



# STATE OF CONNECTICUT

## CONNECTICUT SITING COUNCIL

Ten Franklin Square, New Britain, CT 06051

Phone: (860) 827-2935 Fax: (860) 827-2950

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[www.ct.gov/csc](http://www.ct.gov/csc)

### VIA ELECTRONIC MAIL

October 10, 2018

Jeffrey Barbadora  
Real Estate Specialist  
Crown Castle  
12 Gill Street, Suite 5800  
Woburn, MA 01801

RE: **EM-SPRINT-102-180928** – Sprint notice of intent to modify an existing telecommunications facility located at 31F Clark Falls Road, North Stonington, Connecticut.

Dear Mr. Barbadora:

The Connecticut Siting Council (Council) is in receipt of your correspondence of October 5, 2018 submitted in response to the Council's October 3, 2018 notification of an incomplete request for exempt modification with regard to the above-referenced matter.

The submission renders the request for exempt modification complete and the Council will process the request in accordance with the Federal Communications Commission 60-day timeframe.

Thank you for your attention and cooperation.

Sincerely,

Melanie A. Bachman  
Executive Director

MAB/FOC/IN



## **Robidoux, Evan**

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**From:** Barbadora, Jeff <Jeff.Barbadora@crowncastle.com>  
**Sent:** Friday, October 05, 2018 2:33 PM  
**To:** Robidoux, Evan  
**Cc:** CSC-DL Siting Council  
**Subject:** RE: Council Incomplete Letter for EM-SPRINT-102-180928-ClarkFallsRoad-NorthStonington  
**Attachments:** Mod-Drawings.pdf

Good afternoon,

Per the incomplete letter, I will FedEx three (3) sets of 11x17 of the attached modification drawings to your office. The WO#1581867 references a failed structural analysis. Does the Council need a copy of the failed SA or will the modification drawings suffice as part of Appendix D?

Thanks,

**Jeffrey Barbadora**  
781-970-0053  
12 Gill Street, Suite 5800, Woburn, MA 01801  
[CrownCastle.com](http://CrownCastle.com)

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**From:** Robidoux, Evan  
**Sent:** Wednesday, October 3, 2018 2:43 PM  
**To:** Barbadora, Jeff  
**Cc:** CSC-DL Siting Council  
**Subject:** Council Incomplete Letter for EM-SPRINT-102-180928-ClarkFallsRoad-NorthStonington

Please see the attached correspondence.

Evan Robidoux  
Clerk Typist  
Connecticut Siting Council  
10 Franklin Square  
New Britain, CT 06051

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# TOWER MODIFICATION DRAWINGS

SITE NAME: OSCAWANA LAKE / JONES/ SSUSA  
BU NUMBER: 876374

SITE ADDRESS:  
 31F CLARKS FALLS ROAD  
 NORTH STONINGTO, CT 6359  
 NEW LONDON COUNTY, USA

PROJECT CONTACTS:

1. CROWN PROJECT MANAGER

DAN VADNEY  
 (518) 373-3510  
 DAN.VADNEY@CROWNCastle.COM  
 3 CORPORATE PARK DRIVE, SUITE 101  
 CLIFTON PARK, NY 12065

2. CROWN CONSTRUCTION MANAGER

JASON D'AMICO  
 (860) 209-0104  
 JASON.D'AMICO@CROWNCastle.COM  
 3 CORPORATE PARK DRIVE, SUITE 101  
 CLIFTON PARK, NY 12065

3. CROWN DESIGN ENGINEER (EOR)

TERRY P. STYRAN, P.E.  
 (724) 416-9627  
 EORAPPROVAL@CROWNCastle.COM  
 2000 CORPORATE DRIVE  
 CANONSBURG, PA 15317

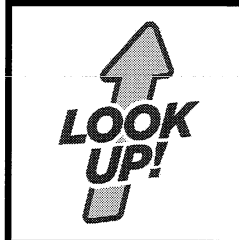
**TOWER INFORMATION**

TOWER MANUFACTURER / DWG #: EEI / DWG # GS53297  
 TOWER HEIGHT / TYPE: 150 FT MONOPOLE TOWER  
 TOWER LOCATION: LAT 41° 27' 53.24"  
 DATUM: (NAD 1983) LONG -71° 49' 34.62"  
 ELEV 234.0 FT AMSL  
 STRUCTURAL DESIGN DRAWING: CCI / WO # 1604241  
 STRUCTURAL ANALYSIS REPORT: CCI / WO # 1581867  
 STRUCTURAL ANALYSIS DATE: 07/02/18  
 ORDER #: 441433 REV # 0  
 CCISITES DOCUMENT ID: 7641674

**CODE COMPLIANCE**

THIS MODIFICATION DESIGN IS BASED ON THE REQUIREMENTS OF THE 2016 CONNECTICUT STATE BUILDING CODE BASED UPON AN ULTIMATE 3-SECOND GUST WIND SPEED OF 135 MPH CONVERTED TO A NOMINAL 3-SECOND GUST WIND SPEED OF 105 MPH WITH NO ICE PER SECTION 1609.3 AND APPENDIX N AS REQUIRED FOR USE IN THE TIA-222-G STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWERS AND ANTENNA SUPPORTING STRUCTURES PER EXCEPTION #5 OF SECTION 1609.1.1, 50 MPH WITH 0.75 INCH ICE THICKNESS AND 60 MPH UNDER SERVICE LOADS, EXPOSURE CATEGORY C AND RISK CATEGORY II.

ATTENTION ALL CONTRACTORS, ANYTIME YOU ACCESS A CROWN SITE FOR ANY REASON YOU ARE TO CALL THE CROWN NOC UPON ARRIVAL AND DEPARTURE, DAILY AT 800-788-7011



**SAFETY CLIMB: 'LOOK UP'**  
 THE INTEGRITY OF THE WIRE ROPE SAFETY CLIMB SYSTEM SHALL BE CONSIDERED DURING ALL STAGES OF DESIGN, INSTALLATION, AND INSPECTION. TOWER REINFORCEMENTS AND EQUIPMENT INSTALLATIONS SHALL NOT COMPROMISE THE INTEGRITY OR FUNCTIONAL USE OF ANY WIRE ROPE SAFETY CLIMB ON THE STRUCTURE. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO: PINCHING OF THE WIRE ROPE, BENDING OF THE WIRE ROPE FROM ITS SUPPORTS, DIRECT CONTACT OR CLOSE PROXIMITY TO THE WIRE ROPE WHICH MAY CAUSE FRICTIONAL WEAR, OR IMPACT TO THE ANCHORAGE POINTS IN ANY WAY. ANY COMPROMISED SAFETY CLIMB MUST BE REPORTED TO YOUR CROWN POC FOR RESOLUTION, INCLUDING EXISTING CONDITIONS.

DRAWINGS INCLUDED	
SHEET NUMBER	DESCRIPTION
S-1	TITLE PAGE
S-2	MODIFICATION INSPECTION CHECKLIST
S-3	NOTES
S-4	POLE MODIFICATION SCHEDULE
S-5	TOWER SECTION

			<small>THIS DRAWING IS COPYRIGHTED AND IS THE SOLE PROPERTY OF CROWN CASTLE. IT IS PRODUCED SOLELY FOR USE BY CROWN CASTLE AND ITS AFFILIATES. REPRODUCTION OR USE OF THIS DRAWING AND/OR THE INFORMATION CONTAINED IN IT IS FORBIDDEN WITHOUT THE WRITTEN PERMISSION OF CROWN CASTLE.</small>		
			SITE NAME: OSCAWANA LAKE / JONES/ SSUSA BU NUMBER: 876374 WO NUMBER: 1604241 SITE ADDRESS: 31F CLARKS FALLS ROAD NORTH STONINGTO, CT 6359 NEW LONDON COUNTY, USA		
			ENG/QA BY: DS DATE: 07/24/18 DFT BY: TPS DATE: 07/25/18 DFT/QA BY: SL DATE: 07/25/18 APRV'D BY: MEB DATE: 07/25/18		
			SCALE: N.T.S.		
			TITLE PAGE		
S-1			REV 0		

## MODIFICATION INSPECTION NOTES

MI CHECKLIST			
REQUIRED	REPORT ITEM	APPLICABLE CROWN DOC #	BRIEF DESCRIPTION
<b>PRE-CONSTRUCTION</b>			
X	MI CHECKLIST DRAWING	CED-SOW-10007	THIS CHECKLIST SHALL BE INCLUDED IN THE MI REPORT.
X	EOR APPROVED SHOP DRAWINGS	CED-SOW-10007	ONCE THE PRE-MODIFICATION MAPPING IS COMPLETE AND PRIOR TO FABRICATION, THE CONTRACTOR SHALL PROVIDE DETAILED ASSEMBLY DRAWINGS AND/OR SHOP DRAWINGS. THESE ARE TO INCLUDE, BUT ARE NOT LIMITED TO, A VISUAL LAYOUT OF NEW REINFORCEMENT, EXISTING REINFORCEMENT CONFIGURATION, PORTHOLES, MOUNTS, STEP PEGS, SAFETY CLIMBS AND ANY OTHER MISCELLANEOUS ITEMS WHICH MAY AFFECT SUCCESSFUL INSTALLATION OF MODIFICATIONS ON THE TOWER. THESE DRAWINGS SHALL BE SUBMITTED TO THE EOR FOR APPROVAL. APPROVED ASSEMBLY/SHOP DRAWINGS SHALL BE SUBMITTED TO THE MI INSPECTOR FOR INCLUSION IN THE MI REPORT.
X	FABRICATION INSPECTION	CED-SOW-10007	A LETTER FROM THE FABRICATOR, STATING THAT THE WORK WAS PERFORMED IN ACCORDANCE WITH INDUSTRY STANDARDS AND THE CONTRACT DOCUMENTS, SHALL BE PROVIDED TO THE MI INSPECTOR FOR INCLUSION IN THE MI REPORT.
NA	FABRICATOR CERTIFIED WELD INSPECTION	CED-SOW-10007 CED-STD-10069	A CWI SHALL INSPECT ALL WELDING PERFORMED ON STRUCTURAL MEMBERS DURING FABRICATION. A WRITTEN REPORT SHALL BE PROVIDED TO THE MI INSPECTOR FOR INCLUSION IN THE MI REPORT.
X	MATERIAL TEST REPORTS (MTR)	CED-SOW-10007	MATERIAL TEST REPORTS SHALL BE PROVIDED FOR MATERIAL USED AS REQUIRED PER SECTION 9.2.5 OF CED-SOW-10007. MTRS SHALL BE PROVIDED TO THE MI INSPECTOR FOR INCLUSION IN THE MI REPORT.
NA	FABRICATOR NDE INSPECTION REPORT	CED-SOW-10066 CED-STD-10069	CRITICAL SHOP WELDS THAT REQUIRE TESTING ARE NOTED ON THESE CONTRACT DRAWINGS. A CERTIFIED NDT INSPECTOR SHALL PERFORM NON-DESTRUCTIVE EXAMINATION AND A REPORT SHALL BE PROVIDED TO THE MI INSPECTOR FOR INCLUSION IN THE MI REPORT.
X	NDE OF MONOPOLE BASE PLATE	ENG-SOW-10033	A NDE OF THE POLE TO BASE PLATE CONNECTION IS REQUIRED AND A WRITTEN REPORT SHALL BE PROVIDED TO THE MI INSPECTOR FOR INCLUSION IN THE MI REPORT.
X	PACKING SLIPS	CED-SOW-10007	THE MATERIAL SHIPPING LIST SHALL BE PROVIDED TO THE MI INSPECTOR FOR INCLUSION IN THE MI REPORT.
ADDITIONAL TESTING AND INSPECTIONS:			
X OR NA			
<b>CONSTRUCTION</b>			
NA	FOUNDATION INSPECTIONS	CED-SOW-10144	A VISUAL OBSERVATION OF THE EXCAVATION AND REBAR SHALL BE PERFORMED BEFORE PLACING THE CONCRETE. A VISUAL OBSERVATION OF THE REBAR SHALL BE PERFORMED BEFORE PLACING THE EPOXY. A SEALED WRITTEN REPORT SHALL BE PROVIDED TO THE MI INSPECTOR FOR INCLUSION IN THE MI REPORT.
NA	CONCRETE COMP. STRENGTH AND SLUMP TEST	CED-SOW-10144	THE CONCRETE MIX DESIGN, SLUMP TEST, AND COMPRESSIVE STRENGTH TESTS SHALL BE PROVIDED AS PART OF THE FOUNDATION REPORT.
NA	EARTHWORK	CED-SOW-10144	FOUNDATION SUB-GRADES SHALL BE INSPECTED AND APPROVED BY A GEOTECHNICAL ENGINEER AND RESULTS INCLUDED AS PART OF THE FOUNDATION REPORT.
NA	MICROPILE/ROCK ANCHOR	CED-SOW-10144	MICROPILES/ROCK ANCHORS SHALL BE INSPECTED BY THE FOUNDATION INSPECTION VENDOR AND SHALL BE INCLUDED AS PART OF THE FOUNDATION INSPECTION REPORT, ADDITIONAL TESTING AND/OR INSPECTION REQUIREMENTS ARE NOTED IN THESE CONTRACT DOCUMENTS.
NA	POST-INSTALLED ANCHOR ROD VERIFICATION	CED-SOW-10007	POST INSTALLED ANCHOR ROD VERIFICATION SHALL BE PERFORMED IN ACCORDANCE WITH CROWN REQUIREMENTS AND A REPORT SHALL BE PROVIDED TO THE MI INSPECTOR FOR INCLUSION IN THE MI REPORT.
NA	BASE PLATE GROUT VERIFICATION	ENG-STD-10323	THE GENERAL CONTRACTOR SHALL PROVIDE DOCUMENTATION TO THE MI INSPECTOR THAT CERTIFIES THAT THE GROUT WAS REMOVED AND/OR INSTALLED IN ACCORDANCE WITH CROWN REQUIREMENTS FOR INCLUSION IN THE MI REPORT.
X	FIELD CERTIFIED WELD INSPECTION	CED-SOW-10066 CED-STD-10069	A CROWN APPROVED CERTIFIED WELD INSPECTOR SHALL INSPECT AND TEST FIELD WELDS, FOLLOWING ALL PROCEDURES SPECIFIED IN CROWN STANDARD DOCUMENTS APPLICABLE TO WELD INSPECTIONS. A REPORT SHALL BE PROVIDED. NDE OF FIELD WELDS SHALL BE PERFORMED AS REQUIRED BY CROWN STANDARDS AND CONTRACT DOCUMENTS. THE NDE REPORT SHALL BE INCLUDED IN THE CWI REPORT.
X	ON-SITE COLD GALVANIZING VERIFICATION	ENG-STD-10149 ENG-BUL-10149	THE GENERAL CONTRACTOR SHALL PROVIDE WRITTEN AND PHOTOGRAPHIC DOCUMENTATION TO THE MI INSPECTOR VERIFYING THAT ANY ON-SITE COLD GALVANIZING WAS APPLIED PER MANUFACTURER SPECIFICATIONS AND APPLICABLE STANDARDS.
NA	TENSION TWIST AND PLUMB	CED-PRC-10182 CED-STD-10261	THE GENERAL CONTRACTOR SHALL PROVIDE A REPORT IN ACCORDANCE WITH APPLICABLE STANDARDS DOCUMENTING TENSION TWIST AND PLUMB.
X	GC AS-BUILT DRAWINGS	CED-SOW-10007	THE GENERAL CONTRACTOR SHALL SUBMIT A LEGIBLE COPY OF THE ORIGINAL DESIGN DRAWINGS EITHER STATING "INSTALLED AS DESIGNED" OR NOTING ANY CHANGES THAT WERE REQUIRED AND APPROVED BY THE ENGINEER OF RECORD. EOR/RFI FORMS APPROVING ALL CHANGES SHALL BE SUBMITTED WHEN THE EOR IS SPECIFYING ADDITIONAL INSPECTIONS DESCRIPTION AND APPLICABLE STANDARDS SHALL BE APPLIED.
ADDITIONAL TESTING AND INSPECTIONS:			
X OR NA			
<b>POST-CONSTRUCTION</b>			
X	CONSTRUCTION COMPLIANCE LETTER	CED-SOW-10007	A LETTER FROM THE GENERAL CONTRACTOR STATING THAT THE WORKMANSHIP WAS PERFORMED IN ACCORDANCE WITH INDUSTRY STANDARDS AND THESE CONTRACT DRAWINGS, INCLUDING LISTING ADDITIONAL PARTIES TO THE MODIFICATION PROCESS.
NA	POST-INSTALLED ANCHOR ROD PULL TESTS	CED-PRC-10119	POST-INSTALLED ANCHOR RODS SHALL BE TESTED BY A CROWN APPROVED PULL TEST INSPECTOR AND A REPORT SHALL BE PROVIDED INDICATING TESTING RESULTS.
X	PHOTOGRAPHS	CED-SOW-10007	PHOTOGRAPHS SHALL BE SUBMITTED TO THE MI. PHOTOS SHALL DOCUMENT ALL PHASES OF THE CONSTRUCTION. THE PHOTOS SHALL BE ORGANIZED IN A MANNER THAT EASILY IDENTIFIES THE EXACT LOCATION OF THE PHOTO.
NA	BOLT INSTALLATION VERIFICATION REPORT	CED-SOW-10007	THE MI INSPECTOR SHALL VERIFY THE INSTALLATION AND TIGHTNESS 10% OF ALL NON PRE-TENSIONED BOLTS INSTALLED AS PART OF THE MODIFICATION. THE MI INSPECTOR SHALL LOOSEN THE NUT AND VERIFY THE BOLT HOLE SIZE AND CONDITION. THE MI REPORT SHALL CONTAIN THE COMPLETED BOLT INSTALLATION VERIFICATION REPORT, INCLUDING THE SUPPORTING PHOTOGRAPHS.
X	PUNCHLIST DEVELOPMENT AND CORRECTION DOCUMENTATION	CED-PRC-10283 CED-FRM-10285	FINAL PUNCHLIST INDICATING ALL NONCONFORMANCE(S) IDENTIFIED AND THE FINAL RESOLUTION AND APPROVAL.
X	MI INSPECTOR REDLINE OR RECORD DRAWING(S)	CED-SOW-10007	THE MI INSPECTOR SHALL OBSERVE AND REPORT ANY DISCREPANCIES BETWEEN THE CONTRACTOR'S REDLINE DRAWING AND THE ACTUAL COMPLETED INSTALLATION.
ADDITIONAL TESTING AND INSPECTIONS:			
X OR NA			

### GENERAL

THE MI IS AN ON-SITE VISUAL AND HANDS-ON INSPECTION OF TOWER MODIFICATIONS INCLUDING A REVIEW OF CONSTRUCTION REPORTS AND ADDITIONAL PERTINENT DOCUMENTATION PROVIDED BY THE GENERAL CONTRACTOR (GC), AS WELL AS ANY INSPECTION DOCUMENTS PROVIDED BY 3RD PARTY INSPECTORS. THE MI IS TO ENSURE THE INSTALLATION WAS CONSTRUCTED IN ACCORDANCE WITH THE CONTRACT DOCUMENTS, NAMELY THE MODIFICATION DRAWINGS; IN ACCORDANCE WITH APPLICABLE CROWN STANDARDS; AND AS DESIGNED BY THE ENGINEER OF RECORD (EOR).

NO DOCUMENT, CODE OR POLICY CAN ANTICIPATE EVERY SITUATION THAT MAY ARISE. ACCORDINGLY, THIS CHECKLIST IS INTENDED TO SERVE AS A SOURCE OF GUIDING PRINCIPLES IN ESTABLISHING GUIDELINES FOR MODIFICATION INSPECTION.

THE MI IS TO CONFIRM INSTALLATION CONFIGURATION AND WORKMANSHIP ONLY AND IS NOT A REVIEW OF THE MODIFICATION DESIGN ITSELF. AND THE MI INSPECTOR DOES NOT TAKE OWNERSHIP OF THE MODIFICATION DESIGN. OWNERSHIP OF THE STRUCTURAL MODIFICATION DESIGN EFFECTIVENESS AND INTEGRITY RESIDES WITH THE EOR AT ALL TIMES. THE MI INSPECTOR SHALL INSPECT AND NOTE CONFORMANCE/NONCONFORMANCE AND PROVIDE TO THE CROWN POINT OF CONTACT (CROWN POC) FOR EVALUATION.

ALL MIs SHALL BE CONDUCTED BY A CROWN APPROVED MI INSPECTOR, WORKING FOR A CROWN APPROVED MI VENDOR. SEE CROWN CED-LST-10173, "APPROVED MI VENDORS".

TO ENSURE THAT THE REQUIREMENTS OF THE MI ARE MET, IT IS VITAL THAT THE GENERAL CONTRACTOR (GC) AND THE MI INSPECTOR BEGIN COMMUNICATING AND COORDINATING AS SOON AS A PURCHASE ORDER (PO) IS RECEIVED. IT IS EXPECTED THAT EACH PARTY WILL BE PROACTIVE IN REACHING OUT TO THE OTHER PARTY. IF CONTACT INFORMATION IS NOT KNOWN THE GC AND/OR INSPECTOR SHALL CONTACT THE CROWN POINT OF CONTACT (POC).

REFER TO CROWN CED-SOW-10007, "MODIFICATION INSPECTION SOW", FOR FURTHER DETAILS AND REQUIREMENTS.

### SERVICE LEVEL COMMITMENT

THE FOLLOWING RECOMMENDATIONS AND SUGGESTIONS ARE OFFERED TO ENHANCE THE EFFICIENCY AND EFFECTIVENESS OF DELIVERING AN MI REPORT:

- THE GC SHALL PROVIDE A MINIMUM OF 5 BUSINESS DAYS NOTICE, PREFERABLY 10, TO THE MI INSPECTOR AS TO WHEN THE SITE WILL BE READY FOR THE MI TO BE CONDUCTED.
- THE GC AND MI INSPECTOR COORDINATE CLOSELY THROUGHOUT THE ENTIRE PROJECT.
- WHEN POSSIBLE, IT IS PREFERRED TO HAVE THE GC AND MI INSPECTOR ON-SITE SIMULTANEOUSLY FOR ANY GUY WIRE TENSIONING OR RE-TENSIONING OPERATIONS.
- WHEN POSSIBLE, IT IS PREFERRED TO HAVE THE GC AND MI INSPECTOR ON-SITE DURING THE MI TO HAVE ANY MINOR DEFICIENCIES CORRECTED DURING THE INITIAL MI. THEREFORE, THE GC MAY CHOOSE TO COORDINATE THE MI CAREFULLY TO ENSURE ALL CONSTRUCTION FACILITIES ARE AT THEIR DISPOSAL WHEN THE MI INSPECTOR IS ON SITE.

### REQUIRED PHOTOS

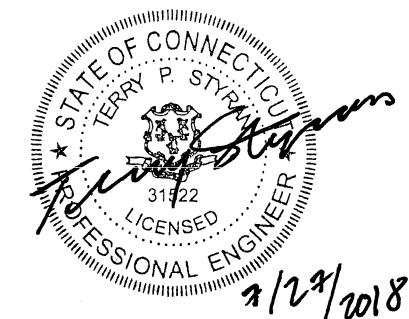
BETWEEN THE GC AND THE MI INSPECTOR THE FOLLOWING PHOTOGRAPHS, AT A MINIMUM, ARE TO BE TAKEN AND INCLUDED IN THE MI REPORT:

- PRE-CONSTRUCTION GENERAL SITE CONDITION
- PHOTOGRAPHS DURING THE REINFORCEMENT MODIFICATION CONSTRUCTION/ERECTION AND INSPECTION
  - RAW MATERIALS
  - PHOTOS OF ALL CRITICAL DETAILS
  - FOUNDATION MODIFICATIONS
  - WELD PREPARATION
  - BOLT INSTALLATION
  - FINAL INSTALLED CONDITION
  - SURFACE COATING REPAIR
- POST CONSTRUCTION PHOTOGRAPHS
  - FINAL INFIELD CONDITION

PHOTOS OF ELEVATED MODIFICATIONS TAKEN ONLY FROM THE GROUND SHALL BE CONSIDERED INADEQUATE.

THIS IS NOT A COMPLETE LIST OF REQUIRED PHOTOS, PLEASE REFER TO CROWN DOCUMENT # CED-SOW-10007.

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NO.	DATE	DESCRIPTION	BY
<b>REVISIONS</b>			
(Empty table for revisions)			
SITE NAME: OSCAWANA LAKE / JONES/ SSUSA BU NUMBER: 876374 WO NUMBER: 1604241 SITE ADDRESS: 31F CLARKS FALLS ROAD NORTH STONINGTO, CT 6359 NEW LONDON COUNTY, USA			
ENG/QA BY: DS		DATE: 07/24/18	
DFT BY: TPS		DATE: 07/25/18	
DFT/QA BY: SL		DATE: 07/25/18	
APRVD BY: MEB		DATE: 07/25/18	
SCALE: N.T.S.			
<b>MODIFICATION INSPECTION CHECKLIST</b>			
<b>S-2</b>			REV <b>0</b>



## GENERAL NOTES


- ALL WORK PRESENTED ON THESE DRAWINGS MUST BE COMPLETED BY THE CONTRACTOR UNLESS NOTED OTHERWISE. THE CONTRACTOR MUST BE EXPERIENCED IN THE PERFORMANCE OF WORK SIMILAR TO THAT DESCRIBED HEREIN. BY ACCEPTANCE OF THIS ASSIGNMENT, THE CONTRACTOR IS ATTESTING THAT HE DOES HAVE SUFFICIENT EXPERIENCE AND ABILITY, THAT HE IS KNOWLEDGEABLE OF THE WORK TO BE PERFORMED, THAT HE IS PROPERLY LICENSED, AND THAT HE IS PROPERLY REGISTERED TO DO THIS WORK IN THE STATE AND/OR COUNTY IN WHICH IT IS TO BE PERFORMED.
- ALL CONSTRUCTION MEANS AND METHODS; INCLUDING BUT NOT LIMITED TO, ERECTION PLANS, RIGGING PLANS, CLIMBING PLANS, AND RESCUE PLANS SHALL BE THE RESPONSIBILITY OF THE GENERAL CONTRACTOR RESPONSIBLE FOR THE EXECUTION OF THE WORK CONTAINED HEREIN AND SHALL MEET ANSI/ASSE A10.48 (LATEST EDITION); FEDERAL, STATE, AND LOCAL REGULATIONS; AND ANY APPLICABLE INDUSTRY CONSENSUS STANDARDS RELATED TO THE CONSTRUCTION ACTIVITIES BEING PERFORMED. ALL RIGGING PLANS SHALL ADHERE TO ANSI/ASSE A10.48 (LATEST EDITION) AND CROWN STANDARD CED-STD-10253 INCLUDING THE REQUIRED INVOLVEMENT OF A QUALIFIED ENGINEER FOR CLASS IV CONSTRUCTION TO CERTIFY THE SUPPORTING STRUCTURE(S) IN ACCORDANCE WITH THE ANSI/TIA-322 (LATEST EDITION).
- THE GENERAL NOTES AND TYPICAL DETAILS ARE APPLICABLE TO ALL PARTS OF THE STRUCTURE AND SHALL BE READ IN CONJUNCTION WITH THE STRUCTURAL DRAWINGS AND PROJECT SPECIFICATIONS.
- THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING APPROVALS FROM ALL AUTHORITIES HAVING JURISDICTION FOR THIS PROJECT AND SHALL NOTIFY THE APPLICABLE JURISDICTIONAL (STATE, COUNTY, OR CITY) ENGINEER 24 HOURS PRIOR TO THE BEGINNING OF CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR ABIDING BY ALL CONDITIONS AND REQUIREMENTS OF THE PERMITS.
- ERECT GUARDS AND BARRIERS PER APPLICABLE LABOR AND CONSTRUCTION SAFETY REGULATIONS.
- THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING CONDITIONS, POSSIBLE INTERFERENCES, AND DIMENSIONS BEFORE PROCEEDING WITH THE WORK. REPORT ANY AND ALL DISCREPANCIES TO THE CROWN CASTLE ENGINEER OF RECORD (EOR) AND CROWN CASTLE FIELD PERSONNEL IMMEDIATELY. ANY AND ALL FIELD CHANGES SHALL BE APPROVED AND DOCUMENTED BY THE EOR PRIOR TO FIELD IMPLEMENTATION.
- ALL MATERIALS AND WORKMANSHIP SHALL BE WARRANTED FOR TWO (2) YEARS FROM THE DATE OF COMPLETED CONSTRUCTION.
- USE ONLY THE LATEST ISSUES OF ANY APPLICABLE CODES, STANDARDS, OR REGULATIONS MENTIONED IN THE FOLLOWING NOTES AND SPECIFICATIONS, UNO.
- ALL WORKMANSHIP SHALL BE IN ACCORDANCE WITH ANSI, ASTM, ACI, TIA, AND AISC STANDARDS AS REFERENCED IN THE APPLICABLE CODE.
- STRUCTURAL ELEMENTS SHOWN ON THESE DRAWINGS ARE DESIGNED IN ACCORDANCE WITH APPLICABLE BUILDING CODES/STANDARDS. ALL CONSTRUCTION, EXCEPT WHERE NOTED OTHERWISE, SHALL COMPLY WITH THOSE CODES/STANDARDS.
- ALL MATERIALS AND EQUIPMENT FURNISHED SHALL BE NEW AND OF GOOD QUALITY, FREE FROM FAULTS AND DEFECTS, AND IN CONFORMANCE WITH THE DRAWINGS. ANY AND ALL SUBSTITUTIONS MUST BE DULY APPROVED AND AUTHORIZED IN WRITING BY THE OWNER AND ENGINEER OF RECORD PRIOR TO FABRICATION AND INSTALLATION. THE CONTRACTOR SHALL FURNISH SATISFACTORY EVIDENCE AS TO THE KIND AND QUALITY OF THE MATERIALS AND EQUIPMENT BEING SUBSTITUTED.
- ALL MANUFACTURER'S HARDWARE ASSEMBLY INSTRUCTIONS SHALL BE FOLLOWED EXACTLY AND SHALL SUPERSEDE ANY CONFLICTING NOTES ENCLOSED HEREIN.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR INITIATING, MAINTAINING, AND SUPERVISING ALL SAFETY PRECAUTIONS AND PROGRAMS IN CONNECTION WITH THE WORK. THE CONTRACTOR IS ALSO RESPONSIBLE FOR ENSURING THAT ALL CONSTRUCTION PROCEDURES MEET THE REQUIREMENTS OF OSHA, THE OWNER, AND ALL OTHER APPLICABLE LOCAL, STATE, AND FEDERAL SAFETY REGULATIONS.
- ACCESS TO THE PROPOSED WORK SITE MAY BE RESTRICTED. THE CONTRACTOR SHALL COORDINATE INTENDED CONSTRUCTION ACTIVITY, INCLUDING WORK SCHEDULE AND MATERIAL ACCESS, WITH THE RESIDENT LEASING AGENT.
- IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO SAFEGUARD ALL EXISTING STRUCTURES OR BURIED SERVICES AFFECTED BY THIS CONSTRUCTION. CONTRACTOR IS ALSO RESPONSIBLE FOR TEMPORARILY RELOCATING ANY LINES OR STRUTS AS NECESSARY TO COMPLETE THE REQUIRED WORK.
- STRUCTURAL DESIGN IS FOR THE COMPLETE CONDITION ONLY. THE CONTRACTOR MUST BE COGNIZANT THAT THE REMOVAL OF ANY STRUCTURAL COMPONENT OF AN EXISTING TOWER HAS THE POTENTIAL TO CAUSE THE PARTIAL OR COMPLETE COLLAPSE OF THE STRUCTURE. ALL NECESSARY PRECAUTIONS MUST BE TAKEN TO ENSURE STRUCTURAL INTEGRITY, INCLUDING, BUT NOT LIMITED TO, ENGINEERING ASSESSMENT OF CONSTRUCTION STRESSES WITH INSTALLATION MAXIMUM WIND SPEED AND/OR TEMPORARY BRACING AND SHORING.
- DO NOT SCALE DRAWINGS.
- THE DRAWINGS AND SPECIFICATIONS ARE THE PROPERTY OF CROWN CASTLE. THEY MAY NOT BE REPRODUCED IN ANY FORM WITHOUT THE EXPRESSED WRITTEN CONSENT/PERMISSION OF CROWN CASTLE.
- FOR THIS ANALYSIS AND MODIFICATION, THE TOWER HAS BEEN ASSUMED TO BE IN GOOD CONDITION WITHOUT ANY DEFECTS. IF THE CONTRACTOR DISCOVERS ANY INDICATION OF AN EXISTING STRUCTURAL DEFECT, CONTACT THE ENGINEER OF RECORD IMMEDIATELY
- MODIFICATION WORK SHALL BE COMPLETED IN CALM WIND CONDITIONS / OR APPROPRIATE WIND SPEED FOR THE TYPE OF MODIFICATION WORK TO BE INSTALLED.
- THE CLIMBING FACILITIES, SAFETY CLIMB AND ALL PARTS THEREOF SHALL NOT BE IMPEDED, MODIFIED OR ALTERED WITHOUT THE EXPRESS WRITTEN APPROVAL OF YOUR CROWN POC. ALL ALTERATIONS TO A SAFETY CLIMB'S ORIGINAL MANUFACTURER'S CONFIGURATION MUST BE DESIGNED BY THE ENGINEER OF RECORD. IF THE GENERAL CONTRACTOR FINDS THAT THE CLIMBING FACILITIES ARE IMPEDED, EITHER DURING BIDDING, DURING PRE-FABRICATION MAPPING, OR WHILE ON-SITE, THE GENERAL CONTRACTOR SHALL CONTACT THE CROWN POC TO DETERMINE A METHOD OF RESOLUTION.
- ANY WORK PERFORMED WITHOUT A PREFABRICATION MAPPING IS DONE AT THE RISK OF THE GENERAL CONTRACTOR AND/OR FABRICATOR.
- IF, DURING THE COURSE OF A FOUNDATION MODIFICATION, THE GC ENCOUNTERS EXISTING CONDUIT LOCATED WITHIN THE CONFINES OF THE EXISTING OR PROPOSED FOUNDATION CONCRETE, AND THIS CONDUIT IS NOT IN A LOCATION THAT IS SPECIFIED WITHIN THESE DESIGN DRAWINGS, THE GC SHALL IMMEDIATELY CONTACT THE EOR FOR GUIDANCE BEFORE PROCEEDING WITH THE INSTALLATION OF THE PROPOSED FOUNDATION MODIFICATIONS. IF CONDUIT IS TO BE INSTALLED THROUGH THE EXISTING FOUNDATION OR PROPOSED FOUNDATION MODIFICATION AND HASN'T BEEN SPECIFIED WITHIN THESE DESIGN DRAWINGS THEN THE GC SHALL IMMEDIATELY CONTACT THE EOR FOR GUIDANCE PRIOR TO PROCEEDING WITH THE INSTALLATION OF THE PROPOSED FOUNDATION MODIFICATIONS.

## STRUCTURAL STEEL NOTES

- DESIGN, FABRICATION, ERECTION, ALTERATION AND MAINTENANCE SHALL CONFORM TO THE FOLLOWING, UNLESS NOTED OTHERWISE (UNO).
  - TIA-222: STRUCTURAL STANDARD FOR ANTENNA SUPPORTING STRUCTURES AND ANTENNAS
  - TIA-1019-A: INSTALLATION, ALTERATION, AND MAINTENANCE OF ANTENNA SUPPORTING STRUCTURES AND ANTENNAS
  - AISC: MANUAL OF STEEL CONSTRUCTION
- ALL STRUCTURAL ELEMENTS SHALL CONFORM TO THE FOLLOWING REQUIREMENTS, UNO.
  - STRUCTURAL STEEL, ASTM A572 GRADE 65 (FY = 65KSI).
  - ALL BOLTS, ASTM A325 TYPE 1 GALVANIZED HIGH STRENGTH BOLTS.
  - ALL NUTS, ASTM A563 CARBON AND ALLOY STEEL NUTS.
  - ALL WASHERS, ASTM F436 HARDENED STEEL WASHERS.
- HOLES SHALL NOT BE FLAME CUT THRU STEEL UNLESS APPROVED BY THE ENGINEER OF RECORD.
- ALL FASTENERS SHALL NOT BE REUSED.
- A NUT LOCKING DEVICE SHALL BE INSTALLED ON ALL PROPOSED AND/OR REPLACED ASTM A325 BOLTS.
- ALL PROPOSED AND/OR REPLACED BOLTS SHALL BE OF SUFFICIENT LENGTH SUCH THAT THE END OF THE BOLT BE AT LEAST FLUSH WITH THE FACE OF THE NUT. IT IS NOT PERMITTED FOR THE BOLT END TO BE BELOW THE FACE OF THE NUT AFTER TIGHTENING IS COMPLETED.
- HOT-DIP GALVANIZE ALL ITEMS, UNO. GALVANIZE PER ASTM A123, ASTM A153/A153M OR ASTM A653 G90, AS APPLICABLE.
- FOR A LIST OF CROWN APPROVED COLD GALVANIZING COMPOUNDS, REFER TO CROWN ENG-BUL-10149, "TOWER PROTECTIVE COATINGS BULLETIN".
- AFTER FINAL INSPECTION, ALL EXPOSED STRUCTURAL STEEL AS THE RESULT OF THIS SCOPE OF WORK INCLUDING WELDS, FIELD DRILLED HOLES, AND SHAFT INTERIORS (WHERE ACCESSIBLE), SHALL BE CLEANED AND COLD GALVANIZING APPLIED BY BRUSH IN ACCORDANCE WITH CROWN ENG-BUL-10149, "TOWER PROTECTIVE COATINGS BULLETIN". PHOTO DOCUMENTATION IS REQUIRED TO BE SUBMITTED TO THE MI INSPECTOR.

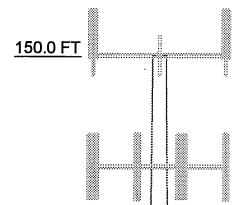
## WELDING NOTES

- ALL WELDING SHALL BE IN ACCORDANCE WITH THE AWS D1.1/D1.1M, "STRUCTURAL WELDING CODE-STEEL".
- ALL WELDING SHALL BE PERFORMED BY AWS CERTIFIED WELDERS.
- ALL ARC WELDING ON CROWN STRUCTURES SHALL BE DONE IN ACCORDANCE WITH THE CROWN ENG-PLN-10015, "CUTTING AND WELDING SAFETY PLAN" AND AWS D1.1 (LATEST EDITION). THIS SHALL INCLUDE A CERTIFIED WELDING INSPECTOR (CWI) FOR ACCEPTANCE OR REJECTION OF ALL WELDING OPERATIONS, PRE-DURING-POST, USING THE ACCEPTANCE CRITERIA OF AWS D1.1. THE CWI SHALL WORK WITH THE GC ON THE LEVEL OF INTERACTION NEEDED TO CONDUCT THE WELDING INSPECTION. THE CERTIFIED WELDING INSPECTION IS THE RESPONSIBILITY OF THE GC.
- FOR ALL WELDING, USE E70XX ELECTRODES FOR SMAW PROCESS AND E7XT-XX ELECTRODES FOR FCAW PROCESS, UNO.
- SURFACES TO BE WELDED SHALL BE FREE FROM SCALE, SLAG, RUST, MOISTURE, GREASE OR ANY OTHER FOREIGN MATERIAL THAT WOULD PREVENT PROPER WELDING. GRIND THE SURFACE ADJACENT TO THE WELD FOR A DISTANCE OF 2" MINIMUM ALL AROUND. ENSURE BOTH AREAS ARE 100% FREE OF ALL GALVANIZING.
- DO NOT WELD IF THE TEMPERATURE OF THE STEEL IN THE VICINITY OF THE WELD AREA IS BELOW 0° F. WHEN THE TEMPERATURE IS BETWEEN 0° F AND 32° F, PREHEAT AND MAINTAIN THE STEEL IN THE VICINITY OF THE WELD AREA AT 70° F DURING THE WELDING PROCESS.
- DO NOT WELD ON WET OR FROST-COVERED SURFACES & PROVIDE ADEQUATE PROTECTION FROM HIGH WINDS.
- FIELD NDE MINIMUM REQUIREMENTS:
  - ALL NDE SHALL BE IN ACCORDANCE WITH AWS D1.1.
  - FOR NEW BASE STIFFENERS (INCLUSIVE OF TRANSITION STIFFENERS) AND ANCHOR ROD BRACKETS, COMPLETE JOINT PENETRATION WELDS SHALL BE 100% INSPECTED BY UT. ALL PARTIAL JOINT PENETRATION AND FILLET WELDS SHALL BE 100% INSPECTED BY MT.
  - FOR NEW FLAT PLATE REINFORCEMENT AT THE BASE OF THE TOWER, COMPLETE JOINT PENETRATION WELDS SHALL BE 100% INSPECTED BY UT. ALL PARTIAL JOINT PENETRATION AND FILLET WELDS SHALL BE 100% INSPECTED BY MT, BUT MAY BE LIMITED TO A HEIGHT OF 10'-0".
  - FOR NDE OF THE EXISTING BASE PLATE CIRCUMFERENTIAL WELD, GC SHALL REFERENCE THE MI CHECKLIST FOR APPLICABILITY. PLEASE SEE ENG-SOW-10033: TOWER BASE PLATE NDE, AND ENG-BUL-10051: NDE REQUIREMENTS FOR MONOPOLE BASE PLATE TO PREVENT CONNECTION FAILURE. NOTIFY THE EOR AND CROWN ENGINEERING IMMEDIATELY IF ANY CRACKS ARE SUSPECTED OR HAVE BEEN IDENTIFIED. THE NDE SHALL INCLUDE ALL EXISTING MODIFICATIONS THAT HAVE BEEN WELDED TO THE BASE PLATE.
  - ALL TESTING LIMITATIONS SHALL BE DETAILED IN THE NDE REPORT.

			
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NO.	DATE	DESCRIPTION	BY
<b>REVISIONS</b>			
SITE NAME: OSCAWANA LAKE / JONES/ SSUSA BU NUMBER: 876374 WO NUMBER: 1604241 SITE ADDRESS: 31F CLARKS FALLS ROAD NORTH STONINGTO, CT 6359 NEW LONDON COUNTY, USA			
ENG/QA BY: DS		DATE: 07/24/18	
DFT BY: TPS		DATE: 07/25/18	
DFT/QA BY: SL		DATE: 07/25/18	
APRVD BY: MEB		DATE: 07/25/18	
SCALE: N.T.S.			
<b>NOTES</b>			
<b>S-3</b>			REV 0



**DETAIL DRAWINGS SHALL GOVERN OVER ANY VARIANCE FROM THIS SHEET**



POLE SPECIFICATIONS	
POLE SHAPE TYPE:	18-SIDED POLYGON
TAPER:	0.229 IN/FT
SHAFT STEEL:	ASTM A572 GRADE 65
BASE PL STEEL:	ASTM A572 GRADE 60 (60 KSI)
ANCHOR RODS:	2 1/4"Ø #18J ASTM A615 GRADE 75

SHAFT SECTION DATA					
SHAFT SECTION	SECTION LENGTH (FT)	PLATE THICKNESS (IN)	LAP SPLICE (IN)	DIAMETER ACROSS FLATS (IN)	
				@ TOP	@ BOTTOM
1	26.83	0.1875	38	15.000	21.150
2	41.46	0.2500		19.920	29.420
3	45.54	0.3125		27.830	38.260
4	48.92	0.3125		36.290	47.500

NOTE: DIMENSIONS SHOWN DO NOT INCLUDE GALVANIZING TOLERANCES

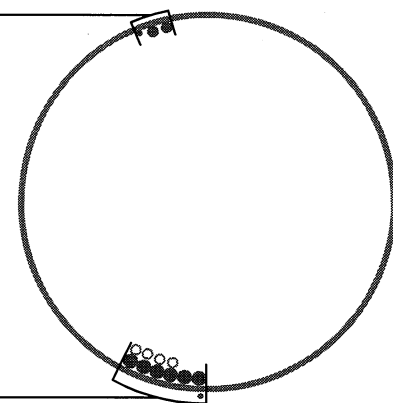
POLE MODIFICATION SCHEDULE			
	ELEVATION (FT)	MODIFICATION	REFERENCE SHEET
A	0.0	INSTALL NEW BASE PLATE STIFFENERS	S-5

PRIOR TO FABRICATION AND INSTALLATION, CONTRACTOR SHALL FIELD VERIFY ALL LENGTHS AND QUANTITIES GIVEN. LENGTH AND QUANTITIES PROVIDED ARE FOR QUOTING PURPOSES ONLY, AND SHALL NOT BE USED FOR FABRICATION.

0.0 FT  
TOP OF BASE PLATE

POLE ELEVATION

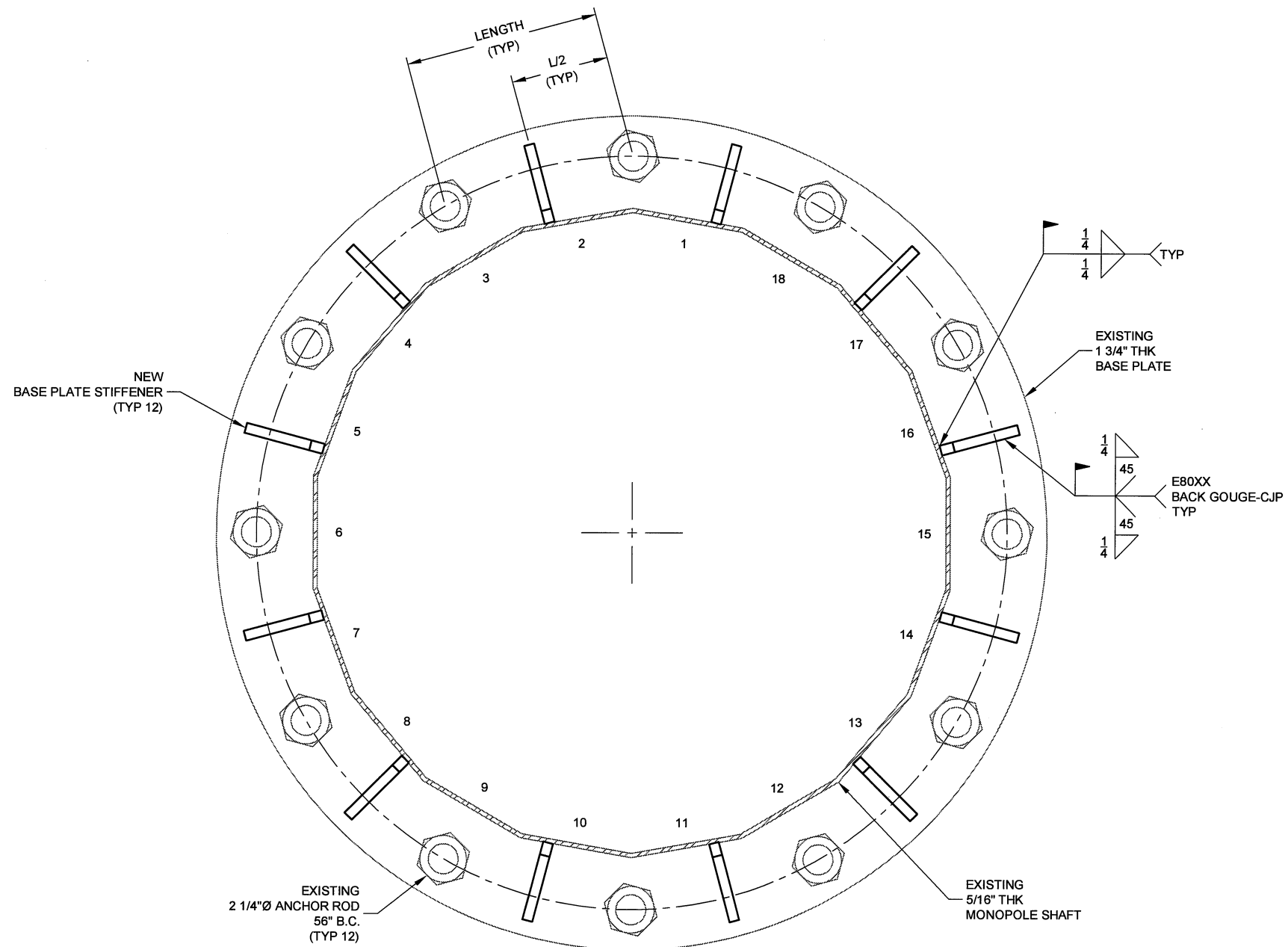
(INSTALLED)  
(1) 1/2" TO 140 FT LEVEL  
(2) 1-1/4" TO 140 FT LEVEL



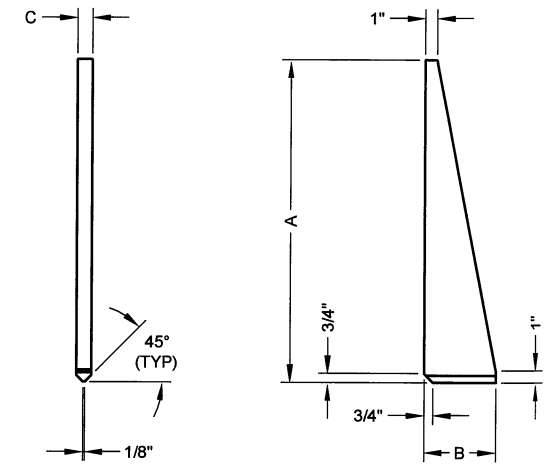
(PROPOSED)  
(4) 1-1/4" TO 150 FT LEVEL  
(INSTALLED)  
(1) 1/2" TO 76 FT LEVEL  
(INSTALLED-TO BE REMOVED)  
(6) 1-5/8" TO 150 FT LEVEL

BASE LEVEL DRAWING

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			<i>Terry P. Styran</i> 3/27/2018		
<b>POLE MODIFICATION SCHEDULE</b>			<table border="1"> <tr> <th>REV</th> </tr> <tr> <td>0</td> </tr> </table>	REV	0
REV					
0					
<b>S-4</b>					



A-A TOWER SECTION  
S-5



BASE PLATE STIFFENER

WEIGHT (#)	A (in)	B (in)	C (in)	STEEL GRADE
13.9	18	6	3/4	A572-60

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			NO.	DATE	DESCRIPTION
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<p>SITE NAME: OSCAWANA LAKE / JONES/ SSUSA          BU NUMBER: 876374          WO NUMBER: 1604241          SITE ADDRESS:          31F CLARKS FALLS ROAD          NORTH STONINGTO, CT 6359          NEW LONDON COUNTY, USA</p>			<p>ENG/QA BY: DS DATE: 07/24/18          DFT BY: TPS DATE: 07/25/18          DFT/QA BY: SL DATE: 07/25/18          APRVD BY: MEB DATE: 07/25/18</p>		
<p>SCALE: N.T.S.</p>			<p>TOWER SECTION</p>		
<p>S-5</p>			<p>REV 0</p>		

*Terry P. Strzala*
  
 7/29/2018