



312-SA-2018

Development Review (Minor) Staff Approval

AT&T COW #1 (Hayden Road) for the 2019 Waste Mgmt Phoenix Open

APPLICATION INFORMATION

LOCATION: 17020 N Hayden Rd	APPLICANT: Kay Hennessy
PARCEL: 215-08-001D	COMPANY: Pinnacle Consulting Inc
Q.S.: 37-46	ADDRESS: 1426 N Marvin St Ste 101 Gilbert, AZ 85233
CODE VIOLATION #:	PHONE: (480) 204-8390
Request: Install a temporary 52-foot-tall temporary wireless communication facility (WCF) located on the east side of Hayden Road between Frank Lloyd Wright Blvd. and Bell Rd. for the 2019 Waste Management Phoenix Open.	

STIPULATIONS

1. The temporary cellular on wheels wireless communication facility shall be consistent with the plans submitted by Young Design Group and AT&T with a date of 10/31/2018.
2. This approval is temporary and shall expire 2/15/2019.
3. This wireless communication facility shall not be permitted until a fully executed license agreement is completed with the City's Real Estate division.
4. Obtain a Minimum Electric Generator permit from the One Stop Shop for the generator. Submit cut-sheets for the generator and fuel tank that clearly indicate the Kw and number of gallons of fuel storage.
5. A Pre-construction meeting is required prior to the start of any setup or construction activities. The Pre-construction meeting shall include Chris Walsh, Parks and Recreation Manager, Brian Dick from the City of Scottsdale Inspection Services, John Goff from the Thunderbirds tournament setup, and Brad Williams and Roby Robertson from the TPC Scottsdale. Contact Chris Walsh to coordinate at 480-312-2551.
6. Height shall not exceed 52-feet above ground level.
7. The areas disturbed with earthwork shall be returned to their original condition upon removal of the WCF.
8. Any additional carriers to co-locate on this pole shall require a separate staff approval and permit.
9. Submit a structural analysis for the tower to be reviewed and approved by the City of Scottsdale Building Review department.
10. Obtain permits as required by the One Stop Shop.

CONSTRUCTION DOCUMENT PLAN REVIEW SUBMITTAL REQUIREMENTS

Submit one copy of this approval letter, and a completed Owner/Builder form if applicable, and a permit application along with the following plan set(s) to the One-Stop-Shop for review:

PERMIT APPLICATION: **Completed Permit Application.** The permit application may be obtained or filled-out online at the following weblink:
http://www.scottsdaleaz.gov/assets/ScottsdaleAZ/Building/APP_Permit_Commercial.pdf
(Please complete the permit application online prior to arriving at the City to submit your construction documents)

PLANS: Submit plans digitally or submit 5 sets of plans to the One Stop Shop. Plans to be reviewed by Building MPE, Building Structural, Fire and Planning.

OTHER:

Structural Analysis

Expiration of Development Review (Minor) Approval

This approval expires two 2/15/2019

Staff Signature:



Keith Niederer

DATE:

11-8-2018

Planning and Development Services

7447 East Indian School Road, Suite 105, Scottsdale, Arizona 85251 Phone: 480-312-7000 Fax: 480-312-7088

City of Scottsdale's Website: www.scottsdaleaz.gov

Pre-Application No.: 241 -PA- 2018 Submittal Date: 11-2-18

Type 1 or 2 WCF Development Review (Minor)
(Administrative Staff Approval)
 Development Application Checklist



Official Use:	
City Staff Contact: <u>Niederer</u>	Email: <u>kniederer@scottsdaleaz.gov</u>
Phone: <u>480-312-2953</u>	
Project Name: <u>Wm Cow #1 & #2 2019</u>	
Property's Address: <u>17000 N. Hayden Rd</u>	A.P.N.: <u>215-46-001F, Row</u>
Property's Zoning District Designation:	
Application Request: <u>Temp cow for waste mgmt Open 2019</u>	
Owner: <u>USA BOR</u>	Applicant: <u>Kay Hennessy</u>
Company:	Company: <u>Pinnacle Consulting, Inc.</u>
Address:	Address: <u>1426 N. Marlin #101, 85233</u>
Phone:	Phone: <u>480-204-8390</u> Fax:
E-mail:	E-mail: <u>Kay.hennessy@pinnaclew.net</u>

Submittal Requirements: Please submit materials requested below. All plans must be folded.

<input checked="" type="checkbox"/> Completed Application (this form) and Application Fee – \$ <u>460.00</u> (fee subject to change every July)	<input type="checkbox"/> Landscape Plan (2) 24" x 36" folded. Indicate location of existing and new plants, location and dimension of paving, a plant palette with names, symbols, sizes, spacing & quantities, and open space/landscaping calculations.
<input checked="" type="checkbox"/> Affidavit of Authority to Act for Property Owner, letter of authorization, or signature below	<input type="checkbox"/> Material Samples – color chips, glazing, etc.
<input type="checkbox"/> Property Owners Association Input	<input checked="" type="checkbox"/> Site plan (2) 24" x 36" <u>11" x 17"</u> folded. Indicate the extent and location of antenna additions, buildings and other structures, including all equipment cabinets. Site plan shall indicate dimensions of existing and proposed structures, dimensions of existing and proposed ROW, setbacks and sight distance visibility triangles.
<input checked="" type="checkbox"/> Request for Site Visits and/or Inspections form	<input checked="" type="checkbox"/> Map showing other existing or planned WCF's that will be used by Provider making the application. (describe height, mounting style & number of antennas on WCF) <u>N/A</u>
<input checked="" type="checkbox"/> Narrative – the WCF request. This shall include efforts made to minimize the visual impact of the antennas and equipment cabinets.	<input checked="" type="checkbox"/> Map of service area for proposed WCF <u>N/A</u>
<input checked="" type="checkbox"/> Color photographs of site – include area of request	<input checked="" type="checkbox"/> Schedule a meeting with Keith Niederer 480-312-2953 when ready to submit this application.
<input checked="" type="checkbox"/> Photo simulations of proposed WCF. In ESL areas, include photosim from nearest single family lots.	<input checked="" type="checkbox"/> Elevation Drawings or Color Photo simulations (2) 24" x 36" <u>11" x 17"</u> folded. – of new additions, buildings, screening, poles or other changes with materials and colors noted and keyed
<input checked="" type="checkbox"/> Community Notification Documentation. Notify all property owners within 750 feet of site. Submit names and addresses of all properties that were notified, submit a copy of the letter that was sent and the date that letter was mailed. Letters shall be mailed at least 15 days prior to submittal.	Other: <u>RF EME Statement</u> <u>FAA Approval</u>

Please indicate in the checkbox below the requested review methodology (please see the descriptions on page 2):

<input checked="" type="checkbox"/> Enhanced Application Review:	I hereby authorize the City of Scottsdale to review this application utilizing the Enhanced Application Review methodology.
<input type="checkbox"/> Standard Application Review:	I hereby authorize the City of Scottsdale to review this application utilizing the Standard Application Review methodology.

Owner Signature: [Signature] Agent/Applicant Signature: [Signature] 11/2/2018



City of Scottsdale Cash Transmittal

117337

11/2/2018 11:27:00
 11/2/2018 11:27:00
 DNARSH 11/2/2018 11:27:00
 \$485.00

Received From :

Kay Hennessy
 1426 N. Marvin Street, #101
 Gilbert, AZ 85233
 (480) 204-8390

Bill To :

Kay Hennessy
 1426 N. Marvin Street, #101
 Gilbert, AZ 85233
 (480) 204-8390

Reference # 241-PA-2018
 Address 17020 N HAYDEN RD
 Subdivision

Issued Date 11/2/2018
 Paid Date 11/2/2018
 Payment Type CREDIT CARD

Marketing Name
 MCR
 APN 215-08-001D

Lot Number
 Metes/Bounds No
 Gross Lot Area 0
 NAOS Lot Area 0
 Net Lot Area 0
 Number of Units 1
 Density 1

Cost Center
 Jurisdiction SCOTTSDALE
 Water Zone
 Water Type
 Sewer Type
 Meter Size
 QS 37-46

Owner Information
 US BOR
 23636 N. 7th Street
 Phoenix, AZ 85024
 (480) 204-8390

Code	Description	Additional	Qty	Amount	Account Number
3232	WIRELESS COMM FACILITY (CASE)		1	\$485.00	100-21300-44221

SIGNED BY KAY HENNESSY ON 11/2/2018

Total Amount

\$485.00

(When a credit card is used as payment I agree to pay the above total amount according to the Card Issuer Agreement.)

3" and larger water meter fees are based on cost recovery. The city will contact the owner of the construction permit if additional funds are due. Payment will be due within 30 days notification.

TO HAVE WATER METER SET - CALL 480-312-5650 AND REFER TO TRANSMITTAL # 117337

AT&T Mobility Temporary Use Permit WM Open 2019
COW #1 Hayden Road



Kay Hennessy – Pinnacle Consulting, Inc
On behalf of AT&T Mobility
(480)204-8390
Kay.hennessy@pinnacleco.net

Project Description: AT&T Wireless is seeking permission to setup a temporary facility for the 2019 Waste Management Open from 12/15/2018 – 2/15/2019 to supplement wireless cell coverage during the event. This site will not negatively affect the surrounding area during this timeframe.

AT&T is planning to deploy a COW (Cell on Wheels) during the event to help with call capacity for the increased usage in the area. The COW will be 55' tall when erected with three (3) PCS antennas and one (1) high band antenna. The project area is approximately 36' X 16' and will be fenced with chain link for security. The site will also contain one (1) generator to be located within the fenced area for backup power.

Location: The COW will be located on Hayden Road in between Frank Lloyd Wright and Bell Road on the East side of the street within the City of Scottsdale Right of Way. The property is owned by the City of Scottsdale and AT&T is currently working with the City of Scottsdale to secure the lease rights to the temporary space.

Access: Access to the temporary facility will be from Hayden road through an existing gate in the chain link fence.

FAA: The proposed project meets the FAA "Determination of No Hazard" standards and does not require any lighting.

Hours of operation: The temporary facility will be operation for 24hrs a day during the 7 day use permit period to ensure that there is adequate coverage for patrons, sponsors, and employees during event and related activities.

Contact:

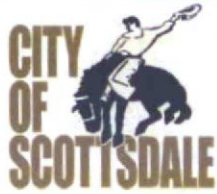
Kay Hennessy
Pinnacle Consulting, Inc
1426 North Marvin Street #101
Gilbert, AZ 85233
480-204-8390
kay.hennessy@pinnacleco.net

COW Photos



COW erected and integrated





Request for Site Visits and/or Inspections

Construction Document Application

This request concerns all property identified in the construction document (plan review) application.

Project Name: AT&T WM COW #1 Hayden Road

Project Address: East Side of Hayden Road, North of Frank Lloyd Wrioth Blvd

STATEMENT OF AUTHORITY:

1. I am the owner of the property, or I am the duly and lawfully appointed agent of the property and have the authority from the owner to sign this request on the owner's behalf. If the land has more than one owner, then I am the agent for all owners, and the word "owner" refer to them all.
2. I have the authority from the owner to act for the owner before the City of Scottsdale regarding any and all development application regulatory or related matter of every description involving all property identified in the construction document.

STATEMENT OF REQUEST FOR SITE VISITS AND/OR INSPECTIONS

1. I hereby request that the City of Scottsdale's staff conduct site visits and/or inspections of the property identified in the construction document in order to efficiently process the application.
2. I understand that even though I have requested the City of Scottsdale's staff conduct site visits and/or inspections, city staff may determine that a site visit and/or an inspection is not necessary, and may opt not to perform the site visit and/or an inspection.

Property owner /Property owner's agent: Kay Hennessy
Print Name

Kay Hennessy
Signature

City Use Only:

Submittal Date: _____ Plan review number: _____

Planning, Neighborhood & Transportation Division

7447 E Indian School Road, Suite 105, Scottsdale, AZ 85251 ♦ Phone: 480-312-7000 ♦ Fax: 480-312-7088



Affidavit of Authority to Act as the Property Owner

1. This affidavit concerns the following parcel of land:

- a. Street Address: East Side of Hayden Road, North of Frank Lloyd Wright
- b. County Tax Assessor's Parcel Number: ROW
- c. General Location: Hayden Road
- d. Parcel Size: ROW
- e. Legal Description: _____

(If the land is a platted lot, then write the lot number, subdivision name, and the plat's recording number and date. Otherwise, write "see attached legal description" and attach a legal description.)

2. I am the owner of the land or I am the duly and lawfully appointed agent of the owner of the land and have authority from the owner to sign this affidavit on the owner's behalf. If the land has more than one owner, then I am the agent for all of the owners, and the word "owner" in this affidavit refers to all of them.

3. I have authority from the owner to act for the owner before the City of Scottsdale with regard to any and all reviews, zoning map amendments, general plan amendments, development variances, abandonments, plats, lot splits, lot ties, use permits, building permits and other land use regulatory or related matters of every description involving the land, or involving adjacent or nearby lands in which the owner has (or may acquire) an interest, and all applications, dedications, payments, assurances, decisions, agreements, legal documents, commitments, waivers and other matters relating to any of them.

4. The City of Scottsdale is authorized to rely on my authority as described in this affidavit until three work days after the day the owner delivers to the Director of the Scottsdale Planning & Development Services Department a written statement revoking my authority.

5. I will immediately deliver to the Director of the City of Scottsdale Planning & Development Services Department written notice of any change in the ownership of the land or in my authority to act for the owner.

6. If more than one person signs this affidavit, each of them, acting alone, shall have the authority described in this affidavit, and each of them warrant to the City of Scottsdale the authority of the others.

7. Under penalty of perjury, I warrant and represent to the City of Scottsdale that this affidavit is true and complete. I understand that any error or incomplete information in this affidavit or any applications may invalidate approvals or other actions taken by the City of Scottsdale, may otherwise delay or prevent development of the land, and may expose me and the owner to other liability. I understand that people who have not signed this form may be prohibited from speaking for the owner at public meetings or in other city processes.

Name (printed)	Date	Signature
<u>Ben Feldman</u>	<u>10/18</u> , 20 <u>18</u>	<u>Benjamin Feldman</u> <small>Digital Signature Image This signature is a digital signature and is not a physical signature. It is not a legal signature and is not a legal document.</small>
_____	_____, 20__	_____
_____	_____, 20__	_____
_____	_____, 20__	_____

Planning and Development Services

7447 E Indian School Road, Suite 105, Scottsdale, AZ 85251 • Phone: 480-312-7000 • Fax: 480-312-7088



Mail Processing Center
Federal Aviation Administration
Southwest Regional Office
Obstruction Evaluation Group
10101 Hillwood Parkway
Fort Worth, TX 76177

Aeronautical Study No.
2017-AWP-8029-0E

Issued Date: 08/21/2017

DAVE CUNDIFF
AT&T MOBILITY
208 S Akard Dr
Dallas, TX 75202

****DETERMINATION OF NO HAZARD TO AIR NAVIGATION FOR TEMPORARY STRUCTURE****

The Federal Aviation Administration has conducted an aeronautical study under the provisions of 49 U.S.C., Section 44718 and if applicable Title 14 of the Code of Federal Regulations, part 77, concerning:

Structure:	Cell-On-Wheels Waste Management - Hyatt Regency
Location:	Scottsdale, AZ
Latitude:	33-38-16.53N NAD 83
Longitude:	111-54-26.35W
Heights:	1545 feet site elevation (SE) 55 feet above ground level (AGL) 1600 feet above mean sea level (AMSL)

This aeronautical study revealed that the temporary structure does not exceed obstruction standards and would not be a hazard to air navigation provided the condition(s), if any, in this letter is (are) met:

****SEE ATTACHMENT FOR ADDITIONAL CONDITION(S) OR INFORMATION****

This determination cancels and supersedes prior determinations issued for this structure.

This determination is based, in part, on the foregoing description which includes specific coordinates, heights, frequency(ies) and power. Any changes in coordinates, heights and frequencies or use of greater power, except those frequencies specified in the Colo Void Clause Coalition; Antenna System Co-Location; Voluntary Best Practices, effective 21 Nov 2007, will void this determination. Any future construction or alteration, including increase to heights, power or the addition of other transmitters, requires separate notice to the FAA. This determination includes all previously filed frequencies and power for this structure.

This determination does include temporary construction equipment such as cranes, derricks, etc., which may be used during actual construction of a structure. However, this equipment shall not exceed the overall heights as indicated above. Equipment which has a height greater than the studied structure requires separate notice to the FAA.

This determination did not include an evaluation of the permanent structure associated with the use of this temporary structure. If the permanent structure will exceed Title 14 of the Code of Federal Regulations, part 77.9, a separate aeronautical study and FAA determination is required.

This determination concerns the effect of this temporary structure on the safe and efficient use of navigable airspace by aircraft and does not relieve the sponsor of compliance responsibilities relating to any law, ordinance, or regulation of any Federal, State, or local government body.

A copy of this determination will be forwarded to the Federal Aviation Administration Flight Procedures Office if the structure is subject to the issuance of a Notice To Airman (NOTAM).

If you have any questions, please contact our office at (202) 267-4525, or david.maddox@faa.gov. On any future correspondence concerning this matter, please refer to Aeronautical Study Number 2017-AWP-8029-OE

Signature Control No: 339480512-341352706

David Maddox
Specialist

(TMP)

Additional Condition(s) or Information for ASN 2017-AWP-8029-OE

Proposal: To construct and/or operate a(n) Cell-On-Wheels to a height of 55 feet above ground level, 1600 feet above mean sea level.

Location: The structure will be located 0.91 nautical miles north of SDL Airport reference point.

Part 77 Obstruction Standard(s) Exceeded and Aeronautical Impacts, if any:

Aeronautical study revealed that the temporary structure will not exceed any Part 77 obstruction standard. Aeronautical study confirmed that the temporary structure will have no effect on any existing or proposed arrival, departure or en route instrument/visual flight rules (IFR/VFR) operations or procedures. Additionally, aeronautical study confirmed that the temporary structure will have no physical or electromagnetic effect on the operation of air navigation and communications facilities and will not impact any airspace and routes used by the military. Based on this aeronautical study, the FAA finds that the temporary structure will have no adverse effect on air navigation and will not impact any aeronautical operations or procedures.

Based on this aeronautical study, the structure would not constitute a substantial adverse effect on aeronautical operations or procedures because it will be temporary. The temporary structure would not be considered a hazard to air navigation provided all of the conditions specified in this determination are strictly met.

Based on this evaluation, marking and lighting are not necessary for aviation safety. However, if marking/lighting are accomplished on a voluntary basis, we recommend it be installed in accordance with FAA Advisory circular 70/7460-1 L Change 1.

It is required that the manager of SCOTTSDALE, (480) 312-2321 be notified at least 3 business days prior to the temporary structure being erected and again when the structure is removed from the site.

It is required that the manager of Scottsdale Air Traffic Control Tower at 520 670-5087 be notified at least 3 business days prior to the temporary structure being erected and again when the structure is removed from the site. Additionally, please provide contact information for the onsite operator in the event that Air Traffic Control requires the temporary structure to be lowered immediately.

This determination expires on 02/21/2019 unless extended, revised, or terminated by the issuing office.

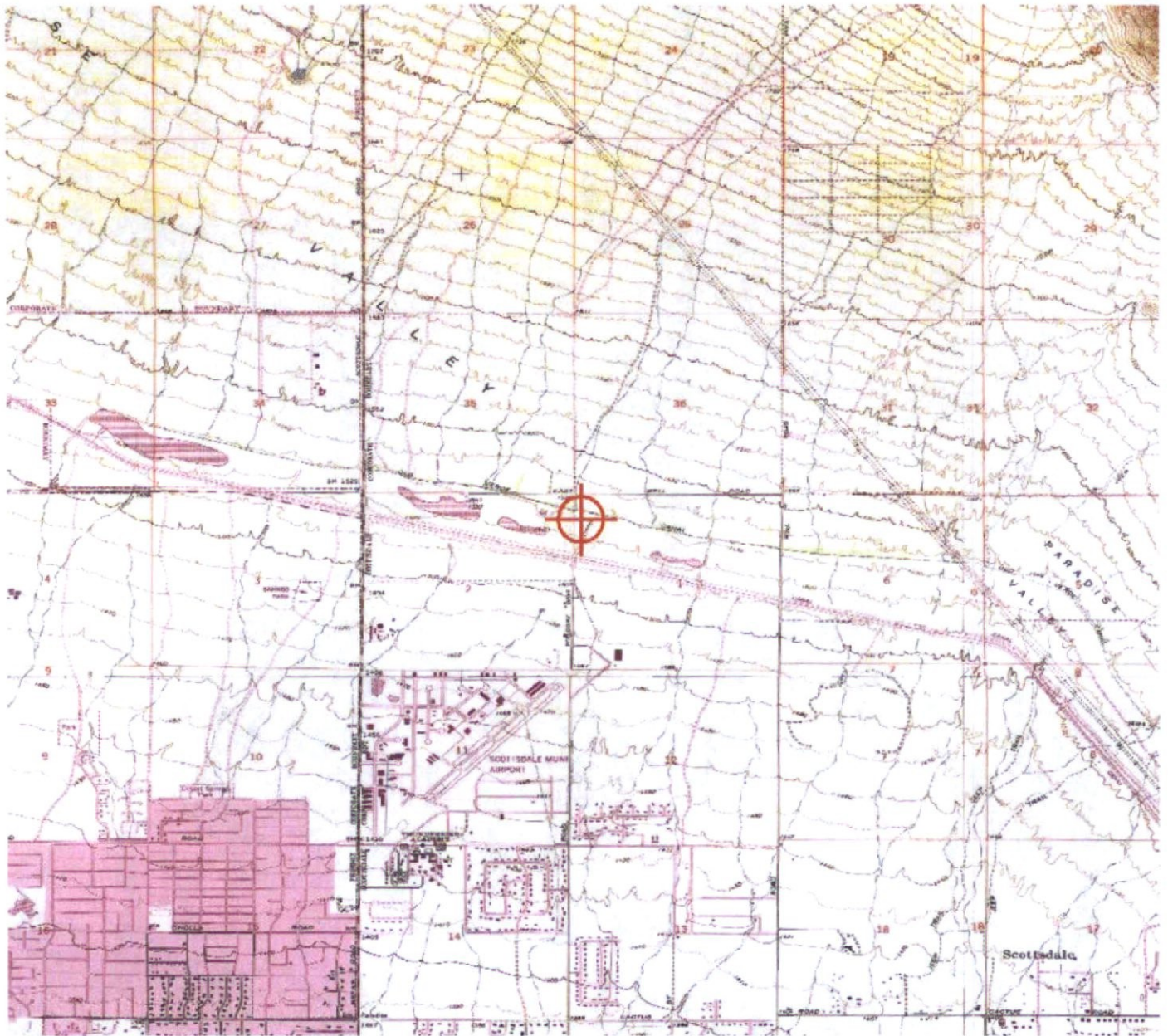
NOTE: REQUEST FOR EXTENSION OF THE EFFECTIVE PERIOD OF THIS DETERMINATION MUST BE E-FILED AT LEAST 15 DAYS PRIOR TO THE EXPIRATION DATE. AFTER RE-EVALUATION OF CURRENT OPERATIONS IN THE AREA OF THE STRUCTURE TO DETERMINE THAT NO SIGNIFICANT AERONAUTICAL CHANGES HAVE OCCURRED, YOUR DETERMINATION MAY BE ELIGIBLE FOR ONE EXTENSION OF THE EFFECTIVE PERIOD.

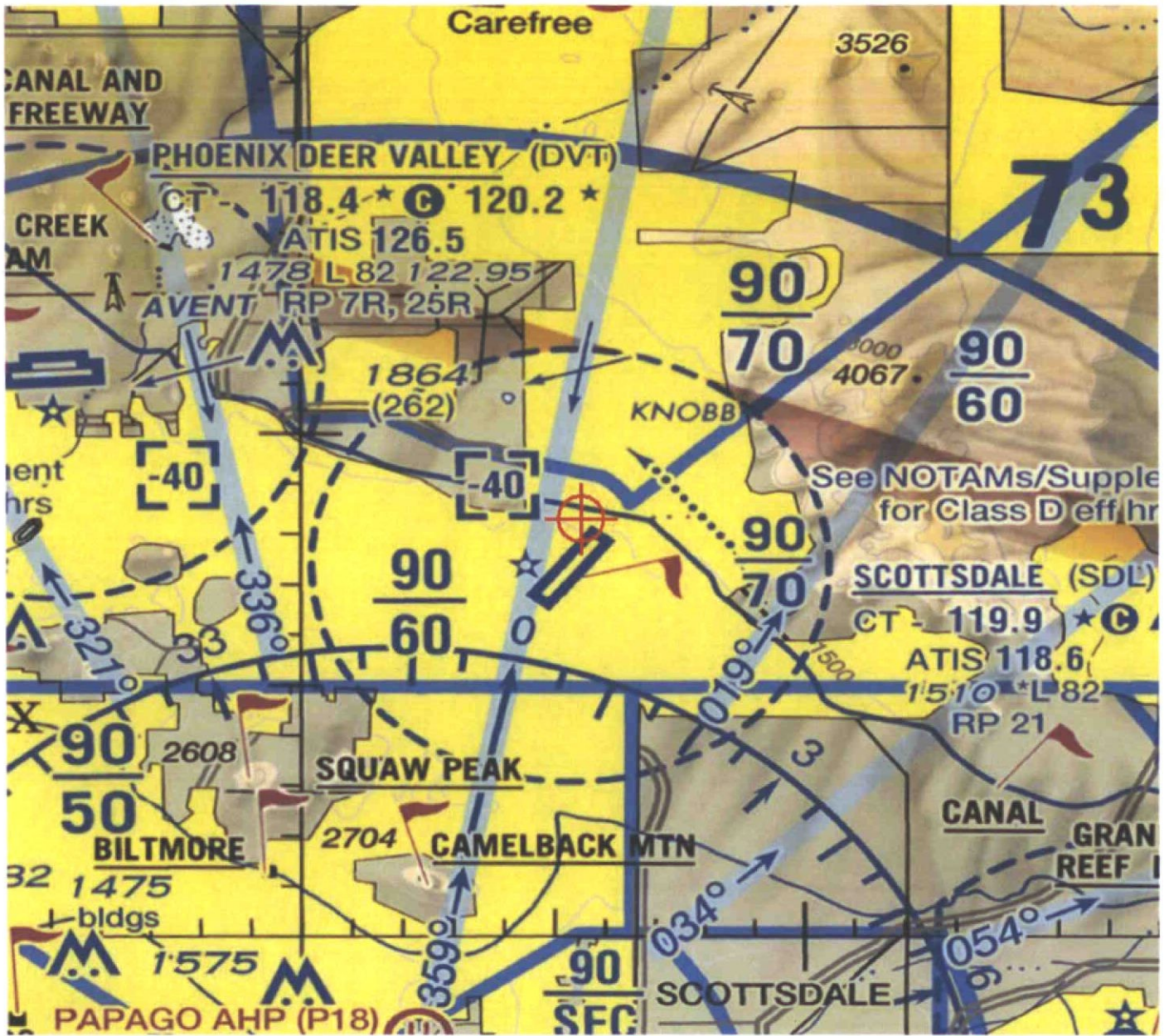
Additional information for ASN 2017-AWP-8029-OE

Revised to include the following condition:

At a distance of 5800 feet from transmitter site spurious emissions signal levels from proposed transmitters must be less than -104 dBm in the 108-137, 225-400 MHz frequency bands.

TOPO Map for ASN 2017-AWP-8029-OE







October 18, 2018

To whom it may concern,

With regards to the proposed AT&T wireless communications facility, Waste Management COW (Hayden Road), this site will operate within all regulations specified by the Federal Communications Commission.

The maximum allowable public exposure set forth by the FCC for this type of facility is one (1) milliwatt per square centimeter. As planned, the calculated maximum value of ground level exposure for this facility will not exceed 0.002892 milliwatts per square centimeter.

Additionally, all FCC required RF safety signage will be posted at the proposed facility.

If I may be of further assistance, please contact me.

Sincerely,

Robert Hammersmark
AT&T Market RF Safety Coordinator
Arizona/New Mexico
(602) 625-2372

October 31, 2018

ISE Job #: 14035

John Sultzbach
Young Design Corp.
10245 E. Via Linda, Suite 211
Scottsdale, AZ 85258

Subject: Structural Evaluation of Temporary Structure for proposed AT&T antennas.

Site Designation: AT&T Waste Management Open #1
East Side Hayden Rd North of Frank Lloyd Wright Blvd
Scottsdale, AZ 85255 (Maricopa County)

Property Owner/Site ID: USA Bureau of Reclamation

Mr. Sultzbach,

At your request we have completed a rigorous structural analysis of the proposed 50'-0" modular self-support tower structure for antenna support at the 40' and 45' rad center elevations. The analysis presented herein was prepared per the ANSI/TIA-222-G "Specification for Antenna Supporting Structures and Antennas" with a 89 mph (3-Sec Gust) Basic Wind Speed. See Tower Diagram for required section Identification.

Summary Results for Critical/Maximum Tower Sections: (Proposed Loading)

Tower Component/Section	% of Allowable Capacity ¹	Pass/Fail
Leg (1' - 21')	54.0	Pass
Diagonal (1' - 21')	78.6	Pass
Horizontal (1' - 21')	89.0	Pass
Bolt Checks	78.3	Pass

¹ Capacity usage at 105% or less is considered acceptable per industry standards for rigorous structural analyses prepared as described herein. Customer/Tower owner acceptance criterion may exclude values in excess of 100%.

Per our analysis:

1. The proposed tower structure **has adequate capacity** for the specified loads per ANSI/TIA-222-G load conditions.
2. The ballast foundation system **has adequate capacity** for the specified loads per ANSI/TIA-222-G load conditions.

Customer shall review the antenna and equipment listing presented herein and confirm that the tower is accurately represented by our assumptions.

We are pleased to have been of service for this project. If you have any questions please feel free to give us a call.

Sincerely,

Glen L. Hunt III, MS, SE/PE
Principal Engineer

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1. Project Information

Code Compliance: IBC 2012

Wind: IBC 2012 1609.1.1-Exception 5
ANSI/TIA-222-G, 90 MPH (3-Sec Gust) Design Wind Speed
Exposure C, Structure Class II, Topo Category 1 w/ Crest Height = 0'

Soils: IBC Table 1806.2 – Material Class 5, Allowable Soil Bearing = 1500psf

Structural Analysis Software: tnxTower, Version 8.0.4.0

Structure: 50'-0" Modular Self Support Tower w/ 14' Square ballast foundation

Required Structure Component Section Assembly:
0' to 50': Standard CMI Sections

Project Documentation Provided by Customer:

Source	Description	Date
YDC	AT&T Construction Drawings	June 13, 2018
ISE	Deployable Tower & Foundation Design	September 9, 2013

2. Analysis Method

The tower structure analysis was performed with the use of tnxTower, a commercially available software program designed for the analysis of telecommunications towers. The program was used to create a three-dimensional mathematical model of the tower and to calculate member stresses under dead and wind loads computed in accordance with the TIA-222-G standard. tnxTower output is attached to this report.

A separate analysis of the above grade ballast foundation system was performed by comparing the factored tower base reactions from the tnxTower output to the original foundation design reactions as indicated in the original ISE design documents.

Analysis Assumptions and Limitations

- Information in the original design drawings or in the previous analysis that could not be verified by ISE is assumed to be correct.
- All tower components are assumed to be in adequate condition to carry their full design capacity.

- The configuration of antennas, transmission cables, mounts and other appurtenances is assumed to be as specified in this report.
- Emergency/essential communication equipment is not located on the tower.
- The foundation system is to be constructed per the original ISE design.

If any of the above assumptions are not valid or have been made in error, this analysis may be affected, and ISE should review any new information to determine its effect on the tower's structural capacity.

3. Structure Loading

Center Line Elevation	Carrier Name	No. of Antennas	Antenna Mfr.	Antenna Model	Mount	No. of Feed Lines	Feed Line Size (in)
45	AT&T	1	Matsing	MS-10.10.10DBA180	Direct	30	1/2
45	AT&T	2	Commscope	5NPX1006F	S/O	30	1/2
40	AT&T	1	Commscope	5UPX0805F	S/O	30	1/2

4. Analysis Results

The following tables summarize analysis results for the tower structure and foundation system.

Tower -

Tower Component/Section	% of Allowable Capacity ¹	Pass/Fail
Leg (1' - 21')	54.0	Pass
Diagonal (1' - 21')	78.6	Pass
Horizontal (1' - 21')	89.0	Pass
Bolt Checks	78.3	Pass

¹ Capacity usage at 105% or less is considered acceptable per industry standards for rigorous structural analyses prepared as described herein. Customer/Tower owner acceptance criterion may exclude values in excess of 100%.

Foundation -

Tower Base Reaction (Unfactored)	Proposed Loading Reactions	Original Design Reactions	Proposed/Original Reaction
Moment	108.2ft-kips	176.79 ft-kips	61.2%
Shear	3.56 kips	3.21 kips	110.9%
Axial	4.47 kips	4.09 kips	109.3%

Subject to the assumptions noted, the proposed ballast foundation assembly **has adequate load bearing capacity** to sustain the proposed loading.

Ballast Requirements:

14' Square Base X 1' height, Frame Weight = 8.6 kips

Critical case: (overturning at edge closest to tower)

Total Overturning Moment, $M_{OT} = 108.2 + 3.56(1') = 111.8$ ft-kips

Restoring Moment, $M_R = 8.6(7') + 4.47(2.33') + W_B(7') = 70.62 + W_B(7')$

Ballast Required (F.S. = 2), $W_B = [(2 \times 108.2) - 70.62] / 7 = 20.8$ kips

Block size = 4' X 4' X 2'

Weight = $(4 \times 4 \times 2)(0.15 \text{ k/ft}^3) = 4.8$ kips

→ use minimum of (6) blocks, distributed uniformly over ballast frame

Total ballast weight = $(6)4.8 = 28.8$ kips

Soil Bearing:

Total System weight = $4.47 + 8.6 + 28.8 = 41.9$ kips

Static bearing pressure = $41.9 / 196 \text{ SF} = 0.214$ ksf

$M_{OT} = 108.2$ ft-kips

Footprint section modulus, $S = bh^2/6 = (14)(14)^2/6 = 457.33 \text{ ft}^3$

Bearing at edge = $M/S = 108.2 / 457.33 = 0.237$ ksf

Maximum soil bearing pressure = $0.214 + 0.237 = 0.451$ ksf < 1 ksf OK

5. Conclusions/Recommendations

The proposed self-support tower structure **has adequate capacity** to sustain the 90 mph wind conditions as prescribed by the TIA-222-G specification under the proposed loading conditions.

The modular foundation system **has adequate capacity** to sustain the proposed loads with a safety factor of 2 for overturning. A total ballast weight of 28.8 kips is required for the design load reactions.

STRUCTURE ANALYSIS / REVIEW GENERAL NOTES

1. The Structural Analysis Report (report) is the property of ISE Services and must not be reproduced, modified or copied in whole or in part without our written permission.
2. The customer must accept all liability and responsibility for the use and application of ISE's review. Additional services of other Professional Engineering Specialists may be required.
3. The subject tower/monopole (structure) is assumed to be installed in accordance with the drawing/s and documents referenced in the report unless otherwise noted. ISE assumes that the structure has been properly maintained and that no portions of the structure have corroded or have been mishandled, overloaded, damaged or substituted with other members. No reduction in capacity has been considered to account for the effects of cyclic loading over the life of the structure. Unless noted otherwise in the report ISE has not inspected or surveyed the loading currently supported by the structure. Unless otherwise indicated in the reviewer's comments, the structure review has been solely based on information listed or referenced in the report.
4. Assumptions made by ISE concerning antenna and appurtenance loading were based on ISE's understanding of the information provided by the customer for the review. Only the antennas and appurtenances listed or referenced in the report were considered for the review unless otherwise noted. The results of the review are not intended nor represented to be applicable to any other loading conditions. ISE has not investigated possible interference between existing and proposed antennas, mounts, appurtenances, etc., unless otherwise indicated in the reviewer's comments.
5. ISE has not reviewed the load carrying capability of existing or proposed mounts supplied by others, or of mounts not identified in the report. ISE also has not evaluated members of the structure for local stresses resulting from the attachment of such mounts. ISE can provide this service if requested by the customer.
6. ISE does not accept responsibility for the accuracy or completeness of the information supplied to ISE or for the assumptions made for this review. ISE assumes thorough field investigations have or will be performed by others to verify all information and assumptions used for ISE's review.
7. ISE's review has been based on the wind and ice loading as specified in the ANSI/TIA/EIA-222-G, "Structural Standard for Antenna Supporting Structures and Antennas". The review is limited to the load carrying capacity of the structure for the wind and ice load indicated. Unless otherwise noted in the report, ISE assumes the structure is installed on level grade. Unless otherwise noted in the report, ISE has not reviewed the structure for conformance to local, state, or federal requirements or for site specific requirements concerning wind load, ice load, grounding, obstruction lighting requirements, obstruction marking, climbing or working facilities, etc.
8. Foundation designs have not been reviewed unless reactions exceed the original structure design reactions. Unless otherwise indicated, ISE has assumed that foundations have been installed in accordance with the original foundation drawings and that the original soil parameters provided and/or assumed were adequate based on the conditions encountered at the site. ISE assumes these parameters were verified by geotechnical investigations at the time of installation.
9. ISE's structure and/or foundation review has been performed utilizing ISE's current review methods. ISE does not accept responsibility to provide a new or revised report due to revisions of standards, codes or review methods.
10. ISE does not accept responsibility for work performed on the structure, for persons doing the work, or for the safety and adequacy of the procedures, equipment, temporary guying, scaffolding, or other work aids. ISE has assumed that all work performed will be by competent and qualified personnel.

11. Materials for proposed additions/alterations are assumed to be manufactured or supplied by reputable manufacturers or as specified in the report. Bolts, nuts, and palnuts for all new/replacement materials must be new. ISE shall be held harmless of any liability when other materials are substituted.
12. If proposed additions/alterations to the structure are implemented, it shall be the responsibility of others to maintain the stability of the structure and to prevent overloading of any component. ISE's review has not considered stresses due to erection since erection conditions were unknown.
13. ISE does not accept responsibility for informing insurance carriers, regulatory officials or other concerned parties of the results of this review or for any proposed alterations.

6. APPENDICES

A. tnxTower Analysis Results

B. Reference Documents



at&t

SITE NAME: WASTE MANAGEMENT OPEN #1
CITY: SCOTTSDALE
STATE: ARIZONA
COUNTY: MARICOPA

PROJECT INFORMATION

ADDRESS

PROJECT OWNER

LANDLORD

APPLICANT / CONTACT

LAND DESCRIPTION OF SUBJECT PARCEL

PROJECT DESCRIPTION

ZONING: N/A R.O.W.
 APN: N/A R.O.W.

THIS PROJECT CONSISTS OF THE PLACEMENT OF A TEMPORARY COLT.

DEVELOPMENT AND CONSTRUCTION OF THIS PROJECT WILL COMPLY WITH ALL APPLICABLE CODES AND ORDINANCES

THIS PROJECT DOES NOT INCLUDE WATER OR SEWER. EXISTING PARKING LOT IS NOT AFFECTED BY THIS PROJECT.

COORDINATES



CONSULTING TEAM

ARCHITECT

YOUNG DESIGN CORP.
 10245 E. VIA LINDA #211
 SCOTTSDALE, AZ. 85258
 CONTACT: JOHN SULTZBACH
 PHONE: (480) 451-9609

PROJECT MANAGER

ROBERT WALKER (AT&T MOBILITY)
 1355 W. UNIVERSITY DRIVE
 MESA, AZ. 85201
 PHONE: (480) 621-9276

SITE ACQUISITION

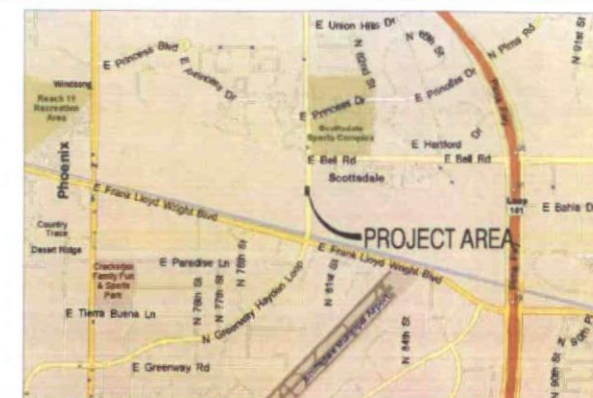
BENJAMIN FELDMAN
 PINNACLE CONSULTING, INC
 PHONE: (602) 819-4663

ZONING

BENJAMIN FELDMAN
 PINNACLE CONSULTING, INC
 PHONE: (602) 819-4663

INDEX OF DRAWINGS

NUMBER	NAME OF SHEET	REV.
T-1	TITLE PAGE	
Z-1	OVERALL SITE PLAN	
Z-2	ENLARGED SITE PLAN	
Z-3	ELEVATIONS	
Z-4	NOT USED	
Z-5	NOT USED	
Z-6 THRU Z-10	RF DATA SHEETS	
Z-11	PLUMBING DIAGRAMS	
Z-12	ANTENNA DETAILS	
S-1	TOWER DETAILS	
S-2	TOWER DETAILS	



CLIENT

1355 W. UNIVERSITY DRIVE
 MESA, AZ 85201

PLANS PREPARED BY

architecture / project management
 10245 E. Via Linda, Scottsdale, AZ 85258
 ph: 480 451 9609 fax: 480 451 9608
 e mail: corp@ydcoffice.com

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0	10/31/18	SUBMITTAL

ARCHITECTS JOB NO.
 YDC-6086

PROJECT INFORMATION

WASTE MANAGEMENT OPEN #1
 EAST SIDE HAYDEN ROAD NORTH OF FRANK LLOYD WRIGHT BLVD.
 SCOTTSDALE, AZ 85255

SHEET TITLE

PROJECT INFORMATION

JURISDICTION APPROVAL

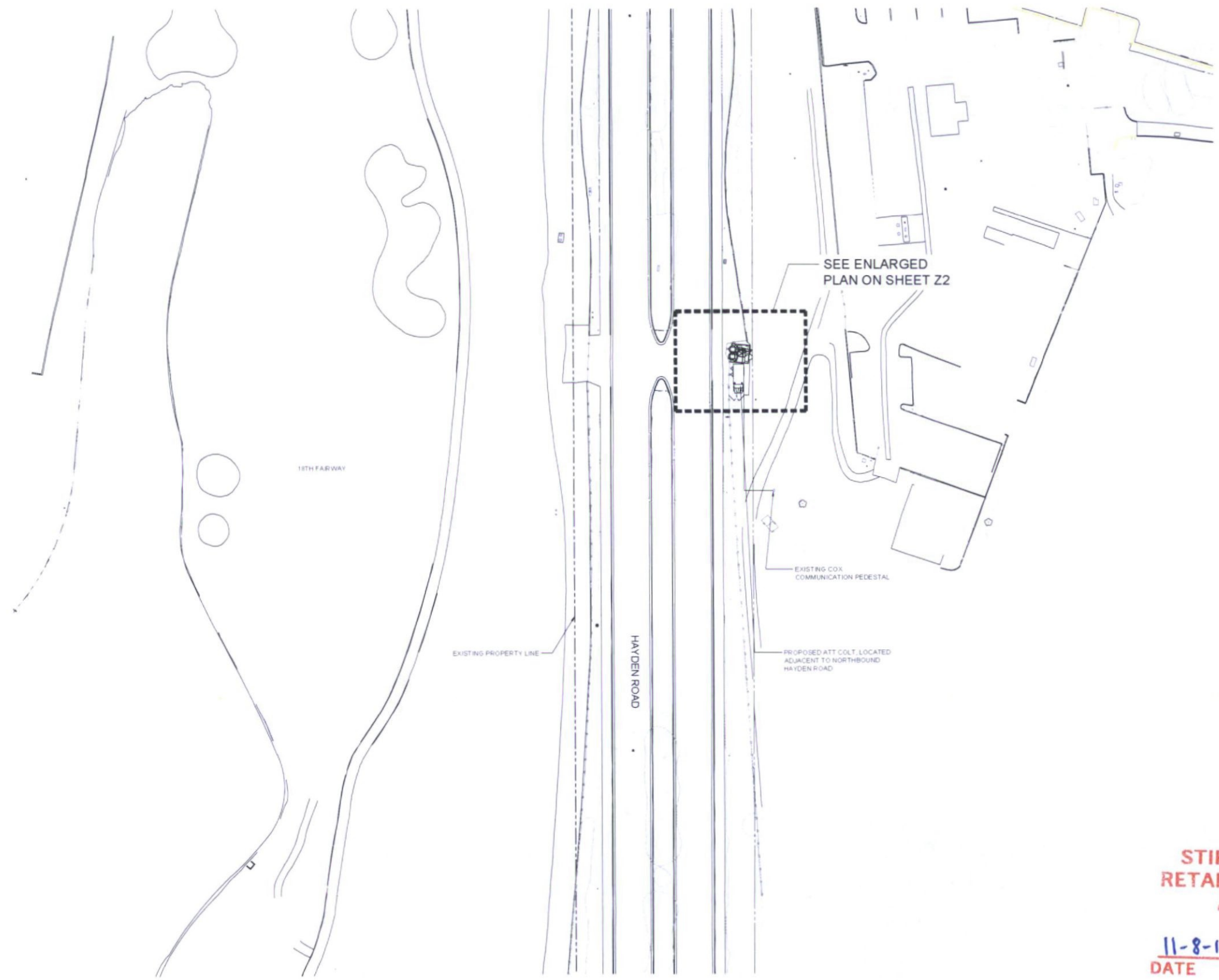
**STIPULATION SET
 RETAIN FOR RECORDS
 APPROVED**

11-8-18
 DATE

KN
 INITIALS

SHEET NUMBER

T1





1 **SITE PLAN**
Z-1

 SCALE: 1" = 40'-0"

**STIPULATION SET
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ph: 480 451 9609 fax: 480 451 9608
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EAST SIDE HAYDEN ROAD NORTH OF FRANK LLOYD WRIGHT BLVD.
SCOTTSDALE, AZ 85255

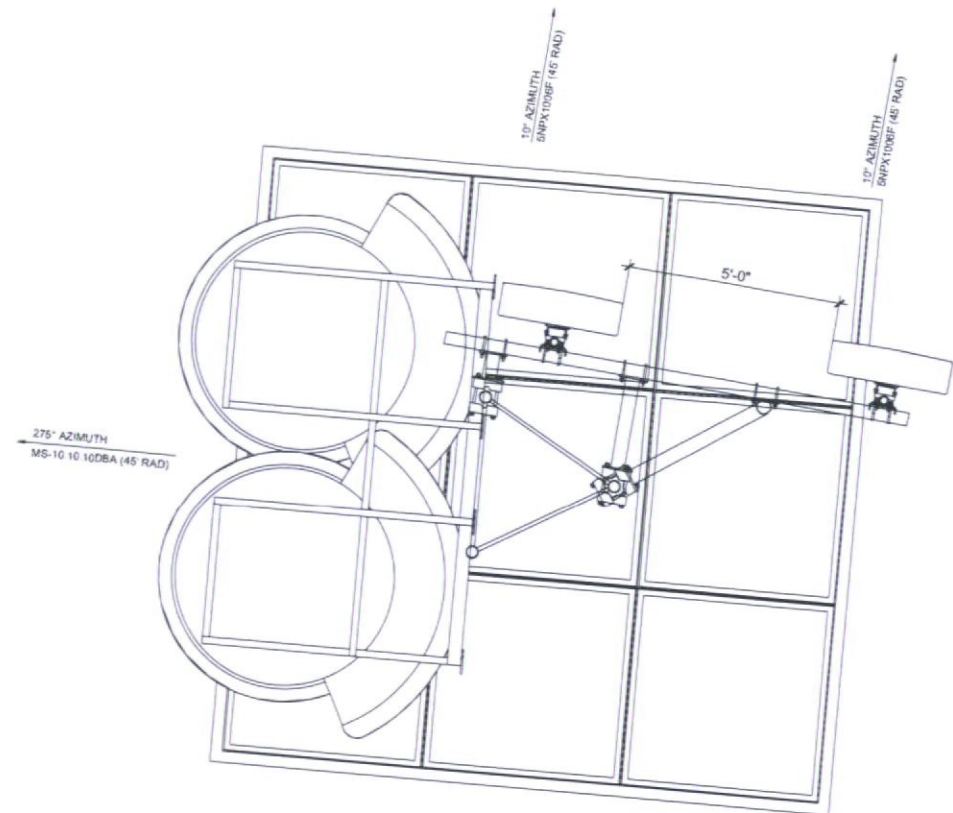
SHEET TITLE

OVERALL SITE PLAN

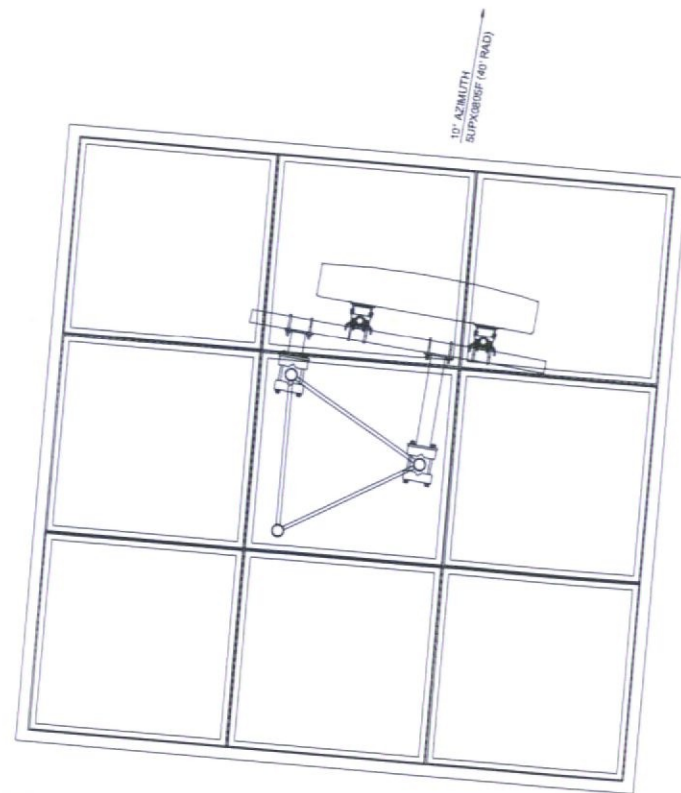
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SHEET NUMBER

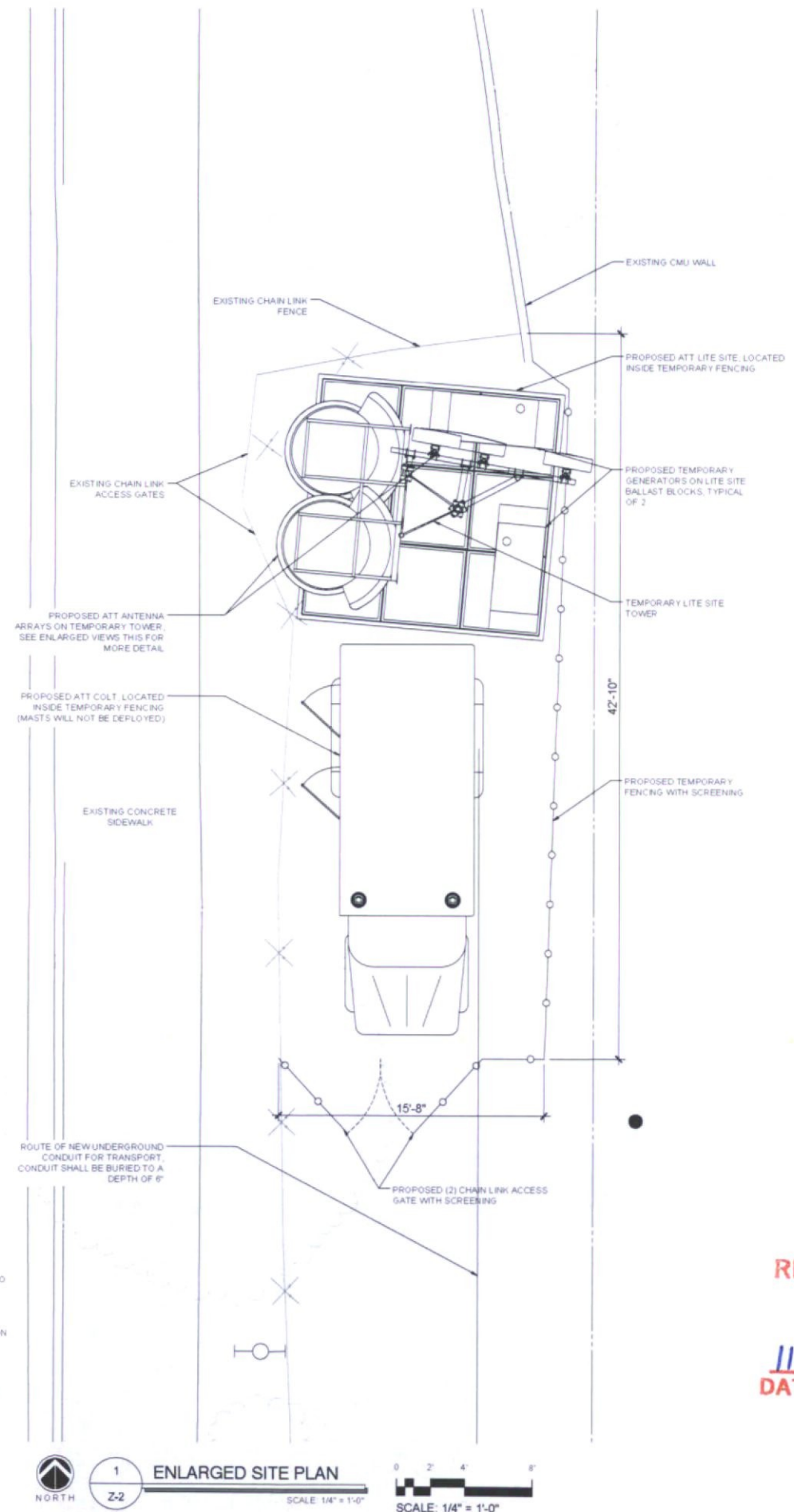
Z-1



2 45' ANTENNA PLAN
SCALE 1/2" = 1'-0"
SCALE: 1/2" = 1'-0"



3 40' ANTENNA PLAN
SCALE 1/2" = 1'-0"
SCALE: 1/2" = 1'-0"



1 ENLARGED SITE PLAN
SCALE 1/4" = 1'-0"
SCALE: 1/4" = 1'-0"

1. PROVIDE ±93' OF 2" CONDUIT FROM COLT LOCATION TO EXISTING COX COMMUNICATION PEDESTAL SE OF EQUIPMENT AREA
2. LEAVE A POT HOLE AT THE BASE OF THE COX COMMUNICATIONS PEDESTAL FOR COX CONSTRUCTION PERSONNEL TO COMPLETE THE PATH INTO THE PEDESTAL
3. PROVIDE 48VDC POWER AT THE 19" TELCO RACK FOR THE COX COMMUNICATION NETWORK INTERFACE DEVICE (NID)

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1355 W. UNIVERSITY DRIVE
MESA, AZ 85201

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architecture / project management
10245 E. Via Linda, Scottsdale, AZ 85258
ph: 480 451 9609 fax: 480 451 9608
e mail: corp@ydcoffice.com

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PROJECT INFORMATION

WASTE MANAGEMENT OPEN #1

EAST SIDE HAYDEN ROAD NORTH OF FRANK LLOYD WRIGHT BLVD.
SCOTTSDALE, AZ 85255

SHEET TITLE

ENLARGED PLAN

JURISDICTION APPROVAL

**STIPULATION SET
RETAIN FOR RECORDS
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DATE 11-8-18 INITIALS KN

SHEET NUMBER
Z-2

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**STIPULATION SET
RETAIN FOR RECORDS
APPROVED**

11-8-18 KN
DATE INITIALS

NO.	DATE	DESCRIPTION
0	10/31/18	SUBMITTAL

ARCHITECTS JOB NO.
YDC-6086

PROJECT INFORMATION

WASTE MANAGEMENT OPEN #1

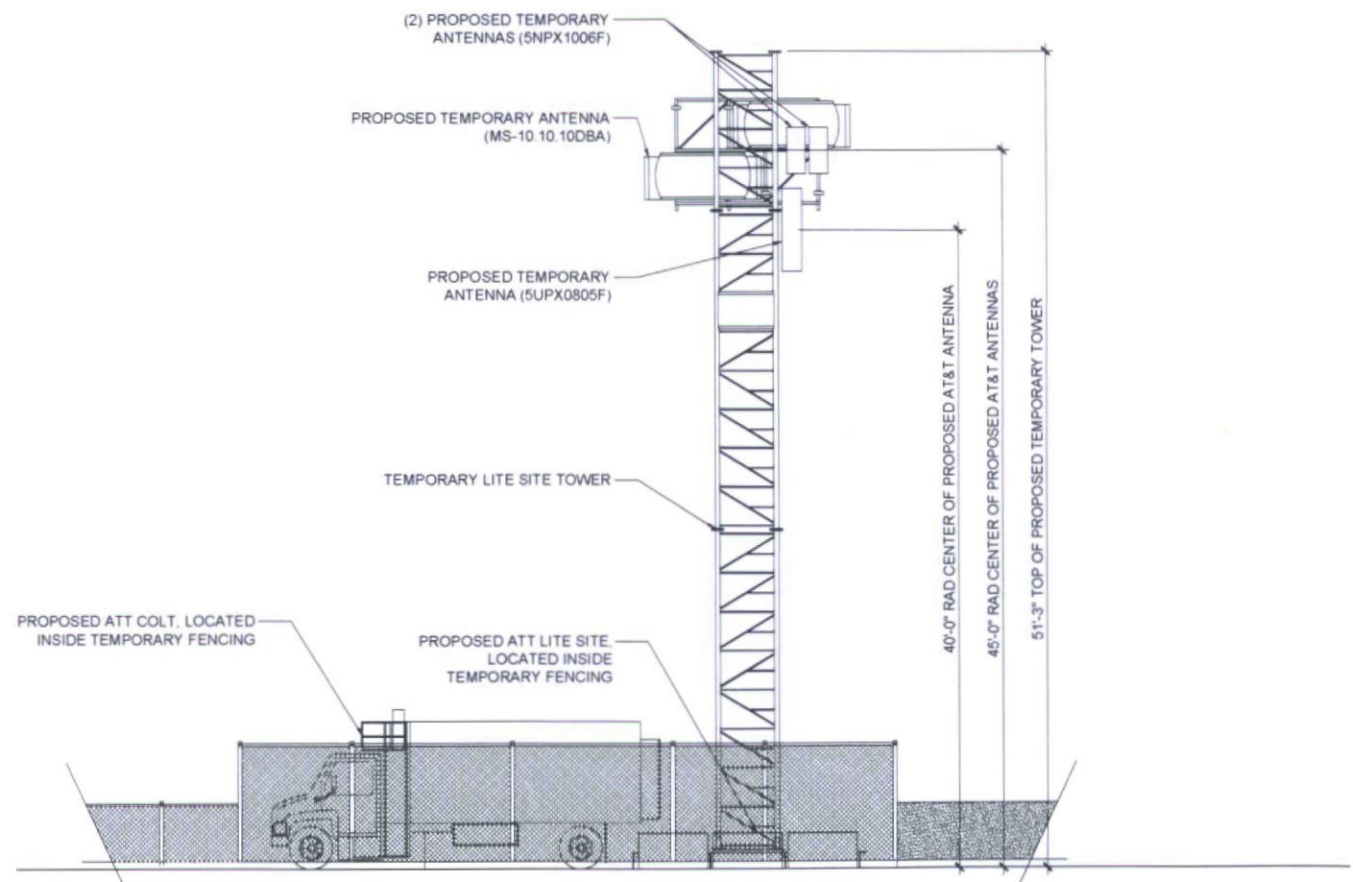
EAST SIDE HAYDEN ROAD NORTH OF FRANK LLOYD WRIGHT BLVD.
SCOTTSDALE, AZ 85255

SHEET TITLE

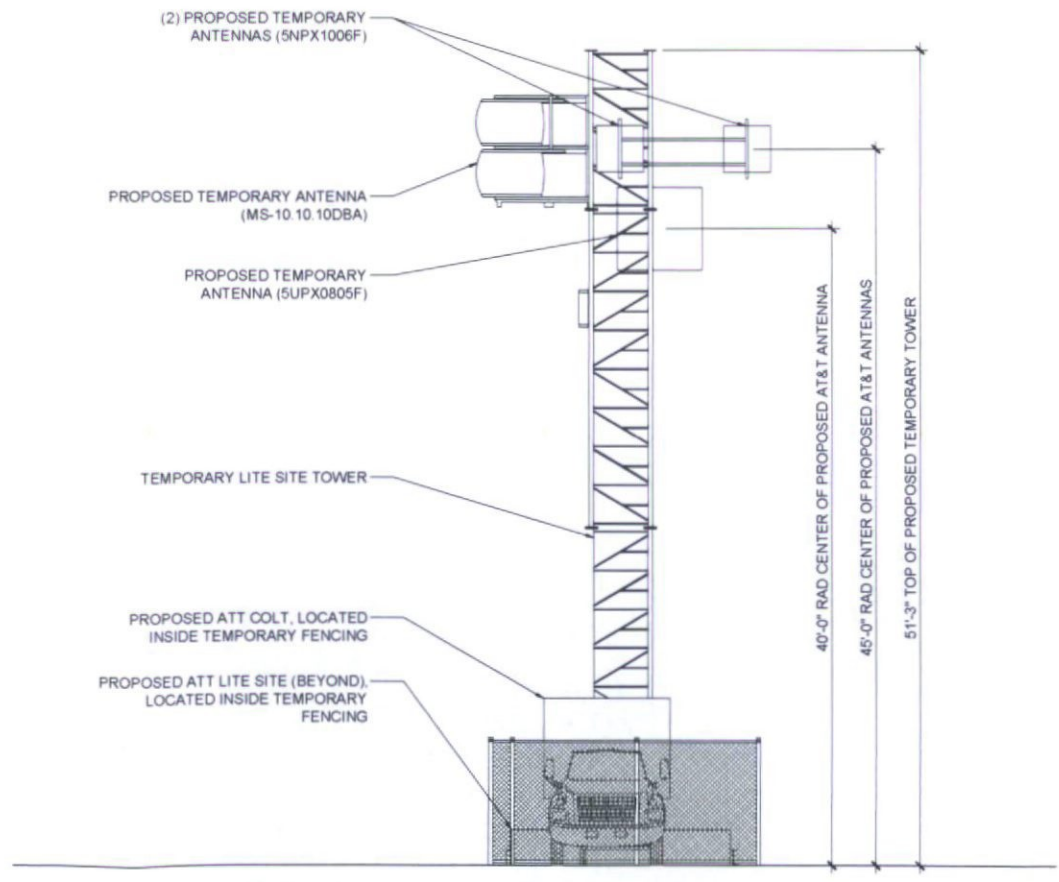
ELEVATIONS

JURISDICTION APPROVAL

SHEET NUMBER
Z-3



 **1 EAST ELEVATION**
Z-3 SCALE 3/16" = 1'-0"



 **1 SOUTH ELEVATION**
Z-3 SCALE 3/16" = 1'-0"

RF Data Sheet
Zoning and Construction

Version: 19.1

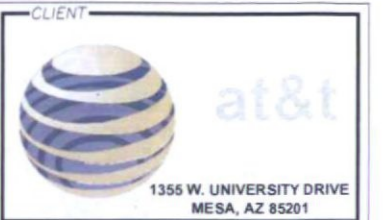
Site # **2322-AA** Disaster Recovery Priority
 Site Name: Waste Management_Cow 1_Cabinet 1
 Site Address: On N Hayden Rd, half way between E Bell Rd and
 City: Scottsdale State: Ariz Zip:
 Type of Site: Cow Latitude: 33 38 16.5 N 33 63790 GPS
 Longitude: 111 54 26.4 W 111 80733 NAD 83
 Microcell Macrocell Site Equipment Type: MACRO Cell Config Type: Sectorized

GSM BSC: GSM Switch Name: LAC:
 RBS Vendor: Number of GSM cabinets: Number of GSM T1:
 GSM ID (CID minus sector): Equipment Type: Ultra Site

UMTS UMTS Switch Name: LAC: RNC:
 RBS Vendor: UMTS ID (CID minus sector): Equipment Type:

Number of UMTS cabinets: 0 Number of Initial UMTS T1: Number of Initial UMTS Carriers: 0 UMTS T1 protection kit
 Number of UCU Cards: 0 Number of New UMTS T1: Number of New UMTS Carriers: UMTS DSS
 ETTCs Needed UMTS # of UCU Cards Modern Group 1: UMTS SIAD/DSS Kit
 ETTCs Bandwidth UMTS Mbps: 700 # of UCU Cards Modern Group 2: UMTS Number of PVC:

Sector Number	Antenna Model	Altitude	Mech. Down Tilt	Electrical Down Tilt	Antenna Length (ft)	Rad. Center	Antennas per Sector	TMA/GMA Model
A	MS-10-10-100DBA180 High	225.5	6	0	87	45	10	
1900 MHz	Mazing		2 COAX		50 Ft.		1/2 diameter	
B	MS-10-10-100DBA180 High	236.5	6	0	87	45	10	
1900 MHz	Mazing		2 COAX		50 Ft.		1/2 diameter	
C	MS-10-10-100DBA180 High	247.5	6	0	87	45	10	
1900 MHz	Mazing		2 COAX		50 Ft.		1/2 diameter	
A	MS-10-10-100DBA180 Low	225.5	6	0	87	45	10	
700 MHz	Mazing		2 COAX		50 Ft.		1/2 diameter	
B	MS-10-10-100DBA180 Low	236.5	6	0	87	45	10	
700 MHz	Mazing		2 COAX		50 Ft.		1/2 diameter	
C	MS-10-10-100DBA180 Low	247.5	6	0	87	45	10	
700 MHz	Mazing		2 COAX		50 Ft.		1/2 diameter	
A	MS-10-10-100DBA180 High	225.5	6	0	87	45	10	
VS 2100 M	Mazing		2 COAX		50 Ft.		1/2 diameter	
B	MS-10-10-100DBA180 High	236.5	6	0	87	45	10	
VS 2100 M	Mazing		2 COAX		50 Ft.		1/2 diameter	
C	MS-10-10-100DBA180 High	247.5	6	0	87	45	10	
VS 2100 M	Mazing		2 COAX		50 Ft.		1/2 diameter	



PLANS PREPARED BY
Young design corp
 architecture / project management
 10245 E. Via Linda, Scottsdale, AZ 85258
 ph: 480 451 9609 fax: 480 451 9608
 e mail: corp@ydcoffice.com

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ARCHITECTS JOB NO.
YDC-6086

PROJECT INFORMATION
WASTE MANAGEMENT OPEN #1
 EAST SIDE HAYDEN ROAD NORTH OF FRANK LLOYD WRIGHT BLVD.
 SCOTTSDALE, AZ 85255

SHEET TITLE
2322-AA RFDS

JURISDICTION APPROVAL

SHEET NUMBER
Z-6

RF Data Sheet
Zoning and Construction

Version: **19.1**

Site # **4552-AA** Disaster Recovery Priority: _____
 Site Name: Waste Management_Cow 1_Cabinet 2
 Site Address: On N Hayden Rd, half way between E Bell Rd and _____
 City: Scottsdale State: Ariz Zip: 85255
 Type of Site: Core Latitude: 33 38 16.5 N Longitude: 111 54 26.4 W Software (Google): NAD 83
 Microcell Macrocell Site Equipment Type: MACRO Cell Config Type: Sectorized

GSM BSC: _____ GSM Switch Name: _____ LAC: _____
 RBS Vendor: _____ Number of GSM cabinets: 0 Number of GSM T1: 0
 GSM ID (CID minus sector): _____ Equipment Type: _____

UMTS UMTS Switch Name: _____ LAC: _____ RNC: _____
 RBS Vendor: _____ UMTS ID (CID minus sector): _____ Equipment Type: _____

Number of UMTS cabinets: 0 Number of Initial UMTS T1: _____ UMTS T1 protection kit: _____
 Number of UCU Cards: _____ Number of New UMTS T1: _____ UMTS DSD: _____
 ETCS Needed UMTS # of UCU Cards Modern Group 1: _____ UMTS SIAD DSD Kit: _____
 ETCS Bandwidth UMTS MHz: 500 # of UCU Cards Modern Group 2: _____ UMTS Number of PVC: _____

LTE LTE Switch Name: _____

Sector Number	Antenna Model	Altitude	Mech. Down Tilt	Electrical Down Tilt	Antenna Length (in)	Rad. Center	Antennas per Sector	TMA/GMA Model
A	MS-10-10-100BA180 High	258.5	6	0	87	45	10	
1900 MHz	Mixing		2 COAX		50 Ft		1/2 diameter	
B	MS-10-10-100BA180 High	269.5	6	0	87	45	10	
1900 MHz	Mixing		2 COAX		50 Ft		1/2 diameter	
C	MS-10-10-100BA180 High	280.5	6	0	87	45	10	
1900 MHz	Mixing		2 COAX		50 Ft		1/2 diameter	
A	MS-10-10-100BA180 Low	258.5	6	0	87	45	10	
700 MHz	Mixing		2 COAX		50 Ft		1/2 diameter	
B	MS-10-10-100BA180 Low	269.5	6	0	87	45	10	
700 MHz	Mixing		2 COAX		50 Ft		1/2 diameter	
C	MS-10-10-100BA180 Low	280.5	6	0	87	45	10	
700 MHz	Mixing		2 COAX		50 Ft		1/2 diameter	
A	MS-10-10-100BA180 High	258.5	6	0	87	45	10	
VS 2100 M	Mixing		2 COAX		50 Ft		1/2 diameter	
B	MS-10-10-100BA180 High	269.5	6	0	87	45	10	
VS 2100 M	Mixing		2 COAX		50 Ft		1/2 diameter	
C	MS-10-10-100BA180 High	280.5	6	0	87	45	10	
VS 2100 M	Mixing		2 COAX		50 Ft		1/2 diameter	

CLIENT



1355 W. UNIVERSITY DRIVE
MESA, AZ 85201

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architecture / project management
10245 E. Via Linda, Scottsdale, AZ 85258
ph: 480 451 9609 fax: 480 451 9608
e mail: corp@ydcoffice.com

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ARCHITECTS JOB NO.
YDC-6086

PROJECT INFORMATION

WASTE MANAGEMENT OPEN #1

EAST SIDE HAYDEN ROAD NORTH OF FRANK LLOYD WRIGHT BLVD.
SCOTTSDALE, AZ 85255

SHEET TITLE

4552-AA RFDS

JURISDICTION APPROVAL

SHEET NUMBER

Z-7

RF Data Sheet
Zoning and Construction

Version: 19.1

Site # **4560-AA** Disaster Recovery Priority
 Site Name: Waste Management_Cow 1_Cabinet 3
 Site Address: On N Hayden Rd, half way between E Bell Rd and
 City: Scottsdale State: AZ Zip:
 Type of Site: Cow Latitude: 33 38 16.5 N Longitude: 111 54 26.4 W Software (Google): NAD 83
 Microcell Macrocell Site Equipment Type: MACRO Cell Config Type: Sectorized

GSM BSC: GSM Switch Name: LAC:
 RBS Vendor: Number of GSM cabinets: Number of GSM T1:
 GSM ID (CID minus sector): Equipment Type: Ultra Site

UMTS UMTS Switch Name: LAC: RNC:
 RBS Vendor: UMTS ID (CID minus sector): Equipment Type:

Number of UMTS cabinets: 0 Number of Initial UMTS T1: Number of Initial UMTS Carriers: UMTS T1 protection kit
 Number of UCU Cards: Number of New UMTS T1: Number of New UMTS Carriers: UMTS DS3
 ETCS Needed UMTS # of UCU Cards Modern Group 1: UMTS SIAD DS3 Kit
 ETCS Bandwidth UMTS Mhz: 500 # of UCU Cards Modern Group 2: UMTS Number of PVC:

LTE LTE Switch Name:

Sector Number	Antenna Model	Azimuth	Mech. Down Tilt	Electrical Down Tilt	Antenna Length (ft)	Rad. Center	Antennas per Sector	TMA/GMA Model
A	MS-10.10.10DBA180 High	291.5	6	0	87	45	10	
1900 MHz	Missing		2 COAX		50 Ft		1/2 diameter	
B	MS-10.10.10DBA180 High	302.5	6	0	87	45	10	
1900 MHz	Missing		2 COAX		50 Ft		1/2 diameter	
C	MS-10.10.10DBA180 High	313.5	6	0	87	45	10	
1900 MHz	Missing		2 COAX		50 Ft		1/2 diameter	
A	MS-10.10.10DBA180 Low	291.5	6	0	87	45	10	
700 MHz	Missing		2 COAX		50 Ft		1/2 diameter	
B	MS-10.10.10DBA180 Low	302.5	6	0	87	45	10	
700 MHz	Missing		2 COAX		50 Ft		1/2 diameter	
C	MS-10.10.10DBA180 Low	313.5	6	0	87	45	10	
700 MHz	Missing		2 COAX		50 Ft		1/2 diameter	
A	MS-10.10.10DBA180 High	291.5	6	0	87	45	10	
VS 2100 M	Missing		2 COAX		50 Ft		1/2 diameter	
B	MS-10.10.10DBA180 High	302.5	6	0	87	45	10	
VS 2100 M	Missing		2 COAX		50 Ft		1/2 diameter	
C	MS-10.10.10DBA180 High	313.5	6	0	87	45	10	
VS 2100 M	Missing		2 COAX		50 Ft		1/2 diameter	



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ARCHITECTS JOB NO.
YDC-6086

PROJECT INFORMATION
WASTE MANAGEMENT OPEN #1
 EAST SIDE HAYDEN ROAD NORTH OF FRANK LLOYD WRIGHT BLVD.
 SCOTTSDALE, AZ 85255

SHEET TITLE
4560-AA RFDS

JURISDICTION APPROVAL

SHEET NUMBER
Z-8

RF Data Sheet
Zoning and Construction

Version: **19.1**

Site # **4572-AA** Disaster Recovery Priority
 Site Name: Waste Management, Cow 1, Cabinet 4
 Site Address: On N Hayden Rd, Half way between E Bell Rd and
 City: Scottsdale State: AZ Zip:
 Type of Site: Cow Latitude: 33 38 16.5 N 33 63'30" Software (Google) NAD 83
 Longitude: 111 54 26.4 W 111 80'33"
 Microcell Macrocell Site Equipment Type: Cell Config Type: Sectorized

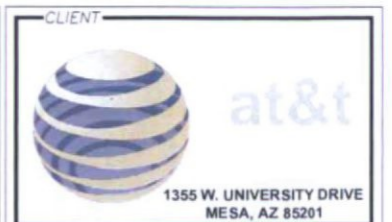
GSM BSC: GSM Switch Name: LAC:
 RBS Vendor: Number of GSM cabinets: Number of GSM T1:
 GSM ID (CID minus sector): Equipment Type: Ultra Site

UMTS UMTS Switch Name: LAC: RNC:
 RBS Vendor: UMTS ID (CID minus sector): Equipment Type:

Number of UMTS cabinets: Number of Initial UMTS T1: Number of Initial UMTS Carriers: UMTS T1 protection kit
 Number of UCU Cards: Number of New UMTS T1: Number of New UMTS Carriers: UMTS DCS
 ETCS Needed UMTS # of UCU Cards Modern Group 1: UMTS SIAD/DS3 Kit
 ETCS Bandwidth UMTS Min: 500 # of UCU Cards Modern Group 2: UMTS Number of PVC:

LTE LTE Switch Name:

Sector Number	Antenna Model	Azimuth	Mech. Down Tilt	Electrical Down Tilt	Antenna Length (in)	Rad. Center	Antennas per Sector	TMA/GMA Model
A	MS-10-10-100BA180 High	324.5	6	0	87	55	10	
1900 MHz	Missing		2 COAX		50 Ft.		1/2 diameter	
B	SNPX1006F	340	0	6	35	45	5	
1900 MHz	Argus		2 COAX		45 Ft.		1/2 diameter	
C	SNPX1006F	355	0	6	35	45	5	
1900 MHz	Argus		2 COAX		45 Ft.		1/2 diameter	
A	MS-10-10-100BA180 High	324.5	6	0	87	55	10	
2100 MHz	Missing		2 COAX		50 Ft.		1/2 diameter	
B	SNPX1006F	340	0	6	35	45	5	
2100 MHz	Argus		2 COAX		45 Ft.		1/2 diameter	
C	SNPX1006F	355	0	6	35	45	5	
2100 MHz	Argus		2 COAX		45 Ft.		1/2 diameter	
A	MS-10-10-100BA180 Low	324.5	6	0	87	55	10	
700 MHz	Missing		2 COAX		50 Ft.		1/2 diameter	
B	SUPX0805F	340	0	6	63.5	40	5	
700 MHz	Argus		2 COAX		45 Ft.		1/2 diameter	
C	SUPX0805F	355	0	6	63.5	40	5	
700 MHz	Argus		2 COAX		45 Ft.		1/2 diameter	



PLANS PREPARED BY
Young design corp
 architecture / project management
 10245 E. Via Linda, Scottsdale, AZ 85258
 ph: 480 451 9609 fax: 480 451 9608
 e-mail: corp@ydcoffice.com

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NO.	DATE	DESCRIPTION
0	10/31/18	SUBMITTAL

ARCHITECTS JOB NO.
YDC-6086

PROJECT INFORMATION
WASTE MANAGEMENT OPEN #1
 EAST SIDE HAYDEN ROAD NORTH OF FRANK LLOYD WRIGHT BLVD.
 SCOTTSDALE, AZ 85255

SHEET TITLE
4572-AA RFDS

JURISDICTION APPROVAL

SHEET NUMBER
Z-9

RF Data Sheet
Zoning and Construction

Version: 19.1

Site # **4573-AA** Disaster Recovery Priority
 Site Name: Waste Management_Cow 1_Cabinet 5
 Site Address: On N Hayden Rd, Half way between F Rd and
 City: Scottsdale State: AZ Zip:
 Type of Site: Cow Latitude: 33 36 16.5 N Longitude: 111 54 26.4 W
 Software (Google): NAD 83
 Microcell Macrocell Site Equipment Type: Cell Config Type: Sectorized

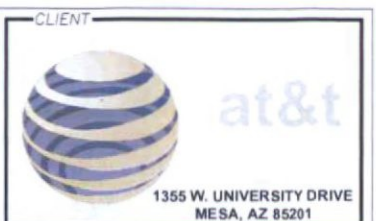
GSM BSC: GSM Switch Name: LAC:
 RBS Vendor: Number of GSM cabinets: Number of GSM T1:
 GSM ID (CID minus sector): Equipment Type: Ultra Site

UMTS UMTS Switch Name: LAC: RNC:
 RBS Vendor: UMTS ID (CID minus sector): Equipment Type:

Number of UMTS cabinets: Number of Initial UMTS T1: Number of Initial UMTS Carriers: UMTS T1 protection kit
 Number of UCU Cards: Number of New UMTS T1: Number of New UMTS Carriers: UMTS DSD
 ETCS Needed UMTS # of UCU Cards Modern Group 1: UMTS SHAD DSD Kit
 ETCS Bandwidth UMTS MHz: 500 # of UCU Cards Modern Group 2: UMTS Number of PVG:

LTE LTE Switch Name: AZL04573

Sector Number	Antenna Model	Azimuth	Mech. Down Tilt	Electrical Down Tilt	Antenna Length (in)	Rad. Center	Antennas per Sector	TMA/GMA Model
A	SNPX1006F	10	0	6	35	45	5	
1800 MHz	Argus				50 Ft.		1/2 diameter	
B	SNPX1006F	25	0	6	35	45	5	
1900 MHz	Argus				50 Ft.		1/2 diameter	
C	SNPX1006F	40	0	6	35	45	5	
1900 MHz	Argus				50 Ft.		1/2 diameter	
A	SNPX1006F	10	0	6	35	45	5	
2100 MHz	Argus				50 Ft.		1/2 diameter	
B	SNPX1006F	25	0	6	35	45	5	
2100 MHz	Argus				50 Ft.		1/2 diameter	
C	SNPX1006F	40	0	6	35	45	5	
2100 MHz	Argus				50 Ft.		1/2 diameter	
A	SUPX0805F	10	0	6	63.5	40	5	
700 MHz	Argus				45 Ft.		1/2 diameter	
B	SUPX0805F	25	0	6	63.5	40	5	
700 MHz	Argus				45 Ft.		1/2 diameter	
C	SUPX0805F	40	0	6	63.5	40	5	
700 MHz	Argus				45 Ft.		1/2 diameter	



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NO.	DATE	DESCRIPTION
0	10/31/18	SUBMITTAL

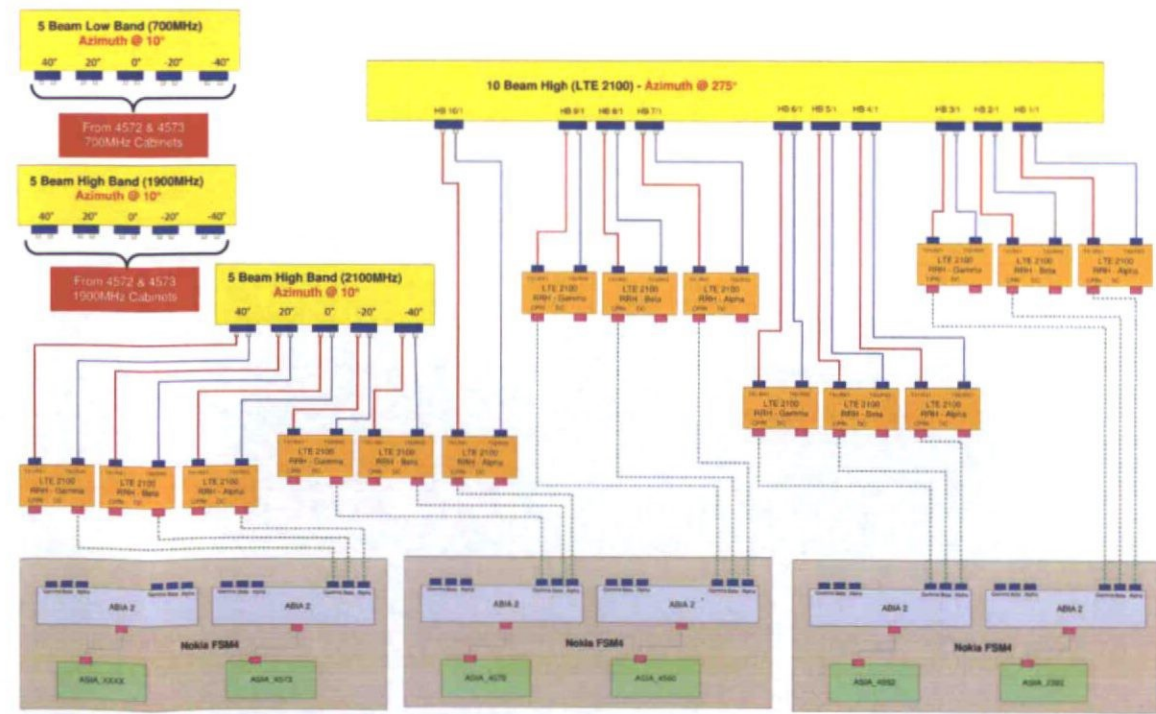
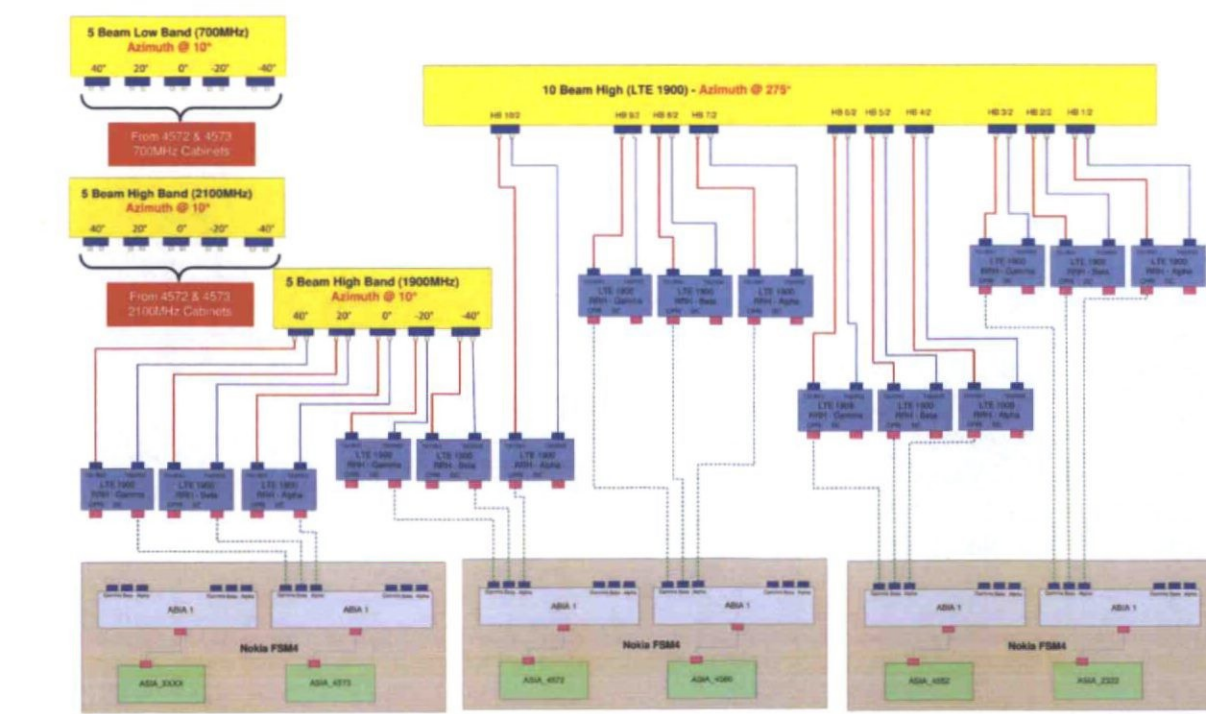
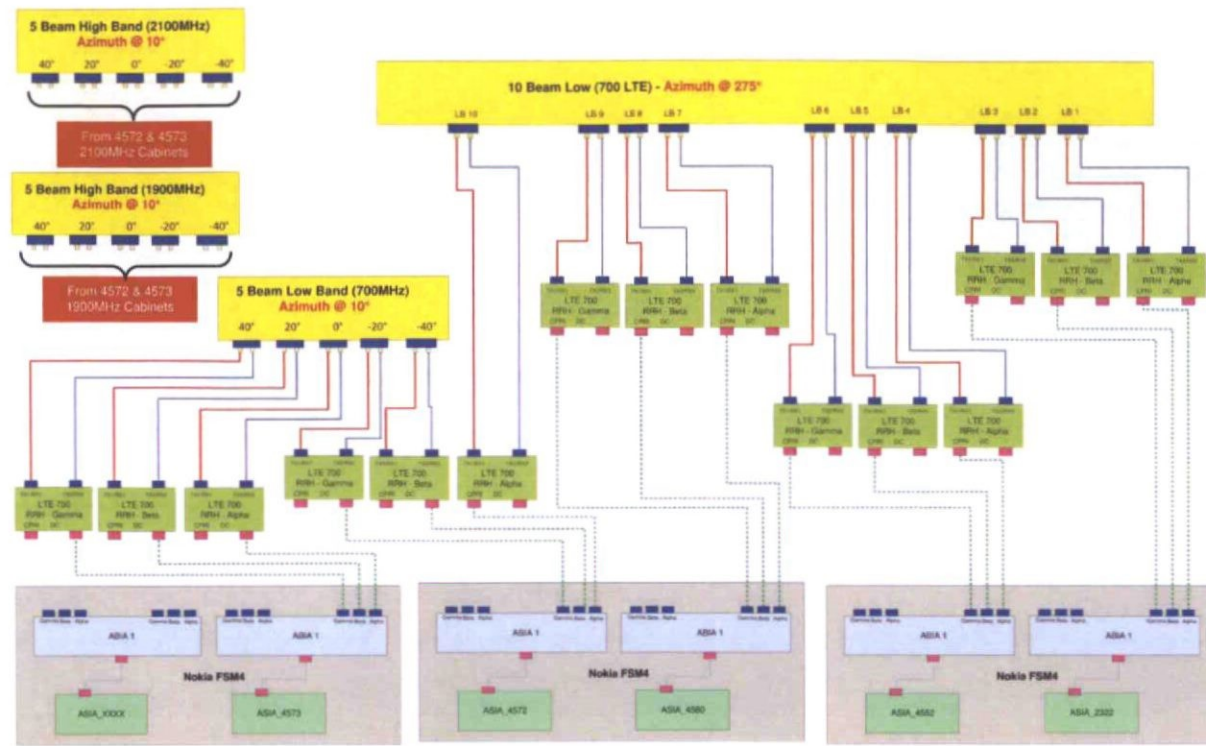
ARCHITECTS JOB NO.
YDC-6086

PROJECT INFORMATION
WASTE MANAGEMENT OPEN #1
 EAST SIDE HAYDEN ROAD NORTH OF FRANK LLOYD WRIGHT BLVD.
 SCOTTSDALE, AZ 85255

SHEET TITLE
4573-AA RFDS

JURISDICTION APPROVAL

SHEET NUMBER
Z-10



NO.	DATE	DESCRIPTION
0	10/31/18	SUBMITTAL

ARCHITECTS JOB NO.
YDC-6086

PROJECT INFORMATION

WASTE MANAGEMENT OPEN #1

EAST SIDE HAYDEN ROAD NORTH OF FRANK LLOYD WRIGHT BLVD,
SCOTTSDALE, AZ 85255

SHEET TITLE

PLUMBING DIAGRAMS

JURISDICTION APPROVAL

Product Specifications

COMMSCOPE



SUPX0805F
Argus® MultiBeam Antenna, 698-894 MHz, 5 x 13.5' horizontal beamwidth, fixed electrical tilt. Ships with two T-041-GL-E mounting kits.

Electrical Specifications

Frequency Band, MHz	698-894
Gain, dB	20.0
Beamwidth, Horizontal, degrees	14
Beamwidth, Vertical, degrees	15.6
Beam Tilt, degrees	0
USLS, dB	18
Front-to-Back Ratio at 180°, dB	25
Isolation, dB	25
VSWR Return Loss, dB	1.42 15.9
PM, 3rd Order, 2 x 20 W, dBc	-15.0
Input Power per Port, maximum, watts	300
Polarization	+45°
Impedance	50 ohm

General Specifications

Antenna Brand	Argus®
Antenna Type	DualPort® MultiBeam
Band	Single band
Brand	Argus® DualPort®
Operating Frequency Band	698 - 894 MHz
Number of Ports	10

Mechanical Specifications

Connector Interface	7-16 DIN Female
Connector Location	Bottom
Connector Quantity, total	10
Lightning Protection	0r Ground
Radome Material	Polyester fiberglass diffusion
Wind Loading, maximum	2700.0 N @ 160 km/h 627.0 lbf @ 160 km/h
Wind Speed, maximum	140.0 km/h 87.0 mph

Dimensions

Depth	282.0 mm 11.1 in
Length	1617.0 mm 63.7 in
Width	1574.0 mm 62.0 in
Net Weight	85.0 kg 187.4 lb

Included Products

T-041-GL-E — Argus® Adjustable Tilt Pole Mounting Kit for 2.0" x 4.5" (50.8x115mm) OD round members for panel antennas. Includes 2 clamp sets.

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Product Specifications

COMMSCOPE



SNPX1006F
Argus® MultiBeam Antenna, 1710-2170 MHz, 5x 10-14' horizontal beamwidth, fixed electrical tilt.

Electrical Specifications

Frequency Band, MHz	1710-1920	1920-2170
Gain, dB	22.0	21.0
Beamwidth, Horizontal, degrees	12	11
Beamwidth, Vertical, degrees	12.0	11.0
Beam Tilt, degrees	6	6
USLS, dB	18	18
Front-to-Back Ratio at 180°, dB	30	30
Isolation, dB	25	25
VSWR Return Loss, dB	1.42 15.9	1.42 15.9
PM, 3rd Order, 2 x 20 W, dBc	-15.0	-15.0
Input Power per Port, maximum, watts	300	300
Polarization	+45°	+45°
Impedance	50 ohm	50 ohm

General Specifications

Antenna Brand	Argus®
Antenna Type	DualPort® MultiBeam
Band	Single band
Brand	Argus® DualPort®
Operating Frequency Band	1710 - 2170 MHz

Mechanical Specifications

Color	Gray
Lightning Protection	0r Ground
Radome Material	ASA, UV stabilized
RF Connector Interface	7-16 DIN Female
RF Connector Location	Bottom
RF Connector Quantity, total	10
Wind Loading, maximum	1060.0 N @ 160 km/h 238.3 lbf @ 160 km/h

Dimensions

Depth	250.0 mm 9.8 in
Length	890.0 mm 35.0 in
Width	865.0 mm 34.1 in
Net Weight	30.0 kg 66.1 lb

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MS-10.10.10DBA180

Multi-Beam Dual Band Spherical Lens Array Antenna: 10 independent low frequency (698-896MHz) cross-polarized beams and 10 independent high frequency (1710-2690MHz) cross-polarized beams (each lens has independent high frequency beams providing 4 ports for 4X4 MIMO or multiple base stations).



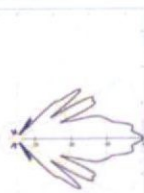
Horizontal Pattern: High-Band 1950MHz



Low-Band 850MHz



Vertical Pattern: High-Band 1950MHz



Low-Band 850MHz



EMAIL: info@matsing.com WEBSITE: www.matsing.com PHONE: (949)356-2223



ESTIMATED TECHNICAL SPECIFICATIONS PER BEAM

Parameter	698-896 MHz	1710-2690 MHz
Frequency	698-896 MHz	1710-2690 MHz
Gain	19dB	24dB
Return Loss	>15dB	>15dB
Polarization	Dual Slant +45°	Dual Slant +45°
Horizontal Coverage	100°	100°
Horizontal Beamwidth (1dB level) Central Beams	10° x 1.5°	10° x 1.5°
Side Beams	15° x 1.5°	14° x 1.5°
Vertical Beamwidth (1dB level)	40°	21°
Tilt	0°	0°
Beam Cross-over	19dB typical	19dB typical
Total Number of Beams	10	10 (4 ports/beam)
First Horizontal Sidelobe Level	<-16dB	<-16dB
Front to Back Ratio	>26dB	>26dB
Isolation Port to Port - Polarization	>26dB	>26dB
Isolation Port to Port - Beam	>26dB	>26dB
Power Rating	400W per port	400W per port
Intermodulation	<-150dBc	<-150dBc
Impedance	50 ohm	50 ohm
Connector Quantity and Type	20 7-16 DIN female	40 7-16 DIN female

ESTIMATED MECHANICAL DATA

Dimensions (H x W x D)	Two truncated Lenses: Diameter: 180cm/70inch Height: 80cm/31inch Antenna dimensions: 228 x 392 x 221 cm 87 x 154 x 87 inch
Antenna Weight	476kg 1050lbs
Radome Material	Fiberglass
Mounting	4 position pipe mount Compatible pipe diameter: 6.1 - 11.4 cm 2.4 - 4.5 inch

ESTIMATED ENVIRONMENTAL RATINGS

Humidity	95% RH @ -30°C
Temperature	-40°C to +70°C
Wind load	@ 140km/hr
Front	5965N/1339lbf
Side	4760N/1070lbf
Back	6147N/1411lbf

SAMPLE CONNECTOR LAYOUT:



EMAIL: info@matsing.com WEBSITE: www.matsing.com PHONE: (949)356-2223

CLIENT



1355 W. UNIVERSITY DRIVE
MESA, AZ 85201

PLANS PREPARED BY



architecture / project management
10245 E. Via Linda, Scottsdale, AZ 85258
ph: 480 451 9609 fax: 480 451 9608
e mail: corp@ydcoffice.com

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EXP. 12/31/19

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NO.	DATE	DESCRIPTION
0	10/31/18	SUBMITTAL

ARCHITECTS JOB NO.
YDC-6086

PROJECT INFORMATION

WASTE MANAGEMENT OPEN #1

EAST SIDE HAYDEN ROAD NORTH OF FRANK LLOYD WRIGHT BLVD.
SCOTTSDALE, AZ 85255

SHEET TITLE

ANTENNA DETAILS

JURISDICTION APPROVAL

SHEET NUMBER

Z-12

81'-3" AFG
Top of Section 4

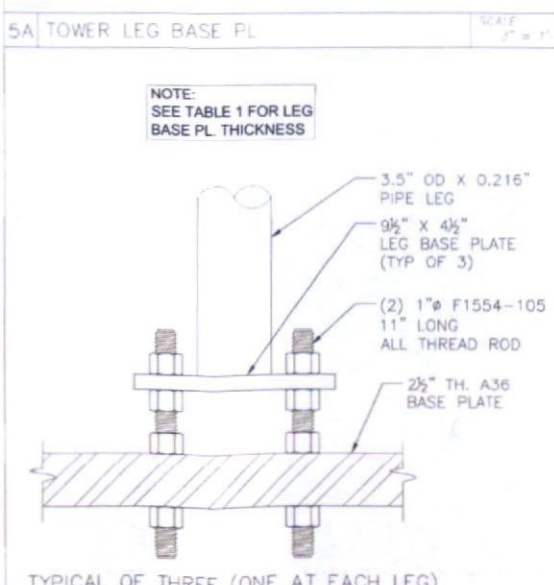
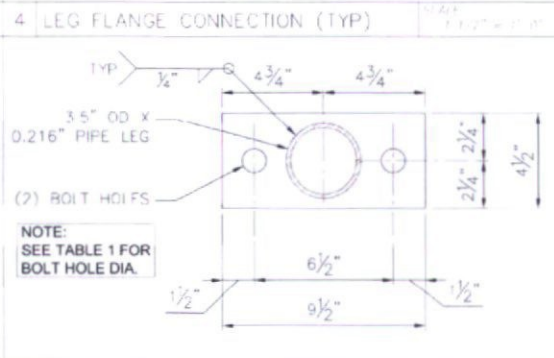
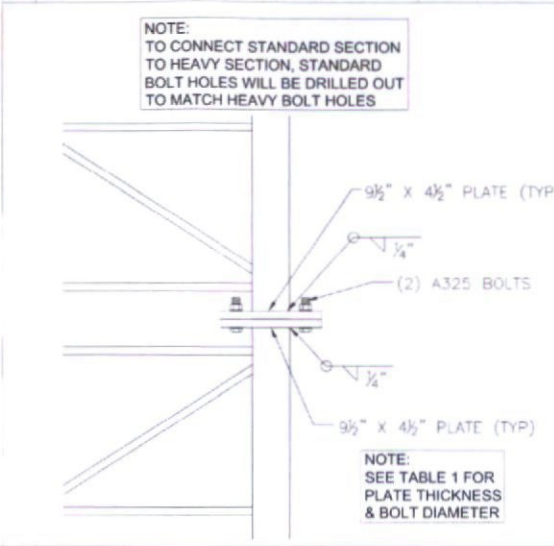
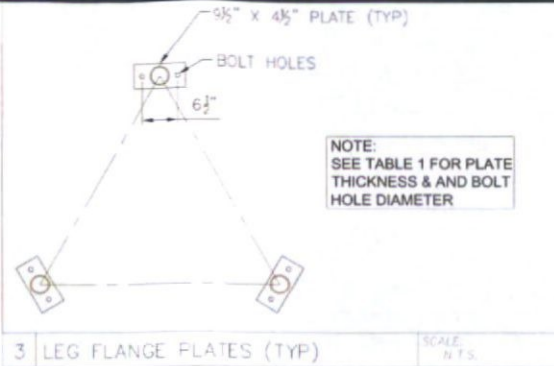
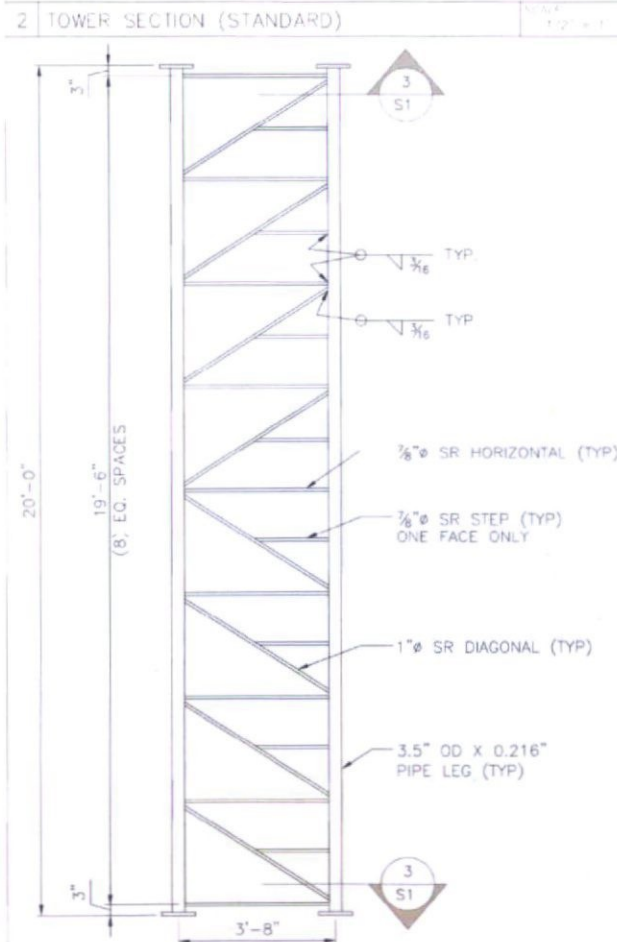
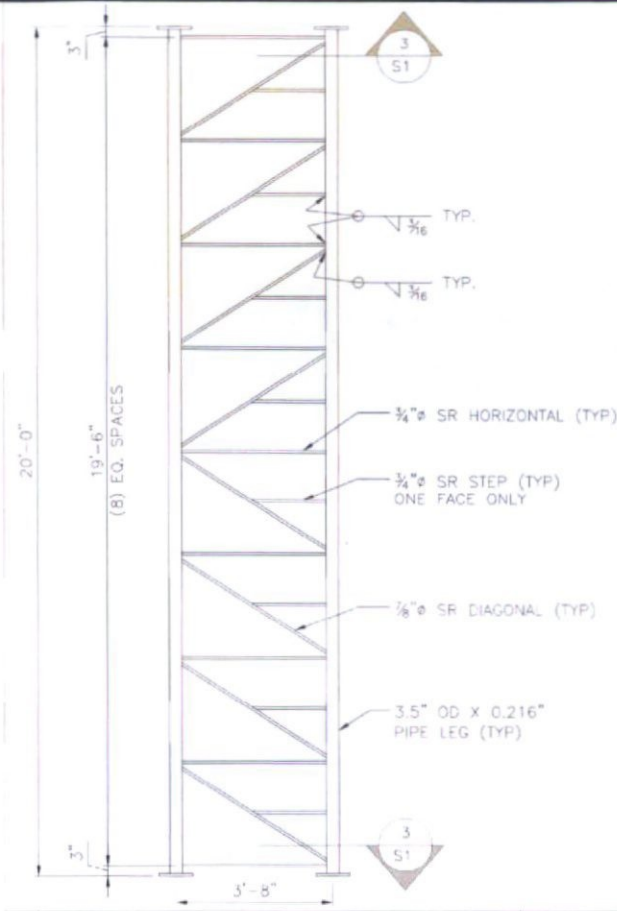
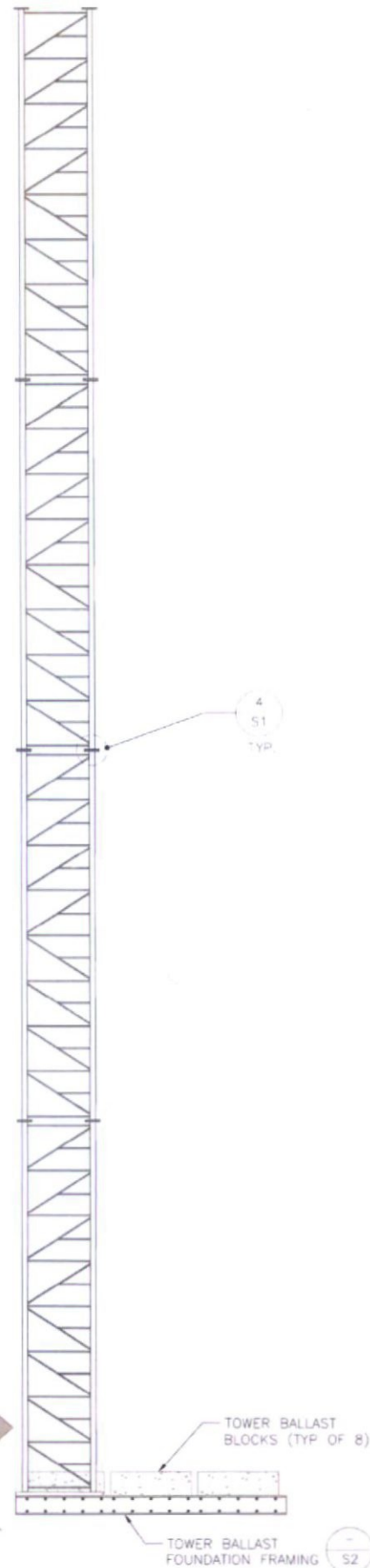
61'-3" AFG
Top of Section 3

41'-3" AFG
Top of Section 2

21'-3" AFG
Top of Section 1

1'-2 1/2" AFG
Top of Base Plate

0'-0" AFG
Finish Grade



GENERAL NOTES:

1. THE CONTRACTOR SHALL VERIFY DIMENSIONS, CONDITIONS, AND ELEVATIONS BEFORE STARTING WORK. SEE SPECIAL CONSTRUCTION NOTES THIS PAGE. THE ENGINEER SHALL BE NOTIFIED IMMEDIATELY IF ANY DISCREPANCIES ARE FOUND.
2. THE TYPICAL NOTES AND DETAILS SHALL APPLY IN ALL CASES UNLESS SPECIFICALLY DETAILED ELSEWHERE. WHERE NO DETAIL IS SHOWN, THE CONSTRUCTION SHALL BE AS SHOWN FOR OTHER SIMILAR WORK AND AS REQUIRED BY THE BUILDING CODE.
3. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLIANCE WITH LOCAL CONSTRUCTION SAFETY ORDERS. APPROVAL OF SHOP DRAWINGS BY THE ARCHITECT OR STRUCTURAL ENGINEER SHALL NOT BE CONSTRUED AS ACCEPTING THIS RESPONSIBILITY.
4. ALL STRUCTURAL FRAMING MEMBERS SHALL BE ADEQUATELY SHORED AND BRACED DURING ERECTION AND UNTIL FULL LATERAL AND VERTICAL SUPPORT IS PROVIDED BY ADJOINING MEMBERS.

CONSTRUCTION NOTES:

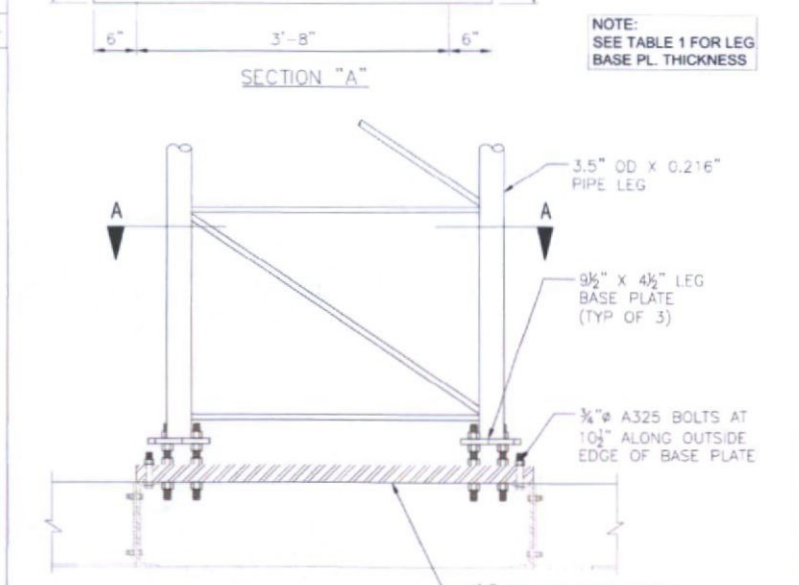
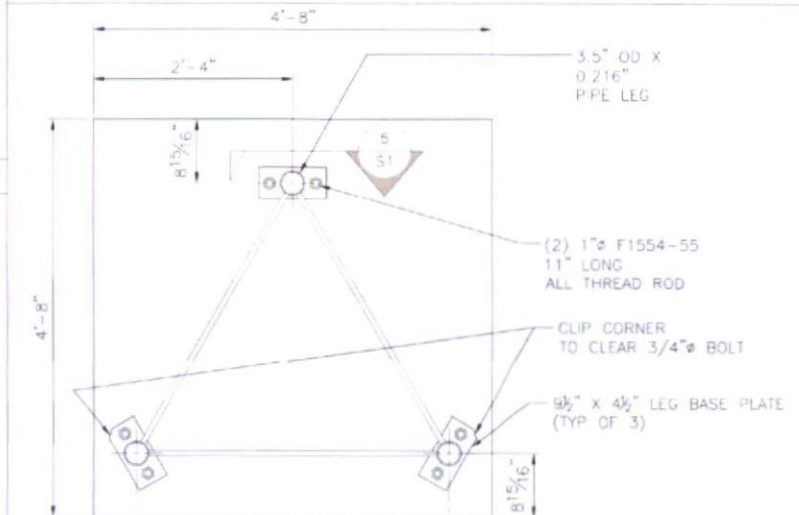
1. IF EXISTING CONDITIONS ARE NOT AS INDICATED ON DRAWINGS, THE CONTRACTOR SHALL CONTACT THE STRUCTURAL ENGINEER (GLEN HUNT) AT ISE INCORPORATED, FOR IN FIELD ADJUSTMENT(S), PRIOR TO PROCEEDING WITH ANY CONSTRUCTION.

STRUCTURAL STEEL:

1. ALL STRUCTURAL STEEL CODE CHECKS BASED ON THE AISC, 13TH EDITION PER THE ASCE 7 STANDARD
3. ALL STEEL ROUND TUBES (HSS) & PIPE TO BE PER ASTM A500 GR. 50 (50 KSI), U.N.O.
4. ALL CHANNELS TO BE 50 KSI
5. ALL OTHER STRUCTURAL STEEL SHAPES & PLATES SHALL BE PER ASTM A36 (36 KSI), U.N.O.
6. ALL BOLTS FOR STEEL-TO-STEEL CONNECTIONS SHALL BE ASTM A325H, U.N.O.
7. ALL BOLTED CONNECTIONS SHALL BE TIGHTENED TO "SNUG TIGHT" CONDITION AS DEFINED BY AISC.
8. ALL WELDING SHALL BE PERFORMED BY CERTIFIED WELDERS IN ACCORDANCE WITH THE LATEST EDITION OF THE AMERICAN WELDING SOCIETY (AWS) D1.1
9. ALL STEEL SURFACES SHALL BE GALVANIZED IN ACCORDANCE WITH THE ASTM A123 AND ASTM A153 STANDARDS, U.N.O.

TABLE 1

TOWER SECTION	PLATE TH. (IN)	BOLT DIA. (IN)	BOLT HOLE DIA. (IN)
STANDARD	3/4	3/4	13/16
HEAVY	1	1	1-1/16



**MODULAR SELF-SUPPORT TOWER & FOUNDATION
80' COMMUNICATIONS STRUCTURE W/ HEAVY BASE
TOWER ASSEMBLY DETAILS**



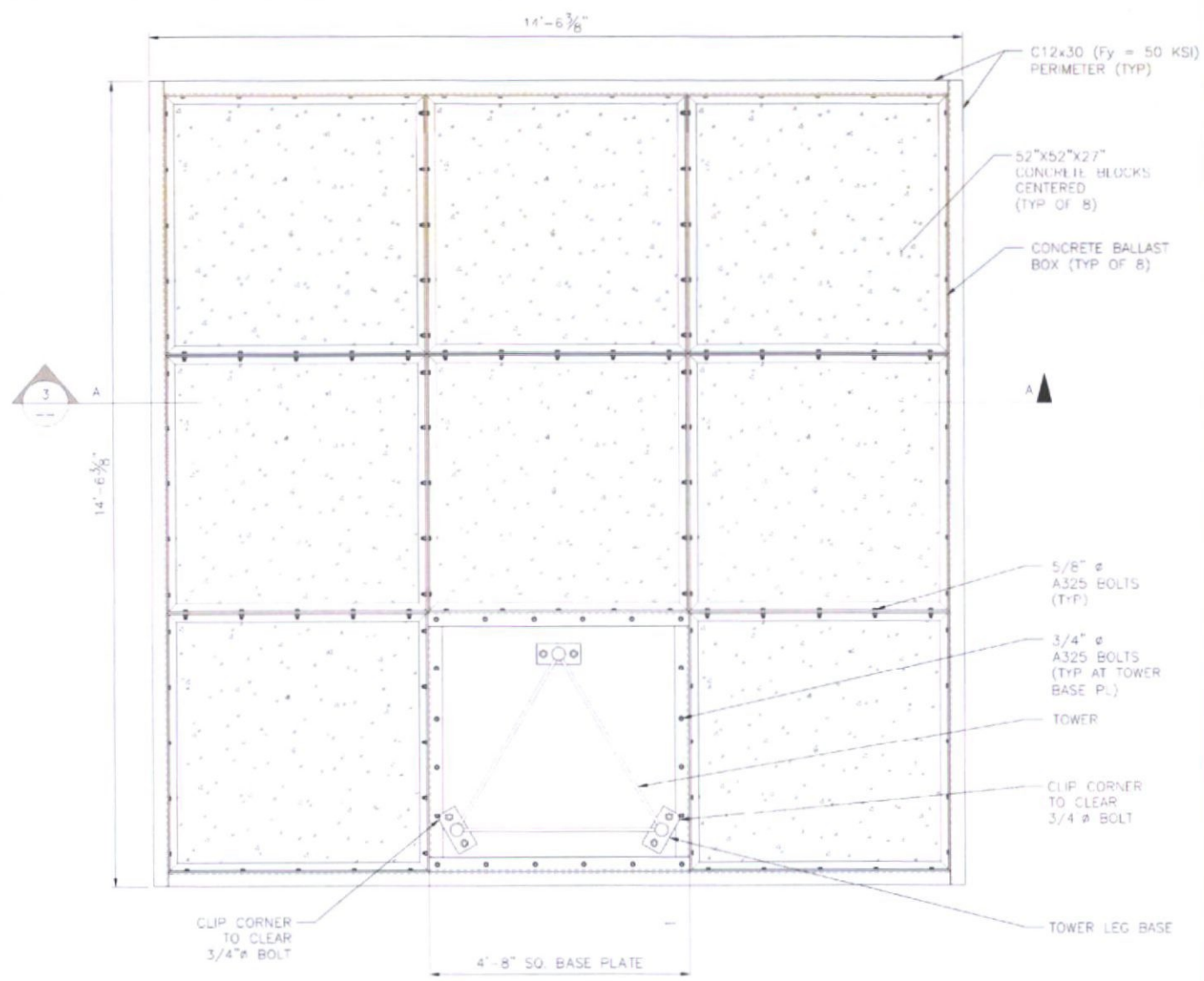
PROGRESS LOG

3	10/21/16	HEAVY BASE SECTION	ASH
2	10/22/13	CMI LOGO	RM
1	10/14/13	Client Changes	MC
0	8/28/13	ISSUED TO CLIENT	JH

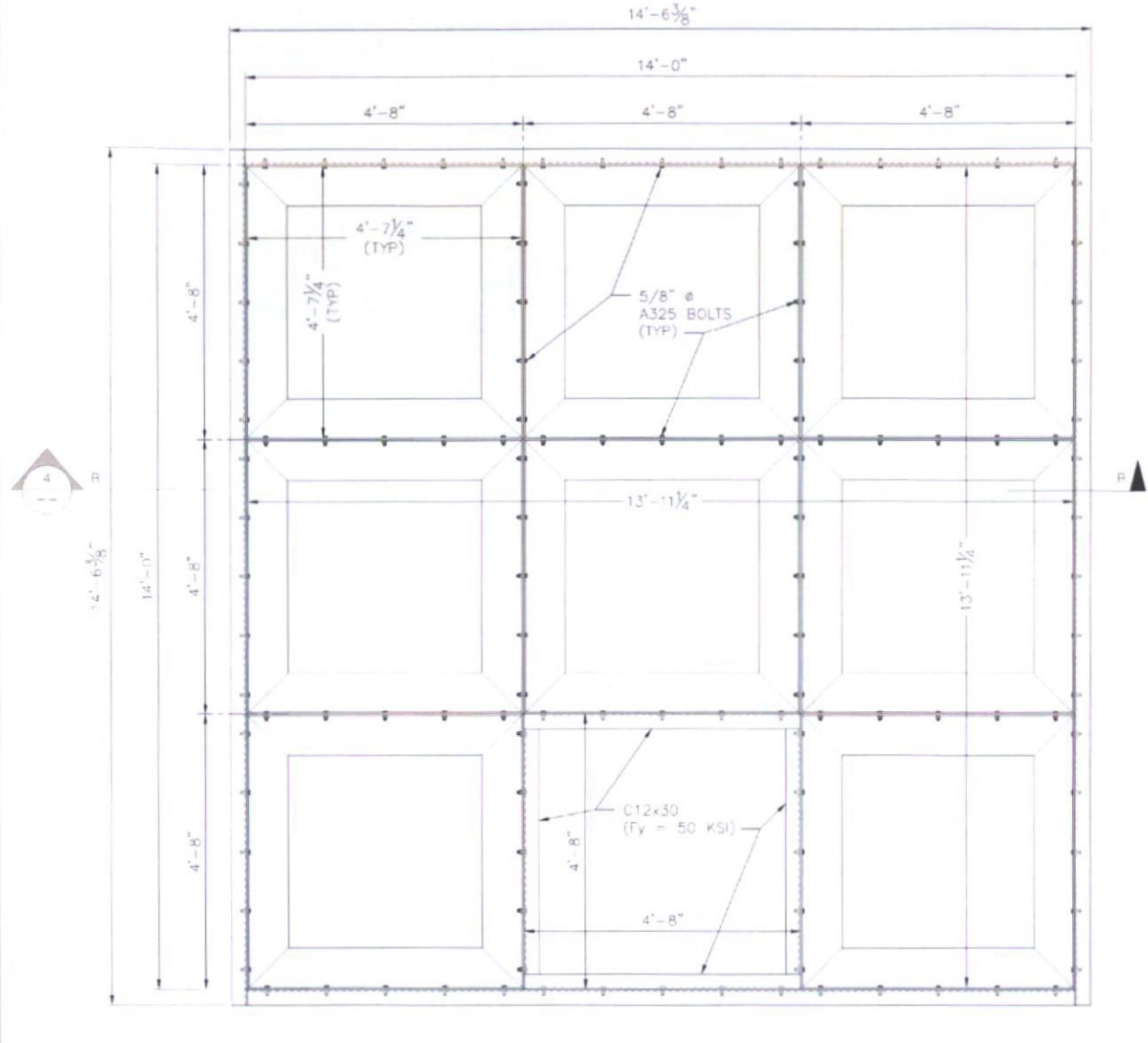
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S1 3

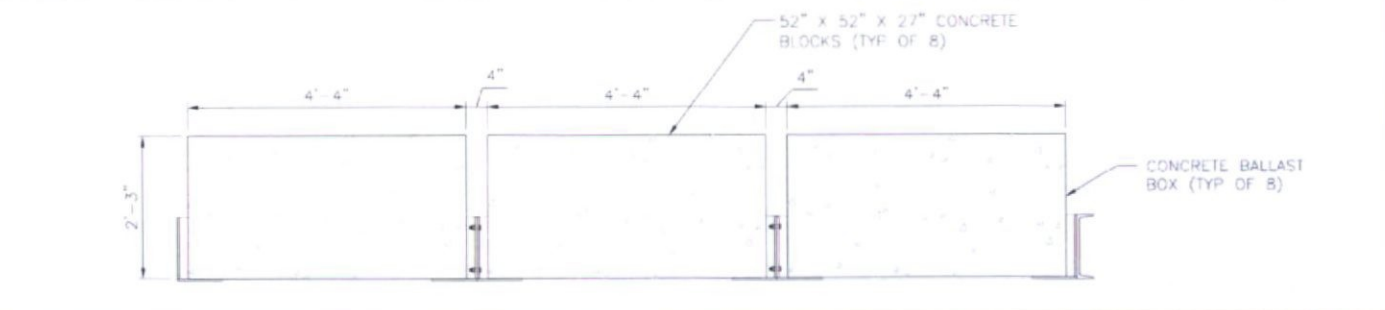
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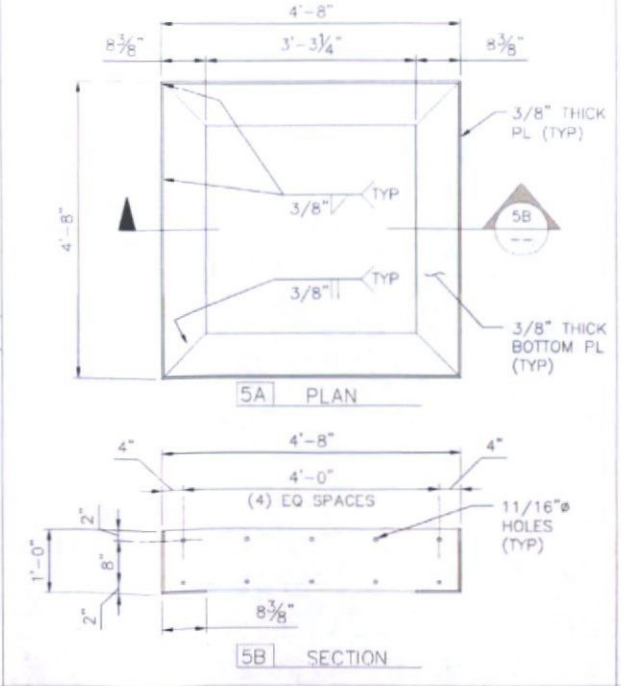
1 ASSEMBLED FOUNDATION PLAN



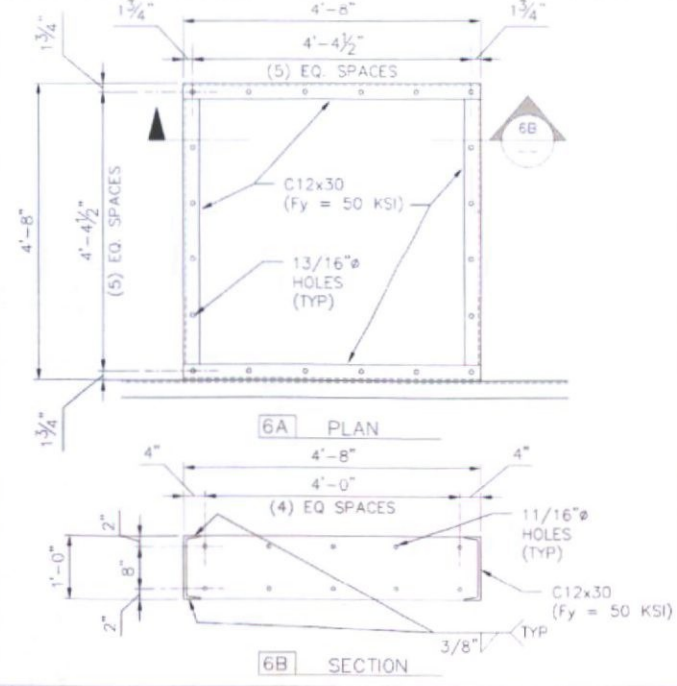
2 FOUNDATION FRAMING PLAN



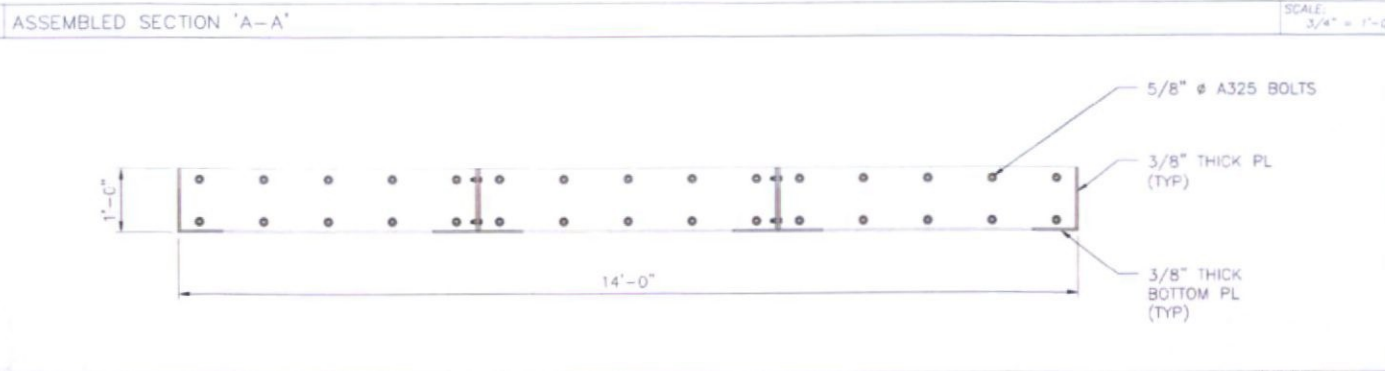
3 ASSEMBLED SECTION 'A-A'



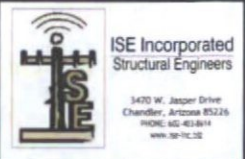
5 TYPICAL BALLAST BOX



6 TOWER BASE FOUNDATION BOX



4 BALLAST BOX ASSEMBLED SECTION 'B-B'



ISE JOB #: 11036

**MODULAR SELF-SUPPORT TOWER & FOUNDATION
80' COMMUNICATIONS STRUCTURE W/ HEAVY BASE
TOWER BALLAST FOUNDATION ASSEMBLY DETAILS**



PROGRESS LOG		
3	10/21/16	HEAVY BASE SECTION
2	10/22/13	OMI LOGO
1	10/14/13	Client Changes
0	9/09/13	ISSUED TO CLIENT

SHEET NUMBER	PROGRESS
S2	3

DRAWING DATE
October 21, 2016