection against loss of prestress through weathering. The full tension is applied to the mechanical anchorage before grouting the bolts. This results in the prestress being applied to the bolt's full length.

Various sizes of bolts are available. Various depths and spacing as well as batter or inclination of the bolts, could be considered. It is generally better to use a greater number of smaller bolts than a few larger ones to avoid too much reliance

on any one bolt. For typical loadings, 1 inch bolts or 1 3/8 inch bolts could be used.

Williams recommends a design loading of 2/3 the maximum working load (elastic limit) for these bolts. This would be 33 kips for the 1-inch bolts and 69 kips for the 1 3/8 inch bolts.

It is recommended that a maximum bonding stress for the grout to the bolt of 75 psi be used, depending on the type of grout used. A grout-to-rock bonding stress of 125 psi can also be used. This will mean that the grout itself could resist the load if the mechanical anchorage deteriorates. The bond resistance in the upper 3 feet of the rock profile should be ignored due to possible surface effects. A minimum embedment of 20 feet into sound rock is recommended.

In addition to securing the bolt to the rock by mechanical anchorage and grout, enough rock mass must be penetrated by the bolt pattern to resist the tension load. This is normally the determining factor in the design for substantial uplift loads. I normally recommend ignoring perimeter shear resistance around the rock mass and using it as an unspecified part of the safety margin. The resisting mass for one isolated bolt would be an inverted cone of rock with its tip at the bolt tip and cone sides inclined at up to 1.0 vertical to 1.0 horizontal. This is an inverted 90° cone. When a group of bolts is used, the cones overlap and this must be discounted in calculating the volume.

A density of 160 pcf can be assumed for the gneiss rock.

A factor of safety of 1.50 could be used for the design of the resisting weight of rock. The actual factor of safety will be substantially higher because the perimeter shear resistance is ignored in the calculations. The allowable bond stress includes a safety factor which should exceed 3.0.

All individual bolts should be tested for pull-out resistance after installation. It should be emphasized that pull-out tests of individual bolts do not verify the group effect. The calculated resisting weight of the rock mass must be relied upon or a large-scale pull-out test of a group of bolts conducted. I recommend that pull out tests be performed at the site before final design recommendations for rock bolt lengths are made.

#### *Building Slabs:*

Concrete floor slabs can be designed to rest on controlled fills resting on virgin materials. A 6-inch layer of well-graded,

free-draining, granular material should be placed beneath the floor slab to provide drainage, act as a capillary break, and to provide better and more uniform support.

If vehicle loadings are to be applied to the floor slab, the proposed slab and supporting soils should be analyzed as a pavement structure. I recommend that a minimum of 12 inches of free draining controlled granular fill be placed below any concrete pavements.

A modulus of subgrade reaction of 125 psi per inch can be used to design concrete slabs resting on a minimum of 6 inches of free draining controlled fill that in turn rests on virgin soils.

Concrete floor slabs will experience some frost heave movements during the winter and spring if the building is not properly heated. If these movements are not acceptable then a minimum of 4.0 feet of approved subbase material and properly designed drains would be required below the concrete slab. If bedrock is encountered before the depth of 4 feet then the controlled fill should extend to the bedrock. The use of properly designed footing drains would also be required to reduce possible frost heave movements.

#### *Seismic Conditions:*

The potential seismic conditions at the proposed site have been investigated using the information provided in ASCE 7-98 Section 9, The NYS Building Code Section 1613 and 18 and the boring information obtained during my investigation.

Based on the soil boring information it is my opinion that the Site Classification (Table 1615.1.1) could be assumed to be A. Using figures 1615 (1 and 2), and the data from the USGS Hazards Mapping and the USGS 2009 NEHRP Seismic Design Provisions, I estimate that the MCE spectral acceleration ( $S_{MS}$ ) at short periods is 27.1 and the MCE spectral acceleration ( $S_{M1}$ ) at 1 s period is 8.1.

The probabilistic ground motion values are expressed in %g for rock site class A. Peak ground accelerations in the upper soil profile may vary. If specific peak ground accelerations or shear wave velocities are required for the upper soil profile additional testing would be required. If it is determined by the structural engineer that the Seismic Design Category is D, E or F additional geotechnical recommendations can be provided.

The soil borings and my analysis do not indicate any significant potential seismic hazards such as liquefaction, sensitive clays, weakly cemented soil or surface rupture.

#### **CONSTRUCTION PROCEDURES AND PROBLEMS:**

All excavations of more than a few feet should be sheeted and braced or laid back to prevent sloughing in of the sides.

Sump-pit and sump-pump-type may be required in excavations during wet weather or if groundwater is encountered.

Subgrades should be kept from freezing during construction. Water, snow, and ice should not be allowed to collect and stand in excavations or low areas of the subgrade.

Some obstacles, including bedrock will be encountered in excavations. The use of hydraulically-operated rippers or pneumatic tools may be required to remove weathered bedrock.

The rock bolts should be installed immediately after drilling since the hole may change shape or become plugged with time.

The individual bolts may not achieve the full prestress at the mechanical anchorage in some cases if the local rock condition at the anchorage is soft or fractured. The full bolt capacity could still be developed after grouting although the prestress will not be per design. An evaluation could be made at the time and a judgment made. The bolt could be accepted as is, a bolt or bolts added, pull-out tests conducted on the grouted bolts, or other approaches could be taken.

Proposed Belfry Mountain Cell Tower  
Wetherbee, New York  
File No. 2476

**CONTENTS OF APPENDIX:**

1. General Notes
2. Boring Log
3. 2009 MCE Ground Motion Data
4. Laboratory Test Results
5. Unified Soil Classification System
6. Soil Use Chart
7. General Qualifications

**SHEET 1 of 1**

DEPTH	Sample Number	Sample Type	BLOW COUNTS per 6 inches	"N" Value	Recovery	DESCRIPTION
1	1	SS	1-1-3-9	4		Fine to Medium Sand, some Silt, trace Gravel, Roots, Dark Brown, Moist, Loose (SM) Topsoil
2	2	SS	47-50/3	100+		Fine to Medium Sand, some Weathered Rock, trace to some Silt, Roots, Dark Brown, Moist, Very Dense (SM) Topsoil
3		RB				Weathered Granitic Gneiss
4	Run 1	DB				Gray Granitic Gneiss, Hard, Sound RQD between 88 and 89 percent
5						
6						
7						
8						
9	Run 2	DB				
10						
11						
12						
13						
14						End of boring at 13.5 Feet
15						
16						
17						
18						
19						
20						
21						
22						
23						
24						
25						
26						
27						

# USGS Design Maps Summary Report

## User-Specified Input

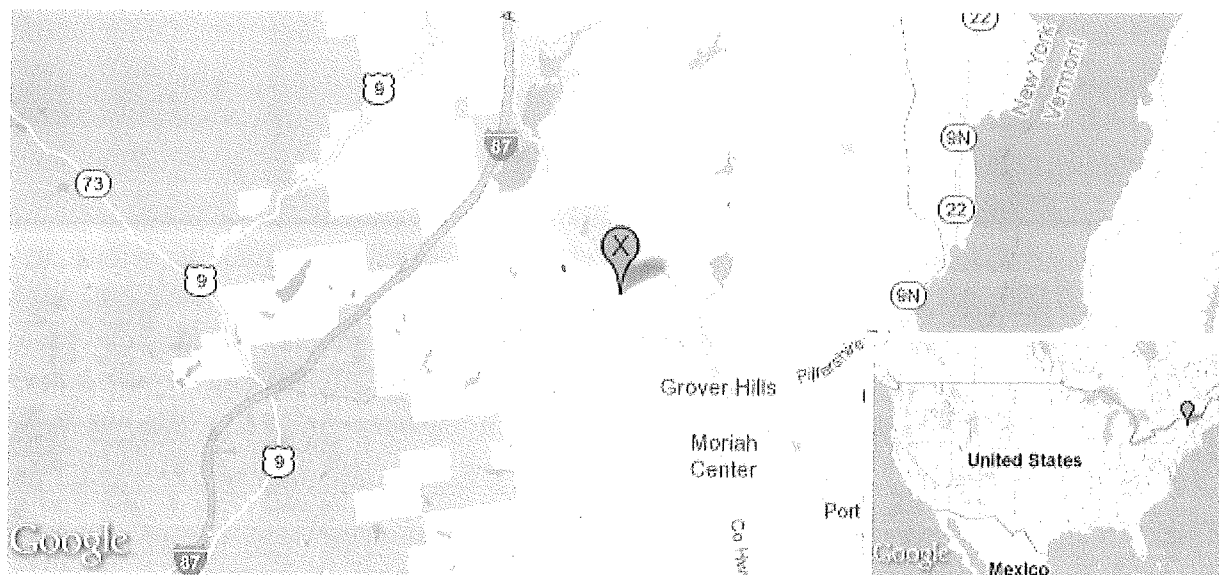
**Report Title** Belfry Mountain Tower  
Fri September 7, 2012 19:49:10 UTC

**Building Code Reference Document** 2009 NEHRP Recommended Seismic Provisions  
(which makes use of 2008 USGS hazard data)

**Site Coordinates** 44.1002°N, 73.5455°W

**Site Soil Classification** Site Class A – "Hard Rock"

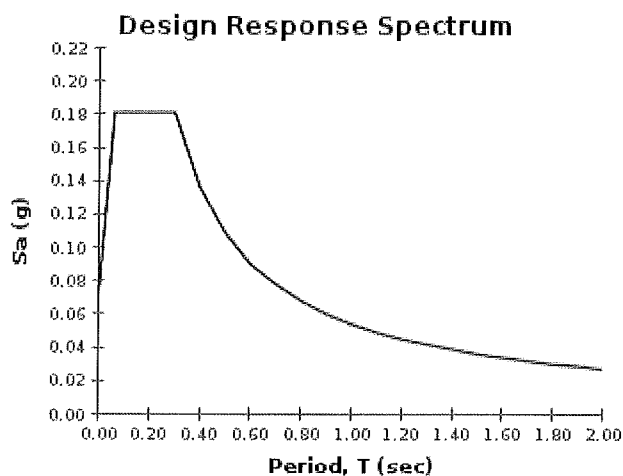
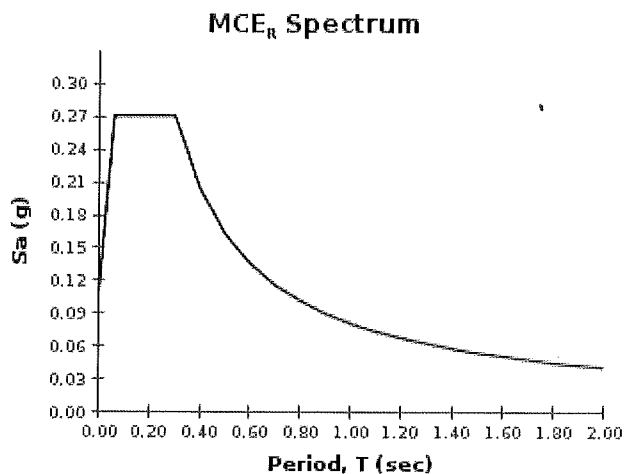
**Risk Category** I/II/III



## USGS-Provided Output

$S_s = 0.339 \text{ g}$	$S_{MS} = 0.271 \text{ g}$	$S_{DS} = 0.181 \text{ g}$
$S_1 = 0.102 \text{ g}$	$S_{M1} = 0.081 \text{ g}$	$S_{D1} = 0.054 \text{ g}$

For information on how the  $S_s$  and  $S_1$  values above have been calculated from probabilistic (risk-targeted) and deterministic ground motions in the direction of maximum horizontal response, please [view the detailed report](#).



For  $PGA_M$ ,  $T_L$ ,  $C_{RS}$ , and  $C_{RI}$  values, please [view the detailed report](#).

# CONSTRUCTION TECHNOLOGY

INSPECTION & TESTING DIVISION, P.D. & T.S., INC.

4 William Street, Ballston Lake, New York 12019

Phone: (518) 399-1848 Fax: (518) 399-1913

CLIENT: **DANIEL LOUCKS, P.E.**

POST OFFICE BOX 163

BALLSTON SPA, NEW YORK 12020

REPORT NUMBER: 1 PAGE: 1

REPORT DATE: 09/11/12

OUR FILE NUMBER: 750.001

LAB SAMPLE: 13481

ATTN: MR. DANIEL LOUCKS, P.E.

PROJECT: **BELFRY MOUNTAIN TOWER: WITHERBEE, NEW YORK**

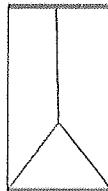
## A.S.T.M. D-2938: UNCONFINED COMPRESSIVE STRENGTH OF INTACT ROCK CORE SPECIMENS

CORE #: 1 BELFRY MOUNTAIN TOWER: WITHERBEE, NEW YORK

LABORATORY SPECIMEN I.D. #:	13481	1
COMPRESSION TEST DATE:		09/11/12
TESTED CORE HEIGHT:	( INCHES )	4.00
TESTED CORE DIAMETER:	( INCHES )	2.00
HEIGHT / DIAMETER RATIO:	( H/D )	2.00
CROSS SECTIONAL AREA:	( SQ. IN. )	3.14
SPECIMEN WEIGHT:	( POUNDS )	1.27
SPECIMEN UNIT WEIGHT:	( P.C.F. )	175.33
MOISTURE CONDITION:	( DRY / SSD )	DRY
MAXIMUM APPLIED LOAD:	( POUNDS )	68,750
UNCORRECTED UNIT STRENGTH:	( P.S.I. )	21,895
H/D CORRECTION FACTOR:	( ASTM C42 )	1.000
CORRECTED UNIT STRENGTH:	( P.S.I. )	21,895

AVERAGE STRENGTH OF CORES: ( P.S.I. ) 21,895

FAILURE FRACTURE DEPICTION:



### REPORT DISTRIBUTION:

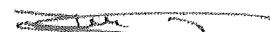
1: FILE  
2:  
3:  
4:

### GENERAL NOTES:

1:  
2:  
3:  
4:

RESPECTFULLY SUBMITTED,

CONSTRUCTION TECHNOLOGY

  
TOM JOSLIN, S.E.T. (NICET)

MANAGER TECHNICAL SERVICES

Table 3.5 Unified Soil Classification

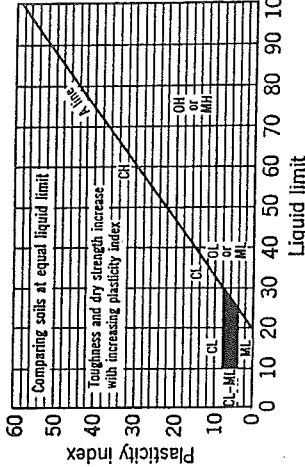
Field Identification Procedures (Excluding particles larger than 3 in. and basing fractions on estimated weights)			Group Symbols	Typical Names	Information Required for Describing Soils	Use grain size curve in identifying the fractions as given under field identification	Determine percentages of gravel and sand from grain size curve Depending on percentage of fines (fraction smaller than No. 200 sieve size) coarse grained soils are classified as follows: GW, GP, SW, SP GM, GC, SM, SC More than 12% Less than 5% 5% to 12% Borderline cases requiring use of dual symbols	Laboratory Classification Criteria	
Gravels More than half of coarse fraction is larger than No. 4 sieve size	Clean gravels (little or no fines)	Wide range in grain size and substantial amounts of all intermediate particle sizes							
Coarse-grained soils More than No. 200 sieve size is larger than No. 200 sieve size	Gravels with appreciable fines (little or no sand)	Predominantly one size or a range of sizes with some intermediate sizes missing	GW	Well graded gravels, gravel-sand mixtures, little or no fines	Give typical name; indicate approximate percentages of sand and gravel; maximum size; angularity, surface condition, and hardness of the coarse grains; local or geologic name and other pertinent descriptive information; and symbols in parentheses	Use grain size curve in identifying the fractions as given under field identification	Determine percentages of gravel and sand from grain size curve Depending on percentage of fines (fraction smaller than No. 200 sieve size) coarse grained soils are classified as follows: GW, GP, SW, SP GM, GC, SM, SC More than 12% Less than 5% 5% to 12% Borderline cases requiring use of dual symbols	$C_u = \frac{D_{60}}{D_{10}}$ Greater than 4 $C_c = \frac{D_{30}^2}{D_{10} \times D_{60}}$ Between 1 and 3 Not meeting all gradation requirements for GW	
		Nonplastic fines (for identification procedures see ML below)	GP	Poorly graded gravels, gravel-sand mixtures, little or no fines					
Sands More than half of coarse fraction is smaller than No. 4 sieve size	Gravels with appreciable fines (little or no sand)	Plastic fines (for identification procedures, see CL below)	GM	Silty gravels, poorly graded gravel-sand-silt mixtures	For undisturbed soils add information on stratification, degree of compactness, conditions and moisture characteristics	Use grain size curve in identifying the fractions as given under field identification	Determine percentages of gravel and sand from grain size curve Depending on percentage of fines (fraction smaller than No. 200 sieve size) coarse grained soils are classified as follows: GW, GP, SW, SP GM, GC, SM, SC More than 12% Less than 5% 5% to 12% Borderline cases requiring use of dual symbols	$C_u = \frac{D_{60}}{D_{10}}$ Greater than 6 $C_c = \frac{D_{30}^2}{D_{10} \times D_{60}}$ Between 1 and 3 Not meeting all gradation requirements for SW	
		Wide range in grain sizes and substantial amounts of all intermediate particle sizes	GC	Clayey gravels, poorly graded gravel-sand-clay mixtures					
Sands More than half of coarse fraction is smaller than No. 4 sieve size	Clean sands (little or no fines)	Predominantly one size or a range of sizes with some intermediate sizes missing	SW	Well graded sands, gravelly sands, little or no fines	Example: Silty sand, gravelly; about 20% hard, angular gravel particles 1/4-in. maximum size; rounded and subangular sand grains coarse to fine, about 15% nonplastic fines with low dry strength; well compacted and moist in place; alluvial sand; (SM)	Use grain size curve in identifying the fractions as given under field identification	Determine percentages of gravel and sand from grain size curve Depending on percentage of fines (fraction smaller than No. 200 sieve size) coarse grained soils are classified as follows: GW, GP, SW, SP GM, GC, SM, SC More than 12% Less than 5% 5% to 12% Borderline cases requiring use of dual symbols	$C_u = \frac{D_{60}}{D_{10}}$ Greater than 4 $C_c = \frac{D_{30}^2}{D_{10} \times D_{60}}$ Between 1 and 3 Not meeting all gradation requirements for SW	
		Nonplastic fines (for identification procedures, see ML below)	SP	Poorly graded sands, gravelly sands, little or no fines					
Sands More than half of coarse fraction is smaller than No. 4 sieve size	Sands with appreciable fines (little or no sand)	Plastic fines (for identification procedures, see CL below)	SM	Silty sands, poorly graded sand-silt mixtures		Use grain size curve in identifying the fractions as given under field identification	Determine percentages of gravel and sand from grain size curve Depending on percentage of fines (fraction smaller than No. 200 sieve size) coarse grained soils are classified as follows: GW, GP, SW, SP GM, GC, SM, SC More than 12% Less than 5% 5% to 12% Borderline cases requiring use of dual symbols	$C_u = \frac{D_{60}}{D_{10}}$ Greater than 4 $C_c = \frac{D_{30}^2}{D_{10} \times D_{60}}$ Between 1 and 3 Not meeting all gradation requirements for SW	
		Wide range in grain sizes and substantial amounts of all intermediate particle sizes	SC	Clayey sands, poorly graded sand-clay mixtures					
Identification Procedures on Fraction Smaller than No. 40 Sieve Size									
Fine-grained soils More than No. 200 sieve size is smaller than No. 200 sieve size	Silt and clay liquid limit less than 50	Dry Strength (crushing characteristics)	ML	None to slight	None	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands with slight plasticity	Give typical name; indicate degree and character of plasticity, amount and maximum size of coarse grains; colour in wet condition, odour if any, local or geologic name, and other pertinent descriptive information, and symbol in parentheses	Use grain size curve in identifying the fractions as given under field identification	Determine percentages of gravel and sand from grain size curve Depending on percentage of fines (fraction smaller than No. 200 sieve size) coarse grained soils are classified as follows: GW, GP, SW, SP GM, GC, SM, SC More than 12% Less than 5% 5% to 12% Borderline cases requiring use of dual symbols
		Dilatancy (reaction to shaking)							
Highly Organic Soils	Silt and clay liquid limit greater than 50	Medium to high	CL	None to very slow	Medium	Inorganic clays of low to medium plasticity, gravelly medium plasticity, clayey silty clays, silty clays, lean clays	For undisturbed soils add information on structure, stratification, consistency in undisturbed and remoulded states, moisture and drainage conditions	Use grain size curve in identifying the fractions as given under field identification	Determine percentages of gravel and sand from grain size curve Depending on percentage of fines (fraction smaller than No. 200 sieve size) coarse grained soils are classified as follows: GW, GP, SW, SP GM, GC, SM, SC More than 12% Less than 5% 5% to 12% Borderline cases requiring use of dual symbols
		Slight to medium	Slow	Slight	Organic silts and organic silty clays of low plasticity				
Highly Organic Soils	Silt and clay liquid limit greater than 50	Slight to medium	MH	Slow to none	Slight to medium	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts		Use grain size curve in identifying the fractions as given under field identification	Determine percentages of gravel and sand from grain size curve Depending on percentage of fines (fraction smaller than No. 200 sieve size) coarse grained soils are classified as follows: GW, GP, SW, SP GM, GC, SM, SC More than 12% Less than 5% 5% to 12% Borderline cases requiring use of dual symbols
		High to very high	None	High	Inorganic clays of high plasticity, fat clays				
Highly Organic Soils	Silt and clay liquid limit greater than 50	Medium to high	CH	None to very slow	Slight to medium	Organic clays of medium to high plasticity	Example: Clayey silt, brown; slightly plastic; small percentage of fine sand; numerous vertical root holes; firm and dry in place; loess; (OML)	Use grain size curve in identifying the fractions as given under field identification	Determine percentages of gravel and sand from grain size curve Depending on percentage of fines (fraction smaller than No. 200 sieve size) coarse grained soils are classified as follows: GW, GP, SW, SP GM, GC, SM, SC More than 12% Less than 5% 5% to 12% Borderline cases requiring use of dual symbols
		Readily identified by colour, odour, spongy feel and frequently by fibrous texture	None to very slow	Slight to medium	Organic clays of medium to high plasticity				
From Wagner, 1957.									
a Boundary classifications. Soils possessing characteristics of two groups are designated by combinations of group symbols. For example GW-GC, well graded gravel-sand mixture with clay binder.									
b All sieve sizes on this chart are U.S. standard.									

(The No. 200 sieve size is about the smallest particle visible to naked eye)

Plasticity Index

Liquid limit

Plasticity chart for laboratory classification of fine grained soils



Plasticity chart  
for laboratory classification of fine grained soils

These procedures are to be performed on the minus No. 40 sieve size particles, approximately 1/4 in. For field classification purposes, screening is not intended, simply remove by hand the coarse particles that interfere with the tests.

Dilatancy (Reaction to shaking): After removing particles larger than No. 40 sieve size, prepare a pat of moist soil with a volume of about one-half cubic inch. Add enough water if necessary to make the soil soft but not sticky. Place the pat in the open palm of one hand and shake horizontally, striking vigorously against the other hand several times. A positive reaction consists of the appearance of water on the surface of the pat which changes to a liver consistency. The water and gloss disappear from the surface, the pat stiffens and finally cracks or crumbles. The rapidity of appearance of water during shaking and of its disappearance during squeezing assist in identifying the character of the fines in a soil. Very fine clean sands give the quickest and most distinct reaction whereas a plastic clay has no reaction. Inorganic silts, such as a typical rock flour, show a moderately quick reaction.

Dry Strength (Crushing characteristics): After removing particles larger than No. 40 sieve size, mould a pat of soil to the consistency of putty, adding water if necessary. Allow the pat to dry completely by oven, sun or air drying, and then test its strength by breaking and crumbling between the fingers. This strength is a measure of the character and quantity of the colloidal fraction contained in the soil. The dry strength increases with increasing plasticity. High dry strength is characteristic for clays of the CH group. A typical inorganic silt possesses only very slight dry strength. Silty fine sands and silts have about the same slight dry strength, but can be distinguished by the feel when powdering the dried specimen. Fine sand feels gritty whereas a typical silt has the smooth feel of flour.

Toughness (Consistency near plastic limit): After removing particles larger than the No. 40 sieve size, a specimen of soil about one-half cubic inch in size, is moulded to the consistency of putty. If too dry, water must be added and if sticky, the specimen should be spread out in thin layer and allowed to lose some moisture by evaporation. Then the specimen is rolled out by hand on a smooth surface or between the palms into a thread about one-eighth inch in diameter. The thread is then folded and re-rolled repeatedly. During this manipulation the moisture content is gradually reduced and the specimen stiffens. Finally it loses its plasticity, and crumbles when the plastic limit is reached. After the thread crumbles, the pieces should be lumped together and a slight kneading action continued until the lump crumbles. The tougher the thread near the plastic limit and the stiffer the lump when it finally crumbles, the more potent is the colloidal clay fraction in the soil. Weakness of the thread at the plastic limit and quick loss of coherence of the lump below the plastic limit indicate either inorganic clay of low plasticity, or materials such as kaolin-type clays and organic clays which occur below the A-line. Highly organic clays have a very weak and spongy feel at the plastic limit.

Soil Characteristics Pertinent to Roads and Airfields

Major Divisions	Letter (1)	Name	Value as Subgrade When Not Subject to Frost Action	Value as Subbase When Not Subject to Frost Action	Value as Base When Not Subject to Frost Action	Potential Frost Action	Compressibility and Expansion	Drainage Characteristics	Compaction Equipment	Unit Dry Weight lb. per cu. ft.	Typical Design Values	
											CBR (2)	Subgrade Modulus k lb. per cu. in.
GRAVEL AND GRAVELLY SOILS	GW	Well-graded gravels or gravel-sand mixtures, little or no fines	Excellent	Excellent	Good	None to very slight	Almost none	Excellent	Crawler-type tractor, rubber-tired roller, steel-wheeled roller	125-140	40-80	300-500
	GP	Poorly graded gravels or gravel-sand mixtures, little or no fines	Good to excellent	Good	Fair to good	None to very slight	Almost none	Excellent	Crawler-type tractor, rubber-tired roller, steel-wheeled roller	110-140	30-60	300-500
	d	Silty gravels, gravel-sand-silt mixtures	Good to excellent	Good	Fair to good	Slight to medium	Very slight	Fair to poor	Rubber-tired roller, sheepfoot roller; close control of moisture	125-145	40-60	300-500
	GM		Good	Fair	Poor to not suitable	Slight to medium	Slight	Poor to practically impervious	Rubber-tired roller, sheepfoot roller	115-135	20-30	200-500
COARSE- GRAINED SOILS	OC	Clayey gravels, gravel-sand-clay mixtures	Good	Fair	Poor to not suitable	Slight to medium	Slight	Poor to practically impervious	Rubber-tired roller, sheepfoot roller	130-145	20-40	200-500
	SW	Well-graded sands or gravelly sands, little or no fines	Good	Fair to good	Poor	None to very slight	Almost none	Excellent	Crawler-type tractor, rubber-tired roller	110-130	20-40	200-400
	SP	Poorly graded sands or gravelly sands, little or no fines	Fair to good	Fair	Poor to not suitable	None to very slight	Almost none	Excellent	Crawler-type tractor, rubber-tired roller	105-135	10-40	150-400
	d	Silty sands, sand-silt mixtures	Fair to good	Fair to good	Poor	Slight to high	Very slight	Fair to poor	Rubber-tired roller, sheepfoot roller; close control of moisture	120-135	15-40	150-400
FINE- GRAINED SOILS	SM		Fair	Poor to fair	Not suitable	Slight to high	Slight to medium	Poor to practically impervious	Rubber-tired roller, sheepfoot roller	100-130	10-20	100-300
	SC	Clayey sands, sand-clay mixtures	Poor to fair	Poor	Not suitable	Slight to high	Slight to medium	Poor to practically impervious	Rubber-tired roller, sheepfoot roller	100-135	5-20	100-300
	ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands or clayey silts with slight plasticity	Poor to fair	Not suitable	Not suitable	Medium to very high	Slight to medium	Fair to poor	Rubber-tired roller, sheepfoot roller; close control of moisture	90-130	15 or less	100-200
	CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays	Poor to fair	Not suitable	Not suitable	Medium to high	Medium	Practically impervious	Rubber-tired roller, sheepfoot roller	90-130	15 or less	50-150
SILTS AND CLAYS LL IS GREATER THAN 50	OL	Organic silts and organic silt-clays of low plasticity	Poor	Not suitable	Not suitable	Medium to high	Medium to high	Poor	Rubber-tired roller, sheepfoot roller	90-105	5 or less	50-100
	MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts	Poor	Not suitable	Not suitable	Medium to very high	High	Fair to poor	Sheepfoot roller, rubber-tired roller	80-105	10 or less	50-100
	CH	Inorganic clays of medium to high plasticity, organic silts	Poor to fair	Not suitable	Not suitable	Medium	High	Practically impervious	Sheepfoot roller, rubber-tired roller	90-115	15 or less	50-150
	OH	Organic clays of high plasticity, fat clays	Poor to very poor	Not suitable	Not suitable	Medium	High	Practically impervious	Sheepfoot roller, rubber-tired roller	80-110	5 or less	25-100
HIGHLY ORGANIC SOILS	Pt	Peat and other highly organic soils	Not suitable	Not suitable	Not suitable	Slight	Very high	Fair to poor	Compaction not practical	---	---	---

Note:

(1) Unit Dry Weights are for compacted soil at optimum moisture content for modified AASHTO compaction effort. Division of GM and SM groups into subdivision of d and u are for roads and airfields only. Subdivision is basis of Atterberg limits; suffix d (e.g., GMd) will be used when the liquid limit (LL) is 25 or less and the plasticity index is 6 or less; the suffix u will be used otherwise.

(2) The maximum value that can be used in design of airfields is, in some cases, limited by gradation and plasticity requirements.

## GENERAL QUALIFICATIONS

This report has been prepared in order to aid in the evaluation of this property and to assist the architect and/or engineer in the design of this project. The scope of the project and location described herein, and my description of the project represents my understanding of the significant aspects relevant to soil and foundation characteristics. In the event that any changes in the design or location of the proposed facilities, as outlined in this report, are planned, I should be informed so the changes can be reviewed and the conclusions of this report modified or approved in writing by myself.

It is recommended that all construction operations dealing with earthwork and foundations be inspected by an experienced soil engineer to assure that the design requirements are fulfilled in the actual construction. If you wish, I would welcome the opportunity to review the plans and specifications when they have been prepared so that I may have the opportunity of commenting on the effect of soil conditions on the design and specifications.

The analysis and recommendations submitted in this report are based upon the data obtained from the soil borings and/or test pits performed at the locations indicated on the location diagram and from any other information discussed in the report. This report does not reflect any variations which may occur between these boring and/or test pits. In the performance of subsurface investigations, specific information is obtained at specific locations at specific times. However, it is a well-known fact that variations in soil and rock conditions exist on most sites between boring locations and also such situations as groundwater conditions vary from time to time. The nature and extent of variations may may not become evident until the course of construction. If variations then appear evident, it will be necessary for a reevaluation of the recommendations of this report after performing on-site observations during the construction period and noting the characteristics of any variations.

**Attachment D – Proposal Pricing Form - 5% Retainage Applicable****Table D.1 – Proposal Pricing Form**

<b>Description</b>	<b>Extended Cost</b>	<b>Total Cost</b>
<b>Radio Communications Tower</b>		
180-root radio communications tower		
Accessories		
Other (list)		
<b>Subtotal</b>		
<b>Foundation Design and Drawings</b>		
Foundation design		
Assembly and erection drawings		
Other (list)		
<b>Subtotal</b>		
<b>Warranty</b>		
5-year no deductible warranty		
<b>Subtotal</b>		
<b>Storage, Transportation, and Offloading</b>		
Storage of the tower at the SELECTED VENDOR'S facility		
Transportation and offloading to the radio communications site		
<b>Subtotal</b>		
<b>Other Materials, Equipment, and Services</b>		
(e.g., documentation, project management, etc.)		
<b>Subtotal</b>		
<b>TOTAL PROPOSAL COST</b>		

## **Attachment E – County Terms and Conditions**

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## ***EVALUATION PROCEDURES***

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### **A. Review of Proposals**

The Selection Committee will review qualifications of the proposals. Firms with unacceptably low technical qualifications will be eliminated from further consideration.

After the qualifications for each firm has been established, the dollar cost bid will be examined.

The County reserves the rights to retain all proposals submitted and use any idea in a proposal regardless of whether that proposal is selected.

### **B. Evaluation Criteria**

Proposals will be evaluated using three sets of criteria. Firms meeting the mandatory criteria will have their proposals evaluated and scored for both technical qualifications and price. The following represent the principal selection criteria that will be considered during the evaluation process.

#### **1. Mandatory Elements**

- a. The firm has no conflict of interest with regard to any other work performed by the firm for the County.
- b. The firm adheres to the instructions in this request for proposal on preparing and submitting the proposal.
- c. Financial Viability.

#### **2. Technical Quality (Maximum Points – 80)**

Expertise and Experience (maximum points – 80)

- (i) The proposer's past experience and performance on comparable local governmental engagements.
- (ii) The work plan including timing of deliverables.
- (iii) Vendor performance guarantees.
- (iv) Warranty.
- (v) Compliance with attached matrix.

#### **3. Price (Maximum Points – 20)**

Cost will not be the primary factor in the selection of a firm. The proposed price will be graded based upon the following formula:

Average Bid/Your Bid = X (whereby X can not exceed 100%)

$X * 20 \text{ points} = \text{Points awarded based on cost}$

#### C. Oral Presentations

During the evaluation process, the Selection Committee at their discretion may request any one or all firms to make oral presentations. Such presentations will provide firms with an opportunity to answer any questions that the Committee may have on a firm's proposal. Not all firms may be asked to make such oral presentations.

#### A. Right to Reject Proposals

Submission of a Proposal indicates acceptance by the firm of the conditions contained in this request for proposal unless clearly and specifically noted in the proposal submitted and confirmed in the contract between the County and the firm selected. The County reserves the right without prejudice to reject any or all proposals.

## **EXHIBIT C**

### **INSURANCE REQUIREMENTS - SERVICE PROVIDERS**

I. The Contractor shall procure and maintain during the entire term of the contract the following required insurance:

- ➔ **Commercial General Liability Insurance**  
\$1,000,000 per occurrence/ \$2,000,000 aggregate.
- ➔ **Excess/Umbrella Liability Insurance**  
\$1,000,000 per occurrence / \$2,000,000 aggregate.
- ➔ **Workers' Compensation**  
Statutory Workers' Compensation and Employers' Liability Insurance for all employees, *except that in the event the Contractor has no employees and is exempt by law from having such insurance coverage the Contractor may provide an exemption statement.*

II. Notwithstanding any terms, conditions or provisions, in any other writing between the parties, the Contractor hereby agrees (except as to workers' compensation insurance coverage) to either effectuate:

- (a) the naming of the County as an "additional insured as funding source for contract services" on the contractor's insurance policies, or
- (b) the inclusion of a contractual liability endorsement covering the Contractor's contract with the County.

III. The policy/policies of insurance furnished by the Contractor shall:

- ➔ be from an A.M. Best rated "A" New York State licensed insurer; and
- ➔ contain a 30-day notice of cancellation

IV. The Contractor agrees to indemnify the County for any applicable deductibles.

V. Contractor acknowledges that failure to obtain such insurance on behalf of the County constitutes a material breach of contract and subjects it to liability for damages, indemnification and all other legal remedies available to the County. Prior to commencement of work or use of facilities, the Contractor shall provide to the County proof that such requirements have been met by furnishing certificate(s) of such insurance, and the declarations pages from the policies of such insurance. The failure of the County to object to the contents of the certificate(s) and/or declarations pages, or the absence of same, shall not be deemed a waiver of any and all rights held by the County.

VI. All certificates of insurance will provide 30 days notice to the county of cancellation or non-renewal.

VII. Contractor and subcontractor waives all rights of subrogation against the owner and will have the General Liability, Umbrella Liability Workers' Compensation policies endorsed setting forth this Waiver of Subrogation.

VIII. All policies will also contain no exclusions with respect to Section 240 and 241 of the NYS Labor Law.

IX. The County shall be listed as an additional insured on a primary and non-contributory basis.

## **APPENDIX D - STANDARD CLAUSES FOR ESSEX COUNTY CONTRACTS**

### **1. Independent Contractor Status**

The parties each acknowledge, covenant and agree that the relationship of the Contractor to the County shall be that of an independent contractor. The Contractor, in accordance with its status as an independent contractor, further covenants and agrees that it:

- (a) will conduct itself in accordance with its status as an independent contractor;
- (b) will neither hold itself out as nor claim to be an officer or employee of the County; and
- (c) will not make any claim, demand or application for any right or privilege applicable to an officer or employee of the County, including but not limited to workers' compensation benefits, unemployment insurance benefits, social security coverage or retirement membership or credits.

### **2. Contractor To Comply With Laws/Regulations**

The Contractor shall at all times comply with all applicable state and federal laws, rules and regulations governing the performance and rendition of the services to be furnished under this agreement.

### **3. Licenses, Permits, Etc.**

The Contractor shall, during the term of this agreement, obtain and keep in full force and effect any and all licenses, permits and certificates required by any governmental authority having jurisdiction over the rendition and performance of the services to be furnished by the Contractor under this agreement.

### **4. Termination**

This agreement may be terminated without cause by either party upon 30 days prior written notice, and upon such termination neither party shall have any claim or cause of action against the other except for services actually performed and mileage expenses actually incurred prior to such termination. Notwithstanding the foregoing, this agreement may be immediately terminated by the County:

- (a) for the Contractor's breach of this agreement, by serving written notice of such termination stating the nature of the breach upon the Contractor by personal delivery or by certified mail, return receipt requested, and upon such termination either party shall have such rights and remedies against the other as provided by law; or
- (b) upon the reduction or discontinuance of funding by the State or Federal governments to be used in furnishing some or all of the work, labor and/or services provided for under this agreement, and upon such termination neither party shall have any claim or cause of action against the other except for services actually performed and expenses (if the same are to be paid under this agreement) actually incurred prior to such termination.

### **5. Defense & Indemnification**

The Contractor shall defend, indemnify and hold harmless the County to the fullest extent allowed by law, and notwithstanding any insurance requirements, from and against any and all liability, losses, claims, actions, demands, damages, expenses, suits, judgments, orders, causes of action and claims, including but not limited to attorney's fees and all other costs of defense, by reason of any liability whatsoever imposed by law or otherwise upon the County for damages to person, property or of any other kind in nature, including but not limited to those for bodily injury, property damage, death arising out of or in connection with its officers, employees, agents, contractors, sub-contractors, guests or invitees negligence or

its/their performance or failure to perform this agreement.

6. **Discrimination Prohibited**

The services to be furnished and rendered under this agreement by the Contractor shall be available to any and all residents of Essex County without regard to race, color, creed, sex, religion, national or ethnic origin, handicap, or source of payment; and under no circumstances shall a resident's financial ability to pay for the services provided be considered unless such consideration is allowed by State and/or Federal law, rule or regulation.

7. **Non-Discrimination In Employment**

The Contractor will not discriminate against any employee or applicant for employment because of race, creed, color, sex, national origin, age, disability or marital status. In the event that this is a contract to be performed in whole or in part within the State of New York for (a) the construction, alteration or repair of any public building or public work, (b) for the manufacture, sale or distribution of materials, equipment or supplies, (c) for building service, the Contractor agrees that neither it nor its subcontractors shall, by reason of race, creed, color, disability, sex or national origin:

- (1) discriminate in hiring against any citizen who is qualified and available to perform the work; or
- (2) discriminate against or intimidate any employee hired for the performance of work under this contract.

The Contractor agrees to be subject to fines of \$50.00 per person per day for any violation of this paragraph, as well as to possible termination of this contract or forfeiture of all moneys due hereunder for a second or subsequent violation.

8. **Damage/Injury To Persons & Property**

The Contractor shall promptly advise the County of all damages to property of the County or of others, or of injuries incurred by persons other than employees of the Contractor, in any manner relating, either directly or indirectly, to the performance of this agreement.

9. **Records**

The Contractor shall establish and maintain complete and accurate books, records, documents, accounts and other evidence directly pertinent to performance under this contract (hereinafter collectively "the Records") in accordance with the following requirements:

- (a) the Records must be kept for the balance of the calendar year in which they were made and for six (6) additional years thereafter;
- (b) the County Auditor, State Comptroller, the Attorney General or any other person or entity authorized to conduct an examination, as well as the agency or agencies involved in this contract, shall have access to the Records during normal business hours at an office of the Contractor within the State of New York, or, if no such office is available, at a mutually agreeable and reasonable venue within the State, for the term specified above for the purposes of inspection, auditing and copying.

The County shall take reasonable steps to protect from public disclosure any of the records which are exempt from disclosure under Section 87 of the Public Officers Law (the "Statute") provided that: (i) the Contractor shall timely inform an appropriate County official, in writing, that said records should not be disclosed; and (ii) said records shall be sufficiently identified and designation of said records as exempt under the statute is reasonable. Nothing

contained herein shall diminish, or in any way adversely affect, the County's right to discovery in any pending or future litigation.

10. **Claims For Payment**

All invoices or claims for which payment is sought from the County must be submitted in accordance with the following:

- (a) each claim for payment must include
  - (1) an invoice detailing the claim,
  - (2) copies of all documentation supporting the claim,
  - (3) a properly completed County standard voucher, which includes
    - (i) the County contract number under which payment is being claimed, **AND**
    - (ii) the payee's Federal employer identification number or Federal social security number, or both such numbers when the payee has both such numbers. *[Failure to include this number or numbers will prevent and preclude payment by the County; except that where the payee does not have such number or numbers, the payee, on the invoice or County voucher, must give the reason or reasons why the payee does not have such number or numbers and such reasons constitute a valid excuse under law.]*
- (b) Unless otherwise provided in this agreement, each claim for payment must be submitted to the County no later than 30 days after the work, labor, materials, and/or services for which payment is claimed were rendered or furnished.
- (c) Notwithstanding any other provision of this agreement, no claim for payment shall be valid, and the County shall not be liable for payment thereof, unless it is submitted to the County within 30 days of the close of the calendar year in which the work, labor, materials, and/or services for which payment is claimed were rendered or furnished.
- (d) Unless otherwise provided in this agreement, the requirements of this paragraph 10, and/or of any other provisions of this agreement which supersede the same, shall constitute conditions precedent to the County's payment obligation, and failure to comply with any or all of said requirements shall entitle the County to deny payment.
- (e) As a further condition of payment, each claim of payment shall be accompanied by a Contractor and Sub-Contractor Progress Payment Waiver, Release and Discharge, and each Final Payment shall be accompanied by a Contractor and Sub-Contractor Final Payment, Waiver and Release form. As well as a Contractor Affidavit relative to Final Payment. Copies of these forms are attached and made a part hereof.

11. **Consent**

In the event that State or Federal law requires the recipient of services to be furnished and rendered under this agreement to give his/her prior consent thereto, the contractor shall obtain such person's consent and furnish proof thereof to the County.

12. **Executory Clause**

The County shall have no liability under this contract to the Contractor or to anyone else beyond the funds appropriated and available for this contract.

13. **Public Work & Building Service Contract Requirements**

If this is a public work contract covered by Article 8 of the Labor Law or a building service contract covered by Article 9 thereof:

- (a) neither the Contractor's employees nor the employees of its subcontractors may be required or permitted to work more than the number of hours or days stated in said

statutes, except as otherwise provided in the Labor Law and as set forth in prevailing wage and supplement schedules issued by the State Labor Department; and

- (b) the Contractor and its subcontractors must pay at least the prevailing wage rate and pay or provide the prevailing supplements, including the premium rates for overtime pay, as determined by the State Labor Department in accordance with the Labor Law.

14. **Public Work Contracts – Hazardous Substances**

If this is a contract for public work, the Contractor agrees as follows:

- (a) the Contractor acknowledges that the County uses and/or produces various substances which may be classified as hazardous under OSHA's Hazard Communication Standard;
- (b) the Contractor recognizes the use of said substances by the County and acknowledges that the County has provided, or upon request will provide, the Contractor with a description of such substances which may be present in the area of the County's facility/facilities to which the Contractor may have accessed during the performance of this contract;
- (c) the Contractor acknowledges that the County has provided, or upon request will provide, suggestions for appropriate protective measures which should be observed when the Contractor is in the area of any such hazardous substances;
- (d) the Contractor agrees to be solely responsible for providing training and information to its employees regarding any such hazardous substances, as well as of any protective measures suggested by the County;
- (e) the Contractor agrees to be solely responsible to ensure that the Contractor's employees observe protective measures during the performance of their duties in the performance of the contract, and that all such protective measures will be at least as stringent as those suggested or which would have been suggested by the County;
- (f) in the event that the Contractor's performance of the work under this contract requires the use of any hazardous substances, the Contractor shall notify the County in advance of bringing in and/or using such substances in or upon County property and suggest to the County appropriate measures to be observed by the County, its officers and employees, and/or the public; and
- (g) in the event the Contractor fails in whole or in part to comply with the terms of this paragraph, the County shall have the right to interrupt the Contractor's work and/or terminate this contract, and the Contractor shall be prohibited from renewing such work until all applicable safety and health procedures and practices are implemented by the Contractor.

15. **Disputes**

Disputes involving this contract, including the breach or alleged breach thereof, may not be submitted to binding arbitration, but must, instead, be heard in a court of competent jurisdiction within the State of New York.

16. **Non-Assignment**

This agreement may not be assigned, subcontracted, transferred, conveyed, sublet or otherwise disposed of in whole or in part, by the Contractor, without the prior written consent of the County, and any attempts to assign the contract without the County's written consent are null and void.

17. **No Collusion**

If this contract was awarded based upon the submission of bids, the Contractor

warrants, under penalty of perjury, that:

- (a) its bid was arrived at independently and without collusion aimed at restricting competition; and
- (b) at the time Contractor submitted its bid, an authorized and responsible person executed and delivered to the County a non-collusive bidding certification on Contractor's behalf.

18. **International Boycott**

In accordance with Section 220-f of the Labor Law, if this contract exceeds \$5,000.00, the Contractor agrees, as a material condition of the contract, that neither the Contractor nor any substantially owned or affiliated person, firm, partnership or corporation, has participated, is participating, or shall participate in an International boycott in violation of the federal Export Administration Act of 1979, or regulations thereunder. If such contractor, or any of the aforesaid affiliates of Contractor, is convicted, or is otherwise found to have violated said laws or regulations upon the final determination of the United States Commerce Department or any other appropriate agency of the United States subsequent to the contract's execution, such contract, amendment or modification thereto shall be rendered forfeit and void. The Contractor shall so notify the County Manager within five (5) business days of such conviction, determination or disposition of appeal.

19. **County's Rights of Set-Off**

The County shall have all of its common law, equitable and statutory rights of set-off. These rights shall include, but not be limited to, the County's option to withhold for the purposes of set-off any moneys due to the Contractor under this agreement up to any amounts due and owing to the County with regard to this contract, any other contract with any County department or agency, including any contract for a term commencing prior to the term of this contract, plus any amounts due and owing to the County for any other reason, including, without limitation, tax delinquencies, fee delinquencies or monetary penalties relative thereto. The County shall exercise its set-off rights in accordance with normal County practices, including, in cases of set-off pursuant to an audit, the acceptance of such audit by the County Board of Supervisors or its designated representative.

20. **Contractor Defined**

Whenever the term "Contractor" is used in this agreement, such term shall include and apply to all employees, all officers, directors and agents, if any, of the Contractor.

21. **Amendment**

This agreement may not be amended, modified or renewed except by written agreement signed by the Contractor and the County.

22. **Ownership Of Work Products**

All final and written or tangible work products completed by the Contractor shall belong to the County. In the event of premature discontinuance of performance, the Contractor agrees to deliver all existing products and data files to the County.

23. **Executive Order Debarment/Suspension**

In the event that this contract involves the Contractor furnishing goods and services in excess of \$100,000.00, or constitutes a subaward to subrecipients, under any Federal program, grant or other funding source, then by executing this agreement the Contractor certifies that neither it nor any of its principals are suspended or debarred within the scope or

meaning of Executive Orders 12549 and 12689, any Federal or State regulation implementing or codifying the same, or any other Federal or State law, rule or regulation.

24. **Health Insurance Portability and Accountability Act of 1996 (HIPAA)**

In the event that this contract involves the use or disclosure of protected health information within the meaning or application of the Health Insurance Portability and Accountability Act of 1996 (HIPAA), and the regulations thereunder, the following provisions of this paragraph shall apply.

- (a) **Definitions.** The terms used, but not otherwise defined, in this Agreement shall have the same meaning as given such terms in 45 CFR §160.103 and §164.501, as the same may be amended from time to time, including but not limited to the following.
- (1) "Business Associate" shall mean the Contractor, its officers, employees, agents and subcontractors.
  - (2) "Covered Entity" shall mean Essex County (the "County"), its departments, agencies, officers and employees.
  - (3) "Individual" shall have the same meaning as given such term in 45 CFR §164.501 and shall also include a person who qualifies as a personal representative in accordance with 45 CFR §164.502(g).
  - (4) "Privacy Rule" shall mean the Standards for Privacy of Individually Identifiable Health Information at 45 CFR Part 160 and Part 164, subparts A and E.
  - (5) "Protected Health Information" shall have the same meaning as given such term in 45 CFR §164.501, limited to the information created or received by Contractor from or on behalf of the County.
  - (6) "Required by law" shall have the same meaning as given such term in 45 CFR §164.501.
  - (7) "Secretary" shall mean the Secretary of the Department of Health and Human Services or his/her designee.
- (b) **Obligations and Activities of Contractor.** Contractor agrees to:
- (1) not use or disclose Protected Health Information other than as permitted or required by this Agreement or as required by law;
  - (2) use appropriate safeguards to prevent use or disclosure of the Protected Health Information other than as provided for by this Agreement;
  - (3) mitigate, to the extent practicable, any harmful effect that is known, should have been known, and/or discovered to/by Contractor of a use or disclosure of Protected Health Information by Contractor in violation of the requirements of this Agreement;
  - (4) report to the County any use or disclosure of the Protected Health Information not provided for by this Agreement of which it becomes aware;
  - (5) ensure that any agent, including a subcontractor, to whom it provides Protected Health Information received from, or created or received by Contractor on behalf of the County agrees to the same restrictions and conditions that apply through this Agreement to Contractor with respect to such information;
  - (6) provide access, at the request of the County, and in the time and manner designated by the County or the Secretary, to Protected Health Information in a Designated Record Set, to the County or, as directed by the County, to an Individual in order to meet the requirements under 45 CFR §164.524;
  - (7) make any amendment(s) to Protected Health Information in a Designated Record

Set that the County directs or agrees to pursuant to 45 CFR §164.526 at the request of the County or an Individual, and in the time and manner designated by the County or the Secretary;

(8) make internal practices, books, and records, including policies and procedures and Protected Health Information, relating to the use and disclosure of Protected Health Information received from, or created or received by Contractor on behalf of, the County available to the County, and/or to the Secretary, in a time and manner designated by the County or by the Secretary, for purposes of the Secretary determining the County's compliance with the Privacy Rule;

(9) document such disclosures of Protected Health Information and information related to such disclosures as would be required for the County to respond to a request by an Individual for an accounting of disclosures of Protected Health Information in accordance with 45 CFR §164.528;

(10) provide to the County or an Individual, in time and manner designated by the County or the Secretary, information collected in accordance with the above subparagraph (b)(9) of this Agreement, to permit the County to respond to a request by an Individual for an accounting of disclosures of Protected Health Information in accordance with 45 CFR §164.528.

(c) Permitted Uses and Disclosures by Contractor.

Except as otherwise limited in this Agreement, Contractor may use or disclose Protected Health Information on behalf of, or to provide services to, the persons entitled to services under this Agreement:

(1) solely for the purposes of performing Contractor's obligations under this Agreement, if such use or disclosure of Protected Health Information would not violate the Privacy Rule if done by the County or the minimum necessary policies and procedures of the County; or

(2) provided that such use or disclosures are required by law; or

(3) Contractor

(A) obtains written authorization(s) from the individual to which the information pertains permitting the specific uses or disclosures of such information to third persons,

(B) represents and agrees in writing with such individual that the information to be used and/or disclosed will remain confidential and used or further disclosed only as required by law or for the purposes specified in the written authorization(s), and

(C) such third persons agree in writing to notify the County as soon as practicable and in writing of any instances of which such third person(s) is/are aware in which the confidentiality of the information has been breached; or

(4) provide Data Aggregation services to the County as permitted by 42 CFR §164.504(e)(2)(i)(B); or

(5) report violations of law to appropriate Federal and State authorities, consistent with §164.502(j)(1).

(d) County To Inform Contractor of Privacy Practices and Restrictions.

The County agrees to notify the Contractor of any

(1) limitation(s) in its notice of privacy practices of the County in accordance with 45 CFR §164.520, to the extent that such limitation may affect the Contractor's use or disclosure of Protected Health Information;

- (2) changes in, or revocation of, permission by Individual to use or disclose Protected Health Information, to the extent that such changes may affect the Contractor's use or disclosure of Protected Health Information; and/or
- (3) restriction to the use or disclosure of Protected Health Information that the County has agreed to in accordance with 45 CFR §164.522, to the extent that such restriction may affect Contractor's use or disclosure of Protected Health Information.

(e) Permissible Requests by County.

The County shall not request Contractor to use or disclose Protected Health Information in any manner that would not be permissible under the Privacy Rule if done by the County; except that in the event that the services to be furnished by the Contractor under this Agreement requires data aggregation by the Contractor, the Contractor may use or disclose protected health information for such data aggregation or management and administrative activities of Contractor.

(f) Survival of Provisions.

The obligations of the Contractor under this paragraph 24 shall survive the expiration of the term of this Agreement and/or the termination of this Agreement, and said obligations shall remain effective and shall not terminate until all of the Protected Health Information provided by the County to Contractor, or created or received by Contractor on behalf of the County, is destroyed or returned to the County, or, if it is infeasible to return or destroy Protected Health Information, protections are extended to such information, in accordance with the termination provisions in subparagraph (g) below.

(g) Return or Destruction of Protected Health Information.

Except as otherwise provided below, upon termination of this Agreement for any reason, Contractor shall return or destroy all Protected Health Information received from the County, or created or received by Contractor on behalf of the County. This provision shall apply to Protected Health Information that is in the possession of subcontractors or agents of Contractor. Contractor shall retain no copies of the Protected Health Information.

In the event that Contractor determines that returning or destroying the Protected Health Information is infeasible, Contractor shall provide to the County notification of the conditions that make return or destruction infeasible. Upon determination by the County that return or destruction of Protected Health Information is infeasible, Contractor shall extend the protections of this Agreement to such Protected Health Information and limit further uses and disclosures of such Protected Health Information to those purposes that make the return or destruction infeasible, for so long as Contractor maintains such Protected Health Information.

(h) Termination for Cause.

Upon the County's knowledge of a material breach of this paragraph by Contractor, the County shall:

- (1) either:
  - (A) provide an opportunity for Contractor to cure the breach or end the violation and terminate this Agreement within the time specified by the County, or
  - (B) immediately terminate this Agreement if cure is not possible; and
- (2) report the violation to the Secretary.

(i) Miscellaneous.

- (1) Regulatory References. A reference in this Agreement to a section in the Privacy

Rule means the section as in effect or as amended.

(2) Amendment. The Parties agree to take such action as is necessary to amend this Agreement from time to time as is necessary for the County to comply with the requirements of the Privacy Rule and the Health Insurance Portability and Accountability Act of 1996, Pub. L. No. 104-191.

(3) Survival. The respective rights and obligations of Contractor under this paragraph 24 of this Agreement shall survive the termination of this Agreement.

(4) Interpretation. Any ambiguity in this Agreement shall be resolved to permit the County to comply with the Privacy Rule.

25. **Severability**

If any term or provision of this agreement or the application thereof to any person or circumstance shall to any extent be held invalid or unenforceable, the remainder of this agreement or the application of such term or provision to persons or circumstances other than those as to which it is held invalid or unenforceable, shall not be affected thereby and every other term and provision of this agreement shall be valid and be enforced to the fullest extent permitted by law.

26. **Entire Agreement**

This agreement is the entire agreement between the parties, and the same shall be construed in accordance with the laws of the State of New York.

27. **For Medicaid/Federal Health Care Related Work**

**Excluded/Debarred Party Clause**

The Vendor/Contractor represents and warrants that it, nor its employees or contractors, are not excluded from participation, and is not otherwise ineligible to participate, in a "federal health care program" as defined in 42 U.S.C. § 1320a-7b(f) or in any other government payment program.

In the event Vendor/Contractor, or one of its employees or contractors, is excluded from participation, or becomes otherwise ineligible to participate in any such program during the Term, Vendor/Contractor will notify Essex County in writing within three (3) days after such event. Upon the occurrence of such event, whether or not such notice is given to the Vendor/Contractor, Essex County reserves the right to immediately cease contracting with the Vendor/Contractor.

If Vendor/Contractor is an Employment Agency, the Vendor/Contractor represents and warrants that its employees and contractors are not excluded from participation in a "federal health care program" as defined in 42 U.S.C. § 1320a-7b(f) or debarred from participation in any federal or other program.

The Vendor/Contractor further represents and warrants it will, at a minimum, check monthly all of its employees and subcontractors against:

The General Services Administration's Federal Excluded Party List System (or any successor system,

The United States Department of Health and Human Services's Office of the Inspector General's Lists of Excluded Individuals and Entities or any successor list,

The New York State Department of Health's Office of the Medicaid Inspector General's

list of Restricted, Terminated or Excluded Individuals or Entities.

In the event an excluded party is discovered the Vendor/Contractor will notify Essex County in writing within three (3) days after such event. Upon the occurrence of such event, whether or not such notice is given to the Vendor/Contractor, Essex County reserves the right to immediately cease contracting with the Vendor/Contractor.

CONTRACTOR PROGRESS PAYMENT WAIVER, RELEASE AND DISCHARGE

PROJECT: \_\_\_\_\_

OWNER: ESSEX COUNTY

CONTRACTOR: \_\_\_\_\_

W I T N E S S E T H :

The above-named Contractor, hereinafter referred to as the "Releasor", does, for and on behalf of itself, its' successors, assigns and all parties claiming any interest or right through the Releasor, hereby warrant, covenant and agree as follows:

1. Releasor is/was a Contractor relative to the above-referenced Project pursuant to a contract or other relationship for the performing and/or furnishing of work, labor, services, materials and/or equipment at the Project site or to be incorporated in said Project.

2 Whenever the term "Releasor" is used in this instrument such term shall mean: (a) the above-named Contractor, its, successors and assigns; (b) any and all sureties and all other guarantors of the Releasor on any payment, performance, labor and/or material bond or other undertaking; (c) all parties claiming any interest or right through the Releasor, including but not limited to subcontractors and suppliers; and (d) the respective officers, directors, principals, shareholders, agents, employees and attorneys of (a), (b) and (c).

3. Whenever the term "Releasees" is used in this instrument such term shall mean: (a) the above-named Owner, its' successors and assigns; (b) the Project Architect/Engineer; and (c) the respective officers, directors, principals, shareholders, agents, employees and attorneys of (a) and (b).

4. For and in consideration of the sum of \$\_\_\_\_\_, and other good and valuable consideration, which sum is acknowledged as being the full and total amount due or allegedly due or owing from the Releasees to the Releasor as of the date hereof, and the receipt of such payment being hereby acknowledged, the Releasor does waive, release and discharge the Releasees from any and all causes of action, suits, debts, claims, liens, accounts, bonds, contracts, damages, encumbrances, judgments and demands whatsoever and of every kind and nature, in law or in equity, which against the Releasees, jointly and/or severally, the Releasor ever had, now has, or might hereafter have, relating directly or indirectly to the work, labor, services, materials and/or equipment furnished and/or performed at the Project site, or incorporated or to be incorporated in said Project, as of the date hereof, including but not in any manner limited to the right of the Releasor to assert, file or claim any lien or other security interest in or upon the real and/or personal property of the Releasees.

5. The Releasor hereby agree to defend, indemnify, and hold harmless the Releasees from any and all damages, costs, expenses, demands, suits, liens and legal fees, directly or indirectly relating to any claim for compensation by any other party for work, labor, services, materials and/or equipment furnished and/or performed at the Project site, or which should have been so furnished or performed, or incorporated or to be incorporated in said Project, as of the date hereof, by the Releasor or by any other party claiming any interest or right through the

Releasor.

6. The Releasor hereby certifies and warrants that it has fully paid for all work, labor, services, materials and/or equipment provided to it in connection with the Project and/or any contract relating thereto.

7. The Releasor hereby grants to the Releasees the right to review and audit any and books and records of the Releasor at any time for verification.

**IN WITNESS WHEREOF** this instrument has been executed this \_\_\_\_ day of \_\_\_\_  
\_\_\_\_\_, 20\_\_.

\_\_\_\_\_  
Releasor

By: \_\_\_\_\_

\_\_\_\_\_  
(Print Name)

\_\_\_\_\_  
(Title)

STATE OF NEW YORK    )  
  ) SS:  
COUNTY OF \_\_\_\_\_ )

I, \_\_\_\_\_, being duly sworn, depose and say that: I reside at \_\_\_\_\_  
\_\_\_\_\_, and I hereby sign this instrument under penalty of perjury; I am  
the of the Releasor identified herein; I am fully authorized to execute this instrument on behalf of  
the Releasor; and I hereby affirm that the statements contained in this instrument are true and  
correct.

\_\_\_\_\_  
Vendor/Releasor Agent Sign Here

Sworn to before me this \_\_\_\_  
day of \_\_\_\_\_, 20\_\_.

\_\_\_\_\_  
Notary Public

## CONTRACTOR FINAL PAYMENT WAIVER, RELEASE AND DISCHARGE

PROJECT: \_\_\_\_\_

OWNER: \_\_\_\_\_ ESSEX COUNTY \_\_\_\_\_

CONTRACTOR: \_\_\_\_\_

### W I T N E S S E T H :

The above-named Contractor, hereinafter referred to as the "Releasor", does, for and on behalf of itself, its' successors, assigns and all parties claiming any interest or right through the Releasor, hereby warrants, covenants and agrees as follows:

1. Releasor is/was a Contractor relative to the above-referenced Project pursuant to a contract or other relationship for the performing and/or furnishing of work, labor, services, materials and/or equipment at the Project site or to be incorporated in said Project.

2 Whenever the term "Releasor" is used in this instrument such term shall mean: (a) the above-named Contractor, its, successors and assigns; (b) any and all sureties and all other guarantors of the Releasor on any payment, performance, labor and/or material bond or other undertaking; (c) all parties claiming any interest or right through the Releasor, including but not limited to subcontractors and suppliers; and (d) the respective officers, directors, principals, shareholders, agents, employees and attorneys of (a), (b) and (c).

3. Whenever the term "Releasees" is used in this instrument such term shall mean: (a) the above-named Owner, its' successors and assigns; (b) Essex County, its agencies and departments (including but not limited to its Office for the Aging); and (c) the respective officers, directors, principals, shareholders, agents, employees and attorneys of (a) and (b).

4. For and in consideration of the sum of \$\_\_\_\_\_, and other good and valuable consideration, which sum is acknowledged as being the full, final and total amount due or allegedly due or owing from the Releasees to the Releasor as of the date hereof, and the receipt of such payment being hereby acknowledged, the Releasor does waive, release and discharge the Releasees from any and all causes of action, suits, debts, claims, liens, accounts, bonds, contracts, damages, encumbrances, judgments and demands whatsoever and of every kind and nature, in law or in equity, which against the Releasees, jointly and/or severally, the Releasor ever had, now has, or might hereafter have, relating directly or indirectly to the work, labor, services, materials and/or equipment furnished and/or performed at the Project site, or incorporated or to be incorporated in said Project, as of the date hereof, including but not in any manner limited to the right of the Releasor to assert, file or claim any lien or other security interest in or upon the real and/or personal property of the Releasees.

5. The Releasor hereby agree to defend, indemnify, and hold harmless the Releasees from any and all damages, costs, expenses, demands, suits, liens and legal fees, directly or indirectly relating to any claim for compensation by any other party for work, labor, services, materials and/or equipment furnished and/or performed at the Project site, or which should have been so furnished or performed, or incorporated or to be incorporated in said Project, as of the date hereof, by the

Releasor or by any other party claiming any interest or right through the Releasor.

6. The Releasor hereby certifies and warrants that it has fully paid for all work, labor, services, materials and/or equipment provided to it in connection with the Project and/or any contract relating thereto.

7. The Releasor hereby grants to the Releasees the right to review and audit any and books and records of the Releasor at any time for verification.

**IN WITNESS WHEREOF** this instrument has been executed this \_\_\_\_ day of \_\_\_\_\_, 20\_\_.

\_\_\_\_\_  
Contractor

By:\_\_\_\_\_

\_\_\_\_\_  
(Print Name)

\_\_\_\_\_  
(Title)

STATE OF NEW YORK    )  
                                  ) SS:  
COUNTY OF ESSEX     )

I, \_\_\_\_\_, being duly sworn, depose and say that: I reside at \_\_\_\_\_, \_\_\_\_\_, and I hereby sign this instrument under penalty of perjury; I am the of the Releasor identified herein; I am fully authorized to execute this instrument on behalf of the Releasor; and I hereby affirm that the statements contained in this instrument are true and correct.

\_\_\_\_\_  
Vendor/Releasor Agent Sign Here

Sworn to before me this \_\_\_\_\_  
day of \_\_\_\_\_, 20\_\_.

\_\_\_\_\_  
Notary Public

**CONTRACTORS AFFIDAVIT RELATIVE TO FINAL PAYMENT**

PROJECT: \_\_\_\_\_

OWNER: \_\_\_\_\_ ESSEX COUNTY \_\_\_\_\_

CONTRACTOR: \_\_\_\_\_

W I T N E S S E T H :

The herein below designated representative of the Contractor being duly sworn deposes and states:

1. He is duly authorized to sign this Affidavit on behalf of the Contractor.
2. That all payrolls, bills for materials and equipment, and other indebtedness connection with the work for which the County or the County's property might be responsible or encumbered have been paid or otherwise satisfied and there remain no further indebtedness or bills outstanding.
3. Attached hereto and made a part hereof is a valid certificate of insurance evidencing that insurance required by the contract documents will remain in full force after final payment is currently in effect and will not be cancelled or allowed to expire until at least 30 days prior written notice has been given to the owner.
4. Contractor knows of no substantial reason that the insurance will not be renewable to cover the period required by the contract documents.
5. Attached hereto and made a part hereof at Schedule B is a detailed list of all sub-contractors and material suppliers.
6. Contractor warrants and represents that all sub-contractors, material suppliers and fringe benefit trust funds for employees of contractor and sub-contractors on the portion of the project encompassed by the work, as well as all workers and persons employed in connection therewith have been paid in full for all labor and work and materials furnished.
7. Contractor releases and waives any and all public improvement lien rights which contractor has against the County.

**IN WITNESS WHEREOF**, deponent has executed this document on \_\_\_\_ day of \_\_\_\_

\_\_\_\_\_, 20\_\_\_\_.

\_\_\_\_\_  
Contractor

By:\_\_\_\_\_

\_\_\_\_\_  
(Print Name)

\_\_\_\_\_  
(Title)

STATE OF NEW YORK     )  
                                  ) SS:  
COUNTY OF ESSEX     )

I, \_\_\_\_\_, being duly sworn, depose and say that: I reside at \_\_\_\_\_, and I hereby sign this instrument under penalty of perjury; I am the of the Releasor identified herein; I am fully authorized to execute this instrument on behalf of the Releasor; and I hereby affirm that the statements contained in this instrument are true and correct.

\_\_\_\_\_  
Vendor/Releasor Agent Sign Here

Sworn to before me this \_\_\_\_  
day of \_\_\_\_\_, 20\_\_\_\_.

\_\_\_\_\_  
Notary Public

SUBCONTRACTOR/SUPPLIER PROGRESS PAYMENT  
WAIVER, RELEASE AND DISCHARGE

PROJECT: \_\_\_\_\_

OWNER: \_\_\_\_\_ ESSEX COUNTY

CONTRACTOR: \_\_\_\_\_

SUBCONTRACTOR/SUPPLIER: \_\_\_\_\_

W I T N E S S E T H :

The above-named Subcontractor/Supplier, hereinafter referred to as the "Releasor", does, for and on behalf of itself, its, successors, assigns and all parties claiming any interest or right through the Releasor, hereby warrants, covenants and agrees as follows:

1. Releasor is/was a subcontractor/supplier to the Contractor above-named relative to the above-referenced Project pursuant to a contract or other relationship for the performing and/or furnishing of work, labor, services, materials and/or equipment at the Project site or to be incorporated in said Project.
2. Whenever the term "Releasor" is used in this instrument such term shall mean: (a) the above-named Subcontractor/Supplier, its' successors and assigns; (b) any and all sureties and all other guarantors of the Releasor on any payment, performance, labor and/or material bond or other undertaking; (c) all parties claiming any interest or right through the Releasor; and (d) the respective officers, directors, principals, shareholders, agents, employees and attorneys of (a), (b) and (c).
3. Whenever the term "Releasees" is used in this instrument such term shall mean: (a) the above-named Contractor and all of its, sureties and other guarantors on any payment, performance, labor and/or material bond or other undertaking; (b) the abovenamed Owner, its, successors and assigns; (c) the Project Architect/Engineer; and (d) the respective officers, directors, principals, shareholders, agents, employees and attorneys of (a), (b) and (c).
4. For and in consideration of the sum of \$ \_\_\_\_\_, and other good and valuable consideration, which sum is acknowledged as being the full and total amount due or allegedly due or owing from the Releasees to the Releasor as of the date hereof, and the receipt of such payment being hereby acknowledged, the Releasor does waive, release and discharge the Releasees from any and all causes of action, suits, debts, claims, liens, accounts, bonds, contracts, damages, encumbrances, judgments and demands whatsoever and of every kind and nature, in law or in equity, which against the Releasees, jointly and/or severally, the Releasor ever had, now has, or might hereafter have, relating directly or indirectly to the work, labor, services, materials and/or equipment furnished and/or performed at the Project site, or incorporated or to be incorporated in said Project, as of the date hereof, including but not in any manner limited to the right of the Releasor to assert, file or claim any lien or other security interest in or upon the real and/or personal property of the Releasees.
5. The Releasor hereby agree to defend, indemnify, and hold harmless the Releasees from any and all damages, costs, expenses, demands, suits, liens and legal fees, directly or indirectly relating to any claim for compensation by any other party for work, labor, services, materials and/or

\_\_\_\_\_  
Notary Public

SUBCONTRACTOR/SUPPLIER FINAL WAIVER, RELEASE AND DISCHARGE

PROJECT: \_\_\_\_\_

OWNER: \_\_\_\_\_ ESSEX COUNTY \_\_\_\_\_

CONTRACTOR: \_\_\_\_\_

SUBCONTRACTOR/SUPPLIER: \_\_\_\_\_

W I T N E S S E T H :

The above-named Subcontractor/Supplier, hereinafter referred to as the "Releasor", does, for and on behalf of itself, its, successors, assigns and all parties claiming any interest or right through the Releasor, hereby warrants, covenants and agrees as follows:

1. Releasor is/was a subcontractor/supplier to the Contractor above-named relative to the above-referenced Project pursuant to a contract or other relationship for the performing and/or furnishing of work, labor, services, materials and/or equipment at the Project site or to be incorporated in said Project.

2. Whenever the term "Releasor" is used in this instrument such term shall mean: (a) the above-named Subcontractor/Supplier, its' successors and assigns; (b) any and all sureties and all other guarantors of the Releasor on any payment, performance, labor and/or material bond or other undertaking; (c) all parties claiming any interest or right through the Releasor; and (d) the respective officers, directors, principals, shareholders, agents, employees and attorneys of (a), (b) and (c).

3. Whenever the term "Releasees" is used in this instrument such term shall mean: (a) the above-named Contractor and all of its, sureties and other guarantors on any payment, performance, labor and/or material bond or other undertaking; (b) the abovenamed Owner, its, successors and assigns; (c) the Project Architect/Engineer; and (d) the respective officers, directors, principals, shareholders, agents, employees and attorneys of (a), (b) and (c).

4. For and in consideration of the sum of \$\_\_\_\_\_, and other good and valuable consideration, which sum is acknowledged as being the full, final and total amount due or allegedly due or owing from the Releasees to the Releasor as of the date hereof, and the receipt of such payment being hereby acknowledged, the Releasor does waive, release and discharge the Releasees from any and all causes of action, suits, debts, claims, liens, accounts, bonds, contracts, damages, encumbrances, judgments and demands whatsoever and of every kind and nature, in law or in equity, which against the Releasees, jointly and/or severally, the Releasor ever had, now has, or might hereafter have, relating directly or indirectly to the work, labor, services, materials and/or equipment furnished and/or performed at the Project site, or incorporated or to be incorporated in said Project, as of the date hereof, including but not in any manner limited to the right of the Releasor to assert, file or claim any lien or other security interest in or upon the real and/or personal property of the Releasees.

5. The Releasor hereby agree to defend, indemnify, and hold harmless the Releasees from any and all damages, costs, expenses, demands, suits, liens and legal fees, directly or indirectly relating to any claim for compensation by any other party for work, labor, services, materials and/or equipment furnished and/or performed at the Project site, or which should have been so furnished or performed, or incorporated or to be incorporated in said Project, as of the date hereof, by the Releasor or by any other party claiming any interest or right through the Releasor.

6. The Releasor hereby certifies and warrants that it has fully paid for all work, labor, services, materials and/or equipment provided to it in connection with the Project and/or any contract relating thereto.

7. The Releasor hereby grants to the Releasees the right to review and audit any and books and records of the Releasor at any time for verification.

**IN WITNESS WHEREOF** this instrument has been executed this \_\_\_\_ day of \_\_\_\_  
\_\_\_\_\_, \_\_\_\_\_.

\_\_\_\_\_  
Releasor

By: \_\_\_\_\_

\_\_\_\_\_  
(Print Name)

\_\_\_\_\_  
(Title)

STATE OF NEW YORK    )  
                                      ) SS:  
COUNTY OF ESSEX     )

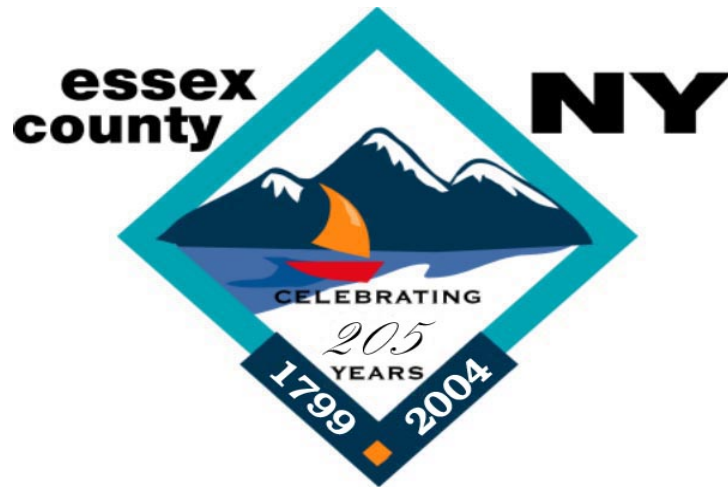
I, \_\_\_\_\_, being duly sworn, depose and say that: I reside at \_\_\_\_\_, and I hereby sign this instrument under penalty of perjury; I am the of the Releasor identified herein; I am fully authorized to execute this instrument on behalf of the Releasor; and I hereby affirm that the statements contained in this instrument are true and correct.

\_\_\_\_\_  
Vendor/Releasor Agent Sign Here

Sworn to before me this \_\_\_\_  
day of \_\_\_\_\_, 20\_\_.

\_\_\_\_\_  
Notary Public

## APPENDIX E



### **ESSEX COUNTY**

#### ***Office of the Purchasing Agent***

7551 Court Street, P.O. Box 217

Elizabethtown, NY 12932

518-873-3330/Fax 518-873-3339

## GENERAL SPECIFICATIONS FOR PROCUREMENT CONTRACTS

Adopted May 20, 1999.

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**PART I**  
***General Provisions***

**1. APPLICABILITY** The terms and conditions set forth herein are expressly incorporated in and applicable to all procurements and resulting procurement contracts let by the Office of the Essex County Purchasing Agent where incorporated by reference in its Bid Documents. The provisions herein shall govern such procurement or contract unless expressly modified or amended by the terms of a Bid Specifications, or a negotiated Contract/Clarification document, if any. Captions are intended as descriptive and are not intended to limit or otherwise restrict the terms and conditions set forth herein.

**2. GOVERNING LAW** The laws of the State of New York shall govern and apply to the procurement, any resulting contract and for determinations in a court of competent jurisdiction in New York of any and all disputes, litigation or interpretations arising from or connected with the procurement or contract, except where expressly superseded in a specific contract letting or where the Federal supremacy clause requires otherwise. These specifications are modeled after and upon the specifications developed and used by the New York State Office of General Services for procurements by New York State.

**3. APPENDIX A / INSURANCE** The mandatory terms for all Essex County contracts are expressly incorporated herein and in all bid documents and/or resulting contracts, such terms being set forth in Appendix A (*Standard Clauses for Essex County Contracts*). Insurance requirements are also attached and incorporated herein.

**4. ETHICS COMPLIANCE** All Bidders/Contractors and their employees must comply with the requirements of the *General Municipal Law*, the *Public Officers Law*, and other State codes, rules and regulations establishing ethical standards for the conduct of business with New York State and/or municipalities. In signing the bid, Bidder certifies full compliance with those provisions for any present or future dealings, transactions, sales, contracts, services, offers, relationships, etc., involving Essex County and/or its employees. Failure to comply with those provisions may result in disqualification from the bidding process, termination of contract, and/or other civil or criminal proceedings as required by law.

**5. CONFLICT OF CLAUSES** Conflicts between procurement or contract documents shall be resolved in the following order of precedence:

(a) **Appendix A** (*Standard Clauses for Essex County Contracts*)

(b) **Contract/Clarification Documents** Writing(s) setting forth the final agreements, clarifications, terms, statement of work and/or modifications between the Bid Documents and Contractors Bid or Mini-bid.

(c) **Bid Documents** - Bid Specifications prepared by Essex County

(d) **Contractors Bid or Proposal**

**6. DEFINITIONS**

Terms used in this document shall have the following meanings:

**AGENCY OR AGENCIES** Essex County, New York, acting by or through one or more departments, boards, commissions, offices or institutions of Essex County.

**ANCILLARY PRODUCT:** Product which is purchased or licensed on a restricted use basis in conjunction with the principal manufacturers Product being acquired (e.g. may be used only in combination, or by educational institutions for research use).

**AUTHORIZED USER(S)** Agencies, or any other entity authorized by Essex County to participate in Essex County procurement contracts (including but not limited to political subdivisions, public authorities, school districts and public benefit corporations), provided that each such Agency or other entity shall be held solely responsible for liabilities or payments due as a result of its participation. The term "Authorized User" shall include "Licensees."

**BID OR BID PROPOSAL** An offer or proposal submitted by a Bidder to furnish a described product or a solution or means of achieving a practical end, at a stated price for the stated contract term.

**BIDDER** Any individual or other legal entity, (including but not limited to partnership, firm or corporation) which submits a bid in response to a Bid Solicitation. The term Bidder shall also include "offeror" and/or "contractor".

**BID DOCUMENTS** Writings setting forth the scope, terms, conditions and technical specifications for a procurement of Product. Such writings typically include, but are not limited to: Invitation for Bids (IFB), Request for Quotation (RFQ), Request for Proposals (RFP), addenda or amendments thereto, and terms and conditions which are incorporated by reference, e.g. Appendix A (*Standard Clauses for NYS Contracts*), Appendix B, (*General Specifications*). Where these General Specifications are incorporated in negotiated contracts which have not been competitively bid, the term "Bid Documents" shall be deemed to refer to the terms and conditions set forth in the negotiated contract.

**BID SOLICITATION** The notice or advertisement of an intent to purchase a specified Product by or on behalf of Authorized User(s).

**BID SPECIFICATION** A written description drafted by Essex County or an authorized user setting forth the specific terms of the intended procurement, which may include: physical or functional characteristics, the nature of a commodity or construction item, any description of the work to be performed, Products to be provided, the necessary qualifications of the Bidder, the capacity and capability of the Bidder to successfully carry out the proposed contract, or the process for achieving specific results and/or anticipated outcomes or any other requirement necessary to perform work. Where these *General Specifications* are incorporated in negotiated contracts which have not been competitively bid, the term "Bid Specifications" shall be deemed to refer to the terms and conditions set forth in the negotiated contract.

**CONTRACT** The writing(s) which contain the agreement of the Commissioner and the Bidder/Contractor setting forth the total legal obligation between the parties as determined by applicable rules of law.

**CONTRACT AWARD NOTIFICATION** An announcement to Authorized Users that a contract has been established.

**CONTRACTOR** Any successful Bidder(s) to whom a contract has been awarded by the Purchasing Agent. The term "Contractor" includes Licensors.

**COUNTY** Essex County, New York.

**EMERGENCY** An urgent and unexpected requirement where health and public safety or the conservation of public resources is at risk.

**ERROR CORRECTIONS** Machine executable software code furnished by Contractor which corrects the Product so as to conform to the applicable warranties, performance standards and/or obligations of the Contractor.

**GROUP** A classification of Product (commodities, services or technology).

**INVITATION FOR BIDS (IFB)** A type of Bid Document which is most typically used where requirements can be stated and award will be made to the lowest responsive bid submitted by the most responsible Bidder(s).

**LATE BID** For purposes of bid openings held and conducted by the Essex County Purchasing Agent, a bid not received in such place as may be designated on the Bid Specifications or in the Office of the Essex County Purchasing Agent, at or before the date and time established in the Bid Specifications for the bid opening.

**LETTER OF ACCEPTANCE** A letter to the successful Bidder(s) indicating acceptance of its bid in response to a solicitation. Unless otherwise specified, the issuance of a Letter of Acceptance forms a contract but is not an order for Product, and Contractor should not take any action with respect to actual contract deliveries except on the basis of Purchase Orders sent from Authorized User(s).

**LICENSED SOFTWARE** Software transferred upon the terms and conditions set forth in the Contract. "Licensed Software" includes ancillary products, error corrections, upgrades, enhancements or new releases, and any deliverables due under a maintenance or service contract (e.g. patches, fixes, PTFs, programs, code or data conversion, or custom programming).

**LICENSEE** The County, or one or more Agencies or Authorized Users who acquire Product from Contractor by execution of a license in accordance with the terms and conditions of the Contract; provided that, for purposes of compliance with an individual license, the term "Licensee" shall be deemed to refer separately to the individual Authorized User(s) on whose behalf the license was executed who took receipt of the Product, and who shall be solely responsible for performance and liabilities incurred.

**LICENSOR** A Contractor who transfers rights in proprietary Product to Authorized Users in accordance with the rights and obligations specified in the Contract.

**MULTIPLE AWARD** A determination and award of a contract in the discretion of the Purchasing Agent to more than one responsive and responsible Bidder who meets the requirements of a specification, where the multiple award is made on the grounds set forth in the Bid Document in order to satisfy multiple factors and needs of Authorized Users (e.g., complexity of items, various manufacturers, differences in performance required to accomplish or produce required end results, production and distribution facilities, price, compliance with delivery requirements, geographic location or other pertinent factors).

**NEW PRODUCT RELEASES (Product Revisions)** Any commercially released revisions to the version of a Product as may be generally offered and available to Authorized Users. New releases involve a substantial revision of functionality from a previously released version of the Product.

**PROCUREMENT RECORD** Documentation by the Essex County Purchasing Agent of the decisions made and approach taken during the procurement process.

**PRODUCT** A deliverable under any Bid or Contract which may include commodities (including printing), services and/or technology. The term "Product" includes Licensed Software.

**PURCHASE ORDER** The County's fiscal form or format which is used when making a purchase.

**REQUEST FOR PROPOSALS (RFP)** A type of Bid Document which is used for procurements where factors in addition to cost are considered and weighted in awarding the contract and where the method of award is "best value", as defined by the County's Procurement Policy and New York Law.

**REQUEST FOR QUOTATION (RFQ)** A type of Bid Document which can be used when a formal bid opening is not required (e.g. discretionary, sole source, single source or emergency purchases).

**RESPONSIBLE BIDDER** A Bidder that is determined to have skill, judgment and integrity, and that is found to be competent, reliable, experienced and qualified financially, as determined by the Purchasing Agent.

**RESPONSIVE BIDDER** A Bidder meeting the specifications or requirements prescribed in the Bid Document or solicitation, as determined by the Purchasing Agent.

**SINGLE SOURCE** A procurement where two or more offerors can supply the required Product, and the Purchasing Agent may award the contract to one Bidder over the other.

**SOLE SOURCE** A procurement where only one offeror is capable of supplying the required Product.

### ***Bid Submission***

**7. BID LANGUAGE & CURRENCY** All offers (tenders), and all information and Product documentation required by the solicitation or provided as explanation thereof, shall be submitted in English. All prices shall be expressed, and all payments shall be made, in United States Dollars (\$ US). Any offers (tenders) submitted which do not meet the above criteria will be rejected.

**8. BID OPENING** Bids may, as applicable, be opened publicly. The Purchasing Agent reserves the right at anytime to postpone or cancel a scheduled bid opening.

**9. BID SUBMISSION** The submission of a bid will be construed to mean that the bidder is fully informed as to the extent and character of the supplies, material, or equipment required and a representation that the bidder can furnish the supplies, materials, or equipment satisfactorily in complete compliance with the specifications.

All bids shall comply with the following:

(a) Bids are to be packaged, sealed and submitted to the location stated in the Bid Specifications. Bidders are solely responsible for timely delivery of their bids to the location set forth in the Bid Specifications prior to the stated bid opening date/time.

(b) A bid return envelope, if provided with the Bid Specifications, should be used with the bid sealed inside. If the bid response does not fit into the envelope, the bid envelope should be taped onto the outside of the sealed box or package with the bid inside. If using a commercial delivery company which requires use of their shipping package or envelope, Bidders sealed bid, labeled as detailed below, should be placed within the shippers sealed envelope to ensure that the bid is not prematurely opened. All bids must have a label on the outside of the package or shipping container outlining the following information:

**“BID ENCLOSED”** (bold print, all capitals)  
IFB or RFP Number  
Bid Submission date and time

In the event that a Bidder fails to provide such information on the return bid envelope or shipping material, the County reserves the right to open the shipping package or envelope to determine the proper bid number or Product group, and the date and time of bid opening. Bidder shall have no claim against the receiving entity arising from such opening and such opening shall not affect the validity of the bid or the procurement. Notwithstanding the County's right to open a bid to ascertain the foregoing information, Bidder assumes all risk of late delivery associated with the bid not being identified, packaged or labeled in accordance with the foregoing requirements.

**10. FACSIMILE SUBMISSIONS** Unless specifically authorized by the terms of the Bid Specifications,

facsimile bids ARE PROHIBITED AND SHALL NOT BE ACCEPTED. Where the bid specifications are silent as to the submission of bids by facsimile, no fax bids shall be permitted or accepted. Where specifically authorized, the following rules and conditions apply:

- (a) FAX number(s) indicated in the Bid Specifications must be used.
- (b) Access to the facsimile machine(s) is on a "first come, first serve" basis, and the Purchasing Agent bears no liability or responsibility and makes no guarantee whatsoever with respect to the Bidders access to such equipment at any specific time.
- (c) Bidders are solely responsible for submission and receipt of the entire facsimile bid by the Essex County Purchasing Agent prior to bid opening and must include on the first page of the transmission the total number of pages transmitted in the bid, including the cover page. Incomplete, ambiguous or unreadable transmissions in whole or in part may be rejected at the sole discretion of the Purchasing Agent.
- (d) Facsimile bids are fully governed by all conditions outlined in the Bid Documents and must be submitted on forms or in the format required in the Bid Specifications, including the executed signature page and acknowledgment.

**11. AUTHENTICATION OF FACSIMILE BIDS** The act of submitting a bid by facsimile transmission, when, as and if specifically authorized, including an executed signature page, shall be deemed a confirming act by Bidder which authenticates the signing of the bid.

**12. LATE BIDS** Any bid received at the specified location after the time specified will be considered a late bid. A late bid shall not be considered for award unless acceptance of the late bid is in the best interests of Essex County and either (a) no timely bids meeting the requirements of the Bid Documents are received, or (b) in the case of a multiple award, an insufficient number of timely bids were received to satisfy the multiple award. Delays in United States mail deliveries or any other means of transmittal, including couriers or agents of Essex County, shall not excuse late bid submissions. Otherwise, all late bids will not be considered and will be returned unopened to the bidder. The bidder assumes the risk of any delay in the mail or in the handling of the mail by employees of the County. Whether sent by mail or by means of personal delivery, the bidder assumes responsibility for having his bid deposited on time at the place specified.

**13. BID CONTENTS** Bids must be complete and legible. All bids must be signed. All information required by the Bid Specifications must be supplied by the Bidder on the forms or in the format specified in the Bid Specifications. No alteration, erasure or addition is to be made to the Bid Documents. Changes may be ignored by the Purchasing Agent or may be grounds for rejection of the bid. Changes, corrections and/or use of white-out in the bid or Bidders response portion of the Bid Document must be initialed by an authorized representative of the Bidder. Bidders are cautioned to verify their bids before submission, as amendments to bids or requests for withdrawal of bids received by the Purchasing Agent after the time specified for the bid opening, may not be considered. All lines must have an indication of bidders response whether it be "o", "N/A" or a dollar figure. All lines must be filled in to indicate bidder acknowledgment of the request. Bids that do not have all applicable lines filled in on bid sheet may be disqualified as a non-responsive bid. The Purchasing Agent shall not assume there is "no charge" when lines are left empty.

Bidders must submit with bid detailed specifications, circulars, warranties and all necessary data on items he proposes to furnish. This information must show clearly that the item offered meets all detailed specifications herein. The Purchasing Agent reserves the right to reject any bid if its compliance with the specifications is not clearly evident. If item offered differs from the provisions contained in these specifications such differences must be explained in detail, and bid will receive careful consideration if such deviations do not depart from the intent of these specifications and are to the best interests of Essex County as interpreted by the Purchasing Agent of Essex County.

It is the responsibility of the bidder to offer a product that meets the specifications of the manufacturer model as listed.

All stock electrical items must be listed and approved by Underwriters' Laboratories, Inc.

**14. EXTRANEIOUS TERMS** Bids must conform to the terms set forth in the Bid Documents, as extraneous terms or material deviations (including additional, inconsistent, conflicting or alternative terms) may render the bid non-responsive and may result in rejection of the bid.

**Extraneous term(s) submitted on standard, pre-printed forms (including but not limited to: product literature, order forms, license agreements, contracts or other documents) which are attached or referenced with the submission shall not be considered part of the bid, but shall be deemed included for informational or promotional purposes only.**

Only those extraneous terms which meet all the following requirements will be considered as having been submitted as part of the Bid:

- (a) Each proposed extraneous term (addition, counter-offer, deviation, or modification) must be specifically enumerated in a writing which is not part of a pre-printed form; and
- (b) The writing must identify the particular specification requirement (if any) which Bidder rejects or proposes to modify by inclusion of the extraneous term; and
- (c) The Bidder shall enumerate the proposed addition, counteroffer, modification or deviation from the Bid Document, and the reasons therefore.

No extraneous term(s), whether or not deemed "material," shall be incorporated into a contract unless the Purchasing Agent expressly accepts each such term(s) in writing. Acceptance and/or processing of the Bid shall not constitute such written acceptance of Extraneous Term(s).

**15. CONFIDENTIAL / TRADE SECRET MATERIALS** Confidential, trade secret or proprietary materials as defined by the laws of the State of New York must be clearly marked and identified as such upon submission. Bidders/Contractors intending to seek an exemption from disclosure of these materials under the *Freedom of Information Law* must request the exemption in writing, setting forth the reasons for the claimed exemption, at the time of submission. Acceptance of the claimed materials does not constitute a determination on the exemption request, which determination will be made in accordance with statutory procedures.

**16. PREVAILING WAGE RATES - Public Works and Building Services Contracts** If any portion of work being bid is subject to the prevailing wage rate provisions of Labor Law, the following shall apply:

**(a) "Public Works" and "Building Services" – Definitions**

**i. Public Works** *Labor Law* Article 8 applies to contracts for public improvement in which laborers, workers or mechanics are employed on a "public works" project (distinguished from public "procurement" or "service" contracts). The State, a public benefit corporation, a municipal corporation (including a school district), or a commission appointed by law must be a party to the contract. The wage and hours provision applies to any work performed by contractor or subcontractors.

**ii. Building Services** *Labor Law* Article 9 applies to contracts for building service work over \$1,500 with a public agency, which 1) involve the care or maintenance of an existing building, or 2) involve the transportation of office furniture or equipment to or from such building, or 3) involve the transportation and delivery of fossil fuel to such building, and 4) the principal purpose of which is to furnish services through use of building service employees.

**(b) Prevailing Wage Rate Applicable to Bid Submissions** A copy of the applicable prevailing wage rates to be paid or provided are attached to this solicitation. Bidders must submit bids which are based upon the prevailing hourly wages, and supplements in cash or equivalent benefits (i.e., fringe benefits and any cash or non-cash compensation which are not wages, as defined by law) that equal or exceed the applicable prevailing wage rate(s) for the location where the work is to be performed. Where the Bid Documents require the Bidder to enumerate hourly wage rates in the bid, Bidders may not submit bids based upon hourly wage rates and supplements below the applicable prevailing wage rates as established by the New York State Department of Labor. **Bids which fail to comply with this requirement will be disqualified.**

**(c) Wage Rate Payments / Changes During Contract Term** The wages to be paid under any resulting contract shall not be less than the prevailing rate of wages and supplements as set forth by law. It is required that the Contractor keep informed of all changes in the Prevailing Wage Rates during the contract term that apply to the classes of individuals supplied by the contractor on any projects which result from this contract which are subject to the provisions of the *Labor Law*. Contractor is solely liable for and must pay such required prevailing wage adjustments during the contract term as required by law.

**(d) Public Posting & Certified Payroll Records** In compliance with Article 8, Section 220 of the *Labor Law*, as amended by Chapter 565 of the Laws of 1997:

**i. Posting** The Contractor must publicly post on the work site, in a prominent and accessible place, a legible schedule of the prevailing wage rates and supplements.

**ii. Payroll Records** Contractors and sub-contractors must keep original payrolls or transcripts subscribed and affirmed as true under the penalties of perjury as required by law. For public works contracts over \$25,000 where the contractor maintains no regular place of business in New York State, such records must be kept at the work site. For building services contracts, such records must be kept at the work site while work is being performed.

**iii. Submission of Certified Payroll Transcripts for Public Works Contracts Only** Contractors and sub-contractors on public works projects must submit monthly payroll transcripts to Essex County which has prepared or directs the preparation of the plans and specifications for a public works project, as set forth in the Bid Specifications. For mini-bid solicitations, the payroll records must be submitted to the entity preparing the agency mini-bid project specification. For "agency specific" bids, the payroll records should be submitted to the entity issuing the purchase order. For all other Essex County procurement contracts, such records should be submitted to the individual agency issuing the purchase order(s) for the work. Upon mutual agreement of the Contractor and Essex County, the form of submission may be submitted in a specified disk format acceptable to the Department of Labor so long as: 1) the contractor/subcontractor retains the original records; and, (2) an original signed letter by a duly authorized individual of the contractor or subcontractor attesting to the truth and accuracy of the records accompanies the disk. **This provision does not apply to building services contracts.**

**iv. Records Retention** Contractors and subcontractors must preserve such certified transcripts for a period of three years from the date of completion of work on the awarded contract.

**(e) Days Labor - Defined for Article 8, Public Works (For Purposes of Article 8 of the Labor Law)** No laborer, worker or mechanic in the employ of the contractor, subcontractor or other person doing or contracting to do all or part of the work contemplated by the contract shall be permitted or required to work more than eight hours in any one calendar day or more than five days in any one week except in cases of extraordinary emergency including fire, flood or danger to life or property. "Extraordinary emergency" shall be deemed to include situations in which sufficient laborers, workers and mechanics cannot be employed to carry on public work expeditiously as a result of such

restrictions upon the number of hours and days of labor and the immediate commencement or prosecution or completion without undue delay of the public work is necessary in the judgment of the Essex County Purchasing Agent for the preservation of the contract site or for the protection of the life and limb of the persons using the contract site.

## **17. TAXES**

(a) Unless otherwise specified in the Bid Specifications or set forth in this clause, the quoted bid price includes all taxes applicable to the transaction.

(b) Purchases made by Essex County and certain non-County Authorized Users are exempt from New York State and local sales taxes and, with certain exceptions, federal excise taxes. To satisfy the requirements of the New York State Sales tax exemption, either the Purchase Order issued by a County Agency or the invoice forwarded to authorize payment for such items will be sufficient evidence that the sale by the Contractor was made to the County, an exempt organization under Section 1116 (a) (1) of the *Tax Law*. Non-County Authorized Users must offer their own proof of exemption where required. No person, firm or corporation is, however, exempt from paying the State Truck Mileage and Unemployment Insurance or Federal Social Security taxes, which remain the sole responsibility of the Bidder/Contractor. For tax free transactions under the Internal Revenue Code, the Essex County Registration Number is 14 6002889.

(c) Purchases by Authorized Users other than Essex County may be subject to such taxes, and in those instances the tax should be computed based on the bid price and added to the invoice submitted to such entity for payment.

**18. EXPENSES PRIOR TO AWARD** Essex County is not liable for any costs incurred by a Bidder in the preparation and production of a bid or for any work performed prior to contract award and/or issuance of an approved Purchase Order.

**19. ADVERTISING BID RESULTS** A Bidder in submitting a bid agrees not to use the results therefrom as a part of any commercial advertising without the prior written approval of the Purchasing Agent. In addition to any other sanctions or remedies available to it in law or equity, the Purchasing Agent may suspend from bidding on its requirements or terminate a contract of any Bidder/Contractor who violates the terms of this clause.

## **20. PRODUCT REFERENCES**

(a) **“Or Equal”** On all Bid Specifications the words “or equal” are understood to apply where a copyright brand name, trade name, catalog reference, or patented Product is referenced. References to such specific Product are intended as descriptive, not restrictive, unless otherwise stated. Comparable Product will be considered if proof of compatibility is provided, including appropriate catalog excerpts, descriptive literature, specifications and test data, etc. The Purchasing Agents decision as to acceptance of the Product as equal shall be final.

(b) **Discrepancies in References** In the event of a discrepancy between the model number referenced in the Bid Specifications and the written description of the Products therein which cannot be reconciled, with respect to such discrepancy, then the written description shall prevail.

**21. RECYCLED OR RECOVERED MATERIALS** Upon the conditions specified in the Bid Specifications and in accordance with the laws of the State of New York, Contractors are encouraged to use recycled or recovered materials in the manufacture of Products and packaging to the maximum extent practicable without jeopardizing the performance or intended end use of the Product or packaging unless such use is precluded due to health, welfare, safety requirements or in the Bid

Specifications. Where such use is not practical, suitable, or permitted by the Bid Specifications, Contractor shall deliver new materials in accordance with the "Warranties & Guaranties" set forth below.

Refurbished or remanufactured components or items may only be accepted at the discretion of the Purchasing Agent, or upon the conditions set forth in the Bid Specifications.

Items with recycled, recovered, refurbished or remanufactured content must be identified in the bid or will be deemed new Product.

**22. PRODUCTS MANUFACTURED IN PUBLIC INSTITUTIONS** Bids offering Products which are manufactured or produced in public institutions will be rejected.

## **23. PRICING**

(a) **Unit Pricing** If required by the Bid Specifications, the Bidder should insert the price per unit specified and the price extensions in decimals, not to exceed four places for each item, in the bid. In the event of a discrepancy between the unit price and the extension, the unit price shall govern unless, in the sole judgment of the Purchasing Agent, such unit pricing is obviously erroneous.

(b) **Net Pricing** Prices must be net, including transportation, customs, tariff, delivery and other charges fully prepaid by the Contractor to the destination(s) indicated in the Bid Specifications, subject only to the cash discount. If the award is to be made on another basis, transportation and other charges must be prepaid by the Contractor and added to the invoice as a separate item, unless otherwise required in the Bid Specifications.

(c) **"No Charge" Bid** When bids are requested on a number of Products as a group or Lot, a Bidder desiring to bid "no charge" on a Product in the grouping or Lot must clearly indicate such. Otherwise, such bid may be considered incomplete and be rejected, in whole or in part, at the discretion of the Purchasing Agent.

If a price is written in numbers and alpha, the alpha will govern.

Prices shall be net FOB any point in Essex County, New York. Price quoted shall include all delivery costs. Prices shall be net, including transportation and delivery charges fully prepaid by the successful bidder to destination indicated in the proposal. If award is made on any other basis, transportation charges must be prepaid by the successful bidder and added to the invoice as a separate item. In any case, title shall not pass until items have been delivered and accepted by the County.

## **24. DRAWINGS**

(a) **Drawings Submitted With Bid** When the Bid Specifications require the Bidder to furnish drawings and/or plans, such drawings and/or plans shall conform to the mandates of the Bid Documents and shall, when approved by the Purchasing Agent, be considered a part of the bid and of any resulting contract. All symbols and other representations appearing on the drawings shall be considered a part of the drawing.

(b) **Drawings Submitted During the Contract Term** Where required by the Bid Specifications to develop, maintain and deliver diagrams or other technical schematics regarding the scope of work, Contractor shall be required to develop, maintain, deliver and update such drawings on an ongoing basis at no additional charge. Contractor shall be responsible for updating drawings and plans during the contract term to reflect additions, alterations, and deletions. Such drawings and diagrams shall be delivered to the Authorized

Users representative as required by the Bid Specifications. Where required, Contractor shall furnish to Authorized User in a timely manner the required drawings representing the then current, "as modified" condition of all product included in the scope of work.

**(c) Accuracy of Drawings Submitted** All drawings shall be neat and professional in manner and shall be clearly labeled as to locations and type of product, connections and components. Drawings and diagrams are to be in compliance with accepted drafting standards. Acceptance or approval of such plans shall not relieve the Contractor from responsibility for design or other errors of any sort in the drawings or plans, or from its responsibility for performing as required, furnishing product, services or installation, or carrying out any other requirements of the intended scope of work.

**25. SITE INSPECTION** Where Bidder is required by the Bid Specifications to deliver or install Product, or to service installed product(s) or equipment, Bidder shall be given an opportunity and shall be required to inspect the site prior to submission of the Bid, including environmental or other conditions or pre-existing deficiencies in the installed product, equipment or environment, which may affect Bidders ability to deliver, install or otherwise provide the required product. All inquiries regarding such conditions may only be made in writing. Bidder shall be deemed to have knowledge of any deficiencies or conditions which such inspection or inquiry might have disclosed, and to have included the costs of repair in its bid. Bidder must provide a detailed explanation of work intended to be performed under this clause. Bidder shall be required to remedy any pre-existing deficiencies or conditions at the commencement of the contract term. Reimbursement for the cost of repairing the conditions or deficiencies shall be separately enumerated in the bid.

## **26. SAMPLES**

**(a) Standard Samples** Bid Specifications may indicate that the Product to be purchased must be equal to a standard sample on display in a place designated by the Purchasing Agent and such sample will be made available to the Bidder for examination prior to the opening date. Failure by the Bidder to examine such sample shall not entitle the Bidder to any relief from the conditions imposed by the Bid Documents.

**(b) Bidder Supplied Samples** The Purchasing Agent reserves the right to request from the Bidder/Contractor a representative sample(s) of the Product offered at any time prior to or after award of a contract. Unless otherwise instructed, samples shall be furnished within the time specified in the request. Untimely submission of a sample may constitute grounds for rejection of bid or cancellation of the Contract. Samples must be submitted free of charge and be accompanied by the Bidders name and address, any descriptive literature relating to the Product and a statement indicating how and where the sample is to be returned. Where applicable, samples must be properly labeled with the appropriate bid or Essex County contract reference.

A sample may be held by the Purchasing Agent during the entire term of the contract and for a reasonable period thereafter for comparison with deliveries. At the conclusion of the holding period the sample, where feasible, will be returned as instructed by the Bidder, at the Bidders expense and risk. Where the Bidder has failed to fully instruct the Purchasing Agent as to the return of the sample (i.e. mode and place of return, etc.) or refuses to bear the cost of its return, the sample shall become the sole property of the receiving entity at the conclusion of the holding period.

**(c) Enhanced Samples** When an approved sample exceeds the minimum specifications, all Product delivered must be of the same enhanced quality and identity as the sample. Thereafter, in the event of a Contractors default, the Purchasing Agent may procure a commodity substantially equal to the enhanced sample from other sources, charging the Contractor for any additional costs incurred.

(d) **Conformance with Sample(s)** Submission of a sample (whether or not such sample is tested by, or for, the Purchasing Agent) and approval thereof shall not relieve the Contractor from full compliance with all conditions and terms, performance related and otherwise, specified in the Bid Documents. If in the judgment of the Purchasing Agent the sample or product submitted is not in accordance with the specifications or testing requirements prescribed in the Bid Documents, the Purchasing Agent may reject the bid. If an award has been made, the Purchasing Agent may cancel the contract at the expense of the Contractor.

(e) **Testing** All samples are subject to tests in the manner and place designated by the Purchasing Agent, either prior to or after contract award. Unless otherwise stated in the Bid Specifications, Bidder Samples consumed or rendered useless by testing will not be returned to the Bidder.

**27. ADDENDA / INTERPRETATION** No verbal interpretation of the intent of any of the specifications or other Contract Documents will be made before receipt of bids. Requests for interpretations prior to receipt of bids must be presented, in writing, to the Purchasing Agent, 100 Court Street, P.O. Box 217, Elizabethtown, NY 12932, and to be given consideration must be received by the Purchasing Agent at least seven (7) days prior to the date set for the opening of bids.

Any interpretation, and any additional information or instruction will, if issued, be in the form of a written Addendum or Addenda sent to all holders of Contract Documents at the addresses furnished therefor, at least five (5) days prior to the date of the opening of bids.

Failure of any bidder to receive any Addenda shall not relieve such bidder from any obligation under this bid as submitted. All Addenda so issued shall become a part of the Contract Documents.

### ***Bid Evaluation***

**28. BID EVALUATION** The Purchasing Agent reserves the right to accept or reject any and all bids, or separable portions of offers, and waive technicalities, irregularities, and omissions if the Purchasing Agent determines the best interests of the County will be served. The Purchasing Agent, in his/her sole discretion, may accept or reject illegible, incomplete or vague bids and his/her decision shall be final. A conditional or revocable bid which clearly communicates the terms or limitations of acceptance may be considered and contract award may be made in compliance with the Bidders conditional or revocable terms in the offer.

Where a bidder is requested to submit a bid on individual items and/or on a total sum or sums, the right is reserved to award bids on individual items or on total sums. The County reserves the right to award in whole or in part based on the lowest responsible bid.

The following three items will automatically render a bid unacceptable to Essex County:

- a. Failure to sign bid proposal page.
- b. Failure to include necessary bid deposit (as required).
- c. Failure to sign and submit non-collusive bidding certificate.

It shall be fully understood that any deviations from the inclusion of the above items will be grounds to see the bid as non-compliant and will not be considered for award.

The Purchasing Agent reserves the right to reject such bids, as in his opinion, are incomplete, conditional, obscure, or which contain irregularities of any kind including unbalanced bids. One in which the amount bid for one or more separate items is substantially out of line with the current market prices for the materials and/or work covered thereby.

**29. CONDITIONAL BID** Unless the Bid Specifications provides otherwise, a bid is not rendered non-responsive if the Bidder specifies that the award will be accepted only on all or a specified group of items or Product included in the specification. It is understood that nothing herein shall be deemed to change or alter the method of award contained in the Bid Documents.

**30. CLARIFICATIONS / REVISIONS** Prior to award, the Purchasing Agent reserves the right to seek clarifications, request bid revisions, or to request any information deemed necessary for proper evaluation of bids from all Bidders deemed to be eligible for contract award. Failure to provide requested information may result in rejection of the bid.

**31. PROMPT PAYMENT DISCOUNTS** While prompt payment discounts will not be considered in determining the low bid, the Purchasing Agent may consider any prompt payment discount in resolving bids which are otherwise tied. However, any notation indicating that the price is net, (e.g. net 30 days), shall be understood to mean only that no prompt payment discount is offered by the Bidder. The imposition of service, interest, or other charges, except pursuant to the provisions of Article 11\_A of the *State Finance Law*, which are applicable in any case, may render the bid non-responsive and may be cause for its rejection.

**32. EQUIVALENT OR IDENTICAL BIDS** In the event two offers are found to be substantially equivalent, price shall be the basis for determining the award recipient. If two or more Bidders submit substantially equivalent bids as to pricing or other factors, the decision of the Purchasing Agent to award a contract to one or more of such Bidders shall be final.

**33. PERFORMANCE QUALIFICATIONS** The Purchasing Agent reserves the right to investigate or inspect at any time whether or not the Product, qualifications or facilities offered by the Bidder/Contractor meet the requirements set forth in the Bid Documents. Contractor shall at all times during the contract term remain responsible and responsive. A Bidder/Contractor must be prepared, if requested by the Purchasing Agent, to present evidence of experience, ability and financial standing, as well as a statement as to plant, machinery and capacity of the manufacturer for the production, distribution and servicing of the Product bid. If the Purchasing Agent determines that the conditions and terms of the Bid Documents or Contract are not complied with, or that items or Product proposed to be furnished do not meet the specified requirements, or that the qualifications, financial standing or facilities are not satisfactory, or that performance is untimely, the Purchasing Agent may reject such bid or terminate the contract. Nothing in the foregoing shall mean or imply that it is obligatory upon the Purchasing Agent to make an investigation either before or after award of a contract, but should such investigation be made, it in no way relieves the Bidder/Contractor from fulfilling all requirements and conditions of the contract.

**34. DISQUALIFICATION FOR PAST PERFORMANCE** Bidder may be disqualified from receiving awards if Bidder, or anyone in Bidders employment, has previously failed to perform satisfactorily in connection with public bidding or contracts.

**35. QUANTITY CHANGES PRIOR TO AWARD** The Purchasing Agent reserves the right, at any time prior to the award of a specific quantity contract, to alter in good faith the quantities listed in the Bid Specifications to conform with requirements. In the event such right is exercised, the lowest responsible Bidder meeting specifications will be advised of the revised requirements and afforded an opportunity to extend or reduce its bid price in relation to the changed quantities. Refusal by the low Bidder to so extend or reduce its bid price may result in the rejection of its bid and the award of such contract to the lowest responsible Bidder who accepts the revised requirements.

**36. RELEASE OF BID EVALUATION MATERIALS** Requests concerning the evaluation of bids may be submitted under the *Freedom of Information Law*. Information, other than the Bid Tabulation, shall be released as required by law after contract award. Written requests should be directed to the Purchasing Agent.

**37. TIME FRAME FOR OFFERS** The Purchasing Agent reserves the right to make awards within sixty (60) days after the date of the bid opening, during which period, bids must remain firm and cannot be withdrawn. If, however, an award is not made within the sixty (60) day period, bids shall remain firm until such later time as either a contract is awarded or the Bidder delivers to the Purchasing Agent written notice of the withdrawal of its bid. Any bid which expressly states therein that acceptance must be made within a shorter specified time, may at the sole discretion of the Purchasing Agent, be accepted or rejected.

## **TERMS & CONDITIONS**

**38. CONTRACT CREATION / EXECUTION** Except as may be otherwise provided by law or by the Purchasing Agent, upon receipt of all required approvals a Contract shall be deemed executed and created with the successful Bidder(s) upon the Purchasing Agent's mailing or electronic communication to the address on the bid of (a) a Letter of Acceptance and (b) a fully executed contract, or (c) a Purchase Order authorized by the Purchasing Agent.

**39. COMPLIANCE WITH LAWS, ETC.** The Bidder shall comply with all the provisions of the laws of the State of New York and of the United States of America which affect municipalities and municipal contracts, and any and all State and Federal rules and regulation, and of amendments and additions thereto, insofar as the same shall be applicable to any contract awarded hereunder with the same force and effect as if set forth at length herein. The Bidder's special attention is called to the following laws: *General Municipal Law* Section 1-03-d, *State Finance Law* Section 167-b prohibiting the purchase of tropical hardwood products, and the New York State Public Employee Safety & Health Act of 1980.

**40. MODIFICATION OF TERMS** The terms and conditions set forth in the Contract shall govern all transactions by Authorized User(s) under this Contract. The Contract may only be modified or amended upon mutual written agreement of the Purchasing Agent and Contractor.

The Contractor may, however, offer Authorized User(s) more advantageous pricing, payment, or other terms and conditions than those set forth in the Contract. In such event, a copy of such terms shall be furnished to the Authorized User(s) and Purchasing Agent by the Contractor.

Other than where such terms are more advantageous for the Authorized User(s) than those set forth in the Contract, no alteration or modification of the terms of the Contract, including substitution of Product, shall be valid or binding against Authorized User(s) unless authorized by the Purchasing Agent or specified in the Contract Award Notification. No such alteration or modification shall be made by unilaterally affixing such terms to Product upon delivery (including, but not limited to, attachment or inclusion of standard pre-printed order forms, product literature, "shrink wrap" terms accompanying software upon delivery, or other documents) or by incorporating such terms onto order forms, purchase orders or other documents forwarded by the Contractor for payment, notwithstanding Authorized Users subsequent acceptance of Product, or that Authorized User has subsequently processed such document for approval or payment.

**41. SCOPE CHANGES** The Purchasing Agent reserves the right, unilaterally, to require, by written order, changes by altering, adding to or deducting from the contract specifications, such changes to be within the general scope of the contract. The Purchasing Agent may make an equitable adjustment in the contract price or delivery date if the change affects the cost or time of performance.

With respect to any specific quantity stated in the contract, the Purchasing Agent reserves the right after award to order up to 20% more or less (rounded to the next highest whole number) than the specific quantities called for in the contract. Notwithstanding the foregoing, the Purchasing Agent may purchase greater or lesser percentages of contract quantities should the Purchasing Agent and Contractor so agree.

**42. ESTIMATED QUANTITY CONTRACTS** Estimated quantity contracts are expressly agreed and

understood to be made for only the quantities, if any, actually ordered during the contract term. No guarantee of any estimated quantity(s) is implied or given. Unless otherwise set forth in the Bid Specifications, contracts for services and technology are completely voluntary as to use, and therefore no quantities are guaranteed.

**43. BEST PRICING OFFER** During the contract term, if substantially the same or a smaller quantity of a Product is sold by the Contractor outside of this contract vehicle upon the same or similar terms and conditions as that of this contract at a lower price, the price under this contract shall be immediately reduced to the lower price.

**44. PURCHASE ORDERS** Unless otherwise authorized in writing by the Purchasing Agent, no Products are to be delivered or furnished by Contractor until transmittal of an official Purchase Order from the Authorized User requiring the Product. Unless terminated or canceled pursuant to the authority vested in the Purchasing Agent, Purchase Orders shall be effective and binding upon the Contractor when placed in the mail or electronically transmitted prior to the termination of the contract period, addressed to the Contractor at the address set forth in the Contract for receipt of orders, or in the Contract Award Notification.

All Purchase Orders issued pursuant to contracts let by the Purchasing Agent must bear the appropriate contract number and, if necessary, required State approvals. Unless otherwise specified, all Purchase Orders against centralized contracts will be placed by Authorized Users directly with the Contractor and any discrepancy between the terms stated on the vendors order form, confirmation or acknowledgment, and the contract terms shall be resolved in favor of the terms most favorable to the Authorized User.

If, with respect to an agency specific contract, a Purchase Order is not received within two weeks after the issuance of a Contract Award Notification, it is the responsibility of the Contractor to request in writing that the appropriate Authorized User forward a Purchase Order. If, thereafter, a Purchase Order is not received within a reasonable period of time, the Contractor shall promptly notify the appropriate purchasing officer in Essex County. Failure to timely notify such officer may, in the discretion of the Purchasing Agent and without cost to the State, result in the canceling of such requirement by the Purchasing Agent with, at the Purchasing Agents discretion, a corresponding reduction in the contract quantity and price.

**45. PRODUCT DELIVERY** It shall be understood that with respect to contract deliveries, time is of the essence. Delivery must be made as ordered and in accordance with the terms of the contract. Unless otherwise specified in the Bid Specifications, delivery shall be made within thirty calendar days after receipt of a purchase order by the Contractor. The decision of the Purchasing Agent as to compliance with delivery terms shall be final. The burden of proof for delay in receipt of Purchase Order shall rest with the Contractor. In all instances of a potential or actual delay in delivery, the Contractor shall immediately notify the Purchasing Agent and the Authorized User, and confirm in writing the explanation of the delay, and take appropriate action to avoid any subsequent late deliveries. Any extension of the time for delivery must be requested in writing by the Contractor and approved in writing by the Purchasing Agent. Failure to meet such time schedule may be grounds for cancellation of the order or, in the Purchasing Agents discretion, the Contract.

The County must be notified twenty-four (24) hours in advance of delivery. The County reserves the right to deny acceptance of delivery if this notice is not given, at no cost to the County.

The successful bidder shall be responsible for delivery of items in good condition at point of destination, and shall file with the carrier all claims for breakage, imperfections, and other losses, which will be deducted from invoices. The Purchasing Agent will note for the benefit of successful bidder when packages are not received in good condition. Carton shall be labeled with purchase order or contract number, successful bidders name and general statement of contents. Failure to comply with this condition shall be considered sufficient reason for refusal to accept the goods.

Unless otherwise stated in the specifications, all items must be delivered into and placed at a point within the building as directed by the shipping instructions or the Purchasing Agent. The successful bidder will be required to furnish proof of delivery in every instance.

Unloading and placing of equipment and furniture is the responsibility of the successful bidder, and the County accepts no responsibility for unloading and placing of equipment. Any costs incurred due to the failure of the successful bidder to comply with this requirement will be charged to him. No help for unloading will be provided by the County, and suppliers should notify their truckers accordingly.

All deliveries shall be accompanied by delivery tickets or packing slips. Ticket shall contain the following information for each item delivered:

Contract Number and/or Purchase Order Number  
Name of Article  
Item Number (if applicable)  
Quantity  
Name of the Successful Bidder

**46. SATURDAY & HOLIDAY DELIVERIES** Unless otherwise specified in the Bid Specifications or by an Authorized User, deliveries will not be scheduled for Saturdays, Sundays or legal holidays observed by the State of New York except of Product for daily consumption or where an emergency exists or the delivery is a replacement or is late, in which event the convenience of the Authorized User shall govern.

#### **47. SHIPPING / RECEIPT OF PRODUCT**

(a) **Packaging** Tangible Product shall be securely and properly packed for shipment, storage and stocking in appropriate, clearly labeled shipping containers and according to accepted commercial practice, without extra charge for packing materials, cases or other types of containers. The container shall become and remain the property of the receiving entity unless otherwise specified in the contract documents.

(b) **Shipping Charges** Contractor shall be responsible for insuring that the Bill of Lading states "charges prepaid" for all shipments. Unless otherwise stated in the Bid Specifications, all deliveries shall be deemed to be FOB Destination tailgate delivery at the dock of the Authorized User. Unless otherwise agreed, items purchased at a price F.O.B. Shipping point plus transportation charges are understood to not relieve the contractor from responsibility for safe and proper delivery notwithstanding the Authorized Users payment of transportation charges.

(c) **Receipt of Product** The Contractor shall be solely responsible for assuring that deliveries are made to personnel authorized to accept delivery on behalf of the Authorized User. Any losses resulting from the Contractors failure to deliver Product to authorized personnel shall be borne exclusively by the Contractor.

**48. TITLE AND RISK OF LOSS** Notwithstanding the form of shipment, title and risk of loss shall not pass from the Contractor to the Authorized User until the Products have been received, inspected and accepted by the receiving entity. Acceptance shall occur within a reasonable time or in accordance with such other defined acceptance period as may be specified in the Bid Specifications. Mere acknowledgment by Authorized User personnel of the delivery or receipt of goods (e.g. signed bill of lading) shall not be deemed or construed as acceptance of the Products received. Any delivery of Product which is substandard or does not comply with the Contract terms, may be rejected or accepted on an adjusted price basis, as determined by the Purchasing Agent.

**49. RE-WEIGHING PRODUCT** Deliveries are subject to re-weighing at the point of destination by the receiving entity. If shrinkage occurs which exceeds that normally allowable in the trade, the receiving

entity shall have the option to require delivery of the difference in quantity, or to reduce the payment accordingly.

**50. PRODUCT SUBSTITUTION** In the event a specified manufacturers Product listed in the Contractors Bid becomes unavailable or cannot be supplied by the Contractor for any reason (except as provided for in the Force Majeure Clause below) a Product deemed by the Purchasing Agent to be the equal or better of the specified commodity or service must be substituted by the Contractor at no additional cost or expense to the Authorized User. Unless otherwise specified, any substitution of Product prior to the Purchasing Agents approval may be cause for cancellation of contract.

**51. REJECTED PRODUCT** When Products are rejected, they must be removed by the Contractor from the premises of the receiving entity within ten days of notification of rejection by Authorized User. Upon rejection notification, risk of loss of rejected or non-conforming Product shall remain on Contractor. Rejected items not removed by the Contractor within ten days of notification shall be regarded as abandoned by the Contractor, and the Authorized User shall have the right to dispose of the items as its own property. The Contractor shall promptly reimburse the Authorized User for any and all costs and expenses incurred in storage or effecting removal or disposition.

**52. INSTALLATION** Where installation is required, Bidder shall be responsible for placing and installing the equipment in the required locations. All materials used in the installation shall be of good quality and shall be free from any and all defects which would mar the appearance of the equipment or render it structurally unsound. Installation includes the furnishing of any equipment, rigging and materials required to install or replace the Product in the proper location. The Contractor shall protect the site from damage for all its work and shall repair damages or injury of any kind caused by the Contractor, its employees, officers or agents. If any alteration, dismantling or excavation, etc. is required to effect installation, the Contractor shall thereafter promptly restore the structure or site to its original condition. Work shall be performed so as to cause the least inconvenience to the Authorized User(s) and with proper consideration for the rights of other contractors or workers. The Contractor shall promptly perform its work and shall coordinate its activities with those of other contractors. The Contractor shall clean up and remove all debris and rubbish from its work as required or directed. Upon completion of the work, the building and surrounding area of work shall be left clean and in a neat, unobstructed condition, and everything in satisfactory repair and order.

**53. REPAIRED OR REPLACED PRODUCT / COMPONENTS** Where the Contractor is required to repair, replace or substitute Product or components under the Contract, the repaired, replaced or substituted Product shall be subject to all terms and conditions for new Product set forth in the contract, including product warranties.

**54. ON-SITE STORAGE** Materials, equipment or supplies may be stored at the County/s or Authorized User's site at the Contractors sole risk and only with the approval of, as the case may be, the County or the Authorized User.

**55. EMPLOYEES / SUBCONTRACTORS / AGENTS** All employees, subcontractors or agents performing work under the contract must be trained technicians who meet or exceed the technical and training qualifications set forth in the Bid Specifications or the Bid, whichever is greater, and must comply with all rules and requirements of the Contract. The Purchasing Agent reserves the right to conduct a security background check or otherwise approve any employee or agent furnished by Contractor and to refuse access to or require replacement of any personnel for cause, including but not limited to, technical or training qualifications, quality of work or change in security status or non-compliance with Authorized Users security or other requirements. Such approval shall not relieve the Contractor of the obligation to perform all work in compliance with the contract terms. The Purchasing Agent reserves the right to reject and/or bar from the facility for cause any employee, subcontractor, or agents of the Contractor.

**56. ASSIGNMENT / SUBCONTRACTORS** The Contractor shall not assign, transfer, convey, sublet, or otherwise dispose of the contract or its right, title or interest therein, or its power to execute such contract to any other person, company, firm or corporation in performance of the contract, other than the assignment of the right to receive moneys due, without the prior written consent of Essex County. Prior to an assignment of the right to receive moneys becoming effective, Contractor shall file a written notice of such assignment simultaneously with Essex County and participating Authorized User(s).

The Purchasing Agent reserves the right to reject any proposed subcontractor, assignee or supplier for bona fide business reasons, which may include, but are not limited to: that the proposed transferee is on the Department of Labors list of companies with which New York State cannot do business; the Purchasing Agent determines that the company is not qualified; unsatisfactory contract performance or service has been previously provided; or attempts were not made to solicit minority and womens business enterprises (M/WBE) bidders for the subcontract.

**57. PERFORMANCE / BID BOND** Essex County reserves the right to require the Bidder/Contractor to furnish without additional cost, a performance, payment or bid bond or negotiable irrevocable letter of credit or other form of security for the faithful performance of the contract, whenever the Purchasing Agent in his/her sole discretion deems such bond or security to be in Essex County's best interest. Where required, such bond or other security shall be in the form prescribed by the Purchasing Agent.

**58. STOP / SUSPENSION OF WORK**

(a) **Stop Work Order** The Purchasing Agent reserves the right to stop the work covered by this contract at any time that the successful Contractor becomes unable or incapable of performing the work or meeting any requirements or qualifications set forth in the contract. In the event of such stopping, the Purchasing Agent shall have the right to arrange for the completion of the work in such manner as it may deem advisable and if the cost thereof exceeds the amount of the bid, the successful Contractor shall be liable for any such cost on account thereof.

(b) **Suspension of Work Order** The Purchasing Agent, in his/her sole discretion, reserves the right to suspend any or all activities under this contract, at anytime, in the best interests of the State or Issuing Entity. In the event of such suspension, the contractor will be given a formal written notice outlining the particulars of such suspension. Examples of the reason for such suspension include, but are not limited to, a budget freeze on County spending, declaration of emergency, or other such circumstances. Upon issuance of such suspension of work, the Contractor is not to accept any purchase orders, as specified in the Suspension Order. Activity may resume at such time as the Purchasing Agent issues a formal written notice authorizing a resumption of work.

**59. CANCELLATION** A contract may be canceled by the Purchasing Agent, and/or an Authorized User may cancel its participation, license or service order under the contract, at the Contractors expense upon non-performance, or upon a determination that Contractor is non-responsive, or non-responsible.

**60. FORCE MAJEURE** The Contractor shall not be responsible for delay resulting from its failure to perform if neither the fault nor negligence of the Contractor, its officers, employees or agents contributed to such delay and the delay is due directly to acts of God, wars, acts of public enemies, strikes, fires or floods, or other similar cause beyond the control of the Contractor, or for any of the foregoing which affect subcontractors or suppliers and no alternate source of supply is available to the Contractor. In such event, Contractor shall notify the Purchasing Agent, by certified or registered mail, of the delay or potential delay and the cause(s) thereof either (a) within ten (10) calendar days after the cause which creates or will create the delay first arose if the Contractor could reasonably foresee that a delay could occur by reason thereof, or (b), if delay is not reasonably foreseeable, within five (5) calendar days after the date the Contractor first had reason to believe a delay could result. The foregoing shall constitute the Contractors sole remedy or excuse with respect to such delay. In the

event performance is suspended or delayed, in whole or in part, by reason of any of the aforesaid causes or occurrences and proper notification is given the Purchasing Agent, any performance so suspended or delayed shall be performed by the Contractor at no increased cost, promptly after such disabilities have ceased to exist unless it is determined in the sole discretion of the Purchasing Agent that the delay will significantly impair the value of the contract to the County or to Authorized Users, whereupon the Purchasing Agent may:

- (a) Accept allocated performance or deliveries from the Contractor. The Contractor, however, hereby agrees to grant preferential treatment to County Agencies with respect to Product subjected to allocation; and/or
- (b) Purchase from other sources (without recourse to and by the Contractor for the costs and expenses thereof) to replace all or part of the Products which are the subject of the delay, which purchases may be deducted from the contract quantity; or
- (c) Terminate the contract or the portion thereof which is subject to delivery delays, and thereby discharge any unexecuted portion of the contract or the relative part thereof.

**61. CONTRACT BILLINGS** Contractor shall provide complete and accurate billing invoices to each Authorized User in order to receive payment. Billings for Agencies must contain all information required by the County Treasurer and/or Auditor. The County Treasurer shall render payment for Agency purchases, and such payment shall be made in accordance with ordinary County procedures and practices. Payment of contract purchases made by Authorized Users other than Agencies shall be billed directly by Contractor on invoices/vouchers, together with complete and accurate supporting documentation as required by the Authorized User.

Submission of an invoice and payment thereof shall not preclude the Purchasing Agent from reimbursement or demanding a price adjustment in any case where the Product delivered is found to deviate from the terms and conditions of the bid and award documents.

**62. DEFAULT - AUTHORIZED USER** An Authorized Users breach shall not be deemed a breach of the centralized contract. In the event a participating Authorized User fails to make payment to the Contractor for Products delivered, accepted and properly invoiced, within 60 days of such delivery and acceptance, the Contractor may, upon 10 days advance written notice to both the Purchasing Agent and the Authorized Users purchasing official, suspend additional shipments of Product or provision of services to such entity until such time as reasonable arrangements have been made and assurances given by such entity for current and future contract payments.

Notwithstanding the foregoing, the Contractor shall, at least 10 days prior to declaring a breach of contract by any Authorized User, by certified or registered mail, notify both the Purchasing Agent and the purchasing official of the breaching Authorized User of the specific facts, circumstances and grounds upon which a breach will be declared. It is understood, however, that if the Contractors basis for declaring a breach is insufficient, the Contractors declaration of breach and failure to service an Authorized User shall constitute a breach of its contract and the County or Authorized User may thereafter utilize any remedy available at law or equity.

### **63. INTEREST ON LATE PAYMENTS**

- (a) **County Agencies** The payment of interest on certain payments due and owed by a County agency may be made in accordance with Section 3-a of the *General Municipal Law* at the rate of three percent (3%) per annum.
- (b) **By Non-County Agencies** The terms of Article 11-A apply only to procurements by and the consequent payment obligations of the County. Neither expressly nor by any implication is the County responsible for payments on any purchases made by a Non-County Agency

Authorized User.

(c) **By Contractor** Should the Contractor be liable for any payments to the County hereunder, interest, late payment charges and collection fee charges will be determined and assessed pursuant to Section 18 of the *State Finance Law* to the same extent as though the contract was with the State of New York rather than the County.

**64. REMEDIES FOR BREACH** It is understood and agreed that all rights and remedies afforded below shall be in addition to all remedies or actions otherwise authorized or permitted by law:

(a) **Cover / Substitute Performance** Upon the failure of the Contractor to properly perform within the time specified, failure to provide acceptable service, to make immediate replacement of rejected Product when so requested, or upon the revocation of the Contract by the Purchasing Agent for cause, or upon repudiation of the contract by the Contractor, the Purchasing Agent may, with or without formally bidding same:

i. Purchase from other sources to replace the Product rejected, revoked, not timely delivered or repudiated; or

ii. If after making reasonable attempts, under the circumstances then existing, to timely provide acceptable service or acquire replacement product of equal or comparable quality, the Purchasing Agent is unsuccessful, the Purchasing Agent may acquire acceptable service or replacement product of lesser or greater quality.

Such purchases may, in the discretion of the Purchasing Agent, be deducted from the contract quantity.

(b) **Withhold Payment** In any case where a question of non-performance by Contractor arises, payment may be withheld in whole or in part at the discretion of the Purchasing Agent. Should the amount withheld be finally paid, a cash discount originally offered may be taken as if no delay in payment had occurred.

(c) **Reimbursement of Costs Incurred** The Contractor agrees to reimburse the County and/or Authorized User promptly for any and all additional costs and expenses incurred for acquiring acceptable services, and/or replacement Product. Should the cost of cover be less than the contract price, the Contractor shall have no claim to the difference. The Contractor covenants and agrees that in the event suit is successfully prosecuted for any default on the part of the Contractor, all costs and expenses expended or incurred by the County or Authorized User in connection therewith, including reasonable attorneys fees, shall be paid by the Contractor.

Where the Contractor fails to timely deliver pursuant to the guaranteed delivery terms of the contract, the Purchasing Agent may authorize an ordering Authorized User to rent substitute equipment temporarily. Any sums expended for such rental shall, upon demand, be reimbursed to the Authorized User promptly by the Contractor or deducted by the Authorized User from payments due or to become due the Contractor on the same or another transaction.

(d) **Deduction / Credit** Sums due as a result of these remedies may be deducted or offset by the County or Authorized User from payments due, or to become due, the Contractor on the same or another transaction. If no deduction or only a partial deduction is made in such fashion the Contractor shall pay to the County or Authorized User the amount of such claim or portion of the claim still outstanding, on demand. The Purchasing Agent reserves the right to determine the disposition of any rebates, settlements, restitution, liquidated damages, etc. which arise from the administration of the contract.

**65. ASSIGNMENT OF CLAIM** Contractor hereby assigns to the County any and all its claims for overcharges associated with this contract which may arise under the antitrust laws of the United States, 15 U.S.C. Section 1, *et seq.* and the antitrust laws of the State of New York, *General Business Law* Section 340, *et seq.*

**66. TOXIC SUBSTANCES** Each Contractor furnishing a toxic substance as defined by Section 875 of the *Labor Law*, shall provide such Authorized User with not less than two copies of a material safety data sheet, which sheet shall include for each such substance the information outlined in Section 876 of the *Labor Law*.

Before any chemical product is used or applied on or in any building, a copy of the product label and Material Safety Data Sheet must be provided to and approved by the user agency representative.

**67. INDEPENDENT CONTRACTOR** It is understood and agreed that the legal status of the Contractor, its agents, officers and employees under this Contract is that of an independent contractor, and in no manner shall they be deemed employees of the County or Authorized User, and therefore are not entitled to any of the benefits associated with such employment. The Contractor agrees, during the term of this contract, to maintain at Contractors expense those benefits to which its employees would otherwise be entitled by law, including health benefits, and all necessary insurance for its employees, including workers compensation, disability and unemployment insurance, and to provide the Authorized User with certification of such insurance upon request. The Contractor remains responsible for all applicable federal, state and local taxes, and all FICA contributions.

**68. SECURITY / CONFIDENTIALITY** Contractor warrants, covenants and represents that it will comply fully with all security procedures of the County and any Authorized User(s) in performance of the Contract.

Contractor further warrants, covenants and represents that any confidential information obtained by Contractor, its agents, subcontractors, officers, or employees in the course of performing its obligations, including without limitation, security procedures, business operations information, or commercial proprietary information in the possession of the County or any Authorized User hereunder or received from another third party, will not be divulged to any third parties. Contractor shall not be required to keep confidential any such confidential material which is publicly available through no fault of Contractor, independently developed by Contractor without reliance on confidential information of the County or Authorized User, or otherwise obtained under the Freedom of Information Act or other applicable New York State Laws and Regulations. This warranty shall survive termination of this Contract for a period of five (5) years. Contractor further agrees to take appropriate steps to instruct its personnel, agents, officers and any subcontractors regarding the obligations arising under this clause to insure such confidentiality.

**69. COOPERATION WITH THIRD PARTIES** The Contractor shall be responsible for fully cooperating with any third party agents, including but not limited to subcontractors of the Authorized User, relating to delivery of product or coordination of services.

**70. CONTRACT TERM - EXTENSION** In addition to any stated renewal periods in the Contract, any contract or unit portion thereof let by the Purchasing Agent may be extended by the Purchasing Agent for an additional period(s) of up to one year (cumulatively) with the written concurrence of the Contractor.

**71. WARRANTIES & GUARANTEES** Contractor hereby warrants and guarantees:

- (a) To fully defend, indemnify and save harmless the County, Authorized Users and their respective officers, agents and employees from suits, actions, damages and costs of every name and description arising out of the acts or omissions of Contractor, its officers, employees,

subcontractors, partners, or agents, in any performance under this contract including: i) personal injury, damage to real or personal tangible or intangible property, without limitation; ii) negligence, either active or passive, without limitation, or iii) infringement of any law or of a United States Letter Patent with respect to the Products furnished, or of any copyright, trademark, trade secret or other third party intellectual proprietary rights, without limitation, provided that the County or Authorized User shall give Contractor: (a) prompt written notice of any action, claim or threat of infringement suit, or other suit, promptness of which shall be established by Authorized User upon the furnishing of written notice and verified receipt, (b) the opportunity to take over, settle or defend such action, claim or suit at Bidders sole expense, and (c) assistance in the defense of any such action at the expense of Contractor. Where a dispute or claim arises relative to a real or anticipated infringement, the County or Authorized User may require Bidder/Contractor, at its sole expense, to submit such information and documentation, including formal patent attorney opinions, as the Purchasing Agent shall require.

**(b)** Contractor warrants full ownership, clear title free of all liens, or perpetual license rights to any Products transferred to Authorized User under this Contract, and Contractor shall be solely liable for any costs of acquisition associated therewith without limitation. Contractor warrants that Authorized User will have undisturbed, peaceful use of the Products, including, without limitation, software, object or source codes, custom programming or third party intellectual property rights incorporated or embedded therein, and training modules or Documentation. Contractor fully indemnifies the County and Authorized User for any loss, damages or actions arising from a breach of said warranty without limitation.

**(c)** To pay, at its sole expense, all applicable permits, licenses, tariffs, tolls and fees and give all notices and comply with all laws, ordinances, rules and regulations of any governmental entity in conjunction with the performance of obligations under the contract.

**(d)** Unless recycled or recovered materials are available in accordance with the "Recycled & Recovered Materials" clause, Product offered shall be standard new equipment, current model of regular stock product with all parts regularly used with the type of equipment offered; and no attachment or part has been substituted or applied contrary to the manufacturers recommendations and standard practice. Every Product, including any substituted or replacement unit delivered, must be guaranteed against faulty material and workmanship for a period of one year from and after the date the unit is accepted unless otherwise specified by the County or Authorized User. Notwithstanding the foregoing, when the manufacturers standard guarantee for Product or any component thereof exceeds one year, the longer guarantee period shall apply to such unit or component thereof delivered under this contract. Furthermore, the Contractor agrees to extend its warranty period with regard to any Product delivered by the cumulative periods of time, after notification, during which the Product requires servicing or replacement (down time) or is in the possession of the Contractor, its agents, officers or employees. If during the regular or extended warranty periods faults develop, the Contractor shall promptly repair or, upon demand, replace the defective unit or component part affected. All costs for labor and material and transportation incurred to repair or replace defective goods during the warranty periods shall be borne solely by the Contractor, and the County or Authorized User shall in no event be liable or responsible therefore. This warranty shall survive any termination of the contract in accordance with the warranty term.

**(e)** Where the provision of services requires the replacement or repair of Product, any replaced or repaired component, part or Product shall be new and shall, if available, be replaced by the original manufacturers component, part or Product. All proposed substitutes for the original manufacturers installed Product must be approved by the Authorized User before installation. The Product or part shall be equal to or of better quality than the original Product being replaced. Any Product replaced by the Contractor under the contract shall be guaranteed for one (1) year from the date of replacement and replaced at no cost to the Authorized User if found defective during that time.

(f) Prior to award and during the Contract term and any renewals thereof, Contractor must establish to the satisfaction of the Purchasing Agent that it meets or exceeds all requirements of the bid and any applicable laws, including but not limited to, permits, insurance coverage, licensing, proof of coverage for workman's compensation, and shall provide such proof as required by the Purchasing Agent. Failure to do so may constitute grounds for the County to cancel or suspend this contract, in whole or in part, or to take any other action deemed necessary by the Purchasing Agent.

The Contractor further warrants and guarantees:

- i. His/Her/Its products against defective material or workmanship and to repair or replace any damages or marring occasioned in transit.
- ii. To furnish adequate protection from damage for all work and repair damages of any kind for which he or his workmen are responsible, to the building or equipment, to his own work, or to the work of other successful bidders.
- iii. To carry adequate insurance to protect the County from loss in case of accident, fire, theft, etc.
- iv. That all deliveries will be equal to the accepted bid sample.
- v. That the equipment delivered is standard, new, latest model of regular stock product or as required by the specifications; also that no attachment or part has been substituted or applied contrary to manufacturer's recommendations and standard practice. Every unit delivered must be guaranteed against faulty material and workmanship for a period of at least one year from date of delivery. If during this period such faults develop, the successful bidder agrees to replace the unit or the part affected without cost to the County. Any merchandise provided under the contract which is or becomes defective during the guarantee period shall be replaced by the successful bidder free of charge with the specific understanding that all replacements shall carry the same guarantee as the original equipment. The successful bidder shall make any such replacement immediately upon receiving notice from the County.
- vi. That all manufacturers product warranties and guarantees shall be furnished to the County, and that the County's rights thereunder shall not be in any way impaired or limited.

## **GENERAL**

**72. APPLICABILITY** In addition to the terms contained in **Part I (General - All Procurements)**, the terms contained in **Part II (Software & Technology Procurements)** apply to software and technology procurements.

## **73. DEFINITIONS - Part II**

**DOCUMENTATION** The complete set of manuals (e.g. user, installation, instruction or diagnostic manuals) in either hard or electronic copy, necessary to enable an Authorized User to properly test, install, operate and enjoy full use of the Product in accordance with the license rights.

**ENTERPRISE** The business operations in the United States of a Licensee or Enterprise Participant, without regard to geographic location where such operations are performed or the entity actually performing such operations on behalf of Licensee or Enterprise Participant. For the County of New York, "business operations" shall be defined as the business operations of all Agencies, as defined in Part I.

**ENTERPRISE LICENSE** A contract which grants Enterprise Participants unlimited license rights to access, use and/or execute Product within the Enterprise.

**ENTERPRISE PARTICIPANTS** One or more Licensees, as defined in Part I, participating in an Enterprise License.

**LICENSE EFFECTIVE DATE** The date Product is delivered to an Authorized User. Where a License involves Licensees right to copy a previously licensed and delivered Master Copy of a Program, the license effective date for additional copies shall be deemed to be the date on which the Purchase Order is executed.

**LOGICAL PARTITION** A subset of the processing power within a CEC which has been divided through hardware and/or software means (i.e. *Processor Resources/System Manager [PR/SM]*) so as to limit the total processing power which is accessible by an operating system image by individual users or individual software products.

**OBJECT CODE** The machine executable code that can be directly executed by a computers central processing unit(s).

**PHYSICAL PARTITION** A subset of the processing power within a CEC which has been derived through hardware means so as to limit the total processing power accessible by an operating system image by individual users or individual Products.

**SITE** The location (street address) where Product will be executed.

**SOURCE CODE** The programming statements or instructions written and expressed in any language understandable by a human being skilled in the art which are translated by a language compiler to produce executable machine Object Code.

**TERMS OF LICENSE** The terms and conditions set forth in the Contract which are in effect and applicable to a Product order at the time of order placement, and only such additional terms as are consistent therewith or more advantageous to the Authorized User as are set forth on the individual Product order form executed and approved by both Authorized User and Contractor.

**VIRUS** Any computer code, whether or not written or conceived by Contractor, which disrupts, disables, harms, or otherwise impedes in any manner the operation of the Product, or any other associated software, firmware, hardware, or computer system (such as local area or wide-area networks), including aesthetic disruptions or distortions, but does not include security keys or other such devices installed by Product manufacturer.

## **TERMS AND CONDITIONS**

**74. SOFTWARE LICENSE GRANT** *Unless otherwise set forth in the Bid Specifications or Contract, where Product is acquired on a licensed basis the following shall constitute the license grant:*

(a) **License Scope** Licensee is granted a non-exclusive, perpetual license to use, execute, reproduce, display, perform, or merge the Product with other product within its business enterprise in the United States. Licensee shall have the right to use and distribute modifications or customizations of the Product to and for use by any Authorized Users otherwise licensed to use the product, provided that any modifications, however extensive, shall not diminish manufacturers proprietary title or interest. No license, right or interest in any trademark, trade name, or service mark is granted hereunder.

(b) **License Term** The license term shall commence upon the License Effective Date. Where the terms of license permit licensing on a non-perpetual basis, the license term stated in

the Contract shall be extended by the time periods allowed for testing and acceptance.

**(c) Licensed Documentation** Contractor hereby grants to Licensee a perpetual license right to make, reproduce (including downloading electronic copies of the Product) and distribute, either electronically or otherwise, copies of Product Documentation as necessary to enjoy full use of the Product. If commercially available, Licensee shall have the option to require the Contractor to deliver, at Contractors expense: a) One (1) hard copy and One (1) Master Electronic Copy of the Documentation in diskette or CD-ROM format; or b) hard copies of the Product Documentation by type of license in the following amounts, unless otherwise mutually agreed:

- Individual/Named User License – 1 copy per License
- Concurrent Users – 8 copies per site
- Processing Capacity – 8 copies per site

**(d) Product Use** Product may be accessed, used, executed, reproduced, displayed, performed by Licensee to service all Authorized Users of the machine on which Product is installed, up to the capacity measured by the applicable licensing unit stated in the terms of license (i.e. payroll size, number of employees, CPU, MIPS, MSU, concurrent user, workstation).

**(e) Permitted License Transfers** As Licensee's business operations may be altered, expanded or diminished, licenses granted hereunder may be transferred or combined for use at an alternative or consolidated Authorized User site not originally specified in the license, including transfers between Agencies ("permitted license transfers"). Licensee(s) do not have to obtain the approval of Contractor for permitted license transfers, but must give thirty (30) days prior written notice to Contractor of such move(s) and certify in writing that the Product is not in use at the prior site. There shall be no additional license or other transfer fees due Contractor, provided that: i) the maximum capacity of the consolidated machine is equal to the combined individual license capacity of all licenses running at the consolidated or transferred site. (e.g., named users, seats, or MIPS); and ii) that, if the maximum capacity of the consolidated machine is greater than the individual license capacity being transferred, a logical or physical partition or other means of restricting access will be maintained within the computer system so as to restrict use and access to the Product to that unit of licensed capacity solely dedicated to beneficial use for Licensee.

**(f) Restricted Use By Outsourcers / Facilities Management, Service Bureaus / or Other Third Parties** Outsourcers, facilities management or service bureaus retained by Licensee shall have the right to use the Product to maintain Licensee's business operations, including data processing, for the time period that they are engaged in such activities, provided that: 1) Licensee gives notice to Contractor of such party, site of intended use of the Product, and means of access; and 2) such party has executed, or agrees to execute, the Product manufacturers standard nondisclosure or restricted use agreement which executed agreement shall be accepted by the Contractor ("NonDisclosure Agreement"); and 3) if such party is engaged in the business of facility management, outsourcing, service bureau or other services, such third party will maintain a logical or physical partition within its computer system so as to restrict use and access to the program to that portion solely dedicated to beneficial use for Licensee. In no event shall Licensee assume any liability for third partys compliance with the terms of the Non-Disclosure Agreement, nor shall the Non-Disclosure Agreement create or impose any liabilities on the County or Licensee.

Any third party with whom a Licensee has a relationship for a state function or business operation, shall have the temporary right to use Product (using, for example, but not limited to, JAVA Applets), provided that such use shall be limited to the time period during which the third party is using the Product for the stated function or business activity.

**(g) Archival Back-Up and Disaster Recovery** Licensee may use and copy the Product and related Documentation in connection with: 1) reproducing a reasonable number of copies of the Product for archival backup and disaster recovery procedures in the event of destruction or corruption of the Product or disasters or emergencies which require Licensee to restore backup(s) or to initiate disaster recovery procedures for its platform or operating systems; 2) reproducing a reasonable number of copies of the Product and related documentation for cold site storage. "Cold Site" storage shall be defined as a restorable back-up copy of the Product not to be installed until and after the declaration by the Licensee of a disaster; 3) reproducing a back-up copy of the Product to run for a reasonable period of time in conjunction with a documented consolidation or transfer otherwise allowed under paragraph (F) above. "Disaster Recovery" shall be defined as the installation and storage of Product in ready-to-execute, back-up computer systems prior to disaster or breakdown which is not used for active production or development.

**(h) Confidentiality Restrictions** The Product is a trade secret and proprietary product. Licensee and its employees will keep the Product strictly confidential, and Licensee will not disclose or otherwise distribute or reproduce any Product to anyone other than as authorized under the terms of license. Licensee will not remove or destroy any proprietary markings of Contractor.

**(i) Restricted Use by Licensee** Except as expressly authorized by the terms of license, Licensee shall not:

- a. Copy the Product;
- b. Cause or permit reverse compilation or reverse assembly of all or any portion of the Product;
- c. Distribute, disclose, market, rent, lease or transfer to any third party any portion of the Product or the Documentation, or use the Product or Documentation in any service bureau arrangement;
- d. Disclose the results of Product performance benchmarks to any third party who is not an Authorized User without prior notice to Contractor;
- e. Export the Licensed Software in violation of any U.S. Department of Commerce export administration regulations.

**75. ENTERPRISE LICENSE OPTION FOR SOFTWARE** Multiple Authorized Users may license any Product offered under the Contract on behalf of their collective business operations. An Enterprise License shall incorporate the terms set forth in this Part II and the pricing set forth in the Contract, and additionally the following terms:

**(a) Enterprise – Defined** Any Authorized User may be an Enterprise Participant. Enterprise Participants will be enumerated in the Enterprise License, including: i) contact name, ship to and main billing address of each Enterprise Participant, ii) street address of the included End User sites of each Enterprise Participant. The originally defined Enterprise may be modified at any time thereafter, including deletion or addition of Enterprise Participants, sites ownership to locations, provided that Contractor is given written notice and that any additional capacity required by such addition is licensed in accordance with the Enterprise License terms.

**(b) Product Use** Product licensed under this Enterprise Option shall be licensed with the rights set forth in this Part II, without reference to a specific designated system or Licensee, up to the maximum licensed capacity. Product may be used and freely transferable anywhere

within the defined Enterprise, including higher or lower performance machines, and Enterprise Participants will not incur an increase in license, support or other charges provided that the aggregate utilization of the Product does not exceed the aggregate Enterprise Licensed capacity.

**(c) Submission of Orders, Billing and Usage Reporting** An Enterprise may be established for order placement and billing as either a “single” or “multiple” point of contact, at Licensees option. Where designated as a “single”, one Enterprise Participant shall be designated as the lead agency and central point for submission of Purchase Orders, usage reporting and billing. Where designated as “multiple” point of contact, each designated Enterprise Participant shall be responsible for submission of Purchase Orders, reporting and billing with regard to its use of Enterprise Licensed Product. For either single or multiple point of contact Enterprises, a) Contractor agrees to hold each Enterprise Participant solely responsible for payment and performance; and b) Contractor shall be responsible for furnishing an annual report to each designated point of contact summarizing overall Enterprise License activity for the preceding twelve months.

**(d) Shipping / Delivery** Contractor shall be responsible for delivery of Master Copies of Enterprise Licensed Product and documentation to Enterprise Participants. Within either “Single” or “Multiple” Enterprise Licenses, shipping and delivery of Master Copies of Product and Documentation shall be the responsibility of Contractor to each “ship to” location specified on the Purchase Order(s). Distribution and installation of Enterprise Licensed Product to End Users at a site shall be the responsibility of the Licensee.

**(e) Enterprise Operating Systems** Unless otherwise specified by the parties, up to ten (10) hardware/operating system combinations for Product shall be included at no additional charge. The initial ten hardware/operating systems may be specified at any time within five (5) years of the Enterprise License effective date. Additional hardware/operating systems beyond the initial ten (10) may be specified at anytime by the Enterprise, however if additional copies of Product are required for hardware/operating systems beyond the initial ten, the cost for such systems will be as mutually agreed between the parties.

**(f) Product Acceptance** Each Enterprise Participant shall have a right of acceptance, as set forth above in this Part II, only for the first copy of Product for its site(s).

**(g) Enterprise Fees** Enterprise License Fees shall be set forth in the Contract. Notwithstanding the foregoing, the Product license fees for additional copies or units of capacity for Enterprise licensed Product shall not increase by more than six percent (6%) annually each year during the Enterprise License term. Contractor may offer additional discounts/incentives for Enterprise Participants as may be mutually agreed between the parties. Enterprise Participants shall be entitled to aggregate the volume of all Enterprise Participants for purposes of establishing any applicable discounts under the Contract, and Enterprise Licensed Volume shall be aggregated with volume of non-Enterprise Licensed Product otherwise purchased under the centralized Contract. Upon termination of the Enterprise, Enterprise Participants have the right to acquire additional capacity or users at the Enterprise License price for twelve months after the termination of the Enterprise License.

**(h) Technical Support** Unless otherwise mutually agreed, technical support is optional and may be elected individually by Product by each Enterprise Participant. Where an Enterprise Participant is under a current maintenance or technical support contract, such Enterprise Participant shall be entitled to credit any support paid covering any portion of the Enterprise License Term to the fees due under the Enterprise license.

Enterprise Participants shall have the right to partially or wholly de-support a subset of unused Enterprise licensed capacity upon written notice to Contractor at the end of any then -

current technical support term without penalty or charge. The capacity for a Program license which has been de-supported must remain inactive and may not be used within the Enterprise unless technical support for such capacity has been reinstated. In the event of de-support, Contractor reserves the right to reasonably determine compatibility of future releases or new programs prior to shipment.

(i) **Merger of Two or More Enterprises** Two or more Enterprises may be merged to form a larger Enterprise for the purpose of sharing and exchanging data at no additional license fee provided that participants give Contractor notice of such merger and that the combined capacity does not exceed the maximum capacity of the individual licenses.

(j) **“Nested” Enterprises** Individual Enterprise License participant(s) may license additional capacity or products for the specific use of a subset of the larger enterprise. Said participant(s) must certify in writing to Contractor that such use is only by the enumerated subset of participants.

(k) **Default** A default by any Enterprise Participant shall entitle the Contractor to the remedies against such participant under the Contract, but shall not be deemed a default by the remaining non-defaulting Enterprise Participants.

**76. PRODUCT ACCEPTANCE** Unless otherwise provided in the Bid Specifications, the County and/or Authorized User(s) shall have sixty (60) days from delivery to accept Product. Failure to provide notice of acceptance or rejection by the end of the period provided for under this clause would constitute acceptance by the County or Authorized User(s) as of the expiration of that period.

Unless otherwise provided in the Bid Specifications, The County or Authorized User shall have the option to run acceptance testing on the Product prior to acceptance, such tests and data sets to be specified by User. Where using its own data or tests, The County or Authorized User must have the tests or representative set of data available upon delivery. This demonstration will take the form of a documented installation test, capable of observation by the County or Authorized User, and shall be made part of the Contractors standard documentation. The test data shall remain accessible to the County or Authorized User after completion of the test.

In the event that the documented installation test cannot be completed successfully within sixty (60) days from delivery, and the Contractor or Product is responsible for the delay, The County or Authorized User shall have the option to cancel the order in whole or in part, or to extend the testing period for another sixty (60) day increment. The County or Authorized User shall notify Contractor of acceptance upon successful completion of the documented installation test. Such cancellation shall not give rise to any cause of action against the County or Authorized User for damages, loss of profits, expenses, or other remuneration of any kind.

Costs and liabilities associated with a failure of the Product to perform in accordance with the functionality tests or product specifications during the acceptance period shall be borne fully by Contractor to the extent that said costs or liabilities shall not have been caused by negligent or willful acts or omissions of the The County or Authorized Users agents or employees. Said costs shall be limited to fees paid to Contractor, if any, or any liability for costs incurred at the direction or recommendation of Contractor.

**77. AUDIT OF LICENSED PRODUCT USAGE** Contractor shall have the right to periodically audit, at its expense, use of licensed Product at any site where a copy of the Product resides provided that: i) Contractor gives Licensee or Enterprise Participants at least thirty (30) days advance notice, ii) such audit is conducted during such party's normal business hours iii) each Licensee or Enterprise Participant is entitled to designate a representative who shall be entitled to participant and simultaneously review all information obtained by the audit, and shall be entitled to copies of all reports, data or information obtained by the Contractor; and iv) if the audit shows that such party is not in

compliance such party shall be liable for the unlicensed capacity and shall be required to purchase the additional units or rights necessary to bring it into compliance.

**78. OWNERSHIP / TITLE TO CUSTOM PRODUCTS OR PROGRAMMING** Where contract deliverables include custom products or programming, title, rights and interests to such Product(s) shall be determined as follows:

**(a) Definitions**

**Product** For purposes of this section, the term "Product" shall have the meaning set forth in Part I of these *General Specifications*, which includes, but is not limited to: software applications or programming, programming tools, documentation (including user or training manuals), modules, interfaces, templates, and other elements such as utilities, subroutines, algorithms, formulas, source code, object code, reports, drawings, or data.

**"Existing Product"** is defined as any proprietary material(s) existing or developed independently and not at the expense of Licensee.

**"Custom Product"** is defined as any material(s), exclusive of Existing Product, created, prepared, written, compiled or developed by Contractor, or anyone acting on his behalf for The County or Authorized User pursuant to the Contract.

**(b) Contractor or Third Party Manufacturers Title to Existing Product** Title to Existing Product(s) does not transfer. With respect to such Existing Product(s), whether embedded in or operating in conjunction with Custom Product, Contractor warrants: a) all right, title and interest in Contractor's Existing Product(s); or b) all license rights, title and interest in third party Existing Product(s), which include the right to grant to The County or Authorized User an irrevocable, non-exclusive, worldwide, paid-up license to use, execute, reproduce, display, perform, and distribute Existing Product(s). Contractor hereby grants a irrevocable, non-exclusive, worldwide, paid-up license to use, execute, reproduce, display, perform, and distribute Existing Product(s) embedded in or transferred for use in conjunction with Custom Product(s). The Licensee agrees to reproduce the copyright notice and any other legend of ownership on any copies made under the license granted under this paragraph prior to distribution or use.

**(c) Title to Custom Product** Title to Custom Product(s), excluding Existing Product, shall be deemed the sole and exclusive property of the County or Authorized User, who shall have all right, title and interest (including ownership and copyrights). For the purposes of the federal copyright law, execution of this contract shall constitute an assignment of all right, title and interest in the Custom Product(s) by Contractor to the County or Authorized User. The County or Authorized User, in its sole discretion, reserves the right to sell Custom Product or to license them on an exclusive or non-exclusive basis to Contractor or other Third Parties. Contractor hereby agrees to take all necessary and appropriate steps to ensure that Custom Product is protected against unauthorized use, execution, reproduction, display, performance, or distribution by or through Contractor, its partners or agents. Notwithstanding this reservation of title, Contractor shall not be precluded from using the related or underlying general knowledge, skills and experience developed in the course of providing the Custom Product in the course of Contractor's business.

**(d) Acquisitions Funded By Tax Exempt Financing** In addition to the foregoing rights under a, b and c, the sale or licensing of Custom Product or rights therein shall not occur until such Product or rights are or become useable, and shall be at fair market value which shall be determined at the time of sale or licensing. Any such transfer shall be pursuant to a separate written agreement. If the Contract deliverables are to be funded through tax exempt financing, the County or Authorized User may assign to a Trustee or other entity for security purposes County or Authorized Users ownership and license rights in Custom and Existing Products. Contractor will cooperate with the County or Authorized User to execute such other documents as may be appropriate to achieve the objectives of

this paragraph.

**(e) Other Acquisitions (Not Funded by Tax Exempt Financing)** In addition to the rights set forth above (paragraphs “a”, “b” and “c”), the County or Authorized User reserves the right to transfer any or all rights to Custom Materials on an exclusive or non-exclusive basis. Where such transfer (sale or licensing) is provided in the Bid Specifications, Contractor shall include a purchase price for such rights in its bid. Such price shall be offered as a deduction from Contractor’s overall Bid or Project Bid price, and shall be weighted as set forth in the bid evaluation criteria, if any. Such rights shall transfer to the successful Bidder/Contractor upon successful completion and acceptance by the County or Authorized User of all contract deliverables. Contractor will cooperate with the County or Authorized User to execute such other documents as may be appropriate to achieve the objectives of this paragraph.

**79. PROOF OF LICENSE** The Contractor must provide to each Licensee who places a Product order either: a) the Product manufacturer’s certified License Confirmation Certificates in the name of each such Licensee; or b) a written confirmation from the Product manufacturer accepting Contractors Product invoice as proof of license. Bidder or Contractor shall submit a sample manufacturers certificate, or alternatively such written confirmation from the manufacturer, with the Bid or Contract. Such certificates must be in a form acceptable to the Licensee.

**80. PRODUCT VERSION** Product orders shall be deemed to reference Manufacturers most recently released model or version of the Product at time of delivery, unless an earlier model or version is specifically requested in writing by the County or Authorized User and Contractor is willing to provide such version.

**81. MIGRATION TO CENTRALIZED CONTRACT** The County or Authorized User may obtain additional Product authorized under this contract, (e.g., licensed capacity upgrades, new releases, documentation, maintenance, consulting or training) whether or not Product was initially obtained independently of this contract. The County or Authorized Users election to obtain additional Product shall not operate to diminish, alter or extinguish rights previously granted.

**82. NOTICE OF PRODUCT DISCONTINUANCE** In the event that a Product manufacturer proposes to discontinue maintenance or support for Product, Contractor shall (1) notify the County and each Authorized User in writing of the intended discontinuance, and (2) continue to provide maintenance and support for the greater of: a) the best terms offered by Contractor to any other customer, or b) not less than eighteen (18) months from the date of notice, and (3) at The County or Authorized Users option, either a) provided that the County or Authorized User is under maintenance, provide the County or Authorized User with either a Product replacement with equivalent functionality at no additional charge, or b) provide County or Authorized User with the source code for Licensed Product at no additional charge to enable it to continue use and maintenance of the Product.

**83. REINSTATEMENT OF MAINTENANCE** The County or Authorized User shall not be required to purchase maintenance for use of Product, and may discontinue maintenance at the end of any current maintenance term upon written notice to Contractor. In the event that The County or Authorized User discontinues maintenance of licensed Product, it may, at any time thereafter, reinstate maintenance for Product without any additional penalties or other charges, by paying Contractor at rates which would have been due under the contract for the period of time that such maintenance had lapsed, or for twelve months, whichever is less.

**84. NO HARDSTOP / PASSIVE LICENSE MONITORING** Contractor hereby represents, warrants and covenants that the Product and all Upgrades do not and will not contain any computer code that would disable the Product or Upgrades or impair in any way its operation based on the elapsing of a period of time, exceeding an authorized number of copies, advancement to a particular date or other numeral, or other similar self-destruct mechanisms (sometimes referred to as “time bombs”, “time locks”, or “drop dead” devices) or that would permit Contractor to access the Product to cause such disablement or

impairment (sometimes referred to as a “trap door” device). Contractor agrees that in the event of a breach or alleged breach of this provision that The County or Authorized User shall not have an adequate remedy at law, including monetary damages, and that The County or Authorized User shall consequently be entitled to seek a temporary restraining order, injunction, or other form of equitable relief against the continuance of such breach, in addition to any and all remedies to which The County or Authorized User shall be entitled.

**85. ADDITIONAL WARRANTIES / GUARANTEES** Where Contractor or Product manufacturer offers additional or more advantageous warranties than set forth herein, Contractor shall offer or pass through any additional or more advantageous warranties to The County or Authorized Users. In addition to the ‘Warranties/Guarantees’ set forth in Part I, Contractor makes the following warranties.

(a) **Product Performance Warranty** Contractor represents and warrants that the Products delivered pursuant to this contract conform to the manufacturers specifications, performance standards, and documentation and that the documentation fully describes the proper procedure for using the Products in an efficient manner. Contractor does not warrant that software is error-free.

In the event that Contractor does not remedy a substantial breach of this warranty within the cure period, Licensee shall also have the right to terminate any payments due Contractor, with a refund of the any fees prospectively paid from the date of breach.

(b) **Year 2000 Warranty** For all procurements of Product, Contractor must furnish a warranty statement in accordance with the NYS Standard Year 2000 Warranty Compliance Statement set forth in Part I at the time of bid for agency specific contracts or product order for centralized contracts.

(c) **Virus Warranty** Contractor represents and warrants that Licensed Software contains no known viruses. Bidder is not responsible for viruses introduced at Licensees site. For purposes of this provision, “Virus” shall have the meaning set forth in Part II, “Definitions”.

A breach of any of the foregoing shall be deemed a material breach of the Contract or any License granted thereunder. The defaulting party shall be given written notice of a warranty breach under this section and shall have a thirty (30) day period to cure such breach.

**86. INDEMINIFICATION THE WARRANTIES SET FORTH IN THESE GENERAL SPECIFICATIONS (PARTS I and II) ARE IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.**

Contractor shall defend, indemnify and save harmless the County and Authorized Users from suits, actions, claims, damages and costs arising under or connected to Contractors actions, and except where express loss liabilities set forth elsewhere in the Contract provide for a higher loss limitation liability than as set forth in this paragraph, or where such express provisions impose Contractor liability on “without limitation”, the total liability of Contractor for such claim(s), regardless of the nature and basis for the claim, shall not exceed two (2) times the fees paid for the applicable Product. For any suit, action, claim, damages or costs arising under or are connected to personal injury or property damage, or breach of the title, patent and copyright warranties, Contractor shall be fully liable without limitation.

The County or Authorized User may retain such moneys from the amount due Contractor as may be necessary to satisfy any claim for damages, costs and the like asserted by or against the County or Authorized User, provided however, that Contractor shall not indemnify each such entity to the extent that any claim, loss or damages arising hereunder is caused by the negligence act or failure to act of said entity.

**87. SOURCE CODE ESCROW FOR LICENSED PRODUCTS** If source code or source code escrow is offered by either Contractor or Product manufacturer/developer to any other commercial customers, Contractor either: i) will provide Licensee with the Source Code for the Product; or ii) place the Source Code in a third party escrow arrangement with a designated escrow agent who shall be named and identified to the County, and who shall be directed to release the deposited Source Code in accordance with a standard escrow agreement acceptable to the County, or iii) will certify to the County that the Product manufacturer/developer has named the County, and the Licensee, as a named beneficiary of an established escrow arrangement with its designated escrow agent who shall be named and identified to the County and Licensee, and who shall be directed to release the deposited Source Code in accordance with the terms of escrow. Source Code, as well as any corrections or enhancements to such source code, shall be updated for each new release of the Product in the same manner as provided above. Contractor shall identify the escrow agent upon commencement of the contract term and shall certify annually that the escrow remains in effect in compliance with the terms of this paragraph.

The County may release the Source Code to Licensees under this Contract who have licensed Product or obtained services, who may use such copy of the Source Code to maintain the Product.

**CERTIFICATION OF COMPLIANCE WITH THE IRAN DIVESTMENT ACT**

As a result of the Iran Divestment Act of 2012 (the "Act"), Chapter 1 of the 2012 Laws of New York, a new provision has been added to State Finance Law (SFL) § 165-a and New York General Municipal Law § 103-g, both effective April 12, 2012. Under the Act, the Commissioner of the Office of General Services (OGS) will be developing a list of "persons" who are engaged in "investment activities in Iran" (both are defined terms in the law) (the "Prohibited Entities List"). Pursuant to SFL § 165-a(3)(b), the initial list is expected to be issued no later than 120 days after the Act's effective date at which time it will be posted on the OGS website.

By submitting a bid in response to this solicitation or by assuming the responsibility of a Contract awarded hereunder, each Bidder/Contractor, any person signing on behalf of any Bidder/Contractor and any assignee or subcontractor and, in the case of a joint bid, each party thereto, certifies, under penalty of perjury, that once the Prohibited Entities List is posted on the OGS website, that to the best of its knowledge and belief, that each Bidder/Contractor and any subcontractor or assignee is not identified on the Prohibited Entities List created pursuant to SFL § 165-a(3)(b).

Additionally, Bidder/Contractor is advised that once the Prohibited Entities List is posted on the OGS Website, any Bidder/Contractor seeking to renew or extend a Contract or assume the responsibility of a Contract awarded in response to this solicitation must certify at the time the Contract is renewed, extended or assigned that it is not included on the Prohibited Entities List.

During the term of the Contract, should the County receive information that a Bidder/Contractor is in violation of the above-referenced certification, the County will offer the person or entity an opportunity to respond. If the person or entity fails to demonstrate that he/she/it has ceased engagement in the investment which is in violation of the Act within 90 days after the determination of such violation, then the County shall take such action as may be appropriate including, but not limited to, imposing sanctions, seeking compliance, recovering damages or declaring the Bidder/Contractor in default.

The County reserves the right to reject any bid or request for assignment for a Bidder/Contractor that appears on the Prohibited Entities List prior to the award of a contract and to pursue a responsibility review with respect to any Bidder/Contractor that is awarded a contract and subsequently appears on the Prohibited Entities List.

I, \_\_\_\_\_, being duly sworn, deposes and says that he/she is the \_\_\_\_\_ of the \_\_\_\_\_ Corporation and that neither the Bidder/Contractor nor any proposed subcontractor is identified on the Prohibited Entities List.

\_\_\_\_\_  
SIGNED

SWORN to before me this \_\_\_\_\_  
day of \_\_\_\_\_, 20\_\_

\_\_\_\_\_  
Notary Public

**NON-COLLUSIVE BIDDING CERTIFICATION**

1. By submission of this bid, the undersigned bidder and each person signing on behalf of such bidder certifies and in the case of a joint bid each party thereto certifies as to its own organization — UNDER PENALTY OF PERJURY, that to the best of the undersigned's knowledge and belief:

(a) The prices in this bid have been arrived at independently without collusion, consultation, communication, or agreement, for the purpose of restricting competition, as to any matter relating to such prices with any other bidder or with any competitor;

(b) Unless otherwise required by law, the prices which have been quoted in this bid have not been knowingly disclosed by the bidder and will not knowingly be disclosed by the bidder prior to opening, directly or indirectly, to any other bidder or to any competitor; and

(c) No attempt has been made or will be made by the bidder to induce any other person, partnership or corporation to submit or not to submit a bid for the purpose of restricting competition.

2. The undersigned acknowledges and agrees that a bid shall not be considered for award nor shall any award be made where any of the above have not been complied with; provided however, that if in any case the bidder cannot make the foregoing certification, the bidder shall so state and shall furnish with the bid a signed statement which sets forth in detail the reasons therefor. Where one or more of the above has/have not been complied with, the bid shall not be considered for award nor shall any award be made unless the political subdivision, public department, agency or official thereof to which the bid is made, or his designee, determines that such disclosure was not made for the purpose of restricting competition.

3. The undersigned also acknowledges and agrees that the fact that a bidder (a) has published price lists, rates, or tariffs covering items being procured, (b) has informed prospective customers of proposed or pending publication of new or revised price lists for such items, or (c) has sold the same items to other customers at the same prices being bid, does not constitute, without more, a disclosure within the meaning of paragraph 1 above.

4. The undersigned further acknowledges and agrees that any bid hereafter made to any political subdivision of the state or any public department, agency or official thereof by a bidder which is a corporation or a limited liability company for work or services performed or to be performed or goods sold or to be sold, where competitive bidding is required by statute, rule, regulation, or local law, and where such bid contains the certification referred to in paragraph 1 of this certificate, shall be deemed to have been authorized by the board of directors of the bidder, and such authorization shall be deemed to include the signing and submission of the bid and the inclusion therein of the certificate as to non-collusion as the act and deed of the corporation or limited liability company.

Name of Bidder: \_\_\_\_\_  
(print full legal name)

Date Signed: \_\_\_\_\_ Signature: \_\_\_\_\_

Name of Person Signing Certificate: \_\_\_\_\_  
(print full legal name of signer)

Bidder is (check one): ☐ an individual, ☐ a limited liability partnership, ☐ a limited liability company,  
☐ other entity (specify): \_\_\_\_\_

CONTRACTOR'S ACKNOWLEDGEMENT

(If Corporation)

STATE OF NEW YORK) SS:  
COUNTY OF ESSEX)

On this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_, before me personally came \_\_\_\_\_  
\_\_\_\_\_ to me known, and known to me to be the  
\_\_\_\_\_ of the Corporation described in and which executed the within instrument,  
who being duly sworn did depose and say that he, the said \_\_\_\_\_ reside at  
\_\_\_\_\_ and that he is \_\_\_\_\_ of said  
corporation and knows the corporate seal of the said corporation; that the seal affixed to the within  
instrument is such corporate seal and that it was so affixed by order of the Board of Directors of said  
corporation, and that he signed his name thereto by like order.

\_\_\_\_\_  
Notary Public

CONTRACTOR'S ACKNOWLEDGEMENT

(If Individual)

STATE OF NEW YORK) SS:  
COUNTY OF ESSEX)

On this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_, before me personally came  
\_\_\_\_\_ to me known, and known to me to be  
the same person described in and who executed the within instrument and he duly acknowledged to  
me that he executed the same for the purpose herein mentioned and, if operating under and trade  
name, that the certificate required by the New York State Penal Law, Sections 440 and 440-b has been  
filed with the County Clerk of Essex County.

\_\_\_\_\_  
Notary Public

CONTRACTOR'S ACKNOWLEDGEMENT

(If Co-Partnership)

STATE OF NEW YORK) SS:  
COUNTY OF ESSEX)

On this \_\_\_\_\_ day of \_\_\_\_\_ 20\_\_\_\_, before me personally came  
\_\_\_\_\_ to me known, and known to me to be a member of the  
firm of and the person described in, and who executed the within instrument in behalf of said firm for  
the purposes herein mentioned and that the certificate required by the New York State Penal Law,  
Sections 440 and 440-b has been filed with the County Clerk of Essex County.

\_\_\_\_\_  
Notary Public