



Motorola Solutions, Inc.
8000 W Sunrise Blvd
Plantation, FL 33322-9947

May 24, 2019

Jacqueline Weinreich
Director, Radio and Technology Division
Pinellas County Public Safety Services
10750 Ulmerton Road
Largo, Florida 33778

Subject: Project for the Design/Build of Multi-Site Radio Shelter and Additional Work

Ms. Weinreich,

Motorola Solutions, Inc. ("Motorola") is pleased to have the opportunity to provide Pinellas County with quality communications services. The Motorola project team has taken great care to propose a solution(s) that will meet your needs and provide unsurpassed value.

To best meet the specifications of this project Motorola's solution includes a combination of hardware, software, and services. At a high level these provide:

- A MAIN/BASE Scope of Work (SOW) including equipment and services for: the New Ridgecrest Tower site; shelter replacements for an additional five sites; a refresh of the Courthouse and Majestic Towers Buildings for new microwave and antenna; installing site security system upgrades including cameras and key card entry systems at all Pinellas County P25 Radio Sites; and the services to add two additional channels at all of the MidZone Radio Sites
- Beyond the MAIN/BASE Offering, the following Optional projects are offered:
 - Option 1: Replacement of Hospital Microwave equipment and all Hospital Remote Desk Top Equipment
 - Option 2: The addition of a four-site, 10-channel North Zone Subsystem
 - Option 3: The addition of a new Toy Town High-Performance-Data site
 - Option 4: The upgrade of the current State required Mutual Aid System
 - Option 5: The addition of the Location on PTT feature

This proposal shall remain valid for a period of 90 days from the date of this cover letter. If there are any questions they may be directed to your Motorola Account Executive Matt Henderson at 813-421-0716, or Project Manager Buster Lerner at 954-790-8441.

Sincerely,

Matt Henderson
Motorola Solutions, Inc.
SAE



134-0251-NC (SS) Third Amendment

This Amendment made and entered into this _____ day of _____, 2019, by and between PINELLAS COUNTY, a political subdivision of the State of Florida, hereinafter referred to as "County," and Motorola Solutions, Inc., hereinafter referred to as "Contractor,"

WITNESSETH

WHEREAS, the County and the Contractor entered into an agreement on February 24, 2015, Pinellas County Request for Proposal/Contract No. 134-0251-NC (hereinafter "Agreement") pursuant to which the Contractor agreed to provide professional engineering services for a design/build multi-site radio tower replacement; and

WHEREAS, Section 15.7 of the Agreement provides for amendment or modification by written instrument signed by authorized representatives of both parties; and

WHEREAS, the County and the Contractor now wish to extend the professional engineering services to include the design/build and relocation of the Ridgecrest Radio Site and the replacement of communication shelters at: the: 1) Tarpon Springs (Dunn) Radio Site; 2) Eldridge Wilde Radio Site; 3) Highway Maintenance Radio Site; 4) Toytown Radio Site; and 4) Fort Desoto Radio Site. In addition, the Majestic Towers and Courthouse Rooftop radio sites will be refreshed with new antennae and microwave dishes and Site Security, including Key Card Entry and Cameras that will be added to all nine (9) Pinellas County Radio Sites.

1. This Third Amendment is an integral part of the Agreement. If there are any inconsistencies between the terms and conditions of this Amendment and the Agreement, this Amendment shall prevail.
2. This Third Amendment includes, and is limited to the Equipment, Services, and Warranty to Relocate the Ridgecrest Radio Site; the replacement of communication shelters at the 1) Tarpon Springs (Dunn) Radio Site; 2) Eldridge Wilde Radio Site; 3) Highway Maintenance Radio Site; 4) Toytown Radio Site; and 4) Fort Desoto Radio Site. In addition, the Majestic Towers and Courthouse Rooftop radio sites will be refreshed with new antennae and microwave dishes, and Site Security, including Key Card Entry and Cameras that will be added to all nine Pinellas County Radio Sites.

As the needs of the County have changed, the County and Motorola have identified additional features and functionality beyond the original scope of this amendment to meet these new challenges. In order to meet these challenges, Motorola is offering, that the County may purchase at a later date, five additional options, the election of which may be made by providing a purchase order to Motorola. These features are: 1) A refresh of the Hospital Microwave Network to add current microwave technology and Hospital remote access hardware; 2) Addition of a new North Radio Zone to allow additional users as well as county wide redundancy in the northern half of the county, 3) a new High-Performance-Data site to be located at the Toy Town radio site to meet the needs of Fire Rescue; 4) A refresh of the State of Florida required Mutual Aid radio system to operate with current technology instead of T1 phone lines which are quickly becoming obsolete; and 5) to enhance public safety first responder's safety with the new "Location of PTT" feature



The individual pricing of each of these five (5) options are more fully described in the Scope and Statement of Work in Exhibit A, attached hereto.

The maximum pricing for this Third Amendment includes the pricing for these options; however, no work will commence for any of the options without the issuance of a purchase order by the County, expressly referencing this Amendment No. 3 and Contract No. 134-0251-NC.

- 3. The Contract Price will be adjusted as follows:

Original Contract Price	\$3,500,000.00
Previous Amendments No. 1 & No. 2 Amount	\$4,404,081.00
This Amendment No. 3, Including Base offering & Options 1 - 5	\$19,412,510.00
Adjusted Contract Price	\$27,316,591.00

- 4. The Contract Completion Date will be adjusted as follows:

Earliest Work Start Date	July 1, 2019
Schedule Completion Date	December 31, 2021

- 5. The following Exhibits shall apply to the work to be performed pursuant to this Amendment:

- Exhibit A System Description, Scope of Work, Statement of Work, Warranty, Equipment List and System Pricing
- Exhibit B Payment Terms
- Exhibit C Phase II Insurance Requirements

- 6. Customer shall make payment to Contractor, per Exhibit B, within forty-five (45) days of receipt of Contractor’s invoice.

- 7. Added Indemnification language:

If the CONTRACTOR or its subcontractor is an individual or entity licensed by the State of Florida who holds a current certificate of registration under Chapter 481, Florida Statutes, to practice architecture or landscape architecture, under Chapter 472, Florida Statutes, to practice land surveying and mapping, or under Chapter 471, Florida Statutes, to practice engineering, and who enters into a written agreement with the COUNTY relating to the planning, design, construction, administration, study, evaluation, consulting, or other professional and technical support services furnished in connection with any actual or proposed construction, improvement, alteration, repair, maintenance, operation, management, relocation, demolition, excavation, or other facility, land, air, water, or utility development or improvement, the CONTRACTOR will indemnify and hold harmless the COUNTY, and its officers and employees, from liabilities, damages, losses, and costs, including, but not limited to, reasonable attorney fees, to the extent caused by its negligence, recklessness, or intentionally wrongful conduct and other persons employed or utilized by the CONTRACTOR in the performance of the Agreement.

- 8. Added Public Entity Crimes language:



CONTRACTOR is directed to the Florida Public Entity Crime Act, Fla. Stat. 287.133, and Fla. Stat. 287.135 regarding Scrutinized Companies, and CONTRACTOR agrees that its bid and, if awarded, its performance of the agreement will comply with all applicable laws including those referenced herein. CONTRACTOR represents and certifies that CONTRACTOR is, and will at all times remain eligible to bid for and perform the services herein, subject to the requirements of these and other applicable laws. CONTRACTOR agrees that any contract awarded to CONTRACTOR will be subject to termination by the County if CONTRACTOR fails to comply or to maintain such compliance.

9. Added Public Records language:

Contractor acknowledges that information and data it manages as part of the services may be public records in accordance with Chapter 119, Florida Statutes and Pinellas County public records policies. Contractor agrees that prior to providing services it will implement policies and procedures to maintain, produce, secure, and retain public records in accordance with applicable laws, regulations, and County policies, including but not limited to the Section 119.0701, Florida Statutes. Notwithstanding any other provision of this Agreement relating to compensation, the Contractor agrees to charge the County, and/or any third parties requesting public records only such fees allowed by Section 119.07, Florida Statutes, and County policy for locating and producing public records during the term of this Agreement.

10. Replacing all prior insurance requirements with the attached Exhibit C.

Except as specifically stated in this Third Amendment, the Agreement in all other respects is ratified, confirmed and continues in full force and effect.

In Witness Whereof, the parties have executed this Change Order as of the Effective Date set forth below.

MOTOROLA SOLUTIONS, INC.

PINELLAS COUNTY:

By: 
(Signature)

By: _____
(Signature)

Name: Scott Adler
(Print - Block Letters)

Name: _____
(Print - Block Letters)

Title: Vice President

Title: _____

Date: June 11, 2019

Date: _____

APPROVED AS TO FORM

By: 
Office of the County Attorney

PROFESSIONAL ENGINEERING SERVICES - DESIGN/BUILD MULTI-SITE RADIO TOWER REPLACEMENT

**CONTRACT NUMBER: 134-0251-NC
THIRD AMENDMENT**

EXHIBIT A



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THIRD AMENDMENT EXHIBIT A

1.1 SYSTEM DESCRIPTION

1.1.1 Purpose and Scope

- This document provides a general overview of the scope of work agreed to within this Third Amendment.
- This amendment includes all of the engineering, program management, construction management, installation, programming, testing and documentation services required to provide the following scope of work.
- The following Scope of work includes the Base equipment and services offered by Motorola that supports the Ridgecrest Tower replacement, plus the shelter replacements for six sites. Also included in the Base Offering is the refresh of the Courthouse and Majestic Towers Buildings to upgrade these sites with new microwave and antennae. Also, all of Pinellas County's Radio Sites will receive site security system upgrades; including camera's and key card entry systems. In addition to the Base Offering, the following optional projects are offered as add-ons to the existing Base offering:
 - Option 1: Replacement of Hospital Microwave equipment and the Hospital Desk Top Remotes
 - Option 2: The addition of a four-site, 10-channel North Zone Subsystem
 - Option 3: The addition of a new Toy Town High-Performance-Data site
 - Option 4: The upgrade of the current State required Mutual Aid System
 - Option 5: The addition of the Location on PTT feature

(Please note that the optional equipment and services will be identified by an option number next to the scope of services they will be associated with.)

1.1.1.1 Ridgecrest Site (EMS Campus) 12490 Ulmerton Road, Largo, Florida

- **This site requires a live cutover. Extreme care is mandatory to reduce or eliminate any interruptions to radio communications services during construction, installation, optimization, testing or cutover.**
 - Prepare an Implementation Time Line indicating any planned downtime necessary, which is to be discussed and mutually agreed to with Pinellas County Director of Radio and Technology Division.
- **Included: New Secure 70' X 70' with 8' fenced Compound**
 - Add new 150 KW Cummins generator with 500 gal diesel belly tank and transfer switch
 - Add new 120 / 240 VAC, 400 Amp Electric Service, including hookup by utility company, disconnect switch and meter panel
 - Add new Ice Bridges from new tower to new communications shelter
 - Install new tower and shelter ground rings and ground to shelter, tower, ice bridge and fence to meet the R56 standard
 - Add an electric 16' sliding gate with key card access
 - Add a personnel gate with key card access
- **Included: Motorola will provide a new 24' X 32' R56 Compliant $V_{ult} = 194$ mph, Risk Category IV communications building which will include two (2) new 50 KiloVoltAmps (KVA) Uninterruptable Power Supplies (UPS's)**
 - Provide shelter door key card access
- **Included: New 330-ft self supporting tower with 10 foot top face**
 - Must meet 194 mph ultimate wind speed per FBC 2017 edition 6
- **Add 1-ft additional Dirt Build up for shelter and Diesel generator/500 gal belly fuel tank foundations**
- **Included: Provide all Architectural and Engineering Services**
 - Site Survey to provide Topographic Survey
 - Soil Boring and Geotechnical Report
 - Design Compound Layout and components per FBC 2017 Edition 6 and Motorola's R56 Site Standards
 - Prepare Construction Drawings
 - Provide Microwave Link Design, Path Analysis and Microwave Frequency Coordination
 - NEPA Analysis and Report
 - SHPO Survey and Report
 - Indian Tribe Analysis
 - FDEP Abatement/Demolition Analysis
 - FAA Obstruction Analysis
 - FCC Check List and Antenna Site Registration
 - Intermod and Interference Studies and Reports
 - Provide support for RF Frequency Acquisition, APCO and FCC Licenses
 - Provide R56 Audit
 - Provide Tower Construction and Plumbness Check Audit
 - Reasonably handle any unforeseen items to a maximum cost of \$15,000.00
- **Included: New Pinellas County Radio System Microwave Radios**
- **Included: Implementation of MPLS SAR8s**

- Option 1: New Hospital MW and remotes for Suncoast, Largo Med, and VA Bay Pines
- Included: New Antennae, Microwave Dishes, TTA, MC, Combiners, Surge Protection, Waveguide and Transmission Line
- Included: Add new Advanced Power Monitors
- Included: Add new Z2 mini work stations
- Included: Add TRAK GPS Frequency Reference Equipment
- Included: Add Site Security System
- Option 4: Relocate and upgrade State Wide mutual aid master equipment to PSC
- Included: Remove and dispose old non reusable equipment and cabling
- Included: Remove and disposal for two existing towers
- Included: Remove and dispose existing Ice Bridges
- Included: Remove and dispose existing Caisson Piers to 2' below grade
- Included: Add Weather Station and interface to network
- Included: Add Workbench
- Included: New Paging Base Station
- Option 4: Install and interface New IP MA Call, Tac 4
- Included: Add Channels 29 and 30 to MZ
- Included: Remove 10 MCC7500 Consoles from EMS for re-installation at the PSC and SP dispatch centers

1.1.1.2 Public Safety Campus 10750 Ulmerton Road, Largo, Florida

- **This site requires a live cutover. Extreme care is mandatory to reduce or eliminate any interruptions to radio communications services during construction, installation, optimization, testing or cutover.**
 - Prepare an Implementation Time Line indicating any planned downtime necessary, which is to be discussed and mutually agreed to with Pinellas County Director of Radio and Technology Division.
- **Included: Provide all Architectural and Engineering Services**
 - Design Compound components per FBC 2017 Edition 6 and Motorola's R56 Site Standards
 - Provide Microwave Link Design, Path Analysis and Microwave Frequency Coordination
 - Intermod and Interference Studies and Reports
 - Provide support for Frequency Acquisition, APCO and FCC Licenses
 - Provide R56 Audit
 - Reasonably handle any unforeseen items to a maximum cost of \$15,000.00
- **Included: Add Site Security System for tower**
- **Included: Add Site Security Manager for Radio System Network (All sites)**
- **Included: Implementation of MPLS SAR8s**

- Included: Add Weather Station and interface to network
- Option 4: Install and interface New IP MA Call, Tac 4
- Included: Add 6 relocated MCC7500 consoles from EMS to E-9-1-1
- Included: Move Utility Microwave routing from Ridgecrest-Logan-Courthouse to Ridgecrest-PSC-Courthouse
- Option 5: The addition of the Location on PTT feature

1.1.1.3 Court House 315 South Ft. Harrison Avenue, Clearwater, Florida

- **This site requires a live cutover. Extreme care is mandatory to reduce or eliminate any interruptions to radio communications services during construction, installation, optimization, testing or cutover.**
 - Prepare an Implementation Time Line indicating any planned downtime necessary, which is to be discussed and mutually agreed to with Pinellas County Director of Radio and Technology Division.
- Included: Provide all Architectural and Engineering Services
 - Design building rooftop components per FBC 2017 Edition 6 and Motorola's R56 Site Standards
 - Evaluate and replace as necessary microwave dishes and RF antenna mounts
 - Provide Microwave Link Design, Path Analysis and Microwave Frequency Coordination
 - Intermod and Interference Studies and Reports
 - Provide Frequency Acquisition, APCO and FCC License Support
 - Provide R56 Audit
 - Reasonably handle any unforeseen items to a maximum cost of \$15,000.00
- Included: Add two (2) new UPS's
- Included: Add Z2 mini work stations
- Included: New Pinellas County Radio System Microwave Radios
- Implementation of MPLS SAR8s
- Option 1: New Hospital MW and remotes to Morton Plant and Mease Dunedin
- Included: Add Site Security System
- Included: Replace dishes, antennae, line, Multicoupler, combiners, TTA, Surge Protection, waveguide and transmission line
- Included: Add Advanced Power Monitors
- Included: Remove/Dispose old non reusable equipment and cabling
- Included: Add Weather Station and interface to network
- Option 4: Install and interface New IP MA Call, Tac 4
- Option 2: Add North Zone Simulcast Sub Site (10-Channels)
- Included: Add Channels 29 and 30 to MZ

1.1.1.4 Tarpon Springs (Dunn Facility) 4100 Dunn Drive, Palm Harbor, Florida

- **This site requires a live cutover. Extreme care is mandatory to reduce or eliminate any interruptions to radio communications services during construction, installation, optimization, testing or cutover.**
 - Prepare an Implementation Time Line indicating any planned downtime necessary, which is to be discussed and mutually agreed to with Pinellas County Director of Radio and Technology Division.
- **Included: Motorola will provide a new 24' X 32' R56 Compliant $V_{ult} = 194$ mph, Risk Category IV communications building which will include two (2) new 50 KiloVoltAmps (KVA) Uninterruptable Power Supplies (UPS's)**
 - Provide shelter door key card access
- **Included: Expand Compound to provide space for the new 24' X 32' shelter with new 8' fence as required.**
 - Add new 150 KW Cummins generator with 500 gal diesel belly tank and transfer switch
 - Add new Ice Bridges from new tower to new communications shelter
 - Install new shelter ground ring and ground to shelter, tower, ice bridge and fence to meet the R56 standard
 - Add an electric 16' sliding gate with key card access
 - Add a personnel gate with key card access
- **Included: Add additional compacted fill dirt to raise shelter and Diesel generator/500 gal belly fuel tank foundations above compound grade**
- **Included: Provide all Architectural and Engineering Services**
 - Site Survey to provide Topographic Survey
 - Design Compound Layout and components per FBC 2017 Edition 6 and Motorola's R56 Site Standards
 - Prepare Construction Drawings
 - Provide Microwave Link Design, Path Analysis and Microwave Frequency Coordination
 - Limited NEPA Analysis and Report
 - SHPO Survey and Report
 - Indian Tribe Analysis
 - FDEP Abatement/Demolition Analysis
 - FCC Checklist
 - Intermod and Interference Studies and Reports
 - Provide support for RF Frequency Acquisition, APCO and FCC Licenses
 - Provide R56 Audit
 - Reasonably handle any unforeseen items to a maximum cost of \$15,000.00
- **Included: New Pinellas County Radio System Microwave Radios**
- **Implementation of MPLS SAR8s**
- **Included: Add Z2 mini work stations**
- **Included: Antennas, Multicoupler, combiners, TTA, Surge Protection, waveguide and transmission line**
- **Included: Add Advanced Power Monitors**
- **Option 1: Replace Helen Ellis MW and remote**

- Included: Relocate Tarpons Springs PD PTP Hop
- Included: Add Site Security System
- Included: Remove and disposal of old non reusable equipment and cabling
- Included: Remove and disposal of old 300' tower
- Included: Demolition and disposal of existing block shelter up to 1 foot below grade
- Included: Remove and dispose existing Ice Bridges
- Included: Remove and dispose existing Caisson Piers to 2' below grade
- Included: Add Weather Station and interface to network
- Included: Add Workbench
- Option 4: Install and interface New IP MA Call, Tac 4
- Included: New Paging Base Station
- Option 2: Add North Zone Simulcast Sub Site (10-Channels)
- Included: Remove and dispose of old Generator
- Included: Add Channels 29 and 30 to MZ

1.1.1.5 Eldridge Wilde 3563 Old Keystone Rd, Tarpon Springs, Florida

- **This site requires a live cutover. Extreme care is mandatory to reduce or eliminate any interruptions to radio communications services during construction, installation, optimization, testing or cutover.**
 - Prepare an Implementation Time Line indicating any planned downtime necessary, which is to be discussed and mutually agreed to with Pinellas County Director of Radio and Technology Division.
- Included: Motorola will provide a new 24' X 32' R56 Compliant $V_{ult} = 194$ mph, Risk Category IV communications building which will include two (2) new 50 KiloVoltAmps (KVA) Uninterruptable Power Supplies (UPS's)
 - Provide shelter door key card access
- Included: Expand Compound to provide space for the new 49' X 30' X 6'-AGL Platform above the flood plain with new 8' fence as required.
 - Design and Install a new 49' X 30' X 6' raised Metal Platform to mount the communications shelter and Diesel generator/500 gal belly fuel tank above flood plain.
 - Add new 150 KW Cummins generator with 500 gal diesel belly tank and transfer switch
 - Add new Ice Bridges from new tower to new communications shelter
 - Install new platform ground ring and ground to platform, shelter, tower, ice bridge and fence to meet the R56 standard
 - Add an electric 16' sliding gate with key card access
 - Add a personnel gate with key card access
- Included: **Provide all Architectural and Engineering Services**
 - Site Survey to provide Topographic Survey

- Design Compound Layout and components per FBC 2017 Edition 6 and Motorola's R56 Site Standards
- Prepare Construction Drawings
- Provide Microwave Link Design, Path Analysis and Microwave Frequency Coordination
- Limited NEPA Analysis and Report
- SHPO Survey and Report
- Indian Tribe Analysis
- FDEP Abatement/Demolition Analysis
- FCC Checklist
- Intermod and Interference Studies and Reports
- Provide support for RF Frequency Acquisition, APCO and FCC Licenses
- Provide R56 Audit
- Reasonably handle any unforeseen items to a maximum cost of \$15,000.00
- Included: New Pinellas County Radio System Microwave Radios
- Included: Implementation of MPLS SAR8s
- Included: Add Z2 mini work stations
- Included: Antennas, Transmission Line, Surge Protection, TTA, Multicoupler and combiners
- Included: Add Advanced Power Monitors
- Included: Add diversity hop to HM to remove Safety Harbor Site
- Included: Add Site Security System
- Included: Remove/Dispose old non reusable equipment and cabling
- Included: Demolition and disposal of existing block shelter up to 1 foot below grade
- Included: Remove and dispose existing Ice Bridges
- Included: Remove and dispose old generator
- Included: Remove and dispose of one existing Caisson Pier to 2' below grade
- Included: Add Weather Station and interface to network
- Included: Add Workbench
- Option 4: Install and interface New IP MA Call, Tac 4
- Option 2: Add North Zone Simulcast Prime Site
- Option 2: Add North Zone Simulcast Sub Site(10-Channel)
- Included: Add Channels 29 and 30 to MZ

1.1.1.6 Safety Harbor 2290 SR 580, Safety Harbor, Florida

- **This site requires a live cutover. Extreme care is mandatory to reduce or eliminate any interruptions to radio communications services during construction, installation, optimization, testing or cutover.**
 - Prepare an Implementation Time Line indicating any planned downtime necessary, which is to be discussed and mutually agreed to with Pinellas County Director of Radio and Technology Division.

- Included: Relocate Hospital MW Mease Countryside to HM
- Included: Remove/Dispose of old Equipment (RF and Gen) and cabling
- Included: Removed site from Pinellas County system

1.1.1.7 Highway Maintenance 22211 U.S. Hwy 19 N, Clearwater, Florida

- **This site requires a live cutover. Extreme care is mandatory to reduce or eliminate any interruptions to radio communications services during construction, installation, optimization, testing or cutover.**
 - Prepare an Implementation Time Line indicating any planned downtime necessary, which is to be discussed and mutually agreed to with Pinellas County Director of Radio and Technology Division.
- Included: Motorola will provide a new 24' X 32' R56 Compliant $V_{ult} = 194$ mph, Risk Category IV communications building which will include two (2) new 50 KiloVoltAmps (KVA) Uninterruptable Power Supplies (UPS's)
 - Provide shelter door key card access
- Included: Install a new 49' X 30' X 6'-AGL Platform above the flood plain..
 - Design and Install a new 49' X 30' X 6' raised Metal Platform to mount the communications shelter and Diesel generator/500 gal belly fuel tank above flood plain.
 - Add new 150 KW Cummins generator with 500 gal diesel belly tank and transfer switch
 - Add new Ice Bridges from new tower to new communications shelter
 - Install new platform ground ring and ground to platform, shelter, tower, ice bridge and fence to meet the R56 standard
- Included: **Provide all Architectural and Engineering Services**
 - Site Survey to provide Topographic Survey
 - Design Compound Layout and components per FBC 2017 Edition 6 and Motorola's R56 Site Standards
 - Prepare Construction Drawings
 - Provide Microwave Link Design, Path Analysis and Microwave Frequency Coordination
 - Limited NEPA Analysis and Report
 - SHPO Survey and Report
 - Indian Tribe Analysis
 - FDEP Abatement/Demolition Analysis
 - FCC Checklist
 - Intermod and Interference Studies and Reports
 - Provide support for RF Frequency Acquisition, APCO and FCC Licenses
 - Provide a structural analysis for the Highway Maintenance Tower with two new 700 MHz Tx Antennae
 - Provide R56 Audit
 - Reasonably handle any unforeseen items to a maximum cost of \$15,000.00
- Included: New Pinellas County Radio System Microwave Radios
- Included 4: Implementation of MPLS SAR8s

- Included: Add Z2 mini work stations
- Included: Antennas, Transmission Line, Surge Protection and Combiners
- Included: Add Advanced Power Monitors
- Included: Add diversity hop to EW to remove Safety Harbor Site
- Option 1: Add Mease Countryside MW and remote to replace Safety Harbor to Mease Countryside.
- Included: Add Site Security System
- Included: Use Swing Trailers for Cutover
- Option 2: Add North Zone Simulcast Sub Site(10-Channel)
- Option 2: Convert North Zone 800 MHz ASR site to 700 MHz ASR site
 - Add two 700 MHz Transmit Antennae with 6-ft Side Arms and 1-5/8" Transmission Line at 225 feet onto the Highway Maintenance Tower
- Included: Remove/Dispose old non reusable equipment and cabling
- Included: Remove and disposal of old Block Shelter, stairs and foundation
- Included: Remove and disposal of existing raised area foundation soils
- Included: Remove and dispose existing Ice Bridges
- Included: Add Weather Station and interface to network
- Included: Add Workbench
- Option 4: Install and interface New IP MA Call, Tac 4
- Included: Relocate Tampa's Alcatel Microwave required to support their ISSI System
- Included: Relocate the Pinellas County DOT FM Traffic System

1.1.1.8 Toytown 10540 16th Street North, St. Petersburg, Florida

- **This site requires a live cutover. Extreme care is mandatory to reduce or eliminate any interruptions to radio communications services during construction, installation, optimization, testing or cutover.**
 - Prepare an Implementation Time Line indicating any planned downtime necessary, which is to be discussed and mutually agreed to with Pinellas County Director of Radio and Technology Division.
- Included: Motorola will provide a new 24' X 32' R56 Compliant $V_{ult} = 194$ mph, Risk Category IV communications building which will include two (2) new 50 KiloVoltAmps (KVA) Uninterruptable Power Supplies (UPS's)
 - Provide shelter door key card access
- Included: Expand Compound to provide space for the new 49' X 30' X 6'-AGL Platform above the flood plain with new 8' fence as required.
 - Design and Install a new 49' X 30' X 6' raised Metal Platform to mount the communications shelter and Diesel generator/500 gal belly fuel tank above flood plain.

- Add new 150 KW Cummins generator with 500 gal diesel belly tank and transfer switch
- Add new Ice Bridges from new tower to new communications shelter
- Install new platform ground ring and ground to platform, shelter, tower, ice bridge and fence to meet the R56 standard
- Add an electric 16' sliding gate with key card access
- Add a personnel gate with key card access
- **Included: Provide all Architectural and Engineering Services**
 - Site Survey to provide Topographic Survey
 - Design Compound Layout and components per FBC 2017 Edition 6 and Motorola's R56 Site Standards
 - Prepare Construction Drawings
 - Provide Microwave Link Design, Path Analysis and Microwave Frequency Coordination
 - Limited NEPA Analysis and Report
 - SHPO Survey and Report
 - Indian Tribe Analysis
 - FDEP Abatement/Demolition Analysis
 - FCC Checklist
 - Intermod and Interference Studies and Reports
 - Provide support for RF Frequency Acquisition, APCO and FCC Licenses
 - Provide R56 Audit
 - Reasonably handle any unforeseen items to a maximum cost of \$15,000.00
- **Included: New Pinellas County Radio System Microwave Radios**
- **Included: Implementation of MPLS SAR8s**
- **Included: Add Z2 mini work stations**
- **Included: Antennas, Transmission Line, Surge Protection, TTA, Multicoupler, Combiners**
- **Included: Add TRAK GPS Equipment**
- **Included: Add Advanced Power Monitors**
- **Included: Add Site Security System**
- **Included: Remove and disposal of old non reusable equipment and cabling**
- **Included: Remove and disposal of old 250' tower**
- **Included: Demolition and disposal of existing block shelter up to 1 foot below grade**
- **Included: Remove and dispose existing Ice Bridges**
- **Included: Remove and dispose old generator**
- **Included: Remove and dispose existing Caisson Piers to 2' below grade**
- **Included: Replace current Site Communications Shelter with a new equipment spares Storage Building**
- **Included: Add Weather Station and interface to network**
- **Included: Add Workbench**
- **Option 4: Install and interface New IP MA Call, Tac 4**
- **Option 3: Add 3 channel 700MHZ HPD Site**

- Included: Add PTP link to MSC Shop
- Included: Add Channels 29 and 30 to MZ

1.1.1.9 St Petersburg Police Campus 143 2nd Avenue N, St. Petersburg, Florida

- **This site requires a live cutover. Extreme care is mandatory to reduce or eliminate any interruptions to radio communications services during construction, installation, optimization, testing or cutover.**
 - Prepare an Implementation Time Line indicating any planned downtime necessary, which is to be discussed and mutually agreed to with Pinellas County Director of Radio and Technology Division.
- Included: Provide all Architectural and Engineering Services
 - Design any compound components per FBC 2017 Edition 6 and Motorola's R56 Site Standards
 - Prepare Construction Drawings
 - Provide Microwave Link Design, Path Analysis and Microwave Frequency Coordination
 - FCC Checklist
 - Intermod and Interference Studies and Reports
 - Provide support for RF Frequency Acquisition, APCO and FCC Licenses
 - Provide R56 Audit
- Included: Add Site Security System for tower
- Included: Implementation of MPLS SAR8s
- Included: Add Site Security Manager for Radio System Network (All sites)
- Included: Add Weather Station and interface to network
- Included: Add Workbench
- Option 4: Install and interface New IP MA Call, Tac 4
- Included: Add Channels 29 and 30 to MZ
- Included: Add 4 relocated MCC7500 consoles from EMS to the new SPPD dispatch
- Option 1: Replace ST Pete General to Northside M/W
- Option 1: Add new remotes at all Hospital M/W hops
- Included: Add Paging Base Station
- Included: Add new Zetron Controller
- Option 5: Add the Location on PTT feature

1.1.1.10 Majestic/Fountains 1255 South Pasadena Avenue, St. Petersburg, Florida

- **This site requires a live cutover. Extreme care is mandatory to reduce or eliminate any interruptions to radio communications services during construction, installation, optimization, testing or cutover.**
 - Prepare an Implementation Time Line indicating any planned downtime necessary, which is to be discussed and mutually agreed to with Pinellas County Director of Radio and Technology Division.

- Included: Provide all Architectural and Engineering Services
 - Design building rooftop components per FBC 2017 Edition 6 and Motorola's R56 Site Standards
 - Evaluate and replace as necessary microwave dishes and RF antenna mounts
 - Provide Microwave Link Design, Path Analysis and Microwave Frequency Coordination
 - Intermod and Interference Studies and Reports
 - Provide Frequency Acquisition, APCO and FCC License Support
 - Provide R56 Audit
 - Reasonably handle any unforeseen items to a maximum cost of \$15,000.00
- Included: Add two (2) new UPS's
- Included: New Pinellas County Radio System Microwave Radios
- Included: Implementation of MPLS SAR8s
- Included: Add Z2 mini work stations
- Included: New Antennas, Transmission Line, Surge Protection, TTA, Multicoupler, Combiners
- Included: Add Advanced Power Monitors
- Option 1: New Hospital MW and remote to Palms of Pasadena
- Included: Add Site Security System
- Included: Replace dishes, antennae, line, Multicoupler, combiners (Review mounting brackets)
- Included: Remove/Dispose of old Equipment and cabling
- Included: Add Weather Station and interface to network
- Option 4: Install and interface New IP MA Call, Tac 4
- Included: Add Channels 29 and 30 to MZ

1.1.1.11 Ft. Desoto 3500 Anderson Blvd, St. Petersburg, Florida

- **This site requires a live cutover. Extreme care is mandatory to reduce or eliminate any interruptions to radio communications services during construction, installation, optimization, testing or cutover.**
 - Prepare an Implementation Time Line indicating any planned downtime necessary, which is to be discussed and mutually agreed to with Pinellas County Director of Radio and Technology Division.
- Included: Motorola will provide a new 24' X 32' R56 Compliant $V_{ult} = 194$ mph, Risk Category IV communications building which will include two (2) new 50 KiloVoltAmps (KVA) Uninterruptable Power Supplies (UPS's)
 - Provide shelter door key card access
- Included: Expand Compound to provide space for the new 49' X 30' X 16'-AGL Platform above the flood plain with new 8' fence as required.

- Design and Install a new 49' X 30' X 16' raised Metal Platform to mount the communications shelter and Diesel generator/500 gal belly fuel tank above flood plain.
- Add new 150 KW Cummins generator with 500 gal diesel belly tank and transfer switch
- Add new Ice Bridges from new tower to new communications shelter
- Install new platform ground ring and ground to platform, shelter, tower, ice bridge and fence to meet the R56 standard
- Add an electric 16' sliding gate with key card access
- Add a personnel gate with key card access
- **Included: Provide all Architectural and Engineering Services**
 - Site Survey to provide Topographic Survey
 - Design Compound Layout and components per FBC 2017 Edition 6 and Motorola's R56 Site Standards
 - Prepare Construction Drawings
 - Provide Microwave Link Design, Path Analysis and Microwave Frequency Coordination
 - Limited NEPA Analysis and Report
 - SHPO Survey and Report
 - Indian Tribe Analysis
 - FDEP Abatement/Demolition Analysis
 - FCC Checklist
 - Intermod and Interference Studies and Reports
 - Provide support for RF Frequency Acquisition, APCO and FCC Licenses
 - Provide R56 Audit
 - Reasonably handle any unforeseen items to a maximum cost of \$15,000.00
- **Included: New Pinellas County Radio System Microwave Radios**
- **Included: Implementation of MPLS SAR8s**
- **Included: Add Z2 mini work stations**
- **Included: Add Antennas, Transmission Line, Sure Protection, TTA, Multicoupler, Combiners**
- **Included: Add TRAK GPS Equipment**
- **Included: Add Advanced Power Monitors**
- **Included: Add Site Security System**
- **Included: Remove and disposal of old non reusable equipment and cabling**
- **Included: Remove and disposal of old Block Shelter, stairs and foundation**
- **Included: Remove and disposal of existing raised area foundation soils**
- **Included: Remove and dispose existing Ice Bridges**
- **Included: Remove and dispose old generator**
- **Included: Add Weather Station and interface to network**
- **Included: Add Workbench**
- **Option 4: Install and interface New IP MA Call, Tac 4**
- **Included: Add Channels 29 and 30 to MZ**
- **Included: Modify old tower to support old eagle nest**

- Included: Remove up to 80' of old tower

1.1.1.12 Bayfront Hospital

- **This site requires a live cutover. Extreme care is mandatory to reduce or eliminate any interruptions to radio communications services during construction, installation, optimization, testing or cutover.**
 - Prepare an Implementation Time Line indicating any planned downtime necessary, which is to be discussed and mutually agreed to with Pinellas County Director of Radio and Technology Division.
- Included: New Paging Base Station
- Included: Implementation of MPLS SAR8s
- Option 1: Replace ST Anthony's to Bayfront Microwave and remotes

1.1.1.13 Update Existing Pinellas County Emergency Trailer

- Included: Add GTR P25 Trunking System (GTRS from Swing equipment)

1.2 STATEMENT OF WORK

1.2.1 Overview

This Statement of Work (SOW) describes the deliverables to be furnished to Pinellas County in compliance with the RFP 134-0251-NC, Third Amendment. The tasks described herein will be performed by Motorola, its subcontractors, and the County to implement the solution described in the scope of work. The SOW describes the actual work involved in installation, identifies the installation standards to be followed, and clarifies the responsibilities for both Motorola and the County during the project implementation.

1.2.2 Contract

1.2.2.1 Contract Award (Milestone)

Pinellas County and Motorola shall execute the contract and both parties shall receive copies of the executed documentation.

1.2.2.2 Contract Administration

Motorola Responsibilities

- Assign a Project Manager, as the single point of contact with authority to make project decisions.
- Assign personnel necessary for project implementation for which Motorola is responsible.



- Schedule the project kickoff meeting with the County.

County Responsibilities

- Assign a Project Manager, as the single point of contact responsible for County-signed approvals.
- Assign personnel necessary to ensure completion of project tasks for which the County is responsible.

Completion Criteria

- Schedule project kickoff meeting.

1.2.2.3 Project Kickoff

Motorola Responsibilities

- Conduct a project kickoff meeting during the Customer Design Review (CDR) phase of the project.
- Ensure key project team participants attend the meeting.
- Introduce all project participants attending the meeting.

County Responsibilities

- The County's key project team participants attend the meeting.
- Review Motorola and County responsibilities.
- Review and approve proposed Final Acceptance Plan.

1.2.3 Contract Design Review

1.2.3.1 Review Contract Design

Motorola Responsibilities

- Meet with the County project team.
- Establish a defined baseline for the system design and identify any special product requirements and their impact on system implementation.
- Review the System Design, Statement of Work, Project Schedule, and Acceptance Plans, and update the contract documents accordingly.
- Submit design documents to the County for approval. These documents form the basis of the system, which Motorola will manufacture, assemble, and install.
 - If, for any reason, any of the proposed sites cannot be utilized due to reasons beyond Motorola's control, the costs associated with site changes or delays including, but not limited to, re-engineering, frequency re-licensing, site zoning, site permitting, schedule delays, site abnormalities, and re-mobilization, will be paid for by the County and documented through the change order process.

County Responsibilities

- Attend project team meetings.
- Make timely decisions, according to the project schedule.

Completion Criteria

- Complete design documentation, which may include updated system description, equipment list, or system drawings applicable to the project. If additional documentation is received from other agencies, such as the FAA, FCC, or FRIP, Motorola will provide such documentation to the County.
- Incorporate any deviations from the proposed system into the contract documents accordingly.
- The system design is “frozen” in preparation for subsequent project phases such as Order Processing and Manufacturing. This means that any additional changes made to the system design that would result in modifying the equipment being ordered could result in a change order.
- If necessary, a change order will be executed in accordance with all material changes resulting from the design review to the contract.

1.2.3.2 Design Approval (Milestone)

- The County executes a Design Approval milestone document.

1.2.3.3 Ship Equipment to Field

Motorola Responsibilities

- Ship equipment to the final destination or a staging location approved by Pinellas County.
- Prepare equipment and ship to the field warehouse, recommended by and approved by the county’s project administrator during CDR.

1.2.4 Site Development

1.2.4.1 Site Development at Ridgecrest Site

Site Scope Summary (All Scope is included except where indicated as optional)

- Engineering services for site drawings and regulatory approvals
- Site acquisition services – **Not included.**
- Zoning Services – **Not included.**
- New fenced compound/expansion size – 70-foot x 70-foot.
- Clearing type – Medium.
- New power run – 350 feet, Electrical service type – Underground, 400-amp - 120/240-volt, single-phase.

- New shelter size – 24-foot x 32-foot.
- New fuel tank size – 500 gallons-, Type – Diesel BellyTank
- New generator size – 150 kW, Type – Outdoor with new transfer switch
- New tower to be used for antennae – 330-foot self-supported tower.
- New tower foundation size – 460 cubic yards, Type – Drilled Pier.

Motorola Responsibilities:

Site Engineering

- Conduct site walks to collect pertinent information from the sites (e.g., location of Telco, power, existing facilities, etc.)
- Design Compound Layout per FBC 2017, Edition 6 and Motorola R56 Site Standards
- Prepare a lease exhibit and sketch of the site to communicate to the property owner the proposed lease space and planned development at the particular site location
- Prepare site construction drawings showing the layout of various new and existing site components
- Perform a site and topographic survey for the property on which the communication site is located or will be located.
- Perform NEPA Threshold Screening, including limited literature and records search and brief reporting, as necessary to identify sensitive natural and cultural features referenced in 47 CFR Chapter 1, subsection 1.1307 that may potentially be impacted by the proposed construction activity. This does not include the additional field investigations to document site conditions if it is determined that the proposed communication facility “may have a significant environmental impact” and thus require additional documentation, submittals, or work. Regional Environmental Review (RER) report submittals if required by FEMA have not been included.
- Perform SHPO Cultural Resource study as needed to identify sensitive historical and archaeological monuments that might be impacted by proposed construction
- Prepare FAA filings and procure information necessary for filing. Track filing for completion.
- Prepare Indian Tribe analysis
- Prepare FCC checklist and FCC Antenna Site Registry application
- Perform geotechnical testing at the shelter foundation location.
- Conduct up to 80-foot deep soil boring test at each tower leg, backfill holes with spoils and prepare geotechnical report of soil conditions at locations of the tower foundation. Grouting of boring holes or access by Automatic Traction Vehicle (ATV) - mounted rig is not included.
- Prepare, submit and track application for local permit fees (zoning, electrical, building etc.)

- Perform construction staking around the site to establish reference points for proposed construction.
- Conduct construction inspection of foundation steel prior to pour, materials testing of concrete and field density tests of backfill to ensure quality construction.
- Check tower erection for plumbness, linearity and alignment after installation.
- Perform inspection of the site and the work performed by the Contractor to document that the site is built in accordance with the "Site Plans" and document any deviations or violations.
- Prepare record drawings of the site showing the as-built information.

Site Preparation

- Obtain the permits such as electrical, building, and construction permits, and coordinate any inspections with local authorities that may be needed to complete site development work.
- Provide one-time mobilization costs for the construction crews. Any remobilization due to interruptions/delays that are out of Motorola's control will result in additional costs.
- Perform medium clearing, grubbing and disposal of vegetation and shrub growth in the site compound area and a 20-foot path around it (12100 square feet).
- Cut and remove existing asphalt pavement, not to exceed 1600 sq. ft
- Grade the site compound and 10-foot path around it to provide a level, solid, undisturbed surface for installation of site components (not to exceed 8100 square feet).
- Supply and install gravel surfacing to a depth of 6 inches, including herbicide treatment and geotextile fabric installation within the fenced in site compound area, and a 3-foot path around it (not to exceed 5776 square feet).
- Provide silt fence around the compound to control soil erosion (not to exceed 280 linear feet).
- Supply and install 8-foot high chain-link fencing with a ten-foot wide gate around the shelter compound (not to exceed 280 linear feet).
- Perform site touch up (fertilize, seed and straw) disturbed areas not covered with gravel after completion of construction work. Landscaping, decorative fencing or any other aesthetic improvement that may be required by local jurisdictions has not been included and will be handled through a negotiated contract change notice.

Site Components Installation

- Construct 1 reinforced concrete foundation necessary for a 24' x 32' shelter.
- Supply and install 1 modular prefabricated concrete shelter 24-foot x 32-foot.
- Supply and install 1 standby power generator (150 kW) with a 500-gallon diesel fuel belly tank located within 20 feet of the ATS, including interconnection wiring between the generator, transfer switch, and site electrical service mains.



- Supply and install 1 120/240-volt, 400-amp, single-phase meter pedestal and hookup for electrical service by the local utility.
- Provide all trenching, conduit, and cabling necessary for underground hookup of power to the shelter from nearby utility termination located within 350 cable feet of the shelter.
- Supply and install a perimeter grounding system around the compound and shelter. The ground system is to tie to the fence and all new metal structures within the compound to meet current Motorola's R56 standards.
- Conduct 1 three-point ground resistance test of the site. Should any improvements to grounding system be necessary after ground testing, the cost of such improvements shall be the responsibility of Pinellas County, FL.
- Supply and install 1 freestanding 24-inch-wide cable/ice bridge from the tower to the shelter (up to 60 linear feet).

Tower Work

- Erect new 330-foot self-supported tower with strobe lighting.
- Supply and install grounding for the tower base for self-supported towers

Antennae and Transmission Line Installation

- Install 7 antenna(s) for the RF system.
- Install 8 antenna(s) for the RF system.
- Install 3 tower top amplifier(s).
- Install 2 yagi antenna(s).
- Install (5) 4-foot microwave dishes.
- Install (4) 6-foot microwave dishes.
- Install 800 linear feet of 3/8-inch transmission line.
- Install up to 500 linear feet of 1/2-inch transmission line.
- Install up to 925 linear feet of 7/8-inch transmission line.
- Install up to 975 linear feet of 1-1/4-inch transmission line.
- Install up to 3580 linear feet of 1-5/8-inch transmission line.
- Install up to 375 linear feet of EW63 waveguide for microwave dishes.
- Install up to 1305 linear feet of EW90 waveguide for microwave dishes.
- Perform sweep tests on transmission lines.
- Perform alignment of each of 9 microwave paths to ensure that the microwave dishes are optimally positioned.
- Provide and install six-hole hanger blocks and attachment hardware for supporting transmission lines on the antenna support structure every three feet.
- Supply and install 1 ground buss bar at the bottom of the antenna support structure for grounding RF cables before they make horizontal transition.

Miscellaneous Work

- Place construction matting for equipment and materials lay down area to avoid damaging asphalt parking lot
- Haul off trees and stumps
- Haul off shelter and generator foundation spoils
- Crane to stack tower
- Drilled pier tower foundations per RWH design
- Supply and install 16' key card operated sliding gates and 6' key card operated personnel gate.
- Removal of (2) existing SS towers (300' & 280'), includes crane
- Removal of existing ice bridges at old towers sites
- Removal of existing tower caisson piers to 2' below grade
- Traffic safety plan and deployment

Customer Responsibilities:

- Provide access to the site as necessary
- As applicable, coordinate, prepare, submit, and pay for all required permits and inspections for the work that is the Customer's responsibility.
- Pay for all utility connection, pole or line extensions, and any easement or usage fees.
- Review and approve site design drawings within 7 calendar days of submission by Motorola or its subcontractor(s). Should a re-submission be required, the Customer shall review and approve the re-submitted plans within 7 calendar days from the date of submittal.
- Pay for the usage costs of power, leased lines and generator fuelling both during the construction effort before cutover, and on an on-going basis.
- Pay for application fees, taxes and recurring payments for lease/ownership of the property.
- Provide personnel to observe construction progress and testing of site equipment according to the schedule provided by Motorola.
- As applicable (based on local jurisdictional authority), the Customer will be responsible for any installation or up-grades of the electrical system in order to comply with NFPA 70, Article 708
- Provide property deed or lease agreement, and boundary survey, along with existing as-built drawings of the site and site components to Motorola for conducting site engineering.
- Maintain existing access road in order to provide clear and stable entry to the site for heavy-duty construction vehicles, cement trucks and cranes. Sufficient space must be available at the site for these vehicles to maneuver under their own power, without assistance from other equipment.
- Provide additional temporary space for staging of the construction equipment during the construction of new site facilities (tower, shelter, generator, fuel tank etc.).



Assumptions:

- No prevailing wage, certified payroll, mandatory union workers or mandatory minority workers are required for this work
- All work is assumed to be done during normal business hours as dictated by time zone (Monday thru Friday, 7:30 a.m. to 5:00 p.m.).
- All recurring and non-recurring utility costs [including, but not limited to, generator fuel (except first fill), electrical, Telco will be borne by the Customer or site owner.
- Site will have adequate electrical service for the new shelter and tower. Utility transformer, transformer upgrades, line, or pole extensions have not been included.
- Hazardous materials are not present at the work location. Testing and removal of hazardous materials, found during site investigations, construction or equipment installation will be the responsibility of the customer.
- A maximum of 45 calendar days will be required for obtaining approved building permits from time of submission, and a maximum of 60 calendar days will be required for zoning approvals from time of submittal.
- No improvements are required for concrete trucks, drill rigs, shelter delivery, and crane access.
- If extremely harsh or difficult weather conditions delay the site work for more than a week, Motorola will seek excusable delays rather than risk job site safety.
- For zoning approvals, a maximum of 60 calendar days will be required from time of submittal with attendance at maximum of two (2) required planning meetings.
- The new tower location will pass the FAA hazard study, zoning, FCC and environmental permitting.
- The restoration of the site surroundings by fertilizing, seeding and strawing the disturbed areas will be adequate.
- Tower and foundation sizing is based on the tower loading requirements as a result of the RF Antenna System design and the Microwave Antenna System design (i.e. - dish sizes and locations obtained from paper path studies). If after physical path studies, the dish sizes and locations change, then Motorola will then review the impact to tower structure and foundations and determine if using the "reasonable handling of unforeseen items costs" should be addressed with the customer.
- If as a result of NEPA studies, any jurisdictional authority should determine that a proposed communications facility "may have a significant environmental impact", the environmental impact studies or field testing and evaluation related to such determination have not been included.
- The site location can be finalized and lease agreement can be reached with the property owner within 60 calendar days after the start of the site acquisition effort.
- A waiver to zoning requirements like setbacks, tower height limitations, etc. can be obtained.



- The soil resistivity at the site is sufficient to achieve resistance of ten (10) ohms or less. Communications site grounding will be designed and installed per Motorola's Standards and Guidelines for Communications Sites (R56).
- Underground utilities are not present in the construction area, and as such no relocation will be required.

Completion Criteria

- Site development completed per issued for construction (IFC) construction drawings, project requirements, contractual obligations (including any customer/Motorola approved changes) and approved by Pinellas County, FL.
 - This shall be confirmed by contractor and reviewed with Motorola construction manager and project manager before inspections occur.
- All jurisdictional and contractual required testing and inspections to be performed by the contractor. (Contractual testing and inspections defined and agreed to with project team and customer prior to project kick off; vendor solely responsible for conducting, coordinating and paying for all jurisdictional testing and inspections).
- Motorola site development checklist shall be completed and signed off by contractor prior to customer inspection. (Review with project team and customer and amend checklist as required at project kick off or before work begins).
- Site turn-over package completed and turned over to Motorola (As defined and agreed to with project team and customer).
- All punch list and deficiencies shall be completed prior to customer and Motorola inspections.

1.2.4.1.1 Site Development Acceptance (Milestone)

- All site development shall be completed by Motorola and shall be reviewed and accepted by Pinellas County.

1.2.4.2 Site Development at Court House Site

Site Scope Summary

- Engineering services for site drawings and regulatory approvals – **Included**.
- Site acquisition services – **Not included**
- Zoning Services – **Not included**

Motorola Responsibilities:

Site Engineering

- Prepare site construction drawings, showing the layout of various new and existing site components.
- Conduct site walks to collect pertinent information from the sites (e.g., location of Telco, power, existing facilities, etc.).



- Prepare a lease exhibit and sketch of the site to communicate to the property owner the proposed lease space and planned development at the particular site location.
- Prepare construction drawings for permit application
- Prepare record drawings of the site showing the as-built information.
- Perform National Environmental Policy Act (NEPA) Threshold Screening, including limited literature and records search and brief reporting, as necessary to identify sensitive natural and cultural features referenced in 47 Code of Federal Regulations (CFR) Chapter 1, subsection 1.1307 that may be potentially impacted by the proposed construction activity. This does not include the additional field investigations to document site conditions if it is determined that the proposed communication facility “may have a significant environmental impact” and thus require additional documentation, submittals, or work. Perform a cultural resource study, as needed to identify sensitive historical and archaeological monuments that might be impacted by propose construction.
- Preparation, submission and tracking of application for local permit fees (zoning, electrical, building etc.) and procurement of information necessary for filing.

Site Preparation

- Obtain the permits such as electrical, building, and construction permits, and coordinate any inspections with local authorities that may be needed to complete site development work.
- Provide one-time mobilization costs for the construction crews. Any remobilization due to interruptions/delays that are out of Motorola's control will result in additional costs.

Antenna and Transmission Line Installation

- Install 3 antenna(s) for the RF system.
- Install 6 antenna(s) for the RF system.
- Supply and install 6 heavy duty mount(s) for Bogner antennae.
- Install (3) 4-foot microwave dishes.
- Install (6) 6-foot microwave dishes.
- Install 150 linear feet of 3/8-inch transmission line.
- Install up to 350 linear feet of 1/2-inch transmission line.
- Install up to 760 linear feet of 7/8-inch transmission line.
- Install up to 650 linear feet of 1-5/8 inch transmission line.
- Install up to 1030 linear feet of EW63 waveguide for microwave dishes.
- Install up to 320 linear feet of EW90 waveguide for microwave dishes.
- Perform sweep tests on transmission lines.
- Perform alignment of each of 9 microwave paths to ensure that the microwave dishes are optimally positioned.
- Provide and install six-hole hanger blocks and attachment hardware for supporting transmission lines on the antenna support structure every three feet.



Existing Facility Improvement Work

- Supply and install two (2) UPS's
- Supply and install one 200-amp breaker panel with capacity for 30 circuits.
- Supply and install twenty four (24) 20-amp breakers in the distribution panel and wire to outlets located on an average within 35 cable feet.
- Supply and install four 40-amp breakers in the distribution panel and wire to outlets located on an average within 35 cable feet.
- Install three 8-outlet distribution-bar(s) and wire each outlet to individual breaker.
- Install two new single-phase UPS equipment and wire output to UPS distribution panel.
- Ground all metallic objects in the interior of the existing room, to meet current Motorola's Standards and Guidelines for Communications Sites (R56) requirements and terminate near equipment locations.
- Supply and install one copper ground buss bar.
- Supply and install one wall-mounted 10-pound CO2 fire extinguisher and one wall-mounted 20-pound ABC fire extinguisher.
- Supply and install "No smoking" EME signage at the site.
- Supply and install one eye wash station and one first aid kit.

Miscellaneous Work

- Crane to put equipment on the roof
- Roof mounted lift system to install bogner antennae on roof
- Removal and disposal at approved waste facility of (6) existing bogner antennae (3) 4' MW dishes and (4) 6' MW dishes
- Traffic safety, permitting and implementation plan for crane lift
- Structural analysis of existing bogner mounts and mounting structure

Customer Responsibilities:

- As applicable, coordinate, prepare, submit, and pay for all required permits and inspections for the work that is the Customer's responsibility.
- Pay for all utility connection, pole or line extensions, and any easement or usage fees.
- Review and approve site design drawings within 7 calendar days of submission by Motorola or its subcontractor(s). Should a re-submission be required, the Customer shall review and approve the re-submitted plans within 7 calendar days from the date of submittal.
- Pay for the usage costs of power, leased lines and generator fuelling both during the construction/installation effort and on an on-going basis.
- Pay for application fees, taxes and recurring payments for lease/ownership of the property.



- Provide personnel to observe construction progress and testing of site equipment according to the schedule provided by Motorola.
- As applicable (based on local jurisdictional authority), the Customer will be responsible for any installation or up-grades of the electrical system in order to comply with NFPA 70, Article 708
- Provide property deed or lease agreement, and boundary survey, along with existing as-built drawings of the site and site components to Motorola for conducting site engineering.
- Maintain existing access road in order to provide clear and stable entry to the site for heavy-duty construction vehicles, cement trucks and cranes. Sufficient space must be available at the site for these vehicles to manoeuvre under their own power, without assistance from other equipment.
- If required, remove or relocate any existing facilities, equipment, and utilities to create space for new site facilities and equipment.
- If required, provide any physical improvements (walls, roofing, flooring, painting, etc.) necessary to house the equipment in the existing room.

Assumptions:

- No prevailing wage, certified payroll, mandatory union workers or mandatory minority workers are required for this work
- All work is assumed to be done during normal business hours as dictated by time zone (Monday thru Friday, 7:30 a.m. to 5:00 p.m.).
- All recurring and non-recurring utility costs [including, but not limited to, generator fuel, electrical, and Telco will be borne by the Customer or site owner.
- All utility installations shall be coordinated and paid for by the site owner and located at jointly agreed to location within or around the new communications shelter or equipment room.
- Site will have adequate electrical service. Utility transformer, transformer upgrades, line, or pole extensions have not been included.
- Hazardous materials are not present at the work location. Testing and removal of hazardous materials, found during site investigations, construction or equipment installation will be the responsibility of the customer.
- A maximum of 45 calendar days will be required for obtaining approved building permits from time of submission, and a maximum of 60 calendar days will be required for zoning approvals from time of submittal.
- No improvements are required for concrete trucks, drill rigs, shelter delivery, and crane access.
- If extremely harsh or difficult weather conditions delay the site work for more than a week, Motorola will seek excusable delays rather than risk job site safety.



- The site will have adequate room for installation of proposed equipment, based on applicable codes and Motorola's R56 standards.
- A clear obstruction-free access exists from the antenna location to the equipment room.
- The floor can support the proposed new loading. Physical or structural improvements to the existing room will not be required.

Completion Criteria

- Site development completed per issued for construction (IFC) construction drawings, project requirements, contractual obligations (including any customer/Motorola approved changes) and approved by Pinellas County, FL.
 - This shall be confirmed by contractor and reviewed with Motorola construction manager and project manager before inspections occur.
- All jurisdictional and contractual required testing and inspections to be performed by the contractor. (Contractual testing and inspections defined and agreed to with project team and customer prior to project kick off; vendor solely responsible for conducting, coordinating and paying for all jurisdictional testing and inspections).
- Motorola site development checklist shall be completed and signed off by contractor prior to customer inspection. (Review with project team and customer and amend checklist as required at project kick off or before work begins).
- Site turn-over package completed and turned over to Motorola (As defined and agreed to with project team and customer).
- All punch list and deficiencies shall be completed prior to customer and Motorola inspections.

1.2.4.2.1 Site Development Acceptance (Milestone)

- All site development shall be completed by Motorola and shall be reviewed and accepted by Pinellas County.

1.2.4.3 Site Development at Tarpon Springs Site

Site Scope Summary

- Engineering services for site drawings and regulatory approvals – Included.
- Site acquisition services – Not included.
- Zoning Services – Not included.
- New expansion size increase required for fenced compound– 150-foot x 12-foot.
- Clearing type – Light.
- Road length requiring improvement – 50 feet.
- New power run – 125 feet, Electrical service type – Underground, 400-amp - 120/240-volt, single-phase.
- New shelter size – 24-foot x 32-foot.



- New fuel tank size – 500 gallons-, Type – Diesel Belly Tank.
- New generator size – 150 kW, Type – Outdoor with new transfer switch
- Existing tower to be used for antennae – 300 ' self supported Tower.

Motorola Responsibilities:

Site Engineering

- Conduct site walks to collect pertinent information from the sites (e.g., location of Telco, power, existing facilities, etc.).
- Prepare a lease exhibit and sketch of the site to communicate to the property owner the proposed lease space and planned development at the particular site location.
- Perform a site survey and topographic survey for the property on which the communication site is located or will be located.
- Perform geotechnical testing at the shelter foundation location.
- Perform limited National Environmental Policy Act (NEPA) Threshold Screening, including limited literature and records search and brief reporting, as necessary to identify sensitive natural and cultural features referenced in 47 Code of Federal Regulations (CFR) Chapter 1, subsection 1.1307 that may be potentially impacted by the proposed construction activity. This does not include the additional field investigations to document site conditions if it is determined that the proposed communication facility “may have a significant environmental impact” and thus require additional documentation, submittals, or work.
- Perform Limited SHPO Cultural Resource study as needed to identify sensitive historical and archaeological monuments that might be impacted by proposed construction
- Perform four-point soil resistivity testing at the time of site visit.
- Perform FCC Checklist
- Prepare site construction drawings, showing the layout of various new and existing site components.
- Preparation, submission and tracking of application for local permit fees (zoning, electrical, building etc.) and procurement of information necessary for filing.
- Perform construction staking around the site to establish reference points for proposed construction.
- Conduct construction inspection of foundation steel prior to pour, materials testing of concrete and field density tests of backfill to ensure quality construction.
- Perform inspection of the site and the work performed by the Contractor to document that the site is built in accordance with the “Site Plans” and document any deviations or violations.
- Prepare record drawings of the site showing the as-built information.
- Provide FDEP Abatement/Demolition Analysis



Site Preparation

- Obtain the permits such as electrical, building, and construction permits, and coordinate any inspections with local authorities that may be needed to complete site development work.
- Provide one-time mobilization costs for the construction crews. Any remobilization due to interruptions/delays that are out of Motorola's control will result in additional costs.
- Perform light clearing of brush, grubbing and disposal of vegetation and shrub growth in the site compound area and a 20-foot path around it (9880 square feet).
- Perform clear light brush, grub roots and dispose vegetation and shrub growth in a 15-foot wide access road to the site (not to exceed 50 feet in length).
- Grade the site compound and 10-foot path around it to provide a level, solid, undisturbed surface for installation of site components (not to exceed 5440 square feet).
- Supply and install gravel surfacing to a depth of 6 inches, including herbicide treatment and geotextile fabric installation within the fenced in site compound area, and a 3-foot path around it (not to exceed 10308 square feet).
- Provide a 15-foot wide access road (not to exceed 50 feet in length), including surface grading and graveling
- Provide silt fence around the compound to control soil erosion (not to exceed 324 linear feet).
- Supply and install 8-foot high chain-link fencing with a ten-foot wide gate around the shelter compound (not to exceed 324 linear feet).
- Perform site touch up (fertilize, seed and straw) disturbed areas not covered with gravel after completion of construction work. Landscaping, decorative fencing or any other aesthetic improvement that may be required by local jurisdictions has not been included and will be handled through a negotiated contract change notice.

Site Components Installation

- Construct 1 reinforced concrete foundation necessary for a 24' x 32-foot shelter.
- Construct 1 concrete slab for Cummins 150 KW Diesel Generator with 500 gallon Diesel fuel belly tank at 3000 psi with reinforcing steel necessary for foundations.
- Supply and install 1 modular prefabricated concrete shelter 24-foot x 32-foot.
- Supply and install 1 standby power generator (150 kW) with a 500 gal Diesel belly tank located within 20 feet of the ATS, including interconnection wiring between the generator, transfer switch, and site electrical service mains.
- Supply and install 1 120/240-volt, 400-amp, single-phase meter pedestal and hookup for electrical service by the local utility.
- Provide all trenching, conduit, and cabling necessary for underground hookup of power to the shelter from nearby utility termination located within 125 cable feet of the shelter.



- Supply and install a perimeter grounding system around the compound and shelter. The ground system is to tie to the fence and all new metal structures within the compound to meet current Motorola's R56 standards.
- Conduct 1 three-point ground resistance test of the site. Should any improvements to grounding system be necessary after ground testing, the cost of such improvements shall be the responsibility of Pinellas County, FL.
- Supply and install 1 freestanding 24-inch-wide cable/ice bridge from the tower to the shelter (up to 60 linear feet).

Tower Work

- Connect existing Tower Ground Ring to new Shelter Ground Ring

Antenna and Transmission Line Installation

- Install 373 linear feet of 3/8-inch transmission line.
- Install up to 130 linear feet of 1/2-inch transmission line.
- Install up to 1377 linear feet of 7/8-inch transmission line.
- Install up to 1625 linear feet of 1-5/8-inch transmission line.
- Install up to 1150 linear feet of EW63 waveguide for microwave dishes.
- Install up to 180 linear feet of EW90 waveguide for microwave dishes.
- Perform sweep tests on transmission lines.
- Perform alignment of each of 8 microwave paths to ensure that the microwave dishes are optimally positioned.
- Provide and install six-hole hanger blocks and attachment hardware for supporting transmission lines on the antenna support structure every three feet.
- Supply and install 1 ground buss bar at the bottom of the antenna support structure for grounding RF cables before they make horizontal transition.

Miscellaneous Work

- Demo electrical equipment, decommission generators for removal by others, decommission and remove UPS and batteries
- Excavate and haul off top soils and in compound and expansion area up to 150 cu yds
- Backfill and compaction of up to 150 cu yds of fill for compound expansion area
- Demolition and removal of existing block equipment building 1' below grade
- Excavate and haul off shelter and generator foundation spoils
- Supply and install 16' key card operated sliding gates and 6' key card operated personnel gate.
- Removal of 300' existing SS tower after system cutover, includes crane.
- Demolition and removal of caisson foundations to 2' below grade

Customer Responsibilities:

- As applicable, coordinate, prepare, submit, and pay for all required permits and inspections for the work that is the Customer's responsibility.

- Pay for all utility connection, pole or line extensions, and any easement or usage fees.
- Review and approve site design drawings within 7 calendar days of submission by Motorola or its subcontractor(s). Should a re-submission be required, the Customer shall review and approve the re-submitted plans within 7 calendar days from the date of submittal.
- Pay for the usage costs of power, leased lines and generator fuelling both during the construction effort before site cutover, and on an on-going basis.
- Pay for application fees, taxes and recurring payments for lease/ownership of the property.
- Provide personnel to observe construction progress and testing of site equipment according to the schedule provided by Motorola.
- As applicable (based on local jurisdictional authority), the Customer will be responsible for any installation or up-grades of the electrical system in order to comply with NFPA 70, Article 708
- Provide property deed or lease agreement, and boundary survey, along with existing as-built drawings of the site and site components to Motorola for conducting site engineering.

Assumptions:

- No prevailing wage, certified payroll, mandatory union workers or mandatory minority workers are required for this work
- All work is assumed to be done during normal business hours as dictated by time zone (Monday thru Friday, 7:30 a.m. to 5:00 p.m.).
- All recurring and non-recurring utility costs [including, but not limited to, generator fuel (except first fill), electrical and Telco will be borne by the Customer or site owner.
- All utility installations shall be coordinated and paid for by the site owner and located at jointly agreed to location within or around the new communications shelter or equipment room.
- Site will have adequate electrical service for the new shelter and tower. Utility transformer, transformer upgrades, line, or pole extensions have not been included.
- Hazardous materials are not present at the work location. Testing and removal of hazardous materials, found during site investigations, construction or equipment installation will be the responsibility of the customer.
- A maximum of 45 calendar days will be required for obtaining approved building permits from time of submission, and a maximum of 60 calendar days will be required for zoning approvals from time of submittal.
- No improvements are required for concrete trucks, drill rigs, shelter delivery, and crane access.
- If extremely harsh or difficult weather conditions delay the site work for more than a week, Motorola will seek excusable delays rather than risk job site safety.

- The existing ground system and soil resistivity at the site is sufficient to achieve resistance of 10 ohms or less. Communication site grounding will be designed and installed per Motorola's R56 standards.
- The existing site has adequate room to expand and install the shelter, including lay-down and staging areas, without encroaching on wetlands, easements, setbacks, right-of-ways, or property lines.
- On the existing tower, the antenna locations for the proposed antenna system design will be available at the time of installation.
- Restoration of the site surroundings by fertilizing, seeding, and strawing the disturbed areas will be adequate.
- The site has adequate utility service to support the proposed equipment loading. Utility transformer upgrades or step-up or down transformers will not be required.
- Underground utilities are not present in the construction area and as such no relocation will be required.

Completion Criteria

- Site development completed per issued for construction (IFC) construction drawings, project requirements, contractual obligations (including any customer/Motorola approved changes) and approved by Pinellas County, FL.
 - This shall be confirmed by contractor and reviewed with Motorola construction manager and project manager before inspections occur.
- All jurisdictional and contractual required testing and inspections to be performed by the contractor. (Contractual testing and inspections defined and agreed to with project team and customer prior to project kick off; vendor solely responsible for conducting, coordinating and paying for all jurisdictional testing and inspections).
- Motorola site development checklist shall be completed and signed off by contractor prior to customer inspection. (Review with project team and customer and amend checklist as required at project kick off or before work begins).
- Site turn-over package completed and turned over to Motorola (As defined and agreed to with project team and customer).
- All punch list and deficiencies shall be completed prior to customer and Motorola inspections.

1.2.4.3.1 Site Development Acceptance (Milestone)

- All site development shall be completed by Motorola and shall be reviewed and accepted by Pinellas County.

1.2.4.4 Site Development at Eldridge Wilde Site

Site Scope Summary

- Engineering services for site drawings and regulatory approvals – **Included**.
- Site acquisition services – **Not included**.



- Zoning Services – **Not included.**
- New expansion size increase required for fenced compound– 100-foot x 20-foot.
- Clearing Type – Medium
- Road length requiring improvement – 200 feet.
- New power run – 100 feet, Electrical service type – Underground, 400-amp - 120/240-volt, single-phase.
- New 49-ft x 30-ft x 6-ft AGL Raised Metal Platform
- New shelter size – 24-foot x 32-foot.
- New fuel tank size – 500 gallons-, Type – Diesel Belly Tank.
- New generator size – 150 kW, Type – Outdoor with new transfer switch
- Existing tower to be used for antennae – 250 ' Self supported Tower.

Motorola Responsibilities:

Site Engineering

- Conduct site walks to collect pertinent information from the sites (e.g., location of Telco, power, existing facilities, etc.).
- Prepare a lease exhibit and sketch of the site to communicate to the property owner the proposed lease space and planned development at the particular site location.
- Perform a site survey and topographic survey for the property on which the communication site is located or will be located.
- Perform geotechnical testing at the shelter foundation location.
- Perform limited National Environmental Policy Act (NEPA) Threshold Screening, including limited literature and records search and brief reporting, as necessary to identify sensitive natural and cultural features referenced in 47 Code of Federal Regulations (CFR) Chapter 1, subsection 1.1307 that may be potentially impacted by the proposed construction activity. This does not include the additional field investigations to document site conditions if it is determined that the proposed communication facility “may have a significant environmental impact” and thus require additional documentation, submittals, or work.
- Perform Limited SHPO Cultural Resource study as needed to identify sensitive historical and archaeological monuments that might be impacted by proposed construction
- Perform four-point soil resistivity testing at the time of site visit.
- Perform FCC Checklist
- Prepare site construction drawings, showing the layout of various new and existing site components.
- Preparation, submission and tracking of application for local permit fees (zoning, electrical, building etc.) and procurement of information necessary for filing.
- Perform construction staking around the site to establish reference points for proposed construction.



- Conduct construction inspection of foundation steel prior to pour, materials testing of concrete and field density tests of backfill to ensure quality construction.
- Perform inspection of the site and the work performed by the Contractor to document that the site is built in accordance with the “Site Plans” and document any deviations or violations.
- Prepare record drawings of the site showing the as-built information.
- Provide FDEP Abatement/Demolition Analysis

Site Preparation

- Obtain the permits such as electrical, building, and construction permits, and coordinate any inspections with local authorities that may be needed to complete site development work.
- Provide one-time mobilization costs for the construction crews. Any remobilization due to interruptions/delays that are out of Motorola's control will result in additional costs.
- Perform medium clearing, grubbing and disposal of vegetation and shrub growth in the site compound area and a 20-foot path around it (8400 square feet).
- Perform medium tree clearing (Trees up to 6” in diameter), grubbing and disposal of vegetation and shrub growth in a 15-foot wide access road to the site (not to exceed 200 feet in length).
- Cut and remove existing asphalt pavement, not to exceed 1200 sq. ft
- Grade the site compound and 10-foot path around it to provide a level, solid, undisturbed surface for installation of site components (not to exceed 4800 square feet).
- Supply and install gravel surfacing to a depth of 6 inches, including herbicide treatment and geotextile fabric installation within the fenced in site compound area, and a 3-foot path around it (not to exceed 2756 square feet).
- Provide a 15-foot wide access road (not to exceed 200 feet in length), including surface grading and graveling
- Provide silt fence around the compound to control soil erosion (not to exceed 240 linear feet).
- Supply and install 8-foot high chain-link fencing with a ten-foot wide gate around the shelter compound (not to exceed 240 linear feet).
- Perform site touch up (fertilize, seed and straw) disturbed areas not covered with gravel after completion of construction work. Landscaping, decorative fencing or any other aesthetic improvement that may be required by local jurisdictions has not been included and will be handled through a negotiated contract change notice.

Site Components Installation

- Supply and install 1 modular prefabricated concrete shelter 24-foot x 32-foot.

- Supply and install 1 standby power generator (150 kW) with a 500 gal diesel belly tank located within 20 feet of the ATS, including interconnection wiring between the generator, transfer switch, and site electrical service mains.
- Supply and install 1 120/208 volt, 400-amp, three-phase meter pedestal and hookup for electrical service by the local utility.
- Provide all trenching, conduit, and cabling necessary for underground hookup of power to the shelter from nearby utility termination located within 100 cable feet of the shelter.
- Supply and install a perimeter grounding system around the compound and shelter. The ground system is to tie to the fence and all new metal structures within the compound to meet current Motorola's R56 standards.
- Conduct 1 three-point ground resistance test of the site. Should any improvements to grounding system be necessary after ground testing, the cost of such improvements shall be the responsibility of Pinellas County, FL.
- Supply and install 1 freestanding 24-inch-wide cable/ice bridge from the tower to the shelter (up to 60 linear feet).

Tower Work

- connect existing Tower Ground Ring to new Shelter Ground Ring

Antenna and Transmission Line Installation

- Install 815 linear feet of 3/8-inch transmission line.
- Install up to 190 linear feet of 1/2-inch transmission line.
- Install up to 815 linear feet of 7/8-inch transmission line.
- Install up to 1700 linear feet of 1-5/8-inch transmission line.
- Install up to 730 linear feet of EW63 waveguide for microwave dishes.
- Perform sweep tests on transmission lines.
- Perform alignment of each of 6 microwave paths to ensure that the microwave dishes are optimally positioned.
- Provide and install six hole hanger blocks and attachment hardware for supporting transmission lines on the antenna support structure every three feet.
- Supply and install 1 ground buss bar at the bottom of the antenna support structure for grounding RF cables before they make horizontal transition.

Miscellaneous Work

- Install raised metal platform for new shelter and generator - Includes Crane
- Installation of raised metal platform stairs
- Demo electrical equipment, decommission generators for removal by others, decommission and remove UPS and batteries
- Demolition and removal of existing block equipment building to 1' below grade
- Excavate and haul off marsh soils in compound expansion area up to 280 cu yds
- Backfill and compaction of up to 280 cu yds of fill for compound expansion area
- Excavate and haul off raised platform foundation spoils up to 180 cu yds

- Place construction matting for equipment and materials lay down area
- Supply and install 16' key card operated sliding gates and 6' key card operated personnel gate.
- Demolition and removal of one caisson foundation to 2' below grade

Customer Responsibilities:

- As applicable, coordinate, prepare, submit, and pay for all required permits and inspections for the work that is the Customer's responsibility.
- Pay for all utility connection, pole or line extensions, and any easement or usage fees.
- Review and approve site design drawings within 7 calendar days of submission by Motorola or its subcontractor(s). Should a re-submission be required, the Customer shall review and approve the re-submitted plans within 7 calendar days from the date of submittal.
- Pay for the usage costs of power, leased lines and generator fuelling both during the construction effort before site cutover, and on an on-going basis.
- Pay for application fees, taxes and recurring payments for lease/ownership of the property.
- Provide personnel to observe construction progress and testing of site equipment according to the schedule provided by Motorola.
- As applicable (based on local jurisdictional authority), the Customer will be responsible for any installation or up-grades of the electrical system in order to comply with NFPA 70, Article 708
- Provide property deed or lease agreement, and boundary survey, along with existing as-built drawings of the site and site components to Motorola for conducting site engineering.

Assumptions:

- No prevailing wage, certified payroll, mandatory union workers or mandatory minority workers are required for this work
- All work is assumed to be done during normal business hours as dictated by time zone (Monday thru Friday, 7:30 a.m. to 5:00 p.m.).
- All recurring and non-recurring utility costs [including, but not limited to, generator fuel (except first fill), electrical and Telco will be borne by the Customer or site owner.
- All utility installations shall be coordinated and paid for by the site owner and located at jointly agreed to location within or around the new communications shelter or equipment room.
- Site will have adequate electrical service for the new shelter and tower. Utility transformer, transformer upgrades, line, or pole extensions have not been included.

- Hazardous materials are not present at the work location. Testing and removal of hazardous materials, found during site investigations, construction or equipment installation will be the responsibility of the customer.
- A maximum of 45 calendar days will be required for obtaining approved building permits from time of submission, and a maximum of 60 calendar days will be required for zoning approvals from time of submittal.
- No improvements are required for concrete trucks, drill rigs, shelter delivery, and crane access.
- If extremely harsh or difficult weather conditions delay the site work for more than a week, Motorola will seek excusable delays rather than risk job site safety.
- The existing ground system and soil resistivity at the site is sufficient to achieve resistance of 10 ohms or less. Communication site grounding will be designed and installed per Motorola's R56 standards.
- The existing site has adequate room to expand and install the shelter, including lay-down and staging areas, without encroaching on wetlands, easements, setbacks, right-of-ways, or property lines.
- On the existing tower, the antenna locations for the proposed antenna system design will be available at the time of installation.
- Restoration of the site surroundings by fertilizing, seeding, and strawing the disturbed areas will be adequate.
- The site has adequate utility service to support the proposed equipment loading. Utility transformer upgrades or step-up or down transformers will not be required.
- Underground utilities are not present in the construction area and as such no relocation will be required.

Completion Criteria

- Site development completed per issued for construction (IFC) construction drawings, project requirements, contractual obligations (including any customer/Motorola approved changes) and approved by Pinellas County, FL.
 - This shall be confirmed by contractor and reviewed with Motorola construction manager and project manager before inspections occur.
- All jurisdictional and contractual required testing and inspections to be performed by the contractor. (Contractual testing and inspections defined and agreed to with project team and customer prior to project kick off; vendor solely responsible for conducting, coordinating and paying for all jurisdictional testing and inspections).
- Motorola site development checklist shall be completed and signed off by contractor prior to customer inspection. (Review with project team and customer and amend checklist as required at project kick off or before work begins).
- Site turn-over package completed and turned over to Motorola (As defined and agreed to with project team and customer).
- All punch list and deficiencies shall be completed prior to customer and Motorola inspections.



1.2.4.4.1 Site Development Acceptance (Milestone)

- All site development shall be completed by Motorola and shall be reviewed and accepted by Pinellas County.

1.2.4.5 Site Development at Highway Maintenance Site

Site Scope Summary

- Engineering services for site drawings and regulatory approvals – **Included**.
- Site acquisition services – **Not included**.
- Zoning Services – **Not included**.
- New expansion size increase required for Fenced Compound – 1-foot x 1-foot.
- Clearing type – Light.
- Road length requiring improvement – 50 feet.
- New power run – 200 feet, Electrical service type – Underground, 400-amp - 120/240-volt, single-phase.
- New 49-ft x 30-ft x 6-ft AGL Raised Metal Platform
- New shelter size – 24-foot x 32-foot.
- New fuel tank size – 500 gallons-, Type – Diesel Fuel Belly Tank
- New generator size – 150 kW, Type – Outdoor with new transfer switch
- Existing tower to be used for antennae – 250 ' Self supported Tower
- Add two 700 MHz Transmit Antennae at 225-feet AGL with 6-foot Side Arms and 1-5/8" Transmission Line
- Add a Tower Structural Analysis for the Highway Maintenance Tower with the two new Tx Antennae and line
- FDEP Abatement/Demolition Analysis

Motorola Responsibilities:

Site Engineering

- Conduct site walks to collect pertinent information from the sites (e.g., location of Telco, power, existing facilities, etc.).
- Prepare a lease exhibit and sketch of the site to communicate to the property owner the proposed lease space and planned development at the particular site location.
- Perform a site survey and topographic survey for the property on which the communication site is located or will be located.
- Perform geotechnical testing at the shelter foundation location.
- Perform limited National Environmental Policy Act (NEPA) Threshold Screening, including limited literature and records search and brief reporting, as necessary to identify sensitive natural and cultural features referenced in 47 Code of Federal Regulations (CFR) Chapter 1, subsection 1.1307 that may be potentially impacted by the proposed construction activity. This does not include the additional field investigations to document site conditions if it is determined that



the proposed communication facility “may have a significant environmental impact” and thus require additional documentation, submittals, or work.

- Perform Limited SHPO Cultural Resource study as needed to identify sensitive historical and archaeological monuments that might be impacted by proposed construction
- Perform four-point soil resistivity testing at the time of site visit.
- Perform FCC Checklist
- Provide a Tower Structural Analysis for the Highway Maintenance Tower
- Prepare site construction drawings, showing the layout of various new and existing site components.
- Preparation, submission and tracking of application for local permit fees (zoning, electrical, building etc.) and procurement of information necessary for filing.
- Perform construction staking around the site to establish reference points for proposed construction.
- Conduct construction inspection of foundation steel prior to pour, materials testing of concrete and field density tests of backfill to ensure quality construction.
- Perform inspection of the site and the work performed by the Contractor to document that the site is built in accordance with the “Site Plans” and document any deviations or violations.
- Prepare record drawings of the site showing the as-built information.
- Provide FDEP Abatement/Demolition Analysis

Site Preparation

- Obtain the permits such as electrical, building, and construction permits, and coordinate any inspections with local authorities that may be needed to complete site development work.
- Provide one-time mobilization costs for the construction crews. Any remobilization due to interruptions/delays that are out of Motorola's control will result in additional costs.
- Perform light clearing of brush, grubbing and disposal of vegetation and shrub growth in the site compound area and a 20-foot path around it (1681 square feet).
- Perform clear light brush, grub roots and dispose vegetation and shrub growth in a 15-foot wide access road to the site (not to exceed 50 feet in length).
- Grade the site compound and 10-foot path around it to provide a level, solid, undisturbed surface for installation of site components (not to exceed 441 square feet).
- Supply and install gravel surfacing to a depth of 6 inches, including herbicide treatment and geotextile fabric installation within the fenced in site compound area, and a 3-foot path around it (not to exceed 49 square feet).
- Provide a 15-foot wide access road (not to exceed 50 feet in length), including surface grading and graveling



- Provide silt fence around the compound to control soil erosion (not to exceed 400 linear feet).
- Perform site touch up (fertilize, seed and straw) disturbed areas not covered with gravel after completion of construction work. Landscaping, decorative fencing or any other aesthetic improvement that may be required by local jurisdictions has not been included and will be handled through a negotiated contract change notice.

Site Components Installation

- Supply and install 1 modular prefabricated concrete shelter 24-foot x 32-foot.
- Supply and install 1 standby power generator (150 kW) with a 500 gal diesel belly tank located within 20 feet of the ATS, including interconnection wiring between the generator, transfer switch, and site electrical service mains.
- Supply and install 1 120/240-volt, 400-amp, single-phase meter pedestal and hookup for electrical service by the local utility.
- Provide all trenching, conduit, and cabling necessary for underground hookup of power to the shelter from nearby utility termination located within 200 cable feet of the shelter.
- Supply and install a perimeter grounding system around the compound and shelter. The ground system is to tie to the fence and all new metal structures within the compound to meet current Motorola's R56 standards.
- Conduct 1 three-point ground resistance test of the site. Should any improvements to grounding system be necessary after ground testing, the cost of such improvements shall be the responsibility of Pinellas County, FL.
- Supply and install 1 freestanding 24-inch-wide cable/ice bridge from the tower to the shelter (up to 60 linear feet).

Tower Work

- Connect existing Tower Ground Ring to new Shelter Ground Ring

Antenna and Transmission Line Installation

- Install two 700 MHz Antennae at 225-feet AGL
- Install two Bogner mounts at 225-feet AGL
- Install two 6-foot side arms at 225-feet AGL
- Install 795 linear feet of 3/8-inch transmission line.
- Install up to 200 linear feet of 1/2-inch transmission line.
- Install up to 235 linear feet of 7/8-inch transmission line.
- Install up to 1615 linear feet of 1-5/8-inch transmission line.
- Install up to 840 linear feet of EW63 waveguide for microwave dishes.
- Perform sweep tests on transmission lines.
- Perform alignment of each of 4 microwave paths to ensure that the microwave dishes are optimally positioned.



- Provide and install six-hole hanger blocks and attachment hardware for supporting transmission lines on the antenna support structure every three feet.
- Supply and install 1 ground buss bar at the bottom of the antenna support structure for grounding RF cables before they make horizontal transition.

Miscellaneous Work

- Install raised metal platform for new shelter and generator - Includes Crane
- Installation of raised metal platform stairs
- Demo electrical equipment, decommission generators for removal by others, decommission and remove UPS and batteries
- Demolition and removal of existing block equipment building 1' below grade
- Excavate and haul off existing raised area foundation soils up to 243 cu yds
- Excavate and haul foundation spoils off for new raised platform
- Supply temporary 200A service for swing trailer. Includes breaker installation and hookup at trailer
- If required, prepare and submit Electromagnetic Energy (EME) plans for the site (as a licensee) to demonstrate compliance with FCC RF Exposure guidelines.

Customer Responsibilities:

- As applicable, coordinate, prepare, submit, and pay for all required permits and inspections for the work that is the Customer's responsibility.
- Pay for all utility connection, pole or line extensions, and any easement or usage fees.
- Review and approve site design drawings within 7 calendar days of submission by Motorola or its subcontractor(s). Should a re-submission be required, the Customer shall review and approve the re-submitted plans within 7 calendar days from the date of submittal.
- Pay for the usage costs of power, leased lines and generator fuelling both during the construction/installation effort and on an on-going basis.
- Pay for application fees, taxes and recurring payments for lease/ownership of the property.
- Provide personnel to observe construction progress and testing of site equipment according to the schedule provided by Motorola.
- As applicable (based on local jurisdictional authority), the Customer will be responsible for any installation or up-grades of the electrical system in order to comply with NFPA 70, Article 708
- Provide property deed or lease agreement, and boundary survey, along with existing as-built drawings of the site and site components to Motorola for conducting site engineering.
- Provide a right of entry letter from the site owner for Motorola to conduct field investigations.
- Arrange for space on the structure for installation of new antennae at the proposed heights on designated existing antenna-mounting structures.



- Provide as-built structural and foundation drawings of the structure and site location(s) along with geotechnical report(s) for Motorola to conduct a structural analysis.
- Provide support facilities for the antenna cables (cable ladder, entry ports, waveguide bridge) from the antenna to the equipment room.

Customer Responsibilities:

- As applicable, coordinate, prepare, submit, and pay for all required permits and inspections for the work that is the Customer's responsibility.
- Pay for all utility connection, pole or line extensions, and any easement or usage fees.
- Review and approve site design drawings within 7 calendar days of submission by Motorola or its subcontractor(s). Should a re-submission be required, the Customer shall review and approve the re-submitted plans within 7 calendar days from the date of submittal.
- Pay for the usage costs of power, leased lines and generator fuelling both during the construction effort before site cutover, and on an on-going basis.
- Pay for application fees, taxes and recurring payments for lease/ownership of the property.
- Provide personnel to observe construction progress and testing of site equipment according to the schedule provided by Motorola.
- As applicable (based on local jurisdictional authority), the Customer will be responsible for any installation or up-grades of the electrical system in order to comply with NFPA 70, Article 708
- Provide property deed or lease agreement, and boundary survey, along with existing as-built drawings of the site and site components to Motorola for conducting site engineering.

Assumptions:

- No prevailing wage, certified payroll, mandatory union workers or mandatory minority workers are required for this work
- All work is assumed to be done during normal business hours as dictated by time zone (Monday thru Friday, 7:30 a.m. to 5:00 p.m.).
- All recurring and non-recurring utility costs [including, but not limited to, generator fuel (except first fill), electrical and Telco will be borne by the Customer or site owner.
- All utility installations shall be coordinated and paid for by the site owner and located at jointly agreed to location within or around the new communications shelter or equipment room.
- Site will have adequate electrical service for the new shelter and tower. Utility transformer, transformer upgrades, line, or pole extensions have not been included.



- Hazardous materials are not present at the work location. Testing and removal of hazardous materials, found during site investigations, construction or equipment installation will be the responsibility of the customer.
- A maximum of 45 calendar days will be required for obtaining approved building permits from time of submission, and a maximum of 60 calendar days will be required for zoning approvals from time of submittal.
- No improvements are required for concrete trucks, drill rigs, shelter delivery, and crane access.
- If extremely harsh or difficult weather conditions delay the site work for more than a week, Motorola will seek excusable delays rather than risk job site safety.
- The existing ground system and soil resistivity at the site is sufficient to achieve resistance of 10 ohms or less. Communication site grounding will be designed and installed per Motorola's R56 standards.
- The existing site has adequate room to expand and install the shelter, including lay-down and staging areas, without encroaching on wetlands, easements, setbacks, right-of-ways, or property lines.
- On the existing tower, the antenna locations for the proposed antenna system design will be available at the time of installation.
- Restoration of the site surroundings by fertilizing, seeding, and strawing the disturbed areas will be adequate.
- The site has adequate utility service to support the proposed equipment loading. Utility transformer upgrades or step-up or down transformers will not be required.
- Underground utilities are not present in the construction area and as such no relocation will be required.

Completion Criteria

- Site development completed per issued for construction (IFC) construction drawings, project requirements, contractual obligations (including any customer/Motorola approved changes) and approved by Pinellas County, FL.
 - This shall be confirmed by contractor and reviewed with Motorola construction manager and project manager before inspections occur.
- All jurisdictional and contractual required testing and inspections to be performed by the contractor. (Contractual testing and inspections defined and agreed to with project team and customer prior to project kick off; vendor solely responsible for conducting, coordinating and paying for all jurisdictional testing and inspections).
- Motorola site development checklist shall be completed and signed off by contractor prior to customer inspection. (Review with project team and customer and amend checklist as required at project kick off or before work begins).
- Site turn-over package completed and turned over to Motorola (As defined and agreed to with project team and customer).
- All punch list and deficiencies shall be completed prior to customer and Motorola inspections.

1.2.4.5.1 Site Development Acceptance (Milestone)

- All site development shall be completed by Motorola and shall be reviewed and accepted by Pinellas County.

1.2.4.6 Site Development at Toytown Site

Site Scope Summary

- Engineering services for site drawings and regulatory approvals – **Included.**
- Site acquisition services – **Not included.**
- Zoning Services – **Not included.**
- New expansion size increase required for Fenced Compound- 120-foot x 40-foot.
- Clearing type – Light.
- Road length requiring improvement – 160 feet.
- New power run – 125 feet, Electrical service type – Underground, 400-amp - 120/240-volt, single-phase.
- New 49-ft x 30-ft x 6-ft AGL Raised Metal Platform
- New shelter size – 24-foot x 32-foot.
- New fuel tank size – 500 gallons-, Type – Diesel Fuel Belly Tank
- New generator size – 150 kW, Type – Outdoor with new transfer switch
- Existing tower to be used for antennae – 250 ' Self supported Tower.
- Replace existing communications shelter with a new prefabricated modular equipment spares storage building-- 24-foot x 32-foot
- Add one new 700 MHz Tx Antenna at 200-feet AGL with 6-foot Side Arm and 1-5/8" Transmission Line
- Add one new 700 MHz Rx Antenna at 225-feet AGL with 6-foot side Arm and 7/8" transmission line
- Add one new TTA at 225-feet AGL with 1/2" Test Line
- Provide a new structural tower analysis with new Antennae, TTA and Transmission Line
- FDEP Abatement/Demolition Analysis

Motorola Responsibilities:

Site Engineering

- Conduct site walks to collect pertinent information from the sites (e.g., location of Telco, power, existing facilities, etc.).
- Prepare a lease exhibit and sketch of the site to communicate to the property owner the proposed lease space and planned development at the particular site location.
- Perform a site survey and topographic survey for the property on which the communication site is located or will be located.
- Perform geotechnical testing at the shelter foundation location.

- Perform limited National Environmental Policy Act (NEPA) Threshold Screening, including limited literature and records search and brief reporting, as necessary to identify sensitive natural and cultural features referenced in 47 Code of Federal Regulations (CFR) Chapter 1, subsection 1.1307 that may be potentially impacted by the proposed construction activity. This does not include the additional field investigations to document site conditions if it is determined that the proposed communication facility “may have a significant environmental impact” and thus require additional documentation, submittals, or work.
- Perform Limited SHPO Cultural Resource study as needed to identify sensitive historical and archaeological monuments that might be impacted by proposed construction
- Perform four-point soil resistivity testing at the time of site visit.
- Provide a new structural analysis for the Toytown Tower
- Perform FCC Checklist
- Prepare site construction drawings, showing the layout of various new and existing site components.
- Preparation, submission and tracking of application for local permit fees (zoning, electrical, building etc.) and procurement of information necessary for filing.
- Perform construction staking around the site to establish reference points for proposed construction.
- Conduct construction inspection of foundation steel prior to pour, materials testing of concrete and field density tests of backfill to ensure quality construction.
- Perform inspection of the site and the work performed by the Contractor to document that the site is built in accordance with the “Site Plans” and document any deviations or violations.
- Prepare record drawings of the site showing the as-built information.
- Provide FDEP Abatement/Demolition Analysis

Site Preparation

- Provide one-time mobilization costs for the construction crews. Any remobilization due to interruptions/delays that are out of Motorola’s control will result in additional costs.
- Perform light clearing of brush, grubbing and disposal of vegetation and shrub growth in the site compound area and a 20-foot path around it (12800 square feet).
- Perform clear light brush, grub roots and dispose vegetation and shrub growth in a 15-foot wide access road to the site (not to exceed 160 feet in length).
- Grade the site compound and 10-foot path around it to provide a level, solid, undisturbed surface for installation of site components (not to exceed 8400 square feet).

- Supply and install gravel surfacing to a depth of 6 inches, including herbicide treatment and geotextile fabric installation within the fenced in site compound area, and a 3-foot path around it (not to exceed 5796 square feet).
- Provide a 15-foot wide access road (not to exceed 160 feet in length), including surface grading and graveling
- Provide silt fence around the compound to control soil erosion (not to exceed 320 linear feet).
- Supply and install 8-foot high chain-link fencing with a ten-foot wide gate around the shelter compound (not to exceed 320 linear feet).
- Perform site touch up (fertilize, seed and straw) disturbed areas not covered with gravel after completion of construction work. Landscaping, decorative fencing or any other aesthetic improvement that may be required by local jurisdictions has not been included and will be handled through a negotiated contract change notice.

Site Components Installation

- Supply and install 1 modular prefabricated concrete shelter 24-foot x 32-foot.
- Supply and install 1 standby power generator (150 kW) with a 500 gal diesel belly tank located within 20 feet of the ATS, including interconnection wiring between the generator, transfer switch, and site electrical service mains.
- Supply and install 1 120/240-volt, 400-amp, single-phase meter pedestal and hookup for electrical service by the local utility.
- Provide all trenching, conduit, and cabling necessary for underground hookup of power to the shelter from nearby utility termination located within 125 cable feet of the shelter.
- Supply and install a perimeter grounding system around the compound and shelter. The ground system is to tie to the fence and all new metal structures within the compound to meet current Motorola's R56 standards.
- Conduct 1 three-point ground resistance test of the site. Should any improvements to grounding system be necessary after ground testing, the cost of such improvements shall be the responsibility of Pinellas County, FL.
- Supply and install 1 freestanding 24-inch-wide cable/ice bridge from the tower to the shelter (up to 60 linear feet).
- After cutover of Toytown Site, supply and install 1 new modular prefabricated concrete storage facility 24-foot x 32-foot.

Tower Work

- Connect existing Tower Ground Ring to new Shelter Ground Ring

Antenna and Transmission Line Installation

- Provide and install a Bogner Mount at 200-feet AGL
- Provide and install a Bogner Mount at 225-feet AGL
- Provide and install two 6-foot side arms

- Install 440 linear feet of 3/8-inch transmission line.
- Install up to 580 linear feet of 1/2-inch transmission line.
- Install up to 580 linear feet of 7/8-inch transmission line.
- Install up to 1355 linear feet of 1-5/8-inch transmission line.
- Install up to 1080 linear feet of EW63 waveguide for microwave dishes.
- Perform sweep tests on transmission lines.
- Provide and install six-hole hanger blocks and attachment hardware for supporting transmission lines on the antenna support structure every three feet.
- Supply and install 1 ground buss bar at the bottom of the antenna support structure for grounding RF cables before they make horizontal transition.

Miscellaneous Work

- Install raised metal platform for new shelter and generator - Includes Crane
- Installation of raised metal platform stairs
- Demo electrical equipment, decommission generators for removal by others, decommission and remove UPS and batteries
- Demolition and removal of existing block equipment building 1' below grade
- Excavate and haul off top soils in compound expansion area up to 60 cu yds
- Excavate and haul off raised platform foundation spoils
- Supply and install 16' key card operated sliding gate and 6' key card operated personnel gate.
- Provide foundations, grounding leads and underground conduit runs for new Thermobond equipment storage building.
- Removal of 250' existing SS tower after system cutover, includes crane.
- Demolition and removal of caisson foundations to 2' below grade
- Demolition and removal of existing waveguide bridge

Customer Responsibilities:

- As applicable, coordinate, prepare, submit, and pay for all required permits and inspections for the work that is the Customer's responsibility.
- Pay for all utility connection, pole or line extensions, and any easement or usage fees.
- Review and approve site design drawings within 7 calendar days of submission by Motorola or its subcontractor(s). Should a re-submission be required, the Customer shall review and approve the re-submitted plans within 7 calendar days from the date of submittal.
- Pay for the usage costs of power, leased lines and generator fuelling both during the construction effort before site cutover, and on an on-going basis.
- Pay for application fees, taxes and recurring payments for lease/ownership of the property.
- Provide personnel to observe construction progress and testing of site equipment according to the schedule provided by Motorola.

- As applicable (based on local jurisdictional authority), the Customer will be responsible for any installation or up-grades of the electrical system in order to comply with NFPA 70, Article 708
- Provide property deed or lease agreement, and boundary survey, along with existing as-built drawings of the site and site components to Motorola for conducting site engineering.

Assumptions:

- No prevailing wage, certified payroll, mandatory union workers or mandatory minority workers are required for this work
- All work is assumed to be done during normal business hours as dictated by time zone (Monday thru Friday, 7:30 a.m. to 5:00 p.m.).
- All recurring and non-recurring utility costs [including, but not limited to, generator fuel (except first fill), electrical and Telco will be borne by the Customer or site owner.
- All utility installations shall be coordinated and paid for by the site owner and located at jointly agreed to location within or around the new communications shelter or equipment room.
- Site will have adequate electrical service for the new shelter and tower. Utility transformer, transformer upgrades, line, or pole extensions have not been included.
- Hazardous materials are not present at the work location. Testing and removal of hazardous materials, found during site investigations, construction or equipment installation will be the responsibility of the customer.
- A maximum of 45 calendar days will be required for obtaining approved building permits from time of submission, and a maximum of 60 calendar days will be required for zoning approvals from time of submittal.
- No improvements are required for concrete trucks, drill rigs, shelter delivery, and crane access.
- If extremely harsh or difficult weather conditions delay the site work for more than a week, Motorola will seek excusable delays rather than risk job site safety.
- The existing ground system and soil resistivity at the site is sufficient to achieve resistance of 10 ohms or less. Communication site grounding will be designed and installed per Motorola's R56 standards.
- The existing site has adequate room to expand and install the shelter, including lay-down and staging areas, without encroaching on wetlands, easements, setbacks, right-of-ways, or property lines.
- On the existing tower, the antenna locations for the proposed antenna system design will be available at the time of installation.
- Restoration of the site surroundings by fertilizing, seeding, and strawing the disturbed areas will be adequate.
- The site has adequate utility service to support the proposed equipment loading. Utility transformer upgrades or step-up or down transformers will not be required.

- Underground utilities are not present in the construction area and as such no relocation will be required.

Completion Criteria

- Site development completed per issued for construction (IFC) construction drawings, project requirements, contractual obligations (including any customer/Motorola approved changes) and approved by Pinellas County, FL.
 - This shall be confirmed by contractor and reviewed with Motorola construction manager and project manager before inspections occur.
- All jurisdictional and contractual required testing and inspections to be performed by the contractor. (Contractual testing and inspections defined and agreed to with project team and customer prior to project kick off; vendor solely responsible for conducting, coordinating and paying for all jurisdictional testing and inspections).
- Motorola site development checklist shall be completed and signed off by contractor prior to customer inspection. (Review with project team and customer and amend checklist as required at project kick off or before work begins).
- Site turn-over package completed and turned over to Motorola (As defined and agreed to with project team and customer).
- All punch list and deficiencies shall be completed prior to customer and Motorola inspections.

1.2.4.6.1 Site Development Acceptance (Milestone)

- All site development shall be completed by Motorola and shall be reviewed and accepted by Pinellas County.

1.2.4.7 Site Development at Majestic Towers (Fountains) Site

Site Scope Summary

- Engineering services for site drawings and regulatory approvals – **Included**.
- Site acquisition services – **Not included**.
- Zoning Services – **Not included**.

Motorola Responsibilities:

Site Engineering

- Conduct site walks to collect pertinent information from the sites (e.g., location of Telco, power, existing facilities, etc.).
- Prepare site construction drawings, showing the layout of various new and existing site components.
- Prepare a lease exhibit and sketch of the site to communicate to the property owner the proposed lease space and planned development at the particular site location.

- Prepare construction drawings for permit application
- Prepare record drawings of the site showing the as-built information.
- Perform National Environmental Policy Act (NEPA) Threshold Screening, including limited literature and records search and brief reporting, as necessary to identify sensitive natural and cultural features referenced in 47 Code of Federal Regulations (CFR) Chapter 1, subsection 1.1307 that may be potentially impacted by the proposed construction activity. This does not include the additional field investigations to document site conditions if it is determined that the proposed communication facility “may have a significant environmental impact” and thus require additional documentation, submittals, or work. Perform a cultural resource study, as needed to identify sensitive historical and archaeological monuments that might be impacted by propose construction.
- Preparation, submission and tracking of application for local permit fees (zoning, electrical, building etc.) and procurement of information necessary for filing.

Antenna and Transmission Line Installation

- Install 5 antennae for the RF system.
- Supply and install 5 heavy duty mount(s) for Bogner antennae.
- Install (4) 6-foot microwave dishes.
- Install up to 650 linear feet of 1-5/8-inch transmission line.
- Install up to 250 linear feet of EW63 waveguide for microwave dishes.
- Perform sweep tests on transmission lines.
- Perform alignment of each of 4 microwave paths to ensure that the microwave dishes are optimally positioned.
- Provide and install six-hole hanger blocks and attachment hardware for supporting transmission lines on the antenna support structure every three feet.

Existing Facility Improvement Work

- Supply and install two (2) UPS's
- Supply and install two 100-amp breaker panel with capacity for 20 circuits.
- Supply and install sixteen (16) 20-amp breakers in the distribution panel and wire to outlets located on an average within 35 cable feet.
- Supply and install two 40-amp breakers in the distribution panel and wire to outlets located on an average within 35 cable feet.
- Install two 8-outlet distribution-bar(s) and wire each outlet to individual breaker.
- Install one new single-phase UPS equipment and wire output to UPS distribution panel.
- Supply and install six cable port entry panel with 6 entry ports.
- Ground all metallic objects in the interior of the existing room, to meet current Motorola's Standards and Guidelines for Communications Sites (R56) requirements and terminate near equipment locations.
- Supply and install three copper ground buss bar(s).



Miscellaneous Work

- Crane to put equipment on the roof
- Roof mounted lift system to install bogner antennae on roof
- Removal and disposal at approved waste facility of (5) existing bogner antennae and (4) 6' MW dishes
- Structural analysis of existing bogner mounts and mounting structure

Customer Responsibilities:

- If required, prepare and submit Electromagnetic Energy (EME) plans for the site (as a licensee) to demonstrate compliance with FCC RF Exposure guidelines.
- As applicable, coordinate, prepare, submit, and pay for all required permits and inspections for the work that is the Customer's responsibility.
- Pay for all utility connection, pole or line extensions, and any easement or usage fees.
- Review and approve site design drawings within 7 calendar days of submission by Motorola or its subcontractor(s). Should a re-submission be required, the Customer shall review and approve the re-submitted plans within 7 calendar days from the date of submittal.
- Pay for the usage costs of power, leased lines and generator fueling both during the construction/installation effort and on an on-going basis.
- Pay for application fees, taxes and recurring payments for lease/ownership of the property.
- Provide personnel to observe construction progress and testing of site equipment according to the schedule provided by Motorola.
- As applicable (based on local jurisdictional authority), the Customer will be responsible for any installation or up-upgrades of the electrical system in order to comply with NFPA 70, Article 708
- Provide property deed or lease agreement, and boundary survey, along with existing as-built drawings of the site and site components to Motorola for conducting site engineering.
- Provide a right of entry letter from the site owner for Motorola to conduct field investigations.
- Maintain existing access road in order to provide clear and stable entry to the site for heavy-duty construction vehicles, cement trucks and cranes. Sufficient space must be available at the site for these vehicles to maneuver under their own power, without assistance from other equipment.

Assumptions:

- No prevailing wage, certified payroll, mandatory union workers or mandatory minority workers are required for this work
- All work is assumed to be done during normal business hours as dictated by time zone (Monday thru Friday, 7:30 a.m. to 5:00 p.m.).

- All recurring and non-recurring utility costs [including, but not limited to, generator fuel (except first fill), electrical, Telco] will be borne by the Customer or site owner.
- All utility installations shall be coordinated and paid for by the site owner and located at jointly agreed to location within or around the new communications shelter or equipment room.
- Site will have adequate electrical service for the new shelter and tower. Utility transformer, transformer upgrades, line, or pole extensions have not been included.
- Pricing has been based on National codes such IBC or BOCA. Local codes or jurisdictional requirements have not been considered in this proposal.
- Hazardous materials are not present at the work location. Testing and removal of hazardous materials, found during site investigations, construction or equipment installation will be the responsibility of the customer.
- A maximum of 45 calendar days will be required for obtaining approved building permits from time of submission, and a maximum of 60 calendar days will be required for zoning approvals from time of submittal.
- No improvements are required for concrete trucks, drill rigs, shelter delivery, and crane access.
- If extremely harsh or difficult weather conditions delay the site work for more than a week, Motorola will seek excusable delays rather than risk job site safety.
- Alarming at existing sites will be limited to new component installations and will have to be discussed and agreed to on a site-by-site basis.
- The site will have adequate room for installation of proposed equipment, based on applicable codes and Motorola's R56 standards.
- The existing utility service and backup power facilities have sufficient extra capacity to support the proposed new equipment load.
- A clear obstruction-free access exists from the antenna location to the equipment room..
- The floor can support the proposed new loading. Physical or structural improvements to the existing room will not be required.

Completion Criteria

- Site development completed per issued for construction (IFC) construction drawings, project requirements, contractual obligations (including any customer/Motorola approved changes) and approved by Pinellas County, FL.
 - This shall be confirmed by contractor and reviewed with Motorola construction manager and project manager before inspections occur.
- All jurisdictional and contractual required testing and inspections to be performed by the contractor. (Contractual testing and inspections defined and agreed to with project team and customer prior to project kick off; vendor solely responsible for conducting, coordinating and paying for all jurisdictional testing and inspections).

- Motorola site development checklist shall be completed and signed off by contractor prior to customer inspection. (Review with project team and customer and amend checklist as required at project kick off or before work begins).
- Site turn-over package completed and turned over to Motorola (As defined and agreed to with project team and customer).
- All punch list and deficiencies shall be completed prior to customer and Motorola inspections.

1.2.4.7.1 Site Development Acceptance (Milestone)

- All site development shall be completed by Motorola and shall be reviewed and accepted by Pinellas County.

1.2.4.8 Site Development at Fort Desoto Site

Site Scope Summary

- Engineering services for site drawings and regulatory approvals – **Included**.
- Site acquisition services – **Not included**.
- Zoning Services – **Not included**.
- New fenced compound/expansion size – 20-foot x 65-foot.
- Clearing type – Light.
- Road length requiring improvement – 125 feet.
- New power run – 50 feet, Electrical service type – Underground, 400-amp - 120/240-volt, single-phase.
- New 49-ft x 30-ft x 16-ft AGL Raised Metal Platform
- New shelter size – 24-foot x 32-foot.
- New fuel tank size – 500 gallons-, Type – Diesel Fuel Belly Tank
- New generator size – 150 kW, Type – Outdoor with new transfer switch
- Existing tower to be used for antennae – 250 ' Self supported Tower.
- FDEP Abatement/Demolition Analysis

Motorola Responsibilities:

Site Engineering

- Conduct site walks to collect pertinent information from the sites (e.g., location of Telco, power, existing facilities, etc.).
- Prepare a lease exhibit and sketch of the site to communicate to the property owner the proposed lease space and planned development at the particular site location.
- Perform a site survey and topographic survey for the property on which the communication site is located or will be located.
- Perform geotechnical testing at the shelter foundation location.
- Perform limited National Environmental Policy Act (NEPA) Threshold Screening, including limited literature and records search and brief reporting, as necessary



to identify sensitive natural and cultural features referenced in 47 Code of Federal Regulations (CFR) Chapter 1, subsection 1.1307 that may be potentially impacted by the proposed construction activity. This does not include the additional field investigations to document site conditions if it is determined that the proposed communication facility “may have a significant environmental impact” and thus require additional documentation, submittals, or work.

- Perform Limited SHPO Cultural Resource study as needed to identify sensitive historical and archaeological monuments that might be impacted by proposed construction
- Perform four-point soil resistivity testing at the time of site visit.
- Perform FCC Checklist
- Prepare site construction drawings, showing the layout of various new and existing site components.
- Preparation, submission and tracking of application for local permit fees (zoning, electrical, building etc.) and procurement of information necessary for filing.
- Perform construction staking around the site to establish reference points for proposed construction.
- Conduct construction inspection of foundation steel prior to pour, materials testing of concrete and field density tests of backfill to ensure quality construction.
- Perform inspection of the site and the work performed by the Contractor to document that the site is built in accordance with the “Site Plans” and document any deviations or violations.
- Prepare record drawings of the site showing the as-built information.
- Provide FDEP Abatement/Demolition Analysis

Site Preparation

- Obtain the permits such as electrical, building, and construction permits, and coordinate any inspections with local authorities that may be needed to complete site development work.
- Provide one-time mobilization costs for the construction crews. Any remobilization due to interruptions/delays that are out of Motorola's control will result in additional costs.
- Perform light clearing of brush, grubbing and disposal of vegetation and shrub growth in the site compound area and a 20-foot path around it (6300 square feet).
- Perform clear light brush, grub roots and dispose vegetation and shrub growth in a 15-foot wide access road to the site (not to exceed 125 feet in length).
- Grade the site compound and 10-foot path around it to provide a level, solid, undisturbed surface for installation of site components (not to exceed 3400 square feet).

- Supply and install gravel surfacing to a depth of 6 inches, including herbicide treatment and geotextile fabric installation within the fenced in site compound area, and a 3-foot path around it (not to exceed 1846 square feet).
- Provide a 15-foot wide access road (not to exceed 125 feet in length), including surface grading and graveling
- Supply and install 8-foot high chain-link fencing with a ten-foot wide gate around the shelter compound (not to exceed 170 linear feet).
- Perform site touch up (fertilize, seed and straw) disturbed areas not covered with gravel after completion of construction work. Landscaping, decorative fencing or any other aesthetic improvement that may be required by local jurisdictions has not been included and will be handled through a negotiated contract change notice.

Site Components Installation

- Supply and install 1 modular prefabricated concrete shelter 24-foot x 32-foot.
- Supply and install 1 standby power generator (150 kW) with a 500 gal diesel belly tank located within 20 feet of the ATS, including interconnection wiring between the generator, transfer switch, and site electrical service mains.
- Supply and install 1 120/240-volt, 400-amp, single-phase meter pedestal and hookup for electrical service by the local utility.
- Provide all trenching, conduit, and cabling necessary for underground hookup of power to the shelter from nearby utility termination located within 50 cable feet of the shelter.
- Supply and install a perimeter grounding system around the compound and shelter. The ground system is to tie to the fence and all new metal structures within the compound to meet current Motorola's R56 standards.
- Conduct 1 three-point ground resistance test of the site. Should any improvements to grounding system be necessary after ground testing, the cost of such improvements shall be the responsibility of Pinellas County, FL.
- Supply and install 1 freestanding 24-inch-wide cable/ice bridge from the tower to the shelter (up to 60 linear feet).

Tower Work

- Supply and install grounding for the tower base for self-supported towers

Antenna and Transmission Line Installation

- Install 255 linear feet of 3/8-inch transmission line.
- Install up to 280 linear feet of 1/2-inch transmission line.
- Install up to 455 linear feet of 7/8-inch transmission line.
- Install up to 980 linear feet of 1-5/8-inch transmission line.
- Install up to 960 linear feet of EW63 waveguide for microwave dishes.
- Perform sweep tests on transmission lines.

- Perform alignment of each of 7 microwave paths to ensure that the microwave dishes are optimally positioned.
- Provide and install six-hole hanger blocks and attachment hardware for supporting transmission lines on the antenna support structure every three feet.
- Supply and install 1 ground buss bar at the bottom of the antenna support structure for grounding RF cables before they make horizontal transition.

Miscellaneous Work

- Install raised metal platform for new shelter and generator - Includes Crane
- Installation of raised metal stairs
- Demo electrical equipment, decommission generators for removal by others, decommission and remove UPS and batteries
- Demolition and removal of existing block equipment building 1' below grade
- Excavate and haul off marsh soils in compound expansion area up to 176 cu yds
- Backfill and compaction of up to 176 cu yds of fill for compound expansion area
- Place construction matting for equipment and materials lay down area
- Supply and install 16' key card operated sliding gates and 6' key card operated personnel gate.
- Removal of top 100' of old Sprint tower and reinforcement of MW mount for Eagles nest, includes crane.

Customer Responsibilities:

- As applicable, coordinate, prepare, submit, and pay for all required permits and inspections for the work that is the Customer's responsibility.
- Pay for all utility connection, pole or line extensions, and any easement or usage fees.
- Review and approve site design drawings within 7 calendar days of submission by Motorola or its subcontractor(s). Should a re-submission be required, the Customer shall review and approve the re-submitted plans within 7 calendar days from the date of submittal.
- Pay for the usage costs of power, leased lines and generator fuelling both during the construction effort before site cutover, and on an on-going basis.
- Pay for application fees, taxes and recurring payments for lease/ownership of the property.
- Provide personnel to observe construction progress and testing of site equipment according to the schedule provided by Motorola.
- As applicable (based on local jurisdictional authority), the Customer will be responsible for any installation or up-grades of the electrical system in order to comply with NFPA 70, Article 708
- Provide property deed or lease agreement, and boundary survey, along with existing as-built drawings of the site and site components to Motorola for conducting site engineering.



Assumptions:

- No prevailing wage, certified payroll, mandatory union workers or mandatory minority workers are required for this work
- All work is assumed to be done during normal business hours as dictated by time zone (Monday thru Friday, 7:30 a.m. to 5:00 p.m.).
- All recurring and non-recurring utility costs [including, but not limited to, generator fuel (except first fill), electrical and Telco will be borne by the Customer or site owner.
- All utility installations shall be coordinated and paid for by the site owner and located at jointly agreed to location within or around the new communications shelter or equipment room.
- Site will have adequate electrical service for the new shelter and tower. Utility transformer, transformer upgrades, line, or pole extensions have not been included.
- Hazardous materials are not present at the work location. Testing and removal of hazardous materials, found during site investigations, construction or equipment installation will be the responsibility of the customer.
- A maximum of 45 calendar days will be required for obtaining approved building permits from time of submission, and a maximum of 60 calendar days will be required for zoning approvals from time of submittal.
- No improvements are required for concrete trucks, drill rigs, shelter delivery, and crane access.
- If extremely harsh or difficult weather conditions delay the site work for more than a week, Motorola will seek excusable delays rather than risk job site safety.
- The existing ground system and soil resistivity at the site is sufficient to achieve resistance of 10 ohms or less. Communication site grounding will be designed and installed per Motorola's R56 standards.
- The existing site has adequate room to expand and install the shelter, including lay-down and staging areas, without encroaching on wetlands, easements, setbacks, right-of-ways, or property lines.
- On the existing tower, the antenna locations for the proposed antenna system design will be available at the time of installation.
- Restoration of the site surroundings by fertilizing, seeding, and strawing the disturbed areas will be adequate.
- The site has adequate utility service to support the proposed equipment loading. Utility transformer upgrades or step-up or down transformers will not be required.
- Underground utilities are not present in the construction area and as such no relocation will be required.

Completion Criteria

- Site development completed per issued for construction (IFC) construction drawings, project requirements, contractual obligations (including any customer/Motorola approved changes) and approved by Pinellas County, FL.



- This shall be confirmed by contractor and reviewed with Motorola construction manager and project manager before inspections occur.
- All jurisdictional and contractual required testing and inspections to be performed by the contractor. (Contractual testing and inspections defined and agreed to with project team and customer prior to project kick off; vendor solely responsible for conducting, coordinating and paying for all jurisdictional testing and inspections).
- Motorola site development checklist shall be completed and signed off by contractor prior to customer inspection. (Review with project team and customer and amend checklist as required at project kick off or before work begins).
- Site turn-over package completed and turned over to Motorola (As defined and agreed to with project team and customer).
- All punch list and deficiencies shall be completed prior to customer and Motorola inspections.

1.2.4.8.1 Site Development Acceptance (Milestone)

- All site development shall be completed by Motorola and shall be reviewed and accepted by Pinellas County.

Please Note: The equipment installations and cutovers will need to be accomplished in two phases. This is because all of the “Swing Equipment” will be needed to permanently support the installation of the new ten-channel North Zone Simulcast Cell and the additions of Channels 29 and 30 of the Mid Zone Simulcast Cell. Therefore, for Phase 1, all equipment will be installed and cutover, with the exception of the North Zone Simulcast Cell and Mid Zone channels 29 and 30. The new North Zone Cell and Mid Zone channels 29 and 30 will be completed in Phase 2 with one additional cutover.

1.2.5 Site Equipment Installation and Cutover (Phase 1)

1.2.5.1 Site Equipment Installation and Cutover Phase 1 at Courthouse Site

- This site requires a live cutover. Extreme care is mandatory to reduce or eliminate any interruptions to radio communications services during construction, installation, optimization, testing or cutover.
 - Prepare an Implementation Time Line (ITL) indicating any planned downtime necessary, which is to be discussed and mutually agreed to with Pinellas County Director of Radio and Technology Division.

Site Scope Summary (All Scope is included except where indicated as optional)

- Engineering services for site floor and rack drawings
- New Loop Microwave Radios
- Implementation of MPLS SAR8s
- New Hospital MW and remotes to Morton Plant and Mease Dunedin- [Option 1](#)
- Add Site Security System
- Replace dishes, antennae, line, Receive Multi-coupler, Combiners and Surge Protection
- Install new Advanced Power Monitors
- Install new Z2 mini work stations
- Relocate and/or rearrange existing equipment to more efficient floor & rack layouts
- Remove/Dispose old non reusable equipment and cabling
- Add Weather Station and interface to network
- Install and interface New IP MA Call, Tac 4- [Option 4](#)

Motorola Responsibilities

Engineering Services

- Provide Rack and Floor Layout Drawings
- Provide Cable Entry Port layout drawings
- Provide Microwave Link Design, Path Analysis and Microwave Frequency Coordination
- Provide Inter-mod and interference studies and reports
- Provide frequency acquisition, APCO and FCC License Support
- Provide Internal R56 Audit after equipment installations
- Reasonably handle any unforeseen items to a maximum cost of \$15,000.00

Equipment Installation and Cutover Services

- Motorola will be responsible for the installation of all fixed equipment contained in the equipment list based upon the agreed to floor plans. All equipment will be properly secured to the floor and installed in a neat and professional manner, employing a standard of workmanship consistent with its own R-56 installation standards and in compliance with applicable National Electrical Code (NEC), EIA, FAA and FCC standards.
- For installation of the fixed equipment at the various sites, Motorola will furnish all cables for power, audio, control, and radio transmission to connect the Motorola supplied equipment to the power panels or receptacles and the audio/control line connection point.
- Rearrange existing equipment to more efficient floor and rack layouts
- Install and cutover new multi-coupler
- Install new site security system
- Install a new Weather Station and interface to the network
- Install and interface a new IP MA Call, Tac 4- [Option 4](#)



- Install new loop microwave equipment
- Install new MPLS SAR8 equipment
- Configure, program and Test the new microwave and MPLS SAR8 equipment
- Cutover the new microwave and MPLS SAR8 equipment per agreed to Implementation Time Line (ITL)
- Ensure that testing of the Mid Zone will not disrupt public safety communications or dispatch operations
- Program, configure, test and baseline the Courthouse Mid Zone Site
- Test to verify that the entire site is operating correctly and is stable and reliable.
- Cutover the Courthouse Mid Zone RF Simulcast site to the Pinellas County Radio System per agreed to Implementation Time Line (ITL)
- Install new Hospital MW equipment and remotes- [Option 1](#)
- Cutover the Morton Plant and Mease Dunedin Microwave Links per agreed to Implementation Time Line (ITL) [Option 1](#)
- Remove and dispose old non reusable microwave equipment and cabling
- Review the installation and cutover with Pinellas County and develop a punch list of deficiencies noted.
- Motorola will correct the deficiencies noted on the punch list for Phase I acceptance and complete the certified as-built documentation.

Customer Responsibilities:

- Provide access to the sites, as necessary.

1.2.5.1.1 Site Equipment Installation and Cutover Phase 1 Acceptance (Milestone)

- All site equipment installation and cutover shall be completed by Motorola and then shall be reviewed and accepted by Pinellas County

1.2.5.2 Site Equipment Installation and Cutover Phase 1 at Majestic Towers Site

- **This site requires a live cutover. Extreme care is mandatory to reduce or eliminate any interruptions to radio communications services during construction, installation, optimization, testing or cutover.**
 - Prepare an Implementation Time Line (ITL) indicating any planned downtime necessary, which is to be discussed and mutually agreed to with Pinellas County Director of Radio and Technology Division.

Site Scope Summary (All Scope is included except where indicated as optional)

- Engineering services for site floor and rack drawings
- New Loop Microwave Radios
- Implementation of MPLS SAR8s
- New Hospital MW and remotes to Palms of Pasadena- [Option 1](#)
- Add Site Security System

- Replace dishes, antennae, line, Receive Multi-coupler, combiners and Surge Protection
- Install Advanced Power Monitors
- Install new Z2 mini work stations
- Relocate the South Zone equipment to the upper room and collocate with the MidZone
- Relocate and/or rearrange existing equipment to more efficient floor & rack layouts
- Remove/Dispose old non reusable equipment and cabling
- Add Weather Station and interface to network
- Install and interface New IP MA Call, Tac 4- [Option 4](#)

Motorola Responsibilities

Engineering Services

- Provide Rack and Floor Layout Drawings
- Provide Cable Entry Port layout drawings
- Provide Microwave Link Design, Path Analysis and Microwave Frequency Coordination
- Provide Inter-mod and interference studies and reports
- Provide frequency acquisition, APCO and FCC License Support
- Provide Internal R56 Audit after equipment installations
- Reasonably handle any unforeseen items to a maximum cost of \$15,000.00

Equipment Installation and Cutover Services

- Motorola will be responsible for the installation of all fixed equipment contained in the equipment list based upon the agreed to floor plans. All equipment will be properly secured to the floor and installed in a neat and professional manner, employing a standard of workmanship consistent with its own R-56 installation standards and in compliance with applicable National Electrical Code (NEC), EIA, FAA and FCC standards.
- For installation of the fixed equipment at the various sites, Motorola will furnish all cables for power, audio, control, and radio transmission to connect the Motorola supplied equipment to the power panels or receptacles and the audio/control line connection point.
- Shut down South Zone. When all South Zone Users migrate over to the Mid Zone, Install the South Zone into the upper room and collocate with the Mid Zone equipment.
- Test and baseline the Majestic Towers South Zone Site.
- Turn on the South Zone Majestic Site and verify that the South Zone users migrate back to the South Zone from the Mid Zone
- Rearrange the rest of the existing equipment to more efficient floor and rack layouts



- Install and cutover new multi-coupler
- Install new site security system
- Install a new Weather Station and interface to the network
- Install and interface a new IP MA Call, Tac 4- [Option 4](#)
- Install new loop microwave equipment
- Install new MPLS SAR8 equipment
- Configure, program and Test the new microwave and MPLS SAR8 equipment
- Cutover the new microwave and MPLS SAR8 equipment per agreed to Implementation Time Line (ITL)
- Ensure that testing of the Mid Zone will not disrupt public safety communications or dispatch operations
- Program, configure, test and baseline the Majestic Towers Mid Zone Site
- Test to verify that the entire site is operating correctly and is stable and reliable.
- Cutover the Courthouse Mid Zone RF Simulcast site to the Pinellas County Radio System per agreed to Implementation Time Line (ITL)
- Install new Hospital MW equipment and remotes-[Option 1](#)
- Cutover the Palms of Pasadena Microwave Link per agreed to Implementation Time Line (ITL) – [Option 1](#)
- Remove and dispose old non reusable microwave equipment and cabling
- Review the installation and cutover with Pinellas County and develop a punch list of deficiencies noted.
- Motorola will correct the deficiencies noted on the punch list for Phase I acceptance and complete the certified as-built documentation.

Customer Responsibilities:

- Provide access to the sites, as necessary.

1.2.5.2.1 Site Equipment Installation and Cutover Phase 1 Acceptance (Milestone)

- All site equipment installation and cutover shall be completed by Motorola and then shall be reviewed and accepted by Pinellas County

1.2.5.3 Site Equipment Installation and Cutover Phase 1 at Tarpon Springs Site

- **This site requires a live cutover. Extreme care is mandatory to reduce or eliminate any interruptions to radio communications services during construction, installation, optimization, testing or cutover.**
 - Prepare an Implementation Time Line (ITL) indicating any planned downtime necessary, which is to be discussed and mutually agreed to with Pinellas County Director of Radio and Technology Division.

Site Scope Summary ([All Scope is included except where indicated as optional](#))

- Engineering services for site floor and rack drawings

- New Loop Microwave Radios
- Implementation of MPLS SAR8s
- New Hospital MW and remotes to Helen Ellis- [Option 1](#)
- Relocate the Tarpon Springs PD PTP to new shelter
- Add Site Security System
- New equipment racks with floor isolators to floor of new communications shelter
- New cable management brackets and grounds to new equipment racks
- Install Mid Zone 28 Channel Equipment using “Swing Equipment” into the new communications shelter
- Add Weather Station and interface to network
- Install and interface New IP MA Call, Tac 4- [Option 4](#)
- Remove and Reinstall SDM equipment into new communications shelter
- Install new paging system equipment
- Add Technician workbench into new communications shelter

Motorola Responsibilities

Engineering Services

- Provide Rack and Floor Layout Drawings
- Provide Cable Entry Port layout drawings
- Provide Microwave Link Design, Path Analysis and Microwave Frequency Coordination
- Provide Inter-mod and interference studies and reports
- Provide frequency acquisition, APCO and FCC License Support
- Provide Internal R56 Audit after equipment installations
- Reasonably handle any unforeseen items to a maximum cost of \$15,000.00

Equipment Installation and Cutover Services

- Motorola will be responsible for the installation of all fixed equipment contained in the equipment list based upon the agreed to floor plans. All equipment will be properly secured to the floor and installed in a neat and professional manner, employing a standard of workmanship consistent with its own R-56 installation standards and in compliance with applicable National Electrical Code (NEC), EIA, FAA and FCC standards.
- For installation of the fixed equipment at the various sites, Motorola will furnish all cables for power, audio, control, and radio transmission to connect the Motorola supplied equipment to the power panels or receptacles and the audio/control line connection point.
- Install new Hospital MW equipment and remotes at Helen Ellis- [Option 1](#)
- Relocate the Tarpon Springs PD PTP to new shelter
- Install new site security system
- Install Cables from Microwave, Antennae,, Tower Top Amp (TTA), combiners and Surge Protection



- Install and secure new equipment racks with floor isolators to floor of new communications shelter
- Install new cable management brackets and grounds to new equipment racks
- Install Mid Zone 28 Channel Equipment using “Swing Equipment” into the new communications shelter
- Install Mid Zone 800 MHz Combiners
- Install 2 Mid Zone APM Controllers and 4 couplers
- Install 4 Mid Zone Routers and 2 network switches
- Install two 800 MHz Multi-coupler units
- Install three TRAK units
- Add Weather Station and interface to network
- Install and interface New IP MA Call, Tac 4- [Option 4](#)
- Remove and Reinstall SDM equipment into new communications shelter
- Install new paging system equipment
- Add a Technician workbench into new communications shelter
- Ensure that testing of the Mid Zone will not disrupt public safety communications or dispatch operations
- Program, configure, test and baseline the Tarpon Springs Mid Zone Site
- Test to verify that the entire site is operating correctly and is stable and reliable.
- Install new loop microwave Radios
- Install new MPLS SAR8s
- Configure, program and Test the new microwave and MPLS SAR8 equipment
- Cutover the new microwave and MPLS SAR8 equipment per agreed to Implementation Time Line (ITL)
- Cutover the Tarpon Springs Mid Zone RF Simulcast site to the Pinellas County Radio System per agreed to Implementation Time Line (ITL)
- Cutover the Helen Ellis Microwave Link per agreed to Implementation Time Line (ITL) – [Option 1](#)
- Remove and prepare existing Tarpon Springs Equipment as “Swing equipment” for deployment at the next new Shelter site
- Remove and dispose old non reusable equipment and cabling from old Tarpon Springs Site Shelter

Customer Responsibilities:

- Provide access to the sites, as necessary

1.2.5.3.1 Site Equipment Installation and Cutover Phase 1 Acceptance (Milestone)

- All site equipment installation and cutover shall be completed by Motorola and then shall be reviewed and accepted by Pinellas County

1.2.5.4 Site Equipment Installation and Cutover Phase 1 at Eldridge Wilde Site

- This site requires a live cutover. Extreme care is mandatory to reduce or eliminate any interruptions to radio communications services during construction, installation, optimization, testing or cutover.
 - Prepare an Implementation Time Line (ITL) indicating any planned downtime necessary, which is to be discussed and mutually agreed to with Pinellas County Director of Radio and Technology Division.

Site Scope Summary (All Scope is included except where indicated as optional)

- Engineering services for site floor and rack drawings
- New Loop Microwave Radios
- Implementation of MPLS SAR8s
- Add New Diversity Microwave Hop to Highway Maintenance Site to Decommission the Safety Harbor Site
- Add Site Security System
- New equipment racks with floor isolators to floor of new communications shelter
- New cable management brackets and grounds to new equipment racks
- Install Mid Zone 28 Channel Equipment using “Swing Equipment” into the new communications shelter
- Add Weather Station and interface to network
- Install and interface New IP MA Call, Tac 4- [Option 4](#)
- Remove and Reinstall SDM equipment into new communications shelter
- Remove and Reinstall the 700 MHz 3-channel HPD Site
- Remove and Reinstall the 3-channel 700 MHz PSIC Site
- Add Technician workbench into new communications shelter

Motorola Responsibilities

Engineering Services

- Provide Rack and Floor Layout Drawings
- Provide Cable Entry Port layout drawings
- Provide Microwave Link Design, Path Analysis and Microwave Frequency Coordination
- Provide Inter-mod and interference studies and reports
- Provide frequency acquisition, APCO and FCC License Support
- Provide Internal R56 Audit after equipment installations
- Reasonably handle any unforeseen items to a maximum cost of \$15,000.00

Equipment Installation and Cutover Services

- Motorola will be responsible for the installation of all fixed equipment contained in the equipment list based upon the agreed to floor plans. All equipment will be properly secured to the floor and installed in a neat and professional manner,

employing a standard of workmanship consistent with its own R-56 installation standards and in compliance with applicable National Electrical Code (NEC), EIA, FAA and FCC standards.

- For installation of the fixed equipment at the various sites, Motorola will furnish all cables for power, audio, control, and radio transmission to connect the Motorola supplied equipment to the power panels or receptacles and the audio/control line connection point.
- Install new Diversity Microwave Hop to Highway Maintenance Site
- Install new site security system
- Install Cables from Microwave, Antennae, Tower Top Amp (TTA), combiners and Surge Protection
- Install and secure new equipment racks with floor isolators to floor of new communications shelter
- Install new cable management brackets and grounds to new equipment racks
- Install Mid Zone 28 Channel Equipment using “Swing Equipment” into the new communications shelter
- Install Mid Zone 800 MHz Combiners
- Install 2 Mid Zone APM Controllers and 4 couplers
- Install 4 Mid Zone Routers and 2 network switches
- Install two 800 MHz Multi-coupler units
- Install three TRAK units
- Install Z2 mini work stations
- Add Weather Station and interface to network
- Install and interface New IP MA Call, Tac 4- [Option 4](#)
- Remove and Reinstall SDM equipment into new communications shelter
- Remove and reinstall the 3-channel 700 MHz HPD site
- Remove and reinstall the 3-channel 700 MHz PSIC site
- Add a Technician workbench into new communications shelter
- Ensure that testing of the Mid Zone will not disrupt public safety communications or dispatch operations
- Program, configure, test and baseline the Eldridge Wilde Mid Zone Site
- Test to verify that the entire site is operating correctly and is stable and reliable.
- Install new loop microwave Radios
- Install new MPLS SAR8s
- Configure, program and Test the new microwave and MPLS SAR8 equipment
- Cutover the new microwave and MPLS SAR8 equipment per agreed to Implementation Time Line (ITL)
- Cutover the Eldridge Wilde Mid Zone RF Simulcast site to the Pinellas County Radio System per agreed to Implementation Time Line (ITL)
- Remove and prepare existing Eldridge Wilde Equipment as “Swing equipment” for deployment at the next new Shelter site

- Remove and dispose old non reusable equipment and cabling from old Eldridge Wilde Site Shelter

Customer Responsibilities:

- Provide access to the sites, as necessary

1.2.5.4.1 Site Equipment Installation and Cutover Phase 1 Acceptance (Milestone)

- All site equipment installation and cutover shall be completed by Motorola and then shall be reviewed and accepted by Pinellas County

1.2.5.5 Site Equipment Installation and Cutover Phase 1 at Fort Desoto Site

- **This site requires a live cutover. Extreme care is mandatory to reduce or eliminate any interruptions to radio communications services during construction, installation, optimization, testing or cutover.**
 - Prepare an Implementation Time Line (ITL) indicating any planned downtime necessary, which is to be discussed and mutually agreed to with Pinellas County Director of Radio and Technology Division.

Site Scope Summary (All Scope is included except where indicated as optional)

- Engineering services for site floor and rack drawings
- New Loop Microwave Radios
- Implementation of MPLS SAR8s
- Add Site Security System
- New equipment racks with floor isolators to floor of new communications shelter
- New cable management brackets and grounds to new equipment racks
- Install Mid Zone 28 Channel Equipment using “Swing Equipment” into the new communications shelter
- Remove and reinstall the existing South Zone into the new communications shelter
- Add Weather Station and interface to network
- Install and interface New IP MA Call, Tac 4
- Remove and Reinstall SDM equipment into new communications shelter
- Add Technician workbench into new communications shelter

Motorola Responsibilities

Engineering Services

- Provide Rack and Floor Layout Drawings
- Provide Cable Entry Port layout drawings
- Provide Microwave Link Design, Path Analysis and Microwave Frequency Coordination
- Provide Inter-mod and interference studies and reports

- Provide frequency acquisition, APCO and FCC License Support
- Provide Internal R56 Audit after equipment installations
- Reasonably handle any unforeseen items to a maximum cost of \$15,000.00

Equipment Installation and Cutover Services

- Motorola will be responsible for the installation of all fixed equipment contained in the equipment list based upon the agreed to floor plans. All equipment will be properly secured to the floor and installed in a neat and professional manner, employing a standard of workmanship consistent with its own R-56 installation standards and in compliance with applicable National Electrical Code (NEC), EIA, FAA and FCC standards.
- For installation of the fixed equipment at the various sites, Motorola will furnish all cables for power, audio, control, and radio transmission to connect the Motorola supplied equipment to the power panels or receptacles and the audio/control line connection point.
- Install Site Security System
- Install Cables from Microwave, Antennae, Tower Top Amp (TTA), Combiners and Surge Protection
- Install and secure new equipment racks with floor isolators to floor of new communications shelter
- Install new cable management brackets and grounds to new equipment racks
- Install Mid Zone 28 Channel Equipment using “Swing Equipment” into the new communications shelter
- Install Mid Zone 800 MHz Combiners
- Install 2 Mid Zone APM Controllers and 4 couplers
- Install 4 Mid Zone Routers and 2 network switches
- Install two 800 MHz Multi-coupler units
- Install three TRAK units
- Install Z2 mini work stations
- Shut down South Zone. When all South Zone Users migrate over to the Mid Zone, Install the South Zone into the new communications shelter
- Test and baseline the Fort Desoto South Zone Site.
- Add Weather Station and interface to network
- Install and interface New IP MA Call, Tac 4- [Option 4](#)
- Remove and Reinstall SDM equipment into new communications shelter
- Add a Technician workbench into new communications shelter
- Ensure that testing of the Mid Zone will not disrupt public safety communications or dispatch operations
- Program, configure, test and baseline the Fort Desoto Mid Zone Site
- Test to verify that the entire site is operating correctly and is stable and reliable.
- Install new loop microwave Radios
- Install new MPLS SAR8s



- Configure, program and Test the new microwave and MPLS SAR8 equipment
- Cutover the new microwave and MPLS SAR8 equipment per agreed to Implementation Time Line (ITL)
- Cutover the Fort Desoto Mid Zone RF Simulcast site to the Pinellas County Radio System per agreed to Implementation Time Line (ITL)
- Turn on the Fort Desoto South Zone Site and verify that the South Zone users migrate back to the South Zone from the Mid Zone
- Remove and prepare existing Fort Desoto Equipment as “Swing equipment” for deployment at the next new Shelter site
- Remove and dispose old non reusable equipment and cabling from old Fort Desoto Site Shelter

Customer Responsibilities:

- Provide access to the sites, as necessary

1.2.5.5.1 Site Equipment Installation and Cutover Phase 1 Acceptance (Milestone)

- All site equipment installation and cutover shall be completed by Motorola and then shall be reviewed and accepted by Pinellas County

1.2.5.6 Site Equipment Installation and Cutover Phase 1 at Ridgecrest Site

- **This site requires a live cutover. Extreme care is mandatory to reduce or eliminate any interruptions to radio communications services during construction, installation, optimization, testing or cutover.**
 - Prepare an Implementation Time Line (ITL) indicating any planned downtime necessary, which is to be discussed and mutually agreed to with Pinellas County Director of Radio and Technology Division.

Site Scope Summary (All Scope is included except where indicated as optional)

- Engineering services for site floor and rack drawings
- New Loop Microwave Radios
- Implementation of MPLS SAR8s
- New Hospital MW and remotes to Suncoast, Largo Med and VA Pines- [Option 1](#)
- Add Site Security System
- New Antennae, Dishes and Tower Top Amp (TTA)
- Remove ten (10) MCC7500 Consoles from EMS for reinstallation at the PSC and SPPD Dispatch Centers
- Relocate and upgrade the State Wide mutual aid master equipment to the PSC- [Option 4](#)
- Install Mid Zone Equipment using “Swing Equipment” into the new communications shelter
- Remove and reinstall 3-channel 700 MHz HPD equipment into new communications shelter

- Add Weather Station and interface to network
- Install and interface New IP MA Call, Tac 4- [Option 4](#)
- Add new paging system equipment
- Add Technician workbench into new communications shelter

Motorola Responsibilities

Engineering Services

- Complete FCC checklist and Antenna Site Registry
- Provide Rack and Floor Layout Drawings
- Provide Cable Entry Port layout drawings
- Provide Microwave Link Design, Path Analysis and Microwave Frequency Coordination
- Provide Inter-mod and interference studies and reports
- Provide frequency acquisition, APCO and FCC License Support
- Provide As Built Tower Drawing
- Provide Internal R56 Audit after equipment installations
- Reasonably handle any unforeseen items to a maximum cost of \$15,000.00

Equipment Installation and Cutover Services

- Motorola will be responsible for the installation of all fixed equipment contained in the equipment list based upon the agreed to floor plans. All equipment will be properly secured to the floor and installed in a neat and professional manner, employing a standard of workmanship consistent with its own R-56 installation standards and in compliance with applicable National Electrical Code (NEC), EIA, FAA and FCC standards.
- For installation of the fixed equipment at the various sites, Motorola will furnish all cables for power, audio, control, and radio transmission to connect the Motorola supplied equipment to the power panels or receptacles and the audio/control line connection point.
- Remove and upgrade State Wide mutual aid master equipment and relocate to the Public Safety Complex for reinstallation-[Option 4](#)
- Remove 10 MCC7500 consoles from EMS for relocation to the PSC and SPPD Dispatch centers
- Install new Technician Workbench
- Install new paging system equipment
- Install Site Security System
- Install and secure new equipment racks with floor isolators to floor of new communications shelter
- Install new cable management brackets and grounds to new equipment racks
- Install Mid Zone 28 Channel Equipment using “Swing Equipment” into the new communications shelter
- Install Mid Zone 800 MHz Combiners



- Install 2 Mid Zone APM Controllers and 4 couplers
- Install 4 Mid Zone Routers and 2 network switches
- Install two 800 MHz Multi-coupler units
- Install three TRAK units
- Install Cables from Antennae, Tower Top Amp (TTA), Combiners and Surge Protection
- Ensure that optimization and testing of the Mid Zone will not disrupt public safety communications or dispatch operations
- Install a new Weather Station and interface to the network
- Install and interface a new IP MA Call, Tac 4- [Option 4](#)
- Ensure that optimization and testing of the Mid Zone will not disrupt public safety communications or dispatch operations
- Install Z2 mini work stations
- Program, configure, test and baseline the Ridgecrest Mid Zone Site
- Test to verify that the Mid Zone site is operating correctly and is stable and reliable.
- Install new loop microwave Radios
- Install new MPLS SAR8s
- Configure, program and Test the new microwave and MPLS SAR8 equipment
- Cutover the new microwave and MPLS SAR8 equipment per agreed to Implementation Time Line (ITL)
- Cutover the Ridgecrest Mid Zone site to the Pinellas County Radio System per agreed to Implementation Time Line (ITL)
- Remove 3-channel 700 MHz HPD site from Ridgecrest equipment room and reinstall into new Ridgecrest communications shelter
- Cutover the Ridgecrest HPD site to the Pinellas County Radio System per agreed to Implementation Time Line (ITL)
- Install the new Microwave Equipment for Suncoast, Largo Med and VA Pines Hospitals- [Option 1](#)
- Cutover the Suncoast, Largo Med and VA Pines Microwave Links per agreed to Implementation Time Line (ITL) –[Option 1](#)
- Remove and prepare existing Fort Desoto Equipment as “Swing equipment” for deployment at the next new Shelter site
- Remove and dispose old non reusable microwave equipment and cabling

Customer Responsibilities:

- Provide access to the sites, as necessary

1.2.5.6.1 Site Equipment Installation and Cutover Phase 1 Acceptance (Milestone)

- All site equipment installation and cutover shall be completed by Motorola and then shall be reviewed and accepted by Pinellas County

1.2.5.7 Site Equipment Installation and Cutover Phase 1 at Public Safety Complex

- This site requires a live cutover. Extreme care is mandatory to reduce or eliminate any interruptions to radio communications services during construction, installation, optimization, testing or cutover.
 - Prepare an Implementation Time Line (ITL) indicating any planned downtime necessary, which is to be discussed and mutually agreed to with Pinellas County Director of Radio and Technology Division.

Site Scope Summary (All Scope is included except where indicated as optional)

- Engineering services for site floor and rack drawings
- Implementation of MPLS SAR8s
- Add Site Security Manager for Radio System Network (All sites)
- Add Site Security System for Tower
- Install six (6) MCC7500 Consoles relocated from EMS into the Dispatch Center
- Reinstall and upgrade the State Wide mutual aid master equipment relocated from the Ridgecrest site- [Option 4](#)
- Add Weather Station and interface to network
- Install and interface New IP MA Call, Tac 4- [Option 4](#)
- Move Utility Microwave routing from Ridgecrest – Logan- Courthouse to Ridgecrest-PSC-Courthouse (remove Logan from microwave loop)
- Install new Location on PTT feature- [Option 5](#)

Motorola Responsibilities

Engineering Services

- Design Compound to include Tower Site Security System
 - Update Compound As Built Drawing to include changes
- Complete FCC checklist and Antenna Site Registry
- Provide Rack and Floor Layout Drawings
- Provide Cable Entry Port layout drawings
- Provide Microwave Link Design, Path Analysis and Microwave Frequency Coordination
- Provide Inter-mod and interference studies and reports
- Provide frequency acquisition, APCO and FCC License Support
- Provide Internal R56 Audit after equipment installations
- Reasonably handle any unforeseen items to a maximum cost of \$15,000.00

Equipment Installation and Cutover Services

- Motorola will be responsible for the installation of all fixed equipment contained in the equipment list based upon the agreed to floor plans. All equipment will be properly secured to the floor and installed in a neat and professional manner, employing a standard of workmanship consistent with its own R-56 installation

standards and in compliance with applicable National Electrical Code (NEC), EIA, FAA and FCC standards.

- For installation of the fixed equipment at the various sites, Motorola will furnish all cables for power, audio, control, and radio transmission to connect the Motorola supplied equipment to the power panels or receptacles and the audio/control line connection point.
- Install and upgrade the State Wide mutual aid master equipment relocated to the Public Safety Complex for reinstallation- [Option 4](#)
- Install six (6) MCC7500 consoles into the PSC Dispatch Center for E-9-1-1
- Install, program and test the Site Security System Manager for the Radio System Network (All sites)
- Move Utility Microwave routing from Ridgecrest – Logan- Courthouse to Ridgecrest-PSC-Courthouse (remove Logan from microwave loop)
- Install site security system for tower
- Install new MPLS SAR8s
- Configure, program and Test the new MPLS SAR8 equipment, then cutover the new MPLS SAR8 equipment per agreed to Implementation Time Line (ITL)
- Install Weather Station and interface to network
- Install and interface New IP MA Call, Tac 4- [Option 4](#)
- Install new Location on PTT feature- [Option 5](#)

Customer Responsibilities:

- Provide access to the sites, as necessary

1.2.5.7.1 Site Equipment Installation and Cutover Phase 1 Acceptance (Milestone)

- All site equipment installation and cutover shall be completed by Motorola and then shall be reviewed and accepted by Pinellas County

1.2.5.8 Site Equipment Installation and Cutover Phase 1 at Toytown Site

- **This site requires a live cutover. Extreme care is mandatory to reduce or eliminate any interruptions to radio communications services during construction, installation, optimization, testing or cutover.**
 - Prepare an Implementation Time Line (ITL) indicating any planned downtime necessary, which is to be discussed and mutually agreed to with Pinellas County Director of Radio and Technology Division.

Site Scope Summary (All Scope is included except where indicated as optional)

- Engineering services for site floor and rack drawings
- New Loop Microwave Radios
- Implementation of MPLS SAR8s
- Add Site Security System

- New equipment racks with floor isolators to floor of new communications shelter
- New cable management brackets and grounds to new equipment racks
- Install Mid Zone 28 Channel Equipment using “Swing Equipment” into the new communications shelter
- Remove and reinstall the existing South Zone RF Site and Prime Site into the new communications shelter
- Add Weather Station and interface to network
- Install and interface New IP MA Call, Tac 4- [Option 4](#)
- Remove and Reinstall SDM equipment into new communications shelter
- Add Technician workbench into new communications shelter

Motorola Responsibilities

Engineering Services

- Provide Rack and Floor Layout Drawings
- Provide Cable Entry Port layout drawings
- Provide Microwave Link Design, Path Analysis and Microwave Frequency Coordination
- Provide Inter-mod and interference studies and reports
- Provide frequency acquisition, APCO and FCC License Support
- Provide Internal R56 Audit after equipment installations
- Reasonably handle any unforeseen items to a maximum cost of \$15,000.00

Equipment Installation and Cutover Services

- Motorola will be responsible for the installation of all fixed equipment contained in the equipment list based upon the agreed to floor plans. All equipment will be properly secured to the floor and installed in a neat and professional manner, employing a standard of workmanship consistent with its own R-56 installation standards and in compliance with applicable National Electrical Code (NEC), EIA, FAA and FCC standards.
- For installation of the fixed equipment at the various sites, Motorola will furnish all cables for power, audio, control, and radio transmission to connect the Motorola supplied equipment to the power panels or receptacles and the audio/control line connection point.
- Install Site Security System
- Install Cables from Microwave, Antennae, Tower Top Amp (TTA) and Surge Protection
- Install and secure new equipment racks with floor isolators to floor of new communications shelter
- Install new cable management brackets and grounds to new equipment racks
- Install Mid Zone 28 Channel Equipment using “Swing Equipment” into the new communications shelter



- Install Z2 mini work stations
- Install Mid Zone 800 MHz Combiners
- Install 2 Mid Zone APM Controllers and 4 couplers
- Install 4 Mid Zone Routers and 2 network switches
- Install two 800 MHz Multi-coupler units
- Install three TRAK units
- Shut down South Zone. When all South Zone Users migrate over to the Mid Zone, Install the South Zone RF and Prime Site into the new communications shelter
- Test and baseline the Toytown South Zone Site.
- Add Weather Station and interface to network
- Install and interface New IP MA Call, Tac 4- [Option 4](#)
- Remove and Reinstall SDM equipment into new communications shelter
- Add a Technician workbench into new communications shelter
- Ensure that testing of the Mid Zone will not disrupt public safety communications or dispatch operations
- Program, configure, test and baseline the Toytown Mid Zone Site
- Test to verify that the entire site is operating correctly and is stable and reliable.
- Install new loop microwave Radios
- Install new MPLS SAR8s
- Configure, program and Test the new microwave and MPLS SAR8 equipment
- Cutover the new microwave and MPLS SAR8 equipment per agreed to Implementation Time Line (ITL)
- Cutover the Toytown Mid Zone RF Simulcast site to the Pinellas County Radio System per agreed to Implementation Time Line (ITL)
- Install new 3-channel HPD site into the new communications shelter- [Option 3](#)
- Cutover the 3-channel HPD site per agreed to Implementation Time Line (ITL)- [Option 3](#)
- Turn on the Toytown South Zone Site and verify that the South Zone users migrate back to the South Zone from the Mid Zone
- Install new PTP link between the Toytown Site and the Motorola MSC
- Remove and prepare existing Toytown Equipment as “Swing equipment” for deployment at the next new Shelter site
- Remove and dispose old non reusable equipment and cabling from old Fort Desoto Site Shelter

Customer Responsibilities:

- Provide access to the site as necessary

1.2.5.8.1 Site Equipment Installation and Cutover Phase 1 Acceptance (Milestone)

- All site equipment installation and cutover shall be completed by Motorola and then shall be reviewed and accepted by Pinellas County

1.2.5.9 Site Equipment Installation and Cutover Phase 1 at Highway Maintenance Site

- This site requires a live cutover. Extreme care is mandatory to reduce or eliminate any interruptions to radio communications services during construction, installation, optimization, testing or cutover.
 - Prepare an Implementation Time Line (ITL) indicating any planned downtime necessary, which is to be discussed and mutually agreed to with Pinellas County Director of Radio and Technology Division.

Site Scope Summary (All Scope is included except where indicated as optional)

- Engineering services for site floor and rack drawings
- New Loop Microwave Radios
- Implementation of MPLS SAR8s
- Add New Diversity Microwave Hop to Eldridge Wilde Site to Decommission the Safety Harbor Site
- Add Mease Countryside MW and remote to replace Safety Harbor to Mease Countryside- [Option 1](#)
- Use “Swing Trailers” for Cutover
- Install and interface New IP MA Call, Tac 4- [Option 4](#)
- Relocate Tampa’s Alcatel Microwave required to support their ISSI System
- Relocate the Pinellas County DOT FM Traffic System
- Add Site Security System
- New equipment racks with floor isolators to floor of new communications shelter
- New cable management brackets and grounds to new equipment racks
- Install Mid Zone 28 Channel Equipment Into “Swing Trailer” using “Swing Equipment”
- Remove 28-channel Mid Zone equipment from existing communications shelter to install into new communications shelter
- Add Weather Station and interface to network
- Remove and Reinstall SDM equipment into new communications shelter
- Convert ASR site to 700 MHz & add two 700 MHz antennae and a new combiner
- Add Technician workbench into new communications shelter

Motorola Responsibilities

Engineering Services

- Provide Rack and Floor Layout Drawings
- Provide Cable Entry Port layout drawings
- Provide Microwave Link Design, Path Analysis and Microwave Frequency Coordination
- Provide Inter-mod and interference studies and reports
- Provide frequency acquisition, APCO and FCC License Support
- Provide Internal R56 Audit after equipment installations



- Reasonably handle any unforeseen items to a maximum cost of \$15,000.00

Equipment Installation and Cutover Services

- Motorola will be responsible for the installation of all fixed equipment contained in the equipment list based upon the agreed to floor plans. All equipment will be properly secured to the floor and installed in a neat and professional manner, employing a standard of workmanship consistent with its own R-56 installation standards and in compliance with applicable National Electrical Code (NEC), EIA, FAA and FCC standards.
- For installation of the fixed equipment at the various sites, Motorola will furnish all cables for power, audio, control, and radio transmission to connect the Motorola supplied equipment to the power panels or receptacles and the audio/control line connection point.
- Use Swing Trailers for 1st cutover.
 - Move Trailer to parking lot adjacent to the Highway Maintenance Site Tower
 - Install trailer Grounding, Utility Power and remote generator backup power
 - Install 28-channel Mid Zone Site into equipment racks to be located at the PSC DSR Master site using “Swing Equipment”, stage and test at the PSC location
 - Install 10-channel 800 MHz ASR Site into equipment rack to be located at the PSC DSR Master site using “Swing Equipment”, stage and test at the PSC location
 - Move the tested 28-channel Mid Zone Racks to the trailer and secure racks to trailer floor
 - Move the tested 10-channel ASR Racks to the trailer and secure racks to trailer floor
 - Connect trailer to the Highway Maintenance Tower using existing waveguide and transmission line per agreed Implementation Time Line (ITL)
 - Cutover the Swing Trailer Mid Zone site per agreed Implementation Time Line (ITL)
 - Cutover the Swing Trailer ASR site per agreed Implementation Time Line (ITL)
 - Relocate the Hillsboro County Alcatel Microwave used to support their ISSI to the Swing Trailer
 - Relocate the PCDOT FM Traffic System to the Swing Trailer
- Installation of New Highway Maintenance Site Communications Shelter
 - Install and secure new equipment racks with floor isolators to floor of new communications shelter
 - Install new cable management brackets and grounds to new equipment racks
 - Install new Diversity Microwave Hop to Eldridge Wilde Site
 - Install new site security system
 - Install Mid Zone 28 Channel Equipment using equipment from old Highway Maintenance Shelter into the new communications shelter



- Install Mid Zone 800 MHz Combiners
- Install 2 Mid Zone APM Controllers and 4 couplers
- Install 4 Mid Zone Routers and 2 network switches
- Install two 800 MHz Multi-coupler units
- Install three TRAK units
- Install 10-Channel ASR Equipment using equipment from old Highway Maintenance Shelter into the new communications shelter
- Add Weather Station and interface to network
- Install and interface New IP MA Call, Tac 4- [Option 4](#)
- Remove and Reinstall SDM equipment into new communications shelter
- Add a Technician workbench into new communications shelter
- Ensure that testing of the Mid Zone and ASR sites will not disrupt public safety communications or dispatch operations
- Program, configure, test and baseline the Highway Mid Zone Site
- Test to verify that the entire site is operating correctly and is stable and reliable.
- Install new loop microwave Radios
- Install new MPLS SAR8s
- Configure, program and Test the new microwave and MPLS SAR8 equipment
- Cutover the new microwave and MPLS SAR8 equipment per agreed to Implementation Time Line (ITL)
- Cutover the Highway Mid Zone RF Simulcast site to the Pinellas County Radio System per agreed to Implementation Time Line (ITL)
- Cutover the 800 MHz 10-channel ASR site to the Pinellas County Radio System per agreed to Implementation Time Line (ITL)
- Relocate the Hillsboro County Alcatel Microwave used to support their ISSI to the new communications shelter
- Relocate the PCDOT FM Traffic System to the new communications shelter
- Remove and prepare existing Highway Maintenance Trailer Equipment for deployment in the new North Zone Cell and Mid Zone Channels 29 & 30
- Remove and dispose old non reusable equipment and cabling from old Highway Maintenance Site
- Move the trailer to the PSC to be reinstalled as an Emergency Trailer

Customer Responsibilities:

- Provide access to the sites, as necessary

1.2.5.9.1 Site Equipment Installation and Cutover Phase 1 Acceptance (Milestone)

- All site equipment installation and cutover shall be completed by Motorola and then shall be reviewed and accepted by Pinellas County

1.2.5.10 Site Equipment Installation and Cutover Phase 1 at Bayfront Hospital

- This site requires a live cutover. Extreme care is mandatory to reduce or eliminate any interruptions to radio communications services during construction, installation, optimization, testing or cutover.
 - Prepare an Implementation Time Line (ITL) indicating any planned downtime necessary, which is to be discussed and mutually agreed to with Pinellas County Director of Radio and Technology Division.

Site Scope Summary (All Scope is included except where indicated as optional)

- Engineering services for site floor and rack drawings
- Add new paging system equipment
- Add MPLS SAR8 router
- New Bayfront to St. Anthony microwave and remotes

Motorola Responsibilities

Engineering Services

- Provide Rack and Floor Layout Drawings
- Provide Cable Entry Port layout drawings
- Provide Microwave Link Design, Path Analysis and Microwave Frequency Coordination
- Provide frequency acquisition, APCO and FCC License Support
- Provide Internal R56 Audit after equipment installations
- Reasonably handle any unforeseen items to a maximum cost of \$15,000.00

Equipment Installation and Cutover Services

- Motorola will be responsible for the installation of all fixed equipment contained in the equipment list based upon the agreed to floor plans. All equipment will be properly secured to the floor and installed in a neat and professional manner, employing a standard of workmanship consistent with its own R-56 installation standards and in compliance with applicable National Electrical Code (NEC), EIA, FAA and FCC standards.
- For installation of the fixed equipment at the various sites, Motorola will furnish all cables for power, audio, control, and radio transmission to connect the Motorola supplied equipment to the power panels or receptacles and the audio/control line connection point.
- Install and cutover new ICS paging base station per agreed to Implementation Time Line (ITL)
- Install new MPLS SAR8
- Configure, program and test MPLS SAR8
- Cutover MPLS SAR8 per agreed to Implementation Time Line (ITL)
- Install new Bayfront to St. Anthony microwave equipment and Remotes- [Option 1](#)

- Cutover to new hospital microwave per agreed to Implementation Time Line (ITL)- [Option 1](#)

Customer Responsibilities:

- Provide access to the sites, as necessary

1.2.5.10.1 Site Equipment Installation and Cutover Phase 1 Acceptance (Milestone)

- All site equipment installation and cutover shall be completed by Motorola and then shall be reviewed and accepted by Pinellas County

1.2.5.11 Decommission Safety Harbor Site

Site Scope Summary (All Scope is included except where indicated as optional)

- Remove and dispose old non reusable equipment and cabling from Safety Harbor Site

Motorola Responsibilities

- [Installation Summary](#)

Customer Responsibilities:

- Provide access to the site, as necessary
- Contact Fleet Maintenance to retrieve propane generator for use by county

1.2.5.11.1 Site Equipment Installation and Cutover Phase 1 Acceptance (Milestone)

- All site equipment installation and cutover shall be completed by Motorola and then shall be reviewed and accepted by Pinellas County

1.2.6 Site Equipment Installation and Cutover (Phase 2)

1.2.6.1 Site Equipment Installation at Courthouse Site (Phase 2)

- **This site requires a live cutover. Extreme care is mandatory to reduce or eliminate any interruptions to radio communications services during construction, installation, optimization, testing or cutover.**
 - Prepare an Implementation Time Line (ITL) indicating any planned downtime necessary, which is to be discussed and mutually agreed to with Pinellas County Director of Radio and Technology Division.

Site Scope Summary (All Scope is included except where indicated as optional)

- Engineering services for site floor and rack drawings
- Add North Zone Simulcast Sub Site (10 Channels)- [Option 2](#)
- Add Channels 29 and 30 to MZ

Motorola Responsibilities

Engineering Services

- Provide Rack and Floor Layout Drawings
- Provide Internal R56 Audit after equipment installations

Equipment Installation and Cutover Services

- Install new North Zone Combiner, APM and 10-channel North Zone RF Simulcast Site equipment –[Option 2](#)
- Program, configure, test and baseline the Courthouse North Zone Site
- Install Mid Zone Channels 29 and 30 equipment, program and test

Customer Responsibilities:

- Provide access to the site, as necessary

1.2.6.2 Site Equipment Installation at Majestic Towers Site (Phase 2)

- **This site requires a live cutover. Extreme care is mandatory to reduce or eliminate any interruptions to radio communications services during construction, installation, optimization, testing or cutover.**
 - Prepare an Implementation Time Line (ITL) indicating any planned downtime necessary, which is to be discussed and mutually agreed to with Pinellas County Director of Radio and Technology Division.

Site Scope Summary (All Scope is included except where indicated as optional)

- Engineering services for site floor and rack drawings
- Add Channels 29 and 30 to MZ

Motorola Responsibilities

Engineering Services

- Provide Rack and Floor Layout Drawings
- Provide Internal R56 Audit after equipment installations

Equipment Installation and Cutover Services

- Install Mid Zone Channels 29 and 30 equipment, program and test

Customer Responsibilities:

- Provide access to the site, as necessary

1.2.6.3 Site Equipment Installation at Tarpon Springs Site (Phase 2)

- This site requires a live cutover. Extreme care is mandatory to reduce or eliminate any interruptions to radio communications services during construction, installation, optimization, testing or cutover.
 - Prepare an Implementation Time Line (ITL) indicating any planned downtime necessary, which is to be discussed and mutually agreed to with Pinellas County Director of Radio and Technology Division.

Site Scope Summary (All Scope is included except where indicated as optional)

- Engineering services for site floor and rack drawings
- Add North Zone Simulcast Sub Site (10 Channels) –Option 2
- Add Channels 29 and 30 to MZ

Motorola Responsibilities

Engineering Services

- Provide Rack and Floor Layout Drawings
- Provide Internal R56 Audit after equipment installations

Equipment Installation and Cutover Services

- Install new North Zone Combiner, APM and 10-channel North Zone RF Simulcast Site equipment –Option 2
- Program, configure, test and baseline the Courthouse North Zone Site
- Install Mid Zone Channels 29 and 30 equipment, program and test

Customer Responsibilities:

- Provide access to the site, as necessary

1.2.6.4 Site Equipment Installation at Eldridge Wilde Site (Phase 2)

- This site requires a live cutover. Extreme care is mandatory to reduce or eliminate any interruptions to radio communications services during construction, installation, optimization, testing or cutover.
 - Prepare an Implementation Time Line (ITL) indicating any planned downtime necessary, which is to be discussed and mutually agreed to with Pinellas County Director of Radio and Technology Division.

Site Scope Summary (All Scope is included except where indicated as optional)

- Engineering services for site floor and rack drawings
- Add North Zone Simulcast Sub Site (10 Channels) –Option 2
- Add Channels 29 and 30 to MZ

Motorola Responsibilities

Engineering Services

- Provide Rack and Floor Layout Drawings
- Provide Internal R56 Audit after equipment installations

Equipment Installation and Cutover Services

- Install new North Zone Prime Site –Option 2
- Install new North Zone Combiner, APM and 10-channel North Zone RF Simulcast Site equipment –Option 2
- Program, configure, test and baseline the Eldridge Wilde North Zone Site - Option 2
- Install Mid Zone Channels 29 and 30 equipment, program and test

1.2.6.5 Site Equipment Installation at Fort Desoto Site (Phase 2)

- **This site requires a live cutover. Extreme care is mandatory to reduce or eliminate any interruptions to radio communications services during construction, installation, optimization, testing or cutover.**
 - Prepare an Implementation Time Line (ITL) indicating any planned downtime necessary, which is to be discussed and mutually agreed to with Pinellas County Director of Radio and Technology Division.

Site Scope Summary (All Scope is included except where indicated as optional)

- Engineering services for site floor and rack drawings
- Add Channels 29 and 30 to MZ

Motorola Responsibilities

Engineering Services

- Provide Rack and Floor Layout Drawings
- Provide Internal R56 Audit after equipment installations

Equipment Installation and Cutover Services

- Install Mid Zone Channels 29 and 30 equipment, program and test

Customer Responsibilities:

- Provide access to the site, as necessary

1.2.6.6 Site Equipment Installation at Ridgecrest Site (Phase 2)

- **This site requires a live cutover. Extreme care is mandatory to reduce or eliminate any interruptions to radio communications services during construction, installation, optimization, testing or cutover.**

- Prepare an Implementation Time Line (ITL) indicating any planned downtime necessary, which is to be discussed and mutually agreed to with Pinellas County Director of Radio and Technology Division.

Site Scope Summary (All Scope is included except where indicated as optional)

- Engineering services for site floor and rack drawings
- Add Channels 29 and 30 to MZ

Motorola Responsibilities

Engineering Services

- Provide Rack and Floor Layout Drawings
- Provide Internal R56 Audit after equipment installations

Equipment Installation and Cutover Services

- Install Mid Zone Channels 29 and 30 equipment, program and test

Customer Responsibilities:

- Provide access to the site, as necessary

1.2.6.7 Site Equipment Installation at Toytown Site (Phase 2)

- This site requires a live cutover. Extreme care is mandatory to reduce or eliminate any interruptions to radio communications services during construction, installation, optimization, testing or cutover.
 - Prepare an Implementation Time Line (ITL) indicating any planned downtime necessary, which is to be discussed and mutually agreed to with Pinellas County Director of Radio and Technology Division.

Site Scope Summary (All Scope is included except where indicated as optional)

- Engineering services for site floor and rack drawings
- Add Channels 29 and 30 to MZ

Motorola Responsibilities

Engineering Services

- Provide Rack and Floor Layout Drawings
- Provide Internal R56 Audit after equipment installations

Equipment Installation and Cutover Services

- Install Mid Zone Channels 29 and 30 equipment, program and test

Customer Responsibilities:

- Provide access to the site, as necessary

1.2.6.8 Site Equipment Installation at Highway Maintenance (Phase 2)

- This site requires a live cutover. Extreme care is mandatory to reduce or eliminate any interruptions to radio communications services during construction, installation, optimization, testing or cutover.
 - Prepare an Implementation Time Line (ITL) indicating any planned downtime necessary, which is to be discussed and mutually agreed to with Pinellas County Director of Radio and Technology Division.

Site Scope Summary (All Scope is included except where indicated as optional)

- Engineering services for site floor and rack drawings
- Convert & Cutover 800 MHz ASR Site to 700 MHz ASR Site - Option 2
- Add North Zone Simulcast Sub Site (10 Channels) –Option 2
- Add Channels 29 and 30 to MZ

Motorola Responsibilities

Engineering Services

- Provide Rack and Floor Layout Drawings
- Provide Internal R56 Audit after equipment installations

Equipment Installation and Cutover Services

- Install new 700 MHz Combiner, APM and 10-channel ASR RF equipment- Option 2
- Program, configure test and baseline the 10-channel ASR Site- Option 2
- Install new North Zone Combiner, APM and 10-channel North Zone RF Simulcast Site equipment –Option 2
- Program, configure, test and baseline the Highway Maintenance North Zone Site- Option 2
- Install Mid Zone Channels 29 and 30 equipment, program and test

Customer Responsibilities:

- Provide access to the site, as necessary

1.2.6.9 Site Equipment Installation at St. Petersburg Site (Phase 2)

- This site requires a live cutover. Extreme care is mandatory to reduce or eliminate any interruptions to radio communications services during construction, installation, optimization, testing or cutover.
 - Prepare an Implementation Time Line (ITL) indicating any planned downtime necessary, which is to be discussed and mutually agreed to with Pinellas County Director of Radio and Technology Division.

Site Scope Summary (All Scope is included except where indicated as optional)

- Engineering services for site floor and rack drawings
- Implementation of MPLS SAR8s
- Add Site Security Manager for Radio System Network (All sites)
- Add Site Security System for Tower
- Relocate FSA Manager from Ridgecrest Site
- Add Mid Zone channels 29 & 30
- Install six (4) MCC7500 Consoles relocated from EMS into the new SPPD Dispatch Center
- Add Weather Station and interface to network
- Install and interface New IP MA Call, Tac 4- [Option 4](#)
- New Hospital MW and remotes from St Pete General to Northside- [Option 1](#)
- Add Technician Workbench
- Install new Location on PTT feature- [Option 5](#)

Motorola Responsibilities

Engineering Services

- Provide Rack and Floor Layout Drawings
- Provide Cable Entry Port layout drawings
- Provide Microwave Link Design, Path Analysis and Microwave Frequency Coordination
- Provide Inter-mod and interference studies and reports
- Provide frequency acquisition, APCO and FCC License Support
- Provide Internal R56 Audit after equipment installations

Equipment Installation and Cutover Services

- Motorola will be responsible for the installation of all fixed equipment contained in the equipment list based upon the agreed to floor plans. All equipment will be properly secured to the floor and installed in a neat and professional manner, employing a standard of workmanship consistent with its own R-56 installation standards and in compliance with applicable National Electrical Code (NEC), EIA, FAA and FCC standards.
- For installation of the fixed equipment at the various sites, Motorola will furnish all cables for power, audio, control, and radio transmission to connect the Motorola supplied equipment to the power panels or receptacles and the audio/control line connection point.
- Relocate FSA Manager from Ridgecrest Site
- Install Mid Zone Channels 29 and 30 equipment, program and test
- Install four (4) MCC7500 consoles into the SPPD Dispatch Center
- Install, program and test the Site Security System Manager for the Radio System Network (All sites)
- Install site security system for tower
- Install new MPLS SAR8s



- Configure, program and Test the new MPLS SAR8 equipment, then cutover the new MPLS SAR8 equipment per agreed to Implementation Time Line (ITL)
- Install Weather Station and interface to network
- Install and interface New IP MA Call, Tac 4- [Option 4](#)
- Install new Location on PTT feature- [Option 5](#)

1.2.6.10 Cutover Mid Zone Chs 29 & 30, 700 MHz ASR Site and North Zone (Phase 2)

- **This site requires a live cutover. Extreme care is mandatory to reduce or eliminate any interruptions to radio communications services during construction, installation, optimization, testing or cutover.**
 - Prepare an Implementation Time Line (ITL) indicating any planned downtime necessary, which is to be discussed and mutually agreed to with Pinellas County Director of Radio and Technology Division.
- Ensure that testing of the Mid Zone will not disrupt public safety communications or dispatch operations
- Optimize the Mid Zone simulcast cell for Channels 29 and 30
- Test to verify that the entire Mid Zone Cell is operating correctly and is stable and reliable
- Test to verify that the new 700 MHz ASR site is operating correctly and is stable- [Option 2](#)
- Cutover the new 700 MHz ASR site per the agreed to Time Line (ITL)- [Option 2](#)
- Cutover Mid Zone Channels 29 and 30 to the Pinellas County Radio System per agreed to Implementation Time Line (ITL)
- Configure, program, Optimize, test and baseline the new North Zone Simulcast Cell- [Option 2](#)
- Test to verify that the entire North Zone Cell is operating correctly and is stable and reliable- [Option 2](#)
- Cutover the new North Zone Cell to the Pinellas County Radio System per agreed to Implementation Time Line (ITL)- [Option 2](#)
- Review the Phase 2 installation and cutover with Pinellas County and develop a punch list of deficiencies noted.
- Motorola will correct the deficiencies noted on the punch list for final site acceptance and complete the certified as-built documentation.

Customer Responsibilities:

- Provide access to the sites, as necessary.

1.2.6.10.1 Site Equipment and Installation Phase II Acceptance (Milestone)

- All site equipment installation and cutover shall be completed by Motorola and shall be reviewed and accepted by Pinellas County

1.2.7 Emergency Trailer

Site Scope Summary (All Scope is included except where indicated as optional)

- Update existing Emergency Trailer
- Engineering services for site floor and rack drawings
- Add GTR P25 Trunking System
 - GTRs available from Swing Equipment
- Add PTP

Motorola Responsibilities

Engineering Services

- Provide Rack and Floor Layout Drawings
- Provide Internal R56 Audit after equipment installations

Equipment Installation and Cutover Services

- Install GTR based P25 Trunking system
 - Configure, program and test
- Install PTP
 - Install in Rack and test

Customer Responsibilities:

- Provide access to trailer, as necessary

1.2.7.1.1 Trailer Installation Acceptance (Milestone)

- All site equipment installation and cutover shall be completed by Motorola and shall be reviewed and accepted by Pinellas County

1.2.8 Finalize

1.2.8.1 Perform Independent Third Party R56 Audit

- All sites associated with the Third Amendment shall be audited by a certified Independent third party for compliance to the Motorola R56 Standard
 - A comprehensive report by the certified third party detailing the testing completed and pass/fail information for each test performed shall be provided to Pinellas County
 - All fails shall be added to the final punch list for resolution prior to final acceptance.

1.2.8.2 Resolve Punch list

Motorola Responsibilities

- Work with the County to resolve punch list items, documented during the acceptance phases, in order to meet all the criteria for final system acceptance.

County Responsibilities

- Assist Motorola with resolution of identified punch list items by providing support, such as access to the sites, and approval of the resolved punch list item(s).

Completion Criteria

- Resolve punch list items and seek approval from the County.

1.2.8.3 Final Acceptance (Milestone)

- All deliverables completed, as contractually required.
- Motorola will present for signature and receive a signed final system acceptance milestone certificate from the County.

1.3 WARRANTY AND MAINTENANCE

1.3.1 Overview

Motorola has the most comprehensive service organization in the Land Mobile Industry. Since 1947, Motorola has been building a unique service team: national in scope, but local in its ability to respond to our customers' diverse needs. As product and systems complexity evolve, Motorola responds with new service products and programs. This approach ensures Pinellas County that Motorola will remain at the cutting edge of service delivery and maintainability.

1.3.2 Warranty Service Program Review

During the first year after system acceptance, Motorola will provide a warranty and maintenance program that will deliver state-of-the-art system service focused on achieving responsive service, maximum system operation, and optimum reliability. The program will commence upon system acceptance and consist of a full one-year parts and labor warranty, and preventive and emergency maintenance services.

The service program combines the services of our local system service team, our local subcontractor team, and the national service team for technical, engineering and administrative support. This approach allows for maximum utilization of resources.

1.3.3 Local Dispatch Service

The local Motorola Service Center, MSC, will provide local dispatch and call support. When a trouble call is received by MSC, a technician shall be dispatched to the site in question.

1.3.4 Technical Support

Technical Support is available 24 hours a day, 7 days a week.

1.4 EQUIPMENT LISTS

1.4.1 Base Offering

Item	Site	Description
1	HM	24' x 32' Communications Shelter for HM
2	EW	24' x 32' Communications Shelter for EW
3	TS	24' x 32' Communications Shelter for TS
4	TT	24' x 32' Communications Shelter For TT
5	FD	24' x 32' Communications Shelter for FD
6	RC	330 foot Self Supporting Tower and 24' x 32' Shelter for RC
7	TT	24' x 32' Prefab Storage Building
8	All Sites	Radio System Loop Microwave Equipment which includes required microwave radio equipment, Microrwave Dishes, Wave Guide, Waveguide Connectors, DeHydrators, DC Power Equipment and all Mounting Hardware for all sites
9	All Sites	MPLS SAR-8 Routers including all required Hardware, Software and licenses for all Sites
10	RC	RF Sub System which includes required Multicoupler, TTA(s), Combiners, Antennas, Transmision Line, RF Connectors, RF Jumper Cables, Surge Protection, Ground Kits, Advanced Power Monitors and all Mounting Hardware
11	RC	TRAK GPS Frequency Reference Equipment
12	CH	RF Sub System which includes required Multicoupler, TTA(s), Combiners, Antennas, Transmision Line, RF Connectors, RF Jumper Cables, Surge Protection, Ground Kits, Advanced Power Monitors and all Mounting Hardware
13	CH	Single Module UPS System
14	TS	RF Sub System which includes required Multicoupler, TTA(s), Combiners, Antennas, Transmision Line, RF Connectors, RF Jumper Cables, Surge Protection, Ground Kits, Advanced Power Monitors and all Mounting Hardware
15	EW	RF Sub System which includes required Multicoupler, TTA(s), Combiners, Antennas, Transmision Line, RF Connectors, RF Jumper Cables, Surge Protection, Ground Kits, Advanced Power Monitors and all Mounting Hardware
16	HM	RF Sub System which includes required Multicoupler, TTA(s), Combiners, Antennas, Transmision Line, RF Connectors, RF Jumper Cables, Surge Protection, Ground Kits, Advanced Power Monitors and all Mounting Hardware

Item	Site	Description
17	TT	RF Sub System which includes required Multicoupler, TTA(s), Combiners, Antennas, Transmission Line, RF Connectors, RF Jumper Cables, Surge Protection, Ground Kits, Advanced Power Monitors and all Mounting Hardware
18	TT	TRAK GPS Frequency Reference Equipment
19	MT	RF Sub System which includes required Multicoupler, TTA(s), Combiners, Antennas, Transmission Line, RF Connectors, RF Jumper Cables, Surge Protection, Ground Kits, Advanced Power Monitors and all Mounting Hardware
20	MT	New 20KVA/18KW UPS
21	FD	RF Sub System which includes required Multicoupler, TTA(s), Combiners, Antennas, Transmission Line, RF Connectors, RF Jumper Cables, Surge Protection, Ground Kits, Advanced Power Monitors and all Mounting Hardware
22	FD	TRAK GPS Frequency Reference Equipment

1.4.2 Option 1

Item	Site	Description
1	CH	New Hospital Microwave Radio Equipment
2	EW	New Hospital Microwave Radio Equipment
3	MT	New Hospital Microwave Radio Equipment
4	RC	New Hospital Microwave Radio Equipment
5	TS	New Hospital Microwave Radio Equipment
6	All Hospital Remote Sites	Hospital Microwave Equipment which includes required microwave radio equipment, Microwave Dishes, Wave Guide, Waveguide Connectors, DeHydrators, DC Power Equipment and all Mounting Hardware.
7	All Hospital Remote Sites	New MCD5000 Desksets, New GGM8000 Gateways, New MCD8000 Radio Gateways, all required Cables & Mounting Hardware

1.4.3 Option 2

Item	Site	Description
1	ALL	All required Licensing for the New North Zone
2	EW	New Prime Site equipment, including new comparators, new site controllers, new Track GPS Prime site reference clock, all required Network Equipment and all required cables and Mounting Hardware
3	EW	Ten (10) new GTR8000 Base Radios, New GGM8000 Gateways, New TRACK GPS Remote Site Reference Clock, New Combiners, New APMs, all required network equipment, required Cables and Mounting Hardware
4	TS	Ten (10) new GTR8000 Base Radios, New GGM8000 Gateways, New TRACK GPS Remote Site Reference Clock, New Combiners, New APMs, all required network equipment, required Cables and Mounting Hardware
5	CH	Ten (10) new GTR8000 Base Radios, New GGM8000 Gateways, New TRACK GPS Remote Site Reference Clock, New Combiners, New APMs, all required network equipment, required Cables and Mounting Hardware
6	HM	Ten (10) new GTR8000 Base Radios, New GGM8000 Gateways, New TRACK GPS Remote Site Reference Clock, New Combiners, New APMs, all required network equipment, required Cables and Mounting Hardware
7	HM	New 700 MHz ASR Site to support Pinellas County Public Safety Aviation Communications. Includes 700 MHz Combiners, APMs, Multicoupler, TTA, Antennae, Transmission Line, all required Surge Protection, Cables and Mounting Hardware

1.4.4 Option 3

Item	Site	Description
1	TT	New HPD Site including new GGM8000 Gateways, Combiners, Multicoupler, TTA and all required Licensing, Transmission Line, Surge Protection, Cables and Mounting Hardware

1.4.5 Option 4

Item	Site	Description
1	PSC	All Required Master Site Licenses
3	PSC	Two (2) GGM8000 Gateways
4	PSC	One (1) Ethernet Switch
5	PSC	Four (4) MLC Conventional Analog Comparators
6	PSC	Three (3) GTR8000 Analog Conventional Base Radios
7	PSC	All Required MOSCAD Licenses
8	RC	Two (2) GGM8000 Gateways
9	RC	One (1) Ethernet Switch
10	RC	Four (4) MLC Conventional Analog Comparators
11	RC	Three (3) GTR8000 Analog Conventional Base Radios
12	RC	All Required MOSCAD Licenses
13	CH	Two (2) GGM8000 Gateways
14	CH	One (1) Ethernet Switch
15	CH	Four (4) MLC Conventional Analog Comparators
16	CH	Three (3) GTR8000 Analog Conventional Base Radios
17	CH	All Required MOSCAD Licenses
18	TS	Two (2) GGM8000 Gateways
19	TS	One (1) Ethernet Switch
20	TS	Four (4) MLC Conventional Analog Comparators
21	TS	Three (3) GTR8000 Analog Conventional Base Radios
22	TS	All Required MOSCAD Licenses
23	EW	Two (2) GGM8000 Gateways
24	EW	One (1) Ethernet Switch
25	EW	Four (4) MLC Conventional Analog Comparators
26	EW	Three (3) GTR8000 Analog Conventional Base Radios

Item	Site	Description
27	EW	All Required MOSCAD Licenses
28	HM	Two (2) GGM8000 Gateways
29	HM	One (1) Ethernet Switch
30	HM	Four (4) MLC Conventional Analog Comparators
31	HM	Three (3) GTR8000 Analog Conventional Base Radios
32	HM	All Required MOSCAD Licenses
33	SP	Two (2) GGM8000 Gateways
34	SP	One (1) Ethernet Switch
35	SP	Four (4) MLC Conventional Analog Comparators
36	SP	Three (3) GTR8000 Analog Conventional Base Radios
37	SP	All Required MOSCAD Licenses
38	MT	Two (2) GGM8000 Gateways
39	MT	One (1) Ethernet Switch
40	MT	Four (4) MLC Conventional Analog Comparators
41	MT	Three (3) GTR8000 Analog Conventional Base Radios
42	MT	All Required MOSCAD Licenses
43	FD	Two (2) GGM8000 Gateways
44	FD	One (1) Ethernet Switch
45	FD	Four (4) MLC Conventional Analog Comparators
46	FD	Three (3) GTR8000 Analog Conventional Base Radios
47	FD	All Required MOSCAD Licenses

1.4.6 Option 5

Item	Site	Description
1	PSC	All Required Master Site Licenses for Location on PTT Feature

1.5 PRICING

1.5.1 Description of Base Offering

- Base Equipment and services as described in the Scope of Work
 - 330 foot Self Support Tower
 - Six (6) New 24' x 32' Communications Shelters
 - Key Card Entry at all County Radio Sites & Shelters
 - Four (4) Raised Shelter Platforms
 - Five (5) New Cummins Generators
 - New Loop Microwave at all Radio Sites
 - Addition of MPLS SAR-8 Routers at all Radio Sites
 - New Combiner Equipment at all Radio Sites
 - Upgrade of all antennae systems for CH & MT
 - Site Security Systems at all ten County Radio Sites
 - Weather Stations at all County Radio Sites
 - Decommission of Safety Harbor Site

1.5.2 Base Offering Pricing

Motorola's has provided pricing to install the work as detailed within this proposal. The total system price including equipment, installation, system integration, one-year full warranty, and system purchase allowance is:

Description	Price
Total List Price	\$20,314,556
Pinellas County Discount (25%)	-\$4,973,639
System Sub-total	\$15,340,917
Less: Pinellas County Customer Loyalty Discount	-\$843,250
Base Offering Total	\$14,497,667

Description	Price
Additional Pinellas County Q2 Technology Credit Purchase Incentive (Motorola must receive Base Offering Purchase Order by 6/26/2019)	\$100,000 Credit

The pricing shown in this document and on the related Work Order (aka Statement of Work SOW) for the Base Offering shown above is based on the Equipment, Services, and SOW described in Exhibit A. Motorola reserves the right to modify the Equipment, Services, Pricing, and Discounts if there are changes to the Project described herein. Additionally, the pricing reflected on this page is predicated upon the Work Order being approved by the County, signed by appropriate County representative, and a Purchase Order being delivered to Motorola Solutions Inc. on or before June 26, 2019. If the signed Work Order and Purchase order are delivered to Motorola after June 26, 2019, the Equipment, Services, SOW, Pricing and Schedules shown are subject to modification by Motorola Solutions, Inc.

A formal contract is considered in effect upon execution of this Amendment by both Parties.

1.5.3 Option Pricing

Motorola's has provided pricing to install the work as detailed within this proposal. The total system price including equipment, installation, system integration, one-year full warranty, and system purchase allowance is:

Description	List Price	Pinellas Discount	Customer Price
Option 1: Hospital Microwave and the Hospital Remotes.	\$2,185,414	25%	\$1,639,061
Option 2: The addition of a four-site, 10-channel North Zone Subsystem North Zone and 700MHz ASR site that will be needed if we add North Zone	\$2,925,684	25%	\$2,172,334
Option 3: TT HPD	\$125,769	25%	\$94,327
Option 4: Upgrade Mutual AID at all sites	\$1,156,559	25%	\$867,419
Option 5: Add the "Location on PTT" Option	\$188,936	25%	\$141,702

Detailed equipment descriptions of the Options shown on this page are described earlier in Exhibit A. The pricing shown on this page for the Optional Items above is predicated upon the Work Order(s) (aka Statement of Work SOW) being approved by the County, signed by appropriate County representative, and a Purchase Order(s) being delivered to Motorola Solutions Inc. on or before December 18, 2020. If the signed Work Order is delivered to Motorola after December 18, 2020, the pricing and schedules shown are subject to modification by Motorola.

While great care has been taken in the drafting of the OPTIONAL items above which are described in Exhibit A and priced on this page, due to the long-term nature of these projects Motorola reserves the right to refresh the Equipment, Statement of Work, and Pricing when notified by the County that it wishes the work to commence.

A formal contract is considered in effect upon execution of the Work Order by both Parties.

Pinellas County, Florida
Third Amendment to Contract Number: 134-0251-NC(RM)

May 24, 2019
Use or disclosure of this proposal is subject to the restrictions on the cover page.

END OF DOCUMENT

EXHIBIT B 134-0251-NC (SS) 3rd Amendment

Customer will make payments to Motorola within forty-five (45) days after the date of each invoice, in accordance with Florida state law. Customer will make payments when due in the form of a check, cashier's check, or wire transfer drawn on a U.S. financial institution and in accordance with the following milestones.

1. 25% of the Contract Price upon CDR Completion;
2. 40% of the Contract Price upon Shipment of Equipment;
3. 20% of the Contract Price upon Installation Completion;
4. 10% of the Contract Price upon System Acceptance and Beneficial use; and
5. 5% of the Contract Price upon System Final Acceptance

Motorola reserves the right to make partial shipments of equipment and to request payment upon shipment of such equipment. In addition, Motorola reserves the right to invoice for installations or civil work completed on a site-by-site basis, when applicable.

PHASE II INSURANCE REQUIREMENTS
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Notice: The Contractor/Vendor must provide a certificate of insurance and blanket endorsements in accordance with the insurance requirements listed below (Exhibit C) and prior to recommendation for award. Failure to provide the Certificate of Insurance within a ten (10) day period following the determination or recommendation of lowest responsive, responsible bidder may result in the County to vacate the original determination or recommendation and proceed with recommendation to the second lowest, responsive, responsible bidder.

The Prime Contractor shall obtain and maintain, at all times during its performance of the Agreement, insurance of the types and in the amounts set forth; and require any sub-contractors to obtain and maintain, at all times during its performance of the Agreement, adequate insurance as it may apply to the portion of the Work performed by the subcontractor; *but in no event will the limits be less than \$500,000 for Workers' Compensation Employers' Liability and \$1,000,000 for General Liability, Auto Liability, and Professional Liability if required below.*

All subcontracts between Contractor and its subcontractors shall be in writing. Further, all subcontracts shall (1) require each subcontractor to be bound to contractor to the same extent the Contractor is bound to Pinellas County, a political subdivision of the State of Florida and the City of St. Petersburg, Florida, a municipal corporation of the State of Florida by the terms of the Contract Documents, as those terms may apply to the portion of the Work to be performed by the subcontractor; (2) provide for the assignment of the subcontractor's work from Contractor to Pinellas County, a political sub-division of the State of Florida and the City of St. Petersburg and the at the election of Owner upon termination of the Contract; (3) provide that Pinellas County and City of St Petersburg will be an additional indemnified party of the subcontract; (4) provide that Pinellas County and the City of St. Petersburg and the will be an additional insured on all insurance policies required to be provided by the subcontractor except worker's compensation; (5) assign all warranties directly Pinellas County and to the City of St Petersburg, if any; and (6) identify Pinellas County and the City of St. Petersburg the as an intended third-party beneficiary of the subcontract.

For projects with a Completed Operations exposure, Contractor shall maintain coverage and provide evidence of insurance for two (2) years beyond final acceptance. All insurance policies shall be from responsible companies duly authorized to do business in the State of Florida and have an AM Best rating of A- VIII or better. Prior to contract execution, the Contractor shall e-mail properly executed and approved a Certificate of Insurance to evidence compliance with the insurance requirements of the agreement to CertsOnly-Portland@ebix.com; be sure to include the organization's unique identifier, which will be provided upon notice of award. The Certificate of Insurance shall be signed by authorized representatives of the insurance companies shown on the Certificate(s). **A copy of the blanket endorsement(s) referenced in paragraph six (6) for Additional Insured shall be attached to the certificate(s).**

No work shall commence at any project site unless and until the required Certificate(s) of Insurance are received and approved by Pinellas County. Approval by Pinellas County of any Certificate of Insurance does not constitute verification by Pinellas County that the insurance requirements have been satisfied or that the insurance policy shown on the Certificate of Insurance is in compliance with the requirements of the Agreement. If litigation arising out of this contract is filed, Motorola will provide access to relevant endorsements and policies as required in this Agreement through its local defense counsel in the jurisdiction in which the litigation is filed and in compliance with the governing Court's rules of discovery.

All liability policies, other than professional liability, obtained by the Contractor and any sub-contractors to meet the requirements of the Agreement shall be endorsed with Blanket Additional Insured Endorsement to include Pinellas County, a political subdivision of the State of Florida and the City of St. Petersburg, Florida, a municipal corporation of the State of Florida as an Additional Insured(s).

If any insurance provided pursuant to the Agreement expires prior to the completion of the Work, renewal Certificates of Insurance and endorsements shall be furnished by the Contractor to Pinellas County and the City of St. Petersburg at least ten (10) business days prior to the expiration date.

Contracted vendor shall also notify Pinellas County and the City of St. Petersburg within ten (10) business days after receipt, of any notices of expiration, cancellation, received by said Contractor from its insurer. Notice shall be given by mail to: Pinellas County, c/o Ebix BPO, PO Box 257, Portland, MI, 48875-0257; be sure to include your organization's unique identifier, which will be provided upon notice of award. Nothing contained herein shall absolve Contractor of this requirement to provide notice.

If the Contractor does not maintain the insurance coverages required herein, Pinellas County may terminate the Agreement.

Each insurance policy shall include the following terms and/or conditions in the policy:

- (1) The Named Insured, Motorola Solutions, Inc., on the Certificate of Insurance must match the entity's name that responded to the solicitation and/or is signing the agreement with Pinellas County, a political subdivision of the State of Florida.
- (2) Companies issuing the insurance policy, or policies, shall have no recourse against Pinellas County, a political subdivision of the State of Florida or against the City of St. Petersburg, Florida, a municipal corporation of the State of Florida for payment of premiums or assessments for any deductibles which all are at the sole responsibility and risk of Contractor.

PHASE II INSURANCE REQUIREMENTS

- (3) The term "County" or "Pinellas County" shall include all Authorities, Boards, Bureaus, Commissions, Divisions, Departments and Constitutional offices of County and individual members, employees thereof in their official capacities, and/or while acting on behalf of Pinellas County. The term City of St. Petersburg shall include all Authorities, Boards, Bureaus, Commissions, Divisions, Department and individual members, thereof in their official capacities and/or while acting on behalf of the City of St. Petersburg.
- (4) The policy clause "Other Insurance" shall not apply to any insurance coverage currently held by Pinellas County, a political subdivision of the State of Florida and the City of St. Petersburg or any such future coverage, or to Pinellas County's or the City of St. Petersburg's Self-Insured Retentions of whatever nature.
- (5) All policies shall be written on a primary, non-contributory basis.
- (6) Any certificate of insurance evidencing coverage provided by a leasing company for either workers compensation or commercial general liability shall have a list of covered employees certified by the leasing company attached to the certificate of insurance. Pinellas County shall have the right, but not the obligation to determine that the contractor is only using employees named on such list to perform work for Motorola under this agreement. Should employees not named be utilized by contractor, Pinellas County and/or the City of St. Petersburg, at its option may stop work without penalty to Pinellas County until proof of coverage or removal of the employee by the contractor occurs, or alternatively find the contractor to be in default and take such other protective measures as necessary.
- (7) Insurance coverage shall include waivers of subrogation in favor of Pinellas County and The City of St. Petersburg from both the Contractor and sub-contractor(s) provided that the County is solely at fault.

The **minimum** insurance requirements for this Agreement, which shall remain in effect throughout its duration and for two (2) years beyond final acceptance for projects with a Completed Operations exposure, are as follows:

(A) Workers' Compensation Insurance

Limit	Florida Statutory
Employers' Liability Limits	
Per Employee	\$ 100,000
Per Employee Disease	\$ 100,000
Policy Limit Disease	\$ 500,000

(B) Commercial General Liability Insurance including, but not limited to, Independent Contractor, Contractual Liability Premises/Operations, Products/Completed Operations and Personal Injury. Policy shall not contain an Explosion, Collapse or Underground (x,c,u) exclusion; nor shall there be a crane weight, jig or boom exclusion.

Limits	
Combined Single Limit Per Occurrence	\$ 1,000,000
Products/Completed Operations Aggregate	\$ 1,000,000
Personal Injury and Advertising Injury	\$ 1,000,000
General Aggregate	\$ 2,000,000

(C) Business Automobile or Trucker's/Garage Liability Insurance covering owned, hired and non-owned vehicles. If the business does not own any vehicles, then evidence of Hired and Non-owned coverage is sufficient. Coverage shall be on an "occurrence" basis, such insurance to include coverage for loading and unloading hazards, unless Contractor can show that this coverage exists under the Commercial General Liability policy.

Limit	
Combined Single Limit Per Accident	\$ 1,000,000

PHASE II INSURANCE REQUIREMENTS
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- (D) Cyber Risk Liability (Network Security/Privacy Liability) Insurance for protection of private or confidential information whether electronic or non-electronic, network security and privacy; privacy against liability for system attacks, denial or loss of service, introduction, implantation or spread of malicious software code, security breach, unauthorized access and use; including regulatory action expenses; and notification and credit monitoring expenses with at least minimum limits as follows:

Limits

Each Occurrence	\$ 1,000,000
General Aggregate	\$ 1,000,000

- (E) Excess or Umbrella Liability Insurance excess of the primary coverage required , in paragraphs (A), (B), (C) and (D) above:

Limits

Each Occurrence	\$ 4,000,000
General Aggregate	\$ 4,000,000

- (F) Professional Liability (Errors and Omissions) Insurance with at least minimum limits as follows. If "claims made" coverage is provided, "tail coverage" extending three (3) years beyond completion and acceptance of the project with proof of "tail coverage" to be submitted with the invoice for final payment. In lieu of "tail coverage", Contractor may submit annually to the City of St. Petersburg and the Pinellas County, for a three (3) year period, a current certificate of insurance providing "claims made" insurance with prior acts coverage in force with a retroactive date no later than commencement date of this contract.

Limits

Each Claim	\$ 2,000,000
Aggregate	\$ 2,000,000

For acceptance of Professional Liability coverage provided by subcontractor(s), all subcontracts between Contractor and its subcontractors shall be in writing. Further, all subcontracts shall (1) require each subcontractor to be bound to contractor to the same extent the Contractor is bound to Pinellas County, a political subdivision of the State of Florida and the City of St. Petersburg, Florida, a municipal corporation of the State of Florida by the terms of the Contract Documents, as those terms may apply to the portion of the Work to be performed by the subcontractor; (2) provide for the assignment of the subcontractor's work from Contractor to Pinellas County, a political sub-division of the State of Florida and the City of St. Petersburg and the at the election of Owner upon termination of the Contract; (3) provide that Pinellas County and City of St Petersburg will be an additional indemnified party of the subcontract; (4) provide that Pinellas County and the City of St. Petersburg and the will be an additional insured on all insurance policies required to be provided by the subcontractor except worker's compensation; (5) assign all warranties directly Pinellas County and to the City of St Petersburg, if any; and (6) identify Pinellas County and the City of St. Petersburg the as an intended third-party beneficiary of the subcontract.

- (G) Pollution Legal/Environmental Legal Liability Insurance is to be provided by the subcontractor for pollution losses arising from all services performed to comply with this contract. Coverage shall apply to sudden and gradual pollution conditions including the discharge, dispersal, release or escape of smoke, vapors, soot, fumes, acids, alkalis, toxic chemicals, liquids or gases, waste materials or other irritants, contaminants or pollutants into or upon land, the atmosphere or any watercourse or body of water, which results in Bodily Injury or Property Damage. If policy is written on a Claims Made form, a retroactive date is required, and coverage must be maintained for 3 years after completion of contract or "tail coverage must be purchased. Coverage should include and be for the at least the minimum limits listed below:

- 1) Bodily injury, sickness, disease, mental anguish or shock sustained by any person, including death; property damage including physical injury to or destruction of tangible property including the resulting loss of use thereof, clean up costs, and the loss of use of tangible property that has not been physically injured or destroyed;
- 2) Defense including costs, charges and expenses incurred in the investigation, adjustment or defense of claims for such compensation damages.

PHASE II – INSURANCE REQUIREMENTS

3) Cost of Cleanup/Remediation.

Limits

Per Claim or Occurrence	\$ 1,000,000
General Aggregate	\$ 1,000,000

For acceptance of Pollution Legal/Environmental Legal Liability coverage included within another policy coverage required herein, a statement notifying the certificate holder must be included on the certificate of insurance and the total amount of said coverage per occurrence must be greater than or equal to the amount of Pollution Legal/Environmental Legal Liability and other coverage combined.

For acceptance of Pollution Legal/Environmental Legal Liability Insurance coverage provided by subcontractor(s), all subcontracts between Contractor and its subcontractors shall be in writing. Further, all subcontracts shall (1) require each subcontractor to be bound to contractor to the same extent the Contractor is bound to Pinellas County, a political subdivision of the State of Florida and the City of St. Petersburg, Florida, a municipal corporation of the State of Florida by the terms of the Contract Documents, as those terms may apply to the portion of the Work to be performed by the subcontractor; (2) provide for the assignment of the subcontractor's work from Contractor to Pinellas County, a political sub-division of the State of Florida and the City of St. Petersburg and the at the election of Owner upon termination of the Contract; (3) provide that Pinellas County and City of St Petersburg will be an additional indemnified party of the subcontract; (4) provide that Pinellas County and the City of St. Petersburg and the will be an additional insured on all insurance policies required to be provided by the subcontractor except worker's compensation; (5) assign all warranties directly Pinellas County and to the City of St Petersburg, if any; and (6) identify Pinellas County and the City of St. Petersburg the as an intended third-party beneficiary of the subcontract.

(H) Property Insurance Contractor will be responsible for all damage to its own property, equipment and/or materials.

(I) Builders Risk and/or Installation Floater Insurance Contractor shall secure, pay for and maintain "all-risk" builders risk and/or installation floater insurance, covering risks of physical loss or damage to the Work (Only equipment installed) and facility (including without limitation the transmission lines to the interconnection facilities, buildings, temporary structures, materials, supplies and equipment to be incorporated in the Work) until final acceptance is made, from perils including, but not limited to, Wind, fire (with extended coverage), theft, vandalism, malicious mischief, collapse "however caused", earth movement, flood, water damage, windstorm and hail, lightning, false-work, Hot and Cold testing and start-up of building systems, machinery, and equipment, terrorism, temporary buildings and debris removal including demolition occasioned by enforcement of any applicable legal requirements and increased cost of construction, expediting expense, extra expense and all other perils not specifically excluded under a standard "all-risk" builders risk and/or installation floater form. No crane, boom, jig, or weight exclusion shall apply. Such insurance shall cover all property during construction and testing, materials while stored onsite and offsite and while in transit and shall include the City of St. Petersburg and Pinellas County, a political subdivision of the State of Florida, and Prime Contractor as named Insureds, and Subcontractors ATIA to the Project as additional Insureds. The policy shall be written on a replacement cost/completed value basis in an amount at least equal to 100% of the projected completed value of the Work, as well as subsequent modifications of that sum due to Change Orders, including Soft Cost Coverage, Loss of Use/Delay in Start-up Costs, which shall at a minimum include additional expenses for interest, legal, consulting, insurance, architectural and engineering, contractor's overhead and general Conditions, and equipment rental and shall contain an agreed amount endorsement waiving any coinsurance penalty. The policy shall contain a waiver of subrogation in favor of the City of St. Petersburg and Pinellas County, a political subdivision of the State of Florida. Contractor is responsible for payment of all applicable deductibles and premiums. Evidence of coverage in the form of a Certificate of Insurance showing all applicable endorsements shall be provided to Pinellas County prior to the commencement of any Work.

AMENDMENT 3 TIMELINE

Pinellas New RC Site and 5 site Shelter Replacement		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	
		2019						2020												2021											
Activity		Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
	RECEIVE SIGNED CONTRACT	X																													
	PROJECT IMPLEMENTATION	X																													
	CDR	X			→X																										
1	UPGRADE CH	X						→X																							
1a	Site Engineering	X						→X																							
1b	ITL Approved			X	→X																										
1c	Add UPS				X			→X																							
1d	Install New Microwave				X			→X																							
1e	Install New MPLS Eq				X			→X																							
1f	Add Weather Stn				X			→X																							
1g	Remove & Dispose Old Equipment							X	→X																						
1h	CH Site Upgrade Complete							X																							
2	UPGRADE MT	X						→X																							
2a	Site Engineering	X						→X																							
2b	ITL Approved			X	→X																										
2c	Add UPS				X			→X																							
2d	Relocate South Zone				X			→X																							
2e	Install New Microwave				X			→X																							
2f	Install New MPLS Eq				X			→X																							
2g	Add Weather Stn				X			→X																							
2h	Remove & Dispose Old Equipment							X	→X																						
2i	MT Site Upgrade Complete							X																							
3	INSTALL NEW SHELTER TS	X										→X																			
3a	Site Engineering	X										→X																			
3b	Environmental Studies	X	→X																												
3c	Permitting		X		→X																										
3d	Expand Compound				X	→X																									
3e	Install Shelter				X	→X																									
3f	Install Gen					X	→X																								
3g	Fence & Restoration						X	→X																							
3h	Ready for FNE Install							X																							
	Cutover TS																														
3i	Install Swing Equipment							X	→X																						
3j	Install New Microwave							X	→X																						
3k	Install New MPLS Eq							X	→X																						
3l	Add Weather Stn							X	→X																						
3m	Program & Test							X	→X																						
3n	ITL Approved											XX																			
3o	Cutover to new Shelter								X	→X																					
3p	Remove Equipment from Old Shelter to reuse as swing equipment									X	→X																				
3q	Swing Equipment Available for Next Site									X																					
3r	Complete FDEP Abatement Analysis									X																					
3s	Remove Old Shelter & Foundation										X																				
4	INSTALL NEW SHELTER EW	X																													
4a	Site Engineering	X																													
4b	Environmental Studies	X	→X																												
4c	Permitting			X	→X																										
4d	Expand Compound				X	→X																									
4e	Install Shelter Platform					X	→X																								
4f	Install Shelter					X	→X																								
4g	Install Gen						X	→X																							
4h	Fence & Restoration							X	→X																						
4i	Ready for FNE Install								X																						
	Cutover EW																														
4j	Install Swing Equipment								X	→X																					
4k	Install New Microwave								X	→X																					
4l	Install New MPLS Eq								X	→X																					
4m	Add Weather Stn								X	→X																					
4n	Program & Test								X	→X																					
4o	ITL Approved											XX																			
4p	Cutover to new Shelter									X	→X																				
4q	Remove Equipment from Old Shelter to reuse as swing equipment										X	→X																			
4r	Swing Equipment Available for Next Site										X																				
4s	Complete FDEP Abatement Analysis										X																				
4t	Remove Old Shelter & Foundation											X																			
5	INSTALL NEW SHELTER FD	X																													
5a	Site Engineering	X																													
5b	Environmental Studies	X	→X																												
5c	Permitting			X	→X																										
5d	Expand Compound				X	→X																									
5e	Install Shelter Platform					X	→X																								
5f	Install Shelter						X	→X																							
5g	Install Gen							X	→X																						

AMENDMENT 3 TIMELINE

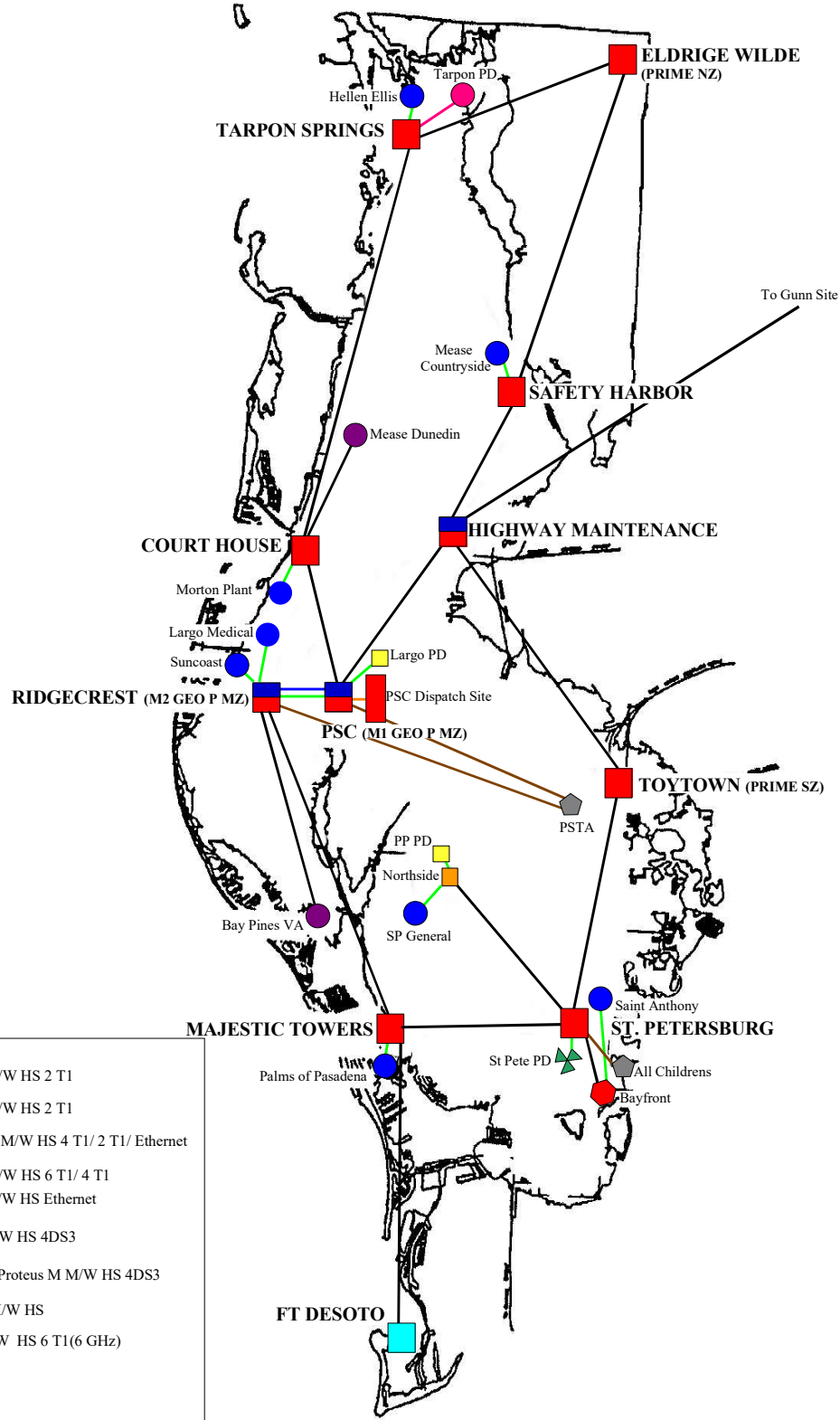
Pinellas New RC Site and 5 site Shelter Replacement		2019												2020												2021					
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	
Activity		Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov
8j	Site Engineering	X		→X																											
8k	Environmental Studies	X				→X																									
8l	Permitting																														
8m	Regrade Compound																X		→X												
8n	Install Shelter Platform																X		→X												
8o	Install Shelter & Gen																X		→X												
8p	Ready for FNE Install																X		→X												
Cutover HM																															
8q	Install Swing Equipment																							X	→X						
8r	Install New Microwave																						X	→X							
8s	Install New MPLS Eq																						X	→X							
8t	Add Chs 29 & 30																						X	→X							
8u	Add Weather Stn																						X	→X							
8v	Program & Test																						X	→X							
8w	Approve ITL																						X	→X							
8x	Cutover to new Shelter																								X	→X					
8y	Relocate Hospital MW Mease Country Side to HM																								X	→X					
8z	Remove Equipment from Trailer to reuse as North Zone Equipment																								X	→X					
8aa	Swing Equipment Available for Mid Zone Chs 29 & 30, Highway Maintenance ASR Conversion to 700 MHz and North Zone Sites																								X						
CUTOVER MID ZONE CHS 29 & 30																									X						
9a	Upgrade CH Site																							X							
9b	Upgrade MT Site																							X							
9c	Upgrade TS Site																							X							
9d	Upgrade EW Site																							X							
9e	Upgrade FD Site																							X							
9f	Upgrade RC Site																							X							
9g	Upgrade TT Site																							X							
9h	Upgrade SP Site																							X							
9i	Upgrade HM Site																							X							
9j	Mid Zone Chs 29 & 30 Complete																							X							
CONVERT HIGHWAY MAINTENANCE ASR SITE TO 700 MHz																															
10a	Install 700 MHz ASR Site																														
10b	Configure, Program & Test																														
10c	Cutover new 700 MHz ASR Site																														
10d	700 MHz ASR Site Complete																														
ADD NORTH ZONE																															
11a	Upgrade EW Site																														
11b	Upgrade TS Site																														
11c	Upgrade CH Site																														
11d	Upgrade HM Site																														
11e	Test North Zone																														
11f	North Zone Complete																														
DECOMMISSION SAFETY HARBOR SITE																															
12a	Remove Equipment from Shelter & Tower and Dispose																														
INSTALL EMERGENCY TRAILER																															
13a	Install Equipment																														
13b	Configure, Program and Test																														
13c	Trailer Complete																														
PROJECT FINAL ACCEPTANCE																															
14a	As Built Documentation																														
14b	Complete Punch List																														
14c	PROJECT COMPLETE																														

CONTRACT NUMBER: 134-0251-NC THIRD AMENDMENT

DRAWINGS AND ATTACHMENTS



PINELLAS COUNTY PUBLIC SAFETY RADIO SYSTEM RF & Microwave System Topology



	Proteus M M/W HS 2 T1
	Proteus M M/W HS 2 T1
	Proteus MX M/W HS 4 T1/ 2 T1/ Ethernet
	Proteus M M/W HS 6 T1/ 4 T1
	Proteus M M/W HS Ethernet
	Proteus M M/W HS 4DS3
	Proteus MX / Proteus M M/W HS 4DS3
	Proteus MX M/W HS
	Proteus M M/W HS 6 T1(6 GHz)
	Telco Lines
	4.9 GHz PTP
	Proteus M M/W HS 12 T1 (6 GHz)
	Proteus M M/W HS SD 12T1 (6 GHz)
	PSC Dispatch Site
	6 GHz
	11 GHz
	Phone Line
	4.9 GHz
	200 Mbs
	Fiber
	HS = Hot Standby
	D = Diversity



MOTOROLA

8000 W. SUNRISE BLVD
PLANTATION, FL 33322

PHONE: (954) 723-5000

**PINELLAS COUNTY -
RIDGECREST**
12490 ULMERTON ROAD
LARGO, FL 33774

WOOD PROJECT NO: --
DRAWN: J. GILMER CHECKED: J. GILMER
APPROVED: F.D. SHIVER DATE: 10/19/18



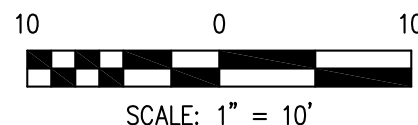
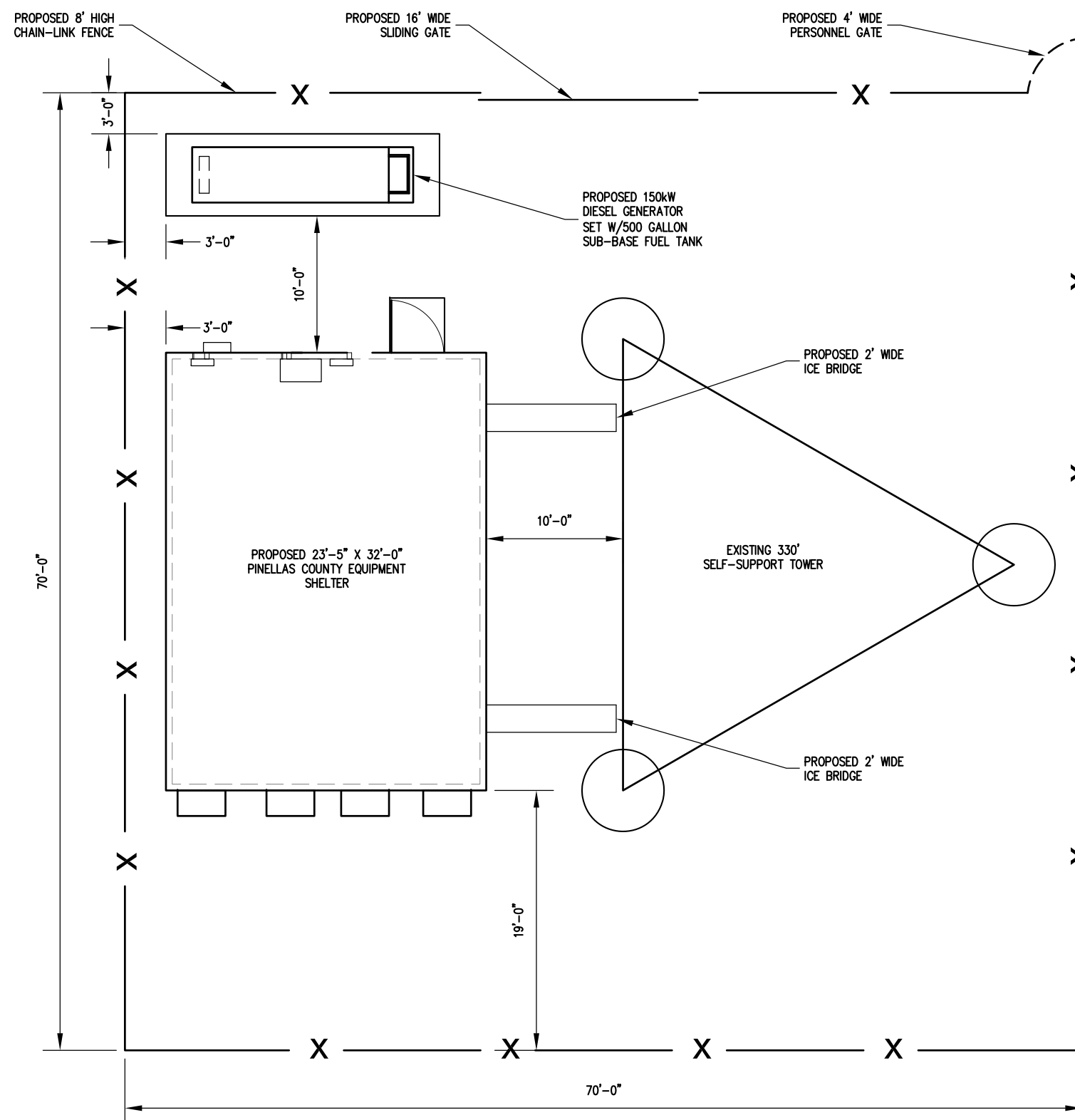
WOOD ENVIRONMENT AND INFRASTRUCTURE, INC.
1075 BIG SHANTY DRIVE, N.W., SUITE 100
KENNESAW, GA 30144
PHONE: (770) 421-3400 FAX: (770) 421-3486

NO.	DATE	REVISION
A	10/19/18	LEASE EXHIBIT

SEAL

SHEET NO. & NAME

**C1
NEW
REPLACEMENT
SHELTER
SITE LAYOUT**



1
C1 **SITE LAYOUT**
SCALE: 1" = 10'-0"



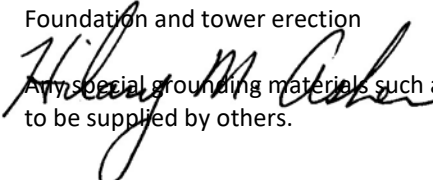
NEW RIDGECREST SITE LAYOUT OPTION 1

70' X 70' Fenced Compound

12490 Ulmerton Rd, Largo, FL 33774

10172018 V2.0

RIDGECREST 330 FOOT SELF SUPPORTING TOWER WITH ZERO FALL ZONE

Item	Description	Price
Motorola Model #	DQ330S31167203	
Tower Model	<p>U-42 x 330' Self Supporting Tower constructed of solid steel members. 42 ft. center to center distance between legs; triangular construction.</p> <ul style="list-style-type: none"> • Engineering drawings to be sealed by registered professional engineer. included • Custom foundation design unit base or drilled caisson if soil report is supplied included • Tower fabricated in an AISC certified facility. included • Hot dipped galvanized sections and components included • Solid rod construction of tower sections included • Angle diagonals for Pirod Truss Leg Sections included • Tower assembly hardware included • Horizontal members for climbing in Pirod Truss Legs included • Anchor steel with full-sized template to simultaneously position anchor bolts for all legs included • (3) 12 line Waveguide Ladder – Face Mounted Included • (8) 6' Bogner Mount: (2) 330', (3) 305', (3) 275', level Included • (4) 6' Universal Side Arm: (2) 330', (2) 240' level included • (3) 3' Pivot Side Arm: (1) 260', (1) 250', (1) 240' level included • (10) 4-1/2" OD Microwave Pipe Mounts, Model R5: (2) 175', (1) 160', (1) 130', (1) 120', (1) 116', (1) 110', (1) 100', (1) 80', (1) 70' level included • (10) Horizontal Tie Back Support Pipes with SAM-U clamp to accommodate customer supplied dish strut arms. (2) 175', (1) 160', (1) 130', (1) 120', (1) 116', (1) 110', (1) 100', (1) 80', (1) 70' level included • FAA Code E-2 Dual LED Infrared Medium Intensity Light Kit with LED Beacons, LED Side Marker Lights, ice shields, controller, alarms, photo cell, SO cord wiring, and all necessary mounting hardware. (2) Beacons at the top included • (2) 10' x 24" wide (2) Post Self Supporting Transmission Line Bridge with Triple level Trapeze Hangers included • (1) Tuf Tug cable type safety climb system less trolley and harness included • TIA-G grounding using 4' lightning rod on 21' lightning rod extender included 	
Freight	<p>Estimated cost, with unloading of truck by Others to nearest access point to the site, via flat bed tractor trailer. Any special handling by others. (6 truck Required) This is an estimate. Actual freight charges will be invoiced.</p> <p>If anchor steel is shipped prior to tower, actual additional freight charges will be invoiced.</p> <p>All material prices are FOB Point of Manufacture.</p>	<p>Included</p> <p>Included</p>
Wind and Ice Load	<p>194 MPH Ultimate Wind speed, Risk Category 4 Per 2017 Florida Building Code, Structure Class III, Exposure C, Topographical Factor Category 1, per TIA-222-G,</p> <p>Design Notes Per Customer:</p> <p>-10' width face required at the top of the tower</p> <p>-Design tower to no more than 70% capacity</p> <p>-Use 150 mph 3-sec gust Basic wind Speed</p> <p>-Fall Zone</p>	
Provided by Others	<ul style="list-style-type: none"> • Foundation and tower erection • Any special grounding materials such as required by R56 or by the specification to be supplied by others. 	

Antenna Load

- 330' – (1) BLR12-H on (1) 6' HD Bogner Mount with (1) 1-5/8" line
- 330' – (1) TTA (assumed 12" x 12" x 8") with (1) 1/2" line
- 330' – (1) BLR12-H on (1) 6' HD Bogner Mount with (1) 7/8" line
- 330' – (1) TTA (assumed 12" x 12" x 8") with (1) 1/2" line
- 330' – (1) COL811-806 on (1) 6' HD Bogner Mount with (1) 1-5/8" line
- 330' – (1) COL811-870 on (1) 6' HD Bogner Mount with (1) 1-5/8" line
- 305' – (3) BMR12-H on (3) 6' HD Bogner Mount with (3) 1-5/8" line
- 275' - (3) BMR12-H on (3) 6' HD Bogner Mount with (3) 1-5/8" line
- 260' – (1) 530-70-HDB (assumed 3" x 15' Whip) on (1) 6' HD Bogner Mount with (1) 1-5/8" line
- 250' – (1) MD960 (assumed 3" x 15' Whip) on (1) 6' HD Bogner Mount with (1) 1-5/8" line
- 240' – (1) DB224 in (1) 6' HD Bogner Mount with (1) 1-5/8" line
- 240' - (1) 530-70-HDB (assumed 3" x 15' Whip) on 6' HD Bogner Mount with (1) 1-5/8" line
- 240' – (1) DB420 on (1) 6' HD Bogner Mount with (1) 1-5/8" line
- 205' Future- (3) BMR12-H on (3) 6' HD Bogner Mount with (3) 1-5/8" line
- 195' Future – (1) VHLP800-11 (90 deg) on (1) Dish Mount with (1) EW90
- 175' – (1) SPD2-52 w/radome (assumed) (261.55 deg) on (1) Dish Mount with (2) LMR900
- 175' Future – (1) BMR12-H on (1) 6' HD Bogner Mount with (1) 1-5/8" line
- 175' - (1) SPD2-52 w/radome (assumed) on (1) Dish Mount with (2) LMR900
- 160' – (1) VHLP800-11 (11.11 deg) on (1) Dish Mount with (1) EW90
- 150' Future Level:
 - (4) CSS MP20-65D
 - (2) CSS MP19-852D
 - (6) TMA (assumed 12" x 12" x 8")
 - (12) 1-5/8" line
 - (3) 10' V-Frame Mount (assumed)
- 130' - (1) VHLP800-11 (316.1 deg) on (1) Dish Mount with (1) EW90
- 120' – (1) VHLP800X-11B (64.87 deg) on (1) Dish Mount with (2) EW90
- 116' – (1) PAR6-65A w/radome (159.3 deg) on (1) Dish Mount with (2) EW63
- 110' – (1) VHLP800X-11B (64.87 deg) on (1) Dish Mount with (2) EW90
- 100' – (1) UHX6-59WR (153.87 deg) on (1) Dish Mount with (2) EW52
- 90' Future – (3) LNX-6515DS-VTM on (3) Leg Mount with (6) 1-5/8" line
- 80' – (1) SPD3-52 w/radome (assumed) (163.67 deg) on (1) Dish Mount with (2) LMR900
- 70' – (1) COL41-70 on (1) 6' HD Bogner Mount with (1) 7/8" line

Twist & Sway Twist and Sway for all diameter assumed 6 GHz (unless otherwise noted above) for 10 db degradation at 60 MPH 3-sec gust Service Wind Speed at dish levels indicated per TIA-222-G.

It is the customer's responsibility to provide dish azimuths for tower analysis. In the absence of customer provided dish azimuths, Valmont will assume azimuths for quoting purposes. Please be aware that without specific azimuth information at the time of quotation, Valmont will not be held liable for towers that do not meet twist and sway criteria when actual azimuths are applied.

Delivery Estimated lead time is **18-20 weeks**. Please note that lead times are estimated and can fluctuate due to production capacity. Please contact customer service to verify current lead times or if a better delivery date is possible when placing an order. A complete soil report and plot plan (for guyed towers) must be received by Valmont prior to manufacturing.

Anchor Steel Delivery: Advance notice is required: estimated 10 business days for standard bolts and 21 business days for guyed tower and non-standard bolts. Please note that lead times are estimated and can fluctuate due to production capacity.

DESIGNED APPURTENANCE LOADING

TYPE	ELEVATION	TYPE	ELEVATION
21' LRE with 7'-6" lightning rod (arm=11.5')	330	BMR12	205
Beacon	330	BMR12	205
Beacon	330	6' Bogner Mount Heavy Duty	205
BLR12-H-B1	330	6' Bogner Mount Heavy Duty	205
6' Bogner Mount Heavy Duty	330	6' Bogner Mount Heavy Duty	205
TMA (12"x12"x8")	330	VHLP800-11	195
BLR12-H-B1	330	6' Bogner Mount Heavy Duty	175
6' Bogner Mount Heavy Duty	330	BMR12	175
TMA (12"x12"x8")	330	SPD2-5.2 w/ Radome	175
COL811-806	330	SPD2-5.2 w/ Radome	175
6' Bogner Mount Heavy Duty	330	VHLP800-11	160
COL811-870	330	(2) TMA (12"x12"x8")	150
6' Bogner Mount Heavy Duty	330	(2) TMA (12"x12"x8")	150
BMR12	305	(2) 2" x 96" Sch. 40	150
BMR12	305	(2) 2" x 96" Sch. 40	150
BMR12	305	(2) 2" x 96" Sch. 40	150
6' Bogner Mount Heavy Duty	305	10' V Frame	150
6' Bogner Mount Heavy Duty	305	10' V Frame	150
6' Bogner Mount Heavy Duty	305	10' V Frame	150
BMR12	275	(2) MP20-65	150
BMR12	275	(2) MP20-65	150
BMR12	275	(2) MP19-85	150
6' Bogner Mount Heavy Duty	275	(2) TMA (12"x12"x8")	150
6' Bogner Mount Heavy Duty	275	VHLP800-11	130
6' Bogner Mount Heavy Duty	275	VHLP800-11	120
WHIP (3" X 15')	260	3" x 27" Sch. 80	116
6' Bogner Mount Heavy Duty	260	PAR6-65 w/ Radome	116
WHIP (3" X 15')	250	VHLP800-11	110
6' Bogner Mount Heavy Duty	250	3" x 28" Sch. 80	100
DB224-A	240	UHX6-69W	100
6' Bogner Mount Heavy Duty	240	LNx-6515DS-VTM	90
WHIP (3" X 15')	240	LNx-6515DS-VTM	90
6' Bogner Mount Heavy Duty	240	LNx-6515DS-VTM	90
DB420-A	240	SPD3-52 w/ Radome	80
6' Bogner Mount Heavy Duty	240	COL41-70	70
BMR12	205	6' Bogner Mount Heavy Duty	70

SYMBOL LIST

MARK	SIZE	MARK	SIZE
A	#12ZG-58 - 1.25" - 1.00" conn. (Pirod 196994)	K	#18/12- (58KSI) Transition - 3.50" - 0.875" Brace - 1.00" DB (Pirod 259976)
B	#12ZG-58 - 1.25" - 1.00" conn.-T-S(Pirod 160999)	L	#18/Double Rod Trans (58KSI) - 3.50" - 0.875" Brace - 1.00" DB (Pirod 243892)
C	#12ZG-58 - 1.25" - 1.00" conn. (Pirod 194434)	M	#18 Double Rod (58KSI) - 2.75" - 0.875" Brace - 1.00" DB (Pirod 243915)
D	#12ZG-58 - 1.50" - 1.00" conn. (Pirod 194651)	N	#18 Double Rod (58KSI) - 3.00" - 0.875" Brace - 1.00" DB (Pirod 244015)
E	#12ZG-58 - 1.75" - 1.00" conn.-TR1-(Pirod 195213)	O	#18 Double Rod (58KSI) - 3.25" - 0.875" Brace - 1.00" DB (Pirod 244016)
F	#12ZG-58 -2.00"-0.875 -DB-0.500"-HP-TR3-(Pirod 196915)	P	#18 Double Rod (58KSI) - 3.50" - 0.875" Brace - 1.00" DB (Pirod 244114)
G	#12ZG-58 -2.50"-0.875 -DB-0.625"-HP-TR4-(Pirod 196949)	Q	#18 Double Rod BASE (58KSI) - 3.50" - 0.875" Brace - 1.25" DB (Pirod 244715)
H	#12ZG-58 -1.75" - 1.00" conn.-TR1-(Pirod 195213)	R	L2 1/2x2 1/2x3/16
I	#12ZG-58 -3.00"-0.875 -DB-0.625"-HP- (Pirod 196957)	S	L3x3x3/16
J	#12/18-58 -3.50"-0.875 -DB-0.625"-HP-TR6-(Pirod 217974)		

MATERIAL STRENGTH

GRADE	Fy	Fu	GRADE	Fy	Fu
A572-58	58 ksi	75 ksi	A572-50	50 ksi	65 ksi
A36	36 ksi	58 ksi			

TOWER DESIGN NOTES

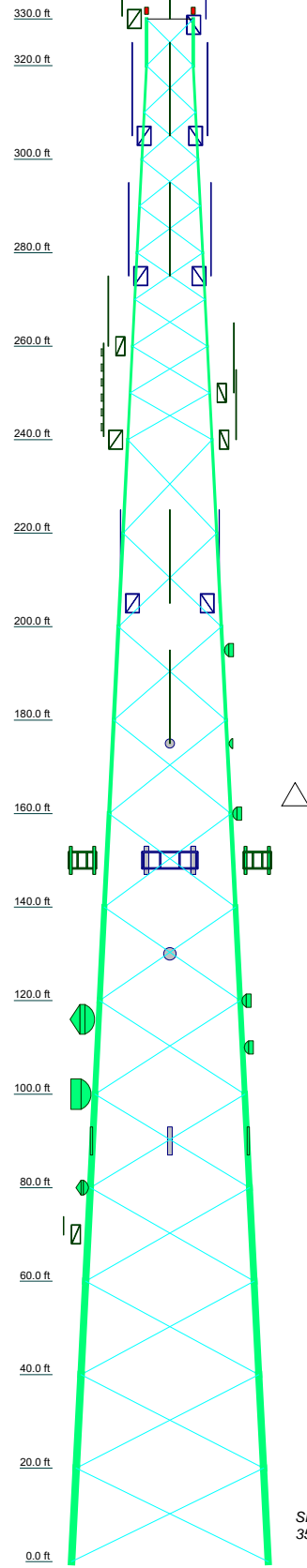
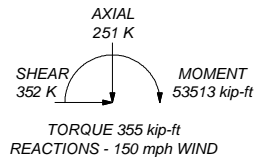
1. Tower is located in Pinellas County, Florida.
2. Tower designed for Exposure C to the TIA-222-G Standard.
3. Tower designed for a 150 mph basic wind in accordance with the TIA-222-G Standard.
4. Deflections are based upon a 60 mph wind.
5. Tower Structure Class III.
6. Topographic Category 1 with Crest Height of 0.00 ft
7. Tower designed with a theoretical zero fall zone at ground level.
8. TOWER RATING: 68.7%

ALL REACTIONS ARE FACTORED

MAX. CORNER REACTIONS AT BASE:

DOWN: 1555 K
SHEAR: 212 K

UPLIFT: -1307 K
SHEAR: 185 K



Section	T1	T2	T3	T4	T5	T6	T7	T8	T9	T10	T11	T12	T13	T14	T15	T16	T17
Legs	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
Leg Grade	A572-58																
Diagonals	L3x3x5/16																
Diagonal Grade	A36																
Top Girts	N.A.																
Face Width (ft)	10																
# Panels @ (ft)	9 @ 10																
Weight (K)	1.3																

valmont
STRUCTURES

1545 Pidco Dr.
Plymouth, IN

Valmont Industries, Inc. - Specialty Structures Group Phone: (574) 936-4221 FAX: (574) 936-6458

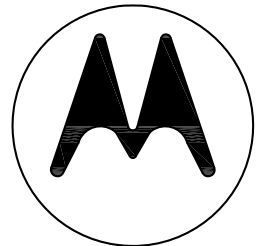
Job: **Quotation 311672-03**

Project: **U-42 x 330' Ridgecrest, FL**

Client: **Motorola Solutions** Drawn by: **JAK** App'd:

Code: **TIA-222-G** Date: **11/05/18** Scale: **NTS**

Path: **Dwg No. E-1**



MOTOROLA

8000 W. SUNRISE BLVD
PLANTATION, FL 33322

PHONE: (954) 723-5000

PINELLAS COUNTY -
TARPON SPRINGS
4100 DOUGLAS STREET
PALM HARBOR, FL 34683

WOOD PROJECT NO: --
DRAWN: J. GILMER CHECKED: J. GILMER
APPROVED: F.D. SHIVER DATE: 10/08/18



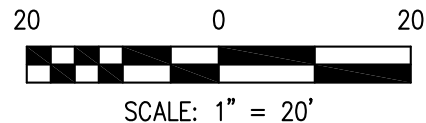
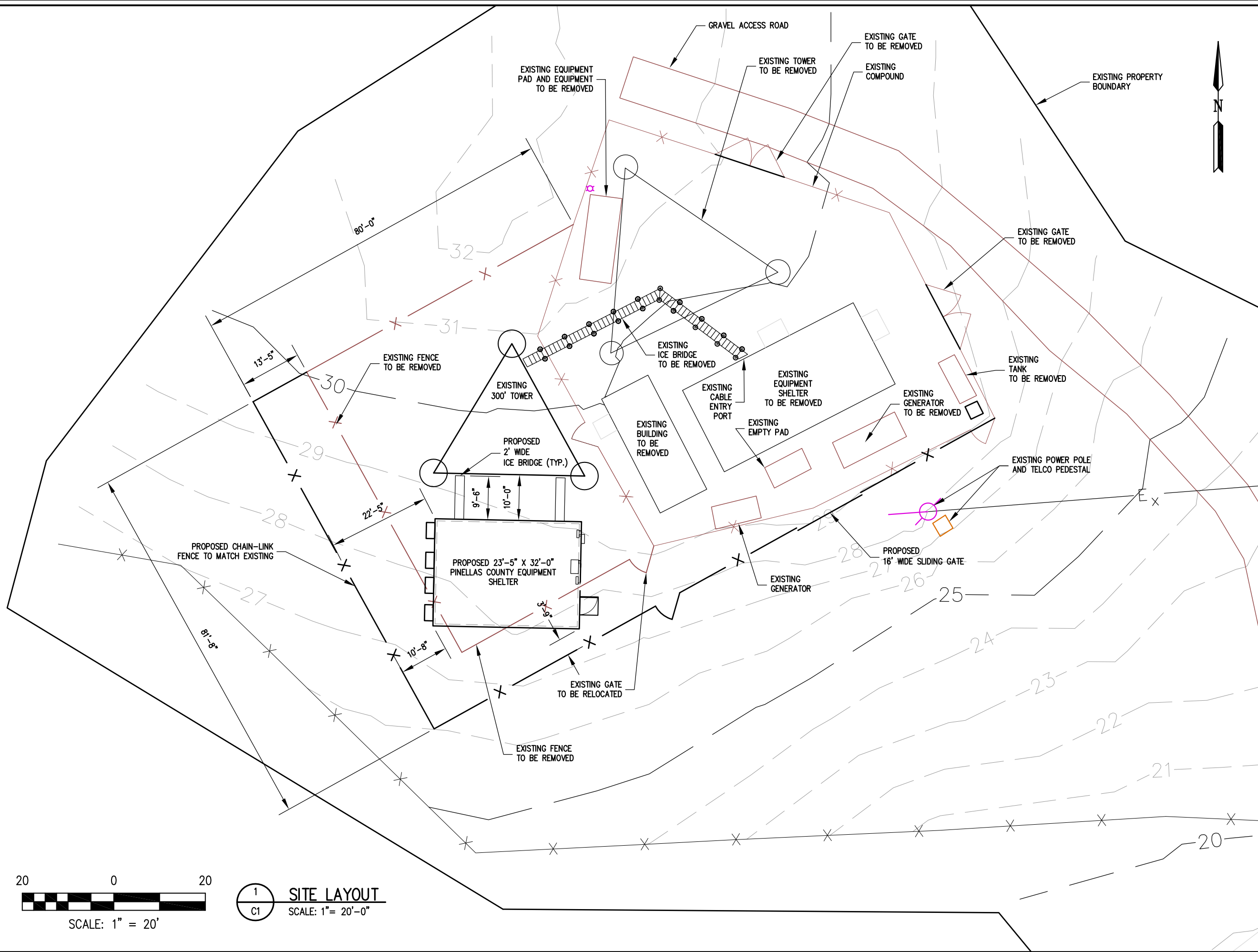
WOOD ENVIRONMENT AND INFRASTRUCTURE, INC.
1075 BIG SHANTY DRIVE, N.W., SUITE 100
KENNESAW, GA 30144
PHONE: (770) 421-3400 FAX: (770) 421-3486

NO.	DATE	REVISION
A	10/09/18	LEASE EXHIBIT

SEAL

SHEET NO. & NAME

C1
NEW
REPLACEMENT
SHELTER
SITE LAYOUT



1
C1 **SITE LAYOUT**
SCALE: 1" = 20'-0"



MOTOROLA

8000 W. SUNRISE BLVD
PLANTATION, FL 33322

PHONE: (954) 723-5000

PINELLAS COUNTY -
ELDRIDGE WILDE
3563 OLD KEYSTONE ROAD
TARPON SPRINGS, FL 34688

WOOD PROJECT NO: --	
DRAWN: J. GILMER	CHECKED: F.D. SHIVER
APPROVED: F.D. SHIVER	DATE: 10/08/18

wood.

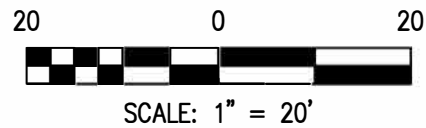
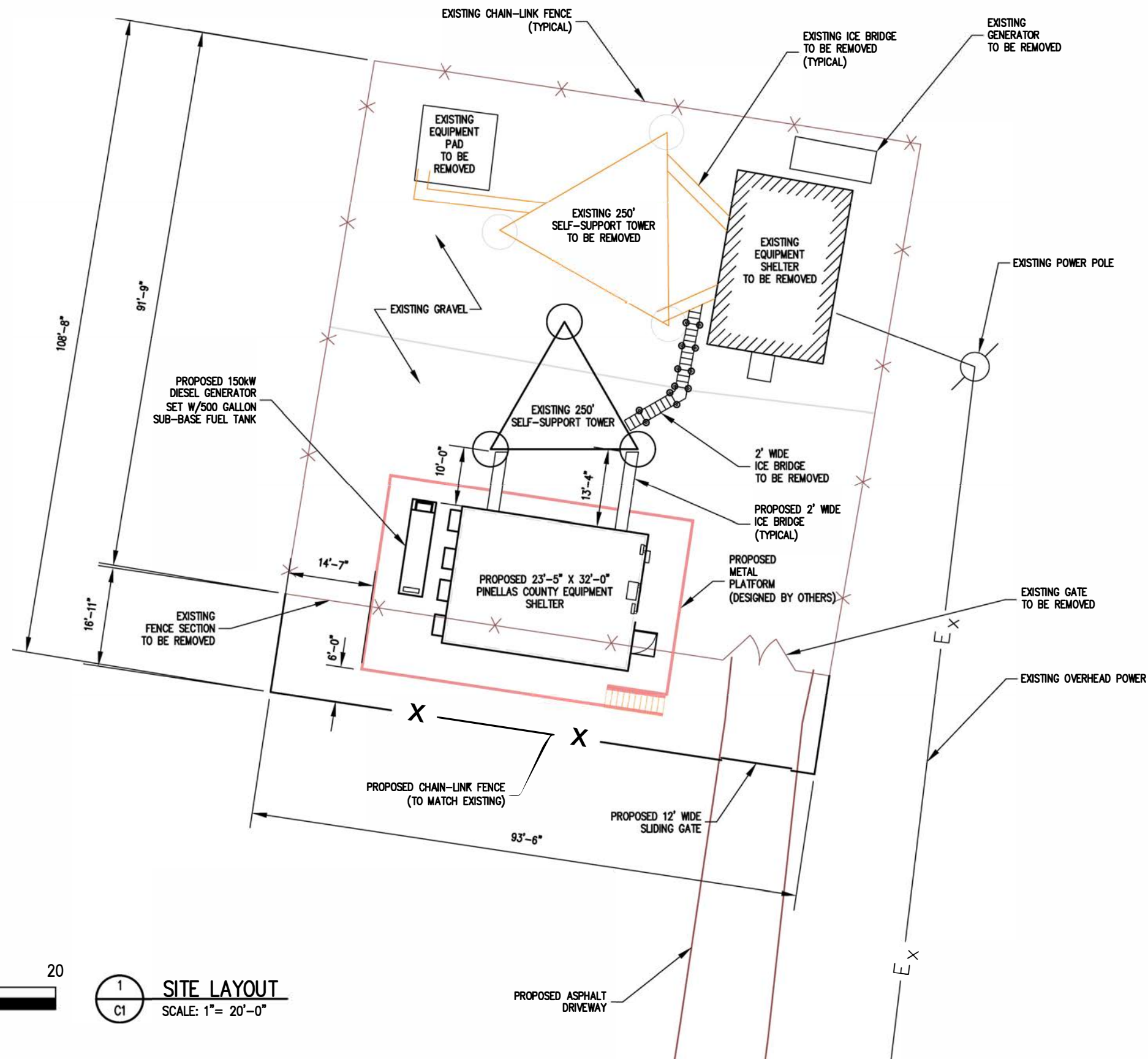
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KENNESAW, GA 30144
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NO.	DATE	REVISION
A	10/09/18	LEASE EXHIBIT

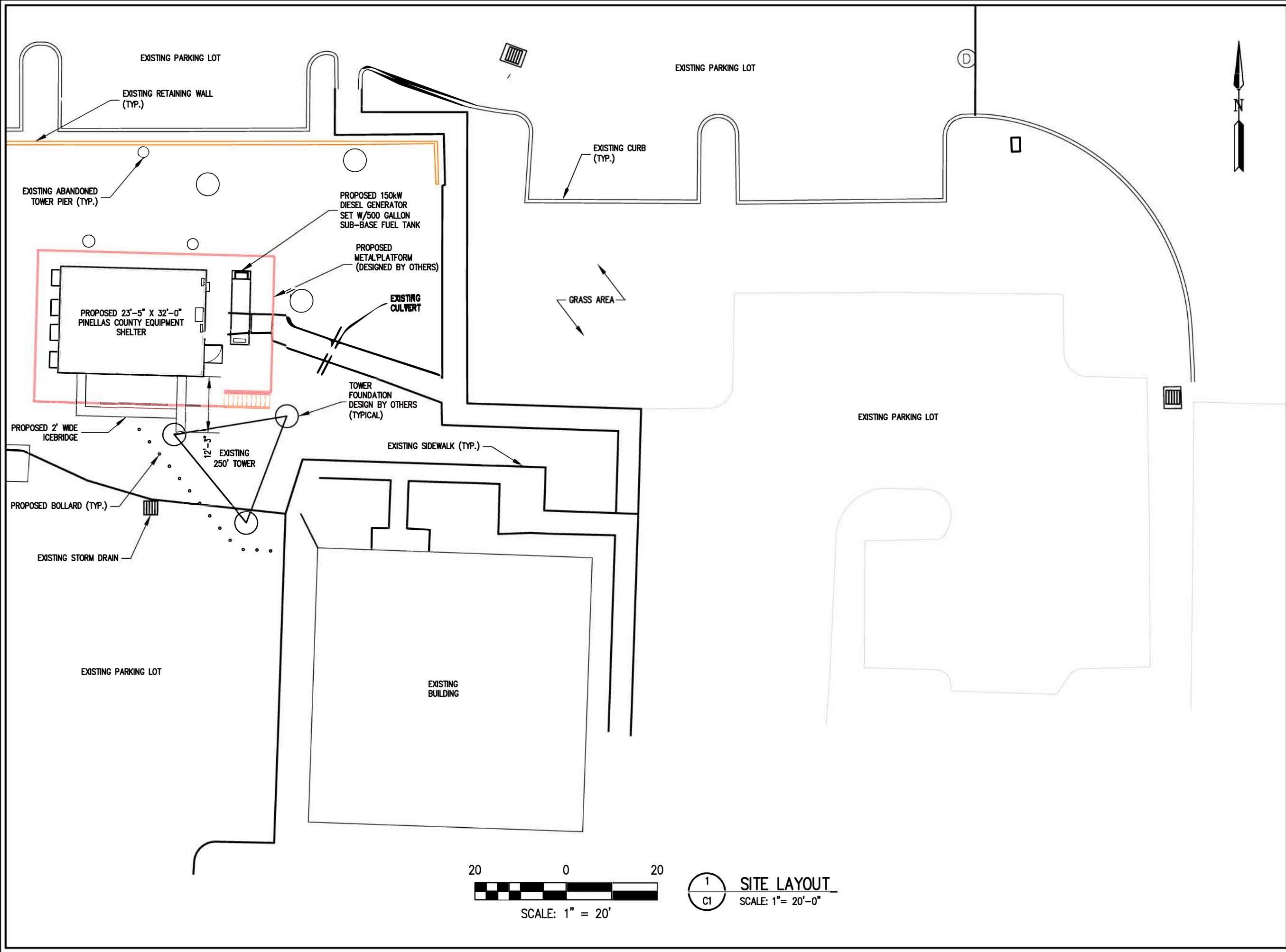
SEAL

SHEET NO. & NAME

C1
NEW
REPLACEMENT
SHELTER
SITE LAYOUT



1
C1 **SITE LAYOUT**
SCALE: 1" = 20'-0"



MOTOROLA

8000 W. SUNRISE BLVD
PLANTATION, FL 33322

PHONE: (954) 723-5000

PINELLAS COUNTY -
HIGHWAY MAINTENANCE
22211 US 19
CLEARWATER, FL 33765

WOOD PROJECT NO: --
DRAWN: J. GILMER | CHECKED: F.D. SHIVER
APPROVED: F.D. SHIVER | DATE: 10/19/18



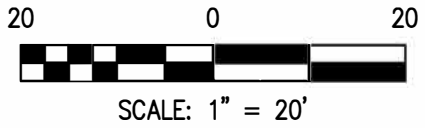
WOOD ENVIRONMENT AND INFRASTRUCTURE, INC.
1075 BIG SHANTY DRIVE, N.W., SUITE 100
KENNESAW, GA 30144
PHONE: (770) 421-3400 FAX: (770) 421-3486

NO.	DATE	REVISION
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SCALE: 1" = 20'-0"



MOTOROLA

8000 W. SUNRISE BLVD
PLANTATION, FL 33322

PHONE: (954) 723-5000

**PINELLAS COUNTY -
TOYTOWN**
10540 16TH STREET NORTH
ST. PETERSBURG, FL 33716

WOOD PROJECT NO: --
DRAWN: J. GILMER CHECKED: J. GILMER
APPROVED: F.D. SHIVER DATE: 10/19/18

wood.

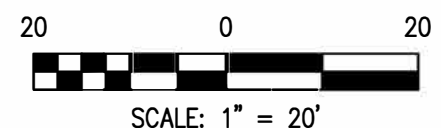
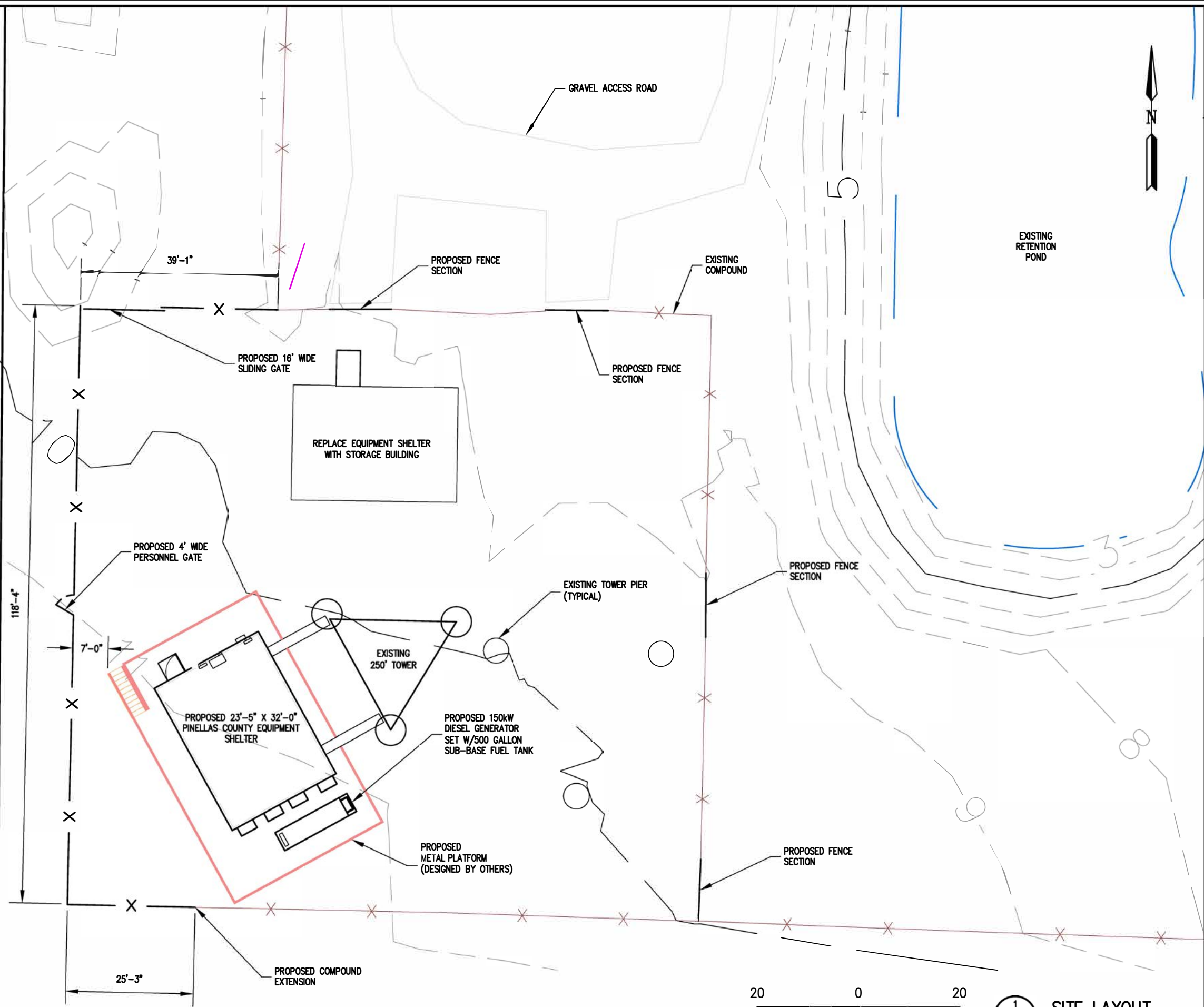
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1075 BIG SHANTY DRIVE, N.W., SUITE 100
KENNESAW, GA 30144
PHONE: (770) 421-3400 FAX: (770) 421-3486

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SCALE: 1" = 20'-0"



MOTOROLA

8000 W. SUNRISE BLVD
PLANTATION, FL 33322

PHONE: (954) 723-5000

PINELLAS COUNTY -
FORT DeSOTO
ANDERSON BLVD
ST. PETERSBURG, FL 33715

WOOD PROJECT NO: --
DRAWN: J. GILMER CHECKED: F.D. SHIVER
APPROVED: F.D. SHIVER DATE: 10/08/18

wood.

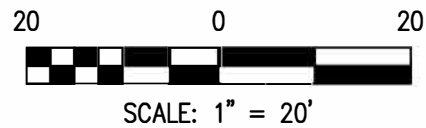
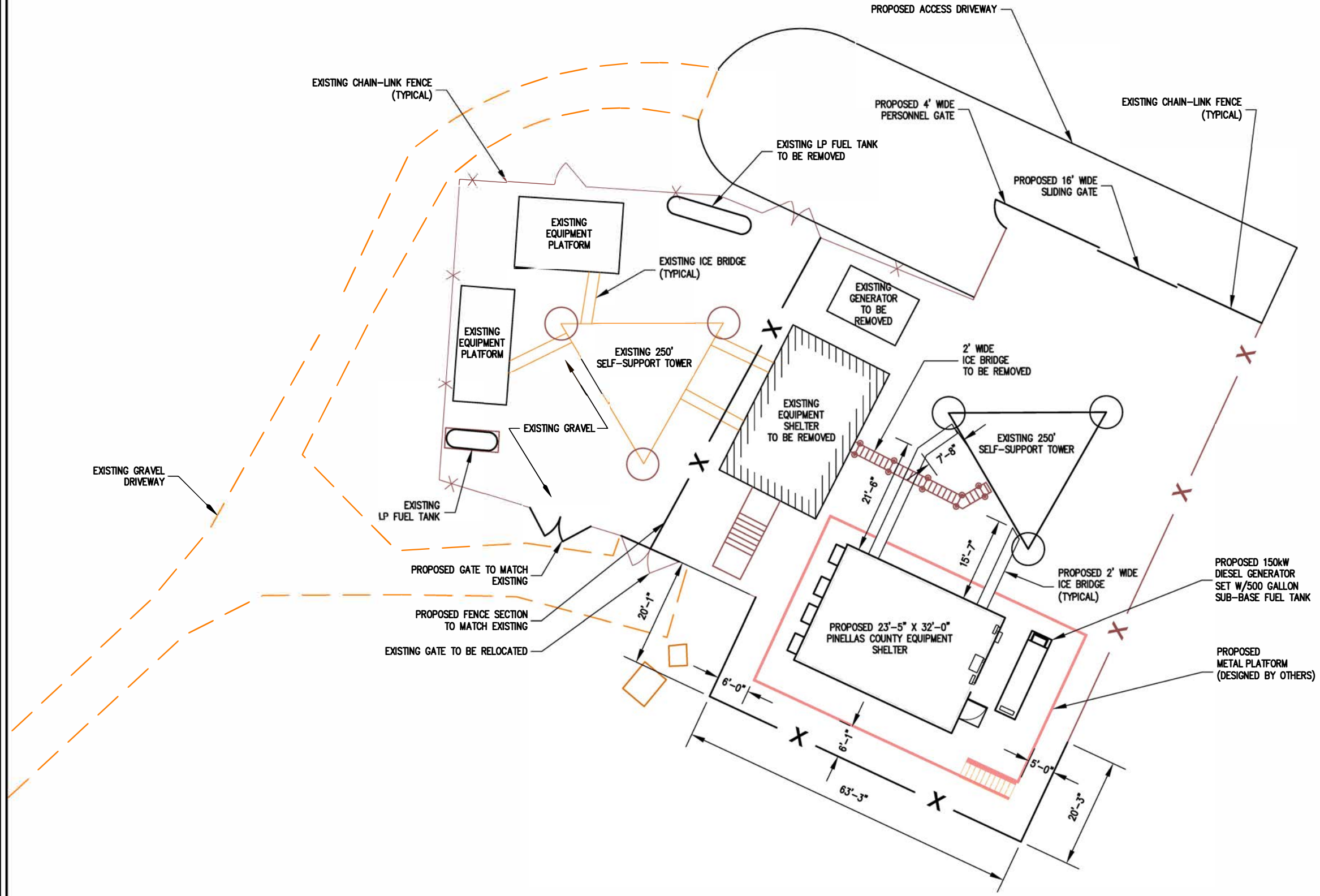
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KENNESAW, GA 30144
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NEW
REPLACEMENT
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SITE LAYOUT



1
C1 **SITE LAYOUT**
SCALE: 1" = 20'-0"



SiteSecure
POWERED BY 

For:
Motorola Solutions, Inc.
1303 East Algonquin Road
Schaumburg, IL 60196

**Pinellas County Public Safety Tower Sites Security Installation
12/12/2018**



Proposal: 17969-1-0

Presented By: Ben Murdock

2610 S. Faulkenburg Rd
Riverview, FL 33578

The data contained in all pages of this proposal has been submitted in confidence and contains trade secrets and/or privileged or confidential commercial or financial information. Such data shall be used or disclosed only for evaluation purposes, provided that if a contract is awarded to this proposer as a result of or in connection with the submission of this proposal, the Customer shall have the right to use or disclose the data herein to the extent provided in the contract. This restriction does not limit the Customer's right to use or disclose data obtained without restriction from any source, including the proposer.

Project Scope

Our scope includes the below items with a checkmark next to them:

- | | |
|--|--|
| <input checked="" type="checkbox"/> Shop Drawings & Submittals | <input checked="" type="checkbox"/> Uninterruptible Power Supplies |
| <input type="checkbox"/> Permits & Inspections | <input checked="" type="checkbox"/> Structured Cabling (CAT6) & Terminations |
| <input checked="" type="checkbox"/> As-Built Drawings & O&M Manuals | <input type="checkbox"/> Fiber Optic Cabling & Terminations |
| <input checked="" type="checkbox"/> End-User Training | <input type="checkbox"/> Fiber Patch Panels/Media Converters |
| <input type="checkbox"/> Man Lifts or Scaffolds | <input checked="" type="checkbox"/> CCTV System Software/Licenses |
| <input type="checkbox"/> Demolition of Existing Hardware/Wiring | <input checked="" type="checkbox"/> CCTV System Software Maintenance Agreement |
| <input type="checkbox"/> 120VAC Power Wiring & Conduit | <input checked="" type="checkbox"/> CCTV System Servers/Archivers |
| <input type="checkbox"/> Underground Conduits & Junction Boxes | <input checked="" type="checkbox"/> CCTV System Workstations |
| <input checked="" type="checkbox"/> Above Ground Conduits & Junction Boxes | <input checked="" type="checkbox"/> Access Control System Software/Licenses |
| <input checked="" type="checkbox"/> Terminal Cabinets/Equipment Enclosures | <input checked="" type="checkbox"/> Access Control System Software Maintenance Agreement |
| <input checked="" type="checkbox"/> Installation of Field Devices | <input checked="" type="checkbox"/> Door Locking Hardware |
| <input checked="" type="checkbox"/> Installation of System Cable/Wiring | <input checked="" type="checkbox"/> Door Lock Power Supplies |
| <input checked="" type="checkbox"/> Surge Suppression | <input checked="" type="checkbox"/> Door/Frame Preparation |
| <input type="checkbox"/> Network Equipment Racks | <input checked="" type="checkbox"/> Sales/Use Tax |
| <input checked="" type="checkbox"/> Network Switches | <input type="checkbox"/> Performance/Payment Bonds |

The scope of this quote is generally described as the installation of a Genetec Security Center System to be include Access Control, CCTV, and SIP Intercoms at each of the Pinellas County Public Safety Tower Sites. These sites include the following;

- 1) Ridgecrest
- 2) Tarpon Springs
- 3) Eldridge Wilde
- 4) Highway Dept.
- 5) Toytown
- 6) St. Pete
- 7) Majestic Towers
- 8) Fort Desoto
- 9) Courthouse
- 10) Pinellas Public Safety Center

Each site will have a local CCTV recording archiver to help keep bandwidth communication throughout the system minimal. Each archiver will also be able to support additional cameras for future expansion.

Refer to "Attachment A" for more detailed information regarding the equipment which will be installed at each site.

Clarifications:

- 1) All labor shall be conducted during normal business hours Monday through Friday 8:00 AM to 5:00 PM.
- 2) Owner is responsible for communications between each site and shall work with our SiteSecure Field Engineer to ensure the network is communication properly.



3) On sites that have multiple buildings the Owner will be responsible for having network communications in place between each building.

4) SiteSecure is not responsible for the conduit to be installed to each man gate, sliding gate operator, or Card Reader Pedestal location. SiteSecure will install all cabling required for these locations for the Access Control System once the conduit has been installed by others. SiteSecure can provide conduit specs to Contractor installing conduit.

5) Owner shall assist with providing SiteSecure sufficient information for all Card Holders to be added into the Access Control System prior to completion.

6) Permitting is not included within our quote. If this is required total system price may increase.

Bill Of Material

Additions: Head End

QTY Description

- 2 MARTA CommScope Cat6 Patch Cord 7' White
- 2 24" LED LCD Monitor
- 1 Streamvault 2000E Appliance - 1U 4 BAY RACKMOUNT SERVER DUAL 200GB,SSD, Xeon E3-1270V6, 16GB RAM, (2) 200GB SSD, Windows 2016, Dual PS, Genetec Security Center pre-installed. License sold separately.
- 1 Streamvault Workstation SVW-300E - Tower, Core I7-7700K, (1) 2.5" SFF Bay + (3) 3.5" LFF Bays, 16GB RAM, 1TB HDD, Windows 10 Pro, 256GBSSD, (2) 1GbE, NVIDIA P1000, Single PS, Genetec Security Center pre-installed. License sold separately.
- 1 RF Ideas pcProx HID USB reader (supports up to 64-bit card numbers) (includes USB enrollment reader connection license)
- 1 Fargo Printer DTC4250E FD
- 2 DTC4500 YMCKO: Full-color ribbon with resin black and clear overlay panel - 500 images
- 1 Full-Size Wireless Keyboard and Optical Mouse Combo
- 1 MISC Installation Consumables, mounting hardware, HDMI Cables,etc.

Courthouse: Access Control

QTY Description

- 2 MARTA CommScope Cat6 Patch Cord 7' White
- 1 2N IP Force - 1 button + HD camera + 10W speaker
- 0 18-6C STR BC FLAMARREST JKT NAT CMP 300V 75C
- 0 18-4C STR BC FLAMARREST JKT NAT CMP 300V 75C
- 0 18-2C STR BC FLAMARREST JKT NAT CMP 300V 75C
- 1 Request to Exit PIR
- 1 Aluminum Housing Armored Cable Contact, Closed Loop, Wide Gap, 3" Gap Size
- 0 23-4P UTP-CMP SOL BC CAT6 FEP/FRPVC BLUE JACKET BOXES GENSPEED 6
- 1 RDR, RP40, MULTICLASS, SE E, LF STD, HF STD/SIO/SEOS, WIEG, PIG, BLK, STD-1, LED RED, FLSH GRN, BZR ON, CSN 32-BIT MSB, IPM OFF
- 1 E1A EDGE EVO EH400-K Standard Controller. Single door, IP-based controller for Host-based systems. Single physical package. Door inputs/outputs are 4 external inputs, 2 outputs; on-board optical tamper (standard mount). One Wiegand/Clock-and-Data reader interface. Hi-O compliant. For use indoor or outside in weatherproof enclosure. US single-gang, US double-gang or EU/APAC 60mm mount. Software reader connection (qty 1) is included
- 1 Electric Strike System, Includes 1006 Electric Strike Body, Inte
- 1 MISC Installation Consumables, mounting hardware, misc. conduit, concrete for pedestal, etc.

Courthouse: CCTV

QTY Description

- 8 MARTA CommScope Cat6 Patch Cord 7' White
- 2 Day/night fixed dome with support for WDR - Forensic Capture and Lightfinder. Discreet, dust and IK08 vandal-resistant indoor casing. Varifocal 3-10.5 mm P-Iris lens, remote focus and zoom. Multiple, individually configurable H.264 and Motion JPEG streams. HDTV 1080p at 30 fps with WDR, and up to 60 fps with WDR disabled. Axis' Zipstream technology for reduced bandwidth and storage needs. Video motion detection and active tampering alarm. Memory card slot for optional local video storage. Power over Ethernet. Midspan not included. Includes mounting bracket for wall/ceiling or junction boxes.
- 3 Chromated and powder coated aluminum wall mount with 1.5 NPS thread for fixed dome pendant kits. Cable routing from behind or through 3/4 conduit hole on the side. Includes mounting plate, pipe seal and conduit hole cover. Color: White
- 2 AXIS P3717-PLE Network Camera is a compact 8-megapixel camera with four varifocal lenses enabling overview and detailed surveillance. With one IP address and one network cable, the four-camera-in-one unit provides a flexible, cost-effective solution for multidirectional surveillance. 360° IR illumination, Forensic WDR and Lightfinder technology provides excellent video quality in any light conditions. Each camera head can be individually positioned (pan, tilt, roll and twist) along a circular track. Remote zoom and focus makes it easy to install and the clear cover, with no sharp edges, ensure
- 2 AXIS T94N01D Pendant Kit comprises a weathershield and a mounting adapter for AXIS P3717-PLE Network Camera. The mounting adapter is compatible with 1.5-inch NPS thread. The kit enables AXIS P3717-PLE to be mounted on walls, poles, parapets and outer corners using AXIS T91 mounting accessories.

Courthouse: CCTV

QTY Description

- 2 Corner Bracket. Requires AXIS T91A61 Wall Bracket. AXIS P55-series, AXIS Q60-series PTZ Dome Network Cameras, AXIS P33 Series Pendant kit, AXIS P33-VE Series Pendant kit, AXIS 225 Pendant kit and AXIS 216/P3301 Pendant kit. White.
- 1 Outdoor pendant kit for AXIS P38-PVE and Q36-VE series. Weathershield made from impact-, UV-, and heat-resistant polymer. Compatible with wide range of Axis mounts with 1.5 NPS threaded interface.
- 1 P3807-PVE, Fixed Dome IP Camera, 180 Panoramic Coverage, up to 30 fps in 8.3 MP Resolution, Lightfinder and Forensic WDR, Zipstream, White
- 1 4-channel, wall mount surge protector
- 1 23-4P UTP-CMP SOL BC CAT6 FEP/FRPVC BLUE JACKET BOXES GENSPEED 6
- 1 MISC Installation Consumables, Mounting Hardware, Etc.
- 7 64GB SDXC Memory Card, Class 10 UHS-I 45MBps

Courthouse: Site Head End

QTY Description

- 2 MARTA CommScope Cat6 Patch Cord 7' White
- 1 SMA for 1 Synergis Enterprise Reader - 1 year
- 5 1 camera connection
- 5 SMA for 1 Omnicast Enterprise Camera - 1 year
- 1 Streamvault 1000 series. 2U 8 BAY, E5-2620V4, 16GB RAM, 275GB SSD, 24TB, (2)x1GbE Ports, WIN 10 PRO. Single PS. Genetec Security Center pre-installed. License sold separately.
- 1 1 Standard Connection to an Intercom Station (requires GSC-Sipelia-Base)
- 1 Genetec™ Advantage for 1 Sipelia Standard Intercom connection - 1 Years
- 1 MISC Installation Consumables, mounting hardware, etc.
- 1 Punchdown Patch Panel, Category 6, Flat, 24 Port, 1RU
- 1 Smart Managed PoE+ Switch With (24) 10/100/1000BASE-T Ports And (2) 100/1000 SFP Slots
- 2 Cisco Compatible SFP 1000BASE-SX 850nm multimode (LC) [220 m/722 ft.] [550m/1804 ft.]

Eldridge Wilde: Access Control

QTY Description

- 0 CAT6 Unshielded OSP Broadband - Rated for Underground Use In Conduit 1MFT
- 5 MARTA CommScope Cat6 Patch Cord 7' White
- 1 2N IP Force - 1 button + HD camera + 10W speaker
- 0 18-6C STR BC FLAMARREST JKT NAT CMP 300V 75C
- 0 18-4C STR BC FLAMARREST JKT NAT CMP 300V 75C
- 0 18-2C STR BC FLAMARREST JKT NAT CMP 300V 75C
- 1 Request to Exit PIR
- 2 Aluminum Housing Armored Cable Contact, Closed Loop, Wide Gap, 3" Gap Size
- 0 23-4P UTP-CMP SOL BC CAT6 FEP/FRPVC BLUE JACKET BOXES GENSPEED 6
- 1 VertX EVO V2000 Reader Interface/Network Controller (with plastic enclosure back plate & cover; no power supply, metal enclosure not included). . Software reader connections (qty 2) are included
- 2 RDR, RP40, MULTICLASS, SE E, LF STD, HF STD/SIO/SEOS, WIEG, PIG, BLK, STD-1, LED RED, FLSH GRN, BZR ON, CSN 32-BIT MSB, IPM OFF
- 1 E1A EDGE EVO EH400-K Standard Controller. Single door, IP-based controller for Host-based systems. Single physical package. Door inputs/outputs are 4 external inputs, 2 outputs; on-board optical tamper (standard mount). One Wiegand/Clock-and-Data reader interface. Hi-O compliant. For use indoor or outside in weatherproof enclosure. US single-gang, US double-gang or EU/APAC 60mm mount. Software reader connection (qty 1) is included
- 1 Electric Strike System, Includes 1006 Electric Strike Body, Inte
- 1 Panel Accessory, Pedestal, Steel Gooseneck, 42 Inch High
- 1 Housing, 14 X 14 X 4, BlackLexan Polycarbonate, Hinged, Gr
- 1 POWER SUPPLY BOARD 75W, 6A/12V OR 3A/24V
- 1 MISC Installation Consumables, mounting hardware, misc. conduit, concrete for pedestal, etc.
- 1 18/4C VNTC N/S E2 600V TC-ER
- 1 18/7C VNTC N/S E2 600V TC-ER

Eldridge Wilde: CCTV

QTY Description

Eldridge Wilde: CCTV

QTY Description

- 8 MARTA CommScope Cat6 Patch Cord 7' White
- 1 Day/night fixed dome with support for WDR – Forensic Capture and Lightfinder. Discreet, dust and IK08 vandal-resistant indoor casing. Varifocal 3-10.5 mm P-Iris lens, remote focus and zoom. Multiple, individually configurable H.264 and Motion JPEG streams. HDTV 1080p at 30 fps with WDR, and up to 60 fps with WDR disabled. Axis' Zipstream technology for reduced bandwidth and storage needs. Video motion detection and active tampering alarm. Memory card slot for optional local video storage. Power over Ethernet. Midspan not included. Includes mounting bracket for wall/ceiling or junction boxes.
- 3 Chromated and powder coated aluminum wall mount with 1.5 NPS thread for fixed dome pendant kits. Cable routing from behind or through 3/4 conduit hole on the side. Includes mounting plate, pipe seal and conduit hole cover. Color: White
- 2 AXIS P3717-PLE Network Camera is a compact 8-megapixel camera with four varifocal lenses enabling overview and detailed surveillance. With one IP address and one network cable, the four-camera-in-one unit provides a flexible, cost-effective solution for multidirectional surveillance. 360° IR illumination, Forensic WDR and Lightfinder technology provides excellent video quality in any light conditions. Each camera head can be individually positioned (pan, tilt, roll and twist) along a circular track. Remote zoom and focus makes it easy to install and the clear cover, with no sharp edges, ensure
- 2 AXIS T94N01D Pendant Kit comprises a weathershield and a mounting adapter for AXIS P3717-PLE Network Camera. The mounting adapter is compatible with 1.5-inch NPS thread. The kit enables AXIS P3717-PLE to be mounted on walls, poles, parapets and outer corners using AXIS T91 mounting accessories.
- 2 Corner Bracket. Requires AXIS T91A61 Wall Bracket. AXIS P55-series, AXIS Q60-series PTZ Dome Network Cameras, AXIS P33 Series Pendant kit, AXIS P33-VE Series Pendant kit, AXIS 225 Pendant kit and AXIS 216/P3301 Pendant kit. White.
- 1 Outdoor pendant kit for AXIS P38-PVE and Q36-VE series. Weathershield made from impact-, UV-, and heat-resistant polymer. Compatible with wide range of Axis mounts with 1.5 NPS threaded interface.
- 1 P3807-PVE, Fixed Dome IP Camera, 180 Panoramic Coverage, up to 30 fps in 8.3 MP Resolution, Lightfinder and Forensic WDR, Zipstream, White
- 1 4-channel, wall mount surge protector
- 1 23-4P UTP-CMP SOL BC CAT6 FEP/FRPVC BLUE JACKET BOXES GENSPEED 6
- 1 MISC Installation Consumables, Mounting Hardware, Etc.
- 6 64GB SDXC Memory Card, Class 10 UHS-I 45MBps

Eldridge Wilde: Site Head End

QTY Description

- 2 MARTA CommScope Cat6 Patch Cord 7' White
- 3 SMA for 1 Synergis Enterprise Reader - 1 year
- 4 1 camera connection
- 4 SMA for 1 Omnicast Enterprise Camera - 1 year
- 1 Streamvault 1000 series. 2U 8 BAY, E5-2620V4, 16GB RAM, 275GB SSD, 24TB, (2)x1GbE Ports, WIN 10 PRO. Single PS. Genetec Security Center pre-installed. License sold separately.
- 1 1 Standard Connection to an Intercom Station (requires GSC-Sipelia-Base)
- 1 Genetec™ Advantage for 1 Sipelia Standard Intercom connection - 1 Years
- 1 MISC Installation Consumables, mounting hardware, etc.
- 1 Punchdown Patch Panel, Category 6, Flat, 24 Port, 1RU
- 1 Smart Managed PoE+ Switch With (24) 10/100/1000BASE-T Ports And (2) 100/1000 SFP Slots
- 2 Cisco Compatible SFP 1000BASE-SX 850nm multimode (LC) [220 m/722 ft.] [550m/1804 ft.]

Fort DeSoto: Access Control

QTY Description

- 0 CAT6 Unshielded OSP Broadband - Rated for Underground Use In Conduit 1MFT
- 5 MARTA CommScope Cat6 Patch Cord 7' White
- 1 2N IP Force - 1 button + HD camera + 10W speaker
- 0 18-6C STR BC FLAMARREST JKT NAT CMP 300V 75C
- 0 18-4C STR BC FLAMARREST JKT NAT CMP 300V 75C
- 0 18-2C STR BC FLAMARREST JKT NAT CMP 300V 75C
- 1 Request to Exit PIR
- 3 Aluminum Housing Armored Cable Contact, Closed Loop, Wide Gap, 3" Gap Size
- 0 23-4P UTP-CMP SOL BC CAT6 FEP/FRPVC BLUE JACKET BOXES GENSPEED 6

Fort DeSoto: Access Control

QTY Description

- 1 VertX EVO V2000 Reader Interface/Network Controller (with plastic enclosure back plate & cover; no power supply, metal enclosure not included). . Software reader connections (qty 2) are included
- 3 RDR, RP40, MULTICLASS, SE E, LF STD, HF STD/SIO/SEOS, WIEG, PIG, BLK, STD-1, LED RED, FLSH GRN, BZR ON, CSN 32-BIT MSB, IPM OFF
- 1 E1A EDGE EVO EH400-K Standard Controller. Single door, IP-based controller for Host-based systems. Single physical package. Door inputs/outputs are 4 external inputs, 2 outputs; on-board optical tamper (standard mount). One Wiegand/Clock-and-Data reader interface. Hi-O compliant. For use indoor or outside in weatherproof enclosure. US single-gang, US double-gang or EU/APAC 60mm mount. Software reader connection (qty 1) is included
- 1 Electric Strike System, Includes 1006 Electric Strike Body, Inte
- 1 Panel Accessory, Pedestal, Steel Gooseneck, 42 Inch High
- 1 Housing, 14 X 14 X 4, BlackLexan Polycarbonate, Hinged, Gr
- 1 POWER SUPPLY BOARD 75W, 6A/12V OR 3A/24V
- 1 MISC Installation Consumables, mounting hardware, misc. conduit, concrete for pedestal, etc.
- 1 18/4C VNTC N/S E2 600V TC-ER
- 1 18/7C VNTC N/S E2 600V TC-ER
- 1 Gate Lock, Electro-Mechanical, Fail Locked, 2000 Pound, Specif
- 1 Bracket Kit, Flex-Mount, Contains Brackets, Bracket Shim
- 1 Push Button, Round, 2 Inch, DPST, Red/Green, Push To Exit
- 1 DK-11 & DK-16 Accessory, Outdoor Weather Cover, Clear, Single
- 1 Accessory, Backbox, Outdoor, Single Gang

Fort DeSoto: CCTV

QTY Description

- 10 MARTA CommScope Cat6 Patch Cord 7' White
- 1 Day/night fixed dome with support for WDR – Forensic Capture and Lightfinder. Discreet, dust and IK08 vandal-resistant indoor casing. Varifocal 3-10.5 mm P-Iris lens, remote focus and zoom. Multiple, individually configurable H.264 and Motion JPEG streams. HDTV 1080p at 30 fps with WDR, and up to 60 fps with WDR disabled. Axis' Zipstream technology for reduced bandwidth and storage needs. Video motion detection and active tampering alarm. Memory card slot for optional local video storage. Power over Ethernet. Midspan not included. Includes mounting bracket for wall/ceiling or junction boxes.
- 4 Chromated and powder coated aluminum wall mount with 1.5 NPS thread for fixed dome pendant kits. Cable routing from behind or through 3/4 conduit hole on the side. Includes mounting plate, pipe seal and conduit hole cover. Color: White
- 3 AXIS P3717-PLE Network Camera is a compact 8-megapixel camera with four varifocal lenses enabling overview and detailed surveillance. With one IP address and one network cable, the four-camera-in-one unit provides a flexible, cost-effective solution for multidirectional surveillance. 360° IR illumination, Forensic WDR and Lightfinder technology provides excellent video quality in any light conditions. Each camera head can be individually positioned (pan, tilt, roll and twist) along a circular track. Remote zoom and focus makes it easy to install and the clear cover, with no sharp edges, ensure
- 3 AXIS T94N01D Pendant Kit comprises a weathershield and a mounting adapter for AXIS P3717-PLE Network Camera. The mounting adapter is compatible with 1.5-inch NPS thread. The kit enables AXIS P3717-PLE to be mounted on walls, poles, parapets and outer corners using AXIS T91 mounting accessories.
- 3 Corner Bracket. Requires AXIS T91A61 Wall Bracket. AXIS P55-series, AXIS Q60-series PTZ Dome Network Cameras, AXIS P33 Series Pendant kit, AXIS P33-VE Series Pendant kit, AXIS 225 Pendant kit and AXIS 216/P3301 Pendant kit. White.
- 1 Outdoor pendant kit for AXIS P38-PVE and Q36-VE series. Weathershield made from impact-, UV-, and heat-resistant polymer. Compatible with wide range of Axis mounts with 1.5 NPS threaded interface.
- 1 P3807-PVE, Fixed Dome IP Camera, 180 Panoramic Coverage, up to 30 fps in 8.3 MP Resolution, Lightfinder and Forensic WDR, Zipstream, White
- 1 4-channel, wall mount surge protector
- 1 23-4P UTP-CMP SOL BC CAT6 FEP/FRPVC BLUE JACKET BOXES GENSPEED 6
- 1 MISC Installation Consumables, Mounting Hardware, Etc.
- 8 64GB SDXC Memory Card, Class 10 UHS-I 45MBps

Fort DeSoto: Site Head End

QTY Description

- 2 MARTA CommScope Cat6 Patch Cord 7' White
- 3 SMA for 1 Synergis Enterprise Reader - 1 year

Fort DeSoto: Site Head End

QTY Description

- 5 1 camera connection
- 5 SMA for 1 Omnicast Enterprise Camera - 1 year
- 1 Streamvault 1000 series. 2U 8 BAY, E5-2620V4, 16GB RAM, 275GB SSD, 24TB, (2)x1GbE Ports, WIN 10 PRO. Single PS. Genetec Security Center pre-installed. License sold separately.
- 1 1 Standard Connection to an Intercom Station (requires GSC-Sipelia-Base)
- 1 Genetec™ Advantage for 1 Sipelia Standard Intercom connection - 1 Years
- 1 MISC Installation Consumables, mounting hardware, etc.
- 1 Punchdown Patch Panel, Category 6, Flat, 24 Port, 1RU
- 1 Smart Managed PoE+ Switch With (24) 10/100/1000BASE-T Ports And (2) 100/1000 SFP Slots
- 2 Cisco Compatible SFP 1000BASE-SX 850nm multimode (LC) [220 m/722 ft.] [550m/1804 ft.]

Highway Dept.: Access Control

QTY Description

- 2 MARTA CommScope Cat6 Patch Cord 7' White
- 0 2N IP Force - 1 button + HD camera + 10W speaker
- 0 18-6C STR BC FLAMARREST JKT NAT CMP 300V 75C
- 0 18-4C STR BC FLAMARREST JKT NAT CMP 300V 75C
- 0 18-2C STR BC FLAMARREST JKT NAT CMP 300V 75C
- 1 Request to Exit PIR
- 1 Aluminum Housing Armored Cable Contact, Closed Loop, Wide Gap, 3" Gap Size
- 1 23-4P UTP-CMP SOL BC CAT6 FEP/FRPVC BLUE JACKET BOXES GENSPEED 6
- 1 RDR, RP40, MULTICLASS, SE E, LF STD, HF STD/SIO/SEOS, WIEG, PIG, BLK, STD-1, LED RED, FLSH GRN, BZR ON, CSN 32-BIT MSB, IPM OFF
- 1 E1A EDGE EVO EH400-K Standard Controller. Single door, IP-based controller for Host-based systems. Single physical package. Door inputs/outputs are 4 external inputs, 2 outputs; on-board optical tamper (standard mount). One Wiegand/Clock-and-Data reader interface. Hi-O compliant. For use indoor or outside in weatherproof enclosure. US single-gang, US double-gang or EU/APAC 60mm mount. Software reader connection (qty 1) is included
- 1 Electric Strike System, Includes 1006 Electric Strike Body, Inte
- 1 MISC Installation Consumables, mounting hardware, misc. conduit, concrete for pedestal, etc.

Highway Dept.: CCTV

QTY Description

- 5 MARTA CommScope Cat6 Patch Cord 7' White
- 1 Day/night fixed dome with support for WDR – Forensic Capture and Lightfinder. Discreet, dust and IK08 vandal-resistant indoor casing. Varifocal 3-10.5 mm P-Iris lens, remote focus and zoom. Multiple, individually configurable H.264 and Motion JPEG streams. HDTV 1080p at 30 fps with WDR, and up to 60 fps with WDR disabled. Axis' Zipstream technology for reduced bandwidth and storage needs. Video motion detection and active tampering alarm. Memory card slot for optional local video storage. Power over Ethernet. Midspan not included. Includes mounting bracket for wall/ceiling or junction boxes.
- 2 Chromated and powder coated aluminum wall mount with 1.5 NPS thread for fixed dome pendant kits. Cable routing from behind or through 3/4 conduit hole on the side. Includes mounting plate, pipe seal and conduit hole cover. Color: White
- 2 AXIS P3717-PLE Network Camera is a compact 8-megapixel camera with four varifocal lenses enabling overview and detailed surveillance. With one IP address and one network cable, the four-camera-in-one unit provides a flexible, cost-effective solution for multidirectional surveillance. 360° IR illumination, Forensic WDR and Lightfinder technology provides excellent video quality in any light conditions. Each camera head can be individually positioned (pan, tilt, roll and twist) along a circular track. Remote zoom and focus makes it easy to install and the clear cover, with no sharp edges, ensure
- 2 AXIS T94N01D Pendant Kit comprises a weathershield and a mounting adapter for AXIS P3717-PLE Network Camera. The mounting adapter is compatible with 1.5-inch NPS thread. The kit enables AXIS P3717-PLE to be mounted on walls, poles, parapets and outer corners using AXIS T91 mounting accessories.
- 2 Corner Bracket. Requires AXIS T91A61 Wall Bracket. AXIS P55-series, AXIS Q60-series PTZ Dome Network Cameras, AXIS P33 Series Pendant kit, AXIS P33-VE Series Pendant kit, AXIS 225 Pendant kit and AXIS 216/P3301 Pendant kit. White.
- 1 4-channel, wall mount surge protector
- 1 23-4P UTP-CMP SOL BC CAT6 FEP/FRPVC BLUE JACKET BOXES GENSPEED 6
- 1 MISC Installation Consumables, Mounting Hardware, Etc.
- 5 64GB SDXC Memory Card, Class 10 UHS-I 45MBps

Highway Dept.: Site Head End

QTY Description

- 2 MARTA CommScope Cat6 Patch Cord 7' White
- 1 SMA for 1 Synergis Enterprise Reader - 1 year
- 3 1 camera connection
- 3 SMA for 1 Omnicast Enterprise Camera - 1 year
- 1 Streamvault 1000 series. 2U 8 BAY, E5-2620V4, 16GB RAM, 275GB SSD, 24TB, (2)x1GbE Ports, WIN 10 PRO. Single PS. Genetec Security Center pre-installed. License sold separately.
- 1 1 Standard Connection to an Intercom Station (requires GSC-Sipelia-Base)
- 1 Genetec™ Advantage for 1 Sipelia Standard Intercom connection - 1 Years
- 1 MISC Installation Consumables, mounting hardware, etc.
- 1 Punchdown Patch Panel, Category 6, Flat, 24 Port, 1RU
- 1 Smart Managed PoE+ Switch With (24) 10/100/1000BASE-T Ports And (2) 100/1000 SFP Slots
- 2 Cisco Compatible SFP 1000BASE-SX 850nm multimode (LC) [220 m/722 ft.] [550m/1804 ft.]

Majestic Towers: Access Control

QTY Description

- 4 MARTA CommScope Cat6 Patch Cord 7' White
- 1 2N IP Force - 1 button + HD camera + 10W speaker
- 0 18-6C STR BC FLAMARREST JKT NAT CMP 300V 75C
- 0 18-4C STR BC FLAMARREST JKT NAT CMP 300V 75C
- 0 18-2C STR BC FLAMARREST JKT NAT CMP 300V 75C
- 3 Request to Exit PIR
- 3 Aluminum Housing Armored Cable Contact, Closed Loop, Wide Gap, 3" Gap Size
- 1 23-4P UTP-CMP SOL BC CAT6 FEP/FRPVC BLUE JACKET BOXES GENSPEED 6
- 3 RDR, RP40, MULTICLASS, SE E, LF STD, HF STD/SIO/SEOS, WIEG, PIG, BLK, STD-1, LED RED, FLSH GRN, BZR ON, CSN 32-BIT MSB, IPM OFF
- 3 E1A EDGE EVO EH400-K Standard Controller. Single door, IP-based controller for Host-based systems. Single physical package. Door inputs/outputs are 4 external inputs, 2 outputs; on-board optical tamper (standard mount). One Wiegand/Clock-and-Data reader interface. Hi-O compliant. For use indoor or outside in weatherproof enclosure. US single-gang, US double-gang or EU/APAC 60mm mount. Software reader connection (qty 1) is included
- 3 Electric Strike System, Includes 1006 Electric Strike Body, Inte
- 1 MISC Installation Consumables, mounting hardware, misc. conduit, concrete for pedestal, etc.

Majestic Towers: CCTV

QTY Description

- 5 MARTA CommScope Cat6 Patch Cord 7' White
- 3 Day/night fixed dome with support for WDR – Forensic Capture and Lightfinder. Discreet, dust and IK08 vandal-resistant indoor casing. Varifocal 3-10.5 mm P-Iris lens, remote focus and zoom. Multiple, individually configurable H.264 and Motion JPEG streams. HDTV 1080p at 30 fps with WDR, and up to 60 fps with WDR disabled. Axis' Zipstream technology for reduced bandwidth and storage needs. Video motion detection and active tampering alarm. Memory card slot for optional local video storage. Power over Ethernet. Midspan not included. Includes mounting bracket for wall/ceiling or junction boxes.
- 1 Day/night fixed dome with support for Forensic WDR, Lightfinder and OptimizedIR with built-in IR illumination. IK10 vandal-resistant outdoor casing. Varifocal 3.5-10 mm P-Iris lens with remote zoom and focus simplifying the installation. Multiple, individually configurable H.264 and Motion JPEG streams. 5 MP at 30 fps with WDR. Zipstream for reduced bandwidth and storage. Video motion detection and active tampering alarm. Memory card slot for optional local video storage.
- 1 Outdoor pendant kit for AXIS P32-VE Series, compatible with Axis ceiling-/wall mounts, AXIS T91A67 Pole mount and 1.5 NPS threaded pipes.
- 1 Chromated and powder coated aluminum wall mount with 1.5 NPS thread for fixed dome pendant kits. Cable routing from behind or through 3/4 conduit hole on the side. Includes mounting plate, pipe seal and conduit hole cover. Color: White
- 1 4-channel, wall mount surge protector
- 1 23-4P UTP-CMP SOL BC CAT6 FEP/FRPVC BLUE JACKET BOXES GENSPEED 6
- 1 MISC Installation Consumables, Mounting Hardware, Etc.
- 4 64GB SDXC Memory Card, Class 10 UHS-I 45MBps

Majestic Towers: Site Head End

QTY Description

- 2 MARTA CommScope Cat6 Patch Cord 7' White
- 3 SMA for 1 Synergis Enterprise Reader - 1 year
- 4 1 camera connection
- 4 SMA for 1 Omnicast Enterprise Camera - 1 year
- 1 Streamvault 1000 series. 2U 8 BAY, E5-2620V4, 16GB RAM, 275GB SSD, 24TB, (2)x1GbE Ports, WIN 10 PRO. Single PS. Genetec Security Center pre-installed. License sold separately.
- 1 1 Standard Connection to an Intercom Station (requires GSC-Sipelia-Base)
- 1 Genetec™ Advantage for 1 Sipelia Standard Intercom connection - 1 Years
- 1 MISC Installation Consumables, mounting hardware, etc.
- 1 Punchdown Patch Panel, Category 6, Flat, 24 Port, 1RU
- 1 Smart Managed PoE+ Switch With (24) 10/100/1000BASE-T Ports And (2) 100/1000 SFP Slots
- 2 Cisco Compatible SFP 1000BASE-SX 850nm multimode (LC) [220 m/722 ft.] [550m/1804 ft.]

Pinellas Public Safety Center: CCTV

QTY Description

- 5 MARTA CommScope Cat6 Patch Cord 7' White
- 1 Day/night fixed dome with support for WDR – Forensic Capture and Lightfinder. Discreet, dust and IK08 vandal-resistant indoor casing. Varifocal 3-10.5 mm P-Iris lens, remote focus and zoom. Multiple, individually configurable H.264 and Motion JPEG streams. HDTV 1080p at 30 fps with WDR, and up to 60 fps with WDR disabled. Axis' Zipstream technology for reduced bandwidth and storage needs. Video motion detection and active tampering alarm. Memory card slot for optional local video storage. Power over Ethernet. Midspan not included. Includes mounting bracket for wall/ceiling or junction boxes.
- 2 Day/night fixed dome with support for Forensic WDR, Lightfinder and OptimizedIR with built-in IR illumination. IK10 vandal-resistant outdoor casing. Varifocal 3.5-10 mm P-Iris lens with remote zoom and focus simplifying the installation. Multiple, individually configurable H.264 and Motion JPEG streams. 5 MP at 30 fps with WDR. Zipstream for reduced bandwidth and storage. Video motion detection and active tampering alarm. Memory card slot for optional local video storage.
- 2 Outdoor pendant kit for AXIS P32-VE Series, compatible with Axis ceiling-/wall mounts, AXIS T91A67 Pole mount and 1.5 NPS threaded pipes.
- 2 Chromated and powder coated aluminum wall mount with 1.5 NPS thread for fixed dome pendant kits. Cable routing from behind or through 3/4 conduit hole on the side. Includes mounting plate, pipe seal and conduit hole cover. Color: White
- 1 4-channel, wall mount surge protector
- 1 23-4P UTP-CMP SOL BC CAT6 FEP/FRPVC BLUE JACKET BOXES GENSPEED 6
- 1 MISC Installation Consumables, Mounting Hardware, Etc.
- 3 64GB SDXC Memory Card, Class 10 UHS-I 45MBps

Pinellas Public Safety Center: Head End Equipment

QTY Description

- 4 MARTA CommScope Cat6 Patch Cord 7' White
- 2 24" LED LCD Monitor
- 3 SMA for 1 Omnicast Enterprise Camera - 1 year
- 1 Streamvault 1000 series. 2U 8 BAY, E5-2620V4, 16GB RAM, 275GB SSD, 24TB, (2)x1GbE Ports, WIN 10 PRO. Single PS. Genetec Security Center pre-installed. License sold separately.
- 1 GSC Omnicast™ Enterprise Package which includes: Archiving and Auxiliary Archiving support, Media Router, Audio, Remote Security Desk, Camera Sequences, Camera Blocking, Camera Dewarping, Hardware Matrix Support, Time Zone, Edge recording, trickling and archive transfer, Keyboard and Joystick Support, Max. 300 cameras per Archiver / 100 cameras on the Directory machine
- 1 GSC Synergis™ Enterprise Package software which includes: Access Manager support, Remote Security Desk, Badge Designer.
- 1 Genetec Security Center (GSC) Base Package - Version 5.7 which includes: 1 Directory, 5 Security Desk client connections (incl. Web Client), Plan Manager Basic, Alarm Management, Advanced Reporting, System Partitioning, Zone Monitoring, IO Modules Support, Email Support, Macros Support (actual macros sold separately), Support for server virtualization, all supported languages. Must purchase a Synergis™, Omnicast™, or AutoVu™ base package to enable access control, video, or LPR content respectively.
- 1 Streamvault 2000E Appliance - 1U 4 BAY RACKMOUNT SERVER DUAL 200GB,SSD, Xeon E3-1270V6, 16GB RAM, (2) 200GB SSD, Windows 2016, Dual PS, Genetec Security Center pre-installed. License sold separately.
- 10 1 Security Center Mobile app connection

Pinellas Public Safety Center: Head End Equipment

QTY Description

- 1 GSC Sipelia™ Base Package
- 1 Streamvault Workstation SVW-300E - Tower, Core I7-7700K, (1) 2.5" SFF Bay + (3) 3.5" LFF Bays, 16GB RAM, 1TB HDD, Windows 10 Pro, 256GBSSD, (2) 1GbE, NVIDIA P1000, Single PS, Genetec Security Center pre-installed. License sold separately.
- 1 RF Ideas pcProx HID USB reader (supports up to 64-bit card numbers) (includes USB enrollment reader connection license)
- 500 ISOProx II Graphics Quality PVC, Proximity Access Card. *** If no card and programming options are specified at the time of purchase, cards shall ship with an HID 26-bit H10301 format, pre-determined facility code and card number, and inkjetted matching s
- 3 1 camera connection
- 1 Full-Size Wireless Keyboard and Optical Mouse Combo
- 1 MISC Installation Consumables, mounting hardware, etc.
- 1 Punchdown Patch Panel, Category 6, Flat, 24 Port, 1RU
- 1 Smart Managed PoE+ Switch With (24) 10/100/1000BASE-T Ports And (2) 100/1000 SFP Slots
- 2 Cisco Compatible SFP 1000BASE-SX 850nm multimode (LC) [220 m/722 ft.] [550m/1804 ft.]

Ridgecrest: Access Control

QTY Description

- 0 CAT6 Unshielded OSP Broadband - Rated for Underground Use In Conduit 1MFT
- 5 MARTA CommScope Cat6 Patch Cord 7' White
- 1 2N IP Force - 1 button + HD camera + 10W speaker
- 0 18-6C STR BC FLAMARREST JKT NAT CMP 300V 75C
- 0 18-4C STR BC FLAMARREST JKT NAT CMP 300V 75C
- 0 18-2C STR BC FLAMARREST JKT NAT CMP 300V 75C
- 1 Request to Exit PIR
- 3 Aluminum Housing Armored Cable Contact, Closed Loop, Wide Gap, 3" Gap Size
- 0 23-4P UTP-CMP SOL BC CAT6 FEP/FRPVC BLUE JACKET BOXES GENSPEED 6
- 1 VertX EVO V2000 Reader Interface/Network Controller (with plastic enclosure back plate & cover; no power supply, metal enclosure not included). . Software reader connections (qty 2) are included
- 3 RDR, RP40, MULTICLASS, SE E, LF STD, HF STD/SIO/SEOS, WIEG, PIG, BLK, STD-1, LED RED, FLSH GRN, BZR ON, CSN 32-BIT MSB, IPM OFF
- 1 E1A EDGE EVO EH400-K Standard Controller. Single door, IP-based controller for Host-based systems. Single physical package. Door inputs/outputs are 4 external inputs, 2 outputs; on-board optical tamper (standard mount). One Wiegand/Clock-and-Data reader interface. Hi-O compliant. For use indoor or outside in weatherproof enclosure. US single-gang, US double-gang or EU/APAC 60mm mount. Software reader connection (qty 1) is included
- 1 Electric Strike System, Includes 1006 Electric Strike Body, Inte
- 1 Panel Accessory, Pedestal, Steel Gooseneck, 42 Inch High
- 1 Housing, 14 X 14 X 4, BlackLexan Polycarbonate, Hinged, Gr
- 1 POWER SUPPLY BOARD 75W, 6A/12V OR 3A/24V
- 1 MISC Installation Consumables, mounting hardware, misc. conduit, concrete for pedestal, etc.
- 1 18/4C VNTC N/S E2 600V TC-ER
- 1 18/7C VNTC N/S E2 600V TC-ER
- 1 Gate Lock, Electro-Mechanical, Fail Locked, 2000 Pound, Specif
- 1 Bracket Kit, Flex-Mount, Contains Brackets, Bracket Shim
- 1 Push Button, Round, 2 Inch, DPST, Red/Green, Push To Exit
- 1 DK-11 & DK-16 Accessory, Outdoor Weather Cover, Clear, Single
- 1 Accessory, Backbox, Outdoor, Single Gang

Ridgecrest: CCTV

QTY Description

- 8 MARTA CommScope Cat6 Patch Cord 7' White

Ridgecrest: CCTV

QTY Description

- 1 Day/night fixed dome with support for WDR – Forensic Capture and Lightfinder. Discreet, dust and IK08 vandal-resistant indoor casing. Varifocal 3-10.5 mm P-Iris lens, remote focus and zoom. Multiple, individually configurable H.264 and Motion JPEG streams. HDTV 1080p at 30 fps with WDR, and up to 60 fps with WDR disabled. Axis' Zipstream technology for reduced bandwidth and storage needs. Video motion detection and active tampering alarm. Memory card slot for optional local video storage. Power over Ethernet. Midspan not included. Includes mounting bracket for wall/ceiling or junction boxes.
- 1 Outdoor pendant kit for AXIS P38-PVE and Q36-VE series. Weathershield made from impact-, UV-, and heat-resistant polymer. Compatible with wide range of Axis mounts with 1.5 NPS threaded interface.
- 3 Chromated and powder coated aluminum wall mount with 1.5 NPS thread for fixed dome pendant kits. Cable routing from behind or through 3/4 conduit hole on the side. Includes mounting plate, pipe seal and conduit hole cover. Color: White
- 2 AXIS P3717-PLE Network Camera is a compact 8-megapixel camera with four varifocal lenses enabling overview and detailed surveillance. With one IP address and one network cable, the four-camera-in-one unit provides a flexible, cost-effective solution for multidirectional surveillance. 360° IR illumination, Forensic WDR and Lightfinder technology provides excellent video quality in any light conditions. Each camera head can be individually positioned (pan, tilt, roll and twist) along a circular track. Remote zoom and focus makes it easy to install and the clear cover, with no sharp edges, ensure
- 2 AXIS T94N01D Pendant Kit comprises a weathershield and a mounting adapter for AXIS P3717-PLE Network Camera. The mounting adapter is compatible with 1.5-inch NPS thread. The kit enables AXIS P3717-PLE to be mounted on walls, poles, parapets and outer corners using AXIS T91 mounting accessories.
- 2 Corner Bracket. Requires AXIS T91A61 Wall Bracket. AXIS P55-series, AXIS Q60-series PTZ Dome Network Cameras, AXIS P33 Series Pendant kit, AXIS P33-VE Series Pendant kit, AXIS 225 Pendant kit and AXIS 216/P3301 Pendant kit. White.
- 1 P3807-PVE, Fixed Dome IP Camera, 180 Panoramic Coverage, up to 30 fps in 8.3 MP Resolution, Lightfinder and Forensic WDR, Zipstream, White
- 1 4-channel, wall mount surge protector
- 1 23-4P UTP-CMP SOL BC CAT6 FEP/FRPVC BLUE JACKET BOXES GENSPEED 6
- 1 MISC Installation Consumables, mounting hardware, etc.
- 6 64GB SDXC Memory Card, Class 10 UHS-I 45MBps

Ridgecrest: Site Head End

QTY Description

- 2 MARTA CommScope Cat6 Patch Cord 7' White
- 3 SMA for 1 Synergis Enterprise Reader - 1 year
- 4 1 camera connection
- 4 SMA for 1 Omnicast Enterprise Camera - 1 year
- 1 Streamvault 1000 series. 2U 8 BAY, E5-2620V4, 16GB RAM, 275GB SSD, 24TB, (2)x1GbE Ports, WIN 10 PRO. Single PS. Genetec Security Center pre-installed. License sold separately.
- 1 1 Standard Connection to an Intercom Station (requires GSC-Sipelia-Base)
- 1 Genetec™ Advantage for 1 Sipelia Standard Intercom connection - 1 Years
- 1 MISC Installation Consumables, mounting hardware, etc.
- 1 Punchdown Patch Panel, Category 6, Flat, 24 Port, 1RU
- 1 Smart Managed PoE+ Switch With (24) 10/100/1000BASE-T Ports And (2) 100/1000 SFP Slots
- 2 Cisco Compatible SFP 1000BASE-SX 850nm multimode (LC) [220 m/722 ft.] [550m/1804 ft.]

St. Petersburg: Access Control

QTY Description

- 0 CAT6 Unshielded OSP Broadband - Rated for Underground Use In Conduit 1MFT
- 4 MARTA CommScope Cat6 Patch Cord 7' White
- 1 2N IP Force - 1 button + HD camera + 10W speaker
- 0 18-6C STR BC FLAMARREST JKT NAT CMP 300V 75C
- 0 18-4C STR BC FLAMARREST JKT NAT CMP 300V 75C
- 0 18-2C STR BC FLAMARREST JKT NAT CMP 300V 75C
- 1 Request to Exit PIR
- 3 Aluminum Housing Armored Cable Contact, Closed Loop, Wide Gap, 3" Gap Size
- 0 23-4P UTP-CMP SOL BC CAT6 FEP/FRPVC BLUE JACKET BOXES GENSPEED 6
- 1 VertX EVO V2000 Reader Interface/Network Controller (with plastic enclosure back plate & cover; no power supply, metal enclosure not included). . Software reader connections (qty 2) are included

St. Petersburg: Access Control

QTY Description

- 3 RDR, RP40, MULTICLASS, SE E, LF STD, HF STD/SIO/SEOS, WIEG, PIG, BLK, STD-1, LED RED, FLSH GRN, BZR ON, CSN 32-BIT MSB, IPM OFF
- 1 E1A EDGE EVO EH400-K Standard Controller. Single door, IP-based controller for Host-based systems. Single physical package. Door inputs/outputs are 4 external inputs, 2 outputs; on-board optical tamper (standard mount). One Wiegand/Clock-and-Data reader interface. Hi-O compliant. For use indoor or outside in weatherproof enclosure. US single-gang, US double-gang or EU/APAC 60mm mount. Software reader connection (qty 1) is included
- 1 Electric Strike System, Includes 1006 Electric Strike Body, Inte
- 1 Panel Accessory, Pedestal, Steel Gooseneck, 42 Inch High
- 1 Housing, 14 X 14 X 4, BlackLexan Polycarbonate, Hinged, Gr
- 1 POWER SUPPLY BOARD 75W, 6A/12V OR 3A/24V
- 1 MISC Installation Consumables, mounting hardware, misc. conduit, concrete for pedestal, etc.
- 1 18/4C VNTC N/S E2 600V TC-ER
- 1 18/7C VNTC N/S E2 600V TC-ER
- 1 Gate Lock, Electro-Mechanical, Fail Locked, 2000 Pound, Specif
- 1 Bracket Kit, Flex-Mount, Contains Brackets, Bracket Shim
- 1 Push Button, Round, 2 Inch, DPST, Red/Green, Push To Exit
- 1 DK-11 & DK-16 Accessory, Outdoor Weather Cover, Clear, Single
- 1 Accessory, Backbox, Outdoor, Single Gang

St. Petersburg: CCTV

QTY Description

- 11 MARTA CommScope Cat6 Patch Cord 7' White
- 1 Day/night fixed dome with support for WDR – Forensic Capture and Lightfinder. Discreet, dust and IK08 vandal-resistant indoor casing. Varifocal 3-10.5 mm P-Iris lens, remote focus and zoom. Multiple, individually configurable H.264 and Motion JPEG streams. HDTV 1080p at 30 fps with WDR, and up to 60 fps with WDR disabled. Axis' Zipstream technology for reduced bandwidth and storage needs. Video motion detection and active tampering alarm. Memory card slot for optional local video storage. Power over Ethernet. Midspan not included. Includes mounting bracket for wall/ceiling or junction boxes.
- 1 Day/night fixed dome with support for Forensic WDR, Lightfinder and OptimizedIR with built-in IR illumination. IK10 vandal-resistant outdoor casing. Varifocal 3.5-10 mm P-Iris lens with remote zoom and focus simplifying the installation. Multiple, individually configurable H.264 and Motion JPEG streams. 5 MP at 30 fps with WDR. Zipstream for reduced bandwidth and storage. Video motion detection and active tampering alarm. Memory card slot for optional local video storage.
- 1 Outdoor pendant kit for AXIS P32-VE Series, compatible with Axis ceiling-/wall mounts, AXIS T91A67 Pole mount and 1.5 NPS threaded pipes.
- 5 Chromated and powder coated aluminum wall mount with 1.5 NPS thread for fixed dome pendant kits. Cable routing from behind or through 3/4 conduit hole on the side. Includes mounting plate, pipe seal and conduit hole cover. Color: White
- 4 AXIS P3717-PLE Network Camera is a compact 8-megapixel camera with four varifocal lenses enabling overview and detailed surveillance. With one IP address and one network cable, the four-camera-in-one unit provides a flexible, cost-effective solution for multidirectional surveillance. 360° IR illumination, Forensic WDR and Lightfinder technology provides excellent video quality in any light conditions. Each camera head can be individually positioned (pan, tilt, roll and twist) along a circular track. Remote zoom and focus makes it easy to install and the clear cover, with no sharp edges, ensure
- 4 AXIS T94N01D Pendant Kit comprises a weathershield and a mounting adapter for AXIS P3717-PLE Network Camera. The mounting adapter is compatible with 1.5-inch NPS thread. The kit enables AXIS P3717-PLE to be mounted on walls, poles, parapets and outer corners using AXIS T91 mounting accessories.
- 4 Corner Bracket. Requires AXIS T91A61 Wall Bracket. AXIS P55-series, AXIS Q60-series PTZ Dome Network Cameras, AXIS P33 Series Pendant kit, AXIS P33-VE Series Pendant kit, AXIS 225 Pendant kit and AXIS 216/P3301 Pendant kit. White.
- 2 4-channel, wall mount surge protector
- 1 23-4P UTP-CMP SOL BC CAT6 FEP/FRPVC BLUE JACKET BOXES GENSPEED 6
- 1 MISC Installation Consumables, Mounting Hardware, Etc.
- 10 64GB SDXC Memory Card, Class 10 UHS-I 45MBps

St. Petersburg: Site Head End

QTY Description

- 2 MARTA CommScope Cat6 Patch Cord 7' White
- 3 SMA for 1 Synergis Enterprise Reader - 1 year

St. Petersburg: Site Head End

QTY Description

- 6 1 camera connection
- 6 SMA for 1 Omnicast Enterprise Camera - 1 year
- 1 Streamvault 1000 series. 2U 8 BAY, E5-2620V4, 16GB RAM, 275GB SSD, 24TB, (2)x1GbE Ports, WIN 10 PRO. Single PS. Genetec Security Center pre-installed. License sold separately.
- 1 1 Standard Connection to an Intercom Station (requires GSC-Sipelia-Base)
- 1 Genetec™ Advantage for 1 Sipelia Standard Intercom connection - 1 Years
- 1 MISC Installation Consumables, mounting hardware, etc.
- 1 Punchdown Patch Panel, Category 6, Flat, 24 Port, 1RU
- 1 Smart Managed PoE+ Switch With (24) 10/100/1000BASE-T Ports And (2) 100/1000 SFP Slots
- 2 Cisco Compatible SFP 1000BASE-SX 850nm multimode (LC) [220 m/722 ft.] [550m/1804 ft.]

Tarpon Springs: Access Control

QTY Description

- 0 CAT6 Unshielded OSP Broadband - Rated for Underground Use In Conduit 1MFT
- 5 MARTA CommScope Cat6 Patch Cord 7' White
- 1 2N IP Force - 1 button + HD camera + 10W speaker
- 0 18-6C STR BC FLAMARREST JKT NAT CMP 300V 75C
- 0 18-4C STR BC FLAMARREST JKT NAT CMP 300V 75C
- 0 18-2C STR BC FLAMARREST JKT NAT CMP 300V 75C
- 1 Request to Exit PIR
- 3 Aluminum Housing Armored Cable Contact, Closed Loop, Wide Gap, 3" Gap Size
- 0 23-4P UTP-CMP SOL BC CAT6 FEP/FRPVC BLUE JACKET BOXES GENSPEED 6
- 1 VertX EVO V2000 Reader Interface/Network Controller (with plastic enclosure back plate & cover; no power supply, metal enclosure not included). . Software reader connections (qty 2) are included
- 3 RDR, RP40, MULTICLASS, SE E, LF STD, HF STD/SIO/SEOS, WIEG, PIG, BLK, STD-1, LED RED, FLSH GRN, BZR ON, CSN 32-BIT MSB, IPM OFF
- 1 E1A EDGE EVO EH400-K Standard Controller. Single door, IP-based controller for Host-based systems. Single physical package. Door inputs/outputs are 4 external inputs, 2 outputs; on-board optical tamper (standard mount). One Wiegand/Clock-and-Data reader interface. Hi-O compliant. For use indoor or outside in weatherproof enclosure. US single-gang, US double-gang or EU/APAC 60mm mount. Software reader connection (qty 1) is included
- 1 Electric Strike System, Includes 1006 Electric Strike Body, Inte
- 1 Panel Accessory, Pedestal, Steel Gooseneck, 42 Inch High
- 1 Housing, 14 X 14 X 4, BlackLexan Polycarbonate, Hinged, Gr
- 1 POWER SUPPLY BOARD 75W, 6A/12V OR 3A/24V
- 1 MISC Installation Consumables, mounting hardware, misc. conduit, concrete for pedestal, etc.
- 1 18/4C VNTC N/S E2 600V TC-ER
- 1 18/7C VNTC N/S E2 600V TC-ER
- 1 Gate Lock, Electro-Mechanical, Fail Locked, 2000 Pound, Specif
- 1 Bracket Kit, Flex-Mount, Contains Brackets, Bracket Shim
- 1 Push Button, Round, 2 Inch, DPST, Red/Green, Push To Exit
- 1 DK-11 & DK-16 Accessory, Outdoor Weather Cover, Clear, Single
- 1 Accessory, Backbox, Outdoor, Single Gang

Tarpon Springs: CCTV

QTY Description

- 8 MARTA CommScope Cat6 Patch Cord 7' White
- 1 Day/night fixed dome with support for WDR – Forensic Capture and Lightfinder. Discreet, dust and IK08 vandal-resistant indoor casing. Varifocal 3-10.5 mm P-Iris lens, remote focus and zoom. Multiple, individually configurable H.264 and Motion JPEG streams. HDTV 1080p at 30 fps with WDR, and up to 60 fps with WDR disabled. Axis' Zipstream technology for reduced bandwidth and storage needs. Video motion detection and active tampering alarm. Memory card slot for optional local video storage. Power over Ethernet. Midspan not included. Includes mounting bracket for wall/ceiling or junction boxes.
- 4 Chromated and powder coated aluminum wall mount with 1.5 NPS thread for fixed dome pendant kits. Cable routing from behind or through 3/4 conduit hole on the side. Includes mounting plate, pipe seal and conduit hole cover. Color: White

Tarpon Springs: CCTV

QTY Description

- 3 AXIS P3717-PLE Network Camera is a compact 8-megapixel camera with four varifocal lenses enabling overview and detailed surveillance. With one IP address and one network cable, the four-camera-in-one unit provides a flexible, cost-effective solution for multidirectional surveillance. 360° IR illumination, Forensic WDR and Lightfinder technology provides excellent video quality in any light conditions. Each camera head can be individually positioned (pan, tilt, roll and twist) along a circular track. Remote zoom and focus makes it easy to install and the clear cover, with no sharp edges, ensure
- 3 AXIS T94N01D Pendant Kit comprises a weathershield and a mounting adapter for AXIS P3717-PLE Network Camera. The mounting adapter is compatible with 1.5-inch NPS thread. The kit enables AXIS P3717-PLE to be mounted on walls, poles, parapets and outer corners using AXIS T91 mounting accessories.
- 3 Corner Bracket. Requires AXIS T91A61 Wall Bracket. AXIS P55-series, AXIS Q60-series PTZ Dome Network Cameras, AXIS P33 Series Pendant kit, AXIS P33-VE Series Pendant kit, AXIS 225 Pendant kit and AXIS 216/P3301 Pendant kit. White.
- 1 Day/night fixed dome with support for Forensic WDR, Lightfinder and OptimizedIR with built-in IR illumination. IK10 vandal-resistant outdoor casing. Varifocal 3.5-10 mm P-Iris lens with remote zoom and focus simplifying the installation. Multiple, individually configurable H.264 and Motion JPEG streams. 5 MP at 30 fps with WDR. Zipstream for reduced bandwidth and storage. Video motion detection and active tampering alarm. Memory card slot for optional local video storage.
- 1 Outdoor pendant kit for AXIS P32-VE Series, compatible with Axis ceiling-/wall mounts, AXIS T91A67 Pole mount and 1.5 NPS threaded pipes.
- 1 4-channel, wall mount surge protector
- 1 23-4P UTP-CMP SOL BC CAT6 FEP/FRPVC BLUE JACKET BOXES GENSPEED 6
- 1 MISC Installation Consumables, Mounting Hardware, Etc.
- 8 64GB SDXC Memory Card, Class 10 UHS-I 45MBps

Tarpon Springs: Site Head End

QTY Description

- 2 MARTA CommScope Cat6 Patch Cord 7' White
- 5 1 camera connection
- 5 SMA for 1 Omnicast Enterprise Camera - 1 year
- 3 SMA for 1 Synergis Enterprise Reader - 1 year
- 1 Streamvault 1000 series. 2U 8 BAY, E5-2620V4, 16GB RAM, 275GB SSD, 24TB, (2)x1GbE Ports, WIN 10 PRO. Single PS. Genetec Security Center pre-installed. License sold separately.
- 1 1 Standard Connection to an Intercom Station (requires GSC-Sipelia-Base)
- 1 Genetec™ Advantage for 1 Sipelia Standard Intercom connection - 1 Years
- 1 MISC Installation Consumables, mounting hardware, etc.
- 1 Punchdown Patch Panel, Category 6, Flat, 24 Port, 1RU
- 1 Smart Managed PoE+ Switch With (24) 10/100/1000BASE-T Ports And (2) 100/1000 SFP Slots
- 2 Cisco Compatible SFP 1000BASE-SX 850nm multimode (LC) [220 m/722 ft.] [550m/1804 ft.]

Toytown: Access Control

QTY Description

- 0 CAT6 Unshielded OSP Broadband - Rated for Underground Use In Conduit 1MFT
- 6 MARTA CommScope Cat6 Patch Cord 7' White
- 1 2N IP Force - 1 button + HD camera + 10W speaker
- 0 18-6C STR BC FLAMARREST JKT NAT CMP 300V 75C
- 0 18-4C STR BC FLAMARREST JKT NAT CMP 300V 75C
- 0 18-2C STR BC FLAMARREST JKT NAT CMP 300V 75C
- 2 Request to Exit PIR
- 4 Aluminum Housing Armored Cable Contact, Closed Loop, Wide Gap, 3" Gap Size
- 1 23-4P UTP-CMP SOL BC CAT6 FEP/FRPVC BLUE JACKET BOXES GENSPEED 6
- 1 VertX EVO V2000 Reader Interface/Network Controller (with plastic enclosure back plate & cover; no power supply, metal enclosure not included). . Software reader connections (qty 2) are included
- 4 RDR, RP40, MULTICLASS, SE E, LF STD, HF STD/SIO/SEOS, WIEG, PIG, BLK, STD-1, LED RED, FLSH GRN, BZR ON, CSN 32-BIT MSB, IPM OFF
- 2 E1A EDGE EVO EH400-K Standard Controller. Single door, IP-based controller for Host-based systems. Single physical package. Door inputs/outputs are 4 external inputs, 2 outputs; on-board optical tamper (standard mount). One Wiegand/Clock-and-Data reader interface. Hi-O compliant. For use indoor or outside in weatherproof enclosure. US single-gang, US double-gang or EU/APAC 60mm mount. Software reader connection (qty 1) is included

Toytown: Access Control

QTY Description

- 2 Electric Strike System, Includes 1006 Electric Strike Body, Inte
- 1 Panel Accessory, Pedestal, Steel Gooseneck, 42 Inch High
- 1 Housing, 14 X 14 X 4, BlackLexan Polycarbonate, Hinged, Gr
- 1 POWER SUPPLY BOARD 75W, 6A/12V OR 3A/24V
- 1 MISC Installation Consumables, mounting hardware, misc. conduit, concrete for pedestal, etc.
- 1 18/4C VNTC N/S E2 600V TC-ER
- 1 18/7C VNTC N/S E2 600V TC-ER
- 1 Gate Lock, Electro-Mechanical, Fail Locked, 2000 Pound, Specif
- 1 Bracket Kit, Flex-Mount, Contains Brackets, Bracket Shim
- 1 Push Button, Round, 2 Inch, DPST, Red/Green, Push To Exit
- 1 DK-11 & DK-16 Accessory, Outdoor Weather Cover, Clear, Single
- 1 Accessory, Backbox, Outdoor, Single Gang

Toytown: CCTV

QTY Description

- 14 MARTA CommScope Cat6 Patch Cord 7' White
- 2 Day/night fixed dome with support for WDR – Forensic Capture and Lightfinder. Discreet, dust and IK08 vandal-resistant indoor casing. Varifocal 3-10.5 mm P-Iris lens, remote focus and zoom. Multiple, individually configurable H.264 and Motion JPEG streams. HDTV 1080p at 30 fps with WDR, and up to 60 fps with WDR disabled. Axis' Zipstream technology for reduced bandwidth and storage needs. Video motion detection and active tampering alarm. Memory card slot for optional local video storage. Power over Ethernet. Midspan not included. Includes mounting bracket for wall/ceiling or junction boxes.
- 2 Day/night fixed dome with support for Forensic WDR, Lightfinder and OptimizedIR with built-in IR illumination. IK10 vandal-resistant outdoor casing. Varifocal 3.5-10 mm P-Iris lens with remote zoom and focus simplifying the installation. Multiple, individually configurable H.264 and Motion JPEG streams. 5 MP at 30 fps with WDR. Zipstream for reduced bandwidth and storage. Video motion detection and active tampering alarm. Memory card slot for optional local video storage.
- 2 Outdoor pendant kit for AXIS P32-VE Series, compatible with Axis ceiling-/wall mounts, AXIS T91A67 Pole mount and 1.5 NPS threaded pipes.
- 6 Chromated and powder coated aluminum wall mount with 1.5 NPS thread for fixed dome pendant kits. Cable routing from behind or through 3/4 conduit hole on the side. Includes mounting plate, pipe seal and conduit hole cover. Color: White
- 3 AXIS P3717-PLE Network Camera is a compact 8-megapixel camera with four varifocal lenses enabling overview and detailed surveillance. With one IP address and one network cable, the four-camera-in-one unit provides a flexible, cost-effective solution for multidirectional surveillance. 360° IR illumination, Forensic WDR and Lightfinder technology provides excellent video quality in any light conditions. Each camera head can be individually positioned (pan, tilt, roll and twist) along a circular track. Remote zoom and focus makes it easy to install and the clear cover, with no sharp edges, ensure
- 3 AXIS T94N01D Pendant Kit comprises a weathershield and a mounting adapter for AXIS P3717-PLE Network Camera. The mounting adapter is compatible with 1.5-inch NPS thread. The kit enables AXIS P3717-PLE to be mounted on walls, poles, parapets and outer corners using AXIS T91 mounting accessories.
- 3 Corner Bracket. Requires AXIS T91A61 Wall Bracket. AXIS P55-series, AXIS Q60-series PTZ Dome Network Cameras, AXIS P33 Series Pendant kit, AXIS P33-VE Series Pendant kit, AXIS 225 Pendant kit and AXIS 216/P3301 Pendant kit. White.
- 1 Outdoor pendant kit for AXIS P38-PVE and Q36-VE series. Weathershield made from impact-, UV-, and heat-resistant polymer. Compatible with wide range of Axis mounts with 1.5 NPS threaded interface.
- 1 P3807-PVE, Fixed Dome IP Camera, 180 Panoramic Coverage, up to 30 fps in 8.3 MP Resolution, Lightfinder and Forensic WDR, Zipstream, White
- 2 4-channel, wall mount surge protector
- 1 23-4P UTP-CMP SOL BC CAT6 FEP/FRPVC BLUE JACKET BOXES GENSPEED 6
- 1 MISC Installation Consumables, Mounting Hardware, Etc.
- 11 64GB SDXC Memory Card, Class 10 UHS-I 45MBps

Toytown: Site Head End

QTY Description

- 2 MARTA CommScope Cat6 Patch Cord 7' White
- 4 SMA for 1 Synergis Enterprise Reader - 1 year
- 8 1 camera connection
- 8 SMA for 1 Omnicast Enterprise Camera - 1 year

Toytown: Site Head End

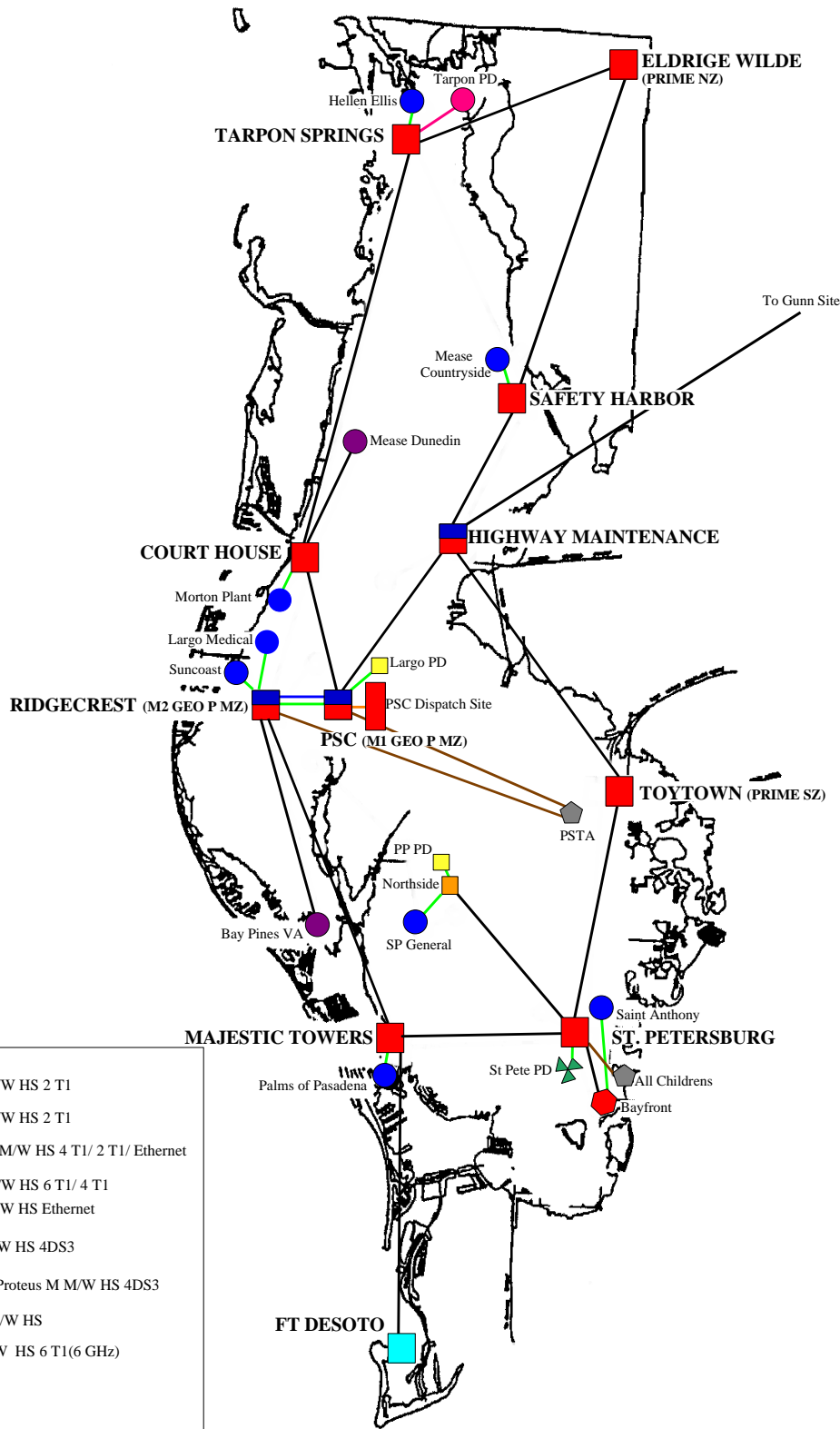
QTY Description

- 1 Streamvault 1000 series. 2U 8 BAY, E5-2620V4, 16GB RAM, 275GB SSD, 24TB, (2)x1GbE Ports, WIN 10 PRO. Single PS. Genetec Security Center pre-installed. License sold separately.
- 1 1 Standard Connection to an Intercom Station (requires GSC-Sipelia-Base)
- 1 Genetec™ Advantage for 1 Sipelia Standard Intercom connection - 1 Years
- 1 MISC Installation Consumables, mounting hardware, etc.
- 1 Punchdown Patch Panel, Category 6, Flat, 24 Port, 1RU
- 1 Smart Managed PoE+ Switch With (24) 10/100/1000BASE-T Ports And (2) 100/1000 SFP Slots
- 3 Cisco Compatible SFP 1000BASE-SX 850nm multimode (LC) [220 m/722 ft.] [550m/1804 ft.]
- 1 Smart Managed PoE+ Switch With (8) 10/100/1000BASE-T Ports And (2) 100/1000 SFP Slots

Financial Summary

"Attachment A"

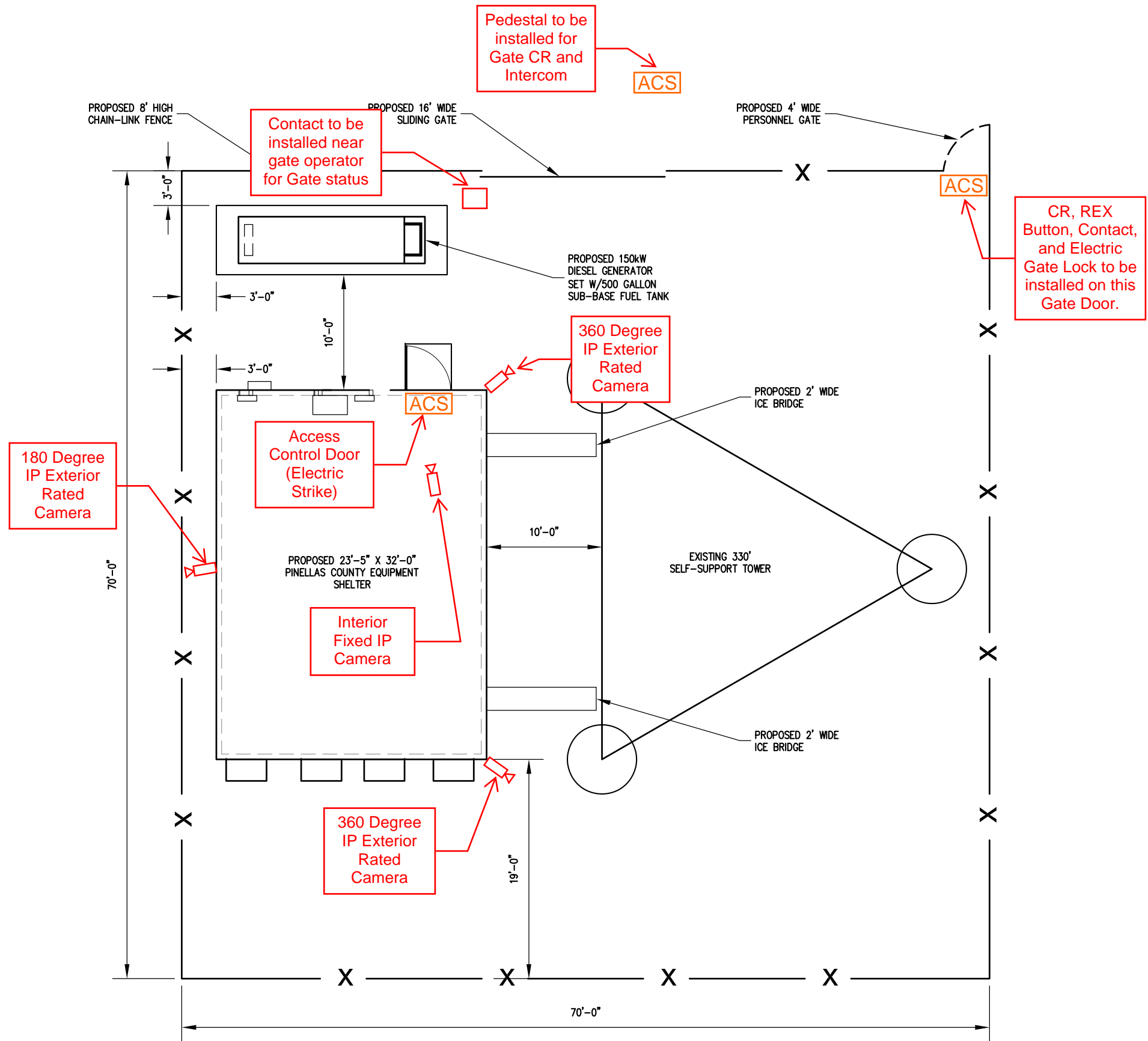
PINELLAS COUNTY PUBLIC SAFETY RADIO SYSTEM



	Proteus M M/W HS 2 T1
	Proteus M M/W HS 2 T1
	Proteus MX M/W HS 4 T1/ 2 T1/ Ethernet
	Proteus M M/W HS 6 T1/ 4 T1
	Proteus M M/W HS Ethernet
	Proteus M M/W HS 4DS3
	Proteus MX / Proteus M M/W HS 4DS3
	Proteus MX M/W HS
	Proteus M M/W HS 6 T1(6 GHz)
	Telco Lines
	4.9 GHz PTP
	Proteus M M/W HS 12 T1 (6 GHz)
	Proteus M M/W HS SD 12T1 (6 GHz)
	PSC Dispatch Site
	6 GHz
	11 GHz
	Phone Line
	4.9 GHz
	200 Mbs
	Fiber
	HS = Hot Standby
	D = Diversity

*Note: Conduit installed by others to Ped. Gate, Pedestal Location, and Gate Operator from Equipment Shelter.

*Note: New POE Network Switch, Remote Archiver, to be rack mounted in existing rack.



MOTOROLA

8000 W. SUNRISE BLVD
PLANTATION, FL 33322
PHONE: (954) 723-5000

PINELLAS COUNTY -
RIDGECREST
12490 ULMERTON ROAD
LARGO, FL 33774

WOOD PROJECT NO: --	
DRAWN: J. GILMER	CHECKED: J. GILMER
APPROVED: F.D. SHIVER	DATE: 10/19/18



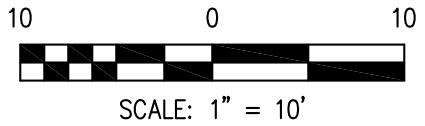
WOOD ENVIRONMENT AND INFRASTRUCTURE, INC.
1075 BIG SHANTY DRIVE, N.W., SUITE 100
KENNESAW, GA 30144
PHONE: (770) 421-3400 FAX: (770) 421-3486

NO.	DATE	REVISION
A	10/19/18	LEASE EXHIBIT

SEAL

SHEET NO. & NAME

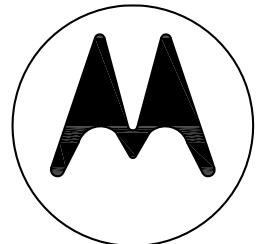
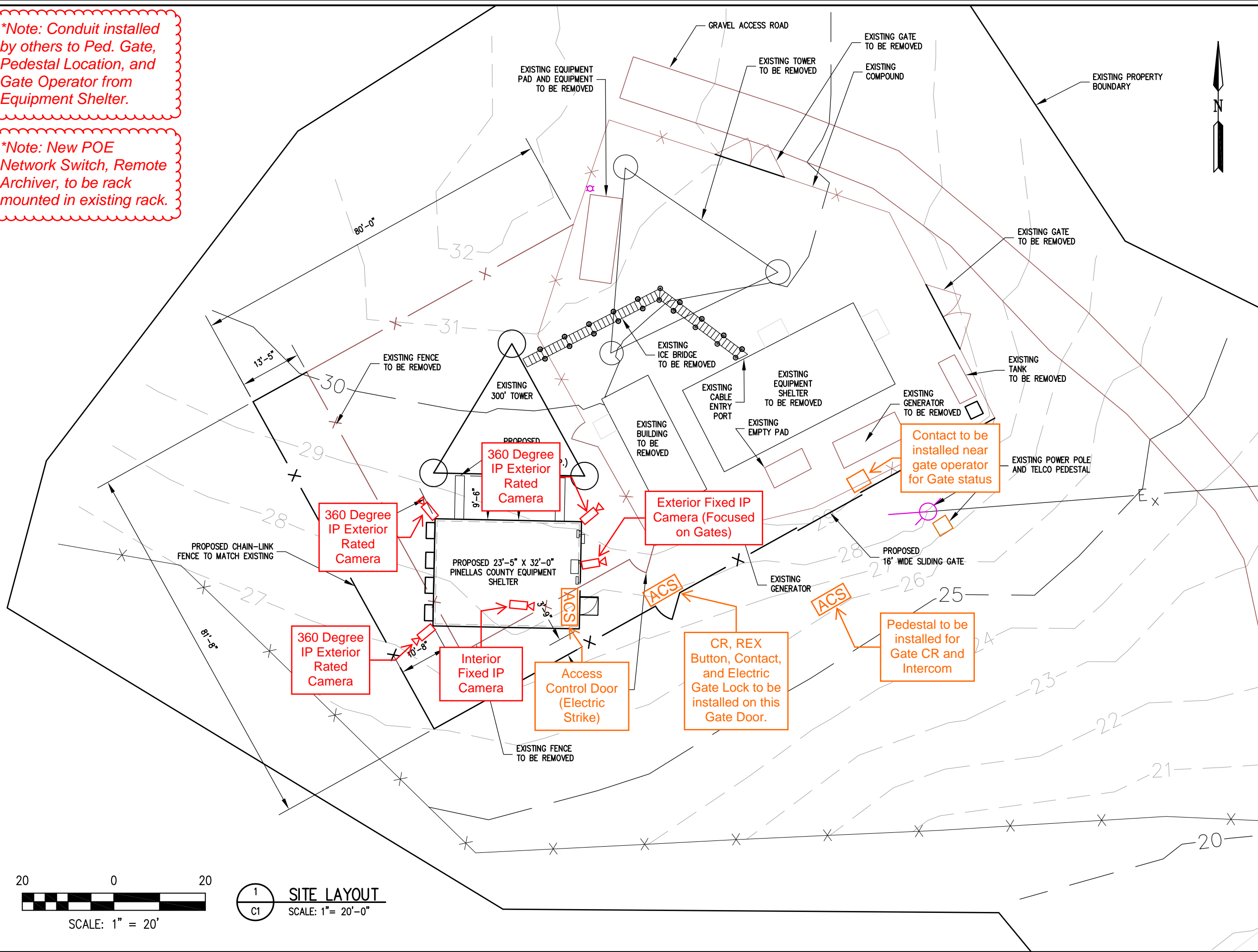
C1
NEW
REPLACEMENT
SHELTER
SITE LAYOUT



1
C1 **SITE LAYOUT**
SCALE: 1" = 10'-0"

**Note: Conduit installed by others to Ped. Gate, Pedestal Location, and Gate Operator from Equipment Shelter.*

**Note: New POE Network Switch, Remote Archiver, to be rack mounted in existing rack.*



MOTOROLA

8000 W. SUNRISE BLVD
PLANTATION, FL 33322

PHONE: (954) 723-5000

**PINELLAS COUNTY -
TARPON SPRINGS**
4100 DOUGLAS STREET
PALM HARBOR, FL 34683

WOOD PROJECT NO: --	
DRAWN: J. GILMER	CHECKED: J. GILMER
APPROVED: F.D. SHIVER	DATE: 10/08/18

wood.

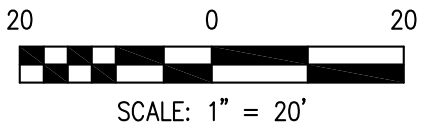
WOOD ENVIRONMENT AND INFRASTRUCTURE, INC.
1075 BIG SHANTY DRIVE, N.W., SUITE 100
KENNESAW, GA 30144
PHONE: (770) 421-3400 FAX: (770) 421-3486

NO.	DATE	REVISION
A	10/09/18	LEASE EXHIBIT

SEAL

SHEET NO. & NAME

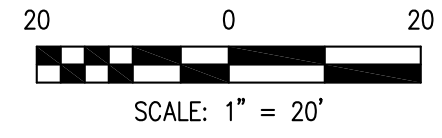
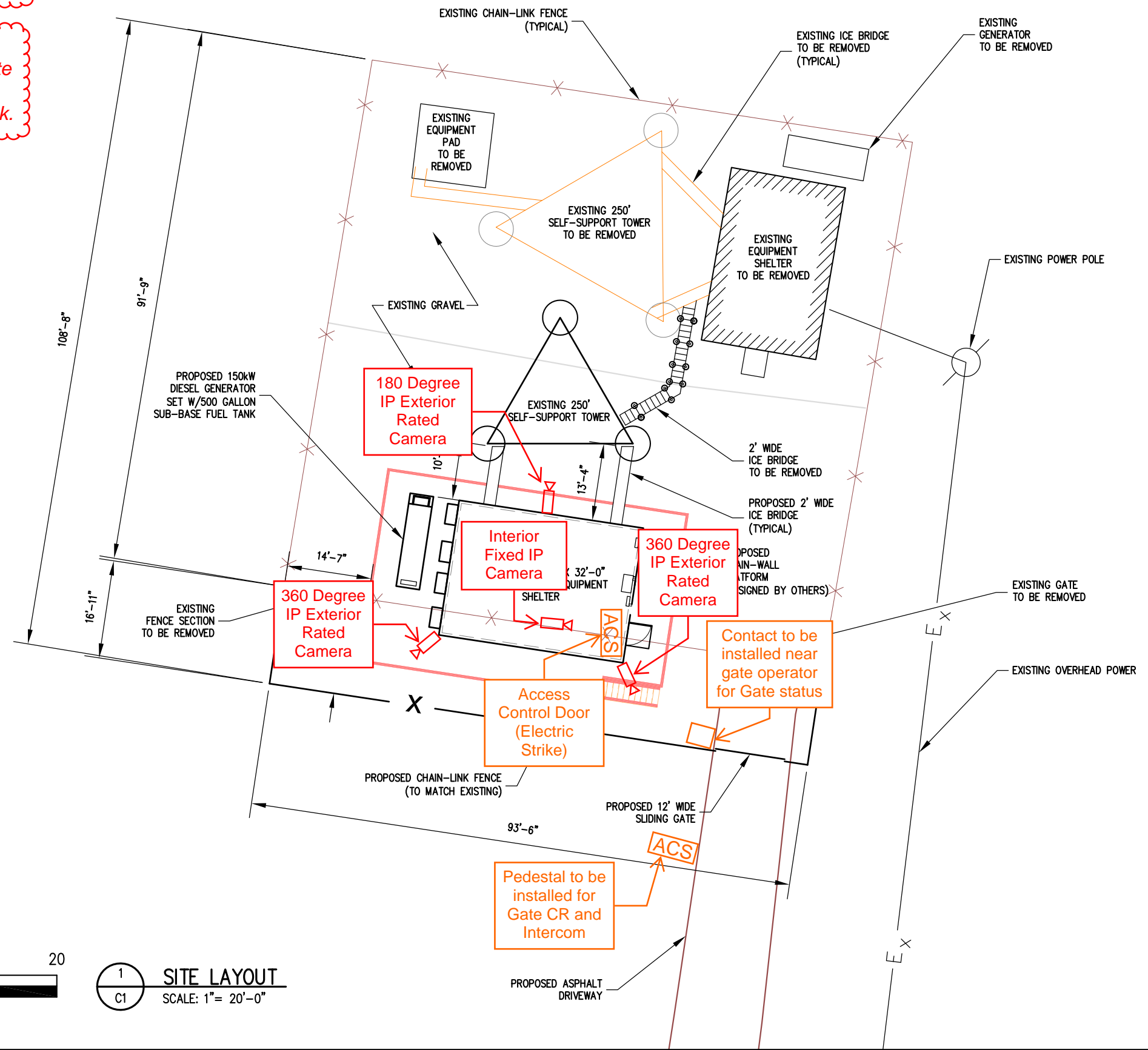
**C1
NEW
REPLACEMENT
SHELTER
SITE LAYOUT**



**1
C1** **SITE LAYOUT**
SCALE: 1" = 20'-0"

*Note: Conduit installed by others to Ped. Gate, Pedestal Location, and Gate Operator from Equipment Shelter.

*Note: New POE Network Switch, Remote Archiver, to be rack mounted in existing rack.



1
C1 SITE LAYOUT
SCALE: 1" = 20'-0"



MOTOROLA

8000 W. SUNRISE BLVD
PLANTATION, FL 33322

PHONE: (954) 723-5000

PINELLAS COUNTY -
ELDRIDGE WILDE
3563 OLD KEYSTONE ROAD
TARPON SPRINGS, FL 34688

WOOD PROJECT NO: --	
DRAWN: J. GILMER	CHECKED: F.D. SHIVER
APPROVED: F.D. SHIVER	DATE: 10/08/18

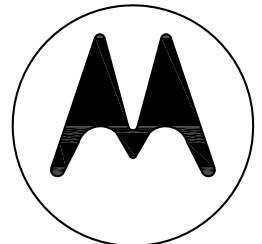
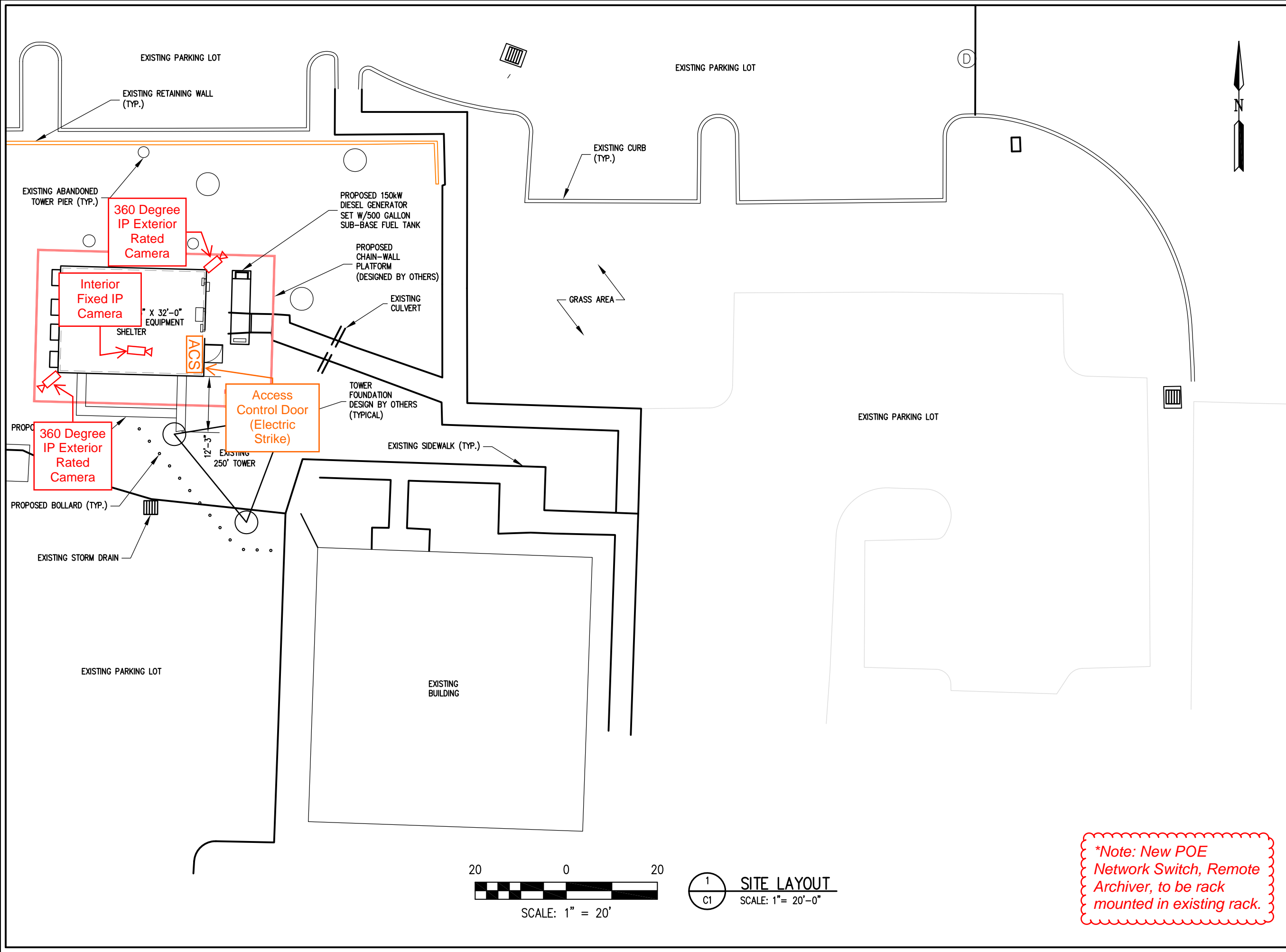


WOOD ENVIRONMENT AND INFRASTRUCTURE, INC.
1075 BIG SHANTY DRIVE, N.W., SUITE 100
KENNESAW, GA 30144
PHONE: (770) 421-3400 FAX: (770) 421-3486

NO.	DATE	REVISION
A	10/09/18	LEASE EXHIBIT

SEAL

SHEET NO. & NAME
**C1
NEW
REPLACEMENT
SHELTER
SITE LAYOUT**



MOTOROLA

8000 W. SUNRISE BLVD
PLANTATION, FL 33322

PHONE: (954) 723-5000

PINELLAS COUNTY -
HIGHWAY MAINTENANCE
22211 US 19
CLEARWATER, FL 33765

WOOD PROJECT NO: --	
DRAWN: J. GILMER	CHECKED: F.D. SHIVER
APPROVED: F.D. SHIVER	DATE: 10/19/18



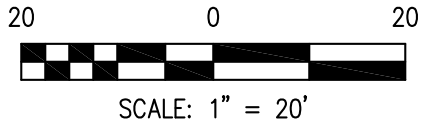
WOOD ENVIRONMENT AND INFRASTRUCTURE, INC.
1075 BIG SHANTY DRIVE, N.W., SUITE 100
KENNESAW, GA 30144
PHONE: (770) 421-3400 FAX: (770) 421-3486

NO.	DATE	REVISION
A	10/19/18	LEASE EXHIBIT

SEAL

SHEET NO. & NAME

C1
NEW
REPLACEMENT
SHELTER
SITE LAYOUT



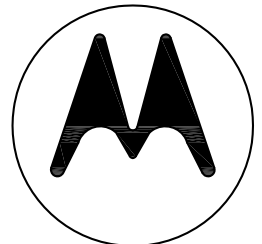
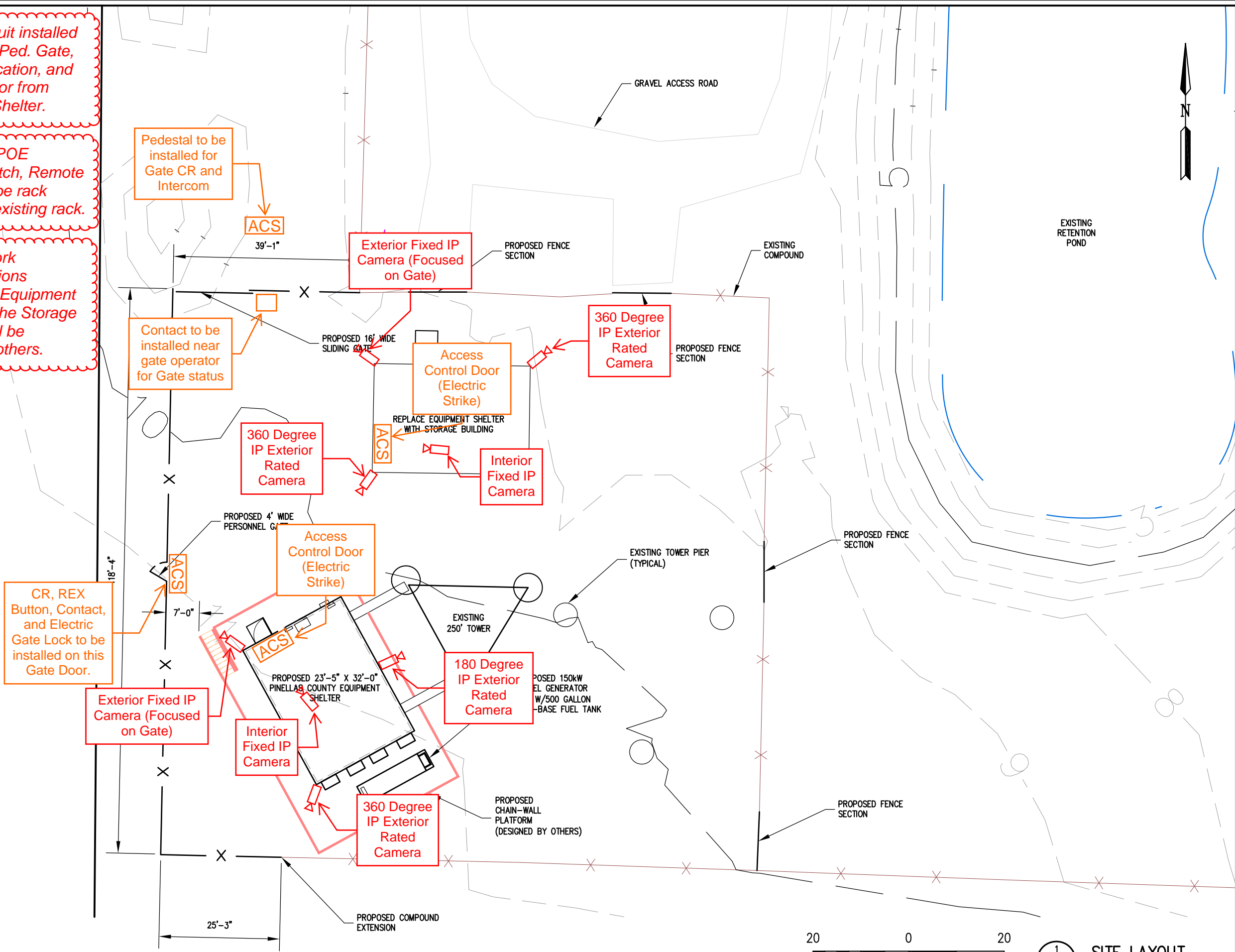
1
C1
SITE LAYOUT
SCALE: 1" = 20'-0"

**Note: New POE Network Switch, Remote Archiver, to be rack mounted in existing rack.*

*Note: Conduit installed by others to Ped. Gate, Pedestal Location, and Gate Operator from Equipment Shelter.

*Note: New POE Network Switch, Remote Archiver, to be rack mounted in existing rack.

*Note: Network Communications between the Equipment Shelter and the Storage Building shall be provided by others.



MOTOROLA

8000 W. SUNRISE BLVD
PLANTATION, FL 33322

PHONE: (954) 723-5000

PINELLAS COUNTY -
TOYTOWN
10540 16TH STREET NORTH
ST. PETERSBURG, FL 33716

WOOD PROJECT NO: --	
DRAWN: J. GILMER	CHECKED: J. GILMER
APPROVED: F.D. SHIVER	DATE: 10/19/18



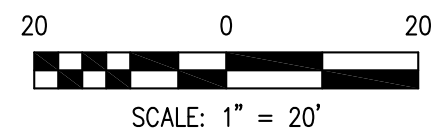
WOOD ENVIRONMENT AND INFRASTRUCTURE, INC.
1075 BIG SHANTY DRIVE, N.W., SUITE 100
KENNESAW, GA 30144
PHONE: (770) 421-3400 FAX: (770) 421-3486

NO.	DATE	REVISION
A	10/19/18	LEASE EXHIBIT

SEAL

SHEET NO. & NAME

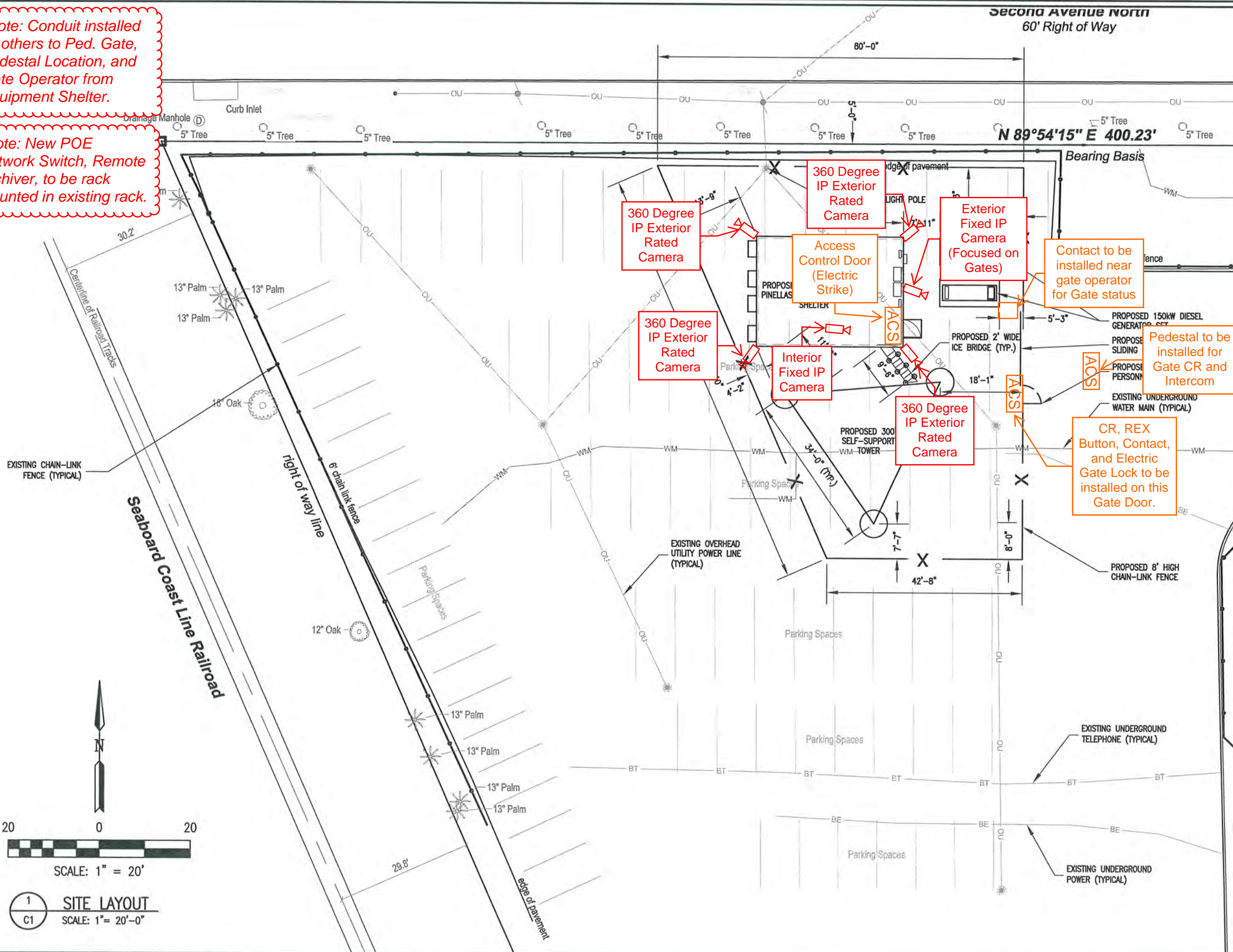
C1
NEW
REPLACEMENT
SHELTER
SITE LAYOUT



1
C1
SITE LAYOUT
SCALE: 1" = 20'-0"

*Note: Conduit installed by others to Ped. Gate, Pedestal Location, and Gate Operator from Equipment Shelter.

*Note: New POE Network Switch, Remote Archiver, to be rack mounted in existing rack.



MOTOROLA

8000 W. SUNRISE BLVD
PLANTATION, FL 33322
PHONE: (954) 723-5000

PINELLAS COUNTY -
ST. PETERSBURG PD
150 N 14TH STREET
ST. PETERSBURG, FL 33705

AMEC FOSTER WHEELER PROJECT NO: 6166-16-0352
DRAWN: J. GILMER CHECKED: F.D. SHIVER
APPROVED: F.D. SHIVER DATE: 12/14/16

AMEC FOSTER WHEELER
ENVIRONMENT AND INFRASTRUCTURE, INC.
1075 BIG SHANTY DRIVE, N.W. SUITE 100
KENNESAW, GA 30144
PHONE: (770) 421-3400 FAX: (770) 421-3486

NO.	DATE	REVISION
A	01/30/17	LEASE EXHIBIT
B	02/16/17	ISSUED FOR PRELIMINARY
C	04/18/17	RE-ISSUED FOR PRELIMINARY
D	05/03/17	ISSUED FOR CONSTRUCTION

SEAL

FRANCIS D. SHIVER
LICENSE No. 19390
STATE OF FLORIDA
PROFESSIONAL ENGINEER
5-8-17

SHEET NO. & NAME
C1
SITE LAYOUT



Google earth

feet
meters



Majestic Towers Site Layout

8

7

6

5

4

3

2

1

H

G

F

E

D

C

B

A

H

G

F

E

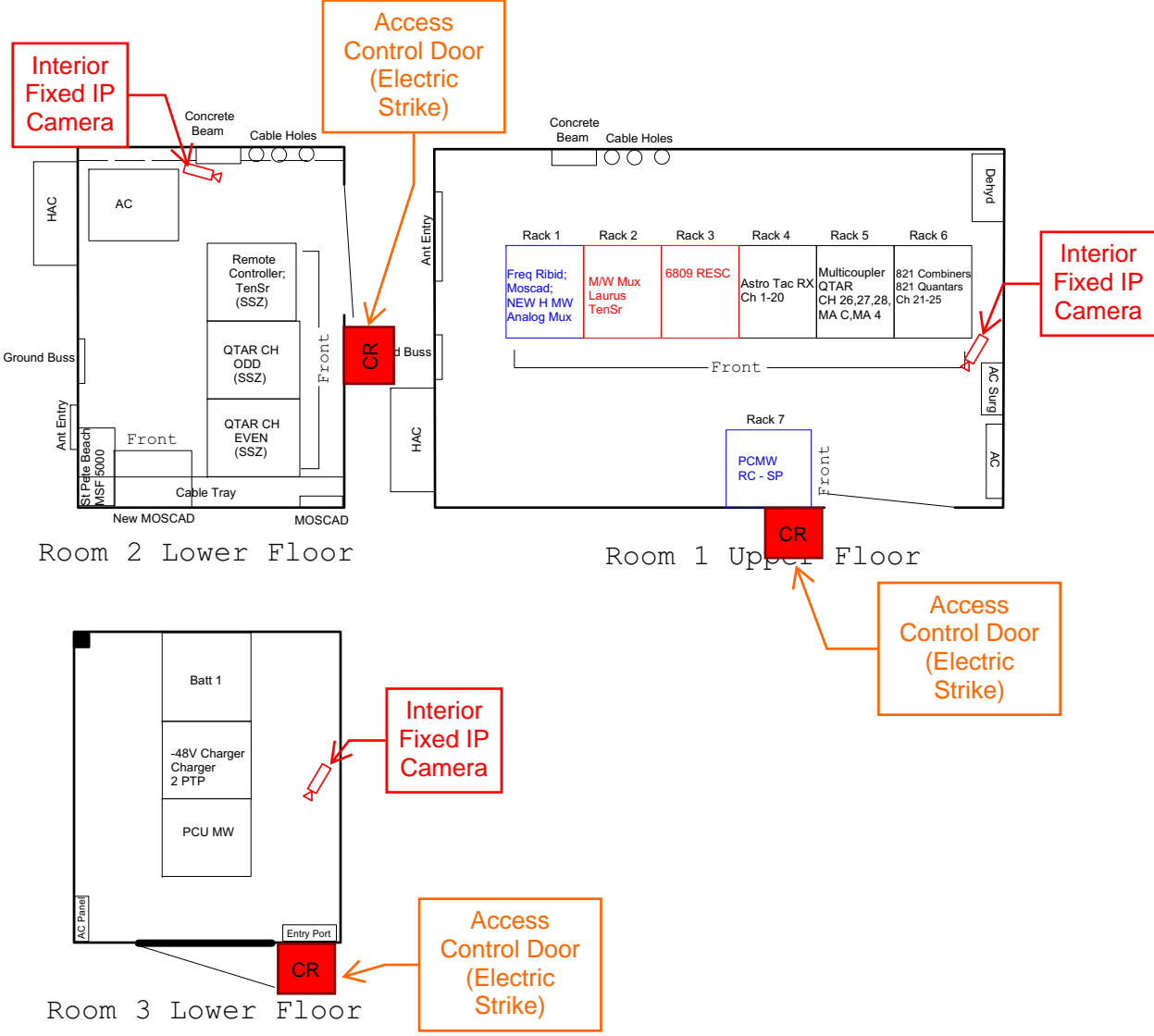
D

C

B

A

**Note: New POE Network Switch, Remote Archiver, to be rack mounted in existing rack.*



Room 2 Lower Floor

Room 1 Upper Floor

Room 3 Lower Floor

Motorola Confidential Proprietary

Legend:

Existing	—
Existing Modified	—
New	—
48V	—

H			
G			
F			
E			
D			
C			
B			
A			
O	11/9/2009	R.P.	Original Release
Rev.	Date:	Engr:	Description:

MOTOROLA Government & Public Safety Engineering
7264 Rosetree PL E
Seminole, FL 33772

Project: PINELLAS COUNTY MZ_UASI PROJECT

Title: Majestic Towers Site Plan

Filename:	Date: 11/9/2009	Sheet: 1 of 1	Scale: 1/4" = 1'
Engineer: R. Parrish	Drawn: R.D. P.	Checked: R. Parrish	Proj. Mgr: B. Learner

8

7

6

5

4

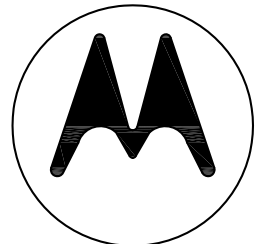
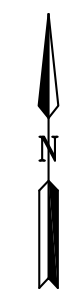
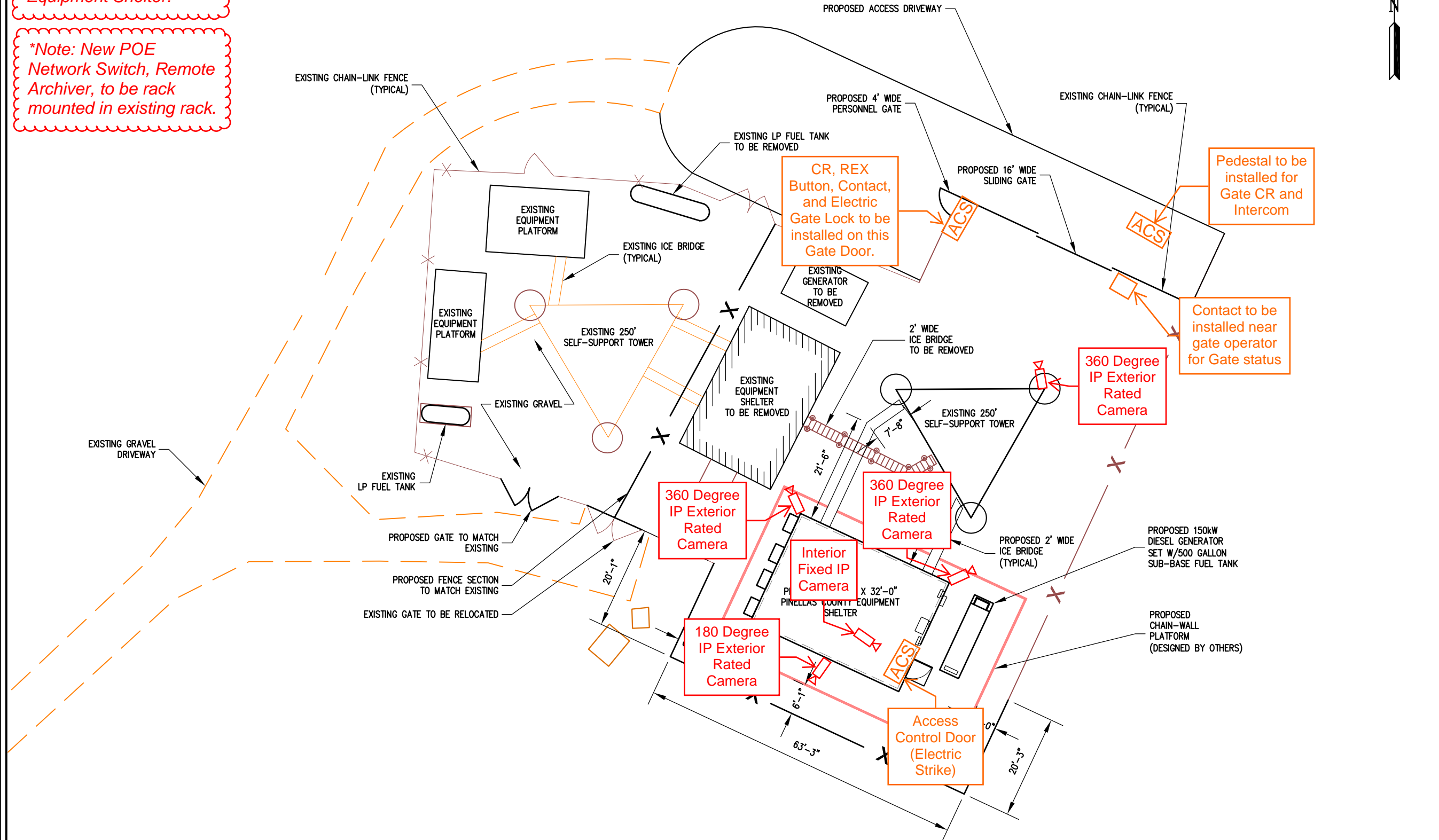
3

2

1

*Note: Conduit installed by others to Ped. Gate, Pedestal Location, and Gate Operator from Equipment Shelter.

*Note: New POE Network Switch, Remote Archiver, to be rack mounted in existing rack.



MOTOROLA

8000 W. SUNRISE BLVD
PLANTATION, FL 33322

PHONE: (954) 723-5000

**PINELLAS COUNTY -
FORT DeSOTO
ANDERSON BLVD
ST. PETERSBURG, FL 33715**

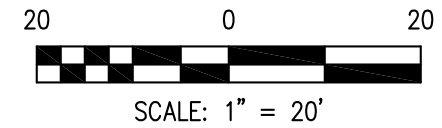
WOOD PROJECT NO: -	
DRAWN: J. GILMER	CHECKED: F.D. SHIVER
APPROVED: F.D. SHIVER	DATE: 10/08/18



WOOD ENVIRONMENT AND INFRASTRUCTURE, INC.
1075 BIG SHANTY DRIVE, N.W., SUITE 100
KENNESAW, GA 30144
PHONE: (770) 421-3400 FAX: (770) 421-3486

NO.	DATE	REVISION
A	10/09/18	LEASE EXHIBIT

SEAL



1 SITE LAYOUT
C1 SCALE: 1" = 20'-0"

SHEET NO. & NAME
**C1
NEW
REPLACEMENT
SHELTER
SITE LAYOUT**

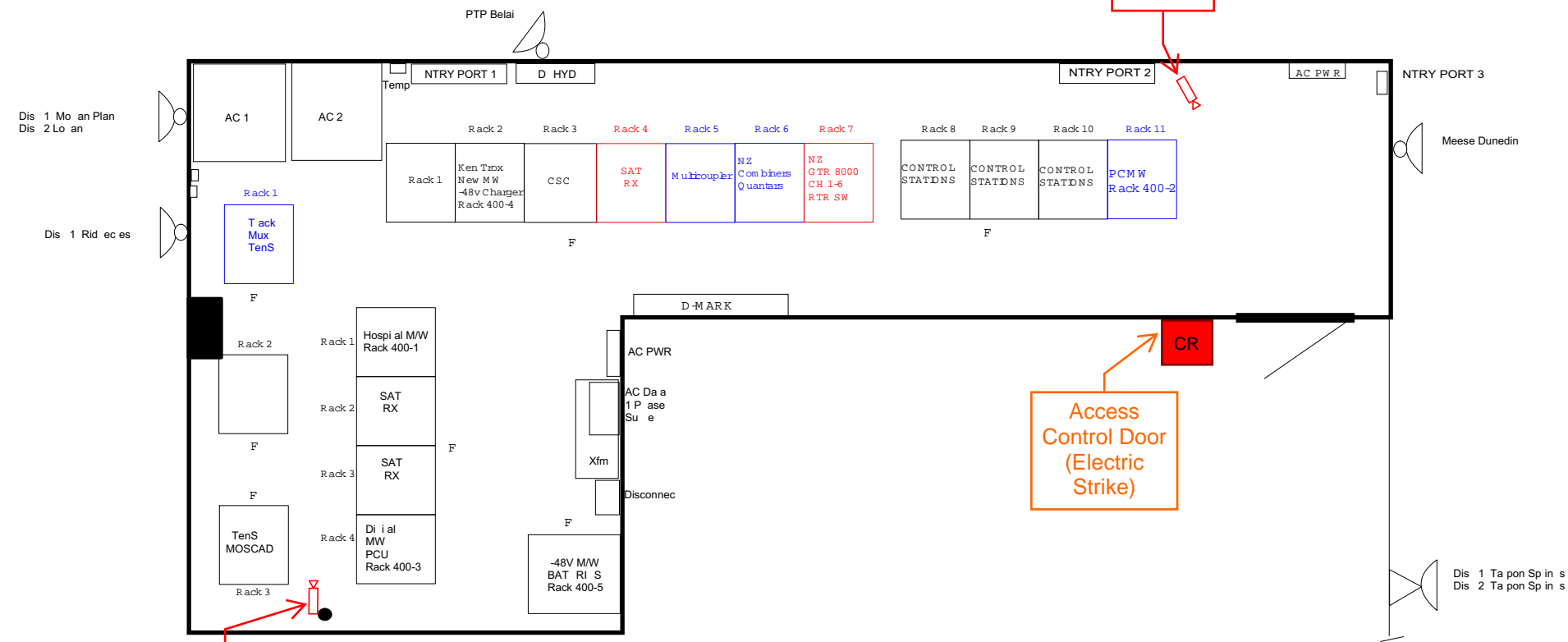


Google earth



Courthouse Site Layout

**Note: New POE Network Switch, Remote Archiver, to be rack mounted in existing rack.*



Legend:

Existing	Black line
Existing Modified	Blue line
New	Red line
48V	Green line

Motorola Confidential Proprietar

Rev.	Date	Description
A	11/1/09	P Add MZ UASI Phase 1
O	9/1/08	P Original release

MOTOROLA Government & Public Safety Engineering
7264 Rosee PL
Seminole, FL 33772

Project: PINELLAS COUNTY MZ_UASI

Title: H Site Diagram

Filename	Date	Sheet 1 of	Scale
Author: Parrish	Drawn: Parrish	Checked: Parrish	Project Manager: B Learner

Exterior
Fixed IP
Camera



Exterior
Fixed IP
Camera



Interior
Fixed IP
Camera

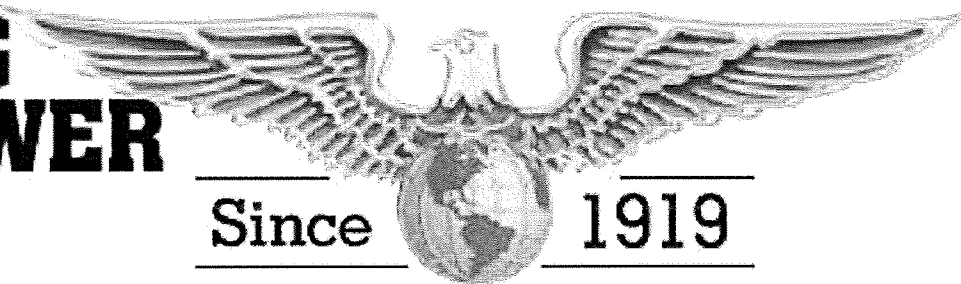


**Note: New POE
Network Switch, Remote
Archiver, to be rack
mounted in existing rack.*

Pinellas Public Safety Center

ALLSTATE TOWER

**PITTSBURG
TANK & TOWER
GROUP**



P.O. BOX 25
HENDERSON, KENTUCKY 42419
PHONE: (270) 830-8512
WWW.ALLSTATETOWER.COM

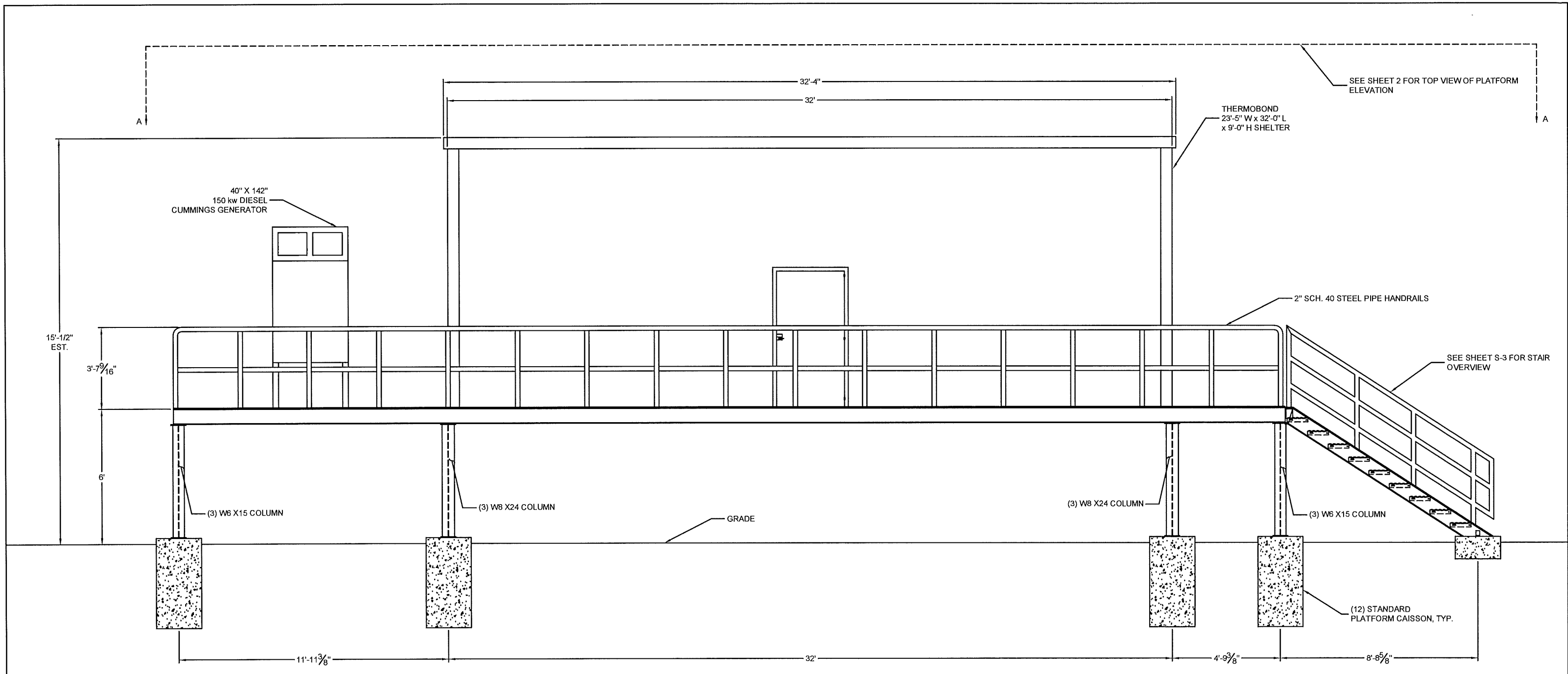
IF YOU HAVE ANY QUESTIONS REGARDING
THE ASSEMBLY, FABRICATION, OR OTHER
TECHNICAL INQUIRIES PLEASE CONTACT
ALLSTATE TOWER : 270-830-8512

6' ELEVATED PLATFORM
CUSTOMER: MOTOROLA SOLUTIONS INC.
SITE: ELDRIDGE WILDE SITE, PINELLAS COUNTY, FL
ALLSTATE JOB NO: FC-075805
DATE: 12/20/2018

CHECKED BY: _____



UNAUTHORIZED STRUCTURAL
MODIFICATIONS OR IMPROPER FIELD
ASSEMBLIES OF AST PRODUCTS ARE
NOT PERMISSIBLE AND MAY VOID
WARRANTIES AND/OR DESIGN
LIABILITIES OFFERED BY AST



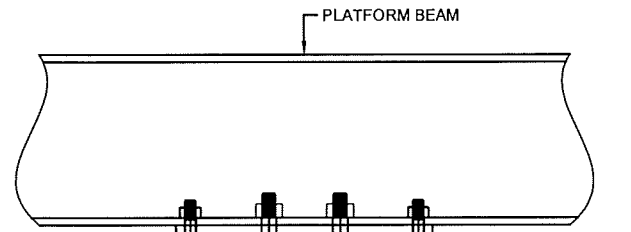
PLATFORM ELEVATION FRONT VIEW
SCALE: 1:50

STRUCTURAL STEEL NOTES:

1. STRUCTURAL STEEL SHALL COMPLY WITH THE FOLLOWING SPECIFICATIONS:
 - A. STRUCTURAL STEEL SHAPES, PLATES AND BARS. (ASTM A572, Fy=50 KSI)
 - B. PIPE - ASTM A53, GRADE B, Fy=35 KSI
 - C. HSS-SHAPES - ASTM A500, GRADE B
 - D. ANCHOR BOLTS - ASTM F1554-105
 - E. STRUCTURAL BOLTS 1/2" Ø AND LARGER - ASTM A325
 - F. STRUCTURAL BOLTS SMALLER THAN 1/2" Ø - DIMENSIONS: ASME B18.2.1 [MATERIAL: SAE J429 GRADE 5] [THREADING: ASME B1.1, UNC, CLASS 2A] [FINISH: HOT-DIP GALVANIZED OR ZINC-PLATED]
 - G. SHEET METAL SCREWS - DIMENSIONS: ASME B18.6.3 [MATERIAL: SAE J933] [FINISH: HOT-DIP GALVANIZED OR ZINC-PLATED]
 - H. NUTS FOR BOLTS/ALL-THREAD - ASTM A563 (THREADING TO MATCH BOLT)
 - I. WASHERS FOR BOLTS/ALL THREADS - ASTM F436
2. STRUCTURAL BOLTS SHALL CONFORM TO THIS NOTE. ALL BOLT HOLES SHALL BE STANDARD SIZE BOLT HOLES PER AISC 360, UNLESS OTHERWISE NOTED. ALL HOLES SHALL BE SHOP DRILLED OR SUB-PUNCHED AND REAMED. BURNING OF HOLES IS NOT PERMITTED. WHERE SLOTTED OR OVERSIZE HOLES ARE SPECIFIED ON THE DRAWINGS, EXTRA-THICK ASTM F436 PLATE WASHERS SHALL BE USED (1/8" MIN. THICKNESS) WITH A DIAMETER SUITABLE TO COVER THE EXTENTS OF THE SLOT OF HOLE. BOLTS SHALL BE HEAVY-HEX WHERE AVAILABLE IN THE SIZE AND GRADE SPECIFIED, OTHERWISE BOLTS SHALL BE HEX HEAD CAP SCREWS.
3. ALL STEEL HARDWARE, INCLUDING ADHESIVE OR EMBEDDED ANCHOR BOLTS AND THEIR ACCESSORIES, SHALL BE HOT-DIP GALVANIZED IN ACCORDANCE WITH ASTM A153 (EXCEPT BOLTS SMALLER THAN 1/2" SHALL CONFORM TO FE/ZN 3 AT PER ASTM F1941 WHERE HOT-DIP GALVANIZED IN ACCORDANCE WITH ASTM A123). REPAIR DAMAGE TO GALVANIZED COATINGS USING ASTM A780 PROCEDURES WITH A ZINC RICH PAINT (SUCH AS ZRC GALVILITE). FOR GALVANIZING DAMAGED BY HANDLING, TRANSPORTING, CUTTING, WELDING, OR BOLTING. DO NOT HEAT SURFACES TO WHICH REPAIR PAINT HAS BEEN APPLIED. CALL OUT HOLES REQUIRED FOR HOT-DIP GALVANIZING ON SHOP DRAWINGS.
4. WELDING SHALL BE IN ACCORDANCE WITH AWS D1.1 "STRUCTURAL WELDING CODE - STEEL". WELD ELECTRODES SHALL BE E60XX. UNLESS OTHERWISE NOTED, PROVIDE CONTINUOUS FILLET. WELDS WITH MINIMUM SIZE OF 3/16" OR OF A SIZE EQUAL TO THE THICKNESS OF THE THINNER MATERIAL BEING JOINED (WHICHEVER IS LESS). FOR ACUTE OR OBTUSE JOINT ANGLES, THE FILLET WELD LEG SIZE SHALL BE ADJUSTED AS REQUIRED TO MAINTAIN THE EFFECTIVE THROAT OF A 3/16" FILLET WELD IN A 90° JOINT. ALL WELD SIZES SHOWN IN INCHES.



PROPRIETARY STATEMENT: THIS DRAWING IS THE PROPERTY OF ALLSTATE TOWER INC. IT IS NOT TO BE REPRODUCED OR COPIED IN ANYWAY WITHOUT PRIOR WRITTEN CONSENT OF ALLSTATE TOWER INC.				DESCRIPTION: 6' PLATFORM ELEVATION FRONT VIEW ELDRIDGE WILDE SITE PINELLAS COUNTY, FL PLATFORM	
REV #	DESCRIPTION	DATE	BY	UNLESS OTHERWISE NOTED DIMENSIONS ARE IN: INCHES	FILE NAME: FC-075805
				TOLERANCE BANDS: X +3/32" / -0 ANGLES ± 2° XX +3/32" / -0 XXX +1/16" / -0 HOLES + Ø1/16" / -0	
				DRAWN BY: J.W.L.	
				DATE: 12/16/2018	
SCALE: NTS				SHEET S-1	



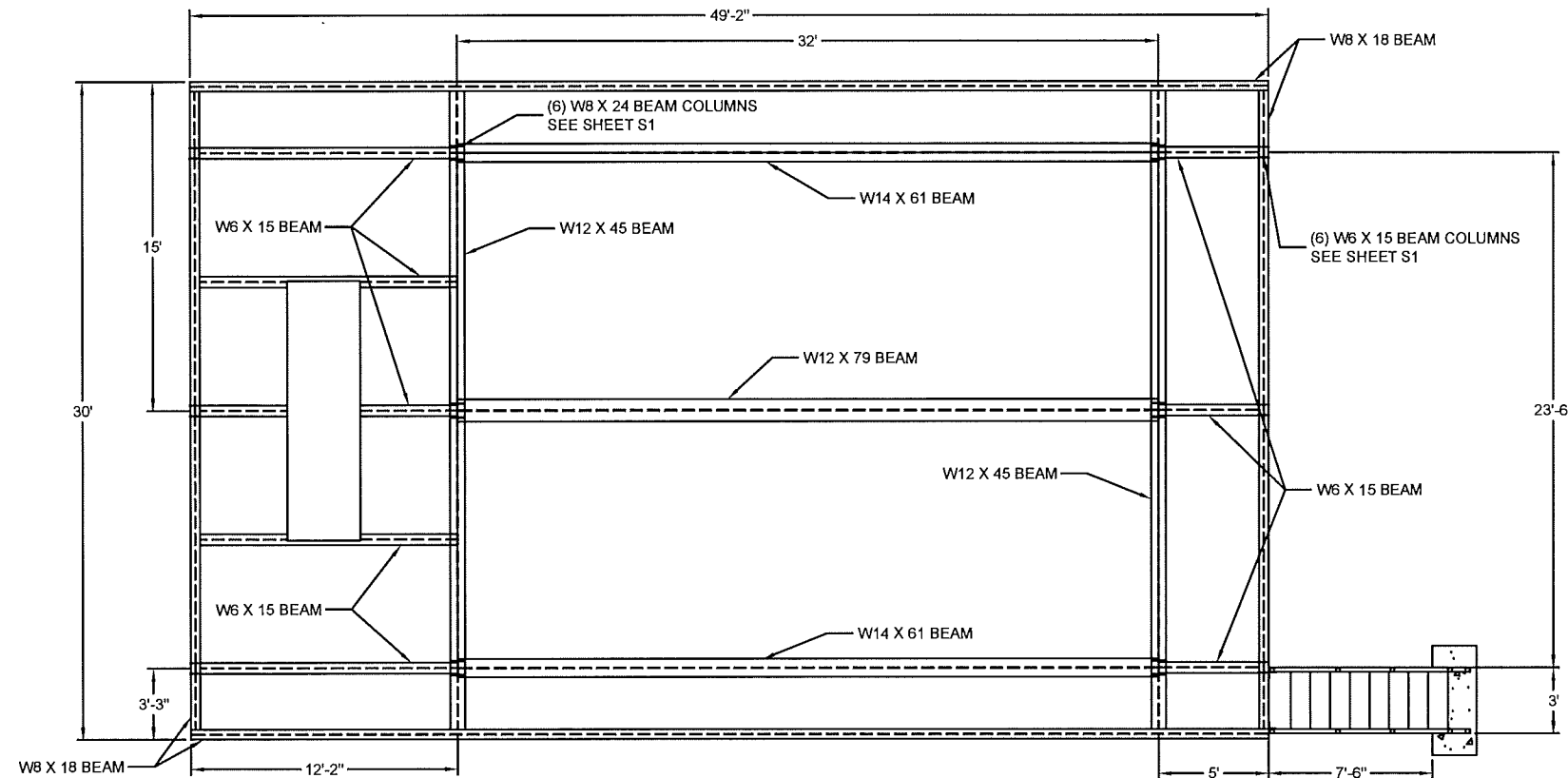
BOLT ASSEMBLIES TO BEAMS

PLATFORM COLUMN

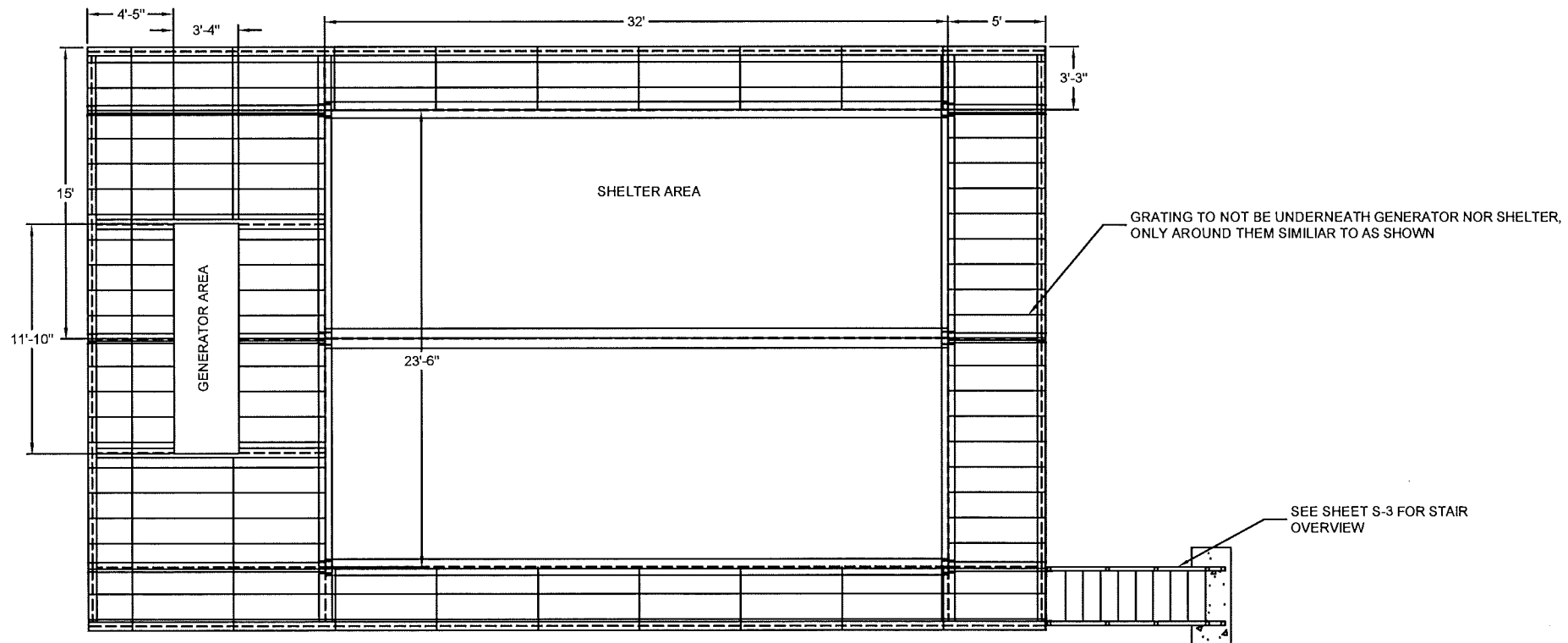
ANCHOR BOLTS

6" EST. PROTRUSION

TYPICAL BEAM COLUMN INSTALL



SECTION A-A, PLATFORM ELEVATION TOP VIEW
(GRATING MISSING TO SHOW PLATFORM MEMBERS)
SCALE: 1:100



SECTION A-A, PLATFORM ELEVATION TOP VIEW
(VIEW SHOWING GRATING)
SCALE: 1:100

PROPRIETARY STATEMENT: THIS DRAWING IS THE PROPERTY OF ALLSTATE TOWER INC. IT IS NOT TO BE REPRODUCED OR COPIED IN ANYWAY WITHOUT PRIOR WRITTEN CONSENT OF ALLSTATE TOWER INC.

REV #	DESCRIPTION	DATE	BY

UNLESS OTHERWISE NOTED DIMENSIONS ARE IN: INCHES

TOLERANCE BANDS:
 .X +3/32" / -0 ANGLES +/- 2°
 .XX +3/32" / -0
 .XXX +1/16" / -0 HOLES +0 / -1/16"

SCALE: NTS

DRAWN BY: J.W.L.
DATE: 12/16/2018

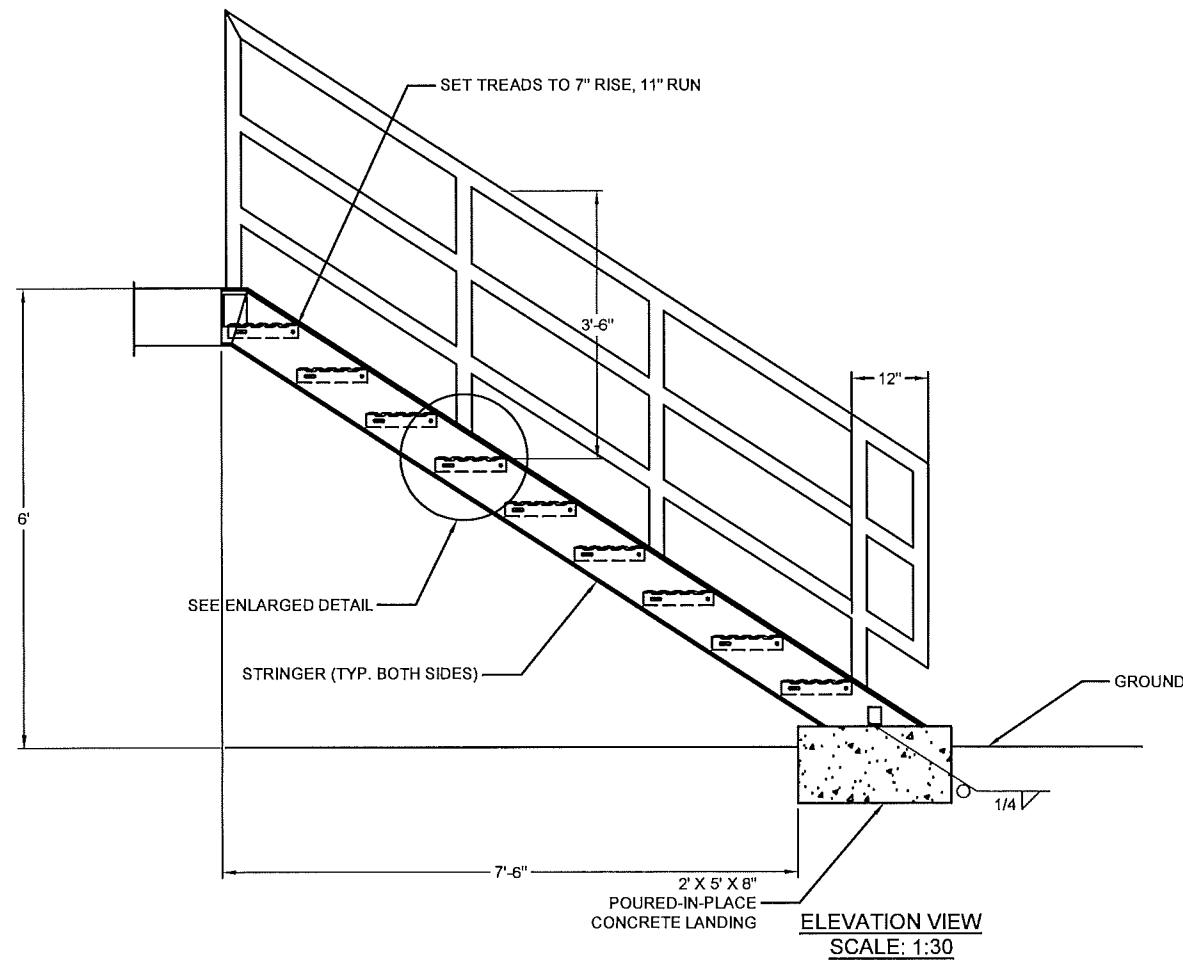
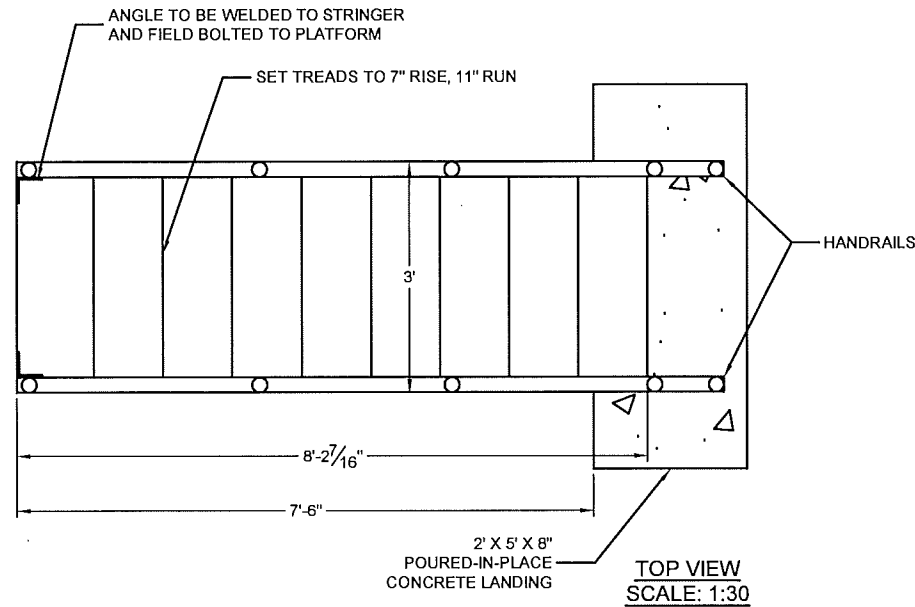
DESCRIPTION: PLATFORM ELEVATION TOP VIEW (SECTION A-A)
ELDRIDGE WILDE SITE
PINELLAS COUNTY, FL
PLATFORM

FILE NAME: FC-075805

SHEET: S-2

ALLSTATE TOWER
 ALLSTATE TOWER INC.
 P.O. BOX 25
 HENDERSON KY 42419
 PHONE: (270) 830-8512
 FAX: (270) 830-8475
 WWW.PTTG.COM

PITTSBURGH TANK & TOWER GROUP
 1918



CONCRETE:

ALL CONCRETE SHALL CONFORM TO ACI'S BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE (ACI 318-11).

ALL CONCRETE SHALL CONSIST OF A 1" MAXIMUM STONE AGGREGATE, A MINIMUM OF 5-1/2 SACKS PER CUBIC YARD, AND A MAXIMUM SLUMP OF 4". TYPE 1 OR TYPE II CEMENT IS TO BE USED. THE CONCRETE SHALL DEVELOP A MINIMUM COMPRESSIVE STRENGTH OF 5000 PSI IN 28 DAYS.

STEEL

PER ACI 318 7.7: MINIMUM COVER ON NON-PRESTRESSED STEEL SHALL BE 3" IF CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH, 1-1/2" FOR #5 BARS OR SMALLER (EXPOSED TO EARTH OR WEATHER), 2" FOR #6 BARS OR GREATER (EXPOSED TO EARTH OR WEATHER). MINIMUM COVER FOR SLABS, WALLS, OR JOISTS NOT EXPOSED TO WEATHER OR GROUND CONTACT SHALL BE 3/4" FOR #11.

ALL STRUCTURAL STEEL SHALL BE IN ACCORDANCE WITH THE 14TH EDITION OF THE AISC ALLOWABLE STRESS DESIGN SPECIFICATIONS.

ALL STRUCTURAL STEEL SHALL CONFORM TO ASTM A36, OR AS OTHERWISE NOTED. ALL REINFORCING STEEL IN CONCRETE SHALL BE HIGH STRENGTH DEFORMED BARS, GRADE 60, ASTM 61-79, WITH A 60,000 PSI MINIMUM YIELD, EXCEPT #4 TIES (GRADE 40).

ALL STEEL (INCLUDING BOLTS, WASHERS, AND NUTS) SHALL BE GALVANIZED, EXCEPT REINFORCING STEEL IN CONCRETE.

REINFORCING STEEL LAP SPLICES ARE NOT ALLOWED UNLESS SHOWN ON DRAWINGS OR AUTHORIZED BY THE STRUCTURAL ENGINEER. THE MINIMUM LAP SPLICE SHALL 40 BAR DIAMETERS. #14 BARS AND #18 BARS CAN NOT BE LAP SPLICED.

CONTRACTOR IS TO PROVIDE SPACERS TO MAINTAIN COVER DISTANCES BETWEEN REINFORCING BAR AND CONCRETE EDGES.



<small>PROPRIETARY STATEMENT: THIS DRAWING IS THE PROPERTY OF ALLSTATE TOWER INC. IT IS NOT TO BE REPRODUCED OR COPIED IN ANYWAY WITHOUT PRIOR WRITTEN CONSENT OF ALLSTATE TOWER INC.</small>				<small>UNLESS OTHERWISE NOTED DIMENSIONS ARE IN: INCHES</small>		<small>DESCRIPTION:</small>	
REV #	DESCRIPTION	DATE	BY	<small>TOLERANCE BANDS: .X +3/32" / -0 ANGLES +/- 2' .XX +3/32" / -0 .XXX +1/16" / -0 HOLES + Ø1/16" / -0</small>		STAIR OVERVIEW ELDRIDGE WILDE SITE PINELLAS COUNTY, FL PLATFORM	
<small>SCALE: NTS</small>				<small>DRAWN BY: J.V.L. DATE: 12/16/2018</small>		<small>FILE NAME: FC-075805</small>	
							<small>SHEET</small> S-3

24' x 32' COMMUNICATIONS SHELTER

EQUIPMENT SHELTER SPECIFICATIONS:

- Floor load: 300 psf. (Reinforced in areas specified by Project Manager at time of drawing review/approval.)
- Floor load: 90 psf. – While lifting the shelter.
- Roof load: 150 psf.
- Walls: Meets FBC 2017 Vult=193mph

BUILDING SIZE: (Equipment Shelter)

- Outside: (Eaves) 23'-9" W x 32'-4" L x 11'-1" H
- Outside: (Base) 23'-5" W x 32'-0" L x 11'-1" H
- Equipment Room: 22'-5" W x 31'-0" L x 9'-0" H (Nominal)

SHELL:

- Floor: 6-3/4" solid concrete floor
- Walls: 4" Solid normal weight concrete.
- Roof: Solid concrete 4" at eave and 5" at ridge.
- Design: Step-joint design.
- Tie down: (4) Tie down Plates.
- Bolts: Painted bolts to replace lifting lugs.
- Concrete: 5000 psi lightweight concrete.
- Reinforcing: Steel #4 and #6 bars, 60,000 psi (Grade 60 ASTM-615).
- Ratings: Walls to be 2 hr. fire rated.
- Ballistics: Tested for UL-752, (HPR - 30.06 - point blank range)

EXTERIOR FINISH:

- Walls: Broom finish, concrete stained.
- Roof: Trowel surface and sealed, broom finish.

INTERIOR FINISH:

- Floor: Covered with 1/8" x 12" x 12" white commercial vinyl composite tile and a 4" base cove.
- Interior Walls: 5/8" APA Rated OSB covered with a white, fiberglass reinforced plastic (FRP).
- Ceiling: 5/8" APA Rated OSB covered with a white, fiberglass reinforced plastic (FRP).

INSULATION:

- Floor: R-11 Rigid Polyisocyanurate Insulation
- Exterior Walls: R-11 Rigid Polyisocyanurate Insulation
- Ceiling: R-19 Rigid Polyisocyanurate Insulation

DOORS:

- Quantity/Size: (1) 3'-6" x 7'-0" level IV bullet resistant door.

-
- Door Type: Ballistex ® UL Listed bullet resistant galvanealed steel. Insulated metal door, powder coated to match exterior finish. Florida Approved.
 - Frame Type: Balistex ® UL Listed bullet resistant steel. Powder Coated galvaneal metal frame,
 - Lockset: Best brand deadbolt with cylinder, Passage Lever set (Class 1).
 - Hinges: Continuous SS hinge
 - Weather Strip: Magnetic weather stripping
 - Threshold: Saddle type threshold, mill finish aluminum
 - Door Sweep: Neoprene style, mill finish aluminum
 - Closer: Hydraulic Door Closers with Hold Open
 - Door Canopy: Powder coated rain hood above door.

FIRE PROTECTION:

- Fire Extinguisher: (1) 10# CO2 wall mount fire extinguisher.
- Fire Extinguisher: (1) 20# Dry chemical wall mount fire extinguisher.
- Fire Suppression: Factory installed FM-200 Fire Suppression System

UPS / DC System:

- UPS: (2) Eaton 93PM 50Kw 1 Phase UPS
208V providing 15 minutes Runtime at Full Load.
Includes (2) wall mounted Maintenance Bypass
Switches and 2 External Battery Cabinets

ELECTRICAL:

- Service: 120/240/400A 3 phase.
- Main Service Disconnect: (1) 400A Enclosure with breaker. Square D
- Surge Suppressor Disc: (1) 120/240V breaker enclosure, Square D
- Surge Suppression: (1) Transtector – DSAPEXIMAX808
Type 1A SAD/MOV.
(1) Transtector – DSAPEXIMAX808MM
Type 2 MOV.
(5) Transtector DSWPH03
(4) Transtector I2R-ICP120V
- Main Breaker Panel: (1) 400A 120/240V, 42 Space, Square D –
Factory built NQ Panelboard
- Sub-Panels: (8) 200A 120/240V 42 space panel with main
breaker, Square D
- Receptacles: (12) 20A 120V Duplex Receptacles at a minimum
of 6' around the perimeter of equipment room.
- Twist Lock Receptacles: (64) 20A, 2 circuits above each rack, mounted to
the side of the cable ladder.

-
- GFI Receptacles: (1) Exterior GFI Receptacle on own circuit.
 - Telco: (4) simplex receptacles for telco.
 - Tower light circuits: (2) 30A circuits provided for Tower lights.
 - Note: all electrical conduits to be galvanized EMT and fittings to be compression type. No set screw type permitted. Horizontal runs of EMT to be installed 7'-6" aff whenever possible. All flex conduit to be seal tight type. Wire-way, conduit and/or drop box will be properly de-rated for compliance with current adopted edition of NEC code.

ATS & GENERATOR:

- ATS: Cummins OTPC
NEMA 1 Enclosure
- Generator: Cummins, 150 KW, Diesel
fueled, C175 D6D, 180 MPH Enclosure, 68 Hour
Runtime with 500 gallon Florida DERM Tanks

LIGHTING:

- Interior: (22) 4 ft., LED fixture, with wrap around lens,
- Exterior: (1) LED mounted at exterior door,
controlled by switch and motion detector.
- Emergency/Exit: (1) Emergency/Exit light combo. McPhilbin
CCAXL 1RW.
- Wall switches: (2) 20A Single pole switch.

AIR CONDITIONING/HEATING:

- Quantity: 4
- Brand: Bard
- Description: 5 Ton units,
integrated 5 kW heat strips, time delay anti-short
cycle timer, high and low pressure switch, low
ambient control, and a one year parts and labor
guarantee
- Temp. Control: (1) Lead Lag Controller with alarm functions.

ALARM SYSTEM:

- Terminal Block: (3) Dry terminal, 66 Block
and amphenol connector.
- Cable: (3) 50ft. of 25 pair shielded cable with a 25 pin
amphenol connector.
- Door: (1) Door intrusion, magnetic.
- Temperature: (1) High (from HVAC controller)
- Temperature: (1) Low (from HVAC controller)
- Power: (1) Power Fail alarm.

-
- Surge Arrestor (2) Surge arrestor
 - Smoke: (1) Photoelectric detector
 - Smoke: (1) Ionization detector
 - Heat: (1) Heat Detector
 - Surge Suppression: (2) Surge Arrestor
 - HVAC Fail: (1) HVAC Power Loss (from HVAC controller)
 - Generator: (1) Generator run
 - Generator: (1) Low Oil Pressure
 - Generator: (1) Low Coolant
 - Generator: (1) Overcrank
 - Generator: (1) High Coolant temp
 - ATS: (1) ATS Transfer Complete

CABLE LADDERS:

- 24" Wide: (110) LF of 24" wide cable ladder, gold chromate. Mount 8'-0" aff to the bottom of the cable ladder. Centered across main cable entry port.
- 6" Wide: (10) LF of 6" wide cable ladder, gold chromate. Mount on Telco board.

CABLE ENTRY:

- Coax Entry: (1) (1) Microflect B1340 24-4" Cable Entry Port.
- Rigid Conduit: (2) 3" PVC sleeve cast in concrete for telco entry.

GROUNDING:

- Halo System: No. 2 AWG Bare, stranded copper wire around inside perimeter of building/rooms as shown on supplied plans with each end lugged to master ground bar, Single point system
- Bonding: No. 6 insulated copper wire from metallic equipment to Halo.
No. 6 green insulated copper wire from metallic items as electrical boxes, and equipment to perimeter ground buss.
#2 stranded green jacketed communication equipment ground buss secured to Newton #2106C brackets mounted to the cable ladder.
- Ground Bars: (1) EPK 24 Kit ground bars, insulators, connecting rods and exterior copper straps to earth ring. Interior/exterior.
- Door: Door grounded with welding cable
- HVAC: HVAC should be grounded to internal halo only.

-
- Ground Rod: Exterior ground rod and copper straps provided by Site Contractor
 - Note: All grounding to meet or exceed Motorola R56 Specifications.

MISCELLANEOUS:

- Warning Signs: (1) EME Warning sign.
(1) No Smoking sign Brady 1NL67.
- Safety: (1) Eye wash station.
(1) First aid kit.
- Binder: Binder Holder for storage of Documentation
- Telco Board: (1) 4'-0" x 4'-0" x 3/4" x FRP covered plywood Telco board.
- Housekeeping: (1) Waste basket
(1) Broom
(1) Dust Pan
(1) Utility Holder



October 18, 2018

Mr. Thomas Campbell
State of Florida
Dept. of Business and Professional Regulations
1940 North Monroe Street, Suite 90A
Tallahassee, FL 32399-0772

RE: Thermobond Buildings, LLC
Elkhart, IN
Model: Rev. to AGB9859

Dear Mr. Campbell:

Enclosed please find one set of documents for the above-noted model.

PFS Corporation hereby certifies that it has examined the building plans and other documents submitted by the manufacturer for certification and found them to be in compliance with the following codes and standards:

2017 Florida Building Code Building
2017 Florida Building Code Residential
2017 Florida Building Code Mechanical
2017 Florida Building Code Plumbing
2017 Florida Building Code Fuel Gas
2017 Florida Building Code Energy Conservation
2017 Florida Building Code Accessibility
2014 National Electrical Code
61G20-3 FAC for Product Approval

If you have any questions concerning this submission, please feel free to contact this office at any time.

Approved By:

A handwritten signature in black ink, appearing to read "Mark Severson".

Mark Severson
Plan Reviewer – SMP0000020

Enclosures: As Stated

cc: Jim Brinkmann
File



Date Received at PFS: _____
 IBC Transmittal No. (by PFS): _____
 Project No. (by PFS): _____

ADDITIONAL OR MODIFIED ACCEPTANCE (MODULARS/PANELIZED)

This form is to be used only when the manufacturer is seeking acceptance of an additional model, modified model or model name change which uses a previously accepted building system.

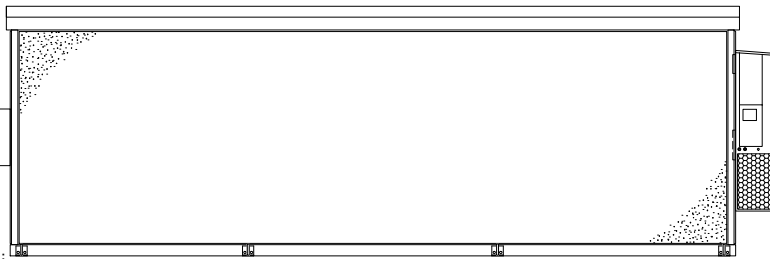
Current PFS Building System Acceptance #: 18-0004610
 Model Name/ No. AGB9859
 Manufacturer's Name: Thermobond Buildings
 Plant(s) at which model will be produced 58140 County Road 3 Elkhart, IN. 46517

Check One: _____ NEW MODEL Revised Model*

TECHNICAL DATA			
	Conforms		
	Yes	No	N/A
Floor Plan Showing:			
Braced Wall Method or Shearwalls	✓		
Building Size (LxW Dimensions)	✓		
Room Sizes, Light & Ventilation Schedule	✓		
Exit Requirements	✓		
Electrical Outlet Spacing & Smoke Detector	✓		
Location of Labels & Data Plates	✓		
Use Group, Type Const., Total Sq.Ft. Area	✓		
Plumbing System Design or Reference No. (<u>N/A</u>)			✓
Heat Loss Calculations or Reference No. (<u>Exempt per 101.4.8.5</u>)			✓
HVAC/Furnace Size/Model No. (<u>Bard / W60A2-A05XPXXXJ</u>)	✓		
Thermal Performance Calculations or Reference No. (<u>Exempt per 101.4.8.5</u>)			✓
Electrical Load Calculations or Reference No. (<u>See Sheet E1</u>)	✓		
Service Size and Location (<u>See Sheet A1, E1</u>)	✓		
Applicable Building Codes <u>2014 NEC, 2017 FBC / FMC / FEC</u>			
Submit model to the following states: <u>FLORIDA</u>			
*Description of Modification: <u>Updated Group Use to U, was S2. Added note on title page that building is 2 hour fire rated. Removed from Davie Site from Site Name in title block and put Motorola.</u>			
Requested by: <u>Jim Brinkmann</u> Date: <u>10/5/18</u> (designer)			
For PFS Use			
Staff Plan Reviewer <u>Mark Anderson</u> IBC Certification #: _____ Date: <u>10/18/18</u>			
Structural Calculation(s) Reviewed By: _____ P.E. #: _____ Date: _____			
Remarks: _____			
**(1) copy sent to IBC within 15 days of approval.			
VERBAL APPROVAL GIVEN <input type="checkbox"/>	By Whom: _____	To Whom: _____	Date: _____
MODEL WAS DEVIATED <input type="checkbox"/>	Revision Number: _____		

THIS FORM SHALL BE FILLED OUT COMPLETELY WITH EACH MODEL ACCEPTANCE OR MODIFICATION PRIOR TO SUBMITTAL TO PFS.

BROWARD COUNTY, FL 23'-5" X 32'-0" SHELTER



BUILDING NOTES:

- INSTALLATION OF FOUNDATION TO DEMO PLATES
- THESE PLANS COMPLY WITH RULE 61G02-3.006 FOR PRODUCT APPROVAL.
- THE SEALED SET OF PLANS ARE ON FILE IN THE THIRD PARTY AGENCY'S OFFICE AS DIRECTED BY THE BUREAU.
- THIS BUILDING HAS BEEN DESIGNED OR APPROVED FOR PLACEMENT IN HIGH VELOCITY HURRICANE ZONES (HVZ).
- THIS BUILDING IS SUBJECT TO REVIEW AND APPROVAL OF THE FIRE INSPECTOR ON SITE BY COMPLIANCE WITH CH. 633 FIRE SAFETY CODE.
- THE MANUFACTURER'S (MFR) SHEET AND THE SPARE (SPR) INSDMA SHALL BE PERMANENTLY MOUNTED TO OR ABOUT THE ELECTRICAL PANEL.
- THIS STRUCTURE HAS BEEN DESIGNED FOR ERECTION OR INSTALLATION ON A SITE BUILT PERMANENT FOUNDATION AND IS NOT DESIGNED TO BE MOVED ONCE ERECTED OR RE-ERECTED.
- LIGHT FRAME CONSTRUCTION IDENTIFICATION PLACARDS (ON SITE OR DETAILS PROVIDED).
- THIS BUILDING MAY BE BUILT IN MIRROR IMAGE.
- THE CONCRETE ROOF, WALL AND FLOOR PANELS ARE 2 HOUR RATED, SEE 2017 FLORIDA BUILDING CODE TABLE 721.1(2) NO. 4-1.1 AND TABLE 721.1(3) NO. 4-1.1.



SPECIAL CONDITIONS / LIMITATIONS

- THIS STRUCTURE IS NOT DESIGNED FOR INSTALLATION IN A FLOOD HAZARD AREA.
- THIS STRUCTURE IS NOT DESIGNED FOR HUMAN OCCUPANCY EXCEPT FOR SHORT PERIODS FOR EQUIPMENT MAINTENANCE.
- CONSTRUCTION SHALL BE RESPONSIBLE FOR ANY ANTENNA INSTALLATION ADJACENT TO THIS BUILDING.
- THIS BUILDING SHALL NOT BE LOCATED AT A SITE THAT EXCEEDS THE LISTED DESIGN WINDSPEED.
- IF BATTERIES BY AN ELECTROLYTE CAPACITY OF MORE THAN 50 GALLONS ARE TO BE INSTALLED IN THIS BUILDING, ONE OF THE FOLLOWING MUST BE INSTALLED BY OTHERS ON SITE:
 - AN EXHAUST FAN BY A HURRICAN LIFT SWITCH TO LIMIT THE HURRICAN TO 1% OF THE TOTAL VOLUME OF THE ROOM.
 - CONTROLED VENTILATION SHALL BE PROVIDED AT A RATE NOT LESS THAN 1 CFM PER SQUARE FOOT OF FLOOR AREA OF THE ROOM.
 - CLIFF TOP VENTILATION SHALL BE PROVIDED AT A RATE NOT LESS THAN 1 CFM PER SQUARE FOOT OF FLOOR AREA OF THE ROOM.
- THIS BUILDING IS NOT INTENDED FOR OCCUPANCY. THE LISTING NUMBER IS REQUIRED FOR A SERVICE CONNECTION PERMITS.
- BUILDING SHALL COMPLY WITH 2017 FLORIDA BUILDING CODE TABLES FOR MEANS OF EGRESS FOR OCCUPANCY GROUP U.

DESIGN LOADS

OCCUPANCY TYPE: U
FLOOR LIVE LOAD: 200 psf
ROOF DESIGN LOAD: 20 psf

$$P_f = (0.7) * (C_d) * (V) * (C_t) * (P_g)$$

EXPOSURE FACTOR: $C_e = 1.0$
IMPORTANCE FACTOR: $I_n = 1.0$
THERMAL FACTOR: $C_t = 1.2$
GROUND SNOW LOAD: $P_g = 0$

WIND DESIGN

WIND SPEED: 130 MPH 3 SECOND GUST
EXPOSURE: B
 $a = 3R$
 $Gz = + 0.18$ (PER ASCE 7)

COMPONENTS/CLADDING:

ULTIMATE ULTIMATE
ZONE 1: $P_u = 34.60$ PSF $P_w = 83.00$ PSF
ZONE 2: $P_u = 34.60$ PSF $P_w = 127.60$ PSF
ZONE 3: $P_u = 34.60$ PSF $P_w = 103.40$ PSF
ZONE 4: $P_u = 86.30$ PSF $P_w = 104.60$ PSF
ZONE 5: $P_u = 86.30$ PSF $P_w = 127.60$ PSF

SHIPPING INFORMATION:

SHIPPING HEIGHT: 11'-0 1/4"
SHIPPING WIDTH: 27'-0"
SHIPPING LENGTH: 32'-0"
HEAVIEST MODULE WEIGHT: 86,750 LBS
OVERALL WEIGHT: 174,000 LBS

SEISMIC DESIGN: N/A

DRAWING INDEX					
SHEET	DESCRIPTION	REV 1	REV 2	REV 3	REV 4
C1	COVER SHEET				
C2	MATERIALS LIST				
A1	FLOOR PLAN				
A2	ELEVATIONS				
A3	FOUNDATION				
E1	ELECTRICAL SCHEMATIC				
E1.1	ALUM SHEDDING				
E1.2	FIRE PANEL DIAGRAM				
E2	GROUNDING LAYOUT				
E3.1	GROUNDING DETAILS				
E3	ELECTRICAL DIMENSIONS				
E4	ELECTRICAL DETAILS				
F1	FLOOR CASTINGS				
F2	WALL CASTINGS				
F3.1	WALL CASTINGS DETAILS				
F3	ROOF CASTINGS				
F4	CROSS SECTION				
F5	CONSTRUCTION DETAILS				
F5.1	CONSTRUCTION DETAILS				
T1	TRANSPORT CONNECTIONS				
T2	INSTALL DETAILS				

RELEASE DATES			
STATUS	RELEASED TO	BY	DATE

REVISIONS			
REV	DESCRIPTION	BY	DATE
1			
2			
3			
4			
5			
6			

FLORIDA

OCCUPANT LOAD: 0
CONSTRUCTION TYPE: VB
USE GROUP: U

2014 NATIONAL ELECTRIC CODE
2017 FLORIDA STATE BUILDING CODE-BUILDING
2017 FLORIDA STATE BUILDING CODE-MECHANICAL
2017 FLORIDA STATE BUILDING CODE-ENERGY
(EXEMPT FROM FLORIDA ENERGY CODE PER SEC. 101.4.8.5 FOR EQUIPMENT SHELTERS)

2014 NATIONAL ELECTRIC CODE
2017 FLORIDA STATE BUILDING CODE-BUILDING
2017 FLORIDA STATE BUILDING CODE-MECHANICAL
2017 FLORIDA STATE BUILDING CODE-ENERGY
(EXEMPT FROM FLORIDA ENERGY CODE PER SEC. 101.4.8.5 FOR EQUIPMENT SHELTERS)

MFT 9439 - MODEL AGB9859

STAMPS AND SEALS

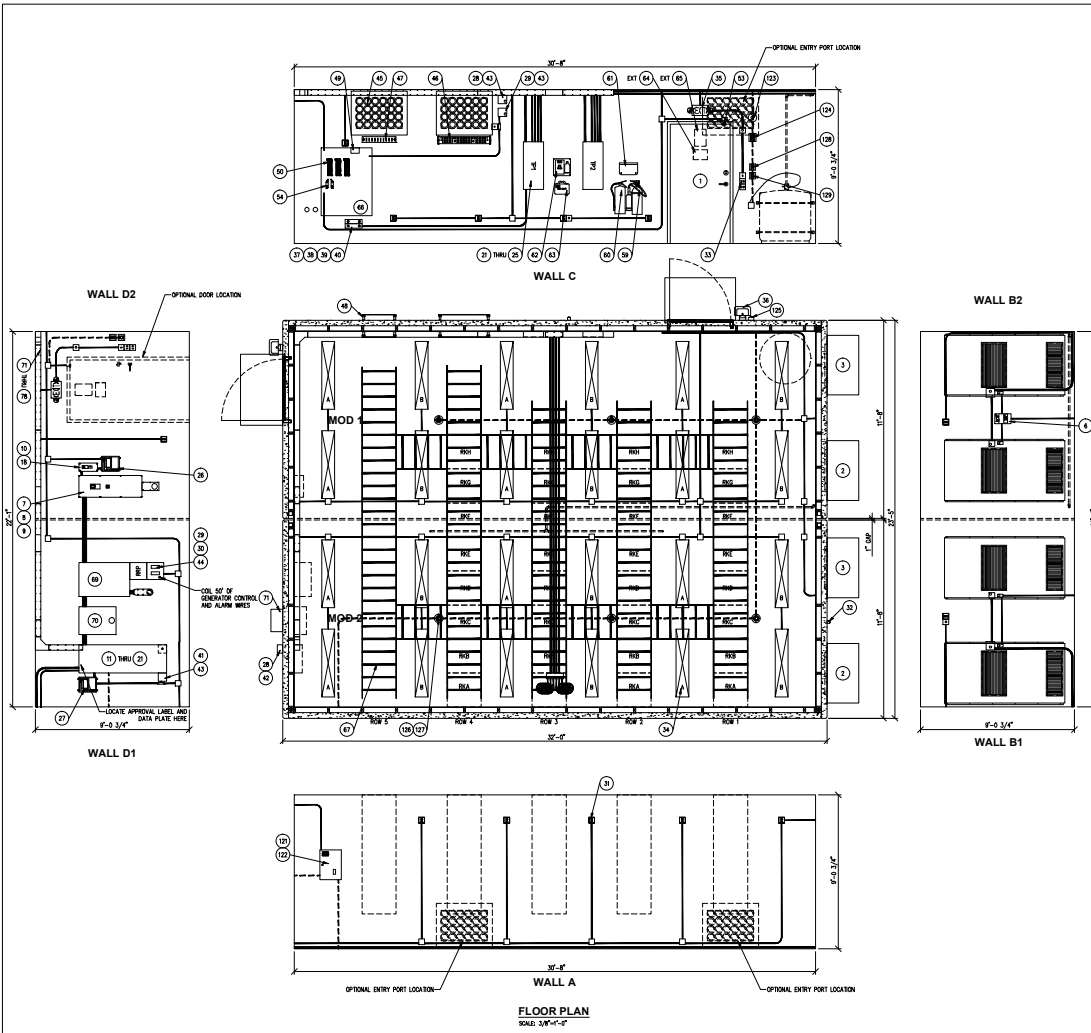
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MOTOROLA
23'-5" X 32'-0" SHELTER
COVER

PROJECT NAME: **MASTER**
DRAWING NUMBER: **AGB9859**

DATE: 3/14/18
SALES MANAGER: T. Fye
DRAWN BY: J. Woagner
SERIAL NUMBER: 1710-471
SCALE: 24X36
SHEET: NONE
C1



- COMMERCIAL POWER:**
120/240VAC, 40AMP SINGLE PHASE SERVICE.
- CONDUIT RUNS:**
1. ALL CONDUIT RUNS TO BE 1 1/2" O.D. UNLESS STATED OTHERWISE.
 2. ALL CONDUIT RUNS TERMINATING AT SERVICE ENTRANCE EQUIPMENT SHALL CONTAIN BENDED BUSINGS.
 3. INTERMEDIATE BENDING 3" OR MORE CURRENT CARRYING CONDUCTORS SHALL BE DERATED PER TABLE 310-109(C)(8) OF APPLICABLE EDITION OF THE NEC.
 4. CONDUIT SHALL BE BASED ON CHAPTER 9, APPENDIX C OF THE NEC.
 5. ALL ENT CONNECTIONS TO BE MADE WITH COMPRESSION TYPE FITTINGS.
- CABLE LADDER:**
1. CABLE LADDER IS TO BE 8"-10" AFF, AND INSTALLED IN ACCORDANCE WITH ARTICLE 302 OF THE NEC.
 2. CABLE LADDER SHALL BE 1/8" THICK.
- GROUNDING:**
1. ALL BONDING EXCEPT FOR CABLE LADDER TO CONFORM TO ARTICLE 250 OF THE NEC.
 2. CABLE LADDER GROUNDING TO CONFORM TO ARTICLE 302 OF THE NEC.
 3. ALL EYE GROUNDING TO MEET MOTOROLA R-26 CRITERIA.
- GENERAL NOTES:**
1. LABEL FACE OF ALL ELECTRICAL EQUIPMENT WITH PNEUMATIC LABELS: BLACK WITH WHITE LETTERS, EXTERNAL UNLESS NOTED OTHERWISE. LABELS SHALL BE 1/2" HIGH. EXCEPT SHALL BE ALL WIRE EQUIPMENT SHALL HAVE PNEUMATIC LABELS AND WITH WHITE LETTERS, EXTERNAL UNLESS NOTED OTHERWISE.
 2. CONDUIT SHALL BE 1/2" O.D. UNLESS NOTED OTHERWISE.
 3. CONDUIT SHALL BE 1/2" O.D. UNLESS NOTED OTHERWISE.
 4. COIL AND TAG SET OF ALARMS WIRE FOR GENERATOR ALARMS.
 5. CONDUIT CONDUIT ALARMS TO THE SHARED SHARED PROTECTION MODULES.
 6. COIL AND TAG SET OF 800 WIRE FOR CIRCUITS.
 7. COIL SET OF ALARMS WIRE FOR TROUBLE LIGHT ALARMS.
 8. COIL SET OF 800 WIRE FOR GENERATOR CONTROL WIRE.

STAMPS AND SEALS

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MOTOROLA 23'-5" X 32'-0" SHELTER FLOOR PLAN

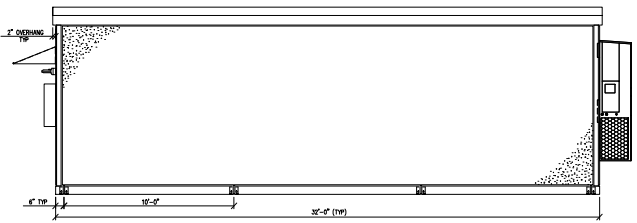
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DRAWING NUMBER: AGB9859

DATE: 3/14/18
SALES MANAGER: T. Fye
DRAWN BY: J. Woagner
SERIAL NUMBER: 1710-471
SCALE: 24X3R
SHEET: NONE

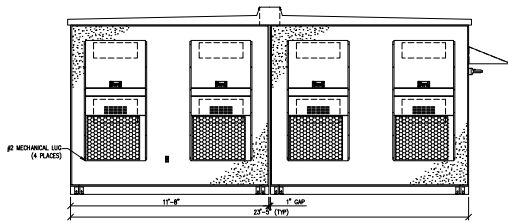
A1

EXTERIOR FINISH SCHEDULE			
ITEM	SURFACE	FINISH	PAINT COLOR
ROOF	TROWELED SMOOTH	SEALED, ELASTOMERIC GROUT	WHITE
WALLS	TROWELED SMOOTH	SMOOTH STAINED CONCRETE	AUTUMN BROWN
DOORS	STEEL, RATED	PAIN	TELECOM BROWN
JOINTS	AS FINISHED	SEALED PER DETAILS SHEET	TELECOM BROWN

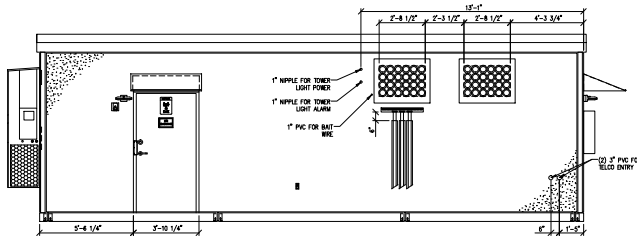
ELEVATION NOTES:
 1. SEE MATERIALS LIST FOR SUPPLIED LOOSE ITEMS.
 2. SEE MATERIALS LIST FOR DOOR HARDWARE.



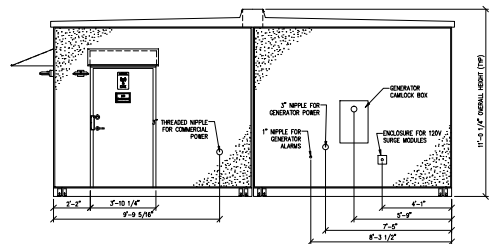
FRONT ELEVATION (WALL A)
SCALE: NONE



RIGHT ELEVATION (WALL B)
SCALE: NONE



REAR ELEVATION (WALL C)
SCALE: NONE



LEFT ELEVATION (WALL D)
SCALE: NONE

STAMPS AND SEALS

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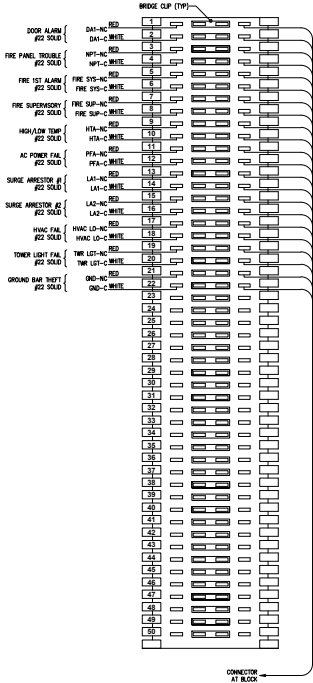
**MOTOROLA
 23'-5" X 32'-0" SHELTER
 ELEVATIONS**

**MASTER
 DRAWING NUMBER
 AGB9859**

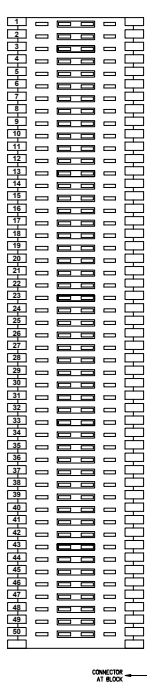
DATE: 3/14/18
 SALES MANAGER: T. F. Ye
 DRAWN BY: J. Woagner
 SERIAL NUMBER: 1710-471
 SCALE: ~ 24X3R
 SHEET: NONE
A2

ALARM NOTES:
 1. ALL ALARMS TO BE NORMALLY CLOSED.
 2. WIRELESS SHALL TESTED FOR WIRE IN STANDING.

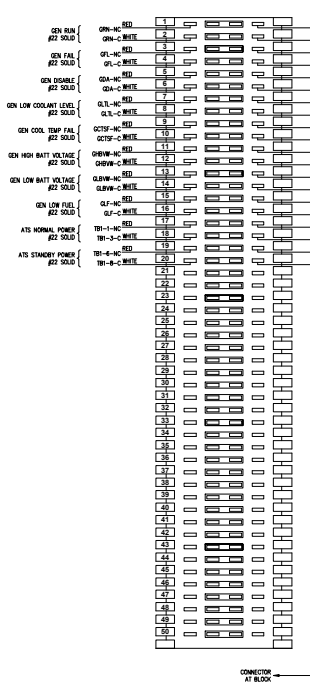
ALARM BLOCK #1



ALARM BLOCK #2



ALARM BLOCK #3



ALARM BLOCKS
SCALE: NONE

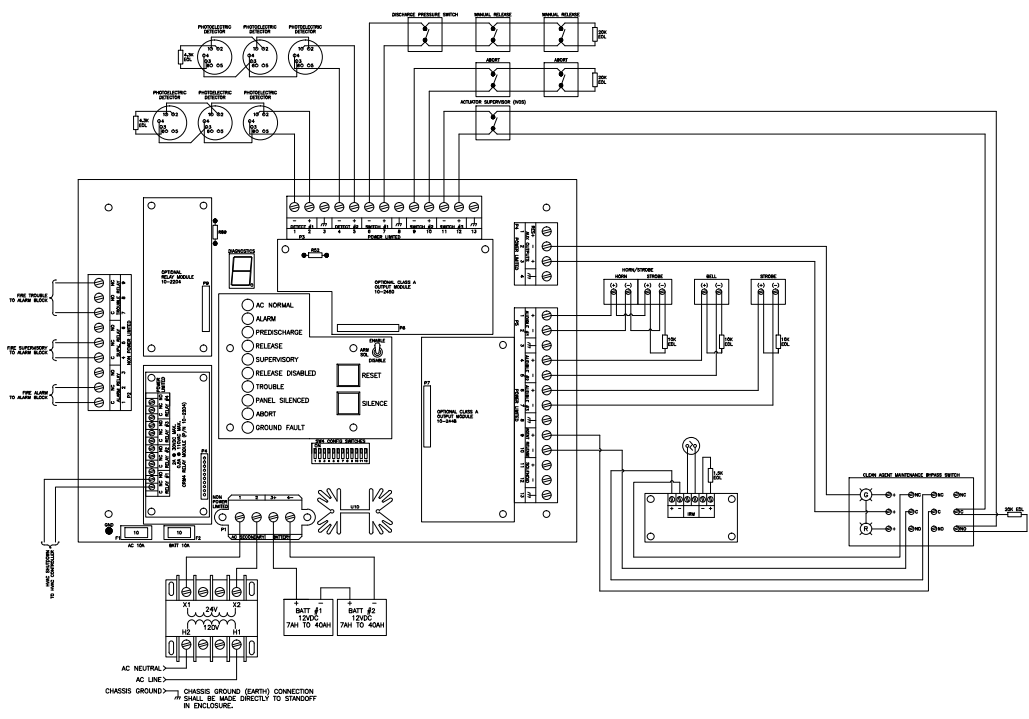
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MOTOROLA
23'-5" X 32'-0" SHELTER
ALARM DIAGRAM

PROJECT NAME: MASTER
DRAWING NUMBER: AGB9859

STAMPS AND SEALS

DATE: 3/14/18
SALES MANAGER: T. E. Yeager
DRAWN BY: J. Woagner
SERIAL NUMBER: 1710-471
SCALE: 24X36
SHEET: NONE
E1.1



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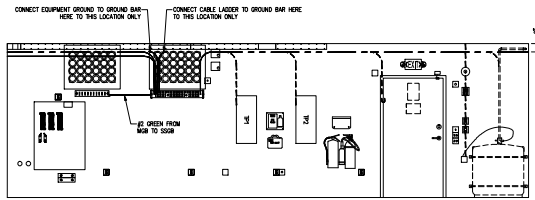
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MOTOROLA
23'-5" X 32'-0" SHELTER
FIRE PANEL DIAGRAM

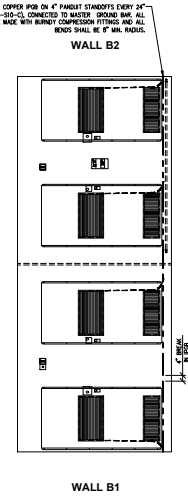
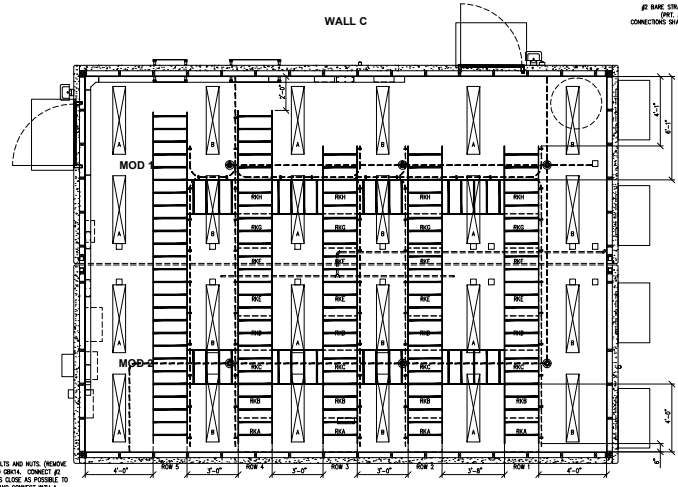
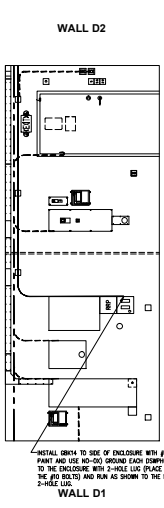
PROJECT NAME: MASTER
DRAWING NUMBER: AGB9859

STAMPS AND SEALS

DATE: 3/14/18
 SALES MANAGER: T. F. Ye
 DRAWN BY: J. Woagner
 SERIAL NUMBER: 1710-471
 SCALE: ~ 24X3R
 SHEET: NONE
E1.2

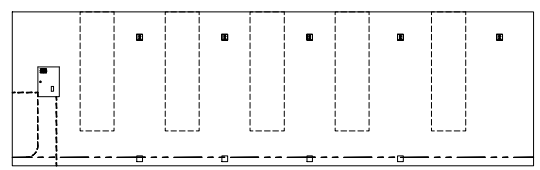


- CABLE LADDER:**
- CABLE LADDER TO BE #2-#4 A.L.S. AND INSTALLED IN ACCORDANCE WITH ARTICLE 310 OF THE NEC LEVEL TO WITHIN 1/8" R. 10' OR SMALLER.
- GROUNDING:**
- ALL GROUNDING EXCEPT FOR CABLE LADDER TO CONFORM TO ARTICLE 250 OF THE NEC.
 - CABLE LADDER GROUNDING TO CONFORM TO ARTICLE 310 OF THE NEC.
 - ALL SITE GROUNDING TO MEET MOTOROLA R-08 GUIDELINES.



INSTALL BRN TO SIDE OF ENCLOSURE WITH #10 BOLTS AND NUTS (REMOVE POINT AND USE #10-30) GROUND SCREW DOWN TO GROUND. CONNECT #8 TO THE ENCLOSURE WITH 2-HOLE LUG (PLACE AS CLOSE AS POSSIBLE TO THE #10 BOLT) AND RUN AS SHOWN TO THE SCB AND CONNECT WITH A 2-HOLE LUG.

#8 BARE STRANDED COPPER FOR OR 4" PANEL STANDOFFS EVERY 24" (MFG. #P25-210-CL CONNECTED TO MASTER GROUND BAR. ALL CONNECTIONS SHALL BE MADE WITH ENERGY CONPRESSION FITTINGS AND ALL BENDS SHALL BE 8" MIN. RADIUS.



WALL A
GROUNDING LAYOUT
SCALE: 3/8"=1'-0"

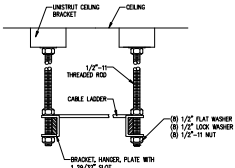
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MOTOROLA
23'-5" X 32'-0" SHELTER
GROUNDING LAYOUT

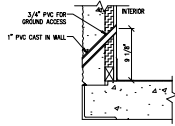
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DRAWING NUMBER: AGB9859

STAMPS AND SEALS

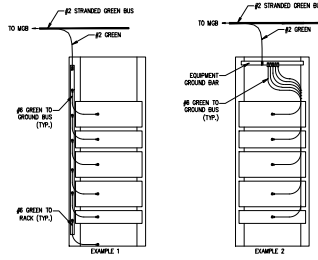
DATE: 3/14/18
SALES MANAGER: T. F. Ye
DRAWN BY: J. Woagner
SERIAL NUMBER: 1710-471
SCALE: ~ 24X3R
SHEET: NONE
E2



LADDER INSTALLATION DETAIL
SCALE: NONE

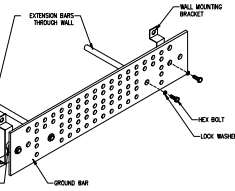


45° PVC NIPPLE DETAIL
SCALE: NONE

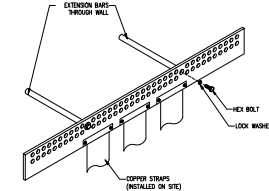


EQUIPMENT GROUNDING ELEVATION EXAMPLE
SCALE: NONE

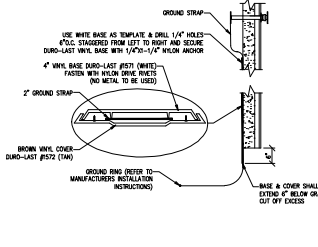
- GROUNDING NOTES:**
- USE 10-00 AT ALL GROUND TERMINATIONS.
 - IN PLACES WHERE THE GROUND BUS WIRE IS LESS THAN 2" FROM METALLIC OBJECTS AND NOT BONDING, HEAVILY TAPE THE SECTION WITH GREEN TAPE. WHERE NECESSARY, REMOVE THE TIE WRAPS AND RE-INSTALL AFTER TAPING AND TAPE C-TAPS FIRST AND THEN TAPE THEM IN A CONTINUOUS MANNER.
 - PLACE HEAVY SHIELD TAPPING THE GROUND BAR METALS THAT FORMS THE MOUNTING CHANNEL.
 - ALL DOORS TO BE GROUND TO THEIR FRAMES WITH WELDING WIRE. USE #2 GAUGE WELDING WIRE AND STANDARD BRACKET TWO-HOLE LUGS PLACE 1/2" BAND OF GREEN TAPE AT EACH END OF THE JAMMER.
 - INTERIOR PERIMETER GROUND BUS (IPGB) IS BASE STRANDED COPPER AROUND INSIDE PERIMETER OF BUILDING WITH EACH END LUGGED TO THE GROUND BAR.
 - BONDING JAMMERS: #2 GREEN STRANDED INSULATED WIRE FROM METALLIC EQUIPMENT TO IPGB AND ADDRESS LADDER RACK SPACES/CROSSUTES.
 - EQUIPMENT GROUND BUS: #2 GREEN RAN OUTSIDE EACH RUN OF CABLE LADDER WITH NEWTON CLIPS (#2104C).



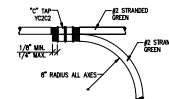
INTERIOR GROUND BAR DETAIL
SCALE: NONE



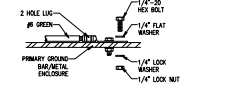
EXTERIOR GROUND BAR DETAIL
SCALE: NONE



GROUND BAR/STRAP/COVER DETAIL
SCALE: NONE

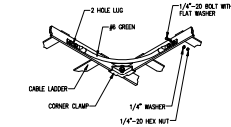


EQUIPMENT GROUND TAP
SCALE: NONE



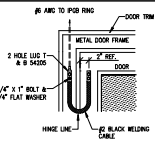
- SELECT BOLT LENGTH TO PROVIDE A MINIMUM OF TWO EXPOSED THREADS.
- BURSH MOUNTING SURFACE TO REMOVE PAINT IN THE AREA OF LUG CONTACT.
- APPLY ANTI-OXIDANT COMPOUND TO MATING SURFACE OF LUG AND WIFE CLEAN EXCESS COMPOUND.
- ONLY ONE LUG PER SET OF BOLTS.

GROUNDING CONNECTION
SCALE: NONE

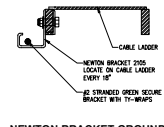


ACROSS EVERY LADDER TO LADDER CONNECTION

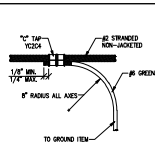
CABLE LADDER BOND DETAIL
SCALE: NONE



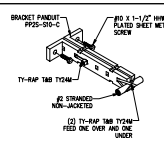
DOOR BONDING DETAIL
SCALE: NONE



NEWTON BRACKET GROUND
SCALE: NONE



IPGB RING GROUND TAP
SCALE: NONE



IPGB GROUND INSTALLATION
SCALE: NONE

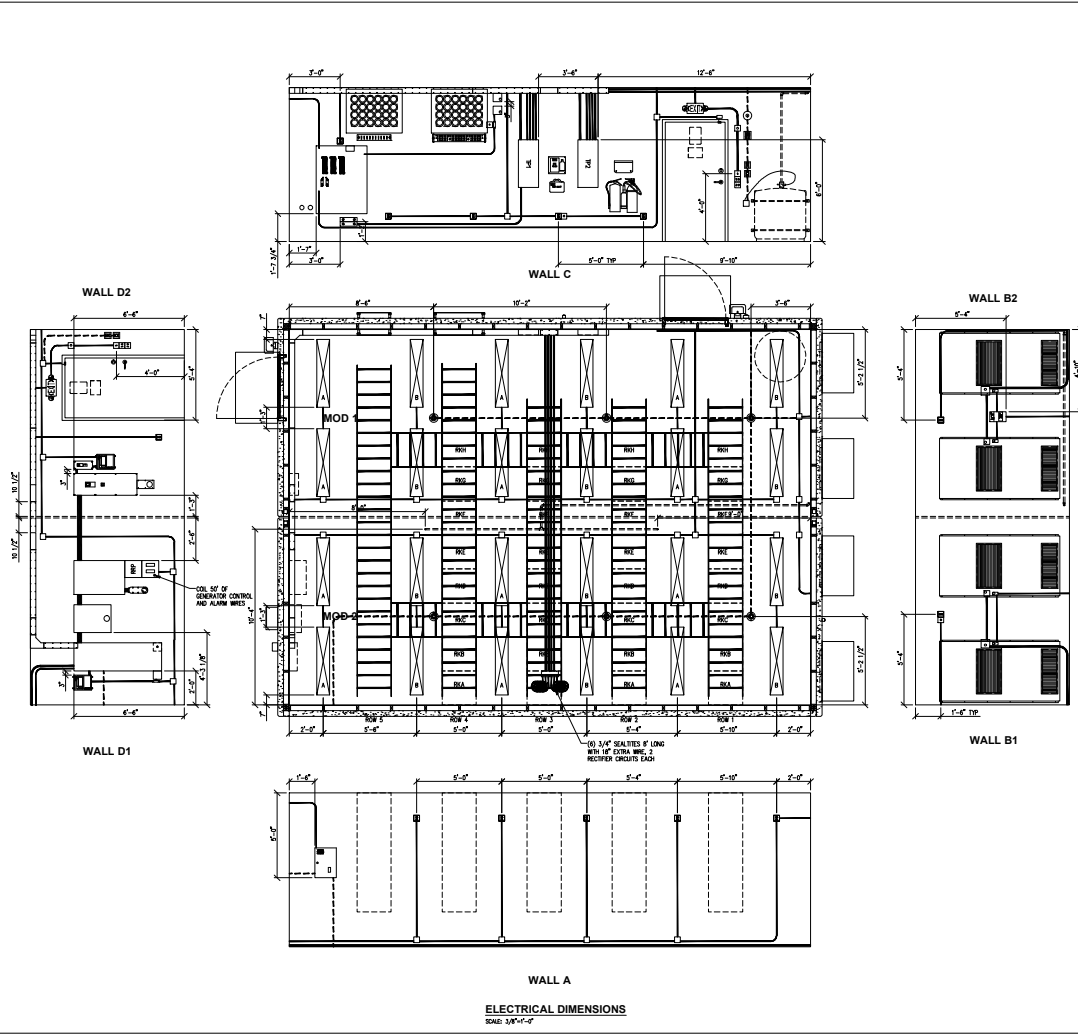
STAMPS AND SEALS

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MOTOROLA
23'-5" X 32'-0" SHELTER
GROUNDING DETAILS

PROJECT NAME: **MASTER**
DRAWING NUMBER: **AGB9859**

DATE: 3/14/18
SALES MANAGER: T. F. Yeager
DRAWN BY: J. Woagner
SERIAL NUMBER: 1710-471
SCALE: 24X36
SHEET: NONE
E2.1



COMMERCIAL POWER:
120/240VAC, 40AMP SINGLE PHASE SERVICE.

CONDUIT RUNS:

1. ALL CONDUIT RINGS TO BE 1 1/2\"/>

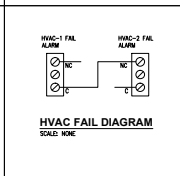
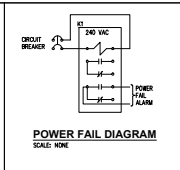
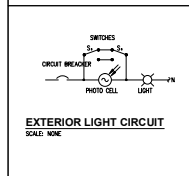
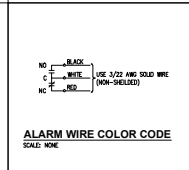
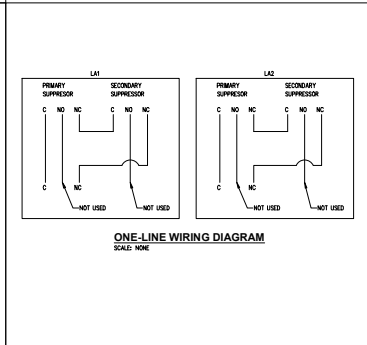
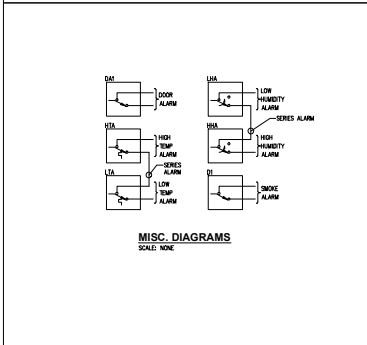
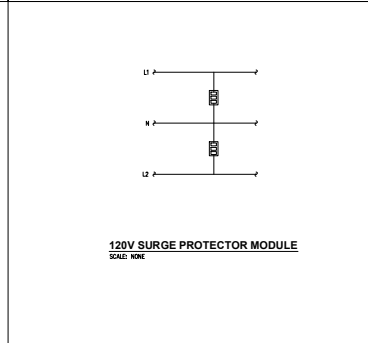
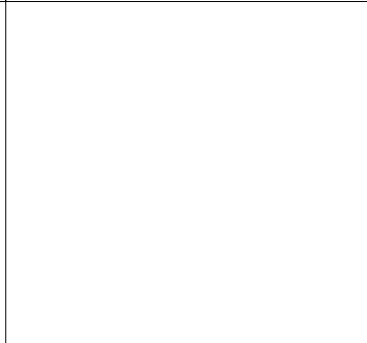
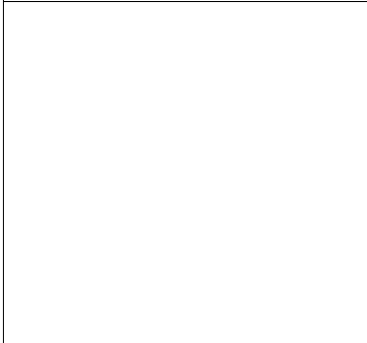
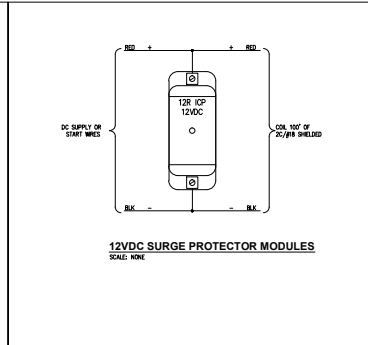
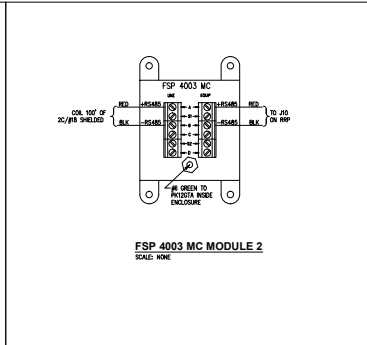
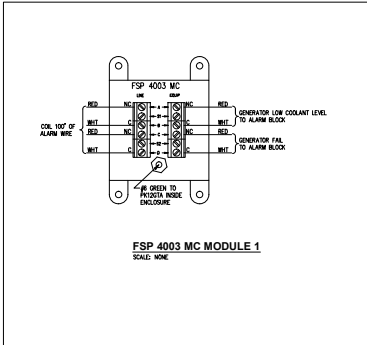
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MOTOROLA
23'-5\"/>

MASTER
AGB9859

STAMPS AND SEALS

DATE: 3/14/18
SALES MANAGER: T. F. Ye
DRAWN BY: J. Woagner
SERIAL NUMBER: 1710-471
SCALE: ~ 24X3R
SHEET: NONE
E3



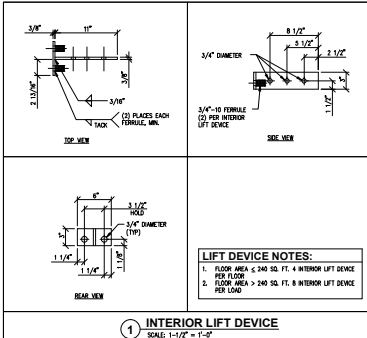
STAMPS AND SEALS

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MOTOROLA
23'-5" X 32'-0" SHELTER
ELECTRICAL DETAILS

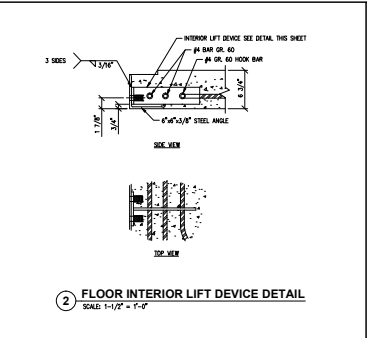
MASTER
DRAWING NUMBER:
AGB9859

DATE: 3/14/18
SALES MANAGER: T. Fye
DRAWN BY: J. Wagner
SERIAL NUMBER: 1710-471
SCALE: ~ 24X36
SHEET: NONE
E4

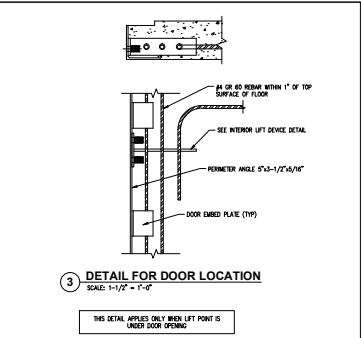


LIFT DEVICE NOTES:
 1. FLOOR AREA < 240 SQ. FT. 4\"/>

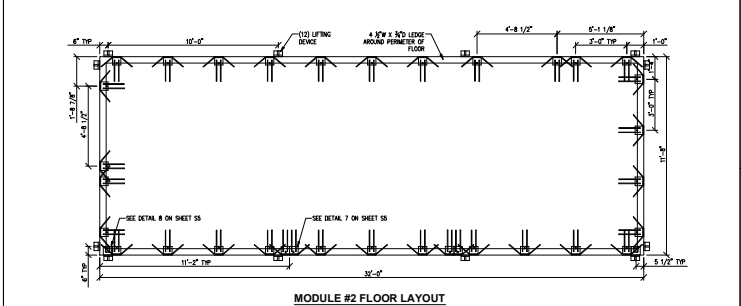
1 INTERIOR LIFT DEVICE
 SCALE: 1-1/2\"/>



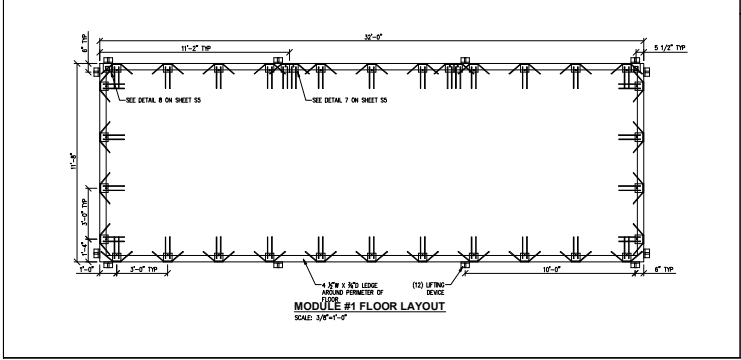
2 FLOOR INTERIOR LIFT DEVICE DETAIL
 SCALE: 1-1/2\"/>



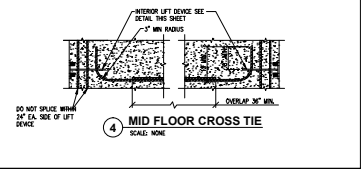
3 DETAIL FOR DOOR LOCATION
 SCALE: 1-1/2\"/>



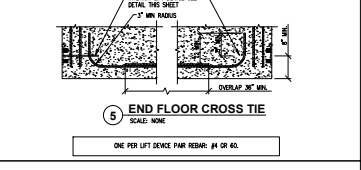
MODULE #2 FLOOR LAYOUT
 SCALE: 3/8\"/>



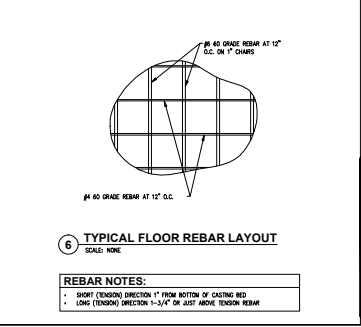
MODULE #1 FLOOR LAYOUT
 SCALE: 3/8\"/>



4 MID FLOOR CROSS TIE
 SCALE: NONE



5 END FLOOR CROSS TIE
 SCALE: NONE



6 TYPICAL FLOOR REBAR LAYOUT
 SCALE: NONE

REBAR NOTES:
 - SHORT TENSION DIAGONAL 1\"/>

CASTING DETAIL NOTES:

REINFORCING BARS:

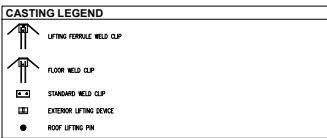
- REINFORCING BAR TO BE ASTM A615, LATEST REVISION, PLAIN BULLET STEEL.
- REINFORCING BAR GRADE #4 OR #6 IS NOT PERMITTED FOR FORMER PLATE EXTENSIONS.
- REINFORCING BAR FOR SLAB STRENGTH AND TIE TO BE ASTM A615 GRADE #4.
- LEFT REINFORCING BAR FOR ACTUAL AREA, SECTION 55, SPACING AND FITTING NOT PERMITTED.
- REINFORCING BAR BEND RADIUS SHALL NOT BE LESS THAN SIX BAR DIAMETERS.
- LOCATION AND FORMING TOLERANCES: +/- 1/8\"/>

WELDS:

- TRANSVERSE REINFORCING BARS (PRIMARY STRUCTURAL REBAR) SHALL NOT BE SPACED LONGER THAN 12\"/>

OTHER MATERIALS:

- PLATE AND ANGLE TO BE ASTM A36, Fy = 36 KSI (MIN).
- HEAVY STEEL TO CONFORM TO ASTM A572 AND ALL HIGH STRENGTH STEEL IS NOT PERMITTED.
- HOLES MUST BE DRILLED AND REAMED OR PUNCHED. PLASMA CUTTING OR TORCHING IS NOT PERMITTED.
- FLOOR-WALL CONNECTION PLATES ARE NOT TO BE SPACED MORE THAN 3\"/>



CASTING TOLERANCES

WALL PANELS	(SEE NOTE 3)	TOLERANCE	FLOOR PANELS	TOLERANCE
LEVEL		± 1/8"	LEVEL	± 1/8"
WIDTH		± 1/8"	SQUARE	± 1/8"
DEPTH		± 1/8"	VERTICAL BUMP	± 1/8"
EMBED PLAIN POSITION		± 1/4"	EDGE SHEET	± 1/8"
EMBED PLATE TO FINISH POSITION LOCATION (SEE NOTE 3)		± 1/8"		
SPACING		± 1/8"		
SQUARE (SEE NOTE 3)		+/- 1/8" IN 12" LEAST DIMENSION, MAX.		

NOTES:

- MAXIMUM DEVIATION OVER PANELS.
- MAXIMUM DEVIATION IN SECTORIAL DIMENSIONS.
- UNLESS NOTED OTHERWISE.

STAMPS AND SEALS

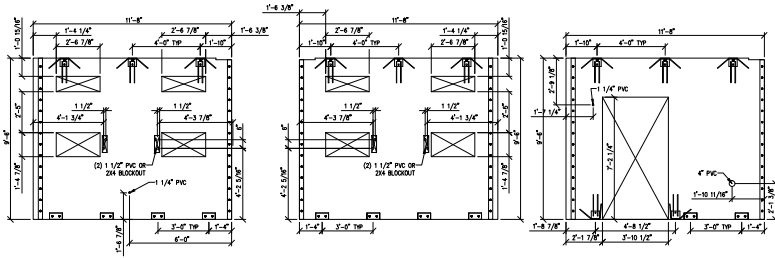
THERMOBOND BUILDINGS

200 N. Court P.O. Box 445
 Ellettsville, IN 46017
 812-836-6949
 www.thermobond.com

MOTOROLA
23'-5" X 32'-0" SHELTER
FLOOR CASTING

MASTER
AGB9859

PROJECT NUMBER: 1710-471
 DRAWING NUMBER: 2433R
 DATE: 3/14/18
 SALES MANAGER: T. E. Wagner
 SERIAL NUMBER: 1710-471
 SCALE: NONE
 SHEET: S1

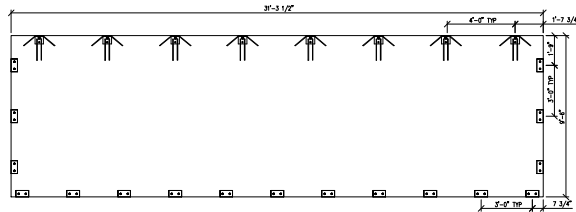


WALL B1 LAYOUT
SCALE: 3/8"=1'-0"

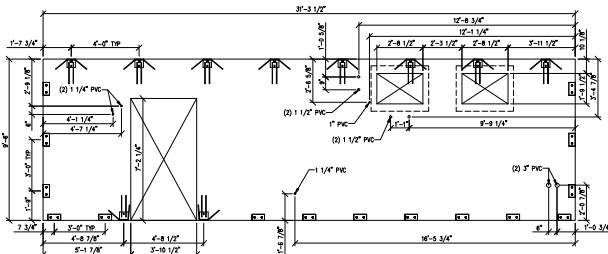
WALL B2 LAYOUT
SCALE: 3/8"=1'-0"

WALL D2 LAYOUT
SCALE: 3/8"=1'-0"

WALL D1 LAYOUT
SCALE: 3/8"=1'-0"

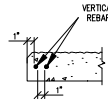


WALL A LAYOUT
SCALE: 3/8"=1'-0"



WALL C LAYOUT
SCALE: 3/8"=1'-0"

NOTE: NORMAL WEIGHT CONCRETE



TYPICAL WALL END DETAIL
SCALE: 1-1/2" = 1'-0"

CASTING LEGEND

- LIFTING FEMALE WELD CLIP
- FLOOR WELD CLIP
- STANDARD WELD CLIP
- EXTERIOR LIFTING DEVICE
- ROOF LIFTING PIN

STUD TABLE

SHELTER LENGTH (FEET)	SHELTER WIDTH (FEET)			
	8'	10'	12'	14'
8'	6	6	6	6
9'	7	6	6	6
10'	8	7	6	6
11'	9	8	7	6
12'	10	9	8	7
13'	11	10	9	8
14'	12	11	10	9
15'	13	12	11	10
16'	14	13	12	11
17'	15	14	13	12
18'	16	15	14	13
19'	17	16	15	14
20'	18	17	16	15
21'	19	18	17	16
22'	20	19	18	17
23'	21	20	19	18
24'	22	21	20	19
25'	23	22	21	20
26'	24	23	22	21
27'	25	24	23	22
28'	26	25	24	23
29'	27	26	25	24
30'	28	27	26	25

EXTERIOR FINISH SCHEDULE

ITEM	SURFACE	FINISH	PAINT COLOR
ROOF	THROTTLED SMOOTH	SEALS, ELASTOMERIC CONCRETE PAINT	WHITE
WALLS	THROTTLED SMOOTH	SMOOTH STAINED CONCRETE	AUTUMN BROWN
DOORS	STEEL RATED	PAINT	TELECOM BROWN
JOINTS	AS FINISHED	SEALS PER DETAILS SHEET	TELECOM BROWN

CASTING TOLERANCES

WALL PANELS (SEE NOTE 1)	TOLERANCE	FLOOR PANELS	TOLERANCES
LENGTH	± 1/8"	LEVEL	± 1/8"
WIDTH	± 1/8"	SQUARE	± 1/8"
DEPTH	± 1/8"	VERTICAL SWEEP	± 1/8"
EDGED PLAN POSITION	± 1/4"	EDGE SWEEP	± 1/8"
EDGED PLATE TO FINISH	± 1/8"		
FINISH TO FINISH (SEE NOTE 3)	± 1/8"		
BOND:	± 1/4"		
SWEEP:	+/- 1/8" IN 10' LEAST DIMENSION, MAX.		
	± 1/8"		

NOTES:
1. MAXIMUM DEVIATION OVER PANEL.
2. MAXIMUM DEVIATION IN SECOND DIMENSIONS.
3. UNLESS NOTED OTHERWISE.

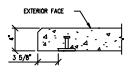
STAMPS AND SEALS

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Ellettsville, IN 46037
812-866-9999
www.thermobonds.com

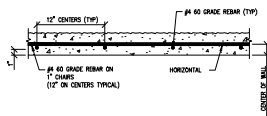
MOTOROLA
23'-5" X 32'-0" SHELTER
WALL CASTING

MASTER
AGB9859

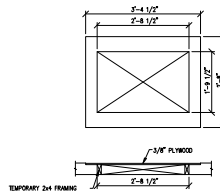
PROJECT NAME: _____
DRAWING NUMBER: _____
DATE: 3/14/18
SALES MANAGER: T. F. Ye
DRAWN BY: J. Woagner
SERIAL NUMBER: 1710-471
SCALE: ~ 24X3R
SHEET: NONE
S2



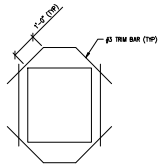
1 TYPICAL SHORTWALL DETAIL
SCALE: 1-1/2" = 1'-0"



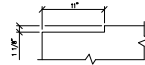
2 TYPICAL WALL REBAR LAYOUT
SCALE: 1-1/2" = 1'-0"



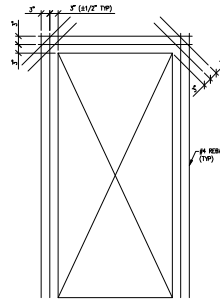
3 MICROFLECT PANEL DETAIL
SCALE: NONE



4 TYPICAL OPENING DETAIL
SCALE: NONE



5 TYPICAL WALL NOTCH DETAIL
SCALE: 1 1/2" = 1'-0"



6 DOOR REBAR DETAIL
SCALE: NONE

CASTING TOLERANCES				
WALL PANELS	(SEE NOTE 1)	TOLERANCE	FLOOR PANELS	TOLERANCES
LENGTH		± 1/8"	LEVEL	± 1/8"
WIDTH		± 1/8"	SQUARE	± 1/8"
DEPTH		± 1/8"	VERTICAL BUMP	± 1/8"
EMBED PLATE POSITION		± 1/4"	EDGE SNEEP	± 1/8"
EMBED PLATE TO PLUSH		± 1/8"		
PROJECTION CLEARANCE (SEE NOTE 3)		± 1/8"		
BONDING		± 1/8"		
SHOULDER		+/- 1/8" MIN TO LEAST DIMENSION, MAX		
SQUARE (SEE NOTE 3)		± 1/8"		

NOTES:
 1. MAXIMUM DEVIATION OVER PANEL.
 2. MAXIMUM DEVIATION IN SEASONAL DIMENSIONS.
 3. UNLESS NOTED OTHERWISE.

STAMPS AND SEALS

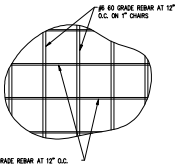
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 Elkhart, IN 46517
 800-969-9999
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MOTOROLA 23'-5" X 32'-0" SHELTER
 WALL CASTING DETAILS

MASTER
 DRAWING NUMBER: **AGB9859**

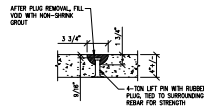
DATE: 3/14/18
 SALES MANAGER: T. Fye
 DRAWN BY: J. Woagner
 SERIAL NUMBER: 1710-471
 SCALE: ~ 24X3R
 SHEET: NONE

S2.1

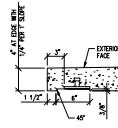


1 TYPICAL ROOF REBAR LAYOUT
SCALE: NONE

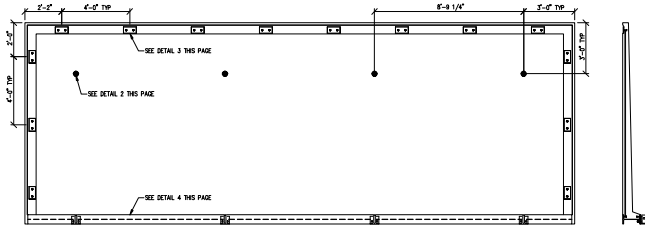
REBAR NOTES:
 • SHORT (TRANS) DIRECTION 1" FROM BOTTOM OF CASTING BED
 LONG (LONG) DIRECTION 1-3/4" ON EACH ABOVE TRANS REBAR



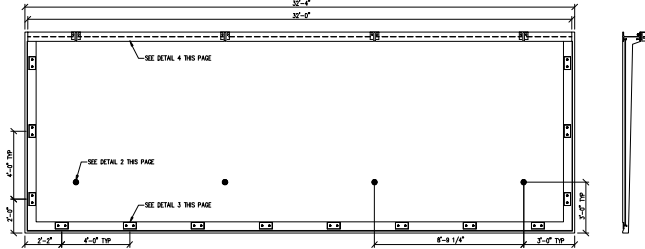
2 SECTION AT LIFTING PIN
SCALE: 1-1/2" = 1'-0"



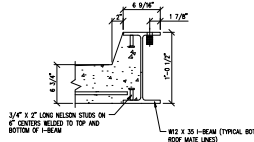
3 SECTION AT ROOF PIN
SCALE: 1-1/2" = 1'-0"



MODULE #2 ROOF LAYOUT
SCALE: 3/8" = 1'-0"



MODULE #1 ROOF LAYOUT
SCALE: 3/8" = 1'-0"



4 SECTION AT MATE LINE
SCALE: 1-1/2" = 1'-0"



5 END OF MATE BEAM DETAIL
SCALE: 1-1/2" = 1'-0"

CASTING LEGEND

- LIFTING FEMALE WELD CLIP
- FLOOR WELD CLIP
- STANDARD WELD CLIP
- EXTERIOR LIFTING DEVICE
- ROOF LIFTING PIN

CASTING TOLERANCES				
WALL PANELS	(SEE NOTE 1)	TOLERANCE	FLOOR PANELS	TOLERANCES
LENGTH		± 1/8"	LEVEL	± 1/8"
BOTH		± 1/8"	SQUARE	± 1/8"
DEPTH		± 1/8"	VERTICAL SWEEP	± 1/8"
EDGED PLATE POSITION		± 1/4"	EDGE SWEEP	± 1/8"
EDGED PLATE TO PLUSH		± 1/8"		
PROJECTION CLEARANCE	(SEE NOTE 3)	± 1/8"		
BOWING		± 1/8"		
SHIPPING		+/- 1/8" MIN. OF LEAST DIMENSION, MAX.		
SQUARE (SEE NOTE 3)		± 1/8"		

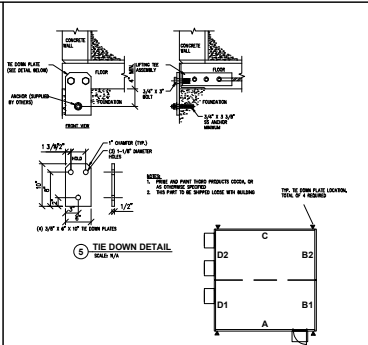
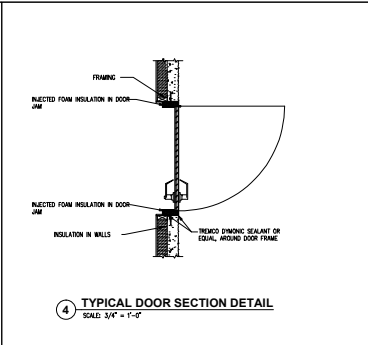
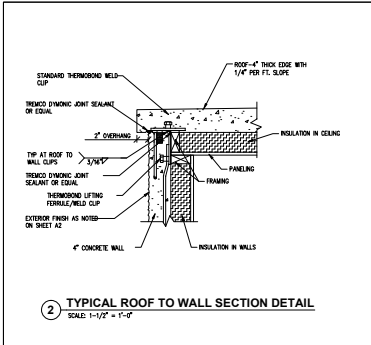
NOTES:
 1. MAXIMUM DEVIATION OVER PANEL.
 2. MAXIMUM DEVIATION IN SEVERAL DIMENSIONS.
 3. UNLESS NOTED OTHERWISE.

STAMPS AND SEALS

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 Ellettsville, IN 46037
 317-832-6041
 www.thermobond.com

MOTOROLA
 23'-5" X 32'-0" SHELTER
 ROOF CASTING

PROJECT NAME: MASTER
 DRAWING NUMBER: **AGB9859**
 DATE: 3/14/18
 SALES MANAGER: T. Eyer
 DRAWN BY: J. Woagner
 SERIAL NUMBER: 1710-471
 SCALE: ~ 24X3R
 SHEET: NONE
53



CROSS SECTION NOTES:

- FLOORS ARE TO BE MOVED AND SEALED BEFORE SHIPPING.

CONSTRUCTION MATERIALS:

EXTERIOR FINISH:

- FLOOR: 1/2" X 12" X 12" WWL TILE WITH 4" BASE CODE
- WALLS: 1/2" THICK COVERED PANELING (CLASS "C" MINIMUM)
- CEILING: 1/2" THICK COVERED PANELING (CLASS "C" MINIMUM)

INSULATION:

- WALLS: 2" X 4" NORMAL FOAM INSULATION (R-11.5) (EIR-1600)
- CEILING: 2" X 4" NORMAL FOAM INSULATION (R-19) (EIR-1600)

FRAMING:

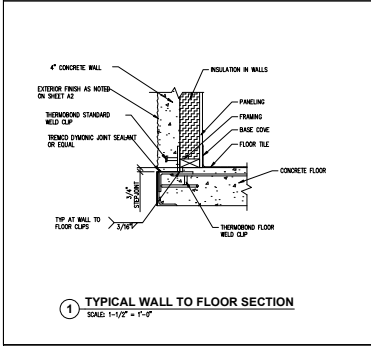
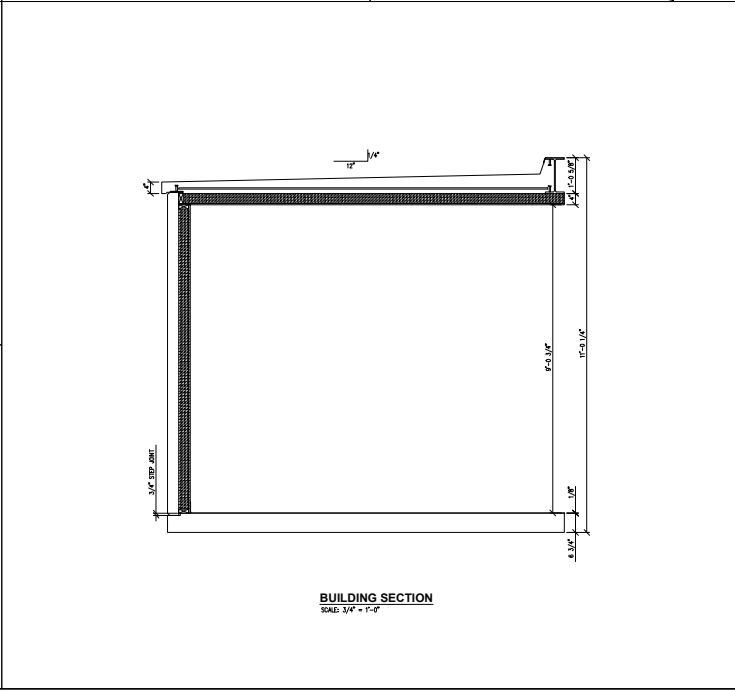
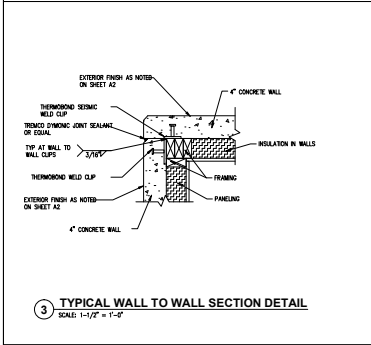
- WALLS: 2" X 4" FLOORING STRIPS ON END AT 24" O.C.
- CEILING: 2" X 4" FLOORING STRIPS ON END AT 24" O.C.

CONCRETE:

- FLOOR: 5000 PSI NORMAL WEIGHT
- WALLS: 5000 PSI NORMAL WEIGHT
- CEILING: 5000 PSI NORMAL WEIGHT

NOTES:

- 4" SOLID CONCRETE WALLS 2-HOUR FIRE RATING.



STAMPS AND SEALS

DATE: 3/14/18
SALES MANAGER: T. E. Ye
DRAWN BY: J. Woagner
SERIAL NUMBER: 1710-471
SCALE: ~ 24X36
SHEET: NONE

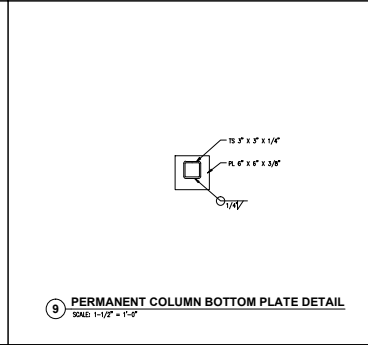
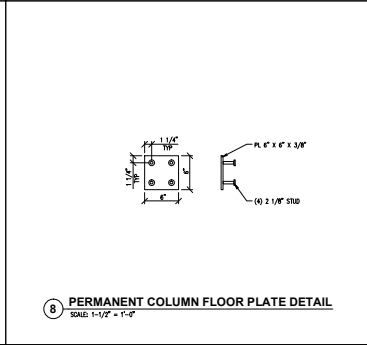
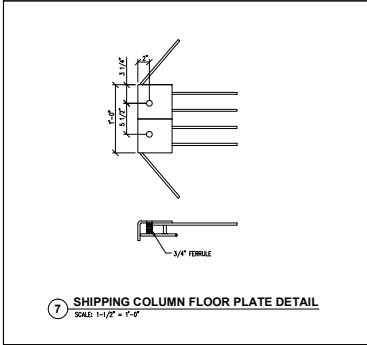
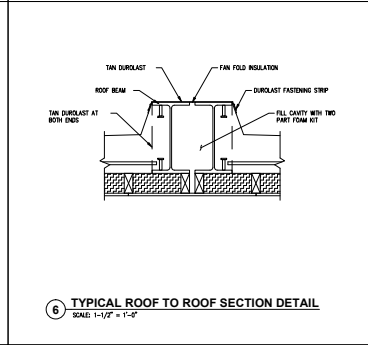
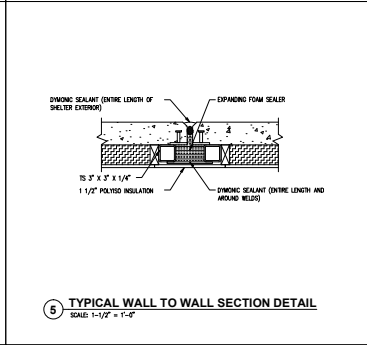
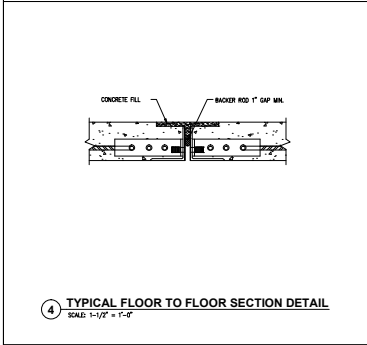
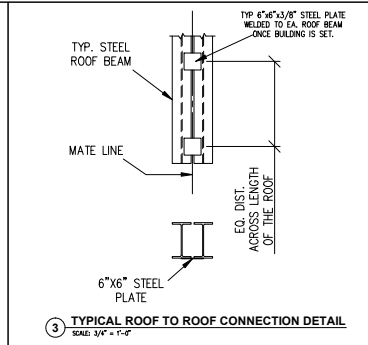
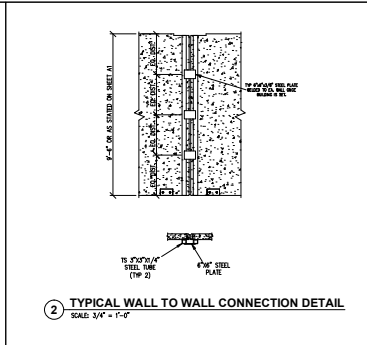
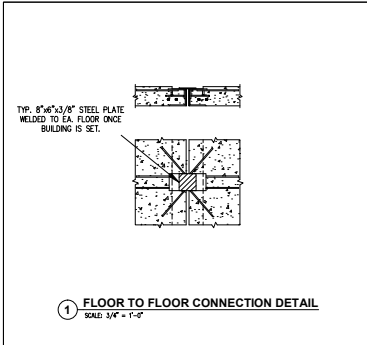
S4

APPROVER: DATE: 03/14/18
PPS CORPORATION
Chicago, Illinois, WI

THERMOBOND BUILDINGS
58120 County Road 3
Elkhart, IN 46517
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www.thermobond.com

MOTOROLA
23'-5" X 32'-0" SHELTER
CROSS SECTION

PROJECT NAME: MASTER
DRAWING NUMBER: AGB9859



STAMPS AND SEALS

THERMOBOND BUILDINGS

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MOTOROLA

23'-5" X 32'-0" SHELTER

CONSTRUCTION DETAILS

PROJECT NAME: **MASTER**

 DRAWING NUMBER: **AGB9859**

DATE: 3/14/18

 SALES MANAGER: T. F. Yee

 DRAWN BY: J. Woagner

 SERIAL NUMBER: 1710-471

 SCALE: ~ 24X3R

 SHEET: NONE

S5

ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED. DIMENSIONS ARE TO FACE UNLESS OTHERWISE NOTED. DIMENSIONS TO FACE TO BE USED FOR FABRICATION UNLESS OTHERWISE NOTED. DIMENSIONS TO FACE TO BE USED FOR FABRICATION UNLESS OTHERWISE NOTED.

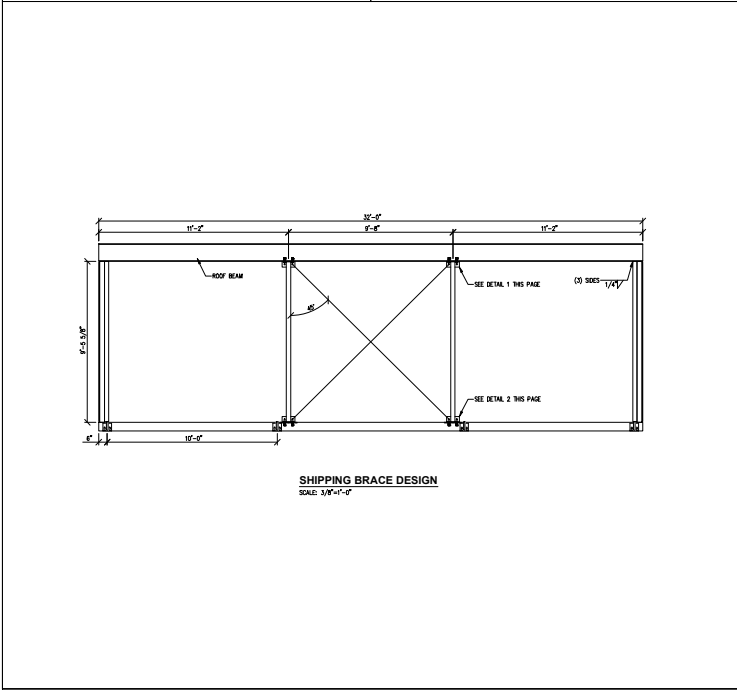
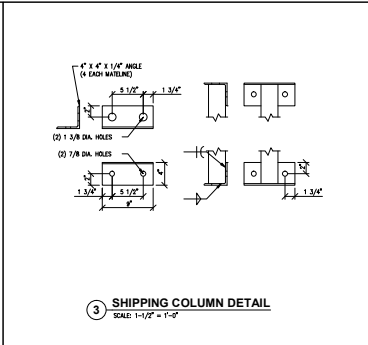
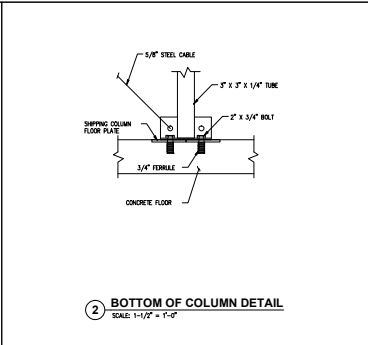
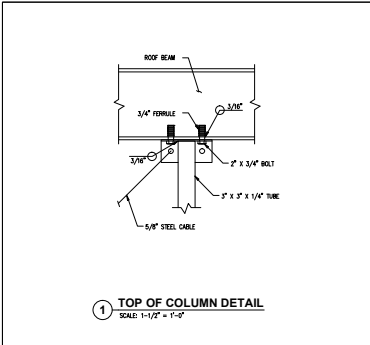


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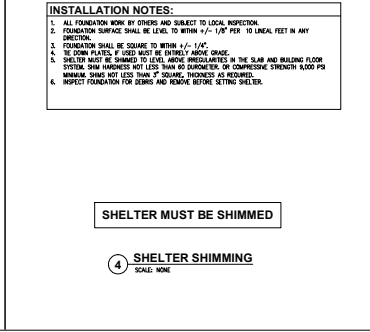
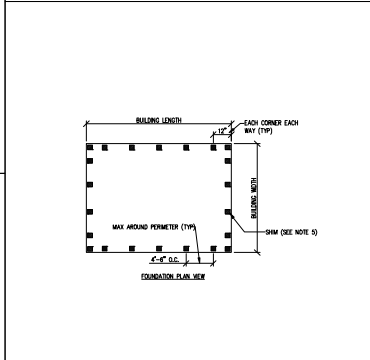
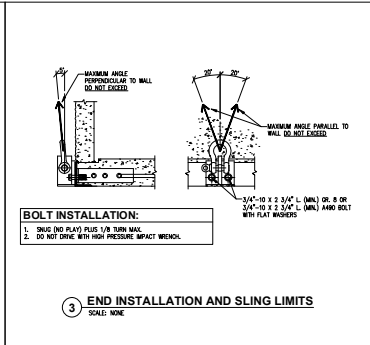
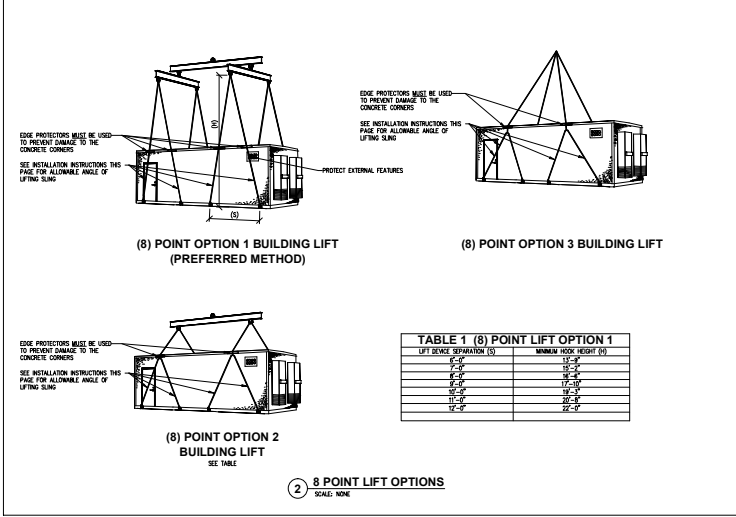
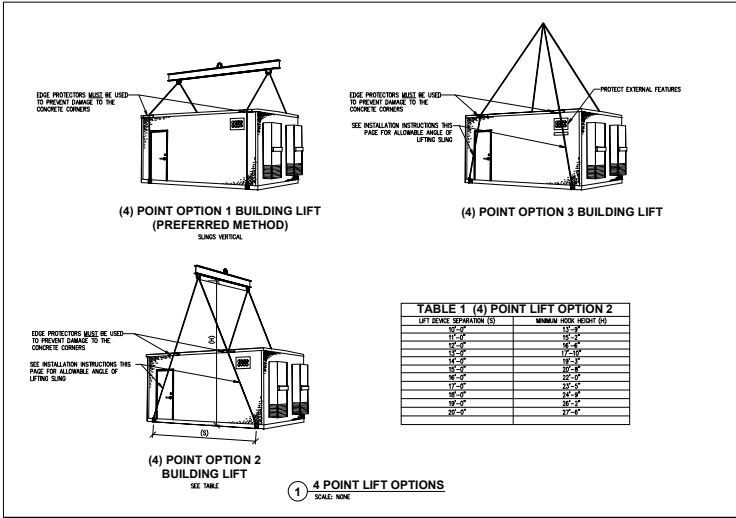
**MOTOROLA
 23'-5" X 32'-0" SHELTER
 CONSTRUCTION DETAILS**

**PROJECT NAME: MASTER
 DRAWING NUMBER: AGB9859**

DATE: 3/14/18
 SALES MANAGER: T. Fye
 DRAWN BY: J. Woagner
 SERIAL NUMBER: 1710-471
 SCALE: ~ 24X3R
 SHEET: NONE
55.1



STAMPS AND SEALS



RIGGING NOTES:

- SHELTER MUST BE LIFTED ONLY AT POINTS PROVIDED, USING APPROPRIATE SPREADER BEAMS AND SLINGS, AND WITHIN THE LIMITS SHOWN ON THIS DRAWING.
- SHELTER CONCRETE ANCHORS OR REINFORCING LEFT ONLY THE SHELTER SELF-HEIGHT. DO NOT LIFT THE SHELTER WITH ADDITIONAL EQUIPMENT RIGGING.
- INSPECT EACH LIFT DEVICE FOR CRACKS, WARPING OR OTHER DEFECTS BEFORE INSTALLING ON SHELTER. DO NOT USE A LIFTING DEVICE THAT HAS ANY CRACKS, QUESTIONABLE WELDS, IRREGULAR OR ELONGATED HOLES OR IS NOT SET OF SHAPE.
- INSPECT WELDS BEFORE INSTALLATION. DO NOT USE ANY BOLTS THAT HAVE DAMAGED THREADS, ARE BENT, IMPROPER ELONGATED OR ARE MALFORMED IN ANY WAY.
- DO NOT ROUTE SLING NEAR HVAC SYSTEMS.
- SHIMMED OR PROTECT FROM DAMAGE AND OTHER PROTECTIONS FROM DAMAGE.
- INSURE TO PROVIDE ALL SUPPORTS BEFORE THE FOUNDATIONS EXTERIOR LIFTING DEVICES. THE RIGGER IS RESPONSIBLE FOR ENSURING THAT THE SAFETY REQUIREMENTS LISTED HEREIN ARE MET.
- SHIMMING SHALL CONFORM TO APPLICABLE LOCAL, STATE AND FEDERAL REQUIREMENTS.
- IF SHELTER IS DELIVERED WITH TEMPORARY SHIPPING BOLTS OR ANY OTHER TEMPORARY STRUCTURE INCLUDED FOR TRANSPORT, DO NOT REMOVE BEFORE SHELTER PLACEMENT.
- DO NOT USE SHIMMABLE POSITIONS FOR LIFTING.
- DO NOT SET THE SHELTER ON AN UNLEVEL OR UNSTABLE SURFACE.

END INSTALLATION AND SLING LIMITS
SCALE: NONE

INSTALLATION NOTES:

- ALL FOUNDATION WORK BY OTHERS AND SUBJECT TO LOCAL INSPECTION.
- FOUNDATION SURFACE SHALL BE LEVEL TO WITHIN +/- 1/8" PER 10 LINEAL FEET IN ANY DIRECTION.
- FOUNDATION SHALL BE SQUARE TO WITHIN +/- 1/4".
- IF CONM PLATES IF USED MUST BE EXACTLY ABOVE GRADE.
- SHELTER MUST BE SHIMMED TO LEVEL ABOVE IRREGULARITIES IN THE SLAB AND RAILING FLOOR SYSTEM. SHIM THICKNESS NOT LESS THAN 80 CHARCOAL OR COMPRESSIVE STRENGTH 8000 PSI MINIMUM STAIN NOT LESS THAN 1/2" SQUARE THICKNESS AS REQUIRED.
- INSPECT FOUNDATION FOR CRACKS AND REPAIR BEFORE SETTING SHELTER.

STAMPS AND SEALS

SHELTER MUST BE SHIMMED

4 SHELTER SHIMMING
SCALE: NONE

PROJECT NAME: MOTOROLA THERMOBOND BUILDINGS
DRAWING NUMBER: 23'-5" X 32'-0" SHELTER
MASTER NUMBER: AGB9859

DATE: 3/14/18
SALES MANAGER: T. Fye
DRAWN BY: J. Wagner
SERIAL NUMBER: 1710-471
SCALE: ~ 24X36
SHEET: NONE
T2

THERMOBOND BUILDINGS
58120 County Road 3
Elkhart, IN 46517
www.thermobond.com

MOTOROLA THERMOBOND BUILDINGS
23'-5" X 32'-0" SHELTER
INSTALL DETAILS

PROJECT NAME: MOTOROLA THERMOBOND BUILDINGS
DRAWING NUMBER: 23'-5" X 32'-0" SHELTER
MASTER NUMBER: AGB9859

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SHEET: NONE
T2



Manufactured (Modular) Buildings
USER: Public User

[Manufactured \(Modular\) Buildings Menu](#) > [Plan Search](#) > [Plan List](#) > **Plan Detail**

OFFICE OF THE SECRETARY

Plan Tracking #	33773-R3		
Code Version	2017		
Building Type	Manufactured Buildings		
Municipal Jail	No		
Manufacturer	Thermo Bond Buildings, LLC		
Agency	PFS Corporation (WI)		
Agency Plan #	AGB9859-R3		
School District			
Contract Agency			
Construction Type	V-B		
Fire Protection	B		
Fire Suppression System	No		
Occupancy	Utility-Misc.		
Allowable # of Stories	1		
Wind Velocity	193 mph	Exposure	D
Fire Rating of Exterior Walls	2 hrs		
	Area	Live - psf	Dead - psf
Maximum Floor Load	736	300	0
Alternate Maximum Floor Load			
Roof Load		20	0
"R" Rating of Floor, Wall, and Roof	N/A		
Modules per Building	2		
Square Footage	736 Sq. Ft.		
Approved for Hurricane Protection Usage			
Designed for use as a Hurricane Public Shelter			
Comments	Updated Group Use to U, was S2. Added note on title page that building is 2 hour fire rated. Removed from Davie Site from Site Name in title block and put Motorola.		
Original Plan Tracking #	33773		
Date of Agency Approval	10/18/2018		
Date Submitted	10/18/2018		
Date Accepted	10/18/2018		
Status	Accepted		

Date	Attached File
10/18/2018	PlanID_33773_R3_Thermobond Buildings, LLC - AGB9859-d024f5a0.pdf

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[Contact Us](#) :: 2601 Blair Stone Road, Tallahassee FL 32399 Phone: 850-487-1824

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please provide the Department with an email address which can be made available to the public. To determine if you are a licensee under Chapter 455, F.S., please click [here](#).

Manufactured (Modular) Buildings Accepts:





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Product Approval
USER: Public User

[Product Approval Menu](#) > [Product or Application Search](#) > [Application List](#) > **Application Detail**

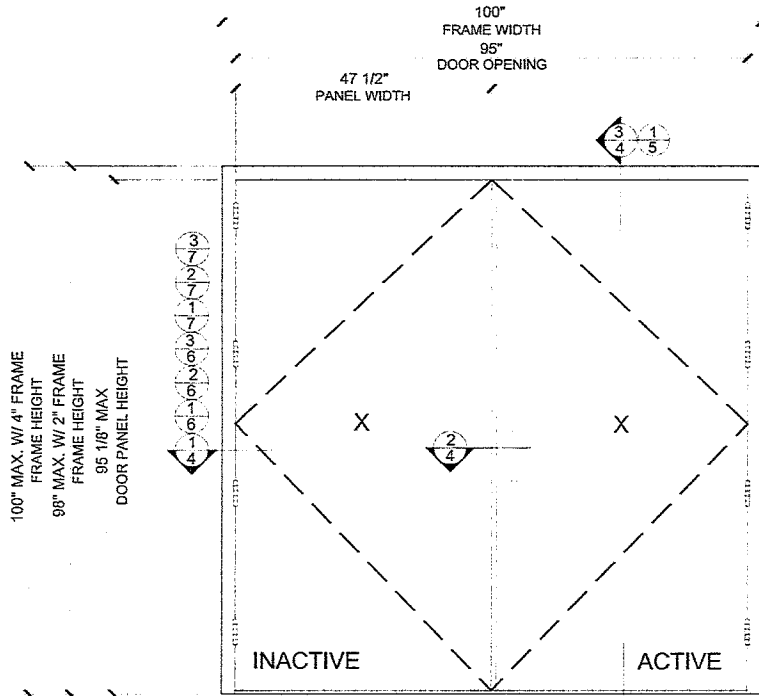


FL #	FL15542-R2
Application Type	Affirmation
Code Version	2017
Application Status	Approved
Comments	
Archived	
Product Manufacturer	Mesker Door, Inc.
Address/Phone/Email	3440 Stanwood Blvd. Huntsville, AL 35811 (256) 851-6670 mtorres@meskergroup.com
Authorized Signature	Hermes Norero fbc@buildingdrops.com
Technical Representative	
Address/Phone/Email	
Quality Assurance Representative	
Address/Phone/Email	
Category	Exterior Doors
Subcategory	Swinging Exterior Door Assemblies
Compliance Method	Evaluation Report from a Florida Registered Architect or a Licensed Florida Professional Engineer Evaluation Report - Hardcopy Received
Florida Engineer or Architect Name who developed the Evaluation Report	Hermes F. Norero, P.E.
Florida License	PE-73778
Quality Assurance Entity	National Accreditation and Management Institute
Quality Assurance Contract Expiration Date	12/31/2018
Validated By	Locke Bowden Validation Checklist - Hardcopy Received
Certificate of Independence	FL15542_R2_COI_COI Mesker SS_2016-08-25.pdf



6/17/2018 12:00 PM

\\pfs\work\mesker_door\in\2016\16-0440 for submittal - 2016 file\rev-01\cadd\dwg\mesker_door_md1004.dwg



DOUBLE DOOR TYP. ELEVATION

TABLE OF CONTENTS		
SHEET	REVISION	SHEET DESCRIPTION
1	-	TYPICAL ELEVATIONS, DESIGN PRESSURES, & GENERAL NOTES
2	-	TYPICAL ELEVATIONS & DESIGN PRESSURES
3	-	HORIZONTAL CROSS SECTIONS
4	-	HORIZONTAL CROSS SECTIONS
5	-	VERTICAL CROSS SECTION
6	-	VERTICAL CROSS SECTION
7	-	HORIZONTAL CROSS SECTIONS
8	-	HORIZONTAL CROSS SECTIONS
9	-	ANCHORING DETAILS
10	-	ANCHORING DETAILS
11	-	ANCHORING DETAILS
12	-	ANCHORING DETAILS
13	-	COMPONENTS
14	-	BILL OF MATERIALS & COMPONENTS

"N" SERIES & "NVS" SERIES COMMERCIAL OUTSWING STEEL DOOR (LMI)

- THIS PRODUCT HAS BEEN DESIGNED AND TESTED TO COMPLY WITH THE REQUIREMENTS OF THE (2014) FLORIDA BUILDING CODE INCLUDING HIGH VELOCITY HURRICANE ZONE (HVHZ).
- DOORS RATED FOR LARGE MISSILE IMPACT AND DO NOT REQUIRE SHUTTERS.
- ANCHORS SHALL BE AS LISTED, SPACED AS SHOWN ON ELEVATIONS / DETAILS. ANCHOR EMBEDMENT TO BASE MATERIAL SHALL BE BEYOND WALL DRESSING OR STUCCO.
- ANCHORING OR LOADING CONDITIONS NOT SHOWN IN THESE DETAILS ARE NOT PART OF THIS APPROVAL.
- MATERIALS INCLUDING BUT NOT LIMITED TO STEEL/METAL SCREWS THAT COME INTO CONTACT WITH OTHER DISSIMILAR MATERIALS SHALL MEET THE REQUIREMENTS.
- METAL STRUCTURES NOT BY MESKER INC. MUST SUPPORT LOADS IMPOSED BY DOOR SYSTEM AND TRANSFER THEM TO THE BUILDING STRUCTURE.
- DOOR PANEL: MIN. 18 GA. (0.042" THK.) STEEL MIN. Fy = 29 KSI MIN.
DOOR FRAME: MIN. 16 GA. (0.053" THK.) STEEL MIN. Fy = 42 KSI MIN.
- DOORS WHICH UTILIZE OUTSWING THRESHOLD QOSH BY DLP (ITEM #78) MEET THE WATER INFILTRATION REQUIREMENTS FOR THE "HVHZ".
WATER TEST PRESSURE = 0.15 x POSITIVE DESIGN PRESSURE
- DOORS THAT DO NOT MEET THE WATER INFILTRATION REQUIREMENTS FOR THE "HVHZ" SHALL BE INSTALLED ONLY IN NON-HABITABLE AREAS OR HABITABLE LOCATIONS PROTECTED BY AN OVERHANG OR CANOPY SUCH THAT THE ANGLE BETWEEN THE EDGE OF CANOPY OR OVERHANG TO SILL IS LESS THAN 45 DEGREES.
- OTHER DOOR PANEL CONFIGURATIONS AVAILABLE PER REQUEST TO MANUFACTURE

NOTES:
EGRESS REQUIREMENTS TO BE REVIEWED BY BUILDING OFFICIAL.

OVERALL FRAME SIZE		FLUSH BOLT LOCATION		DESIGN PRESSURE (PSF)	
WIDTH	HEIGHT	ACTIVE DOOR	INACTIVE DOOR	POSITIVE	NEGATIVE
100"	100"	NO	YES	+65.0	-65.0

SEE SHEET 12 FOR ADDITIONAL DESIGN PRESSURE REQUIREMENTS DUE TO HARDWARE COMPONENT SELECTION



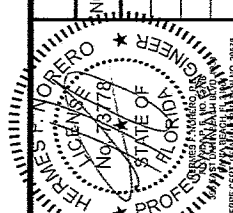
Digitally signed by Hermes F. Norero, P.E.
Reason: I am approving this document
Date: 2016.08.25 19:02:46 -04'00'



MESKER DOOR INC.
3440 Standwood Blvd.
Huntsville, AL 35811
Ph: (256) 851-6670

TITLE: "NVS" SERIES COMMERCIAL OUTSWING STEEL DOOR
INSTALLATION & GENERAL NOTES
PREPARED BY:
BUILDING DROPS, INC.
308 E. DANIA BEACH BLVD. #338
DANIA BEACH, FL 33004
Ph: (954) 309-6478 Fx: (954) 744-4738

NO.	DESCRIPTION	REVISIONS	
		BY	DATE

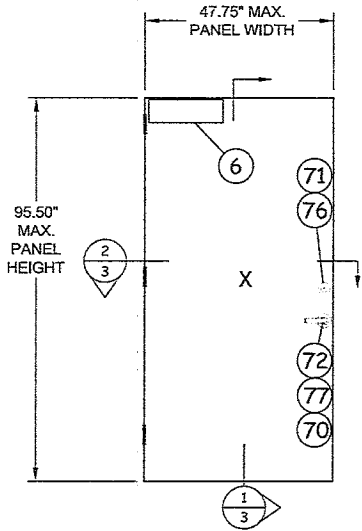


DATE: 06.03.16	DWN BY: LS	CHK BY: HFN	SCALE: NTS
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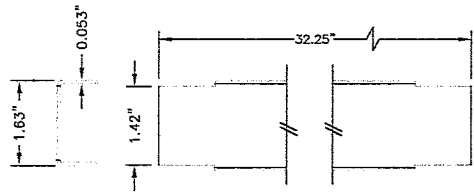
DWG #: MDI004
SHEET: 1 OF 14

8/1/2018 12:00 PM

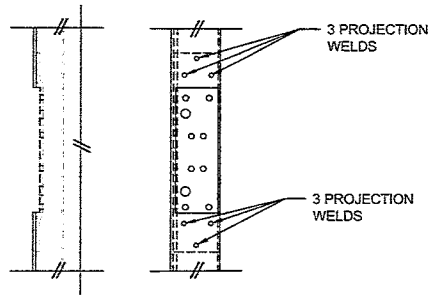
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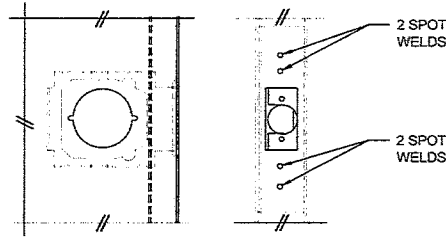
1 "N" OPAQUE STEEL DOOR PANEL



4 DOOR TOP & BOTTOM CLOSER

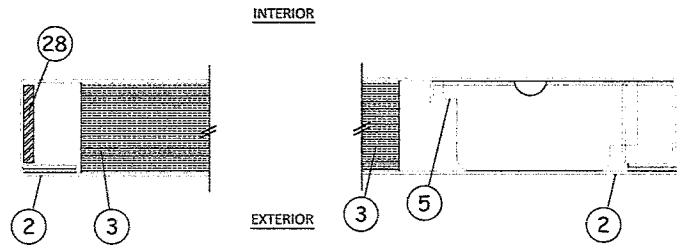


23 DOOR HINGE REINFORCEMENT

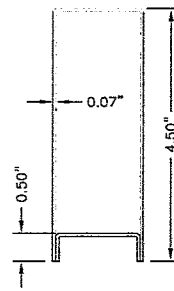


5 LOCK BOX REINFORCEMENT

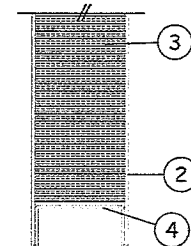
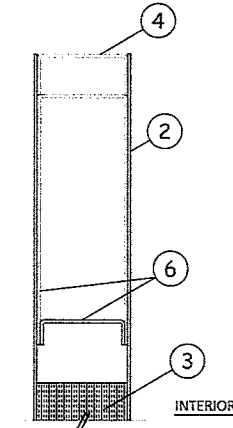
2 HORIZONTAL CROSS SECTION
3 DOOR PANEL



6 CLOSER REINFORCEMENT



1 VERTICAL CROSS SECTION
3 DOOR PANEL



MESKER DOOR INC.
3440 Standwood Blvd.
Huntsville, AL 35811
PH: (256) 851-6670

TITLE: "NVS" SERIES COMMERCIAL
OUTSWING STEEL DOOR

DOOR PANEL DETAILS

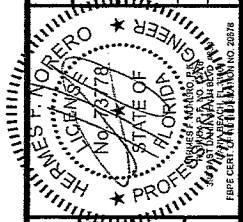
PREPARED BY:

BUILDING DROPS, INC.
398 E. DANIA BEACH BLVD. #338
DANIA BEACH, FL 33004

PH: (954) 390-8478 FX: (954) 744-4736

REVISIONS

NO.	DESCRIPTION	BY	DATE



DATE: 06.03.16
DWN BY: LS
CHK BY: HFN
SCALE: NTS

DWG #: MD1004

SHEET: 3 OF 14



TYPICAL ANCHORS @ HEAD/JAMB: (REFER TO ELEVATION FOR SPACING)

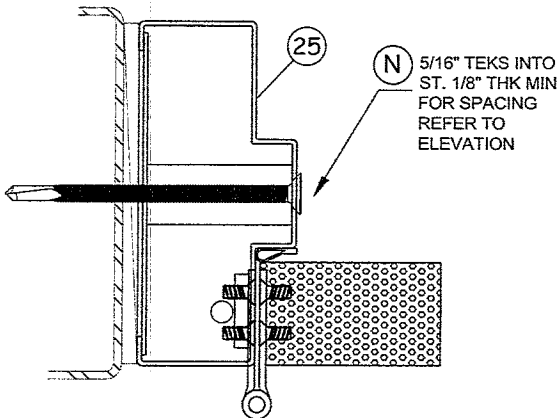
- TYPE A** 3/8" DIA. DYNABOLT SLEEVE ANCHOR BY "ITW"
 DIRECTLY INTO $f_c=3000$ PSI CONCRETE, 1-1/2" MIN. EMBED
 DIRECTLY INTO GROUT FILLED CONCRETE BLOCK, 1-1/2" MIN. EMBED
 MIN. EDGE DIST 2-1/2"
 MIN. SPACING 4-1/2"
- TYPE B** 3/8" POWER-BOLT BY "POWERS"
 DIRECTLY INTO $f_c=3000$ PSI CONCRETE, 2" MIN. EMBED
 DIRECTLY INTO GROUT FILLED/HOLLOW CONCRETE BLOCK, 1-1/4" MIN. EMBED
 MIN. EDGE DIST 3-3/4"
 MIN. SPACING 4-1/2"
- TYPE C** 5/16" DIA. SMS OR MACHINE BOLTS (MIN. GRADE 5 CRS) OR ST/ST
 STEEL : $F_y = 36$ KSI MIN.
 INTO METAL STRUCTURES (STEEL OR ALUMINUM 1/8" MIN. THICK.)
 ALUMINUM : 6063-T6 MIN.
 (STEEL IN CONTACT WITH ALUMINUM TO BE PLATED OR PAINTED)

TYPICAL ANCHORS @ THRESHOLD: (REFER TO ELEVATION FOR SPACING)

- TYPE D** 1/4" TAPCON BY "ITW" DIRECTLY INTO $f_c=3000$ PSI CONCRETE
 1-1/4" MIN. EMBED
 MIN. EDGE DIST 2-1/2"
 MIN. SPACING 3"
- TYPE E** 5/16" DIA. ULTRACONS BY "ELCO" DIRECTLY INTO $f_c=3000$ PSI CONCRETE
 1-3/4" MIN. EMBED
 MIN. EDGE DIST 2-3/16"
 MIN. SPACING 3"

SEALANT:

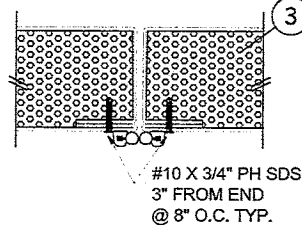
ALL FRAME JOINTS AND CORNERS TO BE SEALED WITH SILICONE AT PERIMETER



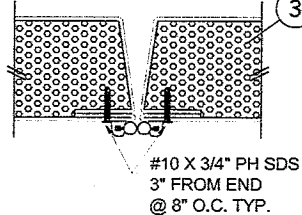
1 ANCHOR OPTION

- TYPE F** 3/8" DIA. HLC SLEEVE ANCHOR BY "HILTI"
 DIRECTLY INTO $f_c=3000$ PSI CONCRETE
 MIN. EMBED. 1-3/8"
 MIN. EDGE DIST 3-1/4"
 MIN. SPACING 4-1/2"
- TYPE F1** 3/8" DIA. HLC SLEEVE ANCHOR BY "HILTI"
 DIRECTLY INTO GROUT FILLED/HOLLOW CONCRETE BLOCK
 MIN. EMBED. 1-3/8"
 MIN. EDGE DIST 3-1/2"
 MIN. SPACING 4-1/2"
- TYPE G** 3/8" DIA. LOK BOLT BY "POWERS"
 DIRECTLY INTO $f_c=3000$ PSI CONCRETE
 MIN. EMBED. 1-5/8"
 MIN. EDGE DIST 3-3/4"
 MIN. SPACING 4-1/2"
- TYPE G1** 3/8" DIA. LOK BOLT BY "POWERS"
 DIRECTLY INTO GROUT FILLED/HOLLOW CONCRETE BLOCK
 MIN. EMBED. 1-1/2"
 MIN. EDGE DIST 3-3/4"
 MIN. SPACING 4-1/2"

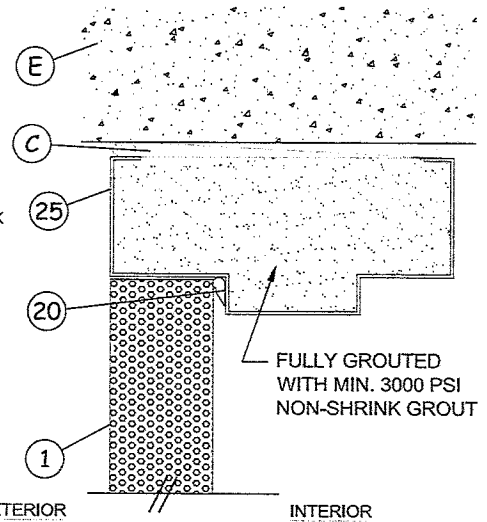
SQUARED EDGE



BEVELED EDGE



2 HORIZONTAL CROSS SECTION



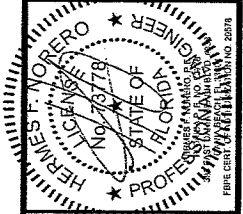
**3 VERTICAL CROSS SECTION
4 W/ 2" HEAD**



MESKER DOOR INC.
 3440 Standwood Blvd.
 Huntsville, AL 35811
 PH: (256) 851-6670

TITLE: "NVS" SERIES COMMERCIAL
 OUTSWING STEEL DOOR
 VERTICAL & HORIZONTAL
 SECTIONS
 PREPARED BY:
 BUILDING DROPS, INC.
 388 E. DANIA BEACH BLVD. #338
 DANIA BEACH, FL 33004
 PH: (954) 389-8478 FX: (954) 744-4738

NO.	REVISIONS DESCRIPTION	BY	DATE



DATE: 06.03.16	DWN BY: LS	CHK BY: HFN	SCALE: NTS
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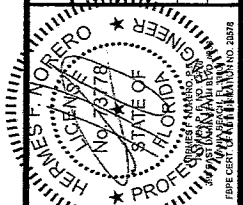
DWG #: MD1004
 SHEET: 4 OF 14

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REVISIONS

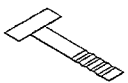
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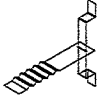



DATE:	06.03.16
DWN BY:	LS
CHK BY:	HFN
SCALE:	NTS

DWG #: **MDI004**
SHEET: **6 OF 14**

TYPICAL ANCHORS @ JAMB: (REFER TO ELEVATION FOR SPACING)

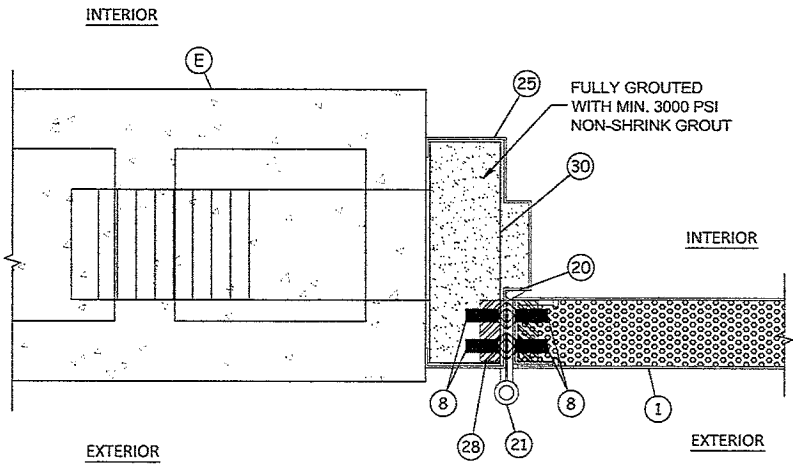
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TYPE I STRAP ANCHOR (PF-2) (Fy=60 KSI) MIN.
DIRECTLY INTO fc=3000 PSI GROUT FILLED CONCRETE BLOCK
- 

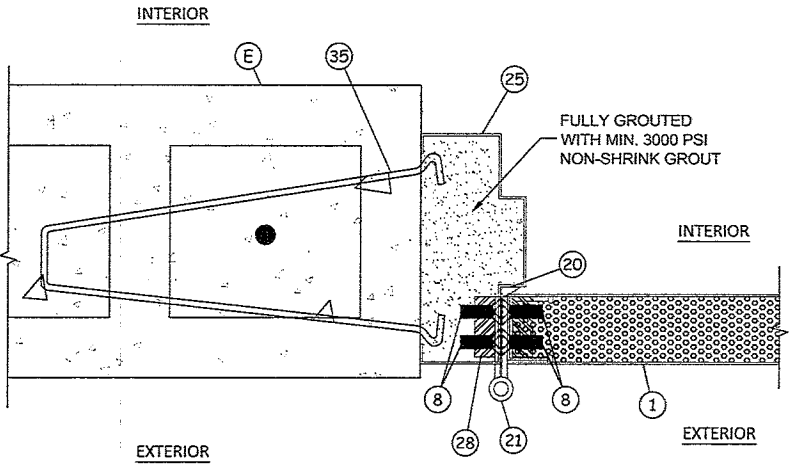
TYPE J STRAP ANCHOR (PS-241) (Fy=60 KSI) MIN.
DIRECTLY INTO fc=3000 PSI GROUT FILLED CONCRETE BLOCK
LIMIT DESIGN PRESSURE TO +/- 65 PSF
- 

TYPE K WIRE ANCHOR (PF-2) (Fy=60KSI) MIN.
DIRECTLY INTO fc=3000 PSI CONCRETE, 1-1/2" MIN. EMBED
DIRECTLY INTO GROUT FILLED/HOLLOW CONCRETE BLOCK, 1-1/4" MIN. EMBED

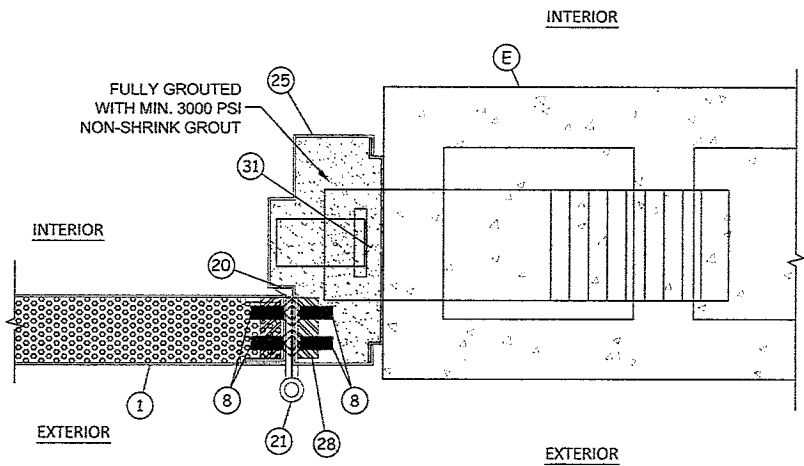
NOTE:
HEAD & JAMBS TO BE FULLY GOUTED WITH MIN. 3000 PSI NON-SHRINK GROUT



2 HORIZONTAL CROSS SECTION
6 STRAP ANCHOR (PF-2)



1 HORIZONTAL CROSS SECTION
6 WIRE ANCHOR

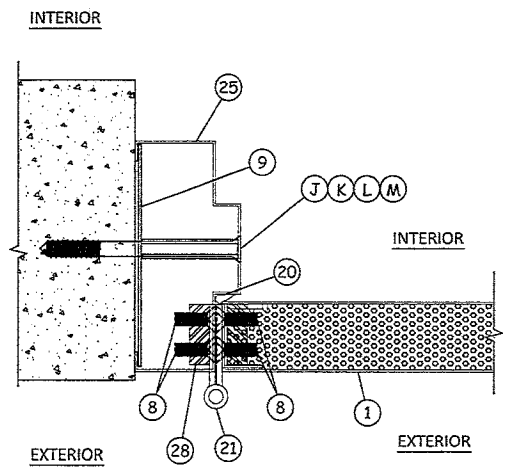


3 HORIZONTAL CROSS SECTION
6 STRAP ANCHOR (PS-241)

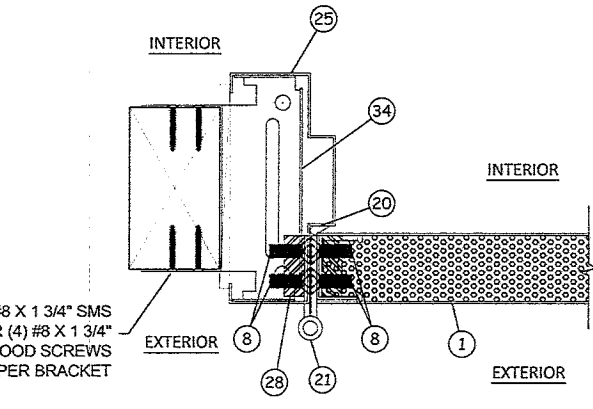


TYPICAL ANCHORS @ JAMB: (REFER TO ELEVATION FOR SPACING)

- TYPE L TUBE ANCHOR (PF-10)
SEE ELEVATIONS FOR ANCHOR BRACKET LAYOUT
⑨
- TYPE M Z ANCHOR (PF-9)
SEE ELEVATIONS FOR ANCHOR BRACKET LAYOUT
LIMIT DESIGN PRESSURE TO +/- 65 PSF
③③
- TYPE N WOOD STUD ANCHOR (F-24)
SEE ELEVATIONS FOR ANCHOR BRACKET LAYOUT
LIMIT DESIGN PRESSURE TO +/- 65 PSF
③④

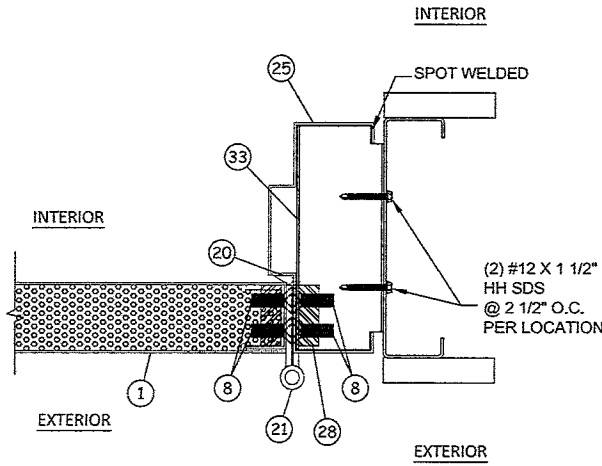


2 HORIZONTAL CROSS SECTION
7 TUBE ANCHOR



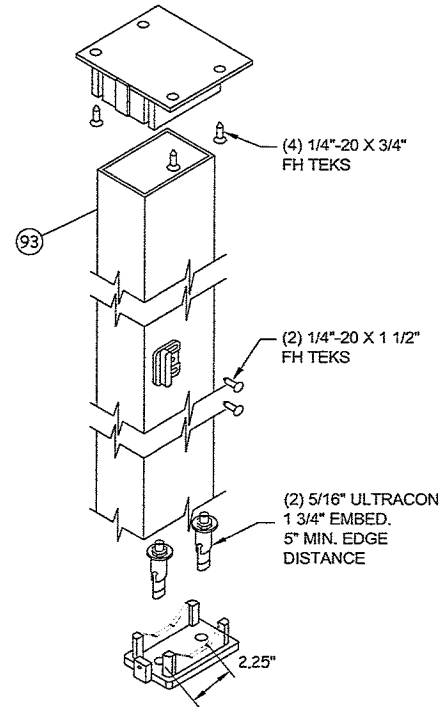
(4) #8 X 1 3/4" SMS
OR (4) #8 X 1 3/4"
WOOD SCREWS
PER BRACKET

1 HORIZONTAL CROSS SECTION
7 WOOD STUD ANCHOR



(2) #12 X 1 1/2"
HH SDS
@ 2 1/2" O.C.
PER LOCATION

3 HORIZONTAL CROSS SECTION
7 Z ANCHOR

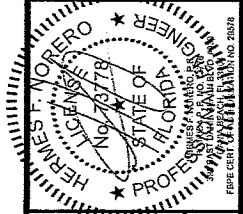


**DESIGN HARDWARE SERIES
KRM REMOVABLE MULLION**

Fy = 36 KSI MIN.
1/8" THK. STEEL

TITLE: "NVS" SERIES COMMERCIAL
OUTSWING STEEL DOOR
HORIZONTAL SECTIONS
PREPARED BY:
BUILDING DROPS, INC.
388 E. DANIA BEACH BLVD. #338
DANIA BEACH, FL 33004
Ph: (954) 989-8178 Fk: (954) 744-4738

NO.	DESCRIPTION	BY	DATE	
				REVISIONS

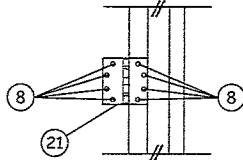


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DWN BY:	LS
CHK BY:	HFN
SCALE:	NTS
DWG #:	MDI004
SHEET:	7 OF 14

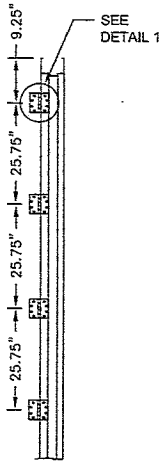
PFS **APPROVED**
DATE 5/15/18
PFS CORPORATION
Cottage Grove, WI

8/17/2016 12:00 PM

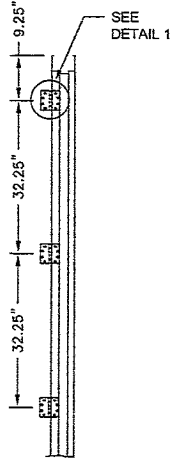
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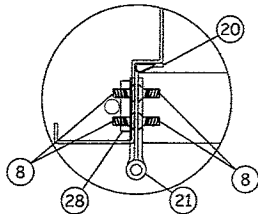
DETAIL 1



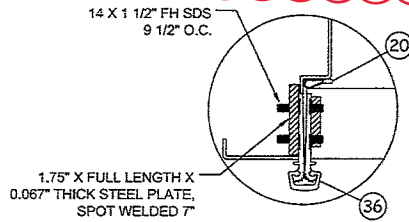
HINGE JAMB
4 HINGE OPTION
100" MAX. FRAME HEIGHT



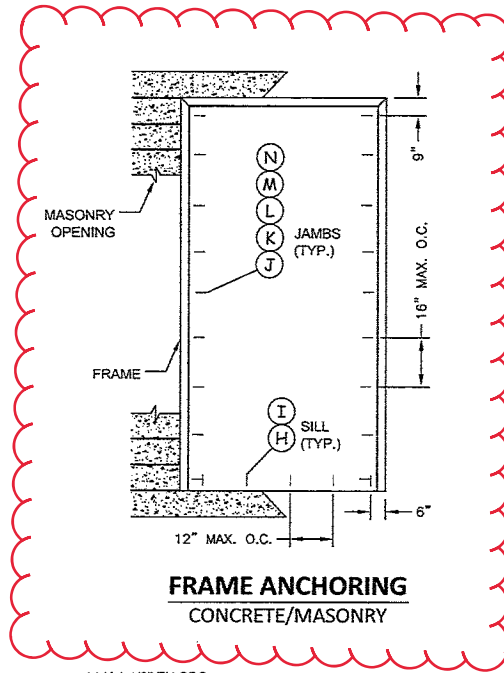
HINGE JAMB
3 HINGE OPTION
90" MAX. FRAME HEIGHT



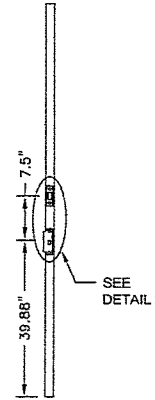
HINGE OPTION 1
BB5 BALL BEARING HINGE



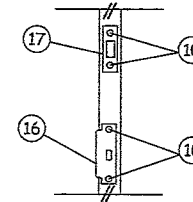
HINGE OPTION 2
CONTINUOUS GEARED HINGE



FRAME ANCHORING
CONCRETE/MASONRY



STRIKE JAMB



DETAIL 2



ANCHOR NOTES:

1. Substitution of equal concrete screws from a different supplier may have different edge distance and center distance requirements. Min. edge distances shown in details are for Dynalbolt Sleeve Anchors. Adjust min. clearances for Tapper concrete screws as necessary.
2. Concrete screw locations at the centers may be adjusted to maintain the minimum edge distance to mortar joints. If concrete screw locations noted as "MAX. ON CENTER" must be adjusted to maintain minimum edge distance to mortar joints, additional concrete screws may be required to ensure the maximum on center dimension is not exceeded.



MESKER DOOR INC.
3440 Standwood Blvd.
Huntsville, AL 35811
Ph: (256) 851-6670

TITLE: "NVS" SERIES COMMERCIAL
OUTSWING STEEL DOOR

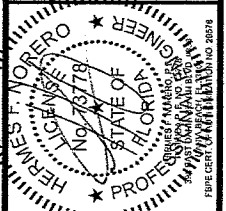
ANCHORING DETAILS

PREPARED BY:
BUILDING DROPS, INC.
388 E. DANIA BEACH BLVD. #338
DANIA BEACH, FL 33004

PH: (954) 398-8478 FX: (954) 744-4738

REVISIONS

NO.	DESCRIPTION	BY	DATE



DATE:	06.03.16	DWN BY:	LS	CHK BY:	HFN	SCALE:	NTS
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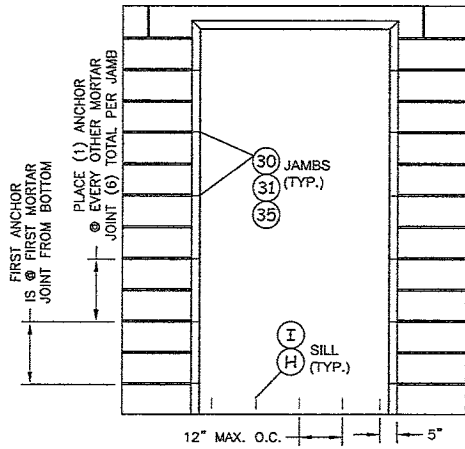
DWG #:

MD1004

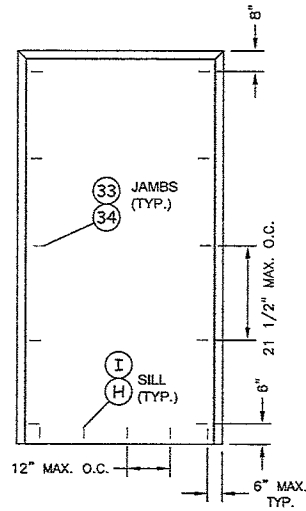
SHEET: **8 OF 14**

8/17/2018 12:00 PM

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FRAME ANCHORING
T-STRAP & WIRE ANCHOR



FRAME ANCHORING
WOOD STUD & Z ANCHOR

PFS APPROVED
DATE 5/15/18
PFS CORPORATION
Cottage Grove, WI



MESKER DOOR INC.
3440 Standwood Blvd.
Huntsville, AL 35811
Ph: (256) 851-6670

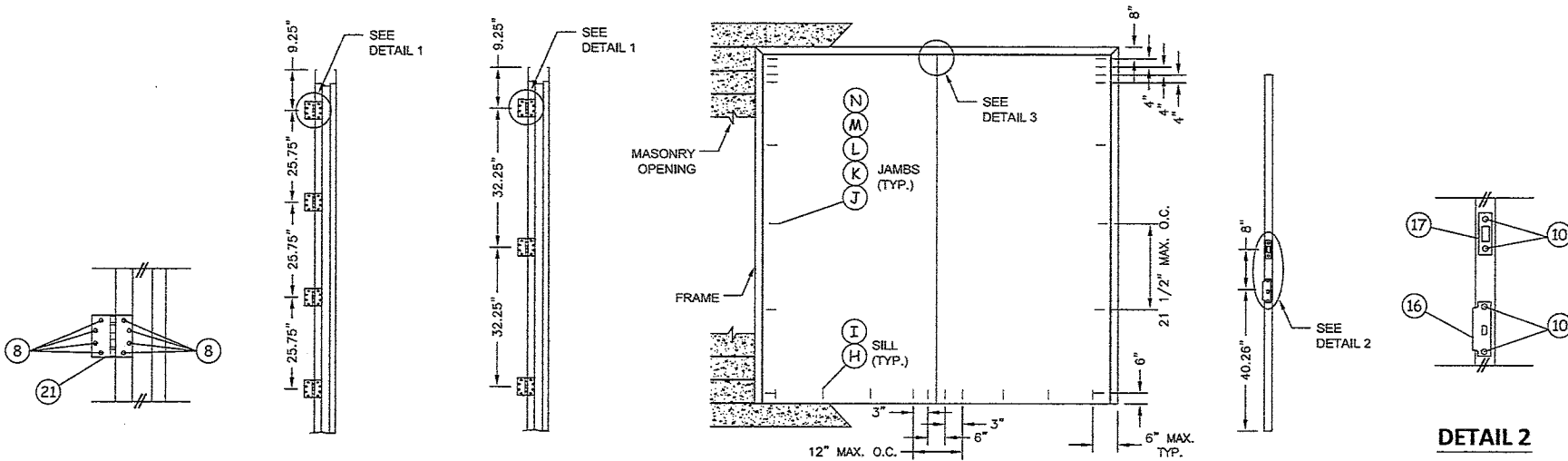
TITLE: "NVS" SERIES COMMERCIAL
OUTSWING STEEL DOOR
ANCHORING DETAILS
PREPARED BY:
 BUILDING DROPS, INC.
388 E. DANIA BEACH BLVD. #338
DANIA BEACH, FL 33004
Ph: (954) 989-9178 Fx: (954) 744-4738

REVISIONS	
NO.	DESCRIPTION



DATE:	06.03.18
DWN BY:	LS
CHK BY:	HFN
SCALE:	NTS

DWG #:
MDI004
SHEET: **9 OF 14**



DETAIL 1

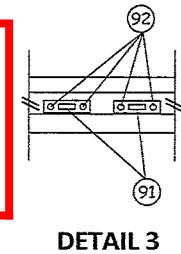
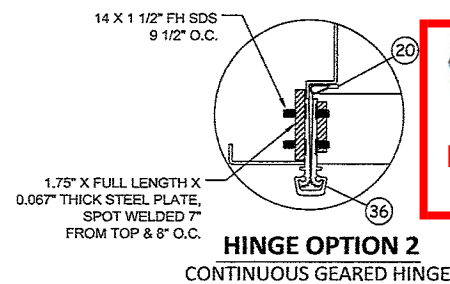
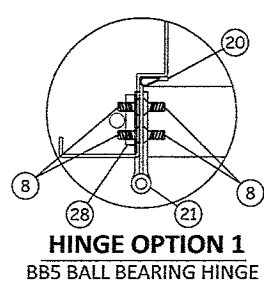
HINGE JAMB
4 HINGE OPTION
100" MAX. FRAME HEIGHT

HINGE JAMB
3 HINGE OPTION
90" MAX. FRAME HEIGHT

FRAME ANCHORING
CONCRETE/MASONRY

STRIKE JAMB

DETAIL 2

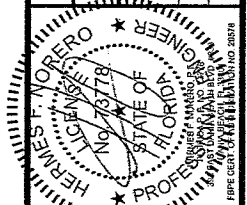


ANCHOR NOTES:

1. Substitution of equal concrete screws from a different supplier may have different edge distance and center distance requirements. Min. edge distances shown in details are for Dynabolt Sleeve Anchors. Adjust min. clearances for Tapper concrete screws as necessary.
2. Concrete screw locations at the centers may be adjusted to maintain the minimum edge distance to mortar joints. If concrete screw locations noted as "MAX. ON CENTER" must be adjusted to maintain minimum edge distance to mortar joints, additional concrete screws may be required to ensure the maximum on center dimension is not exceeded.

REVISIONS

NO.	DESCRIPTION	BY	DATE

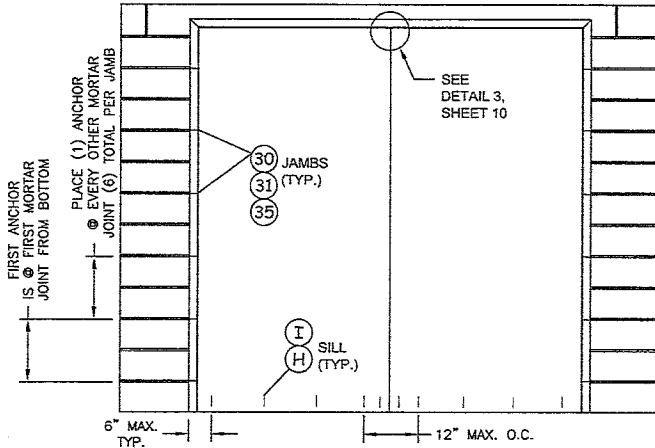


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DWN BY:	LS
CHK BY:	HFN
SCALE:	NTS

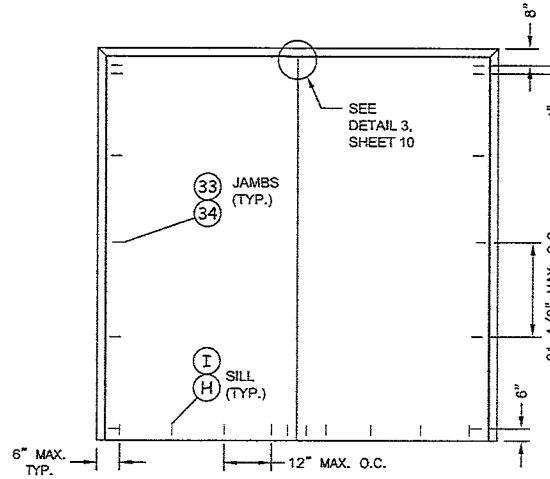
DWG #:
MDI004
SHEET: **10 OF 14**

8/1/2016 12:00 PM

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FRAME ANCHORING
T-STRAP & WIRE ANCHOR



FRAME ANCHORING
WOOD STUD & Z ANCHOR



MESKER DOOR INC.
3440 Standwood Blvd.
Huntsville, AL 35811
Ph: (256) 851-6670

TITLE: "NVS" SERIES COMMERCIAL
OUTSWING STEEL DOOR

ANCHORING DETAILS

PREPARED BY:
BUILDING DROPS, INC.
388 E. DANIA BEACH BLVD. #338
DANIA BEACH, FL 33004
Ph: (954) 309-6476 Fx: (954) 744-4738

REVISIONS	
NO.	DESCRIPTION



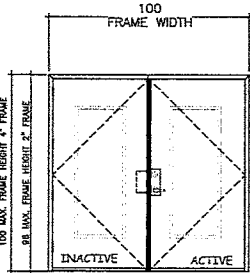
DATE:	06.03.16
DWN BY:	LS
CHK BY:	HFN
SCALE:	NTS

DWG #: MD1004
SHEET: 11 OF 14

HARDWARE/LOCK OPTIONS

ACTIVE DOOR HARDWARE CAN APPLY TO SINGLE DOORS
(EXTERIOR ELEVATIONS - OUTSWING DOORS)

OPTION 1



OPTION 1.A (+/- 65 PSF, 100\"/>

ACTIVE LEAF:

DESIGN HARDWARE M SERIES EXTRA HEAVY DUTY (GRADE 1) MORTISE LOCK WITH (2) 8-32 X 1 1/8\"/>

INACTIVE LEAF:

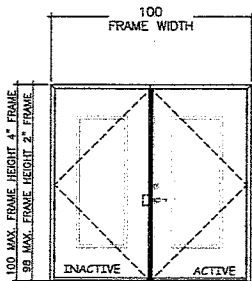
DESIGN HARDWARE UL-MFB-M FLUSH BOLTS WITH (4) 8 X 3/4\"/>

OPTION 1.B (+/- 60 PSF, 40\"/>

ACTIVE LEAF:

ONITY 86E SERIES EXTRA HEAVY DUTY (GRADE 1) MORTISE LOCK WITH (2) #12-24 X 1\"/>

OPTION 2



OPTION 2.A (+/- 65 PSF, 100\"/>

ACTIVE LEAF:

DESIGN HARDWARE X OR Z SERIES (GRADE 1) CYLINDRICAL LOCK, WITH (2) #8 X 3/4\"/>

INACTIVE LEAF:

DESIGN HARDWARE UL-MFB-M FLUSH BOLTS, FLUSH MOUNT METALLIC FLUSH BOLT GUIDE, SURFACE MOUNT METALLIC STRIKE PLATE, WITH (4) 8 X 3/4\"/>

OPTION 2.B (+/- 75 PSF, 52\"/>

ACTIVE LEAF:

DESIGN HARDWARE X OR Z SERIES (GRADE 1) CYLINDRICAL LOCK, WITH (2) #8 X 3/4\"/>

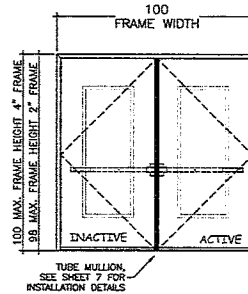
OPTION 2.C (+/- 55 PSF, 40\"/>

ACTIVE LEAF:

SCHLAGE 161 (GRADE 1) CYLINDRICAL LOCK, WITH (2) #8 X 3/4\"/>

NOTE:

CONTINUOUS HINGE OR BBS HINGE ACCEPTABLE ON ALL OPTIONS. LIMIT TO +/- 65 PSF WITH USE OF CONTINUOUS HINGE. FOR PANEL OPTIONS, SEE SHEET 2.



OPTION 3

OPTION 3.A (+/- 65 PSF, 100\"/>

ACTIVE LEAF/INACTIVE LEAF:

DESIGN HARDWARE 2000 SERIES STANDARD DUTY SURFACE MOUNT METALLIC RIM PANIC DEVICE WITH (6) 14 X 1 1/2\"/>

WITH 2\"/>

OPTION 3.B (+/- 65 PSF, 100\"/>

ACTIVE LEAF/INACTIVE LEAF:

DESIGN HARDWARE 1000 SERIES HEAVY DUTY SURFACE MOUNT METALLIC PANIC DEVICE WITH (5) 14 X 1 1/2\"/>

WITH 2\"/>

OPTION 3.C (+/- 55 PSF, 52\"/>

ACTIVE LEAF:

VON DUPRIN 99 SERIES STANDARD DUTY SURFACE MOUNT METALLIC RIM PANIC DEVICE WITH (6) 14 X 1 1/2\"/>

WITH 2\"/>

OPTION 4

OPTION 4.A (+/- 65 PSF, 100\"/>

ACTIVE LEAF/INACTIVE LEAF:

DESIGN HARDWARE 2000 SERIES STANDARD DUTY SURFACE MOUNT METALLIC PANIC DEVICE WITH DESIGN KIL TRIM, WITH (4) 14 X 1 1/2\"/>

OPTION 4.B (+/- 65 PSF, 100\"/>

ACTIVE LEAF/INACTIVE LEAF:

DESIGN HARDWARE 1000 SERIES HEAVY DUTY SURFACE MOUNT METALLIC PANIC DEVICE WITH DESIGN KIL TRIM WITH (5) 14 X 1 1/2\"/>

WITH 2\"/>

OPTION 4.C (+/- 55 PSF, 52\"/>

ACTIVE LEAF:

VON DUPRIN 99 SERIES STANDARD DUTY SURFACE MOUNT METALLIC RIM PANIC DEVICE WITH DESIGN KIL TRIM, WITH (4) 14 X 1 1/2\"/>

OPTION 5

OPTION 5.A (+/- 65 PSF, 100\"/>

ACTIVE LEAF/INACTIVE LEAF:

DESIGN HARDWARE 2000 SERIES STANDARD DUTY (GRADE 1) SVR SURFACE MOUNT METALLIC 2 POINT LOCK SYSTEM WITH PANIC DEVICE AND VERTICAL RODS ON EXTERIOR WITH (6) 14\"/>

OPTION 5.B (+/- 65 PSF, 100\"/>

ACTIVE LEAF/INACTIVE LEAF:

DESIGN HARDWARE 1000 SERIES HEAVY DUTY (GRADE 1) SVR SURFACE MOUNT METALLIC PANIC DEVICE WITH (2) 14-20\"/>



MESKER DOOR INC.
3440 Standwood Blvd.
Huntsville, AL 35811
Ph: (256) 851-6670

TITLE: "NVS" SERIES COMMERCIAL
OUTSWING STEEL DOOR

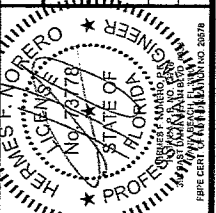
HARDWARE OPTIONS

PREPARED BY:

BUILDING DROPS, INC.
388 E. DANIA BEACH BLVD. #338
DANIA BEACH, FL 33004

PK: (904) 309-9476 FX: (904) 744-4738

NO.	DESCRIPTION	BY	DATE



DATE:	06.03.16
DWN BY:	LS
CHK BY:	LFN
SCALE:	NTS

DWG #:

MD1004

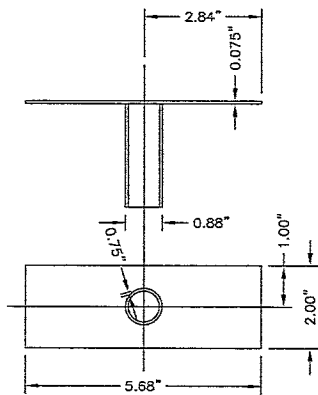
SHEET: 12 OF 14

PFS APPROVED

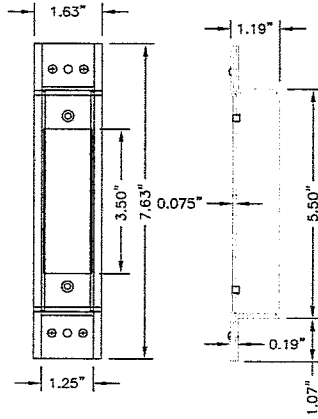
DATE 5/15/18

PFS CORPORATION

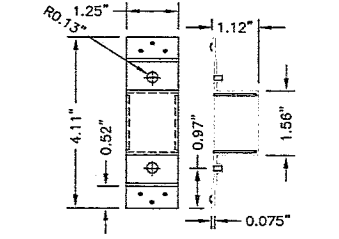
Cottage Grove, WI



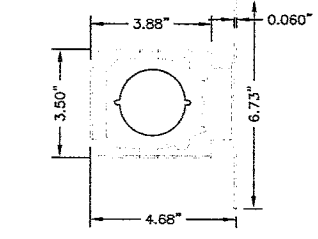
9 TUBE ANCHOR



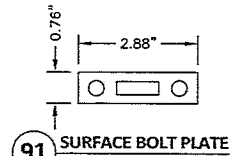
27 LATCH STRIKE REINFORCEMENT



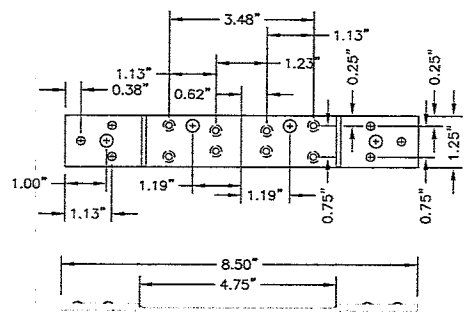
19 DEADBOLT STRIKE REINFORCEMENT



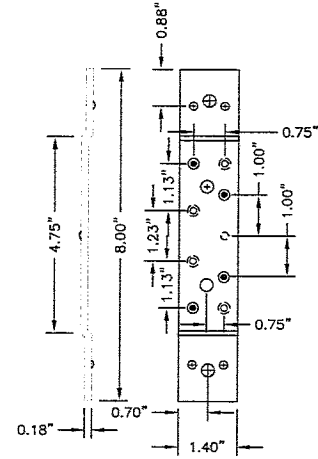
5 LOCK BOX REINFORCEMENT



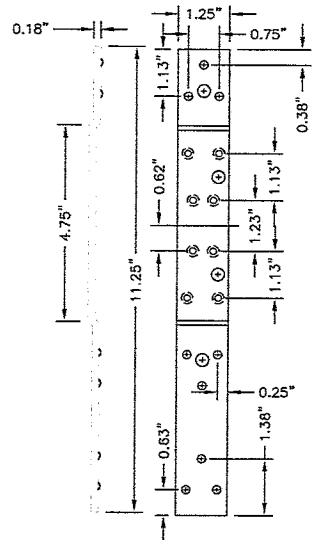
91 SURFACE BOLT PLATE



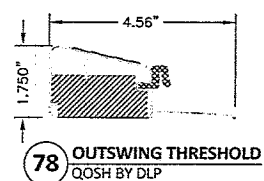
28 FRAME HINGE REINFORCEMENT



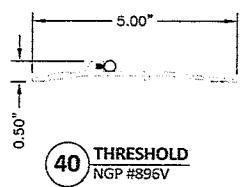
23 STANDARD (SHORT) DOOR HINGE
Reinforcement middle and bottom hinge



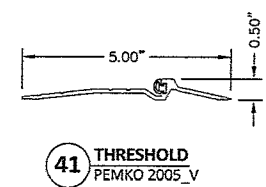
22 STANDARD (LONG) DOOR HINGE
Reinforcement top hinge



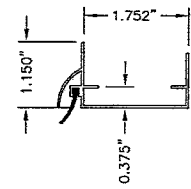
78 OUTSWING THRESHOLD
QOSH BY DLP



40 THRESHOLD
NGP #896V



41 THRESHOLD
PEMKO 2005_V



45 DOOR SWEEP



MESKER DOOR INC.
3440 Standwood Blvd.
Huntsville, AL 35811
PH: (256) 851-6670

TITLE: "NV5" SERIES COMMERCIAL
OUTSWING STEEL DOOR
COMPONENTS
PREPARED BY:
BUILDING DROPS, INC.
388 E. DANIA BEACH BLVD. #338
DANIA BEACH, FL 33004
PH: (954) 390-8478 FX: (954) 744-4738

REVISIONS

NO.	DESCRIPTION	BY	DATE



DATE: 06.03.16
DWN BY: LS
CHK BY: HFN
SCALE: NTS

DWG #: MDI004
SHEET: 13 OF 14

PFS APPROVED
DATE 5/15/18
PFS CORPORATION
Cottage Grove, WI

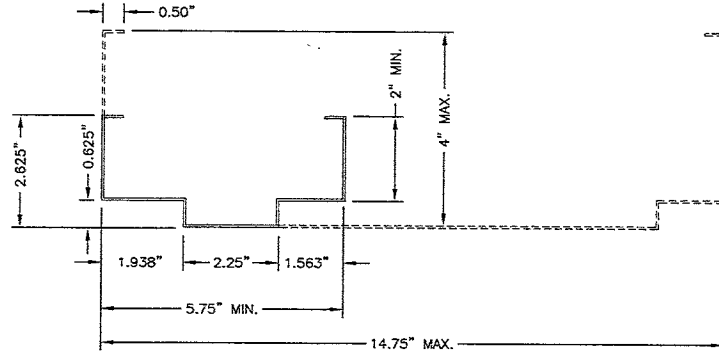
8/1/2016 12:00 PM

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BILL OF MATERIALS

ITEM #	DESCRIPTION	MATERIAL
C	1/4" MAX. SHIM SPACE	-
D	1/4" X 2-3/4" ELCO OR ITW CONCRETE SCREWS	STEEL
E	MASONRY - 3000 PSI MIN. CONCRETE CONFORMING TO ACI 301 OR HOLLOW BLOCK CONFORMING TO ASTM C90	CONCRETE
H	1/4" X 1-3/4" ITW PFH CONCRETE SCREW	STEEL
I	5/16" X 1-3/4" ELCO ULTRACON CONCRETE SCREW	STEEL
J	3/8" X 5" PFH ITW DYNABOLT SLEEVE ANCHOR	STEEL
K	3/8" X 5" HLC HILTI SLEEVE ANCHOR	STEEL
L	3/8" X 5" SLEEVE ANCHOR BY POWERS FASTENERS	STEEL
M	3/8" X 5" TAPPER CONCRETE SCREW BY POWERS FASTENERS	STEEL
N	5/16" SMS OR MACHINE BOLT (MIN. GRADE 5 CRS)	STEEL
O	3/8" X 5" WEDGE BOLT CONCRETE SCREW BY POWERS FASTENERS	STEEL
1	"N" STEEL DOOR PANEL	-
2	DOOR SKIN - 18GA (0.042" THK. STEEL, Fy=42 PSI MIN.) BY MESKER	STEEL
3	FOAM 1.0 PCF MIN. DENSITY	POLYSTYRENE
4	DOOR TOP & BOTTOM CLOSER	STEEL
5	LOCK BOX REINFORCEMENT	STEEL
8	#12-24 X 1/2" SELF TAPPER	STEEL
9	TUBE ANCHOR (PF-10)	STEEL
10	#12-24 X 1" COMBINATION MACHINE / WOOD SCREW	STEEL
16	ANSI LATCH STRIKE	STEEL
17	DEADBOLT STRIKE	STEEL
19	DEADBOLT STRIKE REINFORCEMENT	STEEL
20	WEATHERSTRIP (PEMKO S-88)	NEOPRENE
21	4-1/2" X 4-1/2" X 0.125" TEMPLATE HINGE	STEEL
22	STANDARD (LONG) DOOR HINGE TOP HINGE REINFORCEMENT	STEEL
23	STANDARD (SHORT) DOOR HINGE MIDDLE BOTTOM HINGE REINF.	STEEL
24	WEATHERSTRIP (THRESHOLD)	NEOPRENE
25	HOLLOW METAL FRAME - 16GA (0.053" THK.) BY MESKER	STEEL
27	LATCH STRIKE REINFORCEMENT	STEEL
28	FRAME HINGE REINFORCEMENT	STEEL
30	MASONRY 'TEE' ANCHOR (MESKER PFMT5)	STEEL
31	STRAP ANCHOR (PS-241)	STEEL
33	Z ANCHOR (PF-9)	STEEL
34	WOOD STUD ANCHOR (F-24)	STEEL
35	WIRE ANCHOR (PF-2)	STEEL
36	CONTINUOUS GEARED HINGE	ALUMINUM

ITEM #	DESCRIPTION	MATERIAL
40	THRESHOLD (NATIONAL GUARD PRODUCTS, INC. #896V)	ALUMINUM
41	THRESHOLD (PEMKO 2005_V)	ALUMINUM
45	95WHA DOOR SWEEP NATIONAL GUARD PRODUCTS, INC.	ALUMINUM
46	#6 X 3/4" PHILIPS HEAD SMS	STEEL
71	DESIGN HARDWARE D1-S SERIES DEADBOLT	STEEL
72	DESIGN HARDWARE "Z" SERIES ENTRY	STEEL
76	DESIGN HARDWARE D2-S SERIES DEADBOLT	STEEL
77	DESIGN HARDWARE "X" SERIES ENTRY	STEEL
78	OUTSWING THRESHOLD QOSH BY DLP	ALUM / WOOD
79	WEATHERSTRIP	FOAM
89	#8 X 1-1/4" PPH SELF TAPPER	STEEL
92	#8 X 1-1/4" PPH SELF TAPPER	STEEL
93	KRM REMOVABLE MULLION	STEEL



25 HOLLOW METAL FRAME



MESKER DOOR INC.
3440 Sandbrook Blvd.
Huntsville, AL 35811
Ph: (256) 851-6670

TITLE: "NVS" SERIES COMMERCIAL
OUTSWING STEEL DOOR

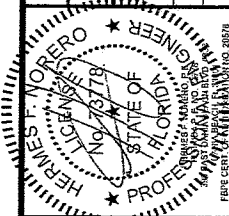
BILL OF MATERIALS

PREPARED BY:

BUILDING DROPS, INC.
398 E. DANIA BEACH BLVD. #338
DANIA BEACH, FL 33004
Ph: (954) 395-9478 Fax: (954) 744-4738

REVISIONS

NO.	DESCRIPTION	BY	DATE



DATE: 06.03.16
DWN BY: LS
CHK BY: HFN
SCALE: NTS

DWG #: MDI004
SHEET: 14 OF 14

