



PORT HOLE INSTALLATION

SITE NAME: SF429 HAGEMANN MEAT COMPA
BU NUMBER: 827748

SITE ADDRESS:
18401 S HIGHWAY 1
BODEGA BAY, CA 94923
SONOMA COUNTY, USA

PROJECT CONTACTS:

1. CROWN PROJECT MANAGER

KATIE DURRENBERGER
(602) 845-1747
KATIE.DURRENBERGER@CROWNCastle.COM
2055 S. STEARMAN DRIVE
CHANDLER, AZ 85286

2. CROWN DESIGN ENGINEER (EOR)

MAGED (MATTHEW) ABDEL-MESSIH, P.E.
(724) 416-9627
EORAPPROVAL@CROWNCastle.COM
2000 CORPORATE DRIVE
CANONSBURG, PA 15317

TOWER INFORMATION

TOWER MANUFACTURER / DWG #: SABRE / DWG # 04-12086-01

TOWER HEIGHT / TYPE: 60 FT MONOPOLE TOWER

| | | |
|-------------------|------|------------------|
| TOWER LOCATION: | LAT | 38° 20' 20.10" |
| DATUM: (NAD 1983) | LONG | -122° 59' 29.40" |
| | ELEV | 514 FT AMSL |

STRUCTURAL DESIGN DRAWING: CCI / WO # 2113565
ORDER #: 606513 REV # 0

CODE COMPLIANCE

THIS MODIFICATION DESIGN IS BASED ON THE REQUIREMENTS OF THE 2019 CBC AND TIA-222-H STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWERS AND ANTENNA SUPPORTING STRUCTURES.

SPECIAL INSPECTIONS REQUIRED

1. FIELD WELDING

HOT WORK INCLUDED

| | |
|----|-------------------------------|
| NA | BASE GRINDING ONLY |
| X | BASE WELDING (AND GRINDING) |
| NA | AERIAL GRINDING ONLY |
| X | AERIAL WELDING (AND GRINDING) |

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

| <u>SHEET NUMBER</u> | <u>DESCRIPTION</u> |
|---------------------|-----------------------------------|
| PH-1 | TITLE PAGE |
| PH-2 | MODIFICATION INSPECTION CHECKLIST |
| PH-3 & PH-4 | NOTES |
| PH-5 | PORT HOLE DESIGN |

[illegible]

| MI CHECKLIST | | | | |
|-------------------------------------|--|--|--|--|
| REQUIRED | REPORT ITEM | APPLICABLE CROWN DOC # | BRIEF DESCRIPTION | |
| PRE-CONSTRUCTION | | | | |
| X | MI CHECKLIST DRAWING | CED-SOW-10007 | THIS CHECKLIST SERVES AS A GUIDELINE FOR THE REQUIRED CONSTRUCTION DOCUMENTS AND INSPECTIONS FOR THIS MODIFICATION. | |
| 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. SHOP DRAWINGS SUBMISSION SHALL INCLUDE THE EOR RFI FORM DETAILING ANY CHANGES FROM THE ORIGINAL DESIGN. | |
| NA | 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. | |
| NA | 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 | PACKING/SHIPPING LIST FOR ALL MATERIAL THAT WAS USED DURING CONSTRUCTION OF THE MODIFICATION. | |
| ADDITIONAL TESTING AND INSPECTIONS: | | | | |
| NA | | | | |
| CONSTRUCTION | | | | |
| 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 AN APPROVED FOUNDATION INSPECTOR 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 | CON-STD-10149 CED-FRM-10358 | 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. | |
| ADDITIONAL TESTING AND INSPECTIONS: | | | | |
| NA | | | | |
| POST-CONSTRUCTION | | | | |
| X | CONSTRUCTION COMPLIANCE LETTER | CED-SOW-10007 CED-FRM-10358 | 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 HOLE 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/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: | | | | |
| NA | | | | |

THE MI CHECKLIST SHALL BE REVIEWED PRIOR TO THE START OF CONSTRUCTION. ALL PARTIES TO THE MODIFICATION SHALL UNDERSTAND CROWN REQUIREMENTS AND INSPECTION/DOCUMENTATION THAT IS APPLICABLE TO THE SCOPE OF WORK THEY ARE PERFORMING. ERRORS ON THE MI CHECKLIST SHALL BE BROUGHT TO THE ATTENTION OF THE CROWN POC AND EOR AS SOON AS POSSIBLE.

MODIFICATION INSPECTION NOTES

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 MI'S 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, FOR A COMPLETE LIST OF PHOTOS SEE CED-SOW-10007.

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| NO. | DATE | DESCRIPTION | BY | |
| REVISIONS | | | | |
|  | | | | SITE NAME: SF429 HAGEMANN MEAT COMPA |
| | | | | BU NUMBER: 827748 |
| | | | | WO NUMBER: 2113565 |
| | | | | SITE ADDRESS: 18401 S HIGHWAY 1 BODEGA BAY, CA 94923 SONOMA COUNTY, USA |
| | | | | |
| | | | | DFT BY: SL DATE: 05/10/22 |
| | | | | DFT/QA BY: TE DATE: 05/10/22 |
| | | | | APRV'D BY: MAM DATE: 05/10/22 |
| | | | | SCALE: N.T.S. |
| | | | | |
| | | | | MODIFICATION INSPECTION CHECKLIST |
| | | | | PH-2 |
| | | | | REV 0 |

1. The General Contractor (GC) shall reference CON-STD-10159, "Tower Modification Construction Specifications", as a continuation of the following General Notes. The GC shall keep a printed or electronic copy of this document with the Structural Design Drawings (SDD) at all times, in a location accessible to all Contractor Personnel, and shall ensure that all Contractor Personnel are aware of the information enclosed within the General Notes and CON-STD-10159.
2. The Contract Documents are the property of Crown Castle (Crown). They are provided to the GC and its Lower Tier Contractors and material suppliers for the limited purpose of use in completing the Work for this Site, and shall be kept in strict confidence and not disclosed to any third parties. The Contract Documents shall not be used for any other purpose whatsoever without the prior written consent of Crown.
3. Detail drawings, including notes and tables, shall govern over general notes and typical details. Contact the Crown Point of Contact (POC) and Engineer of Record (EOR) for clarification as needed.
4. Do not scale drawings.
5. Any Work performed without a prefabrication mapping is done at the risk of the GC and/or fabricator. All dimensions of existing structural elements are assumed based on the available documentation and are preliminary until field-verified by the GC, unless noted otherwise (UNO). Where discrepancies are found, GC shall contact the Crown POC and EOR through RFI.
6. For this analysis and modification, the tower has been assumed to be in good condition without any structural defects, UNO. If the GC discovers any indication of an existing structural defect, contact the Crown POC and EOR immediately.
7. 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 GC 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, "Rigging Program", 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).
8. The structural integrity of the modification design extends to the complete condition only. The GC 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.
9. Aerial and underground utilities and facilities may or may not be shown on the drawings. The GC shall take every precaution to preserve and protect these items, which may include aerial or underground power lines, telephone lines, water lines, sewer lines, cable television facilities, pipelines, structures and other public and private improvements within or adjacent to the Work area. The responsibility for determining the actual on-site location of these items shall rest exclusively with the GC.
10. All manufacturer's hardware assembly instructions shall be followed, UNO. Conflicting notes shall be brought to the attention of the EOR and the Crown POC.



11. The GC shall fabricate all required items per the materials specified below, UNO on the detail drawing sheets. If the GC finds for any component that the materials have not been clearly specified, the GC shall submit an RFI to the EOR to confirm the required material.
- All structural elements shall be new and shall conform to the following requirements, UNO:
- Monopoles:
- Structural shapes and plates: ASTM A572 Grade 65 (FY = 65 KSI)
 - Welding electrodes, SMAW: E80XX
 - Welding electrodes, FCAW: E8XT-XX
 - Welding electrodes, GMAW: ER80S-X
- Self-Support and Guyed Towers:
- Structural shapes and plates: ASTM A572 Grade 50 (FY = 50 KSI)
 - Welding electrodes, SMAW: E70XX
 - Welding electrodes, FCAW: E7XT-XX
 - Welding electrodes, GMAW: ER70S-X
- All tower types:
- Steel angle: ASTM A572 Grade 50 (FY = 50 KSI)
 - Solid rod: ASTM A36 (FY = 36 KSI)
 - Pipe/tube (round): ASTM A500 Grade C (FY = 46 KSI)
 - Pipe/tube (square): ASTM A500 Grade C (FY = 50 KSI)
 - Bolts: ASTM F3125 Grade A325 Type 1
 - U-bolts: ASTM A307 Grade A, or SAE J429 Grade 2
 - Nuts: ASTM A563 Grade DH
 - Washers: ASTM F436 Type 1
 - Guy Wires: ASTM A475 Grade EHS
 - Bridge Strand: ASTM A586 Grade 1
12. After fabrication, hot-dip galvanize all steel items, UNO. Galvanize per ASTM A123, ASTM A153/A153M, or ASTM A653 G90, as applicable. ASTM A490 bolts shall not be hot-dip galvanized, but shall instead be coated with Magni 565 or EOR approved equivalent, per ASTM F2833.
13. Contractor Personnel shall not drill holes in any new or existing structural members, other than those drilled holes shown on structural drawings, without the approval of the EOR.
14. For a list of Crown-approved cold galvanizing compounds, refer to CON-STD-10149, "Tower Protective Coatings Guidelines".
15. All exposed structural steel as the result of this scope of Work including welds (after final inspection of the weld by the CWI), field drilled holes, and shaft interiors (where accessible), shall be cleaned and two (2) coats cold galvanizing shall be applied by brush in accordance with CON-STD-10149, "Tower Protective Coatings Guidelines". Photo documentation is required to be submitted to the MI Inspector.
16. If removal of existing modifications is required per the modification scope, the GC shall clean and cold galvanize any existing empty bolt holes, UNO. If additional unexpected, oversized, or slotted holes are found, the GC shall contact the EOR and Crown POC for guidance prior to proceeding with the modifications.
17. All Work involving base plate grout scope items or resulting in disturbance of base plate grout shall reference ENG-STD-10323, "Base Plate Grout", and shall follow any Base Plate Grout Removal Notes contained herein.
18. If scope of modification involves bark removal or installation, the GC shall reference CED-SOW-10265, "Tree Concealment for Monopoles", as well as CED-STD-10395, "Installation Guidelines for Bark Surfaces".

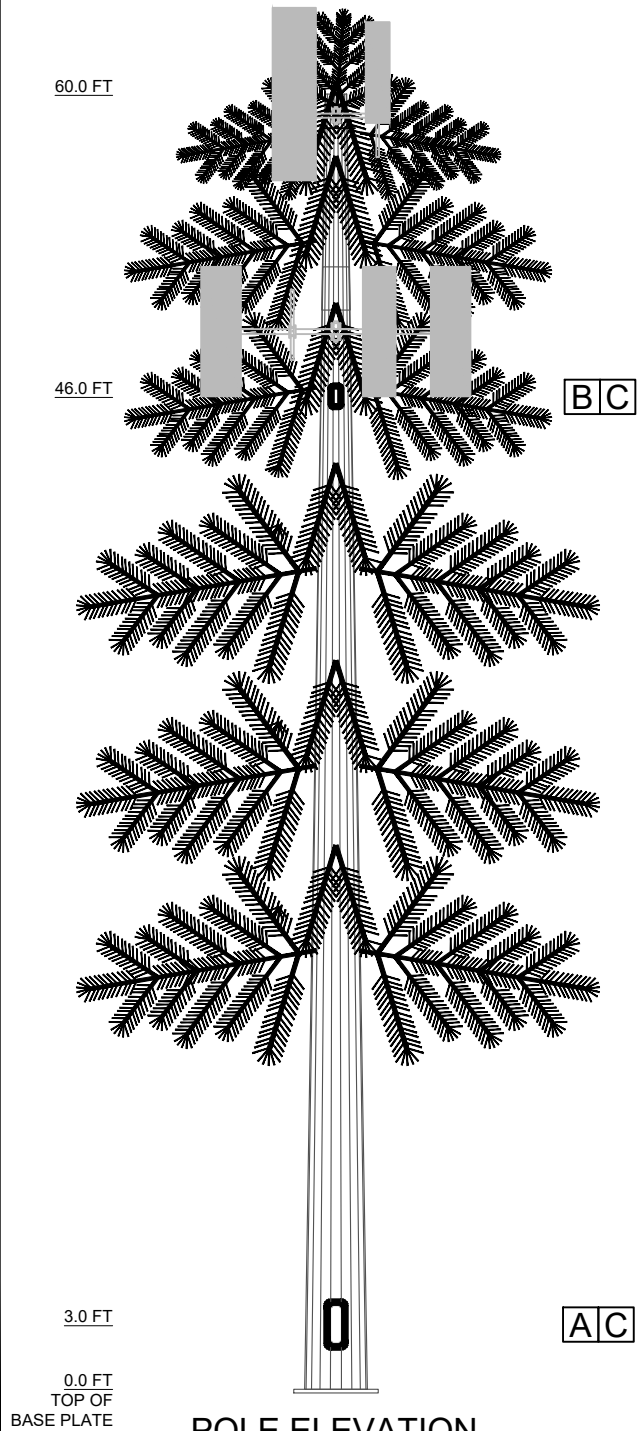
19. If scope of modification involves concealment components including branching, the GC shall reference CED-CAT-10398 "Monopole Concealed Decorative Structures (CDS) Approved Components". All new branch installations require tethering.
20. If scope of modification involves cathodic protection, the GC shall reference CED-SOW-10397, "Cathodic Protection Installation, Replacement, and Enhancement".
21. All tower grounding affected by the Work shall be repaired or replaced in accordance with OPS-STD-10090, "Tower Grounding", and OPS-BUL-10133, "Grounding Repair Recommendation".
22. If scope of modification requires removal or covering of tower ID tag, the tag must be replaced.
23. Any hardware removed from the existing tower shall be replaced with new hardware of equal size and quality, UNO. No existing fasteners shall be reused.
24. All joints using ASTM A325 or A490 bolts, U-bolts, V-bolts, and threaded rods shall be snug tightened, UNO.
25. A nut locking device shall be installed on all proposed and/or replaced snug tightened ASTM A325 or A490 bolts, U-bolts, V-bolts, and threaded rods.
26. All joints are bearing type connections UNO. If no bolt length is given in the Bill of Materials, the connection may include threads in the shear planes, and the GC is responsible for sizing the length of the bolt.
27. Blind bolts shall be installed per the installation specifications on the corresponding Approved Fastener sheets contained in CED-CAT-10300, "Monopole Standard Drawings and Approved Reinforcement Components".
28. If ASTM A325 or A490 bolts, and/or threaded rods are specified to be pre-tensioned, these shall be installed and tightened to the pretensioned condition according to the requirements of the RCSC Specification for Structural Joints Using ASTM High Strength Bolts.
29. 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.

[illegible]

PORT HOLE NOTES

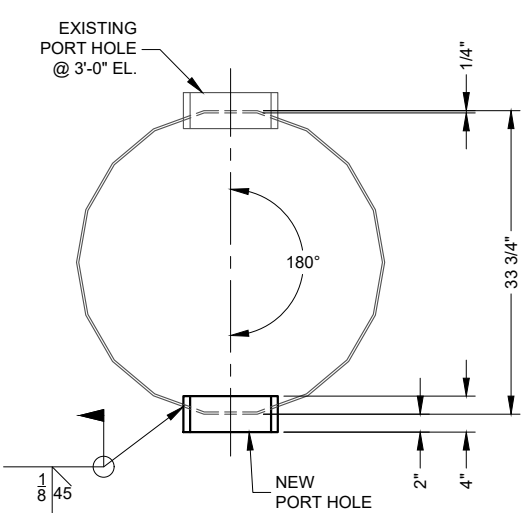
1.
- All surfaces of the port hole rim itself as well as all exterior structural steel areas affected by welding, including weld metal, shall be galvanized in accordance with ASTM A780.
2.
- The following criteria are required for adherence to this standard.
- A.
- Use rim as template for cutting hole in monopole. Care shall be taken to minimize the root opening (AWS tolerances allow a maximum of 0.19").
- B.
- Provide minimum 24" clear vertical separation between rim and other openings in monopole. Align ports on same azimuth as existing ports.
- C.
- Maximum variance of port hole center elevation shall not be greater than 6".
- D.
- Provide 90° minimum radial separation or two times the hole width clear circumferential separation between rim and adjacent opening in monopole, whichever is greatest. 18-sided pole with 4 ports shall not be allowed.
- E.
- Edge of opening for the exit port must be at least 24" from splice.
- F.
- Grind all edges of cut opening, achieving a bevel angle of 45° and removing the zinc from the weld area plus 1/4". Ensure all weld areas and surfaces are clean and free of zinc and loose particles. Zinc shall not be allowed to contaminate the weld.
- G.
- Position the rim as required and securely tack weld. Finish welding the rim with bevel weld and reinforcing fillet weld size as determined from the design method.
- H.
- Repair with galvanized coating. Both inside and outside should be brush-coated with 2 coats of zinc-rich paint. Apply in strict accordance with the manufacturer's recommendations. Paint over repaired surfaces to match monopole.

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| NO. | DATE | DESCRIPTION | BY | |
| REVISIONS | | | | |
|  | | | | SITE NAME: SF429 HAGEMANN MEAT COMPA |
| | | | | BU NUMBER: 827748 |
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| DFT BY: SL DATE: 05/10/22 | | | | |
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| APRV'D BY: MAM DATE: 05/10/22 | | | | |
| SCALE: N.T.S. | | | | |
| NOTES | | | | |
| PH-4 | | | REV 0 | |



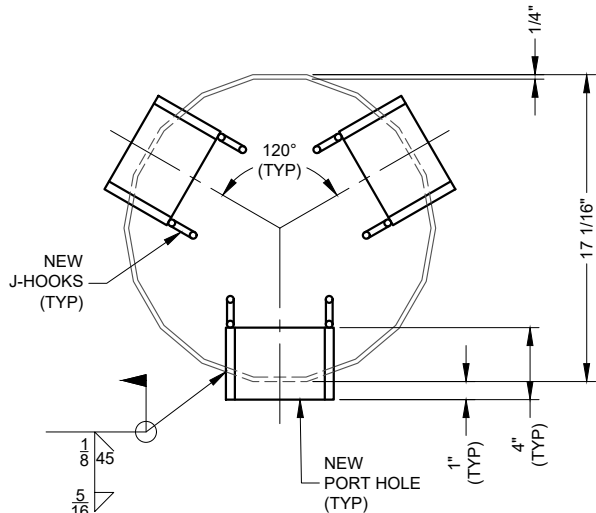
POLE ELEVATION

| POLE MODIFICATION SCHEDULE | | |
|----------------------------|----------------|---|
| | ELEVATION (FT) | MODIFICATION |
| [A] | 3.0 | INSTALL (1) NEW 10 1/2" x 25 1/2" x 3/4" x 4" PORT HOLE 180° FROM EXISTING PORT |
| [B] | 46.0 | INSTALL (3) NEW 6" x 12" x 1/2" x 4" PORT HOLES 120° APART |
| [C] | 3.0 & 46.0 | REMOVE FAUX BARK PRIOR TO CUTTING & WELDING. AFTER INSTALLATION, PAINT PORT HOLE AND AREA TO MATCH EXISTING TOWER BARK (PER CED-SOW-10265 & CED-STD-10395). |



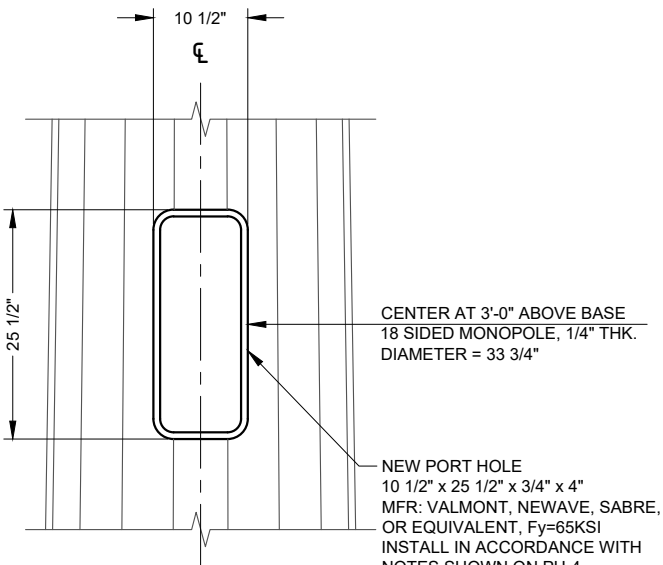
PLAN VIEW

(3.0 FT)



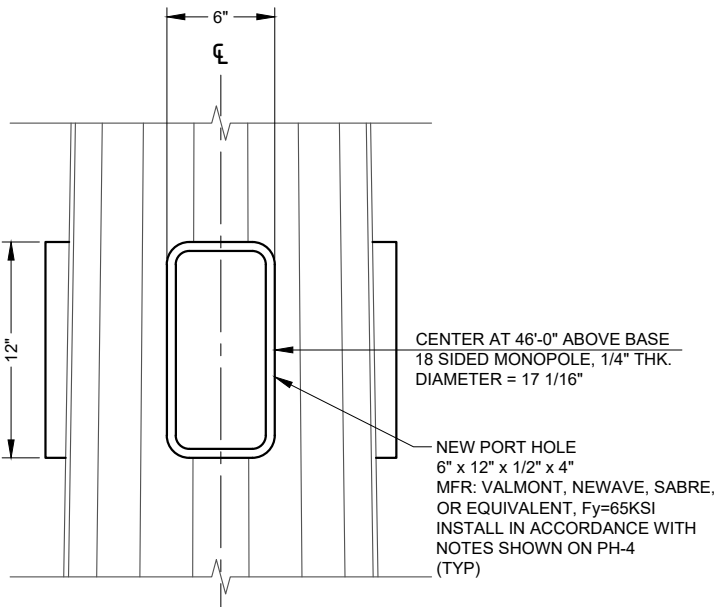
PLAN VIEW

(46.0 FT)



ELEVATION VIEW

(3.0 FT)



ELEVATION VIEW

(46.0 FT)

NOTES:

- PORT HOLE RIM MUST BE HOT DIP GALVANIZED PRIOR TO INSTALLATION.
- REFER TO PORT HOLE NOTES ON PH-4 FOR PORT HOLE INSTALLATION CRITERIA.
- ALL STANDARD AND CUSTOM PORT HOLES MUST INCLUDE J-HOOKS.

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|---|------|-------------|----------|
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| NO. | DATE | DESCRIPTION | BY |
| REVISIONS | | | |
| | | | |
| SITE NAME: SF429 HAGEMANN MEAT COMPA | | | |
| BU NUMBER: 827748 | | | |
| WO NUMBER: 2113565 | | | |
| SITE ADDRESS: 18401 S HIGHWAY 1 BODEGA BAY, CA 94923 SONOMA COUNTY, USA | | | |
| DFT BY: SL DATE: 05/10/22 | | | |
| DFT/QA BY: TE DATE: 05/10/22 | | | |
| APRV'D BY: MAM DATE: 05/10/22 | | | |
| SCALE: N.T.S. | | | |
| PORT HOLE DESIGN | | | |
| PH-5 | | | REV 0 |