



Original
WSUP 19-0053

April 10, 2019

Washoe County
Planning and Development Division
1001 E. Ninth Street
Reno, NV 89512
Attn: Jacob Parker

RE: Application for Special Use Permit and Director's Modification – Vya, NV 89000A Dugway Road, Gerlach, NV 89413

Please find attached a Special Use Permit and Director's Modification submittal applications for a new Commnet Wireless telecommunications facility located at the above referenced location. The submittal contains the following documents.

This application is for the April 15, 2109 submittal.

1. Filing Fee Check
2. Development Application
3. Owner's Affidavit
4. Project Support Statement
5. Director's Modification Application and Memorandum
5. Site Plans
6. Photosimulations
7. Coverage Maps
8. Radio Frequency Statement
9. Treasurer Statement
10. Site Photos
11. Flash Drive containing Application materials

If you have any questions or need additional materials, I can be reached at (314) 640-5182.

Sincerely,

A handwritten signature in blue ink, appearing to read "Julie Krekeler", is written over a circular blue stamp. The stamp is partially obscured by the signature and the text below it.

Julie Krekeler
General Manager

Attachments



April 10, 2019

Washoe County
Planning and Development Division
1001 E. Ninth Street
Reno, NV 89512
Attn: Jacob Parker

RE: Application for Special Use Permit and Director's Modification – Vya, NV 89000A Dugway Road, Gerlach, NV 89413

On behalf of Commnet of Nevada, LLC (dba Commnet Wireless), I am submitting a Special Use Permit and Director's Modification submittal application for a new telecommunications facility located at the above referenced location on April 10, 2109 prior to the April 15 submittal date. Please accept this waiver for the submittal time frames and the 3 day completeness check.

If you have any questions or need additional materials, I can be reached at (314) 640-5182.

Sincerely,

A handwritten signature in blue ink, appearing to read "Julie Krekeler", is written over the typed name and title.

Julie Krekeler
General Manager


Memorandum

To: Washoe County, NV
CC: Commnet of Nevada, LLC
From: Julie M. Hall, Senior RF Engineer, Centerline Solutions
Date: 03/27/19
Re: RF Emissions Analysis of Proposed Facility-Vya, NV

Commnet of Nevada is proposing to install a wireless telecommunications facility at Vya, NV, in Washoe County, at the following coordinates: 41° 35' 30.76" N, 119° 52' 47.15" W. The proposed installation was evaluated for RF Emissions compliance. The computations, analysis, and conclusions were based on applicable FCC guidelines and regulations for maximum permissible exposure to humans consistent with FCC OET Bulletin 65. At the time of installation, this facility will be transmitting at less than 2% of the applicable RF Emissions limits, thus the facility will be in compliance with applicable FCC regulations for RF Emissions. In addition, the analysis was completed with both existing capacity and future capacity, to insure compliance as the site grows in capacity.

Re-evaluation of the site for compliance would happen if other carriers locate at the facility, if the site grows beyond the capacity that the initial evaluation was completed for, or antennas at the site are changed or added to.

I certify that the analysis is correct to the best of my knowledge, and all calculations, assumptions and conclusions are based on generally acceptable engineering practices.



Julie M. Hall
Senior RF Engineer
Centerline Solutions

Property Owner Affidavit

Applicant Name: Commnet of Nevada, LLC

The receipt of this application at the time of submittal does not guarantee the application complies with all requirements of the Washoe County Development Code, the Washoe County Master Plan or the applicable area plan, the applicable regulatory zoning, or that the application is deemed complete and will be processed.

STATE OF NEVADA)
)
COUNTY OF WASHOE)

I, CRAIG R. DRAKE
(please print name)

being duly sworn, depose and say that I am the owner* of the property or properties involved in this application as listed below and that the foregoing statements and answers herein contained and the information herewith submitted are in all respects complete, true, and correct to the best of my knowledge and belief. I understand that no assurance or guarantee can be given by members of Planning and Building.

(A separate Affidavit must be provided by each property owner named in the title report.)

Assessor Parcel Number(s): 061-010-49

Printed Name CRAIG R. DRAKE

Signed Craig R. Drake

Address 708 W. 12th St.

Alturas, CA 96101

Subscribed and sworn to before me this _____ day of _____, _____.

(Notary Stamp)

see att. Just
Notary Public in and for said county and state

My commission expires: _____

*Owner refers to the following: (Please mark appropriate box.)

- Owner
- Corporate Officer/Partner (Provide copy of record document indicating authority to sign.)
- Power of Attorney (Provide copy of Power of Attorney.)
- Owner Agent (Provide notarized letter from property owner giving legal authority to agent.)
- Property Agent (Provide copy of record document indicating authority to sign.)
- Letter from Government Agency with Stewardship

CALIFORNIA JURAT WITH AFFIANT STATEMENT

GOVERNMENT CODE § 8202

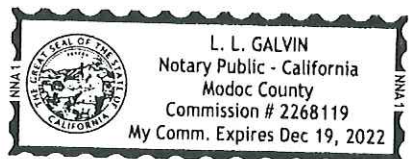
- See Attached Document (Notary to cross out lines 1-6 below)
- See Statement Below (Lines 1-6 to be completed only by document signer[s], *not* Notary)

Signature of Document Signer No. 1 Signature of Document Signer No. 2 (if any)

A notary public or other officer completing this certificate verifies only the identity of the individual who signed the document to which this certificate is attached, and not the truthfulness, accuracy, or validity of that document.

State of California
 County of Modoc

Subscribed and sworn to (or affirmed) before me
 on this 4 day of April, 2019,
 by Date Month Year



(1) Craig R. Drake
 (and (2) _____),
 Name(s) of Signer(s)

proved to me on the basis of satisfactory evidence to be the person(s) who appeared before me.

Signature [Handwritten Signature]
 Signature of Notary Public

Seal
 Place Notary Seal Above

OPTIONAL

Though this section is optional, completing this information can deter alteration of the document or fraudulent reattachment of this form to an unintended document.

Description of Attached Document

Title or Type of Document: _____ Document Date: _____
 Number of Pages: _____ Signer(s) Other Than Named Above: _____

Washoe County Development Application

Your entire application is a public record. If you have a concern about releasing personal information, please contact Planning and Building staff at 775.328.6100.

Project Information		Staff Assigned Case No.: _____	
Project Name: Commnet Wireless - Vya, NV			
Project Description: Commnet Wireless proposes the construction of a new unmanned wireless communication facility serving the Vya and surrounding area.			
Project Address: Washoe County E911 Assigned address: 89000A Dugway Road, Gerlach, NV 89413			
Project Area (acres or square feet): 7,469 sf lease area along with access and utility easements			
Project Location (with point of reference to major cross streets AND area locator): From Vya, NV, head north on CR 34 N (1.4 miles) continue straight onto Dugway Road (1.5) miles. Turn left onto unnamed dirt road to site.			
Assessor's Parcel No.(s):	Parcel Acreage:	Assessor's Parcel No.(s):	Parcel Acreage:
061-010-49	773.890015 acres		
Indicate any previous Washoe County approvals associated with this application: Case No.(s). NA			
Applicant Information (attach additional sheets if necessary)			
Property Owner:		Professional Consultant:	
Name: United States of America - BLM		Name: CIS Communications, LLC	
Address: 2550 Riverside Drive		Address: 749 Old Ballas Road	
Susanville, CA	Zip: 96130	Creve Coeur, MO	Zip: 63141
Phone: (530) 252-5321	Fax:	Phone: (314) 569-2275	Fax:
Email: dryan@blm.gov		Email: julie@ciscomm.com	
Cell: (530) 252-5321	Other:	Cell: (314) 640-5182	Other:
Contact Person: Daniel Ryan - Realty Specialist		Contact Person: Julie Krekeler - General Manager	
Applicant/Developer:		Other Persons to be Contacted:	
Name: Commnet of Nevada, LLC (dba Commnet Wireless)		Name:	
Address: 1562 North Park Street		Address:	
Castle Rock, CO	Zip: 80109		Zip:
Phone: (720) 733-7854	Fax:	Phone:	Fax:
Email: cphillips@atni.com		Email:	
Cell: (720) 733-7854	Other:	Cell:	Other:
Contact Person: Cindy Phillips - Director of Real Estate/Regulatory		Contact Person:	
For Office Use Only			
Date Received:	Initial:	Planning Area:	
County Commission District:		Master Plan Designation(s):	
CAB(s):		Regulatory Zoning(s):	

Special Use Permit Application Supplemental Information

(All required information may be separately attached)

1. What is the project being requested?

Commnet Wireless' proposed installation of a new unmanned telecommunications facility consisting of a 150' monopole tower with antennas/dishes, equipment shelter, outdoor generator and LP tank.

2. Provide a site plan with all existing and proposed structures (e.g. new structures, roadway improvements, utilities, sanitation, water supply, drainage, parking, signs, etc.)

Refer to construction drawings attached.

3. What is the intended phasing schedule for the construction and completion of the project?

One phase - Construction would take between one and two months.

4. What physical characteristics of your location and/or premises are especially suited to deal with the impacts and the intensity of your proposed use?

Location is needed from an RF standpoint. Location is ideal from an impact standpoint as there is minimal to no visibility from any existing populated areas.

5. What are the anticipated beneficial aspects or affects your project will have on adjacent properties and the community?

Improved wireless coverage as well as wireless broadband coverage for the First Net emergency responders.

6. What are the anticipated negative impacts or affect your project will have on adjacent properties? How will you mitigate these impacts?

There are no negative impacts on adjacent properties or communities. Project is located in remote rural area.

7. Provide specific information on landscaping, parking, type of signs and lighting, and all other code requirements pertinent to the type of use being purposed. Show and indicate these requirements on submitted drawings with the application.

No landscaping, parking, or lighting proposed. All required signage to be attached to shelter door/fence. Please refer to Project Support Statement for explanations.

8. Are there any restrictive covenants, recorded conditions, or deed restrictions (CC&Rs) that apply to the area subject to the special use permit request? (If so, please attach a copy.)

<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
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9. Utilities:

a. Sewer Service	NA
b. Electrical Service	Surprise Valley Electrification Corp.
c. Telephone Service	NA
d. LPG or Natural Gas Service	NA
e. Solid Waste Disposal Service	NA
f. Cable Television Service	NA
g. Water Service	NA

For most uses, Washoe County Code, Chapter 110, Article 422, Water and Sewer Resource Requirements, requires the dedication of water rights to Washoe County. Please indicate the type and quantity of water rights you have available should dedication be required.

h. Permit #		acre-feet per year	
i. Certificate #		acre-feet per year	
j. Surface Claim #		acre-feet per year	
k. Other #		acre-feet per year	

Title of those rights (as filed with the State Engineer in the Division of Water Resources of the Department of Conservation and Natural Resources).

Not applicable.

10. Community Services (provided and nearest facility):

a. Fire Station	Washoe Rural - Station T40
b. Health Care Facility	Nevada Health Center, Inc., Gerlach, NV
c. Elementary School	Gerlach K-12
d. Middle School	Gerlach K-12
e. High School	Gerlach K-12
f. Parks	Gerlach Community Park
g. Library	Gerlach Community Library
h. Citifare Bus Stop	NA

Account Detail

[Back to Account Detail](#)

[Change of Address](#)

[Print this Page](#)

CollectionCart			
Collection Cart	Items	Total	
Collection Cart	0	\$0.00	Checkout View

Pay Online

No payment due for this account.

Washoe County Parcel Information		
Parcel ID	Status	Last Update
06101049	Active	4/4/2019 2:07:19 AM
Current Owner: UNITED STATES OF AMERICA		SITUS: 0 UNSPECIFIED WASHOE COUNTY NV
NONE RENO, NV 00000		
Taxing District 9000	Geo CD:	
Legal Description		
Township 42 Section Lot Block Range 19 SubdivisionName _UNSPECIFIED		

Tax Bill (Click on desired tax year for due dates and further details)					
Tax Year	Net Tax	Total Paid	Penalty/Fees	Interest	Balance Due
2018	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
2017	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
2016	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
2015	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
2014	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00
Total					\$0.00

Disclaimer


- ALERTS:** If your real property taxes are delinquent, the search results displayed may not reflect the correct amount owing. Please contact our office for the current amount due.
- For your convenience, online payment is available on this site. E-check payments are accepted without a fee. However, a service fee does apply for online credit card payments. See Payment Information for details.


Pay By Check


Please make checks payable to:
WASHOE COUNTY TREASURER


Mailing Address:
P.O. Box 30039
Reno, NV 89520-3039

Overnight Address:
1001 E. Ninth St., Ste D140
Reno, NV 89512-2845

 **Payment Information**

 **Special Assessment District**

 **Installment Date Information**

 **Assessment Information**

COMMNET WIRELESS PROJECT SUPPORT STATEMENT

Project Name: Vya, NV
Project Address: 89000A Dugway Road, Vya, NV 89413
Project APN: 061-010-49

Introduction

Commnet Wireless (Commnet) focuses on connecting rural America with affordable, carrier grade communications networks to improve safety and quality of life, and to promote economic development. The areas of focus are predominately small communities, state and national parks, seasonal areas, and the roadways that connect these areas to mainstream America. Commnet is seeking to improve cellular coverage within Vya, NV, as well as Hwy 34 north of Vya for approximately 12 miles. In addition, this site is needed to cover Hwy 8, west of the intersection of Hwy 8A/34, for approximately 7 miles, and Hwy 34 south of Vya for approximately 14 miles. Furthermore, this site will be utilized for the FirstNet nationwide emergency broadband network dedicated to first responders.

Location

Commnet proposes the construction of a new wireless communications facility that consists of a 150' monopole located at Dugway Road in Vya, Nevada. The property is zoned General Rural (GR) and is owned by the United States of America and is managed by the Bureau of Land Management. The adjacent parcels are also owned by the United States of America as well as private landowners. The nearest residentially zoned property of medium density suburban residential development, is located mainly on the outskirts of the town of Gerlach, Nevada, which is approximately 70 miles away from the proposed facility.

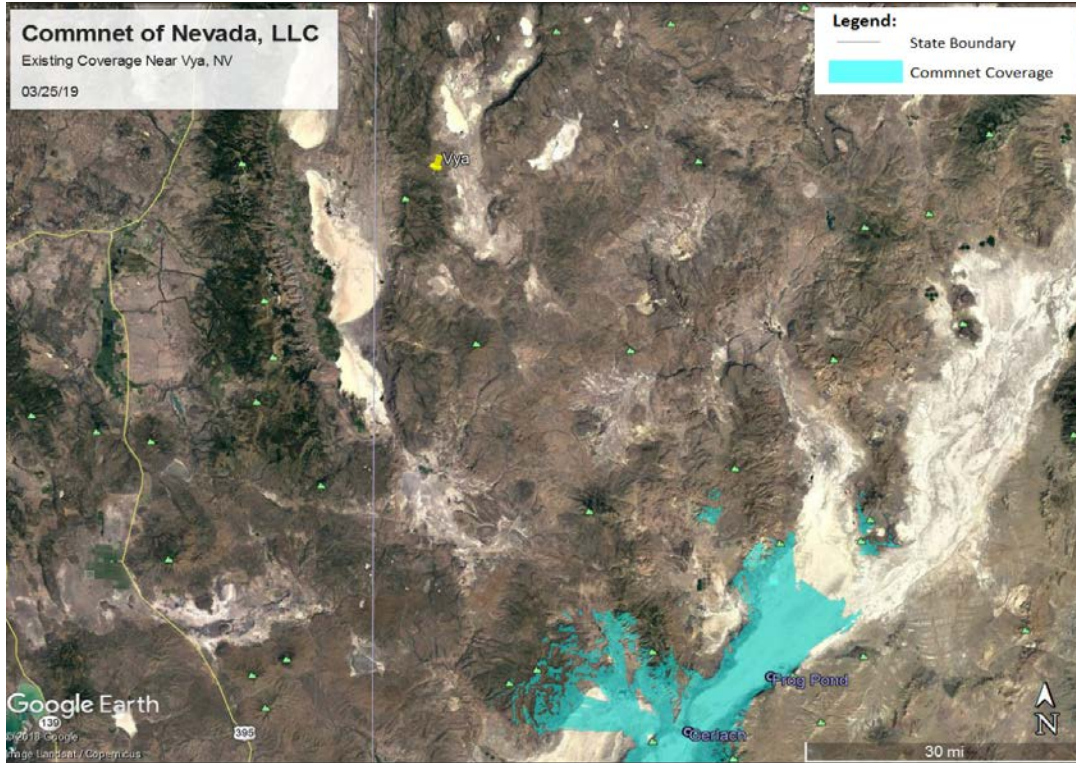
Project Description/Design

Commnet will be adding (6) antennas, (6) RRU's, (1) surge suppressor, (1) Fiber, (2) DC power lines, (2) microwave dishes along with (4) 1/2" coax lines on the tower. An outdoor shelter along with a generator and propane tank will be situated within a fenced 77' x 97' compound. This will be an unmanned facility providing cellular and First Net responders coverage 24 hours a day, 7 days a week.

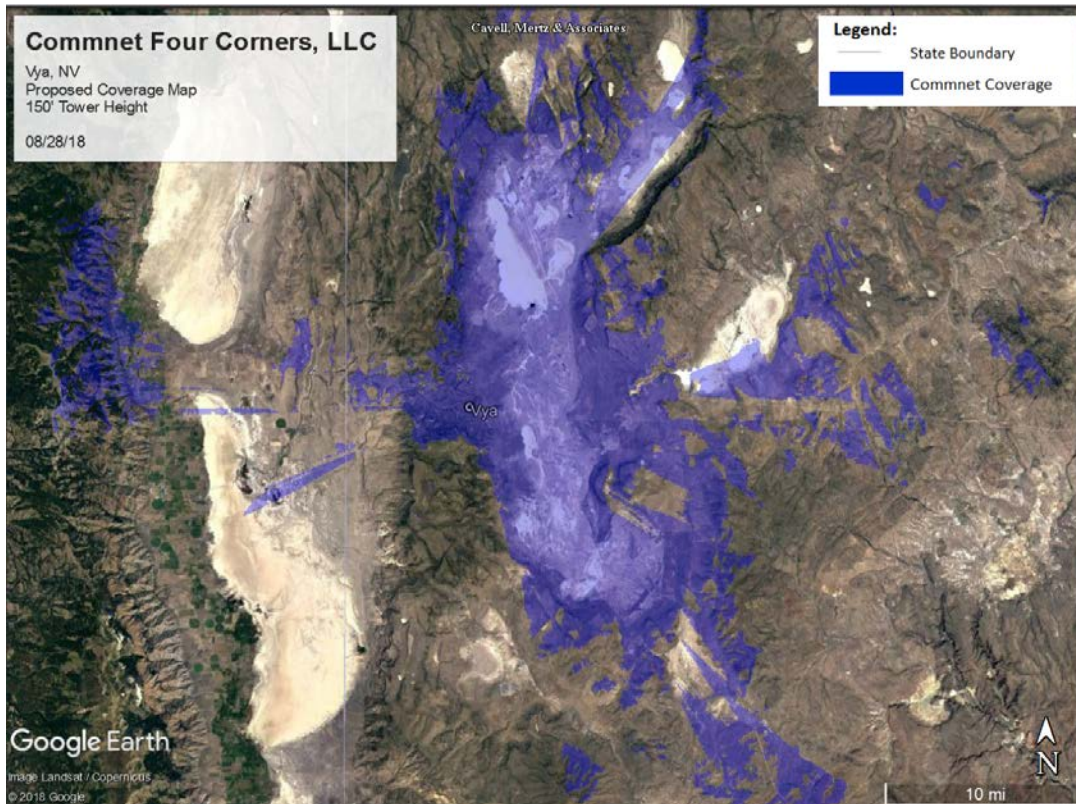
Public and Safety Benefits of Improved Wireless Service

Today, more people are relying on wireless phones as their main form of communication; whether it be in their homes, businesses, and/or vehicles. This site will allow Commnet's customers to maintain cellular coverage as shown in the coverage map referenced below. Additionally, this site is also being utilized for the FirstNet nationwide emergency broadband network dedicated to first responders (ie Fire, Police, EMT) for the ability to communicate on a single network for any public safety needs in this area.

Existing Coverage



Coverage with Proposed Tower



Aesthetic Impacts

Commnet proposes to install a 150' monopole. The proposed height was required due to the surrounding topography and meets the County's requirements for facilities in this zoning code. The facility will not have any negative impacts on this project or adjacent properties in the community as there is currently minimal visibility of the existing facilities from public roadways.



Alternative Site Analysis

When searching for any new communication site location, Commnet's first goal is to try and secure space on an existing tower or tall structure at the height required. With this philosophy in mind, Commnet first evaluated the collocation opportunities in the search area that offered the height, ground space, access and utilities and other needs required for their system. Commnet's initial location was located at Fortynine Mountain. It was determined there were three (3) individual tower sites. The possibility of using any of the existing towers was ruled out due to an unwilling property owner.



In order to meet the required coverage objective, Commnet concluded that the construction of a new facility would be required. Commnet and the BLM worked together to layout an approved location for the proposed facility.

Below is a detailed explanation of why each existing facility at Fortynine Mountain would not be a viable collocation candidate.

1. Bureau of Land Management Tower (Option #1)– Site is located on BLM lands. The BLM stated that they cannot permit any new users at this location as access easements cross private lands and the property owner will not allow additional users. Commnet left multiple messages for the property owner without receiving any responses.
2. Bureau of Land Management Tower (Option #2)– Site is located on BLM lands . The BLM stated that they cannot permit any new users at this location as access easements cross private lands and the property owner will not allow additional users. Commnet left multiple messages for the property owner without receiving any responses.

3. Los Angeles Department of Water and Power (Option #3)– This site is located near the BLM tower (option #2); however, it is placed on the unwilling property owner’s parcel. Per the BLM, the property owner will not allow new users access on his property. Aside from the unwilling property owner, Commnet has tried to collocate on other LADWP towers, with no response.

Statement of Commitment to Allow Collocation

In addition to Commnet’s antenna loadings as proposed, this tower is also structurally designed to accommodate additional communication collocators.

Lighting and Signage

Unless required by the Federal Aviation Administration (FAA), no lighting is proposed at this facility. All required FCC and other regulatory notification signage will be attached to the shelter door and/or fence.

Access/Utilities/Parking

Access to the facility is by way of Dugway Road which is located off of County Road 8A, approximately 70+ miles northwest of Gerlach. No road improvements are planned as Commnet will utilize the existing dirt road. Power for the facility will be routed underground in a conduit from a nearby transformer to a new meter bank located within the fenced the facility as depicted in the site plan. Batteries and generator/propane tank will serve as back-up power supply. Parking is not proposed as this is an unmanned facility that will be visited by a cell tech once or twice a month. There is sufficient parking at the facility location.

Maintenance and equipment back-up power.

The proposed wireless communications facility is located in a remote rural location. Because First Net responder emergency equipment will be located at this facility, it is imperative that the facility is operable in the event of a power outage or a natural disaster. In the event of an outage, the battery power will operate the system. If the power outage is for an extended period, and the batteries are no longer effective, the generator will automatically power the site. This multi-layer back-up system is important for communications sites to ensure continued operation. A cell technician will visit the site approximately once or twice a month to perform regular equipment maintenance.

Landscaping Variance

Commnet is not proposing landscaping at this facility and is seeking a variance to obtain relief from the landscaping requirements. The subject property is located in a remote rural location, has restricted access to water resources, and will have limited monthly technician visits. The site is located approximately 2,000 feet from the nearest public roadway and landscaping would not be visible to the general public. There is natural landscaping surrounding the proposed facility that shields the site to public visibility. Commnet is requesting the Board of Adjustments to specifically waive landscaping requirements for the above stated reasons.

Grading

Not applicable. Grading is not anticipated for this project.

Significant Hydrological Resources

The subject site is located in the High Desert planning area. Per section Section 110.418.05 (e), the provisions of this article do not apply for development in the High Desert planning area.

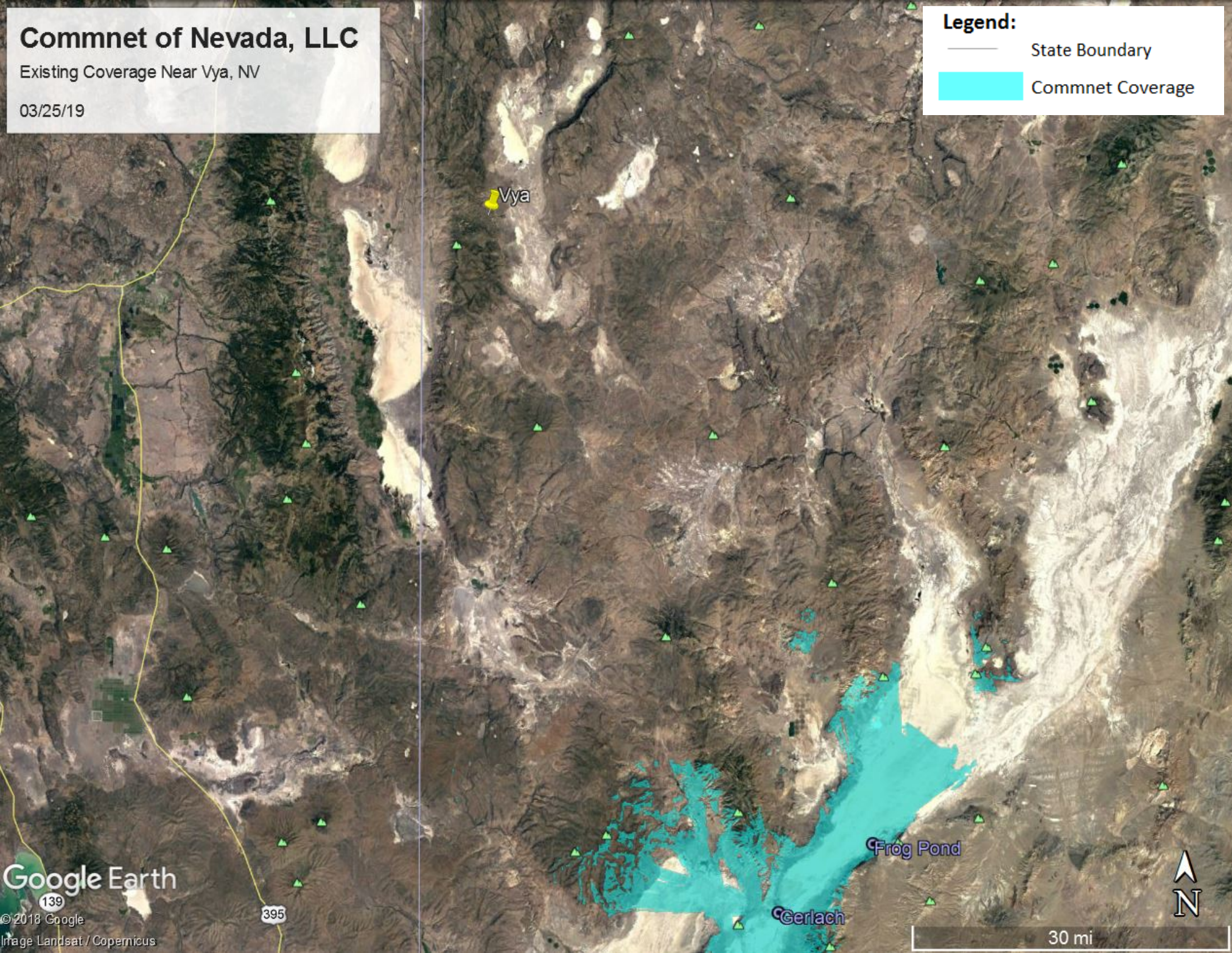
Commnet of Nevada, LLC

Existing Coverage Near Vya, NV

03/25/19

Legend:

- State Boundary
- Commnet Coverage



Google Earth

© 2018 Google
Image Landsat / Copernicus



30 mi

Commnet Four Corners, LLC

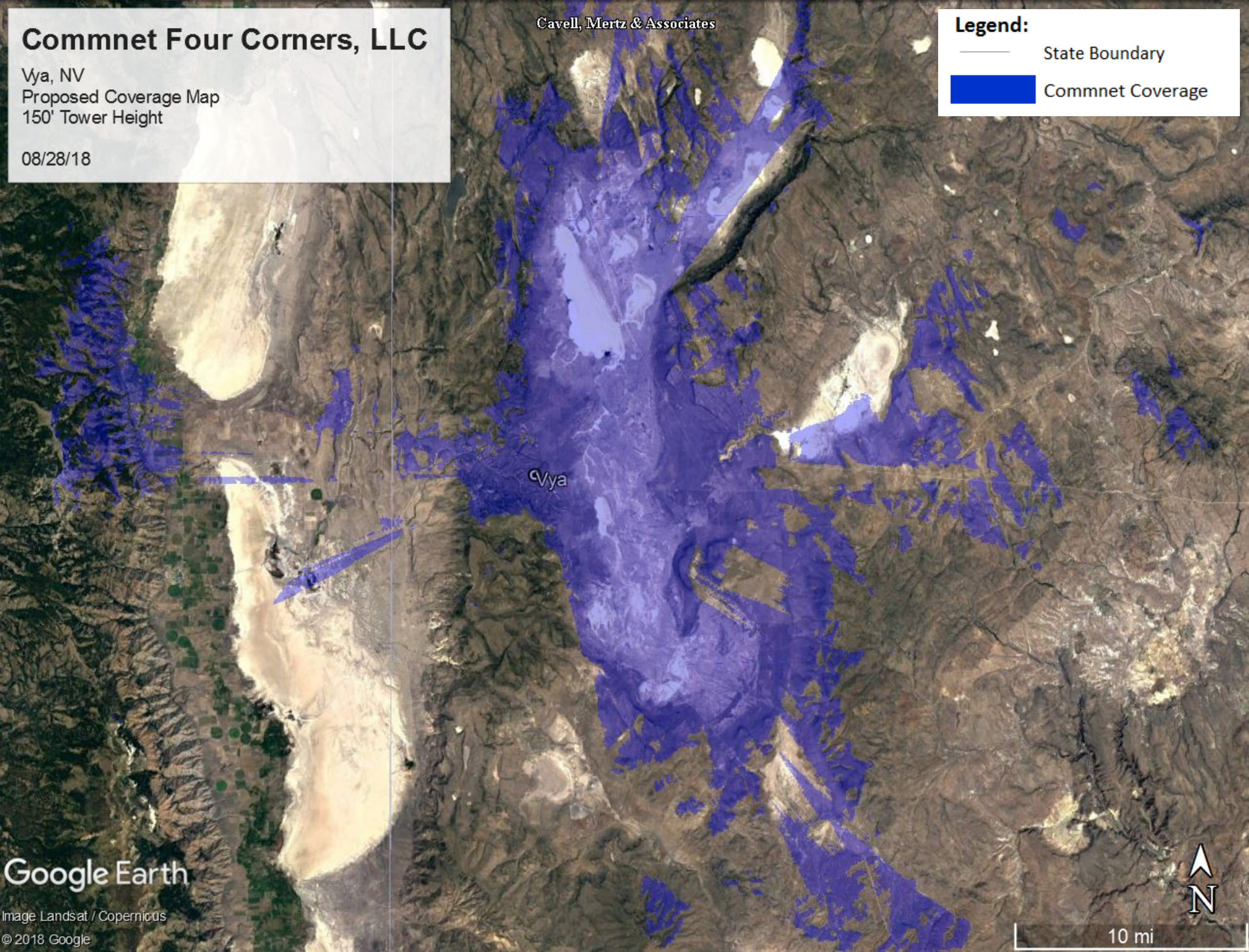
Vya, NV
Proposed Coverage Map
150' Tower Height

08/28/18

Cavell, Mertz & Associates

Legend:

- State Boundary
- Commnet Coverage



Google Earth

Image Landsat / Copernicus

© 2018 Google

10 mi

PROJECT INFORMATION

RAW LAND MONOPOLE

VYA, NEVADA

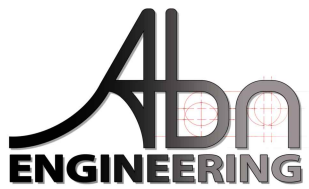
89000A DUGWAY RD
GERLACH, NV 89413

PROJECT OWNER



Commnet
Connecting Rural America

ENGINEER



LOCATION MAP



PROPOSED
MONOPOLE
LOCATION

VIEW FROM
SOUTH

PROJECT INFORMATION

RAW LAND MONOPOLE

VYA, NEVADA

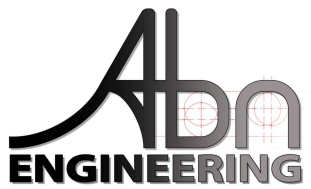
89000A DUGWAY RD
GERLACH, NV 89413

PROJECT OWNER



Commnet
Connecting Rural America

ENGINEER



Looking North Toward Proposed
Monopole Location (Before)



PROJECT INFORMATION

RAW LAND MONOPOLE

VYA, NEVADA

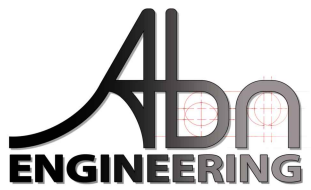
89000A DUGWAY RD
GERLACH, NV 89413

PROJECT OWNER



Commnet
Connecting Rural America

ENGINEER



Looking North Toward Proposed
Monopole Location (After)



PROJECT INFORMATION

RAW LAND MONOPOLE

VYA, NEVADA

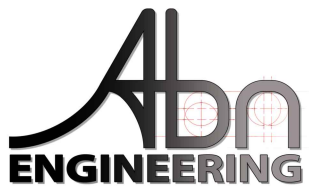
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GERLACH, NV 89413

PROJECT OWNER



Commnet
Connecting Rural America

ENGINEER



LOCATION MAP



PROJECT INFORMATION

RAW LAND MONOPOLE

VYA, NEVADA

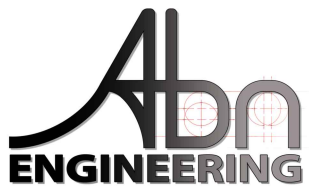
89000A DUGWAY RD
GERLACH, NV 89413

PROJECT OWNER



Commnet
Connecting Rural America

ENGINEER



Looking North East Toward
Monopole Location (Before)



PROJECT INFORMATION

RAW LAND MONOPOLE

VYA, NEVADA

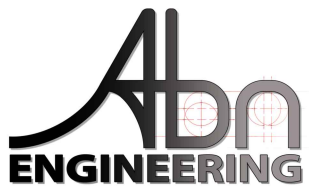
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Commnet
Connecting Rural America

ENGINEER



Looking North East Toward
Monopole Location (After)



PROJECT INFORMATION

RAW LAND MONOPOLE

VYA, NEVADA

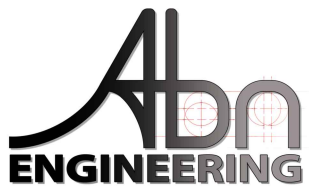
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PROJECT OWNER



Commnet
Connecting Rural America

ENGINEER



LOCATION MAP



PROJECT INFORMATION

RAW LAND MONOPOLE

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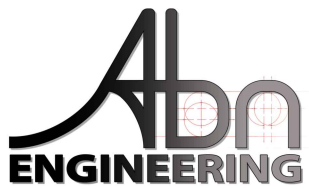
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Commnet
Connecting Rural America

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Looking East Toward Proposed
Monopole Location (Before)



PROJECT INFORMATION

RAW LAND MONOPOLE

VYA, NEVADA

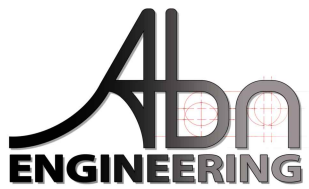
89000A DUGWAY RD
GERLACH, NV 89413

PROJECT OWNER



Commnet
Connecting Rural America

ENGINEER



Looking East Toward Proposed
Monopole Location (After)



Vya, NV Photos

*Note that all photos may have not been attained due to exceptional conditions prohibiting travel to the site

Vya Pre CX East looking West



Vya Pre CX Tower Center looking West



Vya Pre CX Tower Center looking North



Vya Pre CX West looking East



Community Services Department
Planning and Building
DIRECTOR'S MODIFICATION OF
PARKING/LANDSCAPING
MINOR DEVIATION
STANDARDS APPLICATION



Community Services Department
Planning and Building
1001 E. Ninth St., Bldg. A
Reno, NV 89512-2845

Telephone: 775.328.6100

Washoe County Development Application

Your entire application is a public record. If you have a concern about releasing personal information, please contact Planning and Building staff at 775.328.6100.

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Assessor's Parcel No.(s):	Parcel Acreage:	Assessor's Parcel No.(s):	Parcel Acreage:
061-010-49	773.890015 acres		
Indicate any previous Washoe County approvals associated with this application: Case No.(s). NA			
Applicant Information (attach additional sheets if necessary)			
Property Owner:		Professional Consultant:	
Name: United States of America - BLM		Name: CIS Communications, LLC	
Address: 2550 Riverside Drive		Address: 749 Old Ballas Road	
Susanville, CA	Zip: 96130	Creve Coeur, MO	Zip: 63141
Phone: (530) 252-5321	Fax:	Phone: (314) 569-2275	Fax:
Email: dryan@blm.gov		Email: julie@ciscomm.com	
Cell: (530) 252-5321	Other:	Cell: (314) 640-5182	Other:
Contact Person: Daniel Ryan - Realty Specialist		Contact Person: Julie Krekeler - General Manager	
Applicant/Developer:		Other Persons to be Contacted:	
Name: Commnet of Nevada, LLC (dba Commnet Wireless)		Name:	
Address: 1562 North Park Street		Address:	
Castle Rock, CO	Zip: 80109		Zip:
Phone: (720) 733-7854	Fax:	Phone:	Fax:
Email: cphillips@atni.com		Email:	
Cell: (720) 733-7854	Other:	Cell:	Other:
Contact Person: Cindy Phillips - Director of Real Estate/Regulatory		Contact Person:	
For Office Use Only			
Date Received:	Initial:	Planning Area:	
County Commission District:		Master Plan Designation(s):	
CAB(s):		Regulatory Zoning(s):	

Director's Modification of Standards Supplemental Information

(All required information may be separately attached)

1. What modification or deviation are you requesting? **Be specific.**

Parking Standards - Article 110.410.00
Landscaping Standards - Article 110.412.00
Noise and Lighting - Article 110.414.00
Minor deviation Standards - Section 110.804.35

2. Why is the modification or deviation necessary to the success of the project/development? **Be specific.** Are there any extenuating circumstances or physical conditions on the proposed project/development site?

Please refer to the attached Director's Memorandum for explanation

3. Are you proposing to mitigate the effect of the modification or reduction?

Please refer to the attached Director's Memorandum for explanation

4. What section of code are you requesting to modify or deviate? **Be specific.** List the code section and if there are specific requirements for the modification, provide detailed information. For deviation, provide the percentage of the deviation.

Parking Standards - Whole Section
Landscaping Standards - Whole Section
Noise and Lighting - Whole Section
Minor Deviation Standards - Maximum height allowed (150' monopole) as stated per Washoe County Planning Department

5. For Minor Deviation request; list what properties/parcels are affected by the deviation? Explain if there will be any impacts to the affected neighboring properties. (At a minimum, affected property owners are those owners of parcels that immediately abut the location of the proposed minor deviation.)

Please refer to the Director's Memorandum for list of adjoining parcels and impact explanation.

MEMORANDUM

To: Washoe County

CC: Commnet of Nevada, LLC (Commnet Wireless)

From: Julie Krekeler, Site Acquisition, CIS Communications, LLC

Date: April 10, 2019

Re: **DIRECTORS MODIFICATION REQUEST CLARIFICATION – Special Use Permit - APN: 061-010-49 (Vya, NV)**

Dear Washoe County,

The subject application is for a Special Use Permit for the construction of a telecommunications facility consisting of a 150' monopole, outdoor shelter, and a generator and propane tank within a 77' x 97' fenced compound situated in rural Vya, Nevada. The parcel is located on property owned by the United States of America and is managed by the Bureau of Land Management. The parcel consists of 773.89 acres.

Upon review of Washoe County's Development Code Section 110, Commnet Wireless is hereby requesting certain specific conditions to be considered for Director's Modification due to the following.

Article 110.410.00 Parking –Commnet Wireless would like to modify Section 110.410.00 to allow for the request to waive parking. Due to the unusual nature of the establishment and the remote rural location of this proposed unmanned facility that will be visited by a cell tech once or twice a month, the standards set forth in this section such as parking design and access width would be excessive and unreasonable for Commnet Wireless. The secured proposed facility is not for the general public access and there is ample space for the technician to park either outside or inside of the fenced lease area.

Article 110.412.00 Landscaping - Commnet Wireless would like to modify Section 110.412.00 to allow for the request to waive the whole section of landscaping. The subject site is located in a remote unimproved area. In addition to being remote, the site is located 2000+ feet from the nearest gravel county road or adjoining parcel where there will be minimal visibility. Because this remote location and it is an unmanned facility, Commnet Wireless' policy is to avoid any landscaping to conserve water as well as the need for routine landscape maintenance. Additionally, because of the vast size of the parcel (773 acres), it is unreasonable for Commnet Wireless to meet Washoe County's requirement of landscape coverage of a minimum twenty (20) percent of the total developed land area as well as landscaped buffers at least one (1) tree every twenty (20) linear feet of property frontage as outlined in Sections 110.412.40 (a) and (c).

Section 110.414.00 Noise and Lighting - Commnet Wireless would like to modify the Section 110.414.00 to allow for the request to waive the entire section of Noise and Lighting. The site will be powered from a nearby transformer to a new meter bank located within the fenced compound. There will be a generator installed at the site in the event of extended power outages. First Net responder equipment is proposed at this site. Per Section 110.414.20 (b) emergency equipment is exempt from this section.

Unless lighting is required by the FAA, no lighting is proposed at the unmanned facility. Commnet proposes Washoe County's current best practice of "dark-sky" standards. There will be lighting inside the shelter that is turned on only during a technician's site visit.

Section 110.804.35 Minor Deviations – Commnet Wireless is proposing a 150' monopole and is seeking approval for the height deviation per table 110.324.55.1 . As stated, this site is located in a remote area of northern Nevada where there is currently limited to no cellular service. This site will include First Net responder emergency equipment as well as multi users and due to the diverse topography and the remoteness of the area, the height is needed to overcome that terrain to obtain optimal coverage.

The following is a list of parcels that abut the subject property parcel. The closets parcels to the proposed facility, as indicated by an asterisk, are at a distance of 2,000 feet. The nearest residence is approximately one (1) mile away and this facility will not impose any negative impacts. The impact this proposed facility will have is a communication source that is vital to today's safety and quality of life.

061-010-02 – Zoned GR
*061-010-03 – Zoned GR
*061-010-04 – Zoned GR
061-010-05 – Zoned GR
061-010-07 – Zoned GR
* 061-010-55 – Zoned GR
061-260-08 – Zoned GR
061-260-09 – Zoned GR
061-260-03 – Zoned GR
061-260-02– Zoned GR
061-260-01– Zoned GR
061-050-46 – Zoned GR
061-050-30– Zoned GR

LEGAL DESCRIPTIONS

BEING A PORTION OF SECTION 5, TOWNSHIP 42 NORTH, RANGE 19 EAST, MDB&M., WASHOE COUNTY, NEVADA, DESCRIBED AS FOLLOWS:

***PARCEL A*(LEASE AREA)**

COMMENCING AT THE SOUTHWEST CORNER OF THE NORTHWEST QUARTER (NW1/4) OF SECTION 5, TOWNSHIP 42 NORTH, RANGE 19 EAST, M.D.B.&M.;

THENCE NORTH 77°40'28" EAST, 2441.54 FEET TO THE POINT OF BEGINNING;

THENCE SOUTH 89°49'37" EAST, 72.00 FEET TO A POINT HEREINAFTER REFERRED TO AS POINT 'A';

THENCE CONTINUING, SOUTH 89°49'37" EAST, 5.00 FEET;

THENCE NORTH 00°10'23" EAST, 97.00 FEET;

THENCE NORTH 89°49'37" WEST, 38.50 FEET TO A POINT HEREINAFTER REFERRED TO AS POINT 'B';

THENCE CONTINUING, NORTH 89°49'37" WEST, 38.50 FEET;

SOUTH 00°10'23" WEST, 97.00 FEET TO THE POINT OF BEGINNING.

CONTAINING 7,469 SQ.FT. MORE OR LESS.

***PARCEL B*(UTILITY EASEMENT)**

BEING A STRIP OF LAND 10.00 FEET IN WIDTH, LYING 5.00 FEET ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE:

BEGINNING AT THE AFOREMENTIONED POINT 'A';

THENCE SOUTH 12°50'26" EAST, 54.25 FEET TO THE POINT OF TERMINATION.

THE SIDELINES OF THIS STRIP OF LAND ARE TO BE LENGTHENED OR SHORTENED TO INTERSECT AT ALL ANGLE POINTS, AND TO BEGIN ON THE SOUTH LINE OF *PARCEL A*.

CONTAINING 542 SQ.FT. MORE OR LESS.

***PARCEL C*(ACCESS EASEMENT)**

BEING A STRIP OF LAND 12.00 FEET IN WIDTH, LYING 6.00 FEET ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE:

BEGINNING AT THE AFOREMENTIONED POINT 'B';

THENCE NORTH 00°00'00" EAST, 30.57 FEET;

THENCE NORTH 14°37'01" WEST, 54.43 FEET;

THENCE NORTH 25°42'37" WEST, 39.11 FEET;

THENCE NORTH 22°04'32" WEST, 32.34 FEET;

THENCE NORTH 13°24'41" WEST, 44.10 FEET;

THENCE NORTH 14°43'36" WEST, 57.25 FEET;

THENCE NORTH 24°09'51" WEST, 97.94 FEET;

THENCE NORTH 18°44'16" WEST, 85.71 FEET;

THENCE NORTH 39°03'24" WEST, 40.30 FEET TO THE POINT OF TERMINATION.

THE SIDELINES OF THIS STRIP OF LAND ARE TO BE LENGTHENED OR SHORTENED TO INTERSECT AT ALL ANGLE POINTS, AND TO BEGIN ON THE NORTH LINE OF *PARCEL A*.

CONTAINING 5,781 SQ.FT. MORE OR LESS.

PARENT PARCEL LEGAL DESCRIPTION

LYING WITHIN SECTION 5, TOWNSHIP 42 NORTH, RANGE 19 EAST, M.D.M., WASHOE COUNTY, NEVADA.

OWNERSHIP INFORMATION

OWNER = UNITED STATES OF AMERICA
CONTACT = N/A

ASSESSOR'S PARCEL NUMBER = 061-010-49
VESTING DOCUMENT = N/A

TITLE REPORT DATA AND EXCEPTIONS

NO TITLE REPORT PROVIDED.

BASIS OF BEARINGS

GRID NORTH BASED UPON THE NORTH AMERICAN DATUM OF 1983/94 (2011), NEVADA WEST ZONE (2703) COORDINATES PROVIDED BY OPUS SOLUTION; THE DISTANCES ARE BASED ON A GROUND SCALE FACTOR OF 1.0002506172 REFERENCED FROM A POINT NEAR THE PROJECT WITH A LATITUDE OF 41°35'30.19834" N AND A LONGITUDE OF 119°52'47.01529" W AND A NORTH AMERICAN VERTICAL DATUM OF 1988 HEIGHT OF 6167.50 FEET USING GEOID12A

PROPOSED TOWER COORDINATES

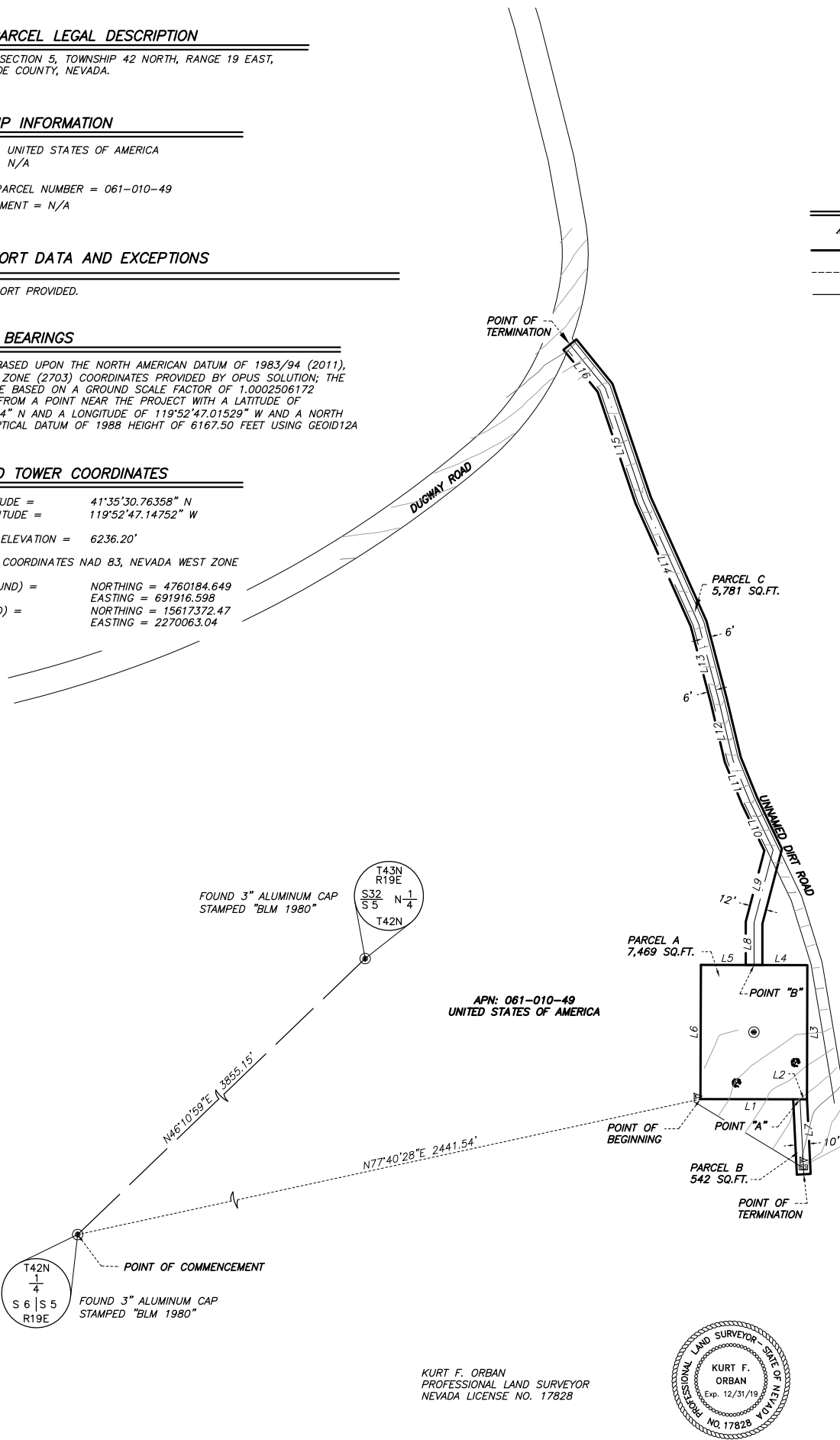
NAD 83 LATITUDE = 41°35'30.76358" N
LONGITUDE = 119°52'47.14752" W

SITE GROUND ELEVATION = 6236.20'

STATE PLANE COORDINATES NAD 83, NEVADA WEST ZONE

METERS (GROUND) = NORTHING = 4760184.649
EASTING = 691916.598

FEET (GROUND) = NORTHING = 15617372.47
EASTING = 2270063.04

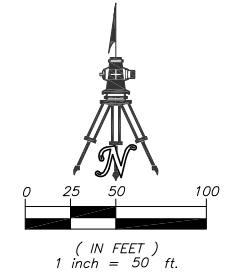


LINE TABLE

LINE	BEARING	DISTANCE
L1	N89°49'37"W	72.00'
L2	N89°49'37"W	5.00'
L3	S0°10'23"W	97.00'
L4	S89°49'37"E	38.50'
L5	S89°49'37"E	38.50'
L6	N0°10'23"E	97.00'
L7	S2°50'26"E	54.25'
L8	N0°00'00"E	30.57'
L9	N14°37'01"E	54.43'
L10	N25°42'37"W	39.11'
L11	N22°04'32"W	32.34'
L12	N13°24'41"W	44.10'
L13	N14°43'36"W	57.25'
L14	N24°09'51"W	97.94'
L15	N18°44'16"W	85.71'
L16	N39°03'24"W	40.30'

LEGEND

- APN ASSESSORS PARCEL NUMBER
- PROPOSED EASEMENT LINE
- EXISTING EASEMENT LINE
- SECTION LINE
- FOUND MONUMENTATION AS DESCRIBED
- E ELECTRIC PULL BOX
- M ELECTRIC MARKER



KURT F. ORBAN
PROFESSIONAL LAND SURVEYOR
NEVADA LICENSE NO. 17828



WALLACE MORRIS ORBAN SURVEYING, LLC.
LAND SURVEY CONSULTING
1250 LAMOLLE HIGHWAY, UNIT 628
ELKO, NEVADA 89801
PH: 775-753-3610 FX: 775-753-7078

DESCRIPTION:

REV: DATE:

COMMNET WIRELESS, LLC
VYA SITE, WASHOE COUNTY, NEVADA
061-010-49
TOPOGRAPHY MAP

DATE: 03/29/18
DRAFTER: KFO
FIELD: BH/CH
CHECKED: KFO
JOB NO. ECOM-18020
SHEET 1
OF 1 SHEETS

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GENERAL NOTES

THE ARCHITECTS/ENGINEERS HAVE MADE EVERY EFFORT AS SET FORTH IN THE CONSTRUCTION DRAWINGS, CONTRACT DOCUMENTS AND THE COMPLETE SCOPE OF WORK. CONTRACTORS BIDDING THE JOB ARE NEVERTHELESS CAUTIONED THAT MINOR OMISSIONS OR ERRORS IN THE DRAWINGS AND SPECIFICATIONS SHALL NOT EXCUSE SAID CONTRACTOR FROM COMPLETING THE PROJECT AND IMPROVEMENTS IN ACCORDANCE WITH THE INTENT OF THESE DOCUMENTS. THE BIDDER SHALL BEAR THE RESPONSIBILITY OF NOTIFYING (IN WRITING) THE ARCHITECT/ENGINEER OF ANY CONFLICTS, ERRORS OR OMISSIONS PRIOR TO THE SUBMISSION OF THE CONTRACTOR'S PROPOSAL. IN THE EVENT OF DISCREPANCIES THE CONTRACTOR SHALL PRICE THE MORE COSTLY OR EXTENSIVE WORK UNLESS OTHERWISE DIRECTED.

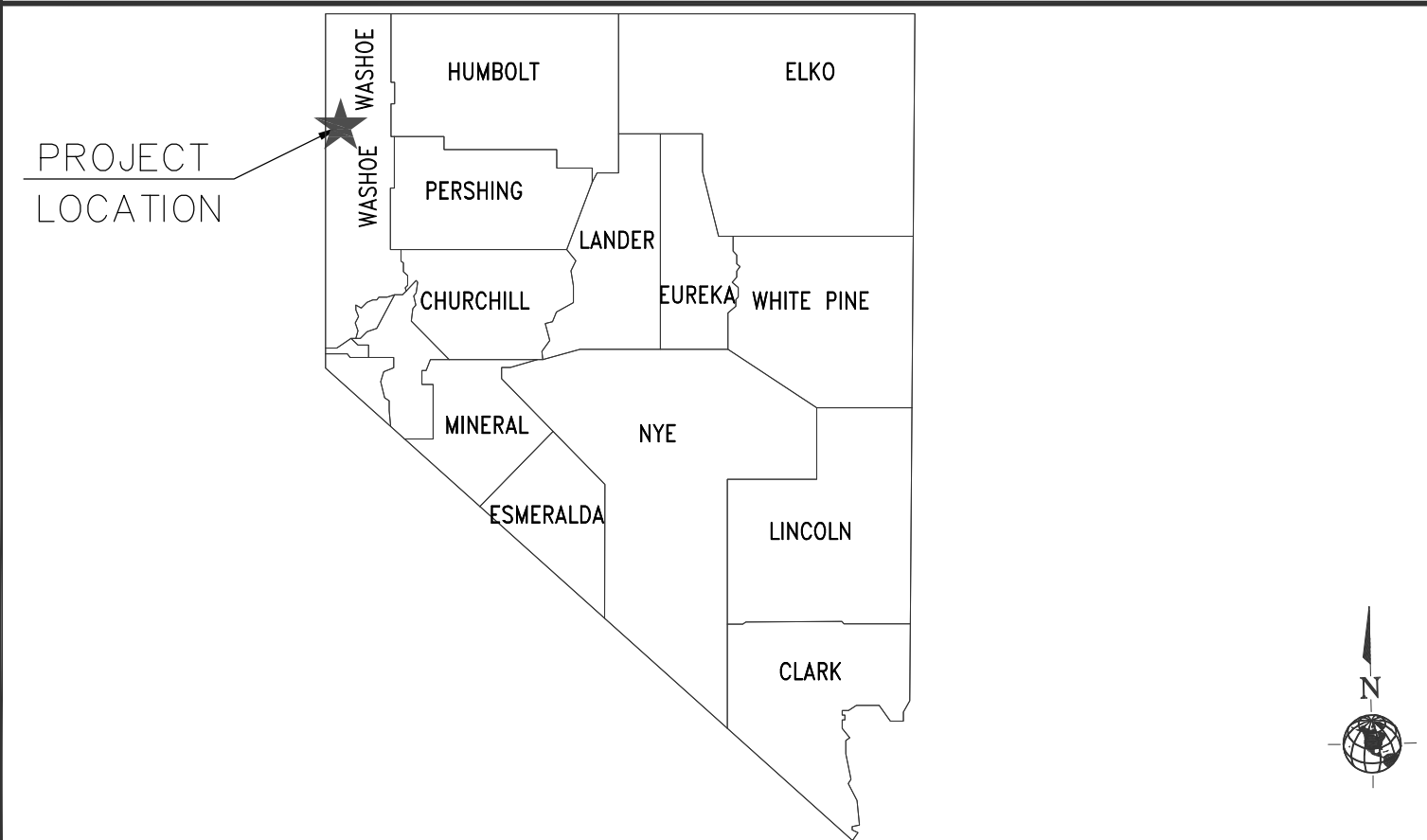
CODE COMPLIANCE

ALL WORK AND MATERIALS SHALL BE PERFORMED AND INSTALLED IN ACCORDANCE WITH THE CURRENT EDITIONS OF THE FOLLOWING CODES AS ADOPTED BY THE LOCAL GOVERNING AUTHORITIES. NOTHING IN THESE PLANS IS TO BE CONSTRUED TO PERMIT WORK NOT CONFORMING TO THESE CODES.

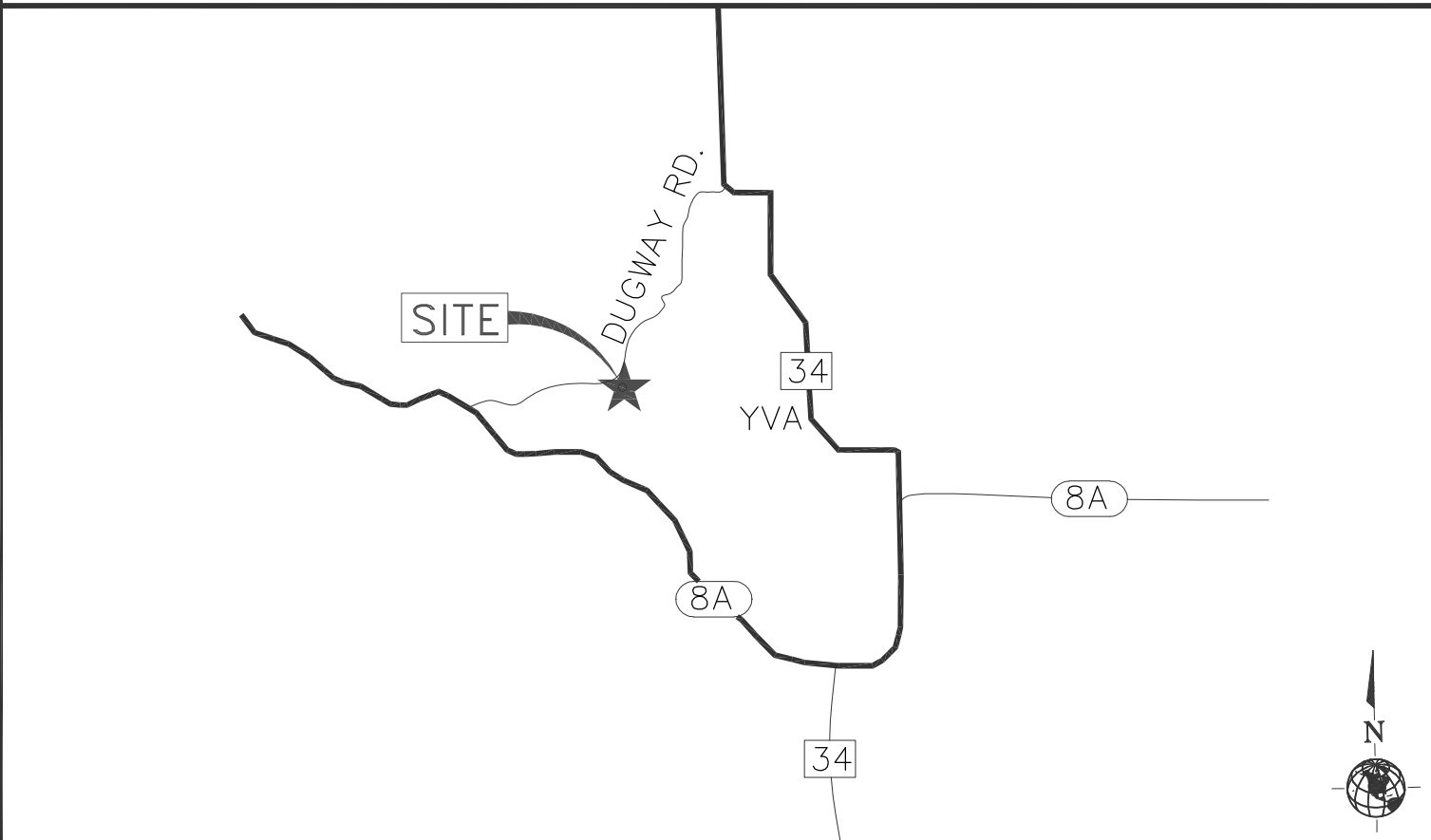
- 2012 INTERNATIONAL BUILDING CODE (IBC)
- 2012 INTERNATIONAL MECHANICAL CODE (IMC)
- 2012 INTERNATIONAL PLUMBING CODE (IPC)
- 2011 NATIONAL ELECTRICAL CODE (NEC)
- TIA/EIA-222-F STRUCTURAL STANDARDS FOR STEEL ANTENNA TOWERS AND ANTENNA SUPPORTING STRUCTURES
- LOCAL BUILDING CODE(S)
- CITY AND/OR COUNTY AMENDED

JURISDICTION: WASHOE COUNTY

STATE MAP



VICINITY MAP

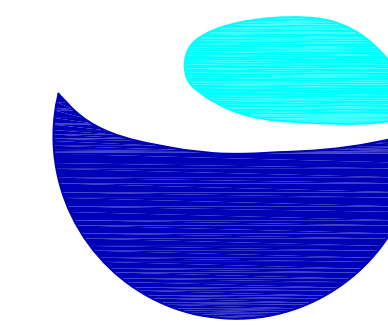


DRIVING DIRECTIONS

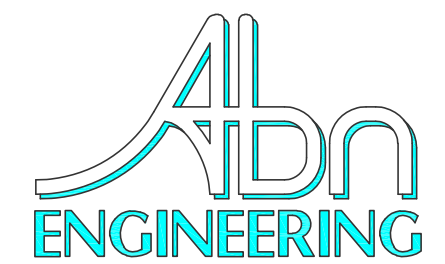
FROM VYA, NEVADA: HEAD NORTH ON COUNTY RD 34 N. (1.4 MILES) CONTINUE STRAIGHT ONTO DUGWAY RD. (1.5 MILES). TURN LEFT ONTO UNNAMED DIRT ROAD TO SITE.

SITE NAME:
VYA, NEVADA

PROJECT:
RAW LAND MONOPOLE

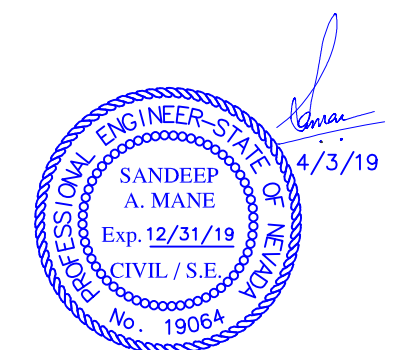


Commnet
Connecting Rural America



1337 E DESERT FLOWER LANE
PHOENIX, AZ 85048
PHONE: (480) 213-8524

PE SEAL



PROJECT TEAM

PROJECT OWNER: COMMNET WIRELESS, LLC
1562 NORTH PARK STREET
CASTLE ROCK, COLORADO 80109

PROJECT MANAGER: 1562 NORTH PARK STREET
CASTLE ROCK, COLORADO 80109
CONTACT: POLLEY WIESE
PHONE: (720) 733-5399
EMAIL: pwiese@atni.com

CONSTRUCTION MANAGER: 1562 N. PARK STREET
CASTLE ROCK, CO 80104
CONTACT: DAVE TILLER, CM
PHONE: (720) 357-5384
EMAIL: DTiller@atni.com

LEASE ACQUISITION: 1562 NORTH PARK STREET
CASTLE ROCK, COLORADO 80109
CONTACT: ALEXIS LEIDIGH,
CASTLE ROCK CO.
PHONE: (501) 448-1545

CIVIL ENGINEER: Abn ENGINEERING, LLC
1337 E. DESERT FLOWER LANE
PHOENIX, AZ 85048
CONTACT: SANDEEP A. MANE, P.E.
PHONE: (480) 213-8524
EMAIL: smane@abneng.com

ELECTRICAL ENGINEERING: EE LLC
12005 ANTELOPE TRAIL
PARKER, CO 80138
PHONE: (303) 748-1189

SURVEYOR: WALLACE MORRIS ORBAN SURVEYING, LLC
1250 LAMOILLE HIGHWAY, UNIT 628
ELKO, NV 89801
PHONE: (775) 753-3610

POWER PROVIDER: SURPRISE VALLEY ELECTRIFICATION CORP
516 US HWY 395
ALTURAS, CA 96101
PHONE: (530) 233-3511
CONTACT: DJ NORTHROP - COMPLIANCE TECH
EMAIL: DJNSVEC@FRONTIER.COM

PROJECT INFORMATION

SITE NAME: VYA, NEVADA

SITE ADDRESS: 89000A DUGWAY ROAD
GERLACH, NV 89413

SITE COORDINATES: LATITUDE: 41° 35' 30.76358"N (NAD 83)
LONGITUDE: 119° 52' 47.14752"W (NAD 83)
ELEVATION: ±6,236.20' (AMSL) (NAVD 88)

APPLICANT: COMMNET WIRELESS, LLC
1562 NORTH PARK STREET
CASTLE ROCK, COLORADO 80109

CONTACT: DAVE TILLER
(720) 357-5384

PROPERTY OWNER: UNITED STATES OF AMERICA

APN NUMBER: 061-010-49

CURRENT ZONING: BLM

CONSTRUCTION TYPE: VB

NEW USE: U

OCCUPANCY: VACANT LAND

CURRENT USE: UNMANNED TELECOMMUNICATIONS FACILITY

LEASE AREA: 7,469 SQ.FT.

SHEET INDEX

TITLE:	DESCRIPTION:
T-1	TITLE SHEET & PROJECT INFORMATION
GN-1	GENERAL NOTES
SN-1	SITE SIGNATE DETAILS
A-1	OVERALL SITE PLAN
A-2.0	ENLARGED SITE PLAN
A-2.1	SHELTER LAYOUT
A-3	SITE ELEVATION & DETAILS
A-4	NOT USED
A-5	CONSTRUCTION DETAILS
A-6	CONSTRUCTION DETAILS
A-7	CONSTRUCTION DETAILS
A-8	CONSTRUCTION DETAILS
S-1	SHELTER FOUNDATION DETAILS
E-1	OVERALL ELECTRICAL PLAN & ELECTRICAL NOTES
E-2	PANEL SCHEDULE & ONE LINE DIAGRAM
E-3	DETAILS
G-1	GROUNDING PLAN
G-2	GROUNDING DETAILS

DESIGNER: JASON NGO

LEAD EE: SB

LEAD CE/SE: SAM

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
H	1/25/19	COMMENTS	JN
I	2/13/19	COMMENTS	JN
J	2/18/19	COMMENTS	JN
K	2/19/19	FINAL CD	JN
L	4/3/19	REVISED CD	JN

THE INFORMATION CONTAINED IN THIS SET OF DOCUMENTS IS PROPRIETARY BY NATURE. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO COMMNET WIRELESS IS STRICTLY PROHIBITED.

SITE NAME

VYA, NEVADA

PROJECT

RAW LAND MONOPOLE

SITE ADDRESS

LAT: 41° 35' 30.76358"N
LONG: 119° 52' 47.14752"W
89000A DUGWAY ROAD
GERLACH, NV 89413

SHEET TITLE

TITLE SHEET

SHEET NUMBER

T-1

PROJECT DESCRIPTION

INSTALLING A NEW MONOPOLE TO INCLUDE, NEW ANTENNAS, RRHS, MOUNTS, PRE-FABRICATED SHELTER, PROPANE TANK, GENERATOR AND A METER SERVICE WITHIN A NEW CHAIN LINK FENCE.

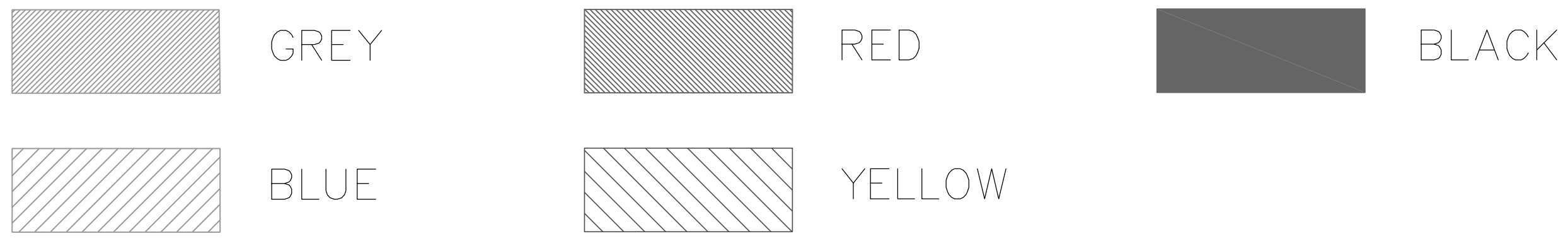
UTILITY TABLE

UTILITY:	PROVIDER:
WATER	N/A
SEWER	N/A
ELECTRICAL	NV ENERGY
TELEPHONE/FIBER	TBD
POLICE	WASHOE COUNTY
FIRE	WASHOE COUNTY

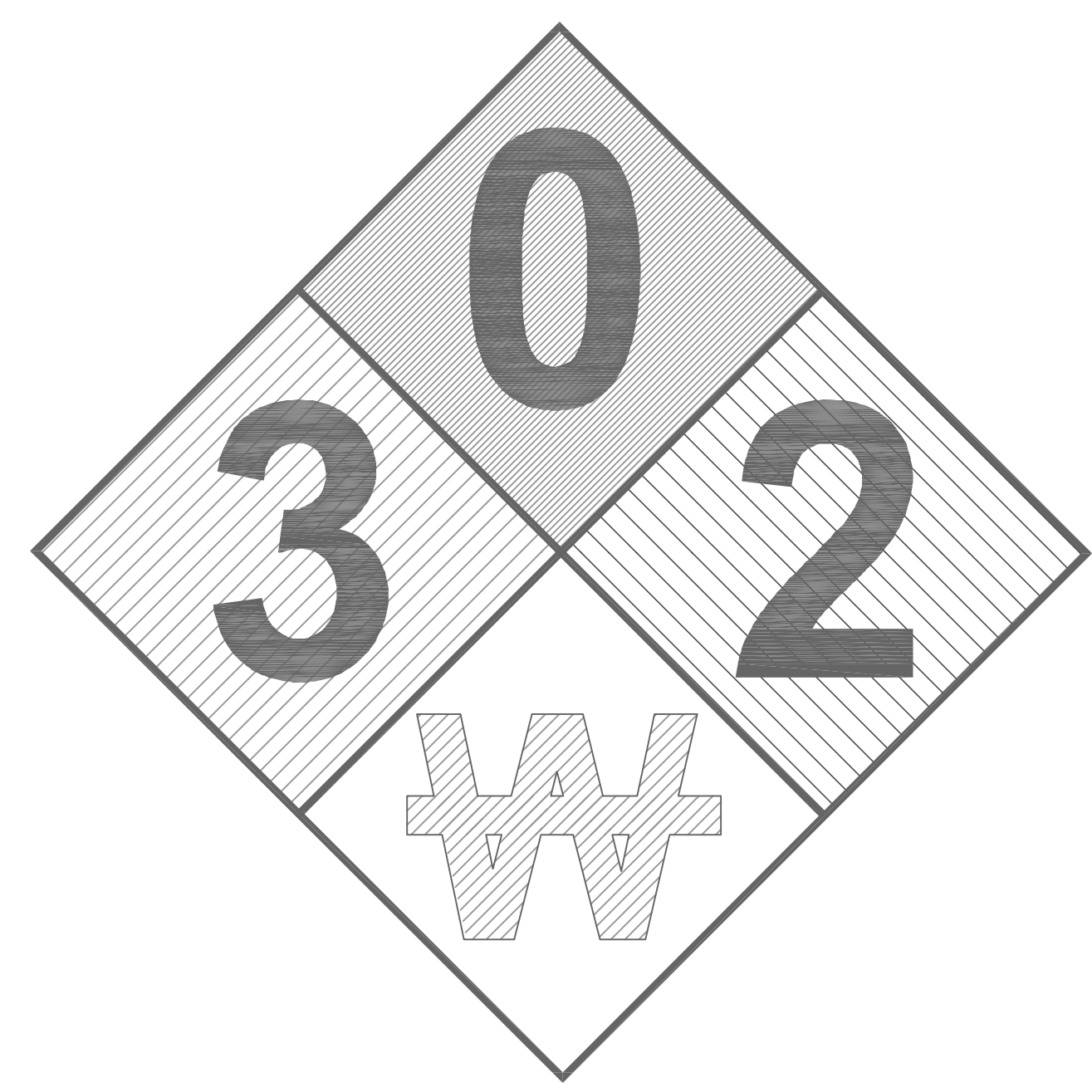
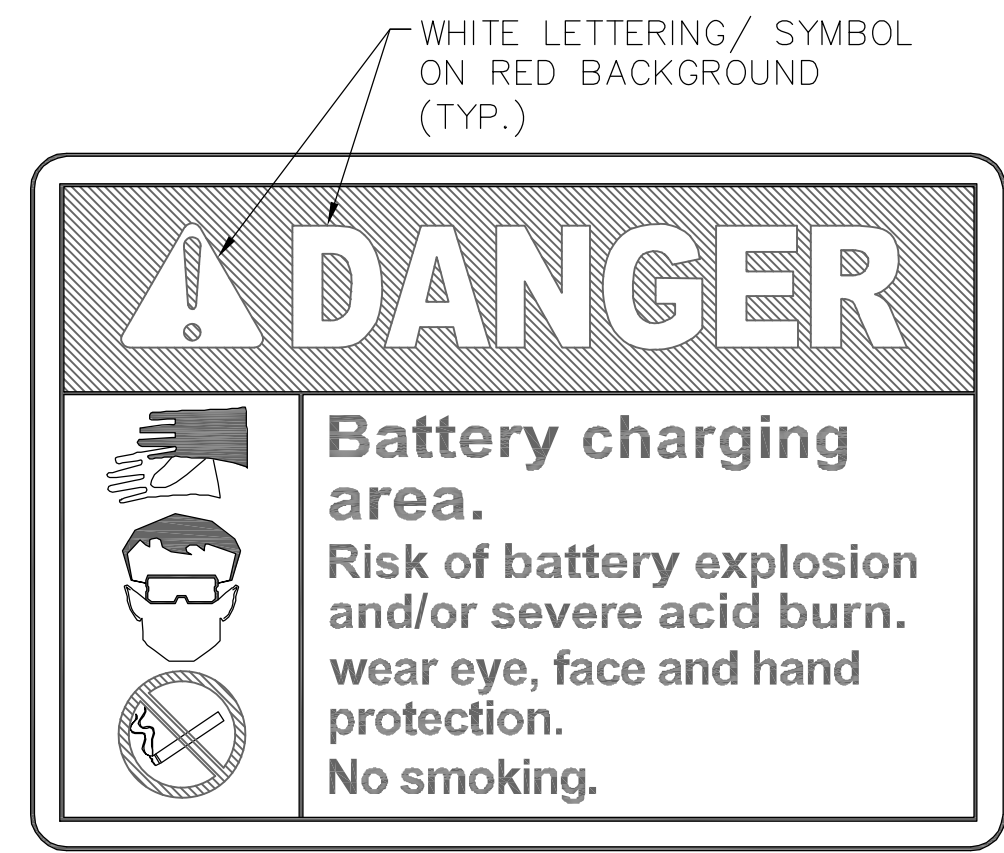
APPROVAL BOX

DEPARTMENT:	SIGNATURE:	DATE:
PROJECT MANAGER		
CONSTRUCTION MANAGER		
RF MANAGER		
PROPERTY OWNER REPRESENTATIVE		

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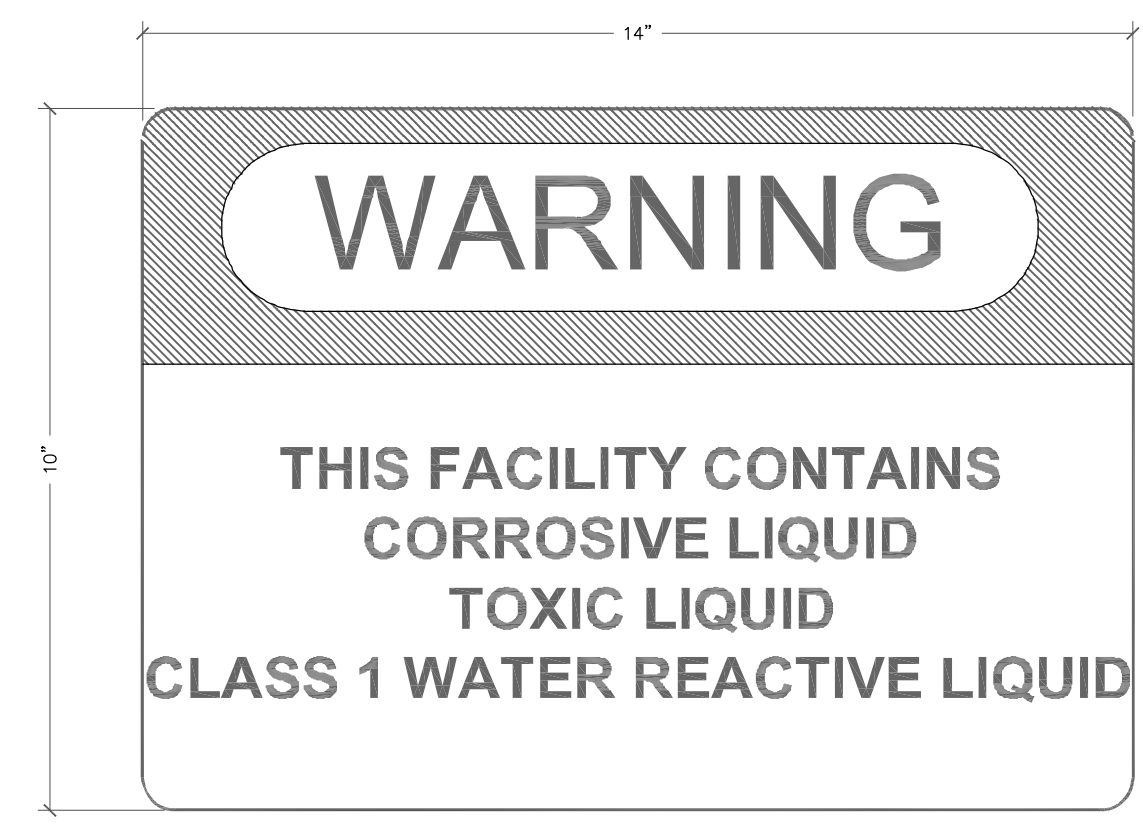
COLOR CODE SCALE: NTS **1**



REQUIRED NFPA SIGNAGE SCALE: NTS **2**

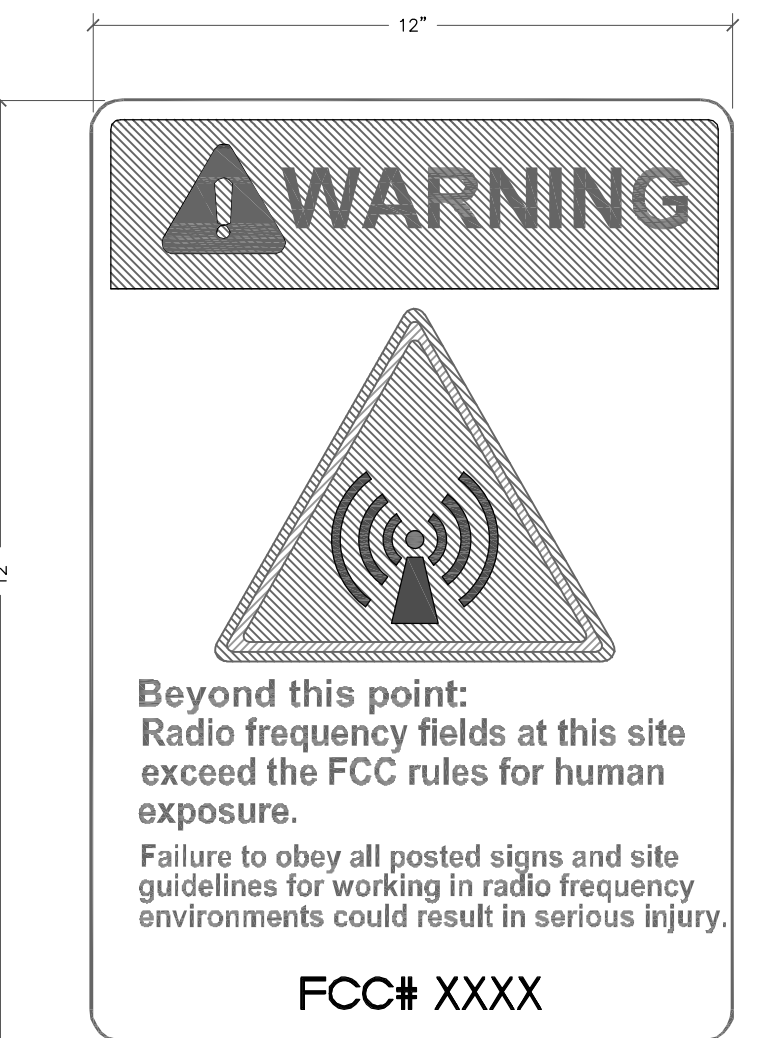
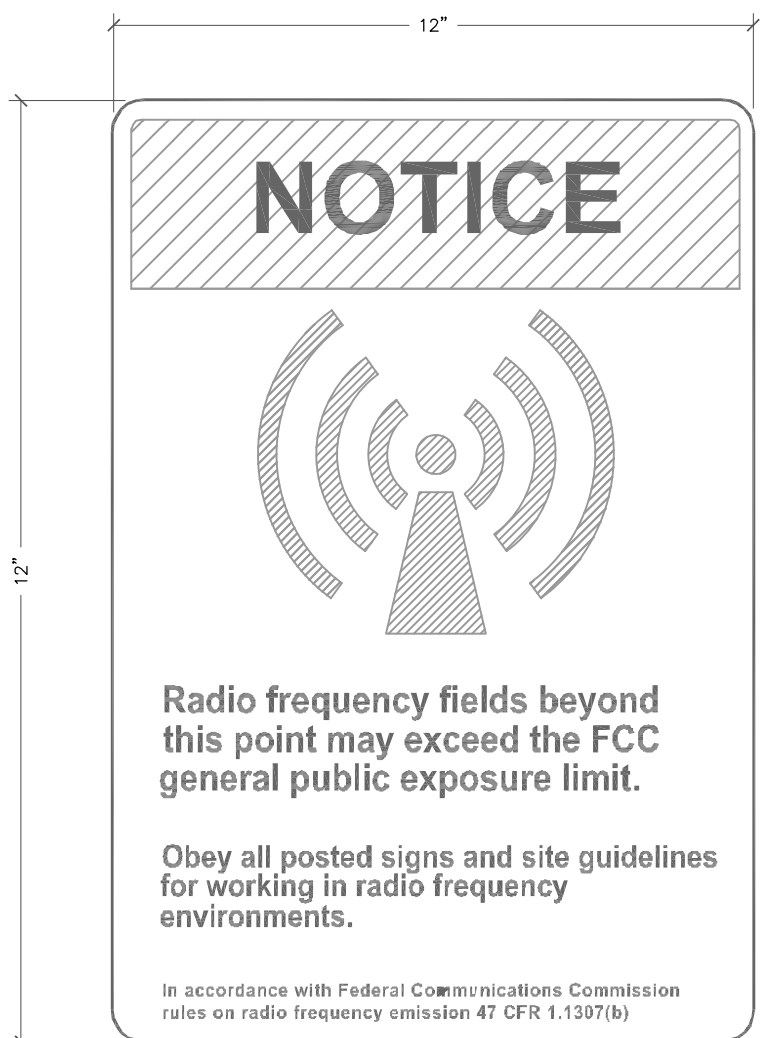
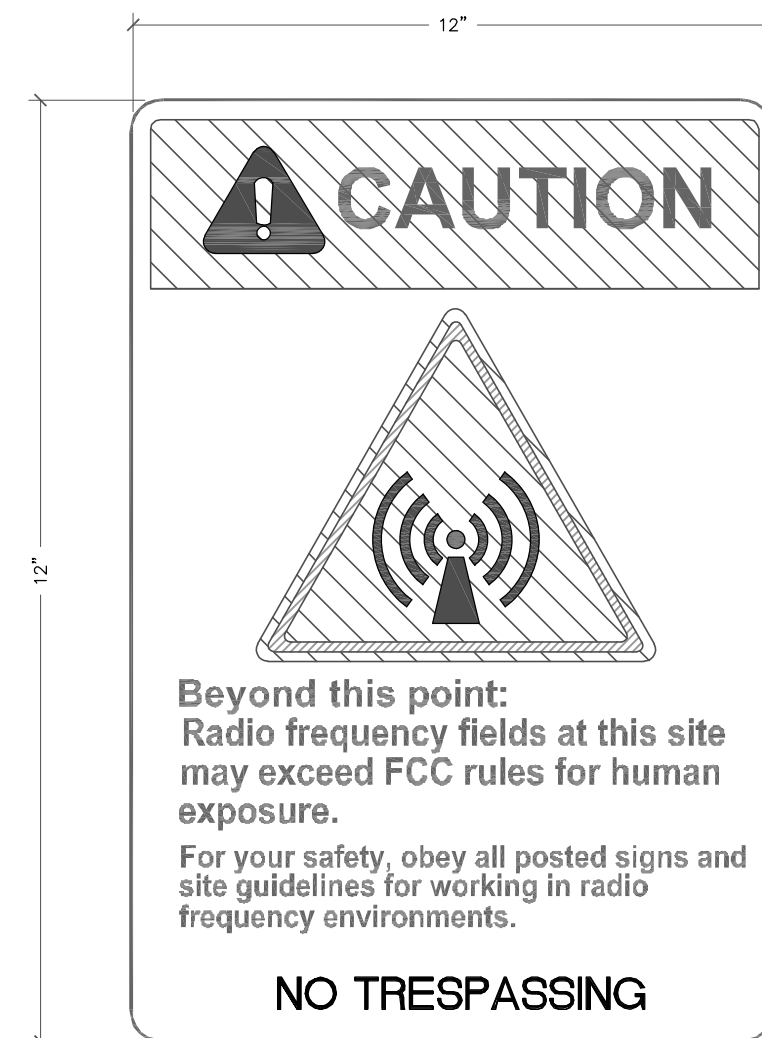


FENCE SIGNAGE SCALE: NTS **3**

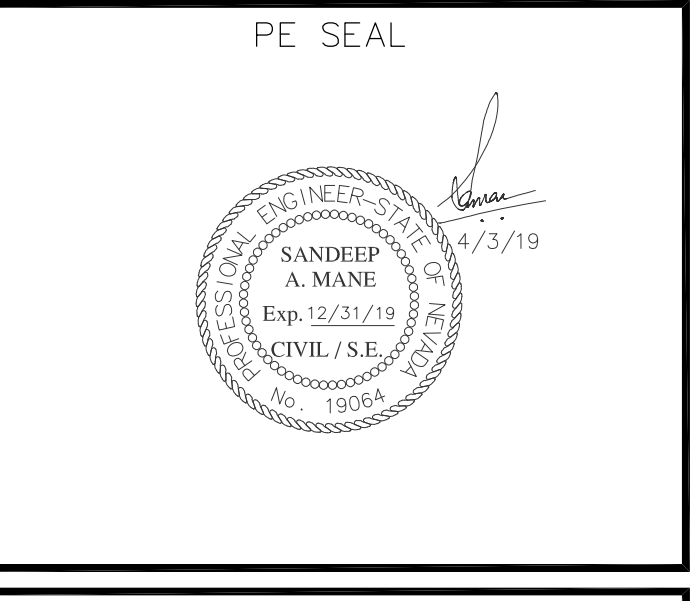


HAZARDOUS MATERIALS SIGNAGE SCALE: NTS **4**

NOTES:
 1. SIGN MATERIAL: 18 GA SHEET ALUMINUM ALLOY 6061-T6, 5052-H38, 5154-H38 OR EQUIVALENT.
 2. LETTERING COLOR: NON REFLECTIVE BLACK SCREENED, CUT OUT PERMANENT OR REMOVABLE LEGEND.
 3. BACKGROUND COLORS: REFLECTIVE WHITE: SILVER WHITE ASTM TYPE III OR TYPE IV SHEETING U.N.O. NON REFLECTIVE YELLOW RED BLUE AND GREY TRANSPARENT PASTE APPLIED OVER THE SILVER WHITE SHEETING.
 4. REFERENCE ANSI C95.2 FOR COLOR, SYMBOLS AND CONTENT CONVENTIONS
 5. SIGNS SHALL BE POSTED ON ACCESS GATE AND SHELTER DOOR OR OUTDOOR EQUIPMENT CABINETS



RF SIGNAGE SCALE: NTS **5**



DESIGNER: JASON NGO

LEAD EE: SB

LEAD CE/SE: SAM

SUBMITTALS			
REV.	DATE	DESCRIPTION	BY
H	1/25/19	COMMENTS	JN
I	2/13/19	COMMENTS	JN
J	2/18/19	COMMENTS	JN
K	2/19/19	FINAL CD	JN
L	4/3/19	REVISED CD	JN

THE INFORMATION CONTAINED IN THIS SET OF DOCUMENTS IS PROPRIETARY BY NATURE. ANY USE OR DISCLOSURE OTHER THAN THAT WHICH RELATES TO COMMNET WIRELESS IS STRICTLY PROHIBITED.

SITE NAME
VYA, NEVADA

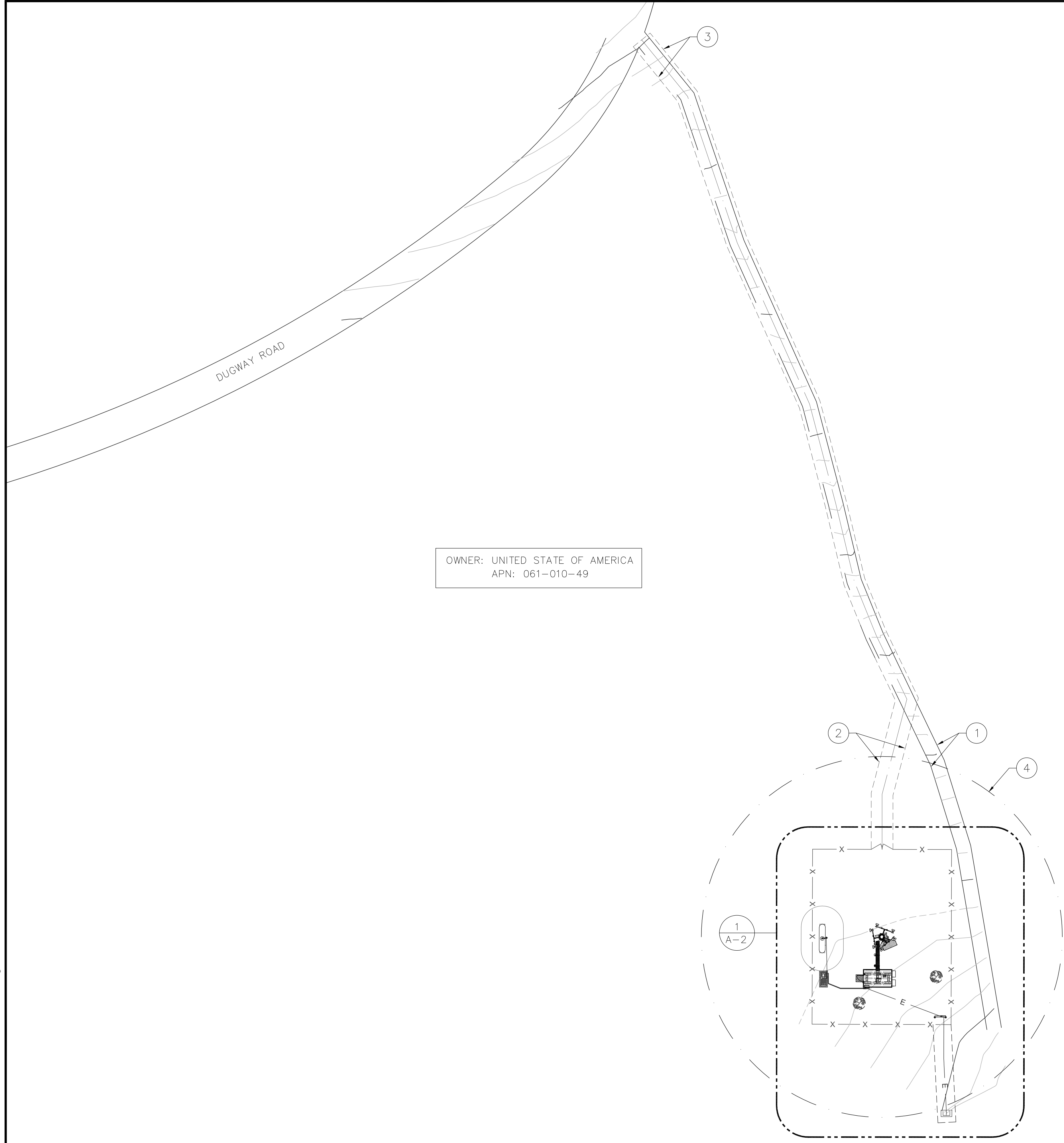
PROJECT
RAW LAND MONOPOLE

SITE ADDRESS
LAT: 41° 35' 30.76358"N
LONG: 119° 52' 47.14752"W
89000A DUGWAY ROAD
GERLACH, NV 89413

SHEET TITLE
SITE SIGNAGE DETAILS

SHEET NUMBER
SN-1

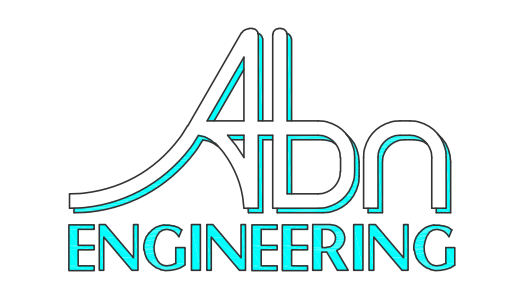
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OWNER: UNITED STATE OF AMERICA
APN: 061-010-49

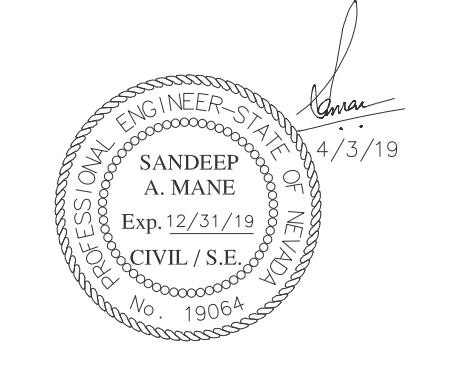
COMPOUND PLAN KEYED NOTES: #

1. (E) DIRT ROAD
2. (N) 12' WIDE DIRT ACCESS ROAD
3. (N) 12' WIDE ACCESS EASEMENT
4. CONSTRUCTION WORK AREA ±100' RADIUS, THE AREA WITHIN THIS BOUNDARY TO BE USED AS TEMPORARY CONSTRUCTION ZONE, STAGING MATERIAL AREA, VEHICLE ACTIVITY AREA AND GENERAL CONSTRUCTION PURPOSE. THIS AREA WILL RECLAIMED AND CLEANED UP AFTER CONSTRUCTION IS COMPLETE.



1337 E DESERT FLOWER LANE
PHOENIX, AZ 85048
PHONE: (480) 213-8524

PE SEAL



DESIGNER: JASON NGO

LEAD EE: SB

LEAD CE/SE: SAM

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
H	1/25/19	COMMENTS	JN
I	2/13/19	COMMENTS	JN
J	2/18/19	COMMENTS	JN
K	2/19/19	FINAL CD	JN
L	4/3/19	REVISED CD	JN

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SITE NAME

VYA, NEVADA

PROJECT

RAW LAND MONOPOLE

SITE ADDRESS

LAT: 41° 35' 30.76358"N
LONG: 119° 52' 47.14752"W
89000A DUGWAY ROAD
GERLACH, NV 89413

SHEET TITLE

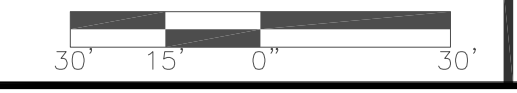
OVERALL SITE PLAN

SHEET NUMBER

A-1



22"x34" SCALE: 1" = 30'-0"
11"x17" SCALE: 1" = 60'-0"



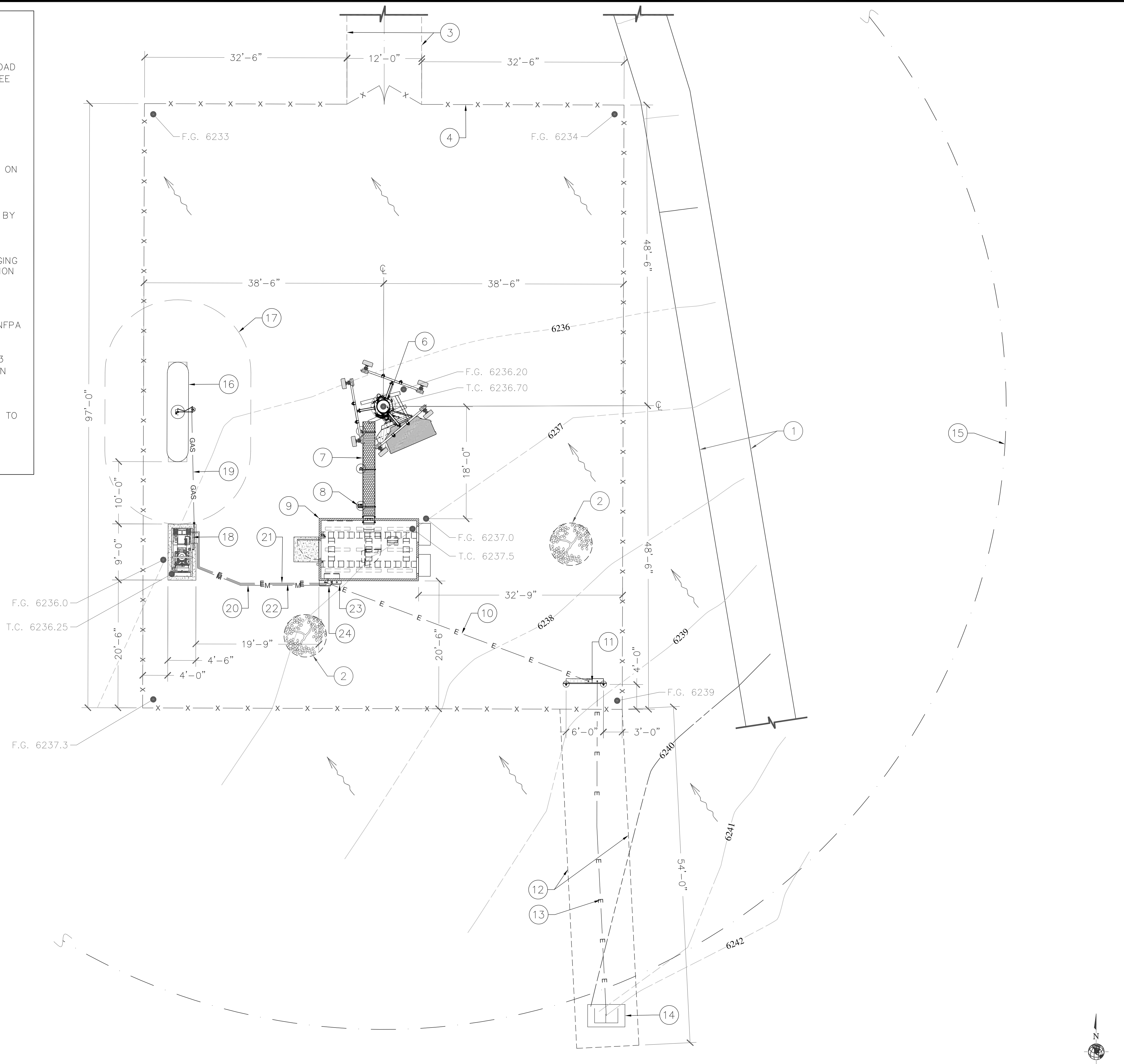
OVERALL SITE PLAN

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- COMPOUND PLAN KEYED NOTES: #
- (E) DIRT ROAD
 - (E) TREE TO BE REMOVED (TYP.)
 - (N) 12' WIDE ACCESS EASEMENT AND (N) 12' WIDE DIRT ACCESS ROAD
 - (N) 7' CHAIN LINK FENCE WITH 12' WIDE DOUBLE ACCESS GATES, SEE DETAIL 3 ON SHEET A-5
 - NOT USED
 - (N) 150' TALL MONOPOLE, SEE STRUCTURAL DRAWINGS BY OTHERS
 - (N) ICE BRIDGE, SEE DETAIL 4 ON SHEET A-5
 - (N) GPS ANTENNA, SEE DETAIL 5 ON SHEET A-5
 - (N) EQUIPMENT SHELTER (PROVIDED BY OTHERS), SEE DETAIL 1 ON SHEET S-1
 - (N) 2"Ø U.G. CONDUIT FOR POWER RUN, SEE FOUNDATION DETAIL 4 ON SHEET E-3
 - (N) METER BANK, SEE DETAIL 3 ON SHEET E-3
 - (N) 10' WIDE UTILITY EASEMENT
 - (N) U.G. CONDUIT FOR POWER RUN FROM SOURCE TO METER BANK BY PROVIDER
 - (E) PAD MOUNTED TRANSFORMER, (N) COMMNET POWER SOURCE
 - CONSTRUCTION WORK AREA ±100' RADIUS, THE AREA WITHIN THIS BOUNDARY TO BE USED AS TEMPORARY CONSTRUCTION ZONE, STAGING MATERIAL AREA, VEHICLE ACTIVITY AREA AND GENERAL CONSTRUCTION PURPOSE. THIS AREA WILL RECLAIMED AND CLEANED UP AFTER CONSTRUCTION IS COMPLETE.
 - (N) PROPANE TANK ON INTERLOCK PAVER, SEE DETAILS 2 & 6 ON SHEET A-8
 - LINE OF 10' PROPANE TANK IGNITION SOURCE SPARK RADIUS PER NFPA 58
 - (N) GENERATOR, SEE DETAILS 1, 3 & 5 ON SHEET A-8
 - (N) U.G. CONDUIT FOR GAS LINE RUN, SEE DETAIL 2 ON SHEET E-3
 - (N) U.G. CONDUIT FOR START/STOP AND MONITOR, SEE DETAIL 5 ON SHEET E-3 AND ONLINE DIAGRAM
 - (N) U.G. CONDUIT FOR POWER RUN FROM GENERATOR TO ATS, SEE DETAIL 5 ON SHEET E-3 AND ONLINE DIAGRAM
 - (N) U.G. CONDUIT FOR GENERATOR BATTERY CHARGER FROM PANEL TO GENERATOR, SEE DETAIL 5 ON SHEET E-3 AND ONLINE DIAGRAM
 - (N) DISCONNECT SWITCH
 - (N) 200A ATS

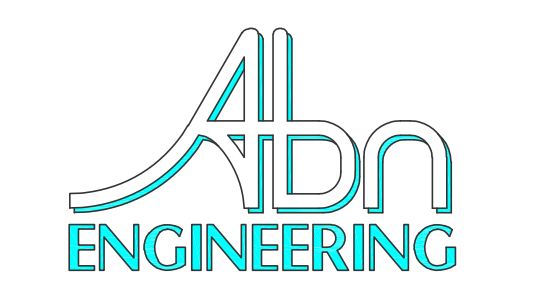
LEGEND:

	EXISTING CONTOUR LINE
	GRADE TO DRAIN
F.G. 6236.20 ●	FINISHED GRADE
T.C. 6236.70 ●	TOP OF CONCRETE



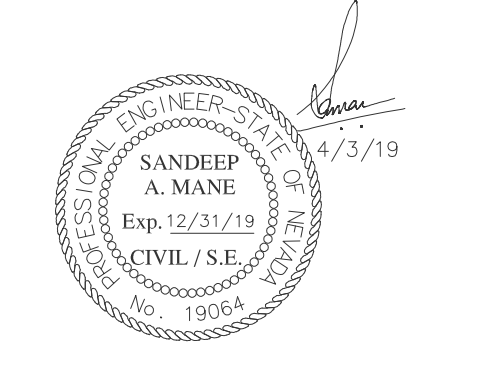
ENLARGED SITE PLAN

22"x34" SCALE: 1/8" = 1'-0"
 11"x17" SCALE: 1/16" = 1'-0"



1337 E DESERT FLOWER LANE
 PHOENIX, AZ 85048
 PHONE: (480) 213-8524

PE SEAL



DESIGNER: JASON NGO

LEAD EE: SB

LEAD CE/SE: SAM

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SITE NAME

VYA, NEVADA

PROJECT

RAW LAND MONOPOLE

SITE ADDRESS

LAT: 41° 35' 30.76358"N
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 89000A DUGWAY ROAD
 GERLACH, NV 89413

SHEET TITLE

ENLARGED SITE PLAN

SHEET NUMBER

A-2.0

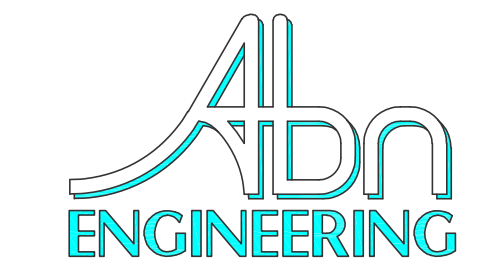
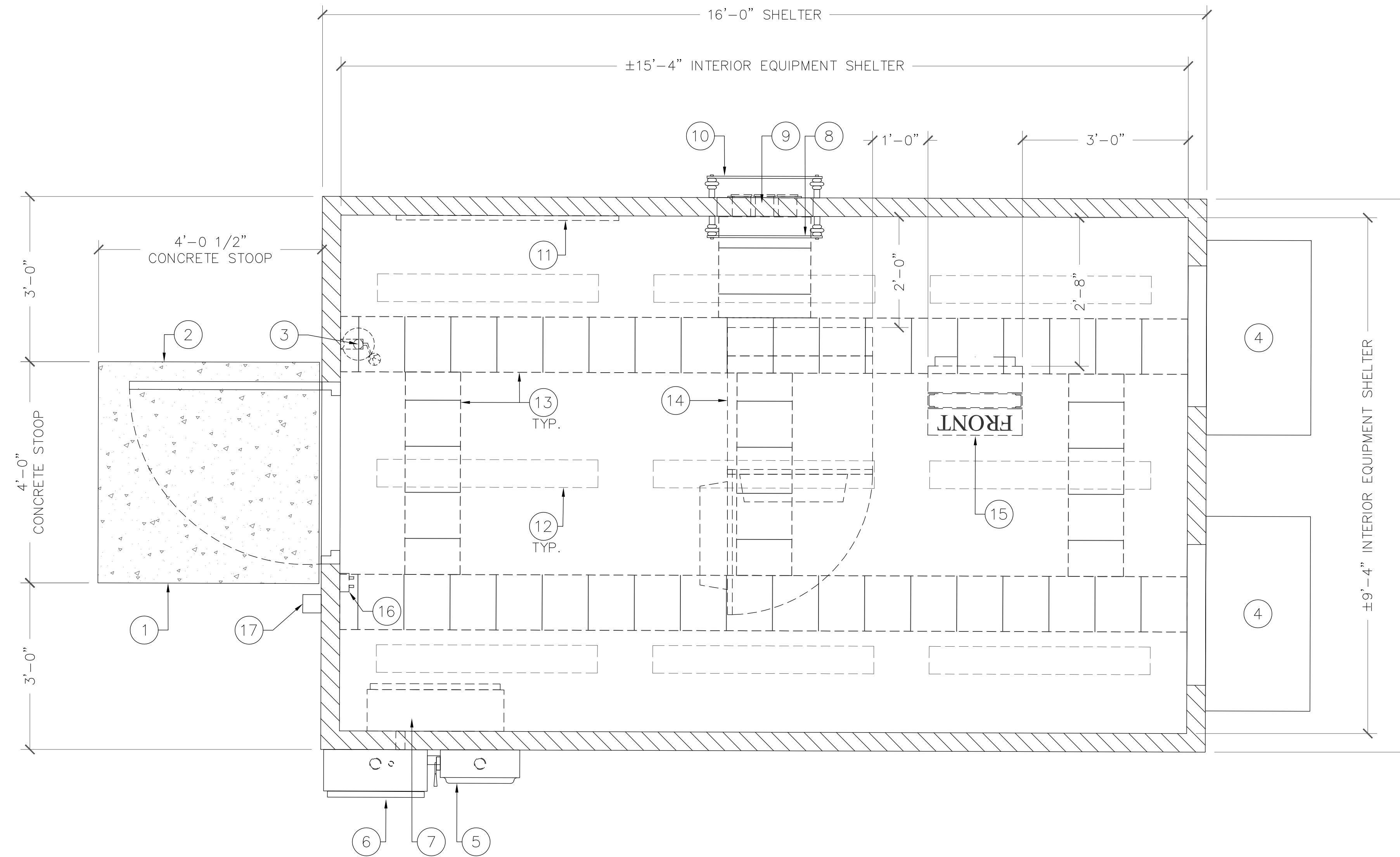


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COMPOUND PLAN KEYED NOTES: #

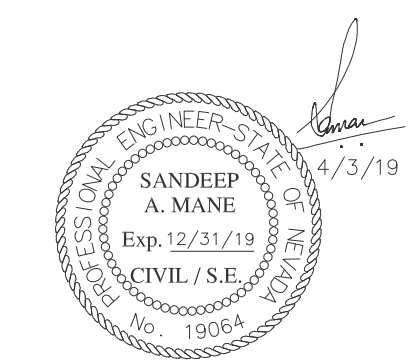
1. (N) CONCRETE STOOP (TYP.)
2. (N) EQUIPMENT SHELTER ACCESS DOOR
3. (N) FIRE EXTINGUISHER (TYP.)
4. (N) HVAC UNIT (TYP.)
5. (N) 200A DISCONNECT SWITCH
6. (N) 200A ATS
7. (N) 200A AC PANEL
8. (N) INTERIOR GROUND BUS BAR (MGB)
9. (N) ENTRY PORTS
10. (N) EXTERIOR GROUND BUS BAR (EGB)
11. (N) TELCOBOARD
12. (N) 1'x4' FLUORESCENT LIGHT (TYP. OF 8)
13. (N) 18" WIDE CABLE TRAY ASSEMBLY, INSTALL PER MANUFACTURER SPECIFICATIONS (INDOOR APPLICATION)
14. (N) ALU CABINET
15. (N) MW RACK & FIRST NET BBU EQUIPMENT
16. (N) LIGHT SWITCH (TYP.)
17. (N) EXTERIOR LIGHT

NOTE:
ELECTRICAL PACKAGE FOR BUILDING INCLUDED EXCEPT FOR CONDUIT AND WIRING.



1337 E DESERT FLOWER LANE
PHOENIX, AZ 85048
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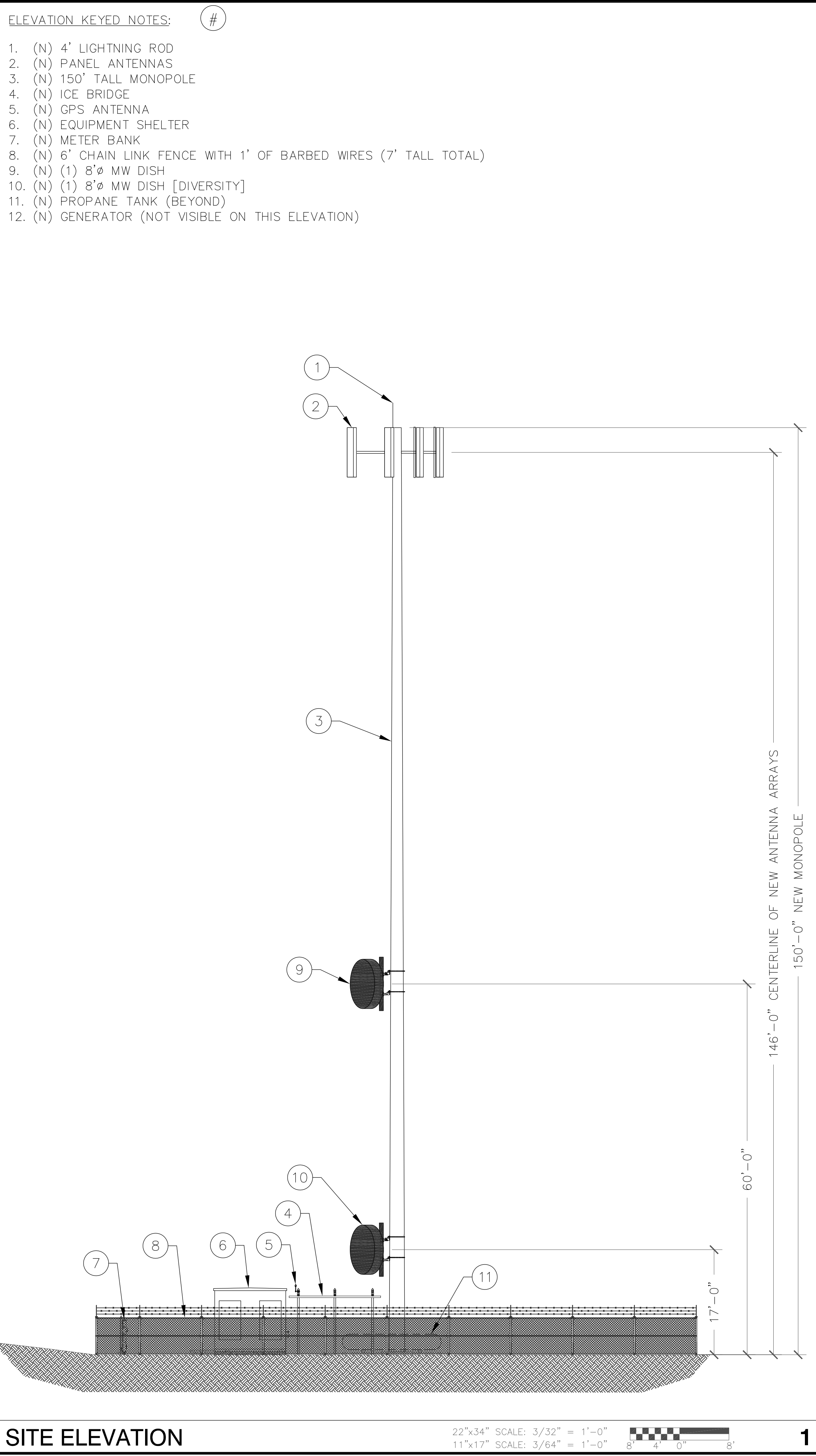
SHELTER LAYOUT

SHEET NUMBER

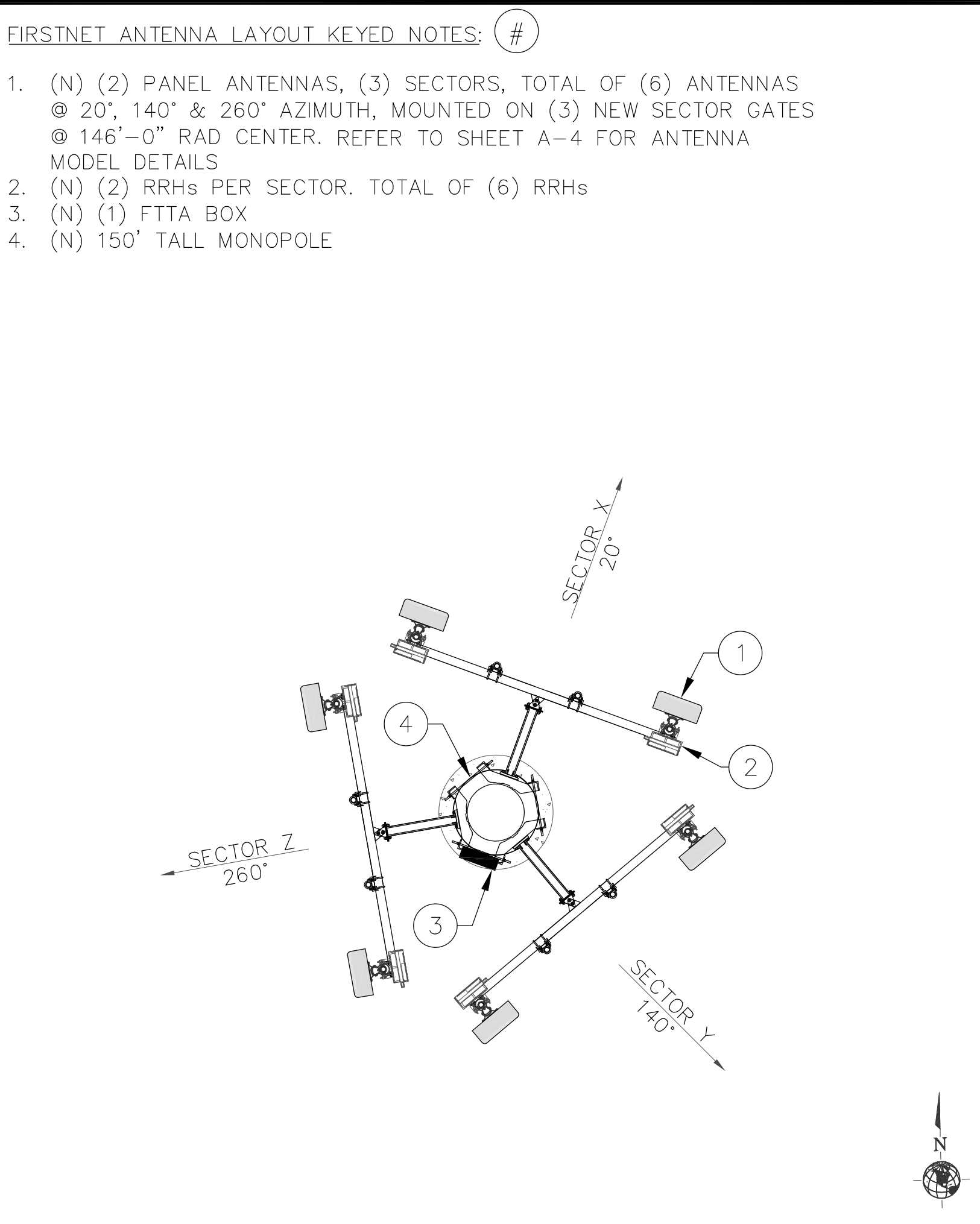
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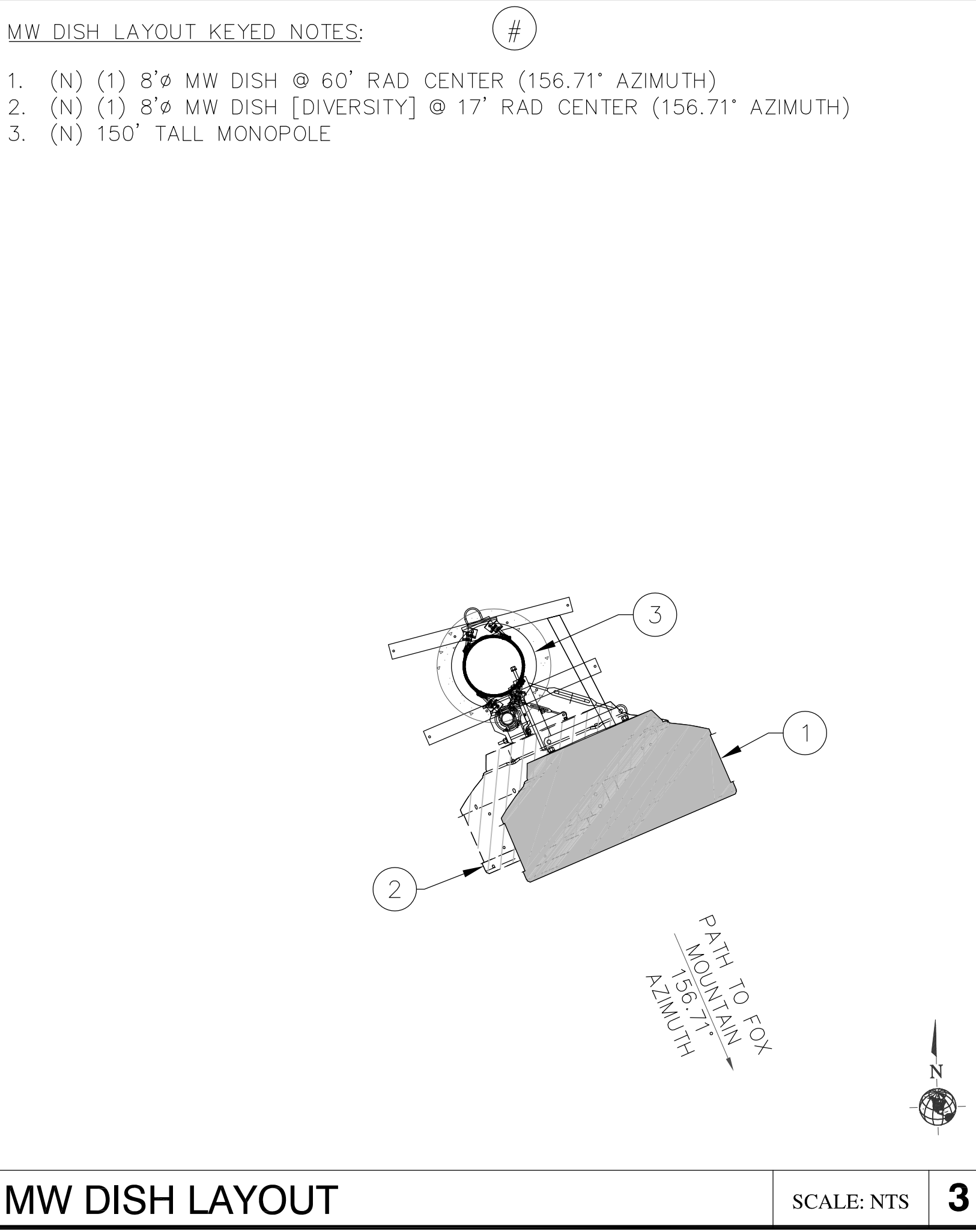
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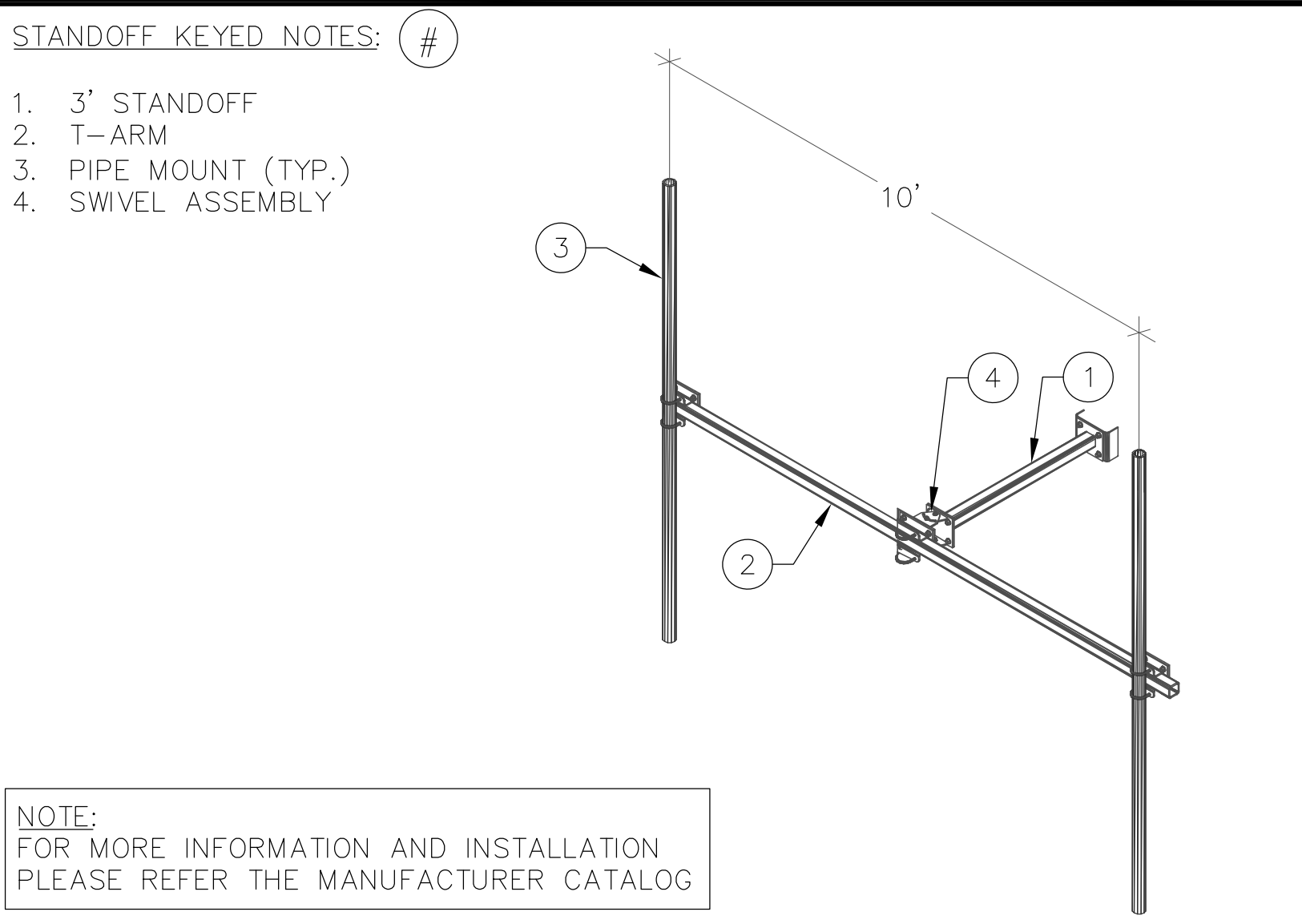
1 SITE ELEVATION SCALE: NTS 22"x34" SCALE: 3/32" = 1'-0" 11"x17" SCALE: 3/64" = 1'-0" 8" 4" 0" 8"



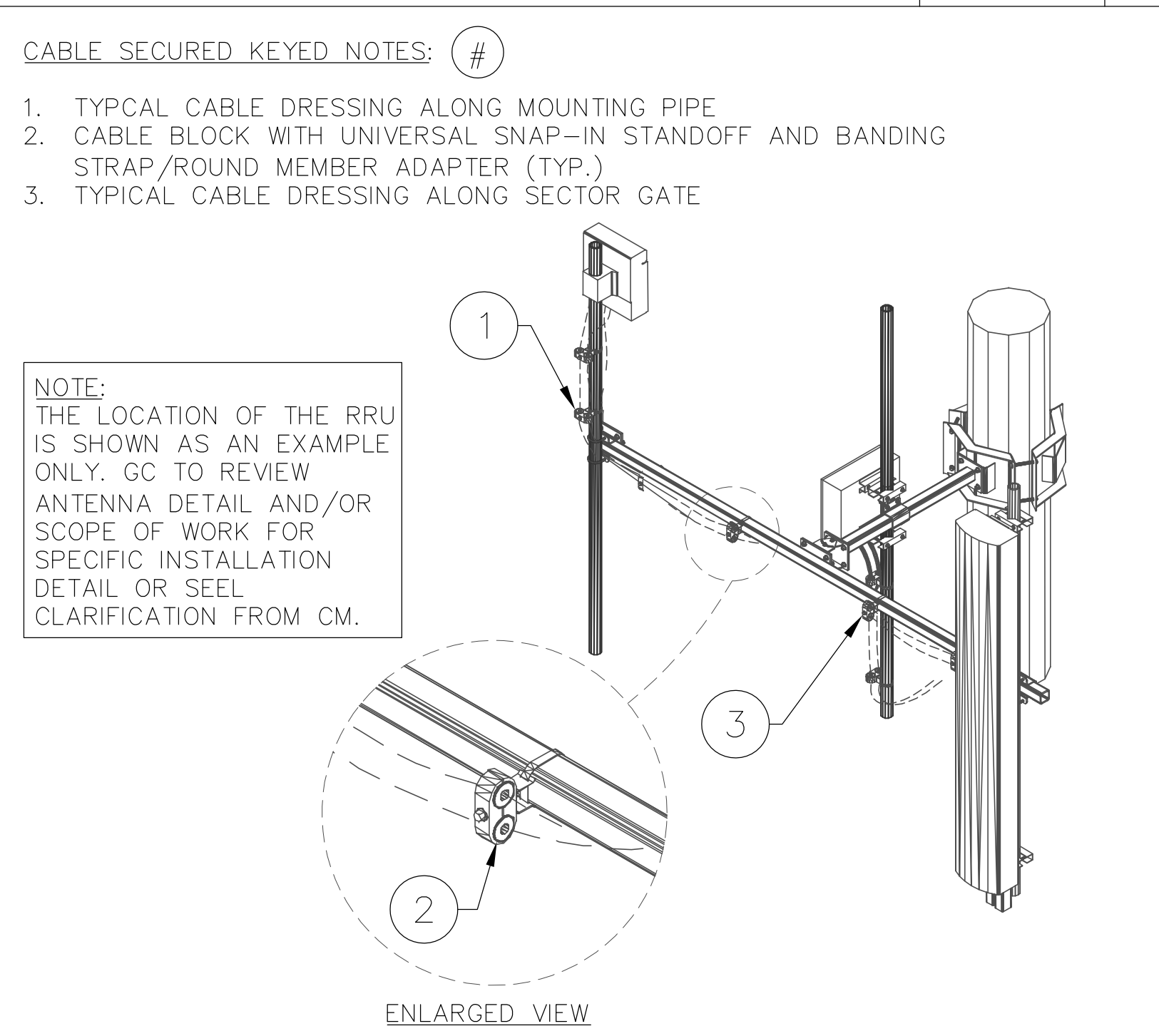
2 ANTENNA LAYOUT SCALE: NTS 2



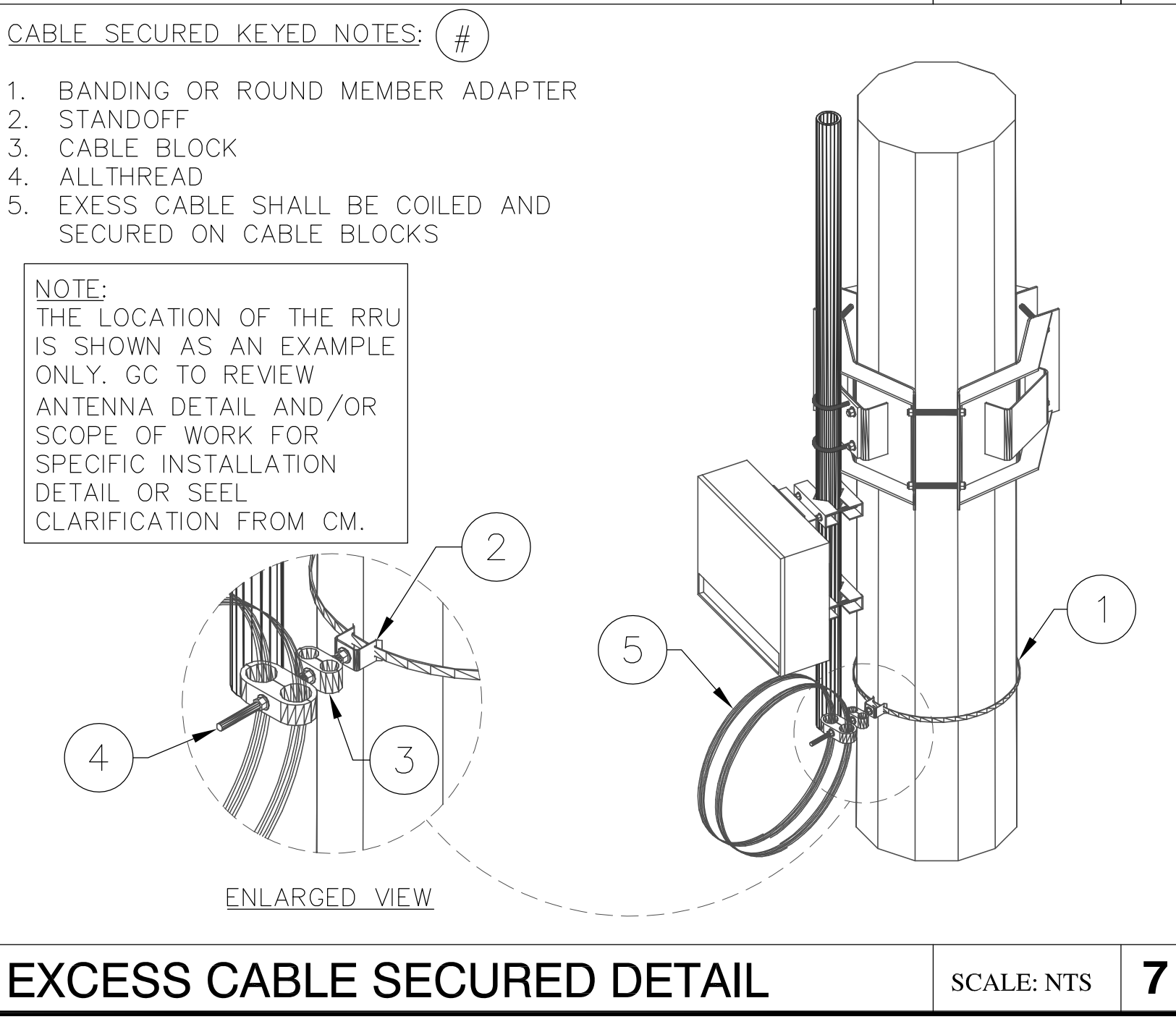
3 MW DISH LAYOUT SCALE: NTS 3



5 TYPICAL STANDOFF SCALE: NTS 5



6 CABLE SECURED DETAIL SCALE: NTS 6



7 EXCESS CABLE SECURED DETAIL SCALE: NTS 7

ELEVATION KEYED NOTES: #

- (N) 4' LIGHTNING ROD
- (N) PANEL ANTENNAS
- (N) 150' TALL MONOPOLE
- (N) ICE BRIDGE
- (N) GPS ANTENNA
- (N) EQUIPMENT SHELTER
- (N) METER BANK
- (N) 6' CHAIN LINK FENCE WITH 1' OF BARBED WIRES (7' TALL TOTAL)
- (N) (1) 8' MW DISH
- (N) (1) 8' MW DISH [DIVERSITY]
- (N) PROPANE TANK (BEYOND)
- (N) GENERATOR (NOT VISIBLE ON THIS ELEVATION)

FIRSTNET ANTENNA LAYOUT KEYED NOTES: #

- (N) (2) PANEL ANTENNAS, (3) SECTORS, TOTAL OF (6) ANTENNAS @ 20°, 140° & 260° AZIMUTH, MOUNTED ON (3) NEW SECTOR GATES @ 146'-0" RAD CENTER. REFER TO SHEET A-4 FOR ANTENNA MODEL DETAILS
- (N) (2) RRHs PER SECTOR. TOTAL OF (6) RRHs
- (N) (1) FTTH BOX
- (N) 150' TALL MONOPOLE

STANDOFF KEYED NOTES: #

- 3' STANDOFF
- T-ARM
- PIPE MOUNT (TYP.)
- SWIVEL ASSEMBLY

NOTE:
FOR MORE INFORMATION AND INSTALLATION PLEASE REFER THE MANUFACTURER CATALOG

CABLE SECURED KEYED NOTES: #

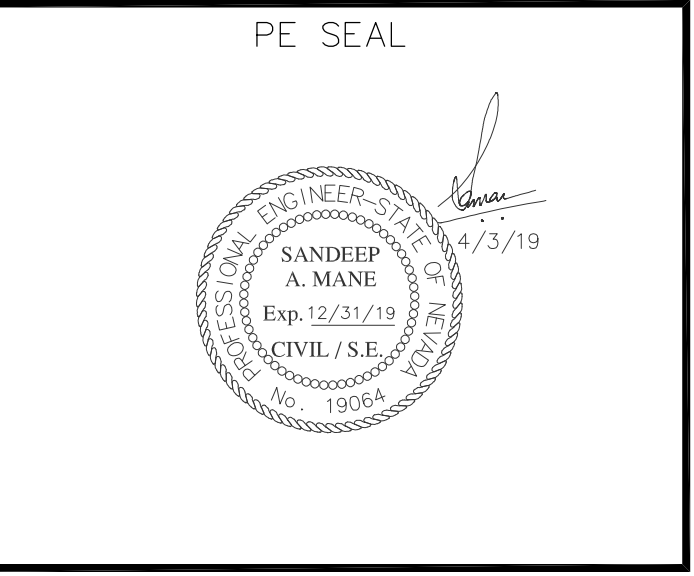
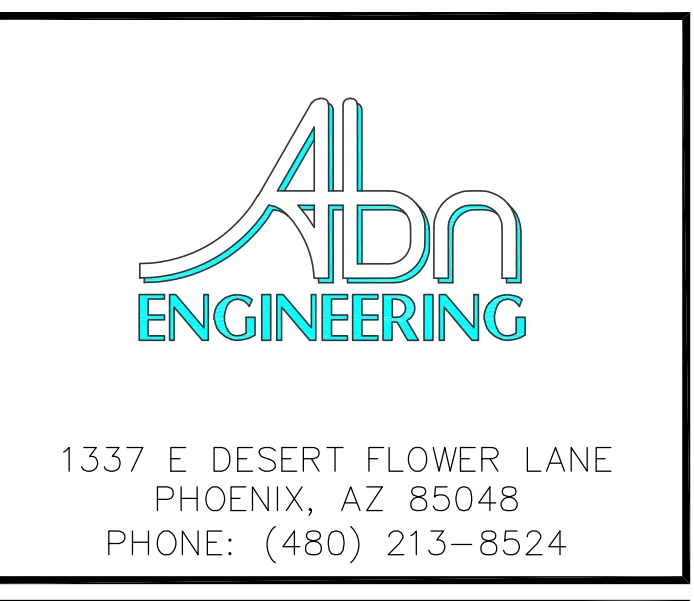
- TYPICAL CABLE DRESSING ALONG MOUNTING PIPE
- CABLE BLOCK WITH UNIVERSAL SNAP-IN STANDOFF AND BANDING STRAP/ROUND MEMBER ADAPTER (TYP.)
- TYPICAL CABLE DRESSING ALONG SECTOR GATE

NOTE:
THE LOCATION OF THE RRU IS SHOWN AS AN EXAMPLE ONLY. GC TO REVIEW ANTENNA DETAIL AND/OR SCOPE OF WORK FOR SPECIFIC INSTALLATION DETAIL OR SEEL CLARIFICATION FROM CM.

CABLE SECURED KEYED NOTES: #

- BANDING OR ROUND MEMBER ADAPTER
- STANDOFF
- CABLE BLOCK
- ALLTHREAD
- EXCESS CABLE SHALL BE COILED AND SECURED ON CABLE BLOCKS

NOTE:
THE LOCATION OF THE RRU IS SHOWN AS AN EXAMPLE ONLY. GC TO REVIEW ANTENNA DETAIL AND/OR SCOPE OF WORK FOR SPECIFIC INSTALLATION DETAIL OR SEEL CLARIFICATION FROM CM.



DESIGNER: JASON NGO

LEAD EE: SB

LEAD CE/SE: SAM

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VYA, NEVADA

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RAW LAND MONOPOLE

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LAT: 41° 35' 30.76358"N
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GERLACH, NV 89413

SHEET TITLE
SITE ELEVATION & DETAILS

SHEET NUMBER
A-3

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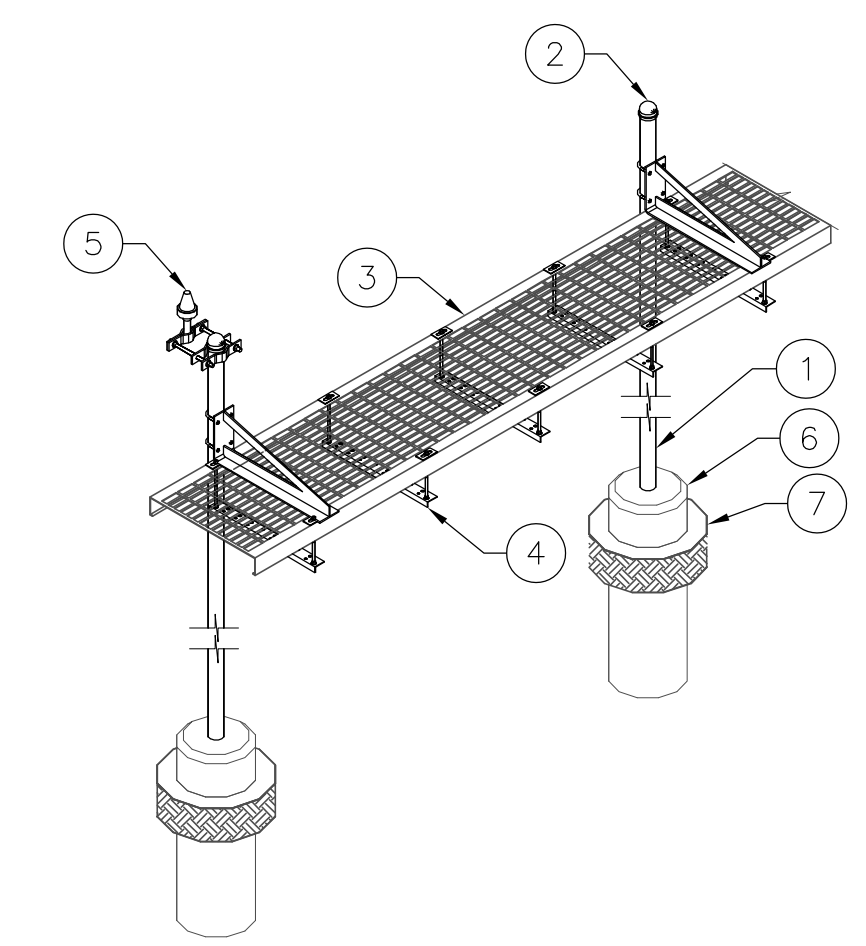


ICE BRIDGE KEYED NOTES: #

- 3" SCH. 40 PIPE COLUMN,
- 3-1/2" FENCE POST CAP
- 24"x10' GRIP SPAN BRIDGE CHANNEL
- TRAPEZE KIT (TYP.)
- GPS ANTENNA
- 18" Ø CONCRETE FORM TUBE 4" ABOVE GRADE & 36" BELOW GRADE (CONCRETE 3000 PSI COMP. STRENGTH MINIMUM)
- FINISHED GRADE MATCH EXISTING SURFACING

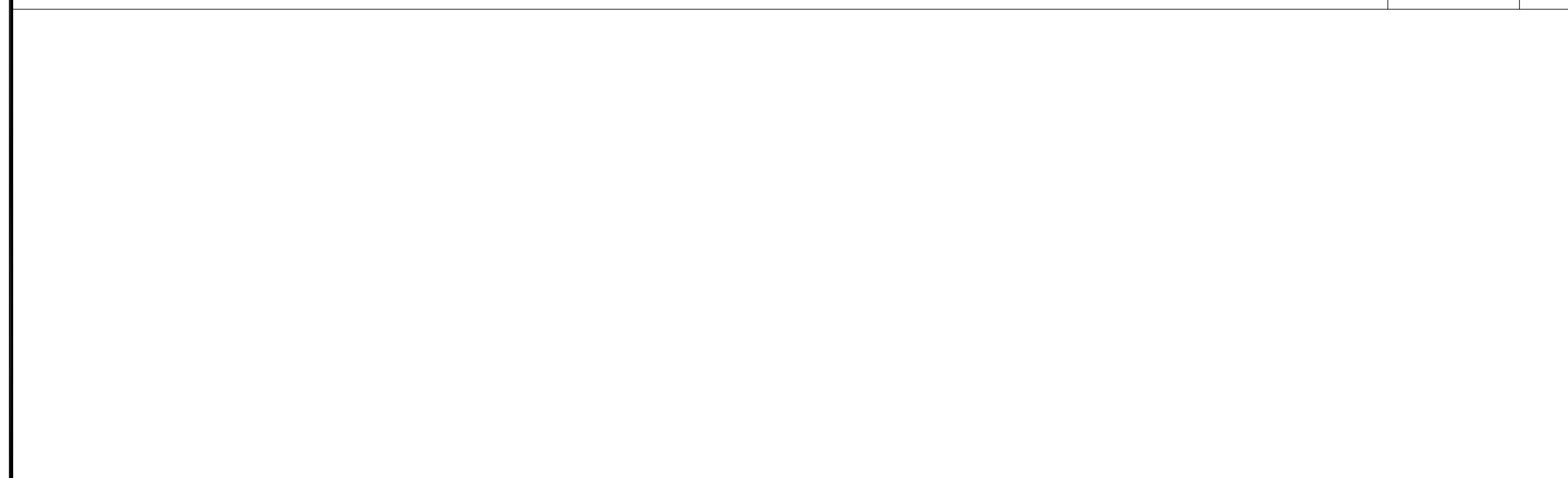
NOTE:

- FOR MORE INFORMATION AND INSTALLATION PLEASE REFER THE MANUFACTURER



NOT USED SCALE: N.T.S. 1

ICE BRIDGE DETAILS SCALE: N.T.S. 4



GPS ANTENNA MOUNT KEYED NOTES: #

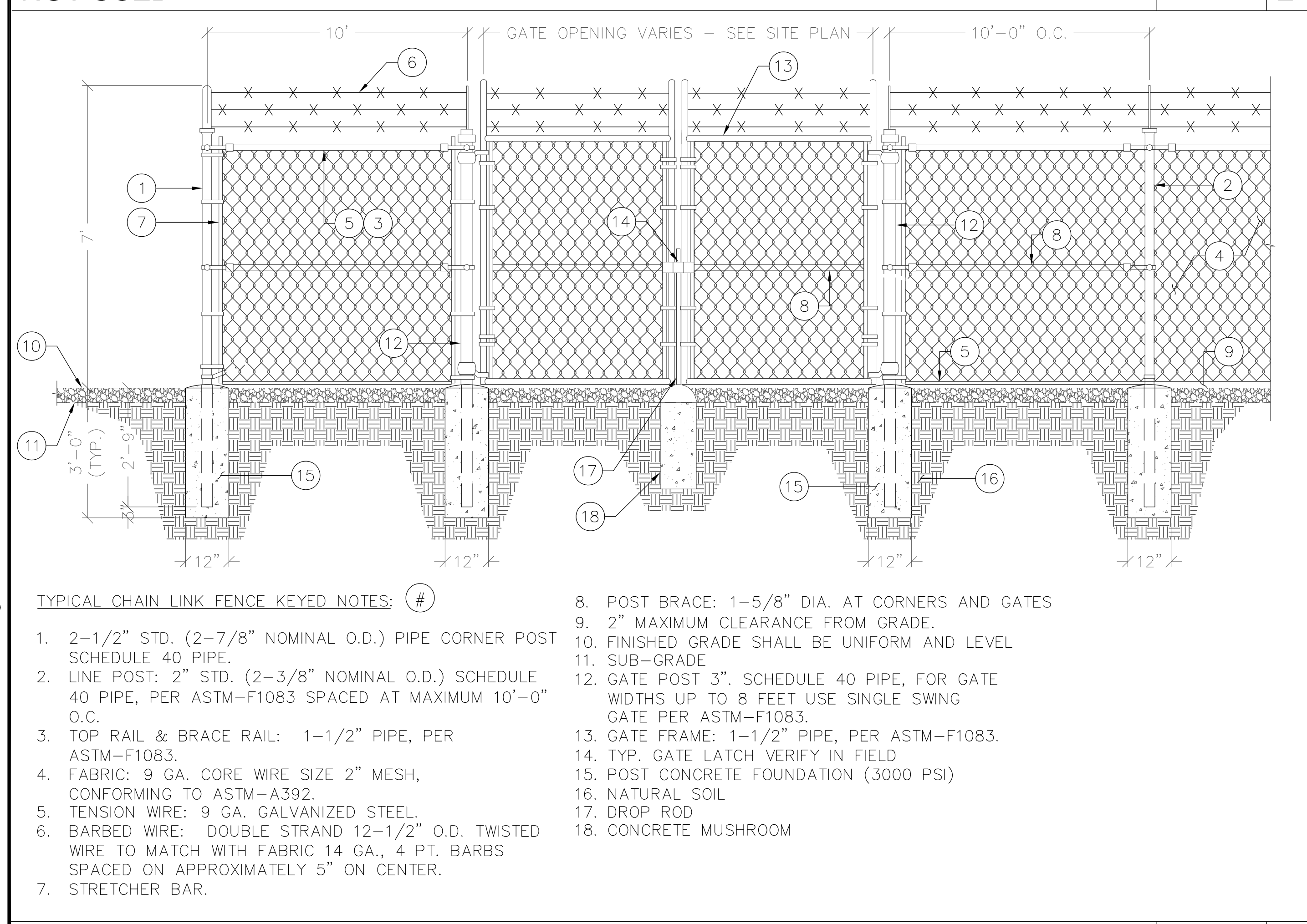
- ICEBRIDGE SUPPORT PIPE
- PIPE TO PIPE MOUNTING KIT BY SUPPLIER
- GPS ANTENNA
- GPS ANTENNA MOUNTING PIPE
- GPS ANTENNA COAXIAL CABLE
- SUPPORT PIPE CAP

PLAN VIEW

SIDE VIEW

NOT USED SCALE: N.T.S. 2

GPS ANTENNA MOUNTING DETAIL SCALE: N.T.S. 5

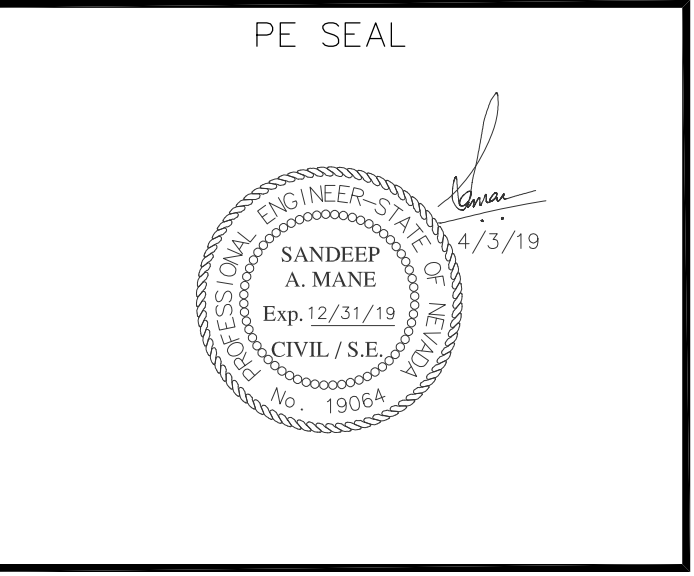


TYPICAL CHAIN LINK FENCE KEYED NOTES: #

- 2-1/2" STD. (2-7/8" NOMINAL O.D.) PIPE CORNER POST SCHEDULE 40 PIPE.
- LINE POST: 2" STD. (2-3/8" NOMINAL O.D.) SCHEDULE 40 PIPE, PER ASTM-F1083 SPACED AT MAXIMUM 10'-0" O.C.
- TOP RAIL & BRACE RAIL: 1-1/2" PIPE, PER ASTM-F1083.
- FABRIC: 9 GA. CORE WIRE SIZE 2" MESH, CONFORMING TO ASTM-A392.
- TENSION WIRE: 9 GA. GALVANIZED STEEL.
- BARBED WIRE: DOUBLE STRAND 12-1/2" O.D. TWISTED WIRE TO MATCH WITH FABRIC 14 GA., 4 PT. BARBS SPACED ON APPROXIMATELY 5" ON CENTER.
- STRETCHER BAR.
- POST BRACE: 1-5/8" DIA. AT CORNERS AND GATES
- 2" MAXIMUM CLEARANCE FROM GRADE.
- FINISHED GRADE SHALL BE UNIFORM AND LEVEL
- SUB-GRADE
- GATE POST 3", SCHEDULE 40 PIPE, FOR GATE WIDTHS UP TO 8 FEET USE SINGLE SWING GATE PER ASTM-F1083.
- GATE FRAME: 1-1/2" PIPE, PER ASTM-F1083.
- TYP. GATE LATCH VERIFY IN FIELD
- POST CONCRETE FOUNDATION (3000 PSI)
- NATURAL SOIL
- DROP ROD
- CONCRETE MUSHROOM

CHAIN LINK FENCE DETAIL SCALE: N.T.S. 3

NOT USED SCALE: N.T.S. 6



DESIGNER: JASON NGO

LEAD EE: SB

LEAD CE/SE: SAM

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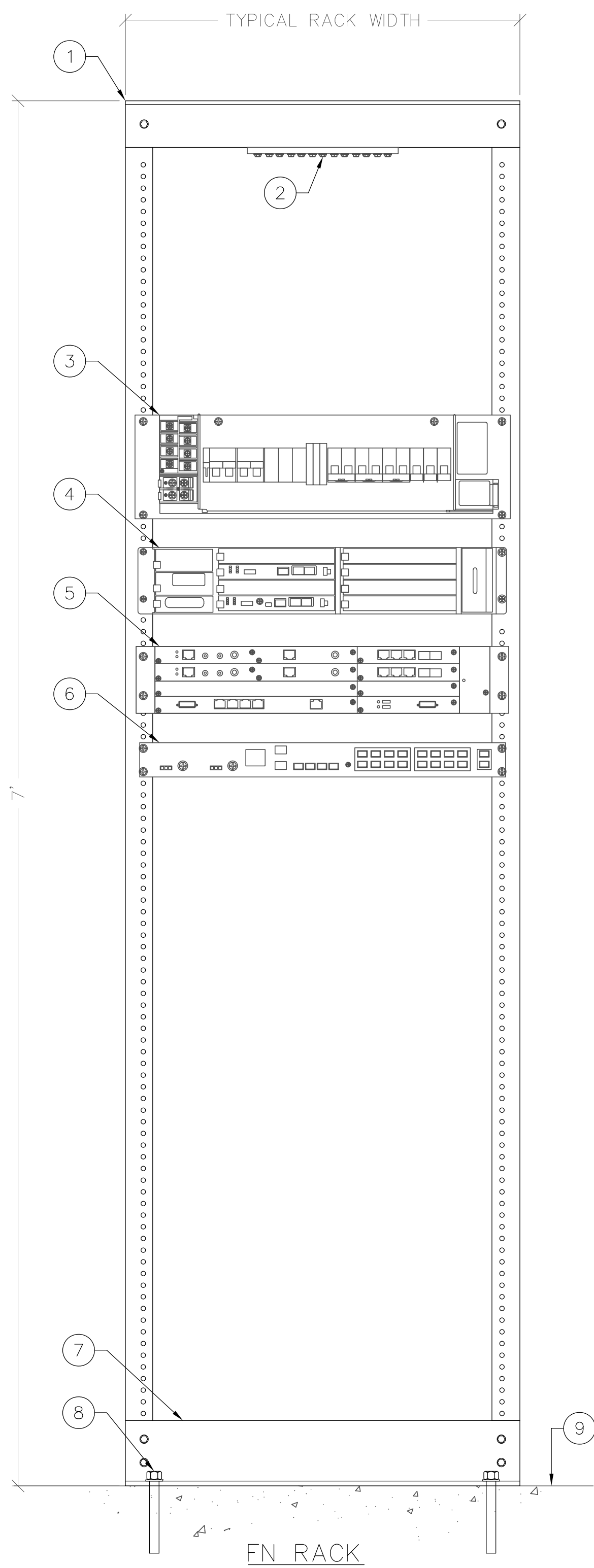
SHEET TITLE
CONSTRUCTION DETAILS

SHEET NUMBER
A-5

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FN RACK KEYED NOTES: #

1. RACK
2. GROUND BAR
3. RECTIFIER
4. BBU
5. MICROWAVE RADIO RACK
6. ROUTER
7. RACK ASSEMBLY
8. ATTACHED RACK TO FLOOR PER MANUFACTURER'S SPECIFICATIONS
9. FLOOR

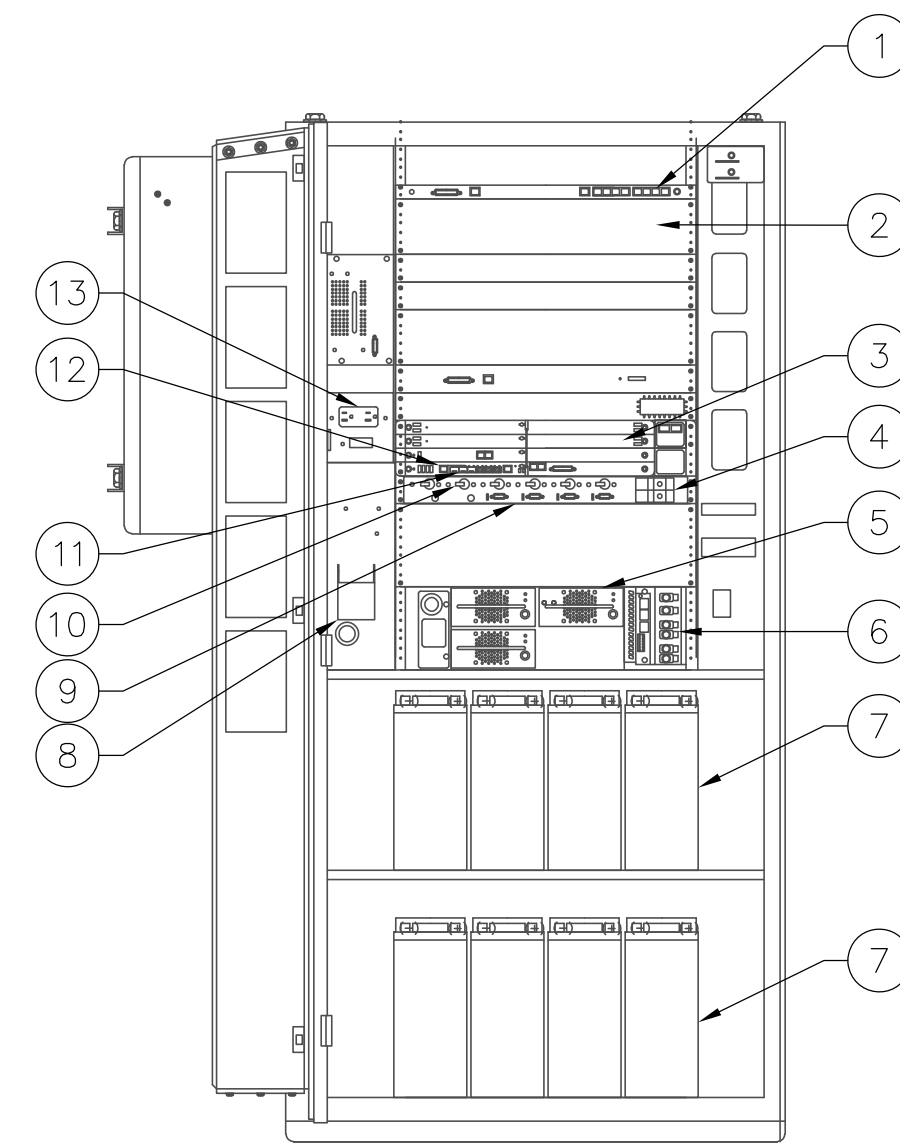


FN RACK

SCALE: N.T.S. **1**

ALU 9929 CABINET KEYED NOTES: #

1. ALARM SHELF: EXTERNAL ALARMS
2. EMPTY EXPANSION BBU RACK
3. BBU SHELF
4. RRH POWER BLOCK
5. RECTIFIERS (TYP.)
6. BATTERY CONNECTIONS
7. BATTERY SHELF (TYP.)
8. AC POWER CONNECTION
9. PDP
10. RRH BREAKERS
11. FIBER OPTIC PORTS
12. DAT CABLE CONNECTION
13. AC OUTLET



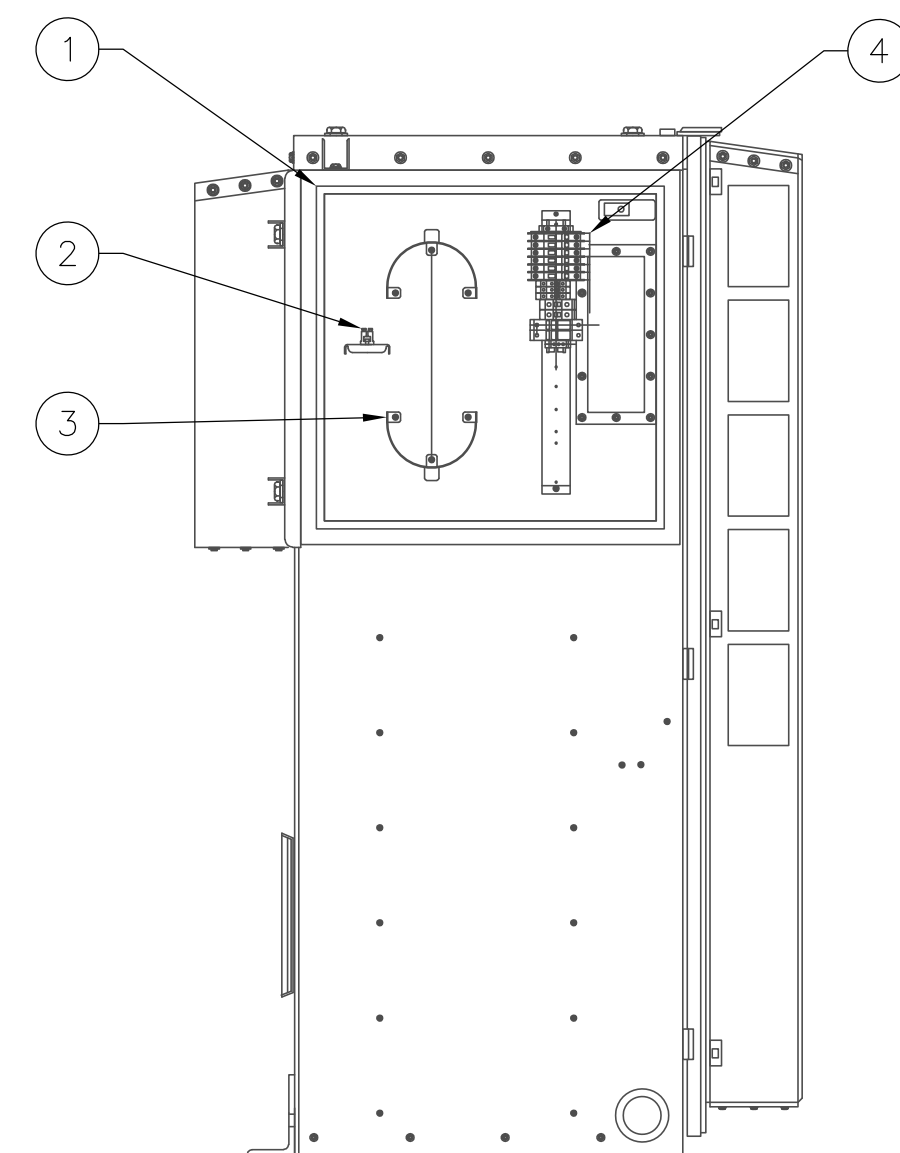
FRONT - DOOR OPEN

ALU 9929 CABINET - FRONT ELEVATION

SCALE: N.T.S. **2**

ALU 9929 CABINET KEYED NOTES: #

1. DC DISTRIBUTION/FIBER MANAGEMENT BOX
2. FIBER PATCH PANEL
3. EXCESS FIBER OPTIC CABLE STORAGE
4. RRH DC BLOCK



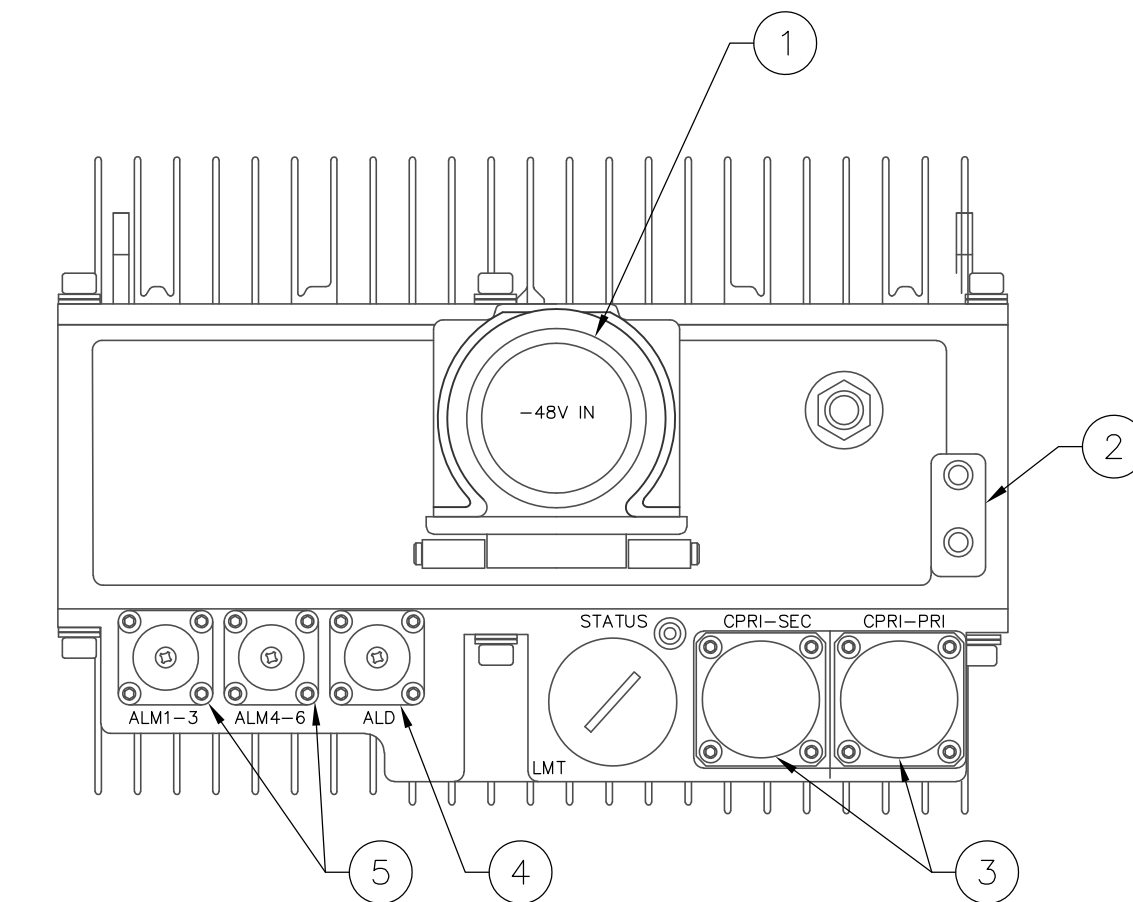
RIGHT SIDE - DOOR OPEN

ALU 9929 CABINET - SIDE ELEVATION

SCALE: N.T.S. **3**

RRH KEYED NOTES: #

1. RRH DC POWER CONNECTION (UNDER RED CAP) - SEE DETAIL 4 ON THIS SHEET
2. GROUND CONNECTION
3. FIBER OPTIC CONNECTION FROM FTTH BOX (POLE MOUNTED) OR INSIDE OF LTE CABINET (BASE MOUNTED)
4. RET CONNECTIONS
5. EXTERNAL ALARMS (IF REQUIRED)



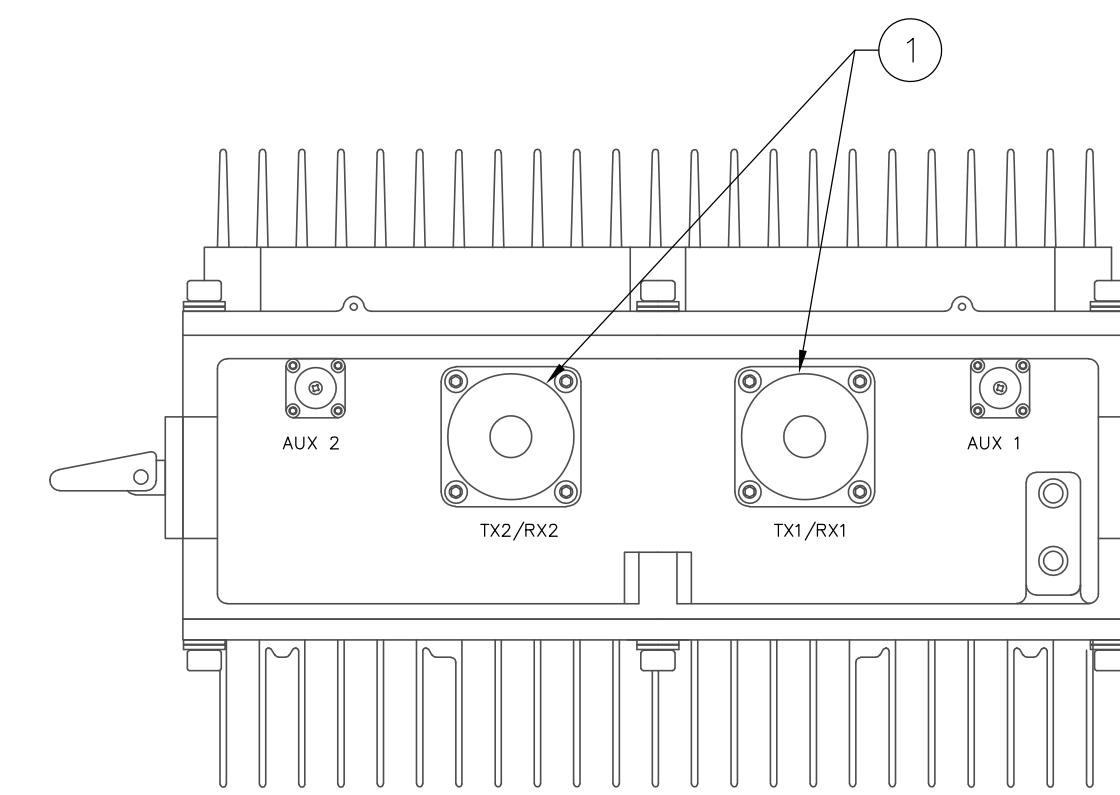
BOTTOM VIEW OF LTE REMOTE RADIO HEAD (RRH)

LTE RRH - BOTTOM VIEW

SCALE: N.T.S. **4**

RRH KEYED NOTES: #

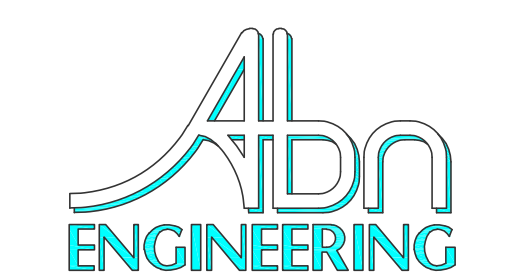
1. ANTENNA JUMPER CONNECTIONS



TOP VIEW OF LTE REMOTE RADIO HEAD (RRH)

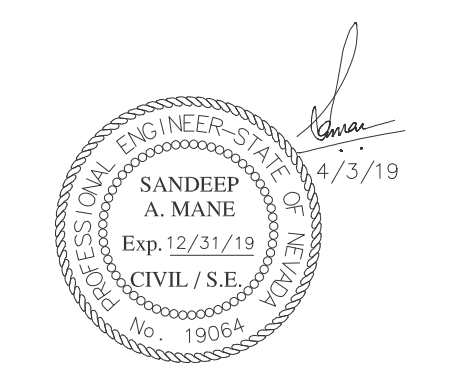
LTE RRH - TOP VIEW

SCALE: N.T.S. **5**



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SHEET TITLE

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A-6

MW RACK DETAIL

SCALE: N.T.S. **1**

ALU 9929 CABINET - SIDE ELEVATION

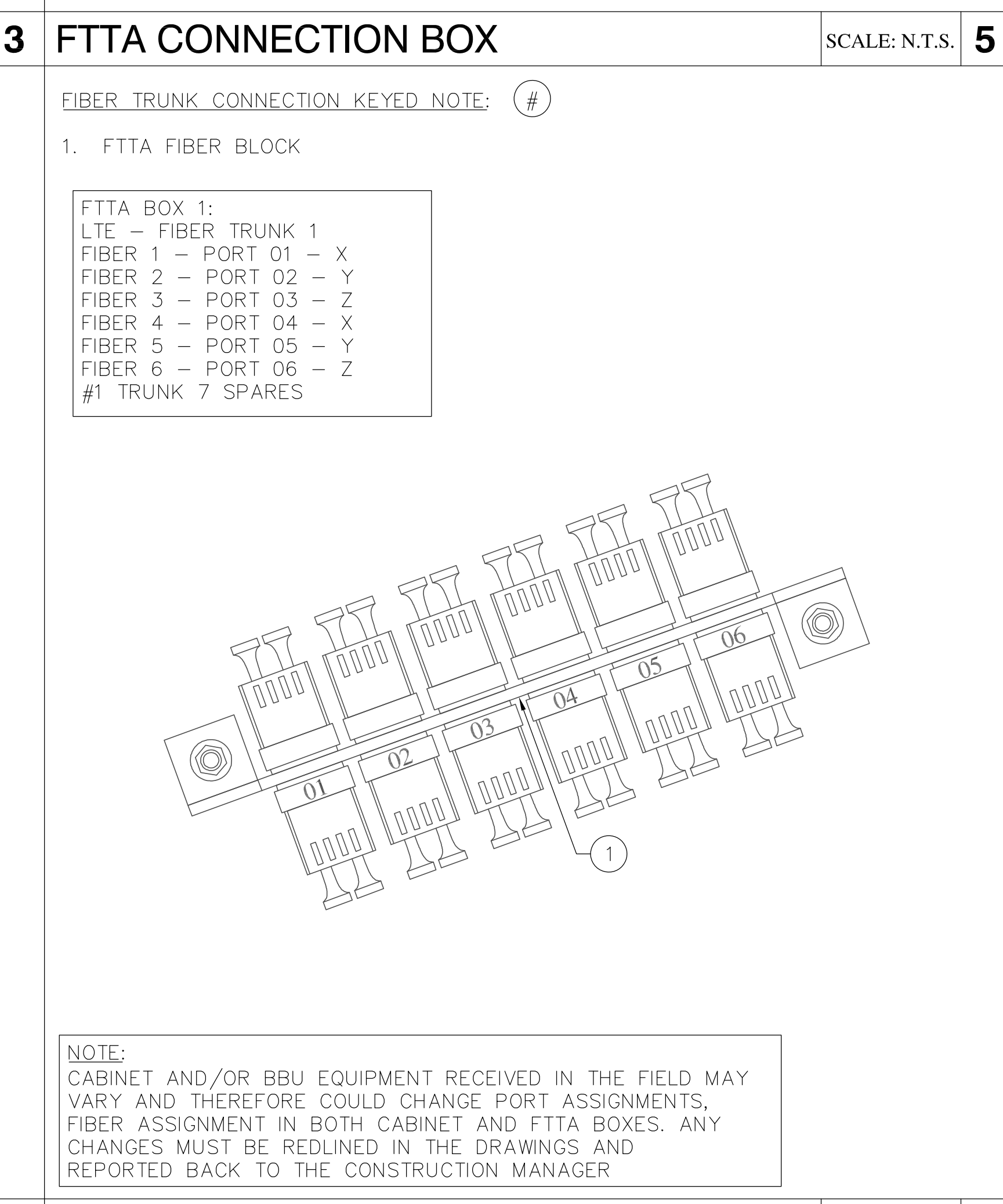
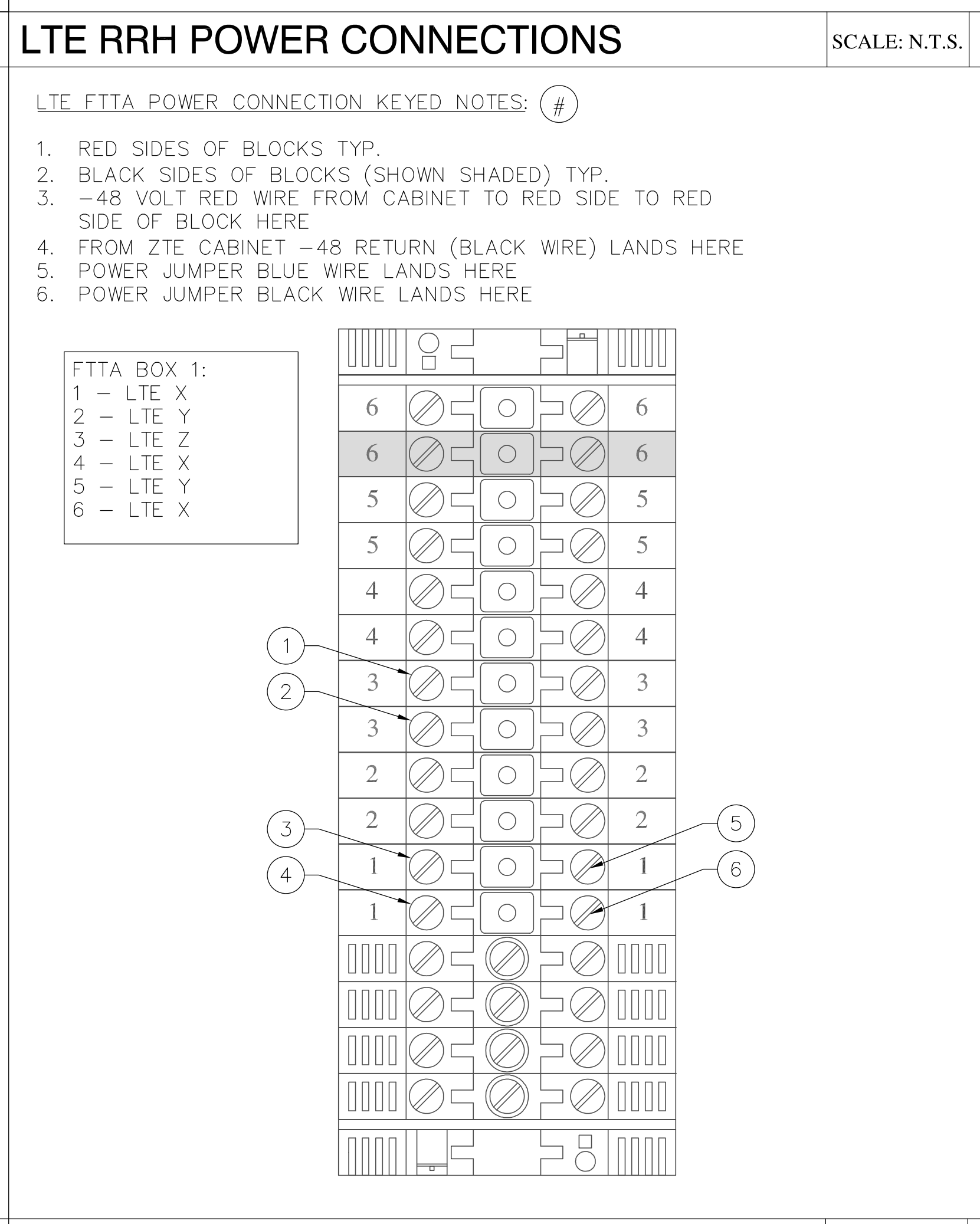
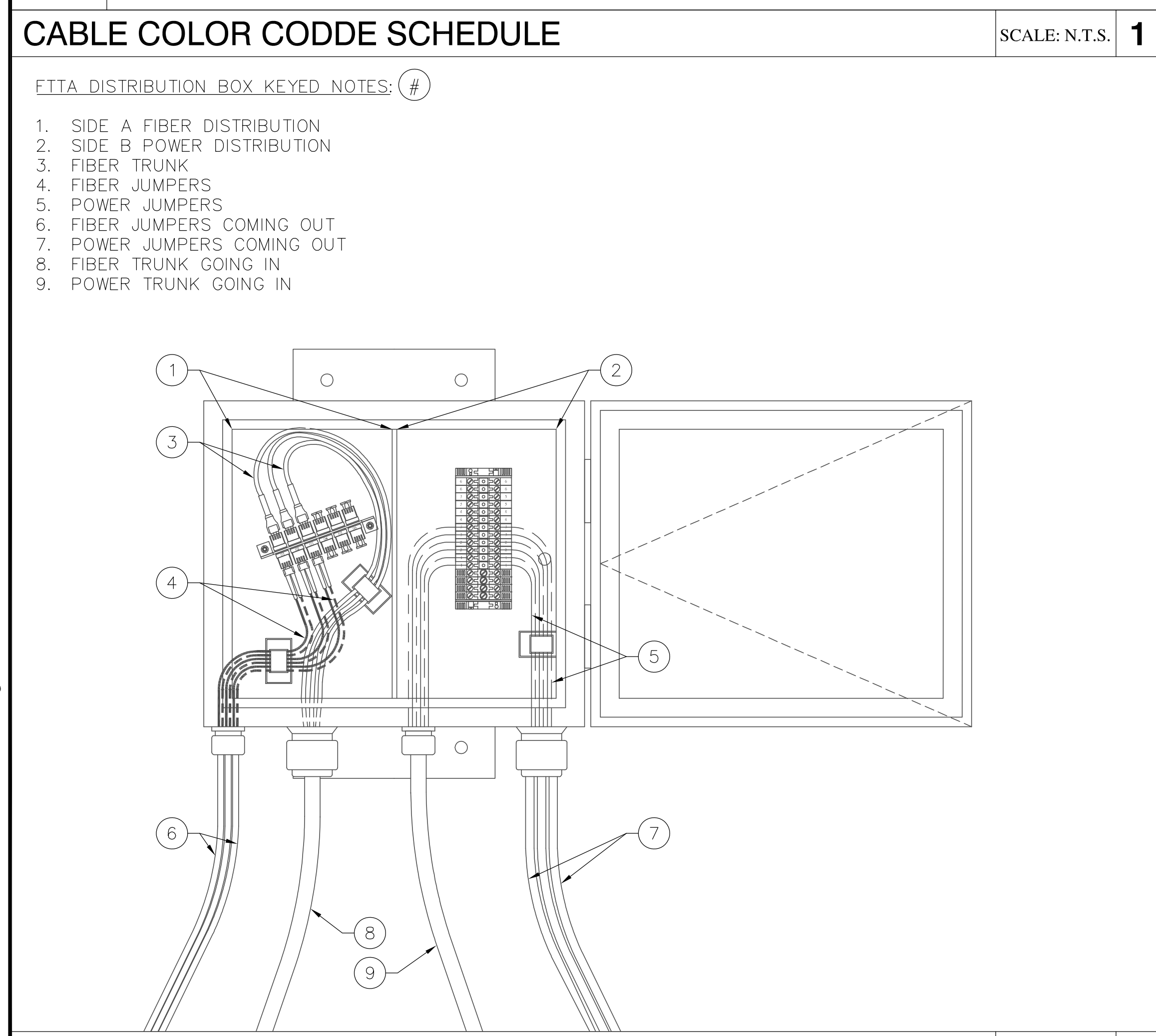
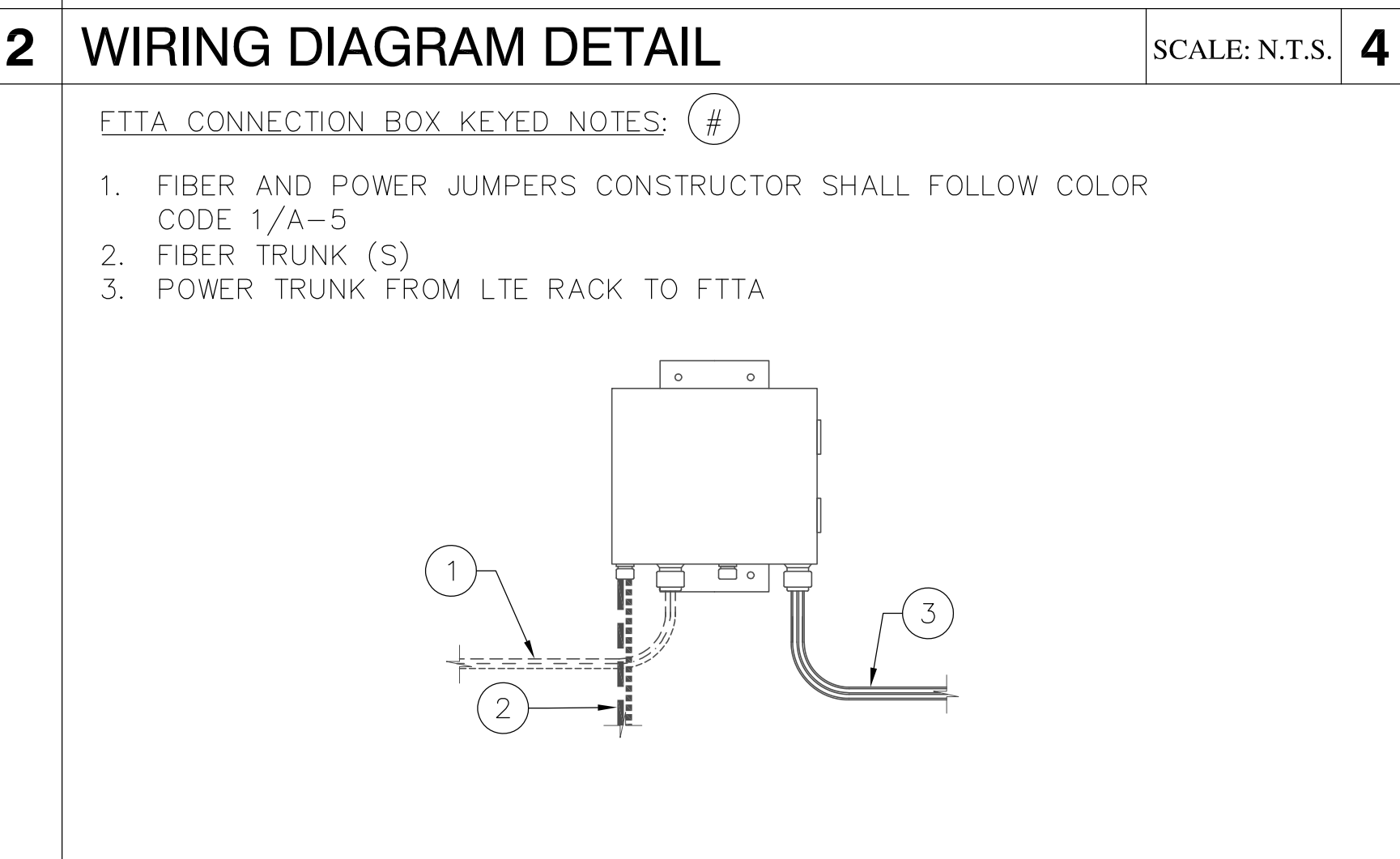
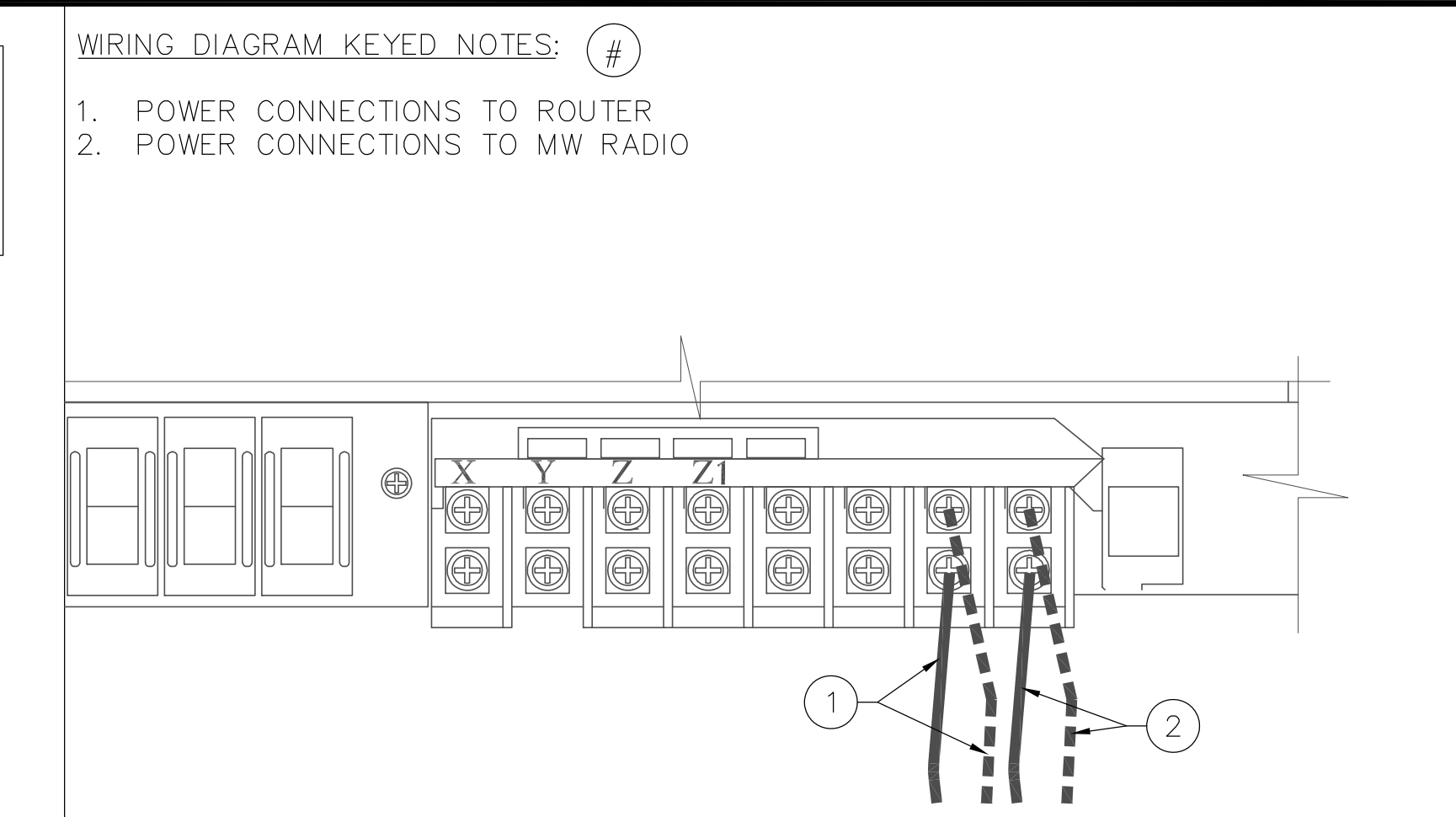
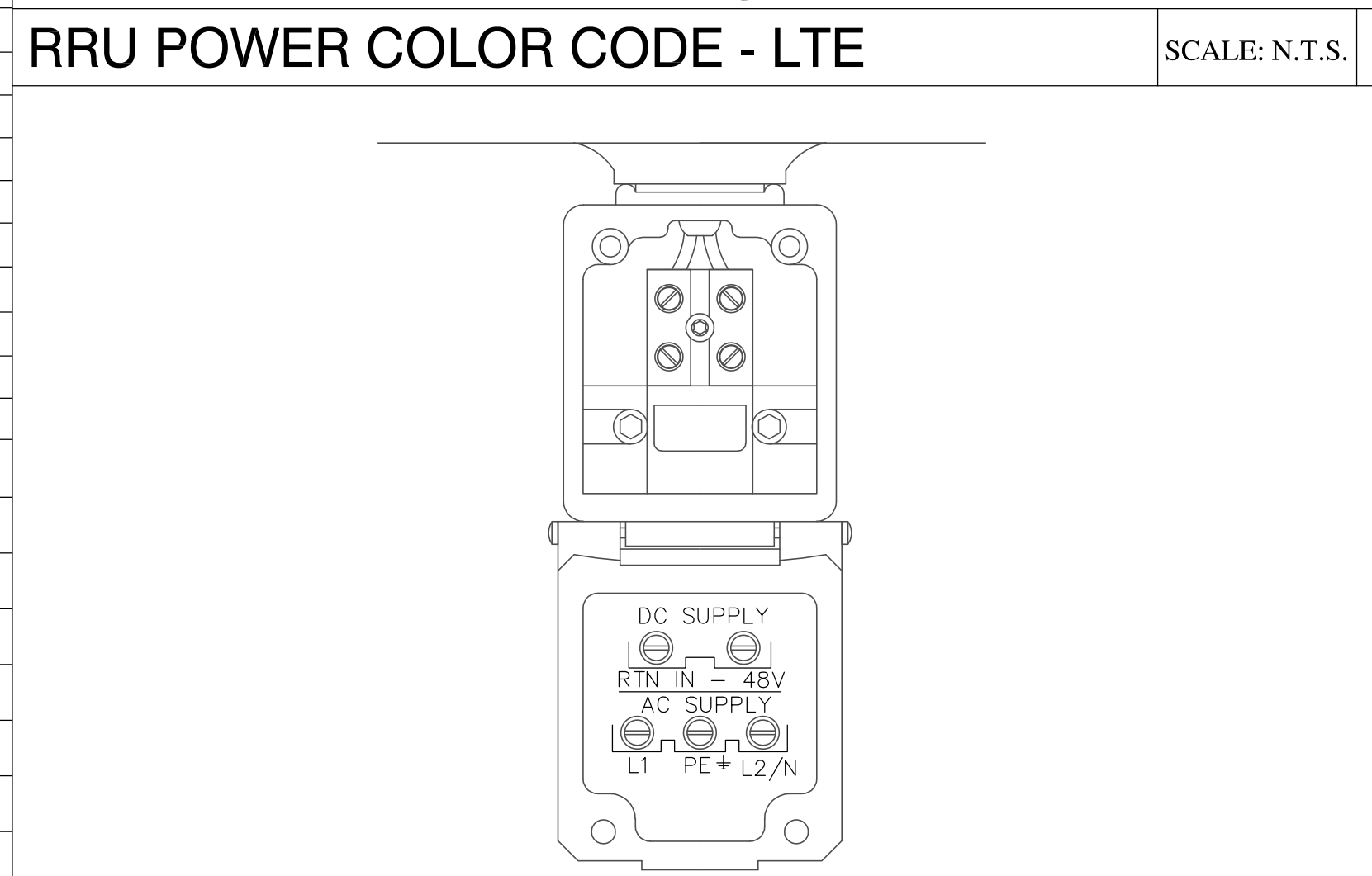
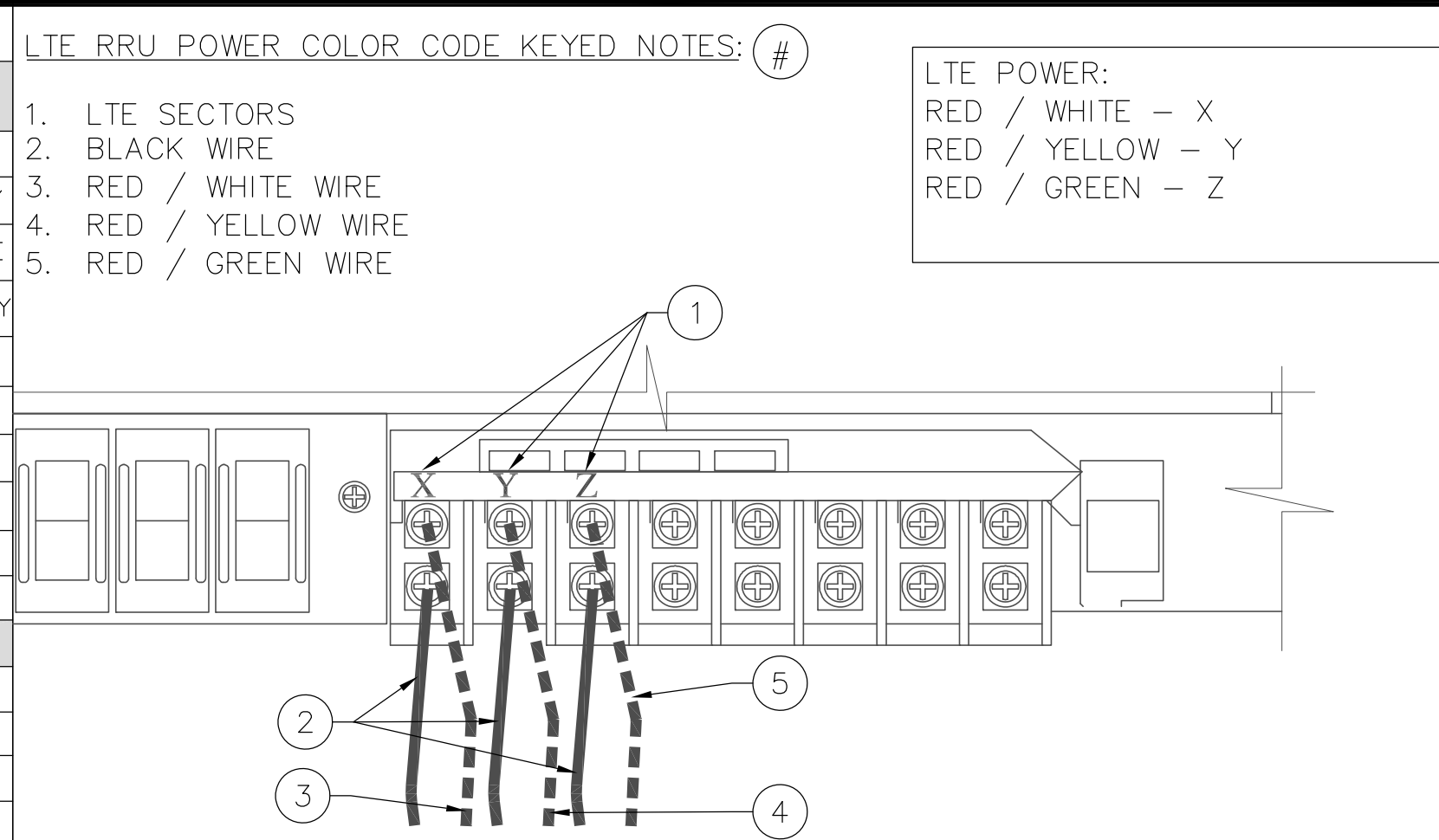
SCALE: N.T.S. **3**

LTE RRH - TOP VIEW

SCALE: N.T.S. **5**

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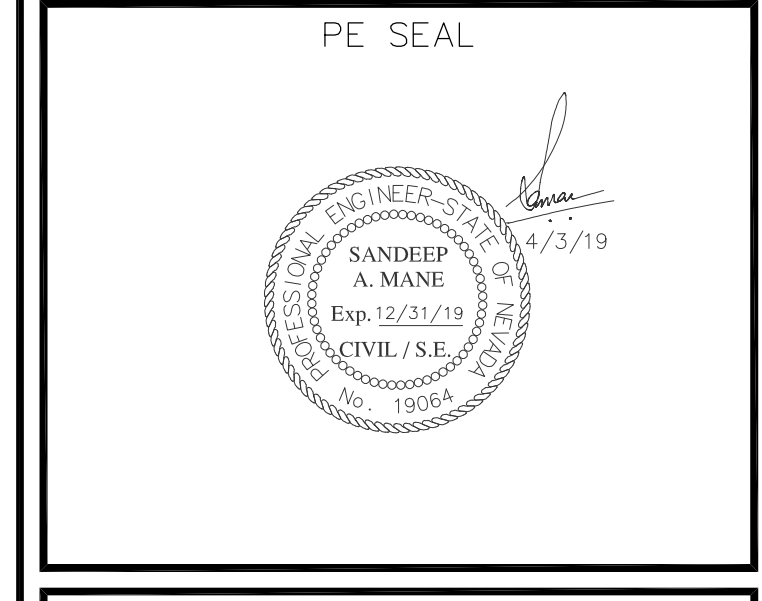
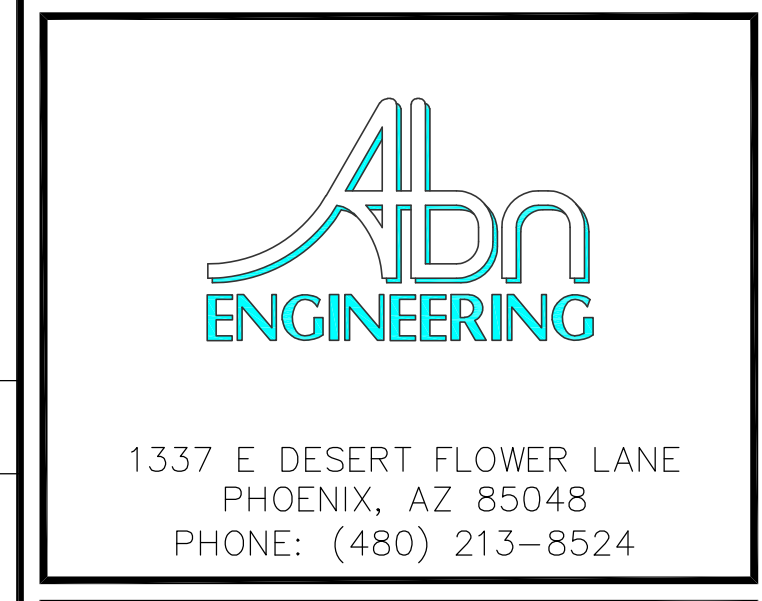
CABLE COLOR CODE SCHEDULE				
TECHNOLOGY	CABLE TYPE	TAPE COLOR	COMMENTS	RRU P/N CODE (LOCATED ON RRU TAG)
LTE	POWER TRUNK	1 ORANGE WRAP	ADDITIONAL POWER OR FIBER TRUNKS FOR LTE, ADD 1 ADDITIONAL WRAP	12955731012 ZXSDR R88 S8500 (B6B) 850 CDMA<E DUAL MODE
LTE	FIBER TRUNK	1 ORANGE WRAP	ADDITIONAL POWER OR FIBER TRUNKS FOR LTE, ADD 1 ADDITIONAL WRAP	12955731009 ZXSDR R88 S8500 (B6A) 850 STANDARD CDMA ONLY
GSM/UMTS	POWER TRUNK	1 YELLOW WRAP	ADDITIONAL POWER OR FIBER TRUNKS FOR GSM/UMTS, ADD 1 ADDITIONAL WRAP	12955731011 ZXSDR R88 S1900 (B6B) 1900 CDMA<E DUAL MODE
GSM/UMTS	FIBER TRUNK	1 YELLOW WRAP	ADDITIONAL POWER OR FIBER TRUNKS FOR GSM/UMTS, ADD 1 ADDITIONAL WRAP	12955731010 ZXSDR R88 S8500 (B6B) 1900 STANDARD CDMA ONLY
CDMA	POWER TRUNK	1 GREEN WRAP	ADDITIONAL POWER OR FIBER TRUNKS FOR CDMA, ADD 1 ADDITIONAL WRAP	12955731037 850 CDMA R8882 NEW SINGLE MODE
CDMA	FIBER TRUNK	1 GREEN WRAP	ADDITIONAL POWER OR FIBER TRUNKS FOR CDMA, ADD 1 ADDITIONAL WRAP	12955731035 1900 CDMA R8882 NEW SINGLE MODE
UMTS	POWER TRUNK	1 PURPLE WRAP	ADDITIONAL POWER OR FIBER TRUNKS FOR UMTS, ADD 1 ADDITIONAL WRAP	12955731023 ZXSDR R8882 S8500(B6B) - 850 GSM/UMTS
UMTS	FIBER TRUNK	1 PURPLE WRAP	ADDITIONAL POWER OR FIBER TRUNKS FOR UMTS, ADD 1 ADDITIONAL WRAP	12955731024 ZXSDR R8882 S1900(B6B) - 1900 GSM/UMTS
DO	POWER TRUNK	1 WHITE WRAP	ADDITIONAL POWER OR FIBER TRUNKS FOR DO, ADD 1 ADDITIONAL WRAP	
DO	FIBER TRUNK	1 WHITE WRAP	ADDITIONAL POWER OR FIBER TRUNKS FOR DO, ADD 1 ADDITIONAL WRAP	
TECHNOLOGY	CABLE TYPE	TAPE COLOR	COMMENTS	
LTE	POWER TRUNK	1 ORANGE+FREQ+SECTOR		
LTE	FIBER TRUNK	1 ORANGE+FREQ+SECTOR		
GSM/UMTS	POWER TRUNK	1 YELLOW+FREQ+SECTOR		
GSM/UMTS	FIBER TRUNK	1 YELLOW+FREQ+SECTOR		
CDMA	POWER TRUNK	1 GREEN+FREQ+SECTOR		
CDMA	FIBER TRUNK	1 GREEN+FREQ+SECTOR		
UMTS	POWER TRUNK	1 PURPLE+FREQ+SECTOR		
UMTS	FIBER TRUNK	1 PURPLE+FREQ+SECTOR		
DO	POWER TRUNK	1 WHITE+FREQ+SECTOR		
DO	FIBER TRUNK	1 WHITE+FREQ+SECTOR		
FREQUENCY	COLOR			
700	BLACK/BLANK			
850	GREY			
1900	BROWN			
SECTOR	CABLE TYPE	COLOR		
X	COAX JUMPER	RED		
Y	COAX JUMPER	WHITE		
Z	COAX JUMPER	BLUE		
EXAMPLE	COLOR CODE FOR LTE FOR 700MHz - 1 ORANGE WRAP, 1 BLACK OR LEAVE BLANK (CABLE COLOR IS ALREADY BLACK) ON POWER / FIBER TRUNK			
COLOR CODE FOR GSM/UMTS FOR 850 MHz - 1 YELLOW WRAP, 1 GREY				



FTTA DISTRIBUTION BOX CONNECTION DETAIL SCALE: N.T.S. **6**

LTE FTTA POWER CONNECTION SCALE: N.T.S. **7**

FIBER TRUNK CONNECTION SCALE: N.T.S. **8**



DESIGNER: JASON NGO

LEAD EE: SB

LEAD CE/SE: SAM

SUBMITTALS			
REV.	DATE	DESCRIPTION	BY
H	1/25/19	COMMENTS	JN
I	2/13/19	COMMENTS	JN
J	2/18/19	COMMENTS	JN
K	2/19/19	FINAL CD	JN
L	4/3/19	REVISED CD	JN

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SITE NAME
 VYA, NEVADA

PROJECT
 RAW LAND MONOPOLE

SITE ADDRESS
 LAT: 41° 35' 30.76358"N
 LONG: 119° 52' 47.14752"W
 89000A DUGWAY ROAD
 GERLACH, NV 89413

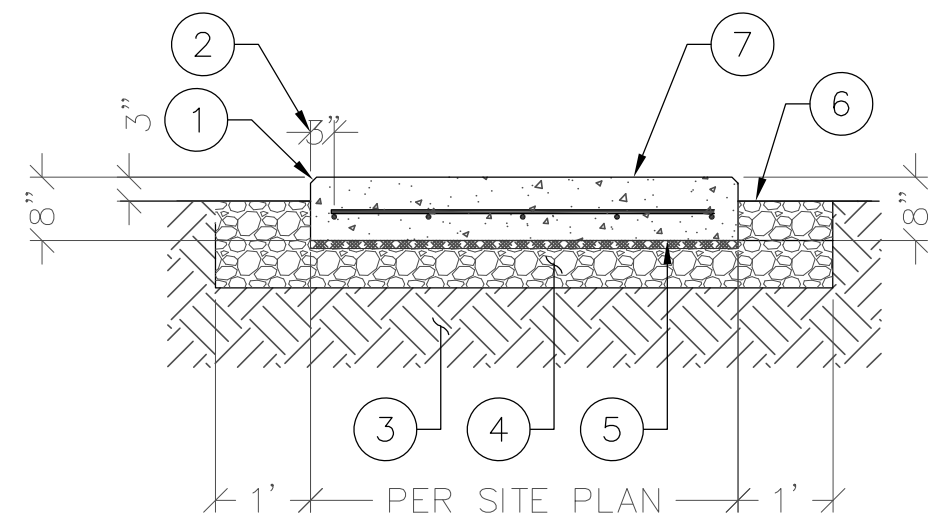
SHEET TITLE
 CONSTRUCTION DETAILS

SHEET NUMBER
 A-7

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CONCRETE SLAB KEYED NOTES: #

- 3/4" CHAMFER EDGE (TYP.)
- 3" REINFORCEMENT CLEARANCE FROM SLAB PERIMETER
- NATURAL SOIL
- 6" THK. MIN. CRUSHED STONE OR COMPACTED GRANULAR FILL
- USE 6 MIL PLASTIC MOISTURE BARRIER
- FINISHED GRADE LEVEL
- 8" THK. SLAB W/ #4 @ 12" O.C. EACH WAY; SLAB FINISH 4" ABOVE GRADE



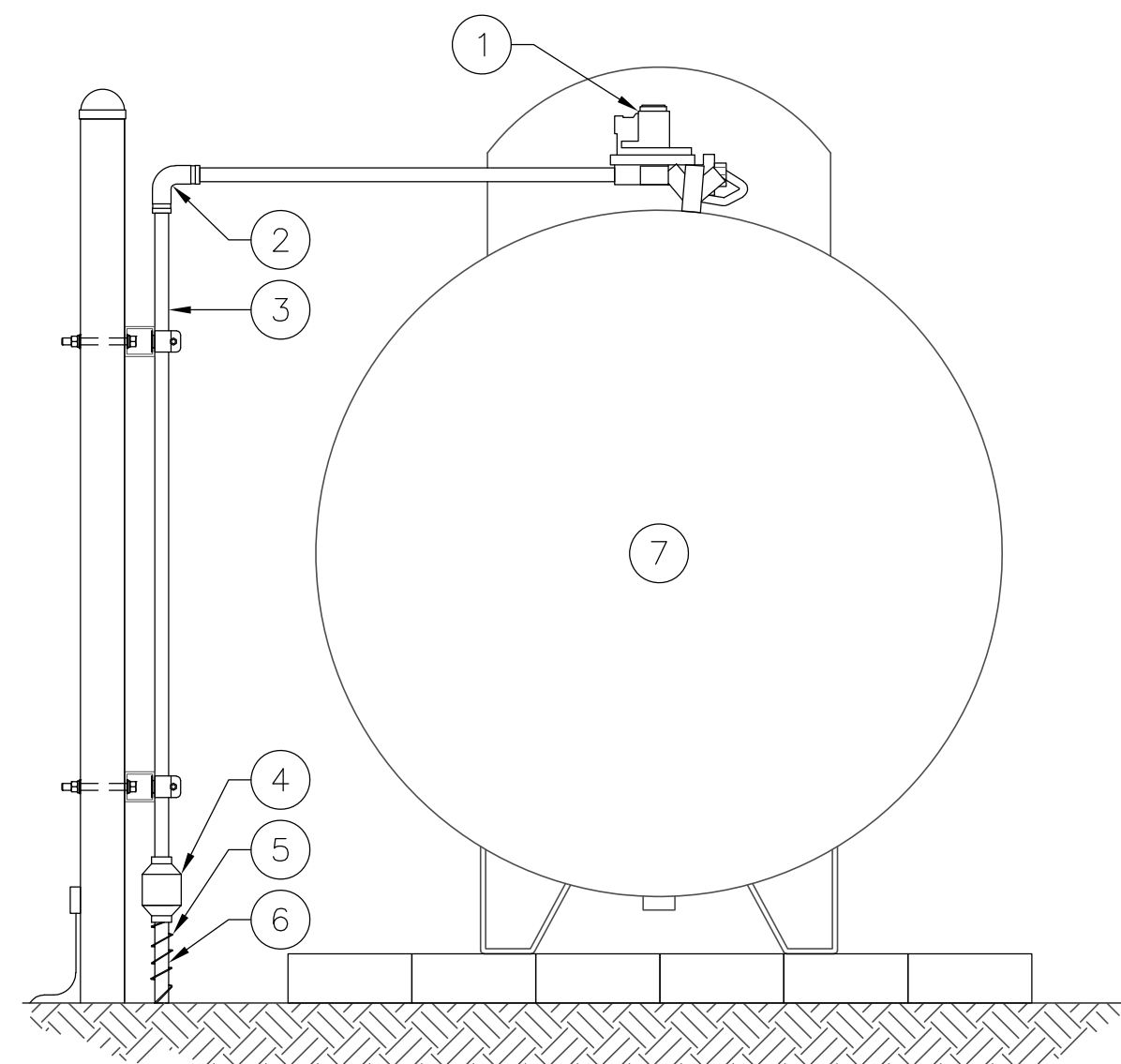
NOTE:
USE ITW RED HEAD TRUBOLT + WEDGE ANCHOR 1/2" DIA. ANCHOR BOLT W/ 3-1/4" MIN EMBEDMENT (TOTAL 4); VERIFY SIZE W/ MANUFACTURER SPECS.

GENERATOR SLAB DETAILS

N.T.S. **1**

FIRST STAGE REGULATOR KEYED NOTES: #

- FIRST STAGE REGULATOR; COORDINATE W/ PROPANE SUPPLIER
- 1-1/2" A53/53M PIPE FITTING 90° ELBOW
- 1-1/2" A53/53M PIPE (VERIFY PIPE BY INSPECTOR OF RECORD PRIOR TO COATING WITH COAL TAR EPOXY)
- PIPE FITTING
- TRACER WIRE INSTALLED ON ALL POLYETHYLENE PIPE
- 1-1/2" POLYETHYLENE PIPE
- PROPANE TANK



1ST STAGE REGULATOR DETAIL

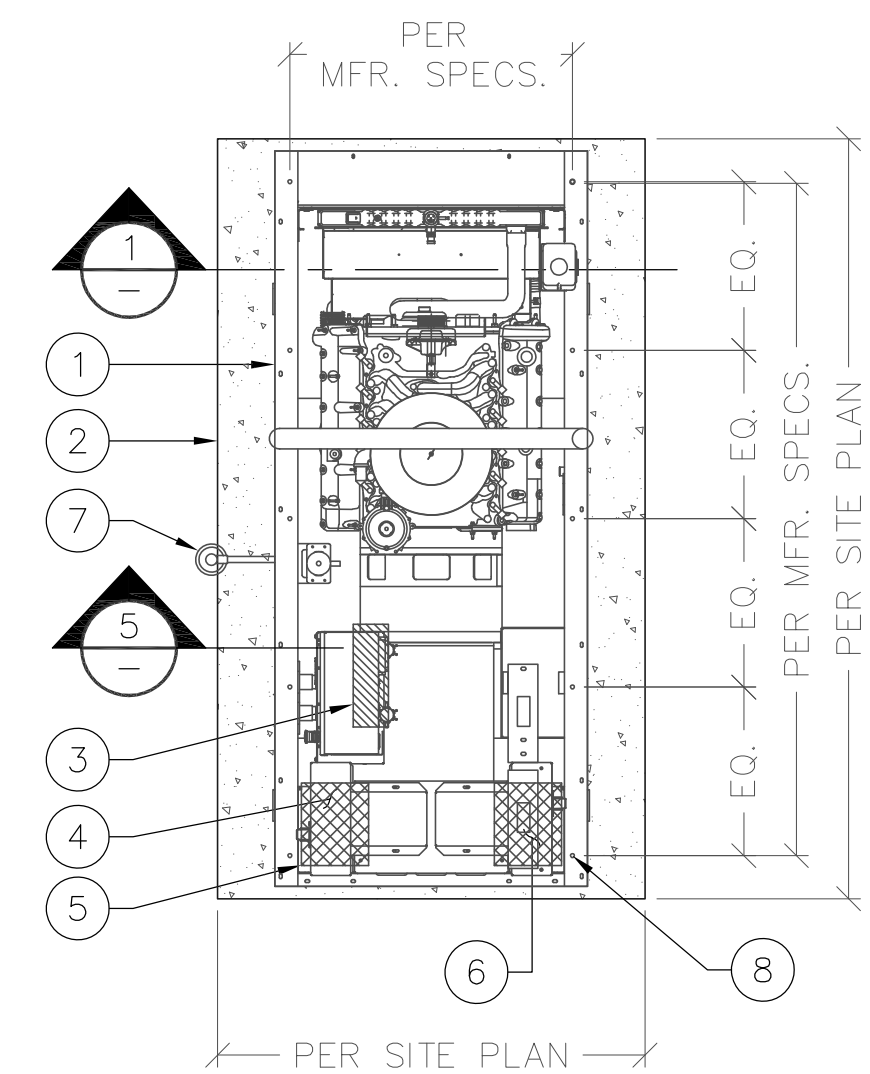
N.T.S. **2**

GENERATOR CONCRETE SLAB KEYED NOTES: #

- OUTLINE OF GENERATOR
- 3/4" CHAMFER EDGE (TYP.)
- LOW VOLTAGE STUB-UP AREA (SEE NOTE 3)
- PRIMARY CB CONNECTION BOX OPENING
- PRIMARY HIGH VOLTAGE STUB-UP AREA
- SECONDARY HIGH VOLTAGE STUB-UP AREA
- SECOND STAGE REGULATOR, SEE DETAIL 5 ON THIS SHEET
- ITW RED HEAD TRUBOLT + WEDGE ANCHOR 1/2" DIA. ANCHOR BOLT W/ 3-1/4" MIN EMBEDMENT (MIN. 4); VERIFY SIZE W/ MANUFACTURER SPECS.

GENERATOR FOUNDATION NOTES:

- VERIFY DIMENSIONS WITH GENERATOR MANUFACTURER ALONG WITH LOCATION OF BASE FRAME CONNECTIONS.
- VERIFY DIMENSIONS WITH GENERATOR MANUFACTURER ALONG WITH LOCATION OF OPEN STUB-UP AREA THROUGH FUEL TANK BASE.
- CONNECTION POINTS FOR CONTROL WIRES PROVIDED IN THE LOW VOLTAGE CONNECTION BOX (USE LOW VOLTAGE STUB UP AREA)
- REMOVE ALL LOOSE INORGANIC OR UNSUITABLE SOIL TO UNDISTURBED BEARING STRATA W/ ALLOWABLE SOIL BEARING PRESSURE OF 1500 PSF.
- CONCRETE STRENGTH SHALL BE 2500 PSI, MIN.
- SUB-GRADE SHALL BE COMPACTED 95% AND INDEPENDENTLY TESTED.
- GENERAL SUBCONTRACTOR TO FOLLOW SUBGRADE PREPARATION STATED IN GEOTECHNICAL REPORT



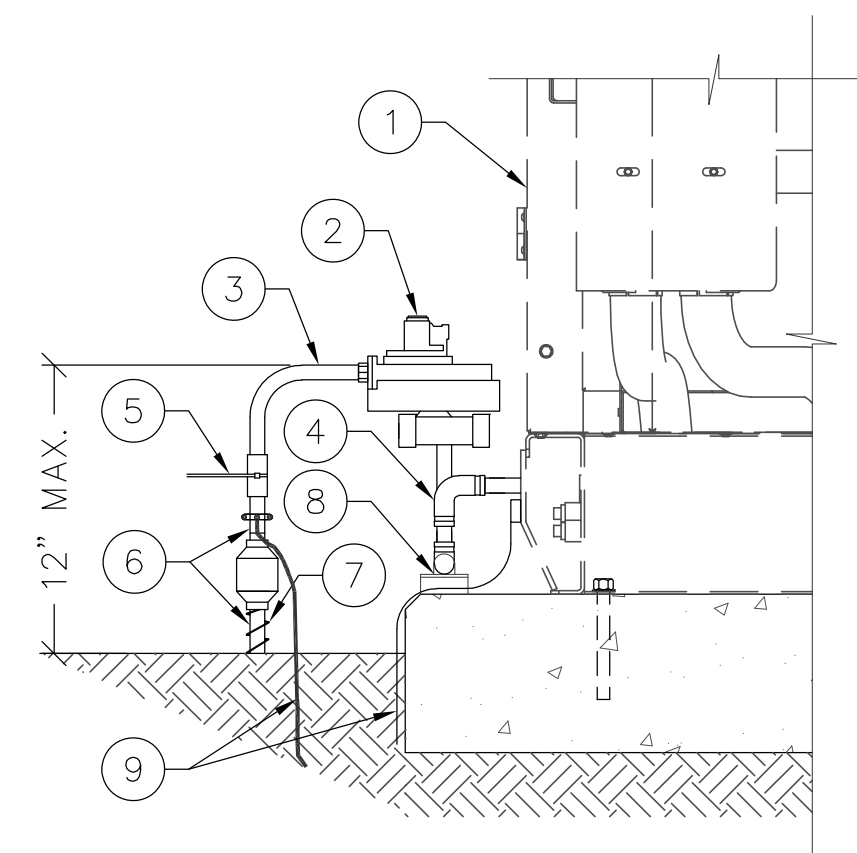
PLAN VIEW

GENERATOR CONC. SLAB DETAIL

N.T.S. **3**

2ND STAGE REGULATOR KEYED NOTES: #

- OUTDOOR GENERATOR.
- SECOND STAGE REGULATOR - CONTRACTOR TO VERIFY WITH GENERATOR MANUFACTURER PRIOR TO INSTALL.
- 1-1/2" A53/53M PIPE (VERIFY PIPE BY INSPECTOR PRIOR TO COATING WITH COAL TAR EPOXY).
- 1-1/2" A53/53M PIPE FITTING 90° ELBOW.
- SHUT OFF VALVE.
- 1-1/2" POLYETHYLENE PIPE.
- TRACER WIRE INSTALLED ON ALL POLYETHYLENE PIPE.
- STRUT STRAP & P-1000T UNISTRUT ANCHORED TO CONC. SLAB W/ 1/4" x 2" (L) RED HEAD HAMMER-SET NAIL DRIVE OR EQUIV.
- MECHANICAL GROUND & #2 TINNED GROUND LEAD TO EXTERIOR GROUND RING.

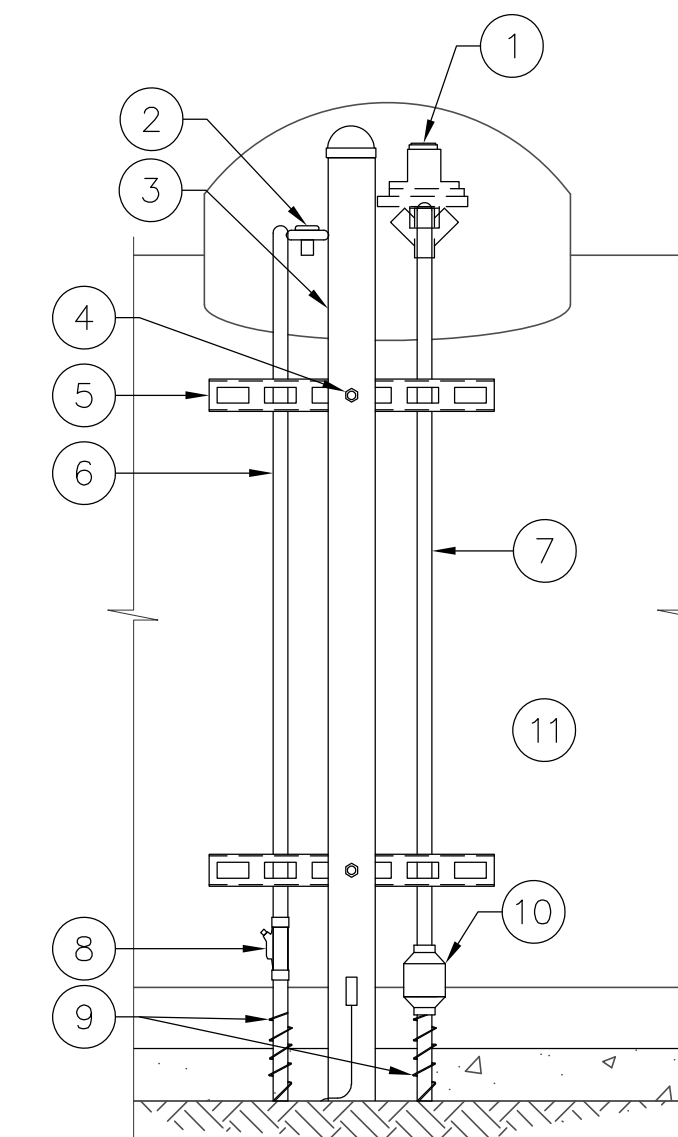


2ND STAGE REGULATOR DETAIL

N.T.S. **4**

MONITOR & GAS LINE KEYED NOTES: #

- FIRST STAGE REGULATOR; COORDINATE WITH PROPANE SUPPLIER
- REMOTE READY HALL EFFECT MODULE TWINsites AND R3D HALL EFFECT MODULE
- 2" Ø STAND OFF PIPE CALLED 4" ABOVE GRADE WITH 18" EMBEDMENT IN CONCRETE PIER
- 3/8" GALV. THRU BOLT (TYP.)
- 14" LONG P1000T UNISTRUT WITH SUPERSTRUT PIPE STRAP (TYP.)
- 3/4" SCH. 40 UV RATED PVC PIPE
- 1-1/2" A53/53M PIPE (VERIFY PIPE BY INSPECTOR OF RECORD PRIOR TO COATING WITH COAL TAR EPOXY)
- EXPLOSION- PROOF FITTING RESPA-EYF75-AL
- TRACER WIRE INSTALLED ON ALL POLYETHYLENE PIPE
- PIPE FITTING
- PROPANE TANK



MONITOR & GAS LINE DETAIL

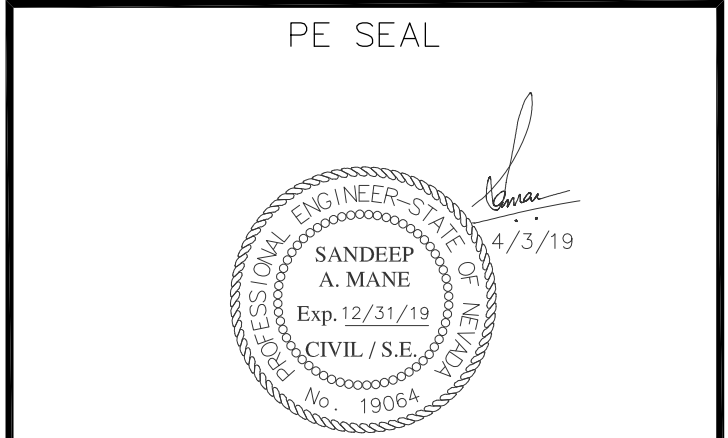
N.T.S. **6**

NOT USED

N.T.S. **4**



1337 E DESERT FLOWER LANE
PHOENIX, AZ 85048
PHONE: (480) 213-8524



DESIGNER: JASON NGO
LEAD EE: SB
LEAD CE/SE: SAM

SUBMITTALS			
REV.	DATE	DESCRIPTION	BY
H	1/25/19	COMMENTS	JN
I	2/13/19	COMMENTS	JN
J	2/18/19	COMMENTS	JN
K	2/19/19	FINAL CD	JN
L	4/3/19	REVISED CD	JN

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SITE NAME
VYA, NEVADA

PROJECT
RAW LAND MONOPOLE

SITE ADDRESS
LAT: 41° 35' 30.76358"N
LONG: 119° 52' 47.14752"W
89000A DUGWAY ROAD
GERLACH, NV 89413

SHEET TITLE
CONSTRUCTION DETAILS

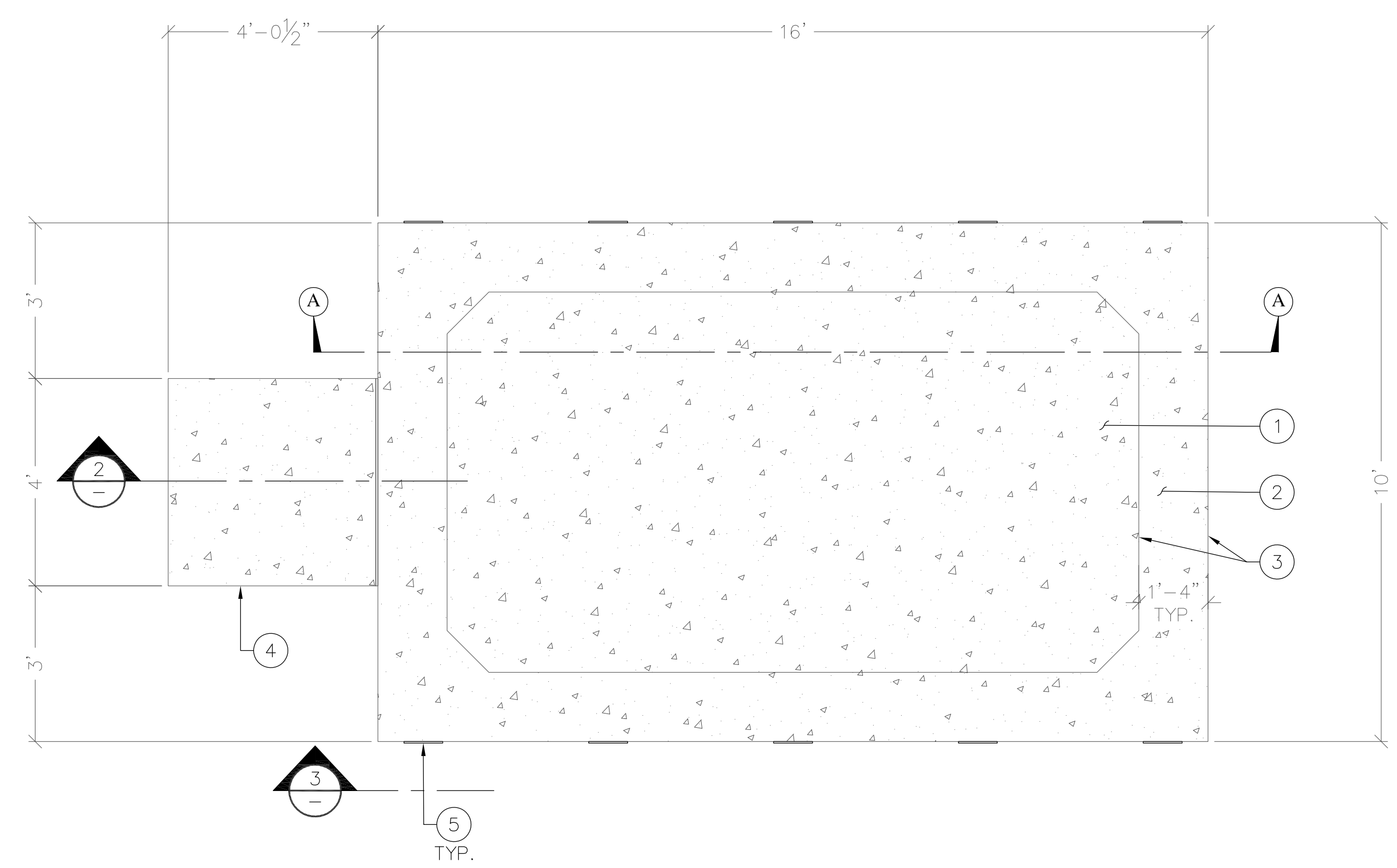
SHEET NUMBER
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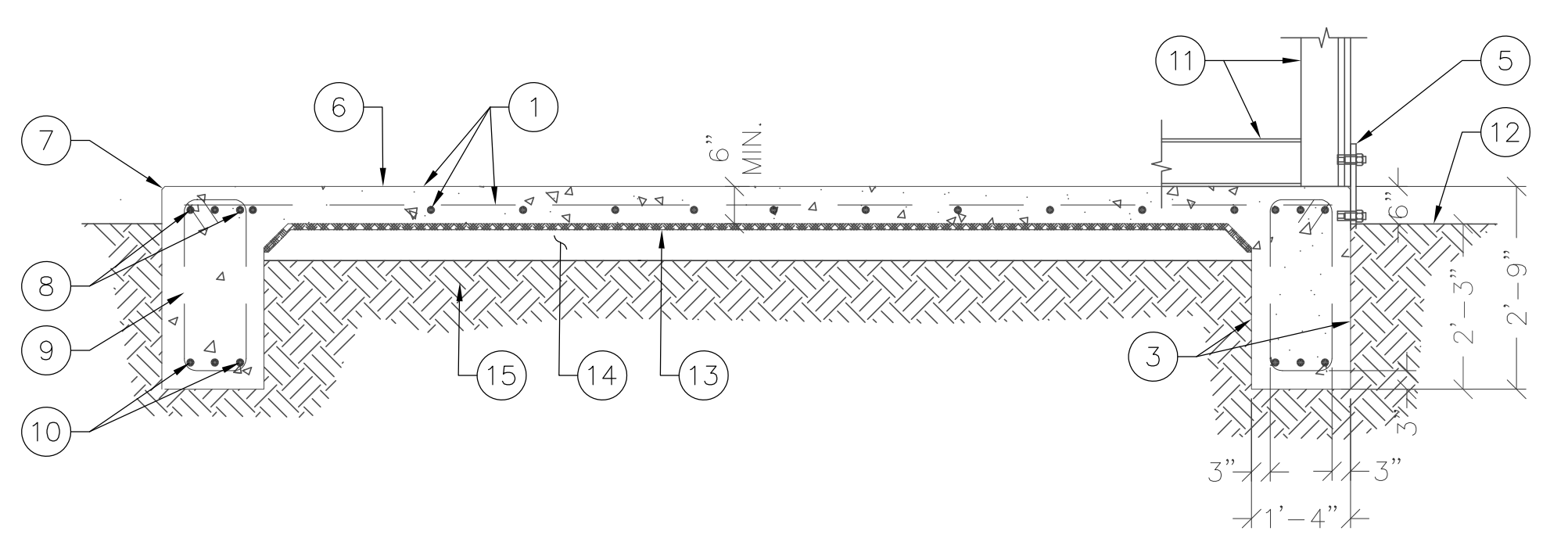
FOUNDATION KEYED NOTES: #

1. 6" CONCRETE SLAB W/ #4 @ 8" O.C. EACH WAY
2. (3) #5 CONTINUOUS REINFORCING TYP. TOP & BOTTOM OF PERIMETER FOOTING
3. TYPICAL TURNDOWN AT PERIMETER
4. CONCRETE STOOP (TYP.)
5. ANCHOR BOLTS AND TIE DOWN PLATE IN ACCORDANCE WITH MANUFACTURER'S SHELTER DRAWINGS
6. USE SPRAY ON CURING AGENT
7. MIN. 1/2" CHAMFER ON ALL EXPOSED EDGES BOTH VERTICAL & HORIZONTAL
8. (3) #5 TOP
9. #4 STIRRUPS @ 14" O.C. (TYP.)
10. (3) #5 BOTTOM
11. SHELTER WALL AND FLOOR
12. FINISH GRADE
13. 6 MIL PLASTIC MOISTURE BARRIER
14. 6" THK MIN. CRUSHED STONE OR COMPACTED GRANULAR FILL (SEE NOTE 6), ALSO REFER GEOTECHNICAL REPORT FOR REQUIRED BACKFILL SPECIFICATION
15. FILL TO LEVEL W/ NATURAL BACKFILL

- SHELTER FOUNDATION NOTES**
1. CONTRACTOR TO VERIFY DIMENSIONS WITH SHELTER MANUFACTURER.
 2. REMOVE ALL LOOSE INORGANIC OR UNSUITABLE SOIL TO UNDISTURBED BEARING STRATA W/ ALLOWABLE SOIL BEARING PRESSURE OF 1500 PSF.
 3. CONCRETE STRENGTH SHALL BE 4000 PSI, MIN.
 4. SLAB SHALL BE LEVEL ±1/4"
 5. SHELTER TIE DOWN DETAIL PROVIDED BY SHELTER MANUFACTURER.
 6. SUB-GRADE SHALL BE COMPACTED 95%.
 7. FINISH SLAB ELEVATION TO BE 6" ABOVE HIGHEST ADJACENT EXISTING GRADE



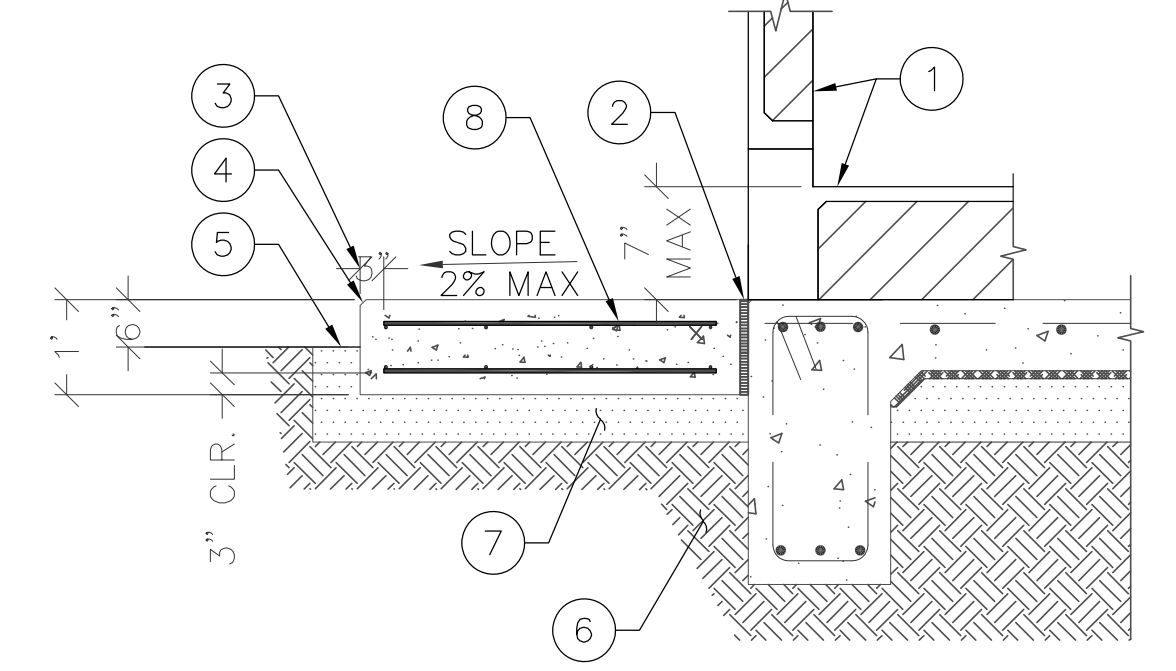
PLAN



SECTION "A-A"

TYPICAL CONCRETE STOOP KEYED NOTES: #

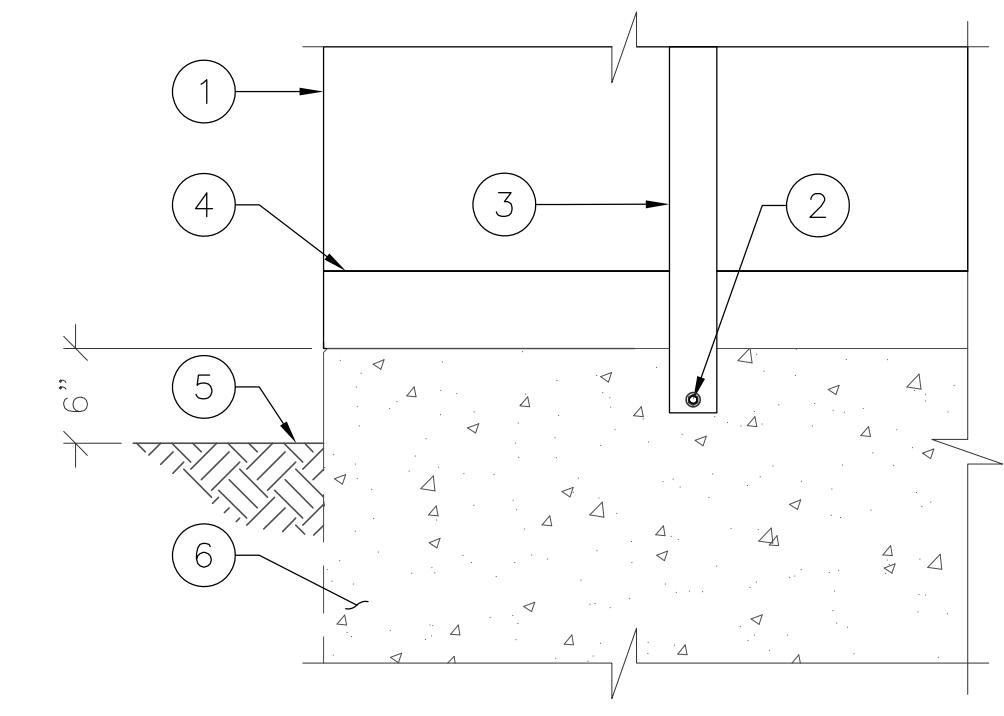
1. SHELTER WALL AND FINISHED FLOOR
2. 1/2" NEOPRENE FILLER
3. 3" REINFORCEMENT CLEARANCE FROM SLAB PERIMETER
4. 3/4" CHAMFER EDGE (TYP.)
5. TRANSITION FINISH GRADE
6. NATURAL SOIL OR BEDROCK
7. 6" THK MIN. CRUSHED STONE OR COMPACTED GRANULAR FILL (SEE NOTE 6), ALSO REFER GEOTECHNICAL REPORT FOR REQUIRED BACKFILL SPECIFICATION
8. 12" SLAB WITH #5 @ 12" O.C. EACH WAY TOP & BOTTOM, SLAB FINISH 6" ABOVE FINISH GRADE



CONCRETE STOOP DETAIL SCALE: N.T.S. **2**

SHELTER ANCHOR KEYED NOTES: #

1. SHELTER
2. ANCHOR BOLT SUPPLIED BY MANUFACTURER (TYP.)
3. STEEL TIE DOWN TRAP PROVIDED BY SHELTER MANUFACTURER (VERIFY W/ SHELTER MANUFACTURER)
4. SHELTER FLOOR
5. FINISH GRAVEL LEVEL
6. CONCRETE TURNDOWN AT PERIMETER

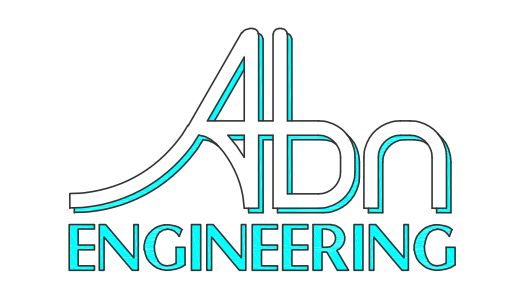


SHELTER ANCHORING DETAIL SCALE: N.T.S. **3**

SHELTER FOUNDATION DETAILS

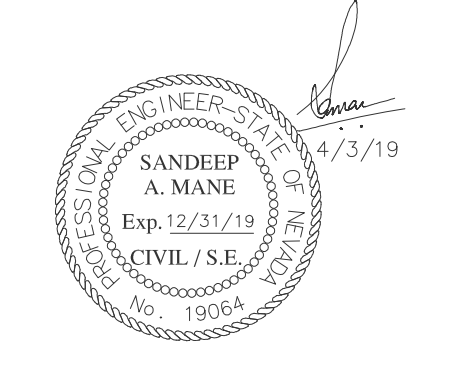
SCALE: N.T.S. **1** NOT USED

SCALE: N.T.S. **4**



1337 E DESERT FLOWER LANE
PHOENIX, AZ 85048
PHONE: (480) 213-8524

PE SEAL



DESIGNER: JASON NGO

LEAD EE: SB

LEAD CE/SE: SAM

SUBMITTALS

REV.	DATE	DESCRIPTION	BY
H	1/25/19	COMMENTS	JN
I	2/13/19	COMMENTS	JN
J	2/18/19	COMMENTS	JN
K	2/19/19	FINAL CD	JN
L	4/3/19	REVISED CD	JN

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SITE NAME

VYA, NEVADA

PROJECT

RAW LAND MONOPOLE

SITE ADDRESS

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89000A DUGWAY ROAD
GERLACH, NV 89413

SHEET TITLE

SHELTER FOUNDATION DETAILS

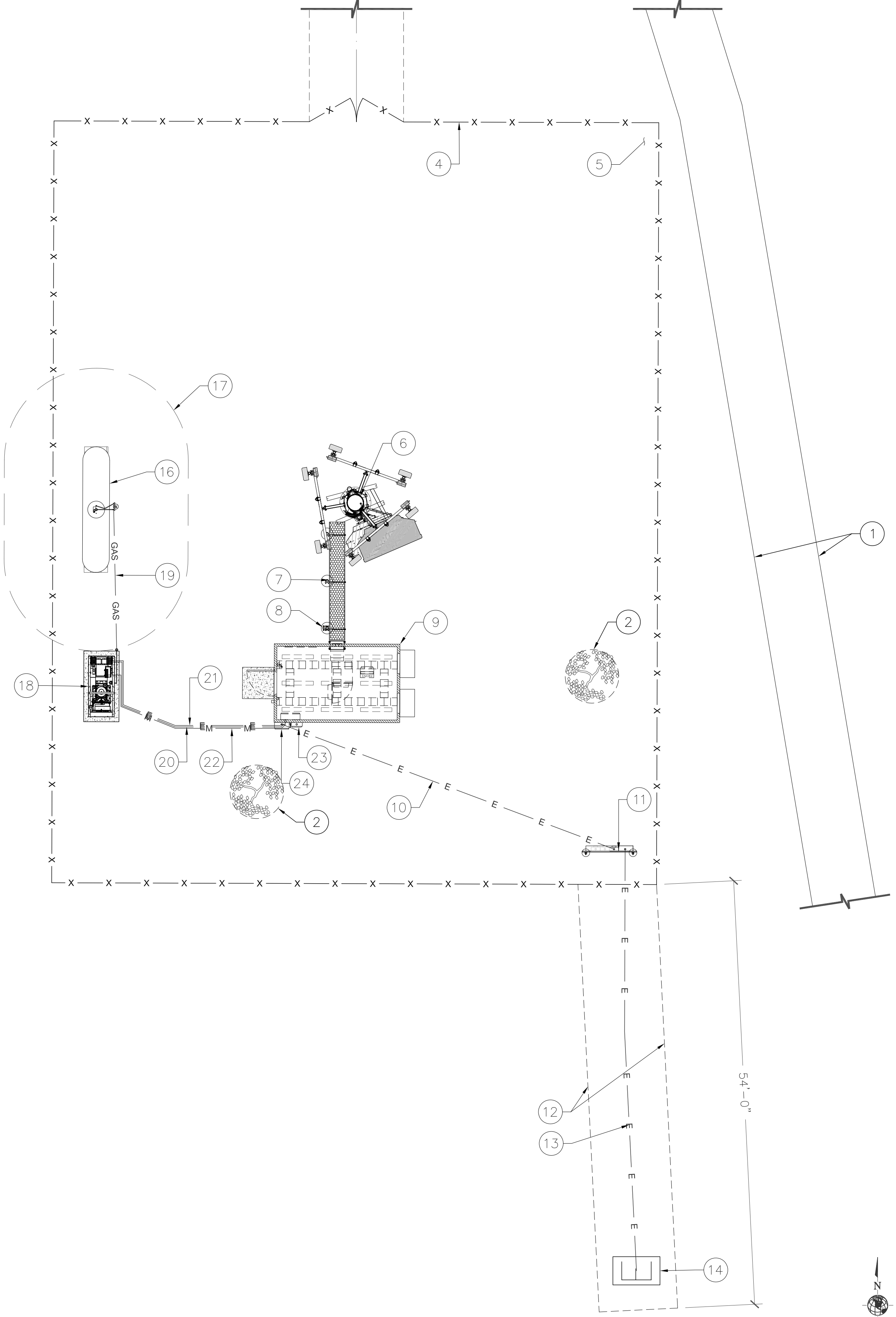
SHEET NUMBER

S-1

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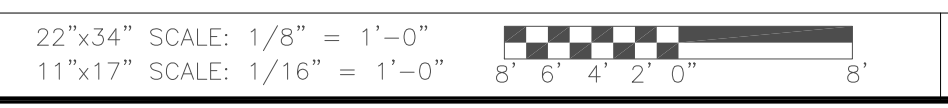
COMPOUND PLAN KEYED NOTES: #

1. (E) DIRT ROAD
2. (E) TREE TO BE REMOVED (TYP.)
3. (N) 12' WIDE ACCESS EASEMENT AND (N) 12' WIDE DIRT ACCESS ROAD
4. (N) 7' CHAIN LINK FENCE WITH 12' WIDE DOUBLE ACCESS GATES, SEE DETAIL 3 ON SHEET A-5
5. NOT USED
6. (N) 150' TALL MONOPOLE, SEE STRUCTURAL DRAWINGS BY OTHERS
7. (N) ICE BRIDGE, SEE DETAIL 4 ON SHEET A-5
8. (N) GPS ANTENNA, SEE DETAIL 5 ON SHEET A-5
9. (N) EQUIPMENT SHELTER (PROVIDED BY OTHERS), SEE DETAIL 1 ON SHEET S-1
10. (N) U.G. CONDUIT FOR POWER RUN, SEE DETAIL 4 ON SHEET E-3 AND SINGLE LINE DIAGRAM
11. (N) METER BANK, SEE DETAIL 3 ON SHEET E-3
12. (N) 10' WIDE UTILITY EASEMENT
13. (N) U.G. CONDUIT FOR POWER RUN FROM SOURCE TO METER BANK BY PROVIDER
14. (E) PAD MOUNTED TRANSFORMER. (N) COMMNET POWER SOURCE
15. NOT USED.
16. (N) PROPANE TANK ON INTERLOCK PAVER, SEE DETAILS 2 & 6 ON SHEET A-8
17. LINE OF 10' PROPANE TANK IGNITION SOURCE SPARK RADIUS PER NFPA 58
18. (N) GENERATOR, SEE DETAILS 1, 3 & 5 ON SHEET A-8
19. (N) U.G. CONDUIT FOR GAS LINE RUN, SEE DETAIL 2 ON SHEET E-3
20. (N) U.G. CONDUIT FOR START/STOP AND MONITOR, SEE DETAIL 5 ON SHEET E-3 AND ONLINE DIAGRAM
21. (N) U.G. CONDUIT FOR POWER RUN FROM GENERATOR TO ATS, SEE DETAIL 5 ON SHEET E-3 AND ONLINE DIAGRAM
22. (N) U.G. CONDUIT FOR GENERATOR BATTERY CHARGER FROM PANEL TO GENERATOR, SEE DETAIL 5 ON SHEET E-3 AND ONLINE DIAGRAM
23. (N) DISCONNECT SWITCH
24. (N) 200A ATS



ELECTRICAL GENERAL NOTES:

1. SUBMITTAL OF BID INDICATES CONTRACTOR IS COGNIZANT OF ALL JOB SITE CONDITIONS AND WORK TO BE PERFORMED UNDER THIS CONTRACT. CONTRACTOR IS RESPONSIBLE FOR ALL FIELD VERIFICATION.
2. THESE PLANS ARE DIAGRAMMATIC ONLY, AND ARE NOT TO BE SCALED.
3. ELECTRICAL CONTRACTOR SHALL PROVIDE ALL LABOR, MATERIALS, INSURANCE, EQUIPMENT, INSTALLATION, CONSTRUCTION TOOLS, TRANSPORTATION, ETC. AS REQUIRED FOR A COMPLETE AND PROPERLY OPERABLE SYSTEM ENERGIZED THROUGHOUT AND AS INDICATED ON DRAWINGS, AS SPECIFIED HEREIN AND/OR AS OTHERWISE REQUIRED.
4. ALL MATERIALS AND EQUIPMENT SHALL BE NEW AND IN PERFECT CONDITION WHEN INSTALLED AND SHALL BE OF THE BEST GRADE AND OF THE SAME MANUFACTURER THROUGHOUT FOR EACH CLASS OR GROUP OF EQUIPMENT. MATERIALS SHALL BE LISTED AND APPROVED BY UNDERWRITER'S LABORATORY (UL) AND SHALL BEAR THE INSPECTION LABEL "J" WHERE SUBJECT TO SUCH APPROVAL. MATERIALS SHALL MEET WITH APPROVAL OF THE DIVISION OF INDUSTRIAL SAFETY AND ALL GOVERNING BODIES HAVING JURISDICTION (A.H.J). MATERIALS SHALL BE MANUFACTURED IN ACCORDANCE WITH APPLICABLE STANDARDS ESTABLISHED BY ANSI, NEMA, AND NBFU.
5. ALL CONDUIT INSTALLED SHALL BE SURFACE MOUNTED UNLESS OTHERWISE NOTED.
6. ELECTRICAL CONTRACTOR SHALL CARRY OUT HIS WORK IN ACCORDANCE WITH ALL GOVERNING STATE, COUNTY, LOCAL CODES AND O.S.H.A.
7. ELECTRICAL CONTRACTOR SHALL SECURE ALL NECESSARY ELECTRICAL PERMITS, AND PAY ALL REQUIRED FEES.
8. COMPLETE JOB SHALL BE GUARANTEED FOR A PERIOD OF NO LESS THAN ONE YEAR AFTER THE DATE OF JOB COMPLETION. DATE OF JOB COMPLETION SHALL BE THE DATE ON THE CONTRACTOR'S "NOTICE OF COMPLETION" SUBMITTED TO THE OWNER. ANY WORK, MATERIAL, OR EQUIPMENT FOUND TO BE FAULTY DURING THAT PERIOD SHALL BE CORRECTED AT ONCE, UPON WRITTEN NOTIFICATION, AT THE EXPENSE OF THE ELECTRICAL CONTRACTOR.
9. ALL CONDUIT ONLY (C.O.) SHALL HAVE A PULL WIRE OR ROPE, AND TRUE TAPE.
10. ELECTRICAL CONTRACTOR SHALL PROVIDE THE OWNER WITH ONE SET OF COMPLETE ELECTRICAL "AS BUILT" DRAWINGS, SHOWING ACTUAL DIMENSIONS AND CIRCUITS, WITHIN 10 WORKING DAYS OF PROJECT COMPLETION.
11. ALL BROCHURES, OPERATING MANUALS, CATALOGS, SHOP DRAWINGS, ETC. SHALL BE TURNED OVER TO PROJECT MANAGER AT JOB COMPLETION.
12. USE T-TAP CONNECTIONS ON ALL MULTI-CIRCUITS WITH COMMON NEUTRAL CONDUCTOR FOR LIGHTING FIXTURE. ALL CONDUCTORS SHALL BE COPPER.
13. THE EXTERIOR GROUND RING SHALL BE TESTED PER COMMNET WIRELESS SPECIFICATIONS USING A 3-POINT FALL OF POTENTIAL TEST. IF THE GROUNDING SYSTEM RESISTANCE TO EARTH IS GREATER THAN 5 OHMS, THE ELECTRICAL CONTRACTOR SHALL NOTIFY THE RESPONSIBLE ENGINEER.
14. ALL CIRCUIT BREAKERS, FUSES AND ELECTRICAL EQUIPMENT SHALL HAVE AN AMP INTERRUPT RATING (AIC) NOT LESS THAN THE MAXIMUM SHORT CIRCUIT CURRENT TO WHICH THEY MAY BE SUBJECTED, AND A MINIMUM OF 10,000 A.I.C.
15. THE ENTIRE ELECTRICAL INSTALLATION SHALL BE GROUNDED AS REQUIRED BY ALL APPLICABLE CODES.
16. PATCH, REPAIR AND PAINT ANY AREA THAT HAS BEEN DAMAGED IN THE COURSE OF THE ELECTRICAL WORK.
17. IN DRILLING HOLES INTO CONCRETE (WHETHER FOR FASTENING OR ANCHORING PURPOSES OR PENETRATIONS THROUGH THE FLOOR FOR CONDUIT RUNS, PIPE RUNS, ETC.) IT MUST BE CLEARLY UNDERSTOOD THAT TENDONS AND REBARS WILL NOT BE DRILLED INTO, CUT, OR DAMAGED UNDER ANY CIRCUMSTANCES.
18. LOCATION OF TENDONS AND REBARS ARE NOT DEFINITELY KNOWN AND THEREFORE MUST BE SEARCHED FOR BY APPROPRIATE METHODS AND EQUIPMENT VIA X-RAY, OR OTHER DEVICES THAT CAN ACCURATELY LOCATE THE REINFORCING STEEL TENDONS.
19. PENETRATIONS IN FIRE RATED WALLS SHALL BE FIRE STOPPED IN ACCORDANCE WITH APPLICABLE LOCAL BUILDING CODES, USING U.L. RATED MATERIALS.
20. ELECTRICAL CONTRACTOR IS TO COORDINATE WITH UTILITY COMPANY FOR CONNECTION OF TEMPORARY AND PERMANENT POWER TO THE SITE. THE TEMPORARY POWER AND ALL HOOK-UP COSTS SHALL BE PAID BY THE CONTRACTOR.
21. ELECTRICAL CONTRACTOR SHALL SUBMIT SHOP DRAWINGS AND/OR CATALOG CUT-SHEETS ON ALL NON-SPECIFIED ORIGINAL MATERIALS AND EQUIPMENT, TO PROJECT MANAGER PRIOR TO COMMENCEMENT OF THE WORK.
22. ALL GROUNDING SYSTEM LEADS SHALL BE TESTED FOR CONTINUITY WITH THE GROUND LOOP CONDUCTOR. ALL FAULTY CONNECTIONS OR CONDUCTORS SHALL BE REPAIRED OR REPLACED AS REQUIRED.
23. CLEAN PREMISES DAILY OF ALL DEBRIS RESULTING FROM WORK AND LEAVE WORK PREMISES IN A COMPLETE AND UNDAMAGED CONDITION.
24. ALL EXTERIOR WALL PENETRATIONS SHALL BE SEALED WITH POLYSEAM SEALANT.
25. ALL #2 TINNED BARE COPPER DOWNLEADS TO BE PROTECTED BY 1/2" P.V.C. PIPE AND SECURED.
26. COMPRESSION FITTINGS TO BE USED ON ALL CONDUITS (NO SETSCREWS).
27. ALL #6 STRANDED COPPER WITH GREEN INSULATION TO BE ATTACHED WITH CRIMPED DOUBLE LUG, ATTACHED WITH NUTS, BOLTS AND STAR WASHERS TYPICAL AND NO-OX GREASE BETWEEN LUG AND BUSS BAR. ALL ABOVE GROUND CONDUIT SHALL BE SCHEDULE 80 PVC WITH UV PROTECTION OR GRC.
- 28.



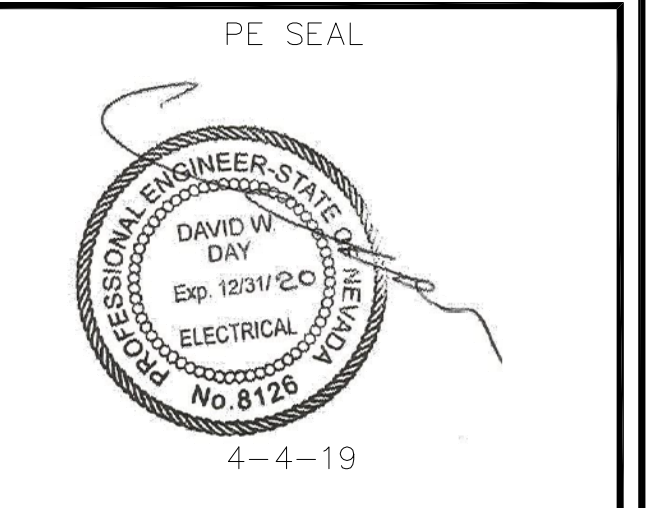
OVERALL ELECTRICAL PLAN

1 ELECTRICAL NOTES

SCALE: NTS 2



Abn ENGINEERING
 1337 E DESERT FLOWER LANE
 PHOENIX, AZ 85048
 PHONE: (480) 213-8524



DESIGNER: JASON NGO

LEAD EE: SB

LEAD CE/SE: SAM

SUBMITTALS			
REV.	DATE	DESCRIPTION	BY
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SITE NAME
 VYA, NEVADA

PROJECT
 RAW LAND MONOPOLE

SITE ADDRESS
 LAT: 41° 35' 30.76358"N
 LONG: 119° 52' 47.14752"W
 89000A DUGWAY ROAD
 GERLACH, NV 89413

SHEET TITLE
 OVERALL ELECTRICAL
 PLAN & ELECTRICAL
 NOTES

SHEET NUMBER
 E-1

PANEL SCHEDULE "A"

VOLTAGE: 240 / 120 VOLTS		BUSS RATING (AMPS): 200		REMARKS:	
MOUNTING: SURFACE		PHASE: 1		MAIN BREAKER: 200	
ENCLOSURE: NEMA 3R		WIRE: 3		SHORT CIRCUIT RATING: 10,000	
		AMPS (RMS-SYM)			

CIRCUIT BREAKER	CIRCUIT NAME		FEEDER		LOAD/PHASE (VA)		LOAD		FEEDER		CIRCUIT BREAKER			
			C	WIRE	ØA	ØB	WATTS	ØA	ØB	WATTS	ØA	ØB	MOD.	POLE
1	40	2	RECTIFIER RACK	1"	#8	1.00	3,720	7,680				2	60	2
3	-	-	-	-	-	-	-	-	-	-	-	-	-	-
5	40	2	FIRSTNET CABINET	1"	#8	1.00	3,720	7,680				2	60	6
7	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9	-	-	SPACE	-	-	-	400	400				1	20	10
11	-	-	SPACE	-	-	-		150				1	20	12
13	-	-	SPACE	-	-	-	900	900				1	20	14
15	-	-	SPACE	-	-	-		720				1	20	16
17	-	-	SPACE	-	-	-	180	180				1	20	18
19	-	-	SPACE	-	-	-		2000				1	30	20
21	-	-	SPACE	-	-	-	0	0				-	-	22
23	-	-	SPACE	-	-	-	0	0				-	-	24
25	-	-	SPACE	-	-	-	0	0				-	-	26
27	-	-	SPACE	-	-	-	0	0				-	-	28
29	-	-	SPACE	-	-	-	0	0				-	-	30

NOTES:

- ALL INSULATION ON CONDUCTORS TO BE THHN UNLESS NOTED OTHERWISE. INSULATION ON ALL UNDERGROUND EXTERIOR CONDUCTORS SHALL BE THHW.
- LOAD DEMANDS CALCULATED AS PER SECTIONS 210 & 220 OF THE NATIONAL ELECTRICAL CODE.
- PANEL COVER SHALL BE FIELD MARKED FOR FLASH PROTECTION WITH A PERMANENT LABEL AS REQUIRED BY THE NATIONAL ELECTRICAL CODE SECTION 110. LABEL SHALL READ: "DANGER: POTENTIAL ARC FLASH HAZARD"
- ABBREVIATIONS: CO-CONVENIENCE OUTLET, RR-RESTROOM, (N)ORTH, (S)OUTH, (E)AST, (W)EST.

* WIRE AND CONDUIT SIZE PER SHELTER MANUFACTURER SPECS.

ØA	ØB	TOTALS
16,840	18,230	35,070
146	146	
1,090	1,028	2,118
17,930	19,258	37,188
149	160	
48%	52%	155

CONNECTED LOAD (VA)
CONNECTED LOAD (A)
DEMAND FACTOR ADJUSTMENTS (VA)
TOTAL LOAD (VA)
TOTAL LOAD (A)
MAXIMUM LOAD (A)
PHASE BALANCE

NOTE: ALL CONDUCTORS AND CONDUIT PROVIDED AND INSTALLED BY G.C.

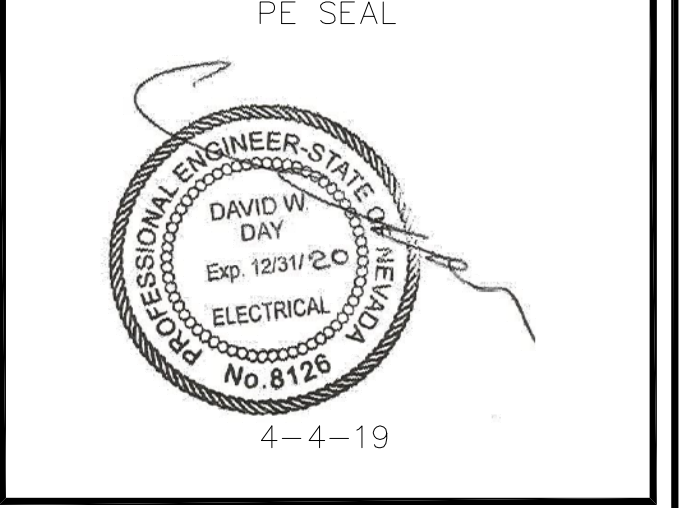
FAULT CURRENT CALCULATION TABLE

MAIN UTILITY COMPANY TRANSFORMER			TRANSFORMER KVA	AFC AT UTILITY
1Ø 120/240V -200A			50	13,889 A

CONFIGURATION		FEEDER				SYSTEM				FAULT CURRENT AT EQUIPMENT	FULL OR SERIES RATED	MINIMUM SYMMETRICAL EQUIPMENT AIC RATING
FROM	TO	LENGTH	AVAILABLE FAULT CURRENT	FEEDER SIZE	FEEDERS PER PHASE	WIRE CONSTANT	LINE TO LINE VOLTS	XFMR SECONDARY VOLTS	PHASE			
TRANSFORMER	600A TERM. BOX	60'-0"	13,889 AIC	350 CU	2	22,737	240 V		1Ø		-	OHP
METER	200A DISCONNECT	50'-0"	12,042 AIC	370 CU	1	12,844	240 V		1Ø		-	OHP

NOTE: DISTANCES INDICATED ARE FOR FAULT-CURRENT ANALYSIS ONLY. CONTRACTOR SHALL USE FIELD MEASUREMENTS ESTABLISH CONDUCTOR LENGTHS FOR ORDERING PURPOSES. CALCULATIONS ARE BASED ON A 50KVA TRANSFORMER AND (2) RUNS 350mm CU FROM TRANSFORMER TO METERBANK. PLEASE CONTACT ENGINEER IF SIZE IS DIFFERENT.

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SHEET TITLE
PANEL SCHEDULE & ONE LINE DIAGRAM

SHEET NUMBER
E-2

ILC PANEL SCHEDULE 'A'

SCALE: N.T.S. **1**

FAULT CURRENT CALCULATIONS

SCALE: N.T.S. **3**

COPPER FEEDER SCHEDULE

TYPE	CONDUIT SIZE		CONDUCTORS	75°C AMP RATING	TYPE	CONDUIT SIZE		CONDUCTORS	75°C AMP RATING	TYPE	CONDUIT SIZE		CONDUCTORS	75°C AMP RATING			
	PVC	EMT				PVC	EMT				PVC	EMT			PVC	EMT	
38	3/4"	3/4"	3	#8	50	33X	2"	2"	3	3/0	200	350	3"	2-1/2"	3	500 KCMIL	380
33	1"	1"	3	#3	100	34X	2"	2"	3	4/0	230	360	3-1/2"	3-1/2"	3	600 KCMIL	420

EQUIPMENT GROUNDING CONDUCTORS SCHEDULE

OVERCURRENT DEVICE	COPPER
15	14
20	12
30	10
40	10
60	10
100	8
200	6
300	4
400	3
500	2
600	1
800	1/0

NOTE: 1. SEE EQUIPMENT GROUND CONDUCTOR SCHEDULES OR SERVICE GROUNDING DETAIL FOR GROUND CONDUCTORS RATING.
2. ALL INSULATION SHALL BE THHN UNLESS NOTED OTHERWISE.
3. PVC CONDUIT SIZE IS BASED ON SCHEDULE 40 PVC. PVC IS APPROVED FOR UNDERGROUND FEEDERS ONLY.

NOTES:

- ALL EQUIPMENT SHOWN IS NEW UNLESS OTHERWISE NOTED.
- CONTRACTOR TO INSTALL AC DISCONNECT AT SHELTER FOR EACH HVAC UNIT.

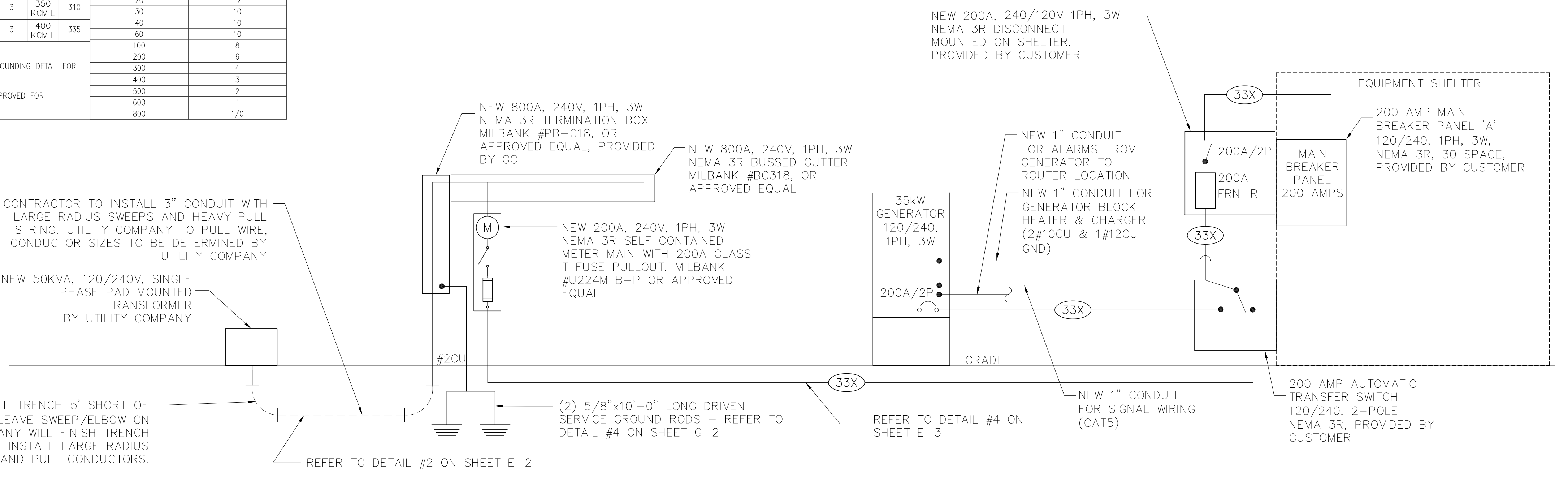
ALL CONDUCTORS SHALL BE COPPER WITH (THHN)-INSULATION ABOVE GROUND IN CONDUIT (THWN)-IN CONDUIT BELOW GRADE (USE)-DIRECT BURIAL (RHH-RHW)- INDOORS OPEN RACEWAY

CONTRACTOR TO INSTALL 3" CONDUIT WITH LARGE RADIUS SWEEPS AND HEAVY PULL STRING. UTILITY COMPANY TO PULL WIRE, CONDUCTOR SIZES TO BE DETERMINED BY UTILITY COMPANY

NEW 50KVA, 120/240V, SINGLE PHASE PAD MOUNTED TRANSFORMER BY UTILITY COMPANY

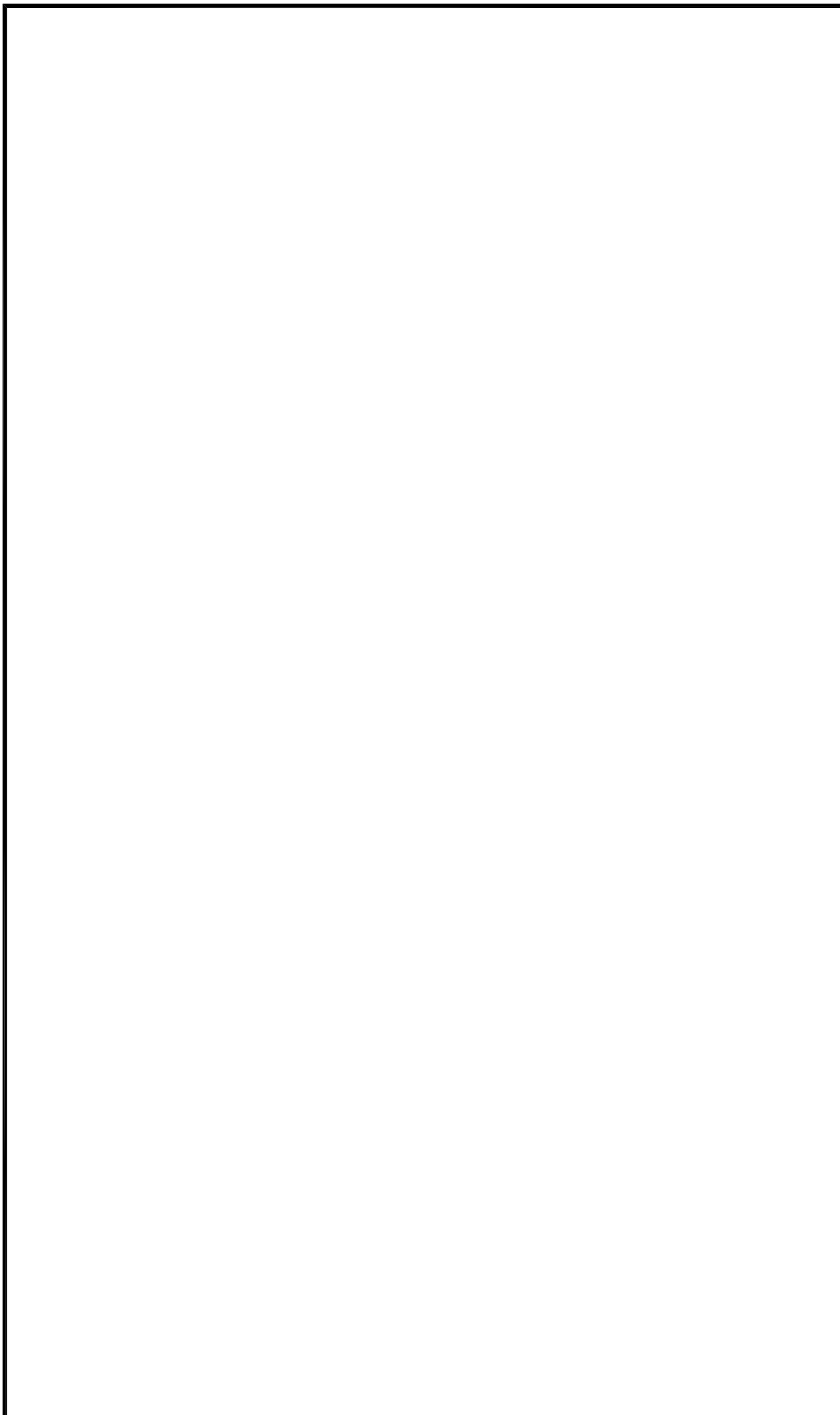
CONTRACTOR WILL TRENCH 5' SHORT OF TRANSFORMER AND LEAVE SWEEP/ELBOW ON SITE. UTILITY COMPANY WILL FINISH TRENCH TO TRANSFORMER, INSTALL LARGE RADIUS SWEEP, AND PULL CONDUCTORS.

ONE-LINE DIAGRAM

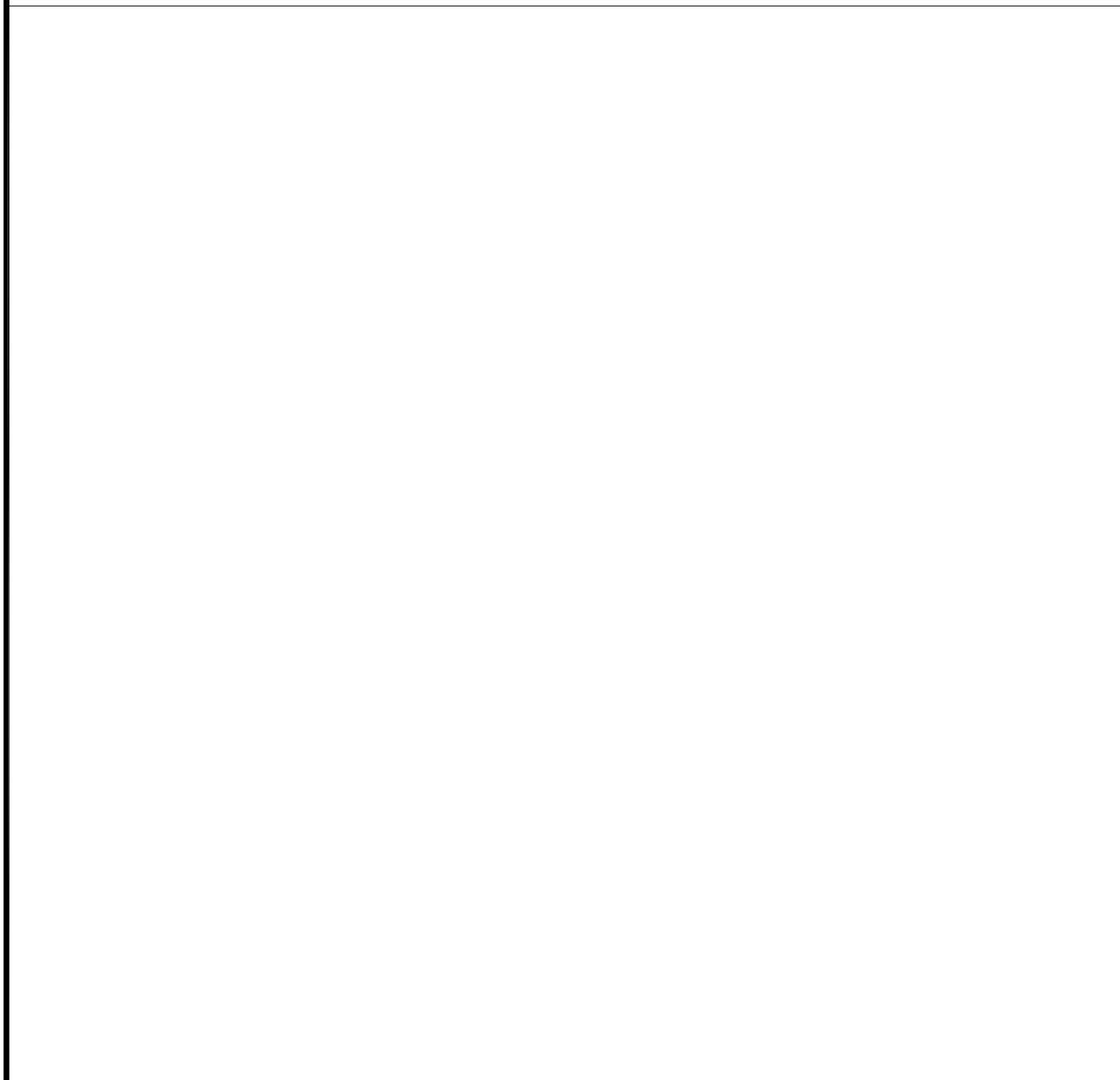


SCALE: N.T.S. **2**

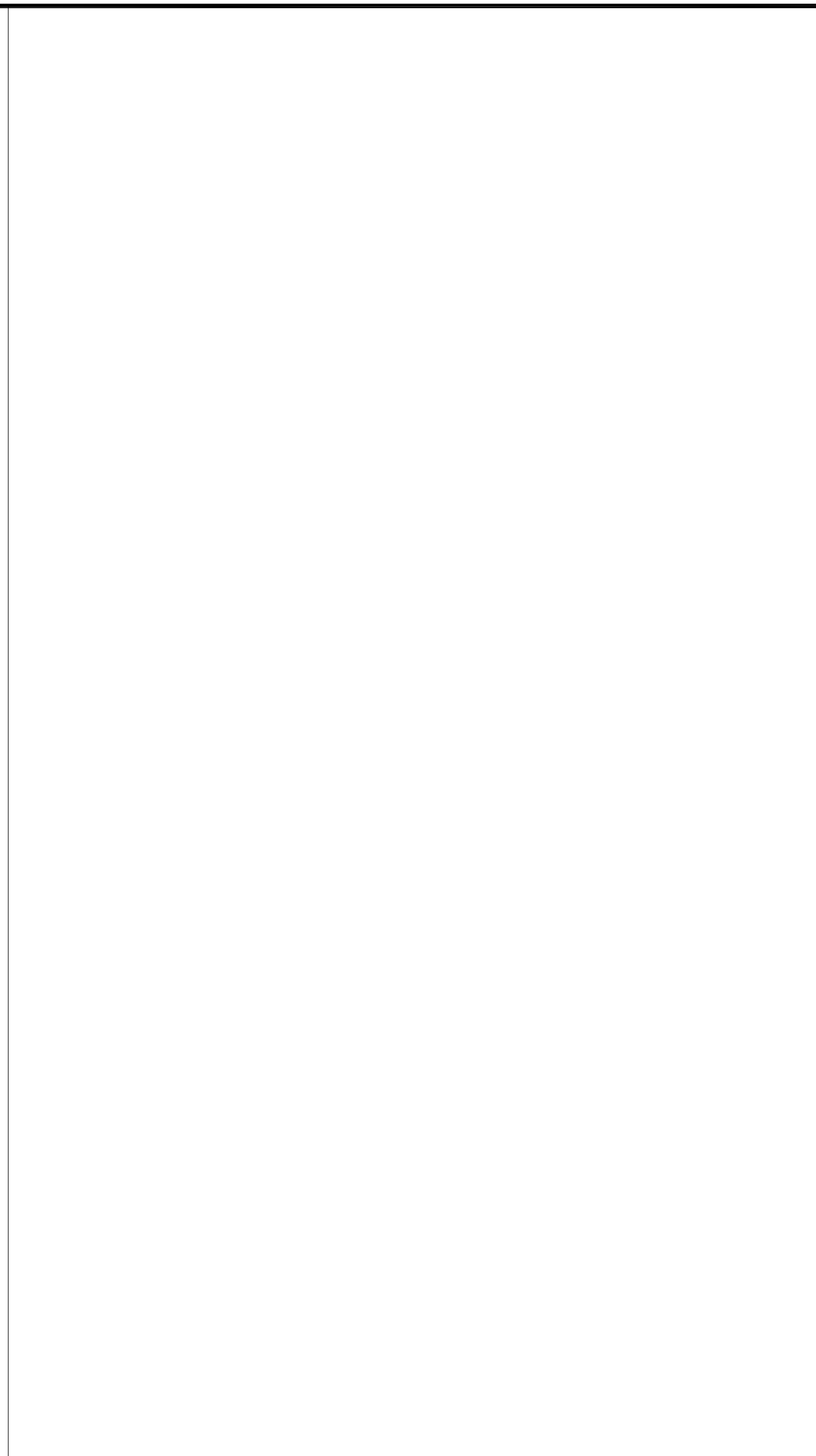
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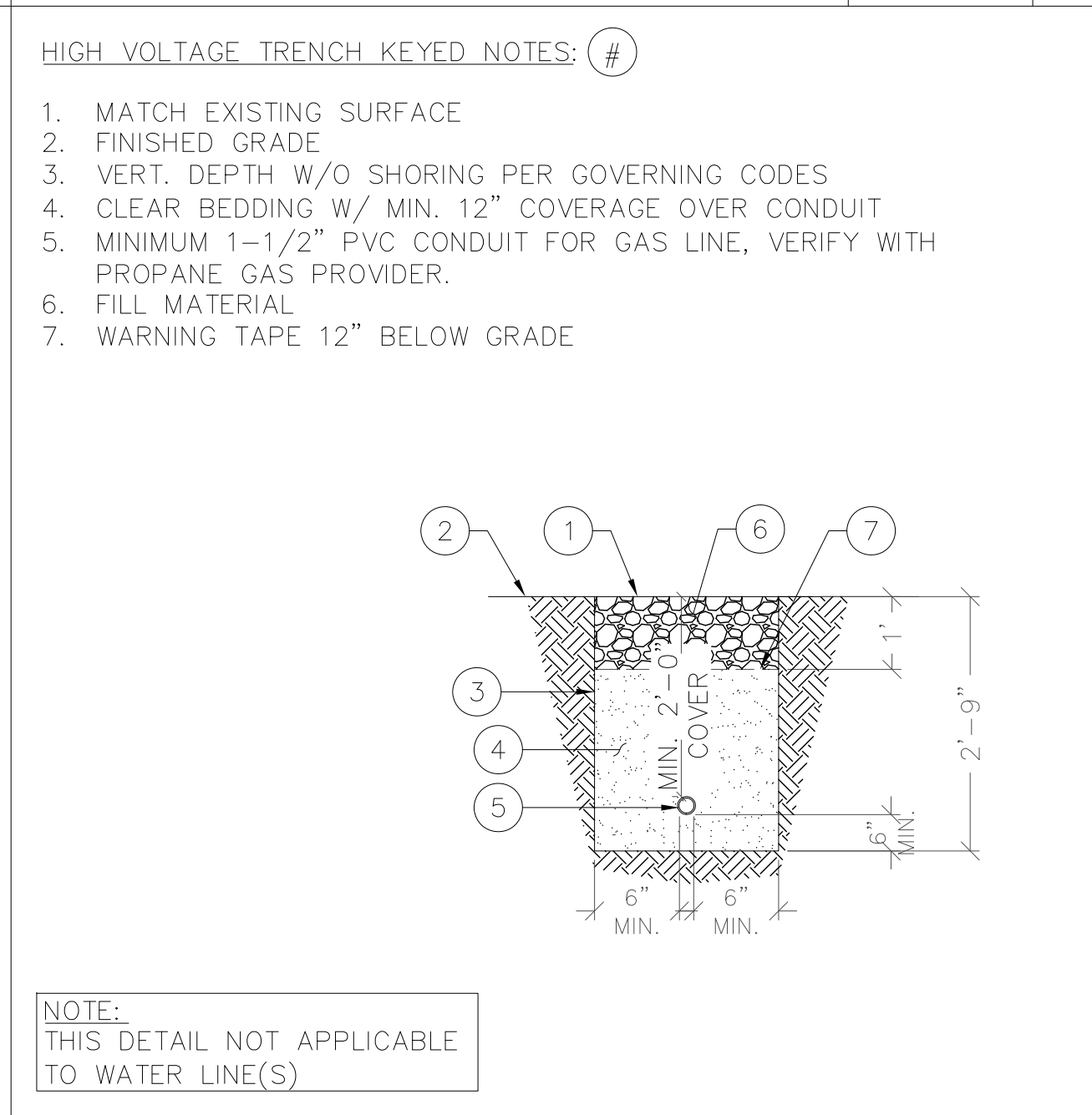
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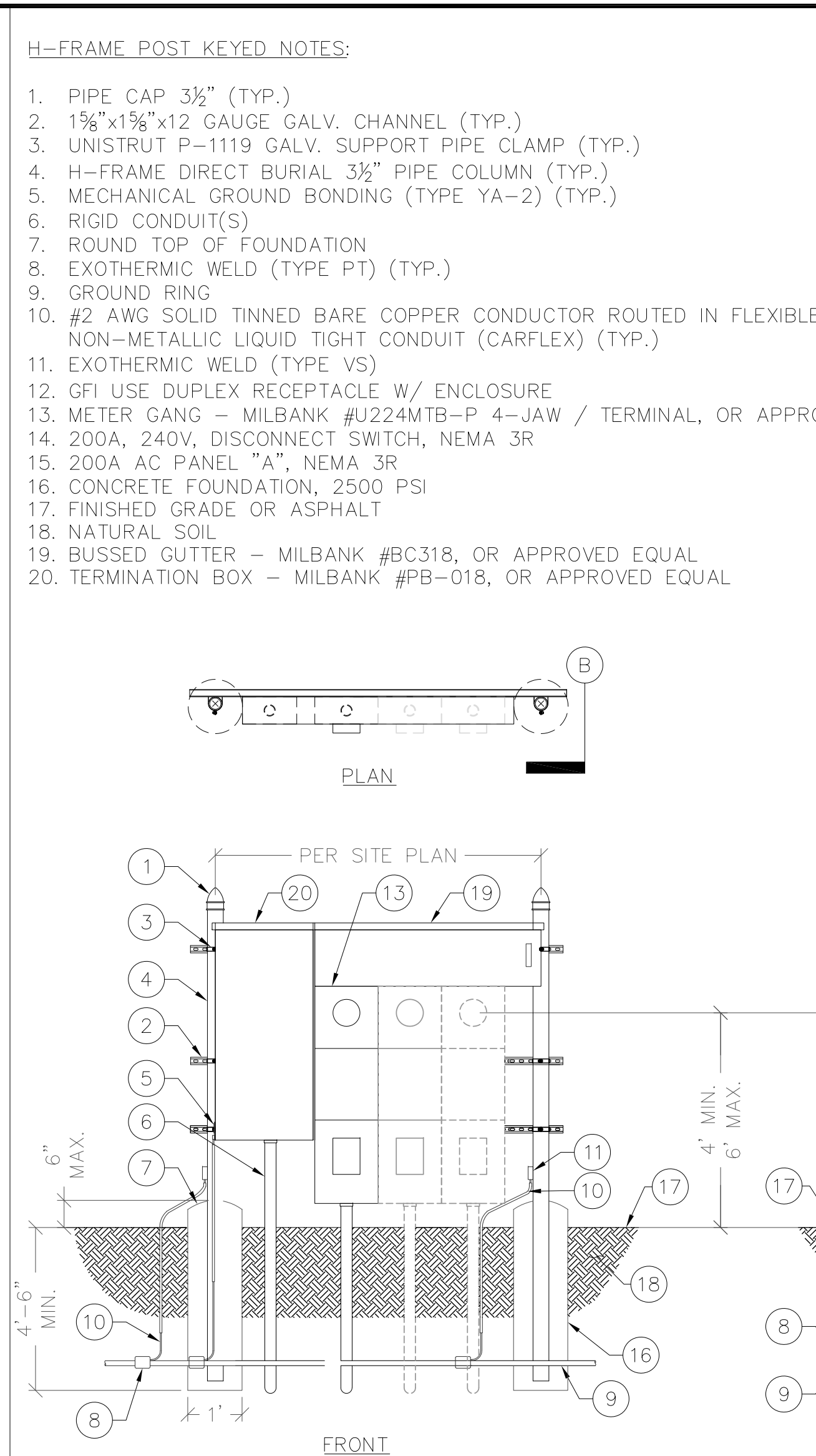
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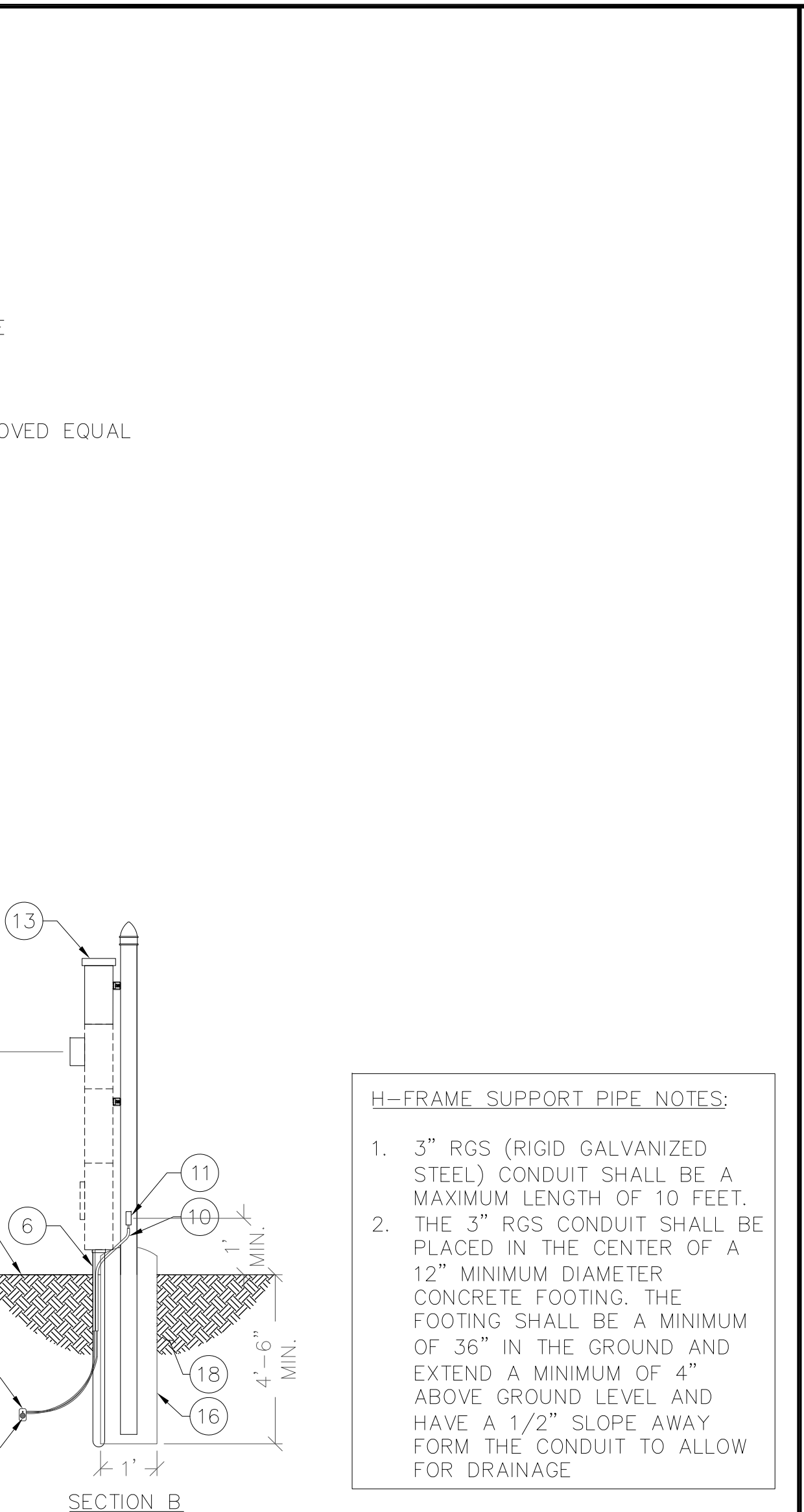
SCALE: N.T.S. **1** TYPICAL H-FRAME DETAILS



SCALE: N.T.S. **2** FUEL LINE TRENCH DETAIL



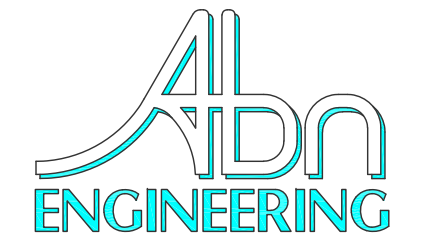
SCALE: N.T.S. **4** POWER TRENCH DETAIL



SCALE: N.T.S. **5** GENERATOR TRENCH DETAIL

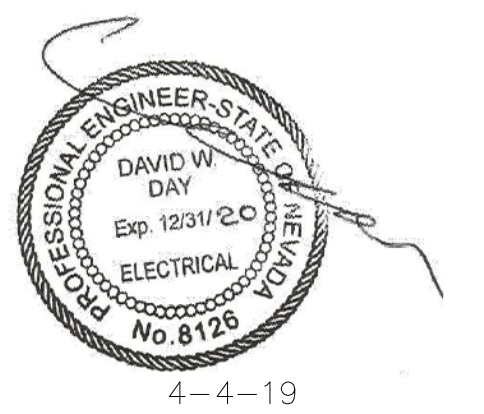
- H-FRAME POST KEYED NOTES:
1. PIPE CAP 3 1/2" (TYP.)
 2. 1 1/8"x1 1/8"x12 GAUGE GALV. CHANNEL (TYP.)
 3. UNISTRUT P-1119 GALV. SUPPORT PIPE CLAMP (TYP.)
 4. H-FRAME DIRECT BURIAL 3 1/2" PIPE COLUMN (TYP.)
 5. MECHANICAL GROUND BONDING (TYPE YA-2) (TYP.)
 6. RIGID CONDUIT(S)
 7. ROUND TOP OF FOUNDATION
 8. EXOTHERMIC WELD (TYPE PT) (TYP.)
 9. GROUND RING
 10. #2 AWG SOLID TINNED BARE COPPER CONDUCTOR ROUTED IN FLEXIBLE NON-METALLIC LIQUID TIGHT CONDUIT (CARFLEX) (TYP.)
 11. EXOTHERMIC WELD (TYPE VS)
 12. GFI USE DUPLEX RECEPTACLE W/ ENCLOSURE
 13. METER GANG - MILBANK #U224MTB-P 4-JAW / TERMINAL, OR APPROVED EQUAL
 14. 200A, 240V, DISCONNECT SWITCH, NEMA 3R
 15. 200A AC PANEL "A", NEMA 3R
 16. CONCRETE FOUNDATION, 2500 PSI
 17. FINISHED GRADE OR ASPHALT
 18. NATURAL SOIL
 19. BUSSED GUTTER - MILBANK #BC318, OR APPROVED EQUAL
 20. TERMINATION BOX - MILBANK #PB-018, OR APPROVED EQUAL

- H-FRAME SUPPORT PIPE NOTES:
1. 3" RGS (RIGID GALVANIZED STEEL) CONDUIT SHALL BE A MAXIMUM LENGTH OF 10 FEET.
 2. THE 3" RGS CONDUIT SHALL BE PLACED IN THE CENTER OF A 12" MINIMUM DIAMETER CONCRETE FOOTING. THE FOOTING SHALL BE A MINIMUM OF 36" IN THE GROUND AND EXTEND A MINIMUM OF 4" ABOVE GROUND LEVEL AND HAVE A 1/2" SLOPE AWAY FROM THE CONDUIT TO ALLOW FOR DRAINAGE



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PE SEAL



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LEAD EE: SB

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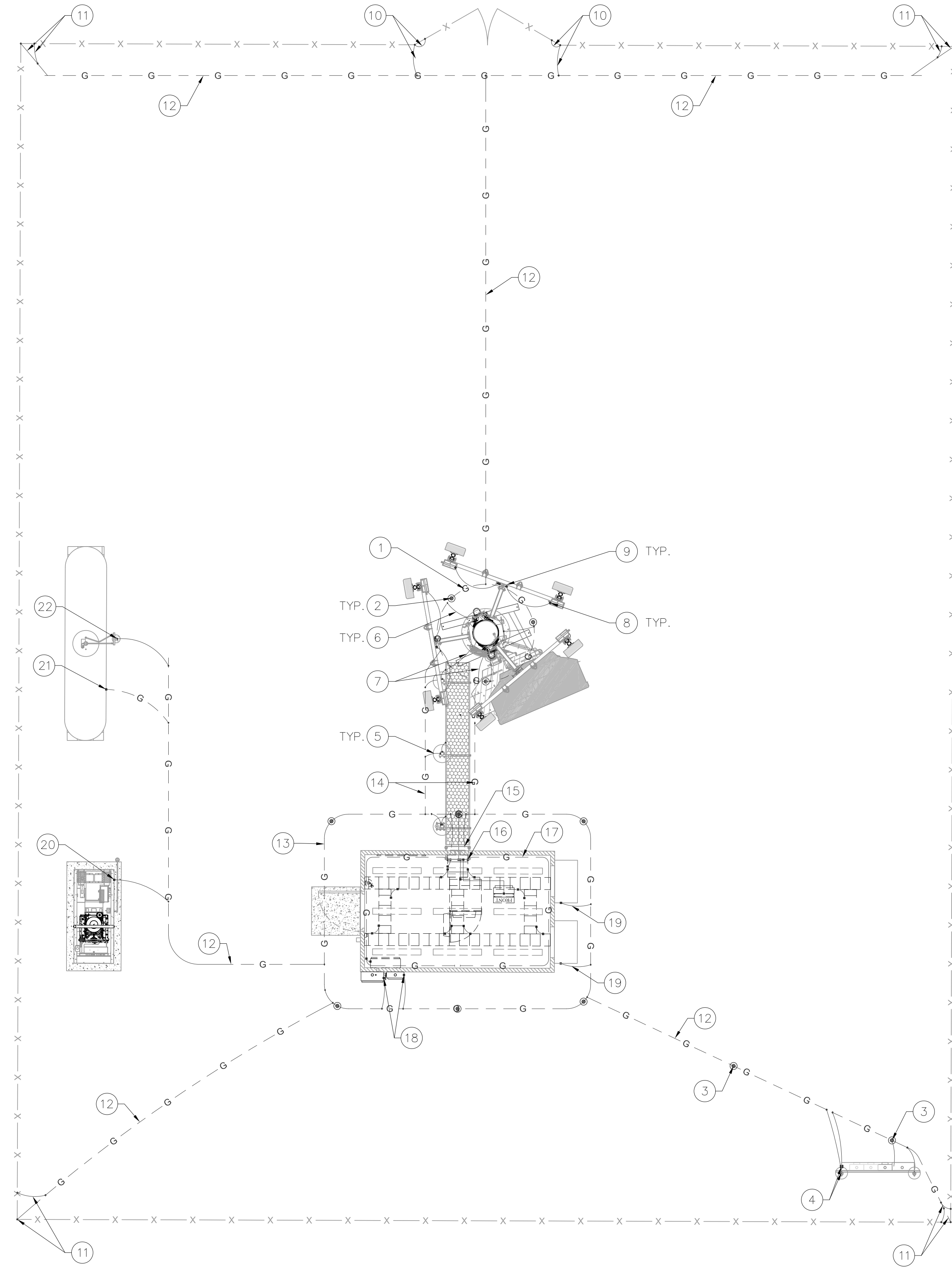
SHEET TITLE

DETAILS

SHEET NUMBER

E-3

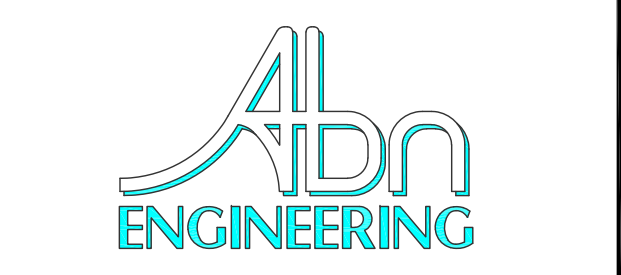
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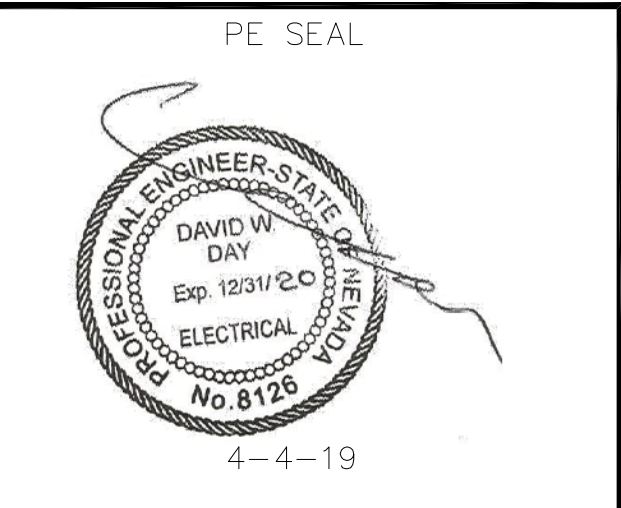
- LEGEND:**
- TCB— TINNED SOLID ALLOY 110 COPPER POLE BUSS BAR BONDED TO POLE STEEL.
 - ⊙ 5/8" DIA. x 10' COPPER CLAD GROUND ROD. REFER TO DETAIL 7 ON SHEET G-2.
 - G— GROUND RING, REFER TO DETAIL 6 ON SHEET G-2.
 - EXOTHERMIC WELD OR IRREVERSIBLE HIGH-COMPRESSION CRIMP.
 - MECHANICAL CONNECTION.

- GENERAL NOTES:**
- A. THESE DRAWINGS REPRESENT THE GENERAL EXTENT AND ARRANGEMENT OF SYSTEMS, BUT ARE NOT TO BE CONSIDERED FABRICATION DRAWINGS. COORDINATE WITH OTHER TRADES, AND PROVIDE EACH SYSTEM COMPLETE, INCLUDING ALL NECESSARY COMPONENTS, FITTINGS AND OFFSETS.
 - B. INSTALL SYSTEMS SUCH THAT REQUIRED CLEARANCE AND SERVICE ACCESS SPACE IS PROVIDED AROUND ALL MECHANICAL AND ELECTRICAL EQUIPMENT, AND AROUND ANY COMPONENTS WHICH REQUIRE SERVICE ACCESS.
 - C. PROVIDE SUPPLEMENTARY STEEL AS REQUIRED FOR THE PROPER SUPPORT OF ALL SYSTEMS.
 - D. REFER TO G-2 FOR GROUNDING DETAILS.
 - E. ALL METALLIC SURFACES SHALL BE PREPARED PRIOR TO BONDING, COLD GALV. SPRAY SHALL BE USED ON ANY EXOTHERMIC WELD TO PREVENT CORROSION, ANY AREA TO BE COLD GALV. SPRAY SHALL BE TAPED OFF PRIOR TO APPLICATION.

- CONSTRUCTION KEYED NOTES: (#)**
1. GROUNDING ELECTRODE CONDUCTOR SYSTEM (GROUND RING), #2 AWG SOLID BARE TINNED COPPER CONDUCTOR. GROUNDING ELECTRODE CONDUCTOR SHALL BE BURIED 30" BELOW GRADE WHERE APPLICABLE. ABOVE GRADE GROUNDING ELECTRODE CONDUCTOR TO BE ROUTED IN FLEXIBLE NON-METALLIC LIQUID TIGHT CONDUIT & FASTENED TO CONCRETE SURFACE EVERY 3' MAX. FASTENERS SHALL BE FLEXIBLE CONDUIT HALF STRAPS W/ 1/4"φ x 2" (L) RED HEAD HAMMER-SET NAIL DRIVE ANCHOR OR EQUIV. (TYP.)
 2. 5/8" DIA. x 10' LONG COPPER CLAD GROUND ROD PLACED MINIMUM EVERY 10' APART (TYP.). REFER TO DETAIL 4 ON SHEET G-2.
 3. SERVICE 5/8" DIA. x 10' LONG COPPER CLAD GROUND ROD PLACED MINIMUM EVERY 10' APART (TYP. OF 2). REFER TO DETAIL 4 ON SHEET G-2.
 4. BOND H-FRAME & ELECTRICAL BOX TO GROUND RADIAL (TYP.), REFER TO DETAIL 3 ON SHEET E-2.
 5. BOND ICE BRIDGE POST TO POLE GROUND RING (TYP.).
 6. BOND POLE BASE PLATE (AT MANUFACTURER INSTALLED BONDING TAB) TO GROUND RING. UNDER NO CIRCUMSTANCES WILL EXOTHERMIC WELDING BE PERMITTED ON THE POLE TRUNK, TYPICAL 3 LOCATIONS.
 7. BOND POLE GROUND BUSS BAR TO POLE GROUND RING WITH #2 AWG, TYP. OF 2 CONNECTIONS
 8. BOND RRHs TO ANTENNA GROUND BUS BAR WITH #6 AWG (TYP.)
 9. ATTACHED ANTENNA GROUND BUS BAR SECTOR GATE (TYP.)
 10. BOND GATE TO GATE POST VIA #2 GATE BOND JUMPER (TYP.). REFER TO DETAIL 5 ON SHEET G-2
 11. BOND TO FENCE FABRIC SUPPORT POST. REFER TO DETAIL 5 ON SHEET G-2 (TYP.)
 12. #2 AWG SOLID BARE TINNED COPPER CONDUCTOR (TYP.)
 13. #2 AWG SOLID BARE TINNED COPPER EQUIPMENT SHELTER GROUND RING
 14. EQUIPMENT SHELTER GROUND RING TO POLE GROUND RING WITH #2 AWG (TYP. OF 2 CONNECTIONS)
 15. EXTERIOR GROUND BUS BAR (EGB). BOND TO GROUND RING WITH (2) #2 AWG SOLID TINNED BARE COPPER CONDUCTORS. IN ADDITION, BOND ENTRY PANEL TO EGB WITH #2 AWG THHN COPPER CONDUCTOR PER SHELTER MANUFACTURER SPECIFICATIONS (TYP.)
 16. MAIN GROUND BUS BAR (MGB) INSTALLED BY SHELTER MANUFACTURER
 17. INTERIOR GROUNDING HALO SUPPLIED AND INSTALLED BY GC
 18. BOND ATS & DISCONNECT TO GROUND RING WITH #2 AWG SOLID TINNED BARE COPPER CONDUCTOR
 19. SHELTER A/C UNIT. BOND TO GROUND RING WITH #2 AWG SOLID TINNED BARE COPPER CONDUCTOR. BONDING ON THE SHELTER A/C UNIT HOUSING SHALL BE MECHANICAL ONLY (TYP.)
 20. BOND GENERATOR TO GROUND RADIAL WITH #2 AWG
 21. BOND PROPANE TANK LEG TO GROUND RADIAL WITH #2 AWG
 22. BOND SUPPORT PIPE TO GROUND RADIAL WITH #2 AWG



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SHEET TITLE
GROUNDING PLAN

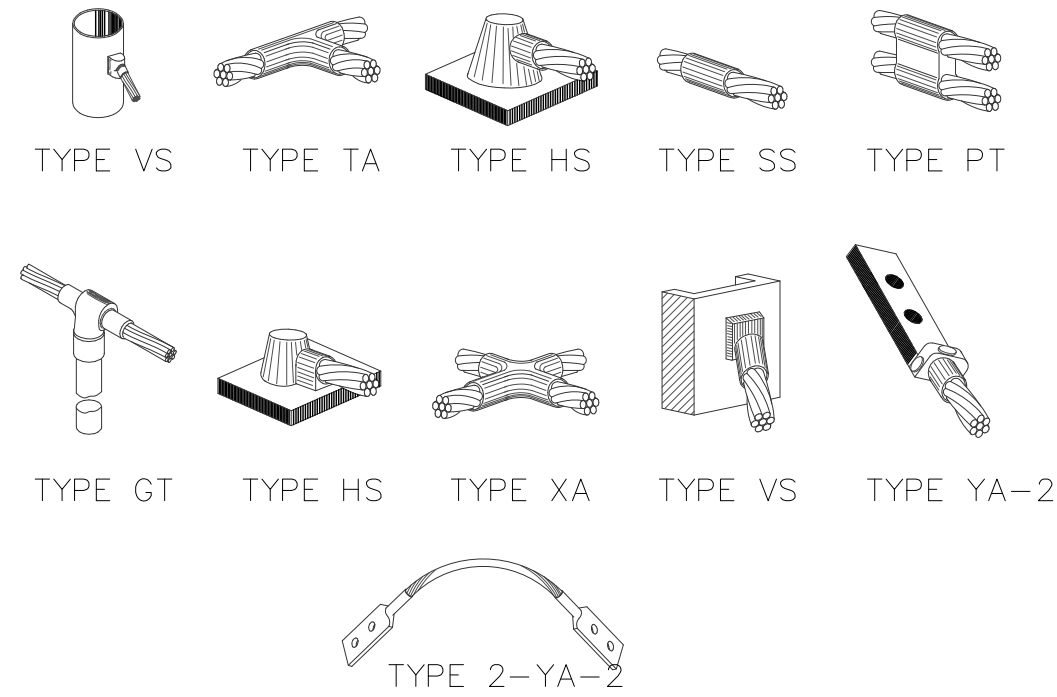
SHEET NUMBER
G-1

GROUNDING PLAN

22"x34" SCALE: 3/16" = 1'-0"
11"x17" SCALE: 3/32" = 1'-0"
4' 2' 0' 4'

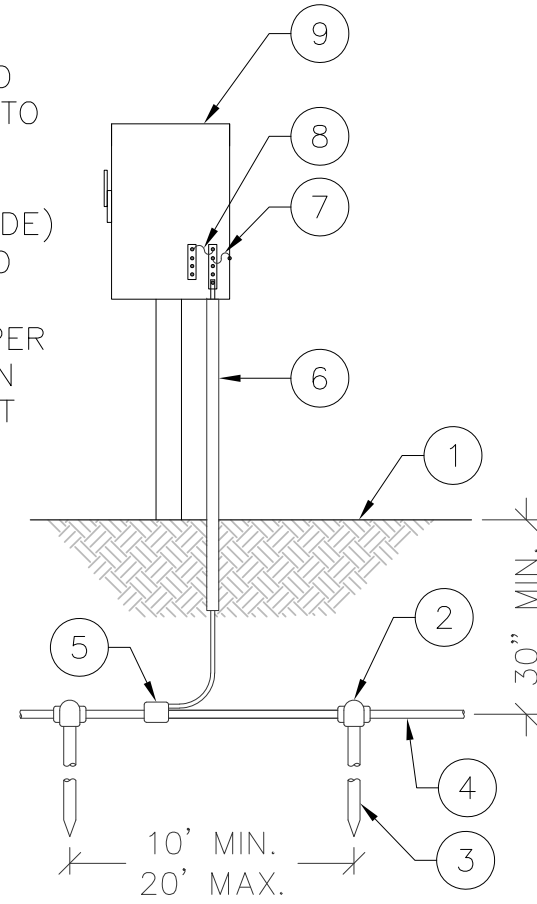
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NOTE:
ERICO CADWELD "MOLD TYPES" SHOWN HERE ARE EXAMPLES. CONSULT WITH PROJECT MANAGER OR CONSTRUCTION MANAGER FOR SPECIFIC MOLDS TO BE USED FOR THIS PROJECT.



GROUND ROD INSTALLATION KEYED NOTES: #

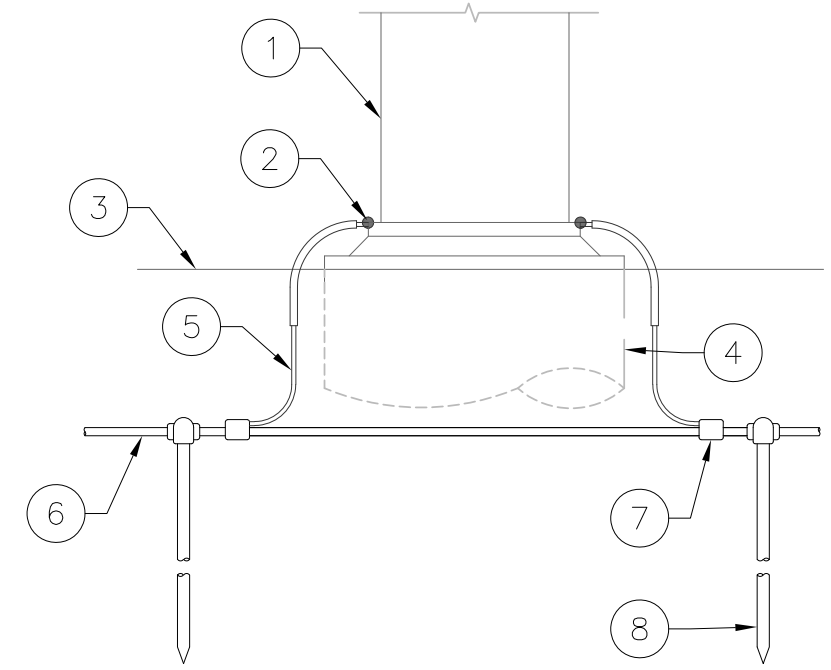
1. FINISHED GRADE
2. EXOTHERMIC CONNECTION (TYPE GT)
3. 5/8"Øx10' LONG COPPER CLAD GROUND ROD WITH EXOTHERMIC CONNECTION TO GROUND RING
4. #2 AWG SOLID TINNED BARE COPPER WIRE (GROUND RING 30" BELOW GRADE)
5. EXOTHERMIC CONNECTION TO GROUND RING (TYPE PT)
6. #8CU AWG SOLID TINNED BARE COPPER WIRE GROUND CONDUCTOR ROUTED IN FLEXIBLE NON-METALLIC LIQUID TIGHT CONDUIT (CARFLEX)
7. #8CU AWG COPPER MAIN EQUIPMENT BONDING JUMPER
8. #8CU AWG COPPER MAIN BONDING JUMPER
9. TERMINATION BOX



NOTES:
1. ALL GROUNDING AND BONDING AT THE SERVICE ENTRANCE SHALL COMPLY WITH NEC 250.28, 250.50, 250.66, 250.92, 250.102(C) & 250.56
2. GROUNDING SYSTEM RESISTANCE IS 25 OHMS OR LESS

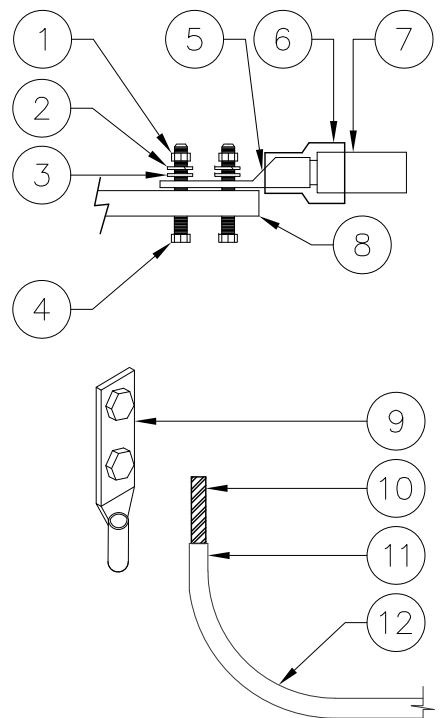
TYPICAL MONOPOLE GROUNDING KEYED NOTES: #

1. MONOPOLE
2. EXOTHERMIC WELD TO MANUFACTURER INSTALLED BONDING TAB (TYP.)
3. FINISHED GRADE
4. OUTLINE OF POLE FOUNDATION
5. #2 AWG SOLID TINNED BARE COPPER CONDUCTOR ROUTED IN FLEXIBLE NON-METALLIC LIQUID TIGHT CONDUIT (CARFLEX) (TYP. OF 3)
6. GROUND RING
7. EXOTHERMIC CONNECTION TO GROUND RING (TYPE PT)
8. GROUND ROD (TYP.)



GROUND LUG KEYED NOTES: #

1. NUT
2. LOCK WASHER
3. FLAT WASHER
4. BOLT
5. BURNDY GROUND LUG (SEE TABLE FOR SIZE AND MODEL)
6. HEAT SHRINK (CLEAR)
7. GROUNDING CONDUCTOR
8. GROUND BUSS BAR OR METALLIC BONDING SURFACE
9. BURNDY 2-HOLE LUG W/ LONG BARREL FOR #6 AWG STRANDED ENDS
10. BARE WIRE TO BE NO-OXED AT BOTH ENDS
11. HEAT SHRINK
12. #6 AWG THHN COPPER WIRE



WIRE SIZE	BURNDY LUG	BOLT SIZE
#6 AWG	YA6C-2TC38	3/8" - 16 NC S 3 BOLT
#2 AWG SOLID	YA3C-2TC38	3/8" - 16 NC S 3 BOLT
#2 AWG STRANDED	YA2C-2TC38	3/8" - 16 NC S 3 BOLT
#2/0 AWG	YA26-2TC38	3/8" - 16 NC S 3 BOLT
#4/0 AWG	YA28-2N	1/2" - 16 NC S 3 BOLT

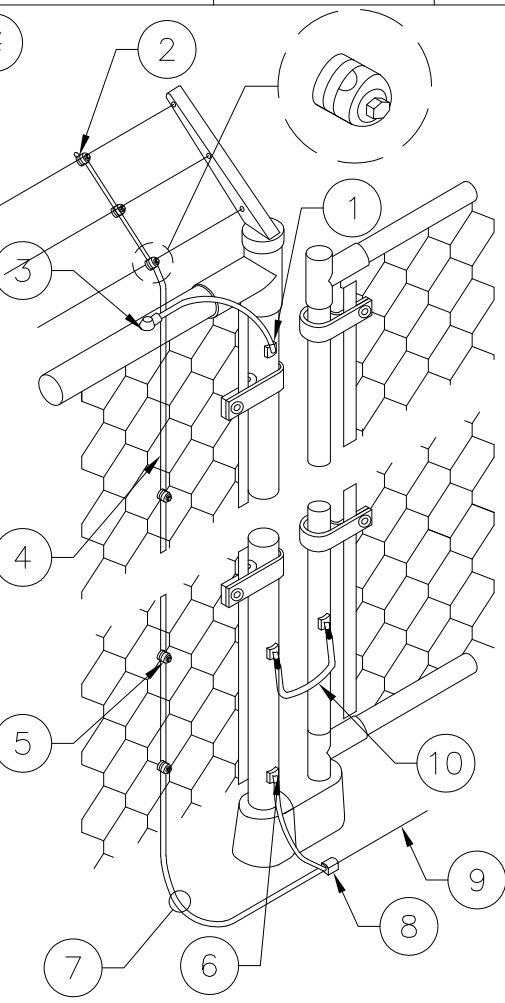
EXOTHERMIC WELD DETAILS SCALE: N.T.S. 1

GROUNDING CONDUCTOR SIZING	
CONDUCTOR LENGTH IN LINEAR FT	CONDUCTOR SIZE IN AWG/MCM
< 33	2
34 - 41	1
42 - 53	1/0
54 - 66	2/0
67 - 84	3/0
85 - 105	4/0
106 - 125	250 MCM
126 - 150	300 MCM
151 - 175	350 MCM
176 - 250	500 MCM
251 - 300	600 MCM
> 300	750 MCM

GROUND ROD DETAIL SCALE: N.T.S. 4

CORNER FENCE GROUNDING KEYED NOTES: #

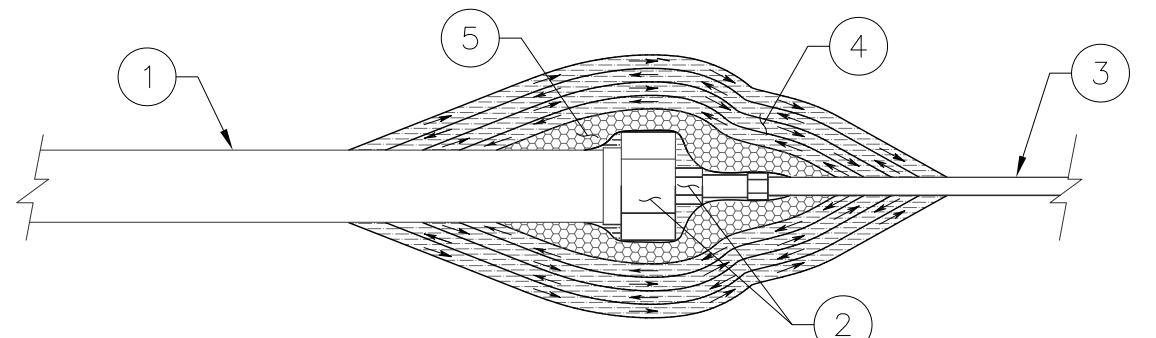
1. ERICO EXOTHERMIC WELD CONNECTION "VB" OR EQUIVALENT
2. DETERRENT WIRE GROUNDING CLAMP (HARGER FGC2) TRIM LEAD AS CLOSE TO GROUNDING CLAMP AS POSSIBLE
3. ERICO EXOTHERMIC WELD CONNECTION "HA" OR EQUIVALENT
4. #2 AWG SOLID TINNED BARE COPPER WIRE, BOND FENCE FABRIC TO GROUND CONDUCTOR
5. FENCE FABRIC GROUNDING CLAMP (TYP.)
6. GROUND CONDUCTOR WITH ERICO EXOTHERMIC WELD "VS" OR EQUIVALENT
7. CONNECT FENCE BONDING CONDUCTOR TO EXTERNAL GROUNDING ELECTRODE SYSTEM USING EXOTHERMIC WELD OR IRREVERSIBLE HIGH COMPRESSION FITTING
8. ERICO EXOTHERMIC WELD CONNECTION "PC" OR EQUIVALENT TO GROUND RING
9. GROUNDING RADIAL TO SYSTEM GROUND RING
10. GATE JUMPER WITH ERICO EXOTHERMIC WELD "VS" OR EQUIVALENT



MONOPOLE GROUNDING DETAIL SCALE: N.T.S. 7

WEATHERPROOFING KEYED NOTES: #

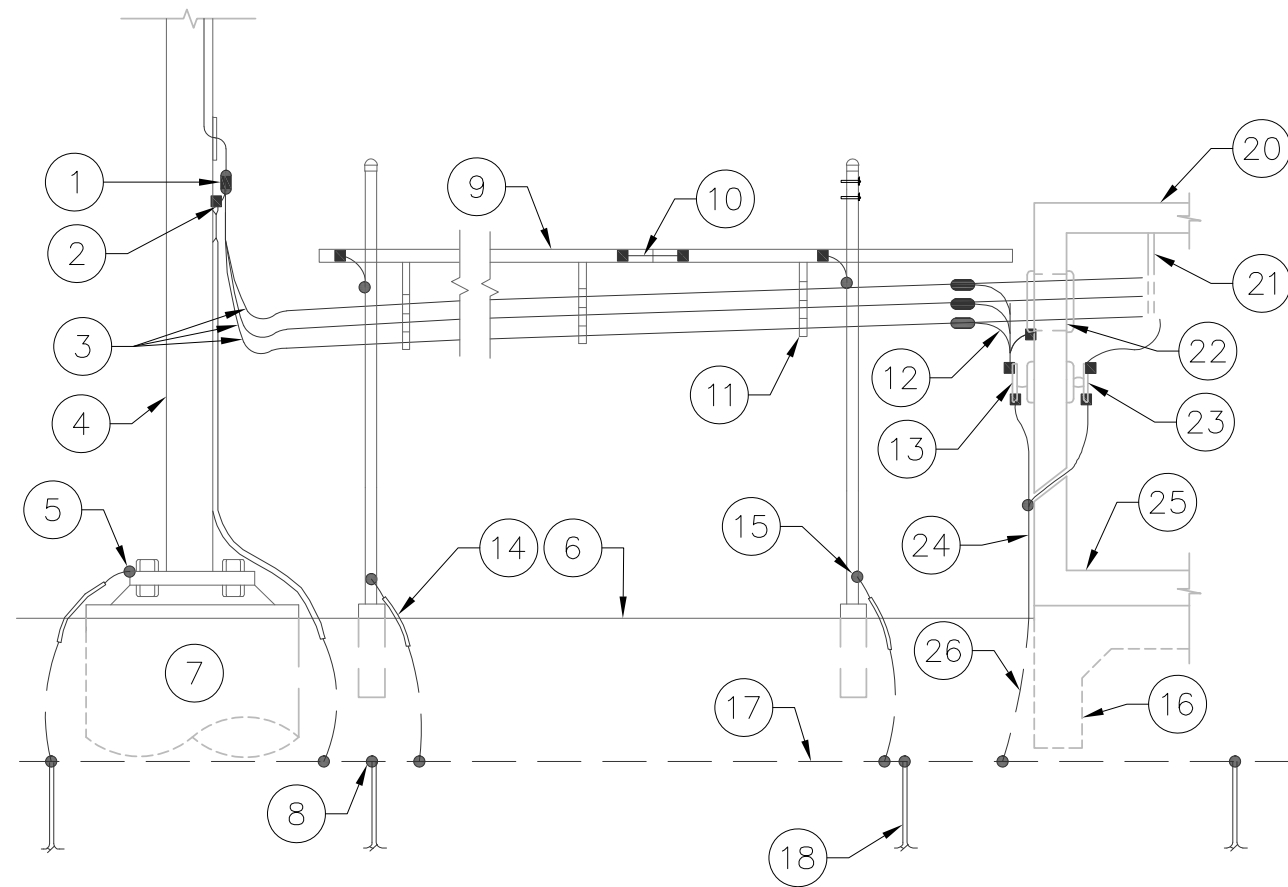
1. COAX
2. COAX TO JUMPER CONNECTION (TYP.)
3. JUMPER (TYP.)
4. 3M SCOTCH SUPER 33+ VINYL ELECTRICAL TAPE (OR EQUIVALENT)
5. VAPOR WRAP SEALANT



GROUNDING LUG DETAIL SCALE: N.T.S. 10

TYPICAL POLE/ICE BRIDGE GROUNDING KEYED NOTES: #

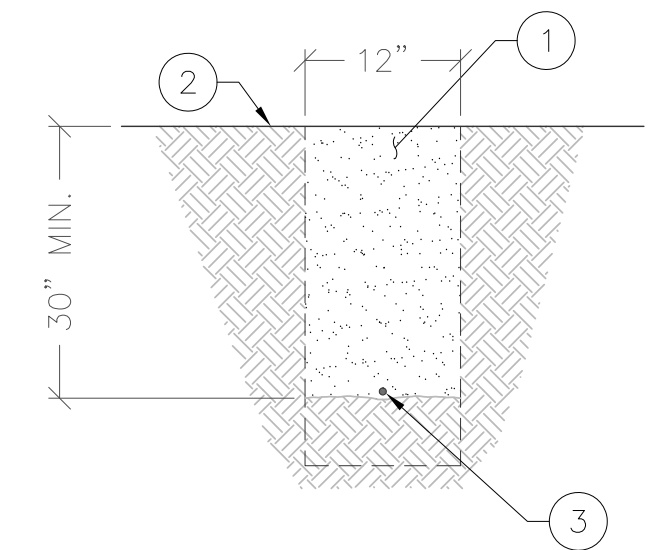
1. "SUREGROUND" GROUND KIT
2. TINNED SOLID ALLOY 110 COPPER GROUND BUS BAR AT BOTTOM OF POLE (TGB); BOND DIRECTLY TO MONOPOLE STEEL
3. RF TRANSMISSION LINE (COAX)
4. MONOPOLE
5. EXOTHERMIC WELD TO MANUFACTURER INSTALLED BONDING TAB (TYP.)
6. FINISHED GRADE
7. OUTLINE OF POLE FOUNDATION
8. EXOTHERMIC WELD (TYP.)
9. ICE BRIDGE
10. #6 AWG THHN COPPER WIRE W/ MECHANICAL CONNECTION TO EACH ICE BRIDGE SECTION (TYP.)
11. COAX CABLE AND HANGERS
12. "SUREGROUND" GROUND KIT
13. EXTERNAL GROUND BUS BAR (EGB)
14. CONDUCTOR ROUTED IN PVC OR FLEXIBLE NON-CONDUCTIVE CONDUIT (CARFLEX) (TYP.)
15. #2 AWG SOLID TINNED BARE COPPER WIRE TO SUPPORT POST (TYP.)
16. OUTSIDE EDGE OF SHELTER FOUNDATION
17. #2 AWG SOLID TINNED BARE COPPER WIRE (GROUND RING) MIN. 30" BELOW GRADE
18. 5/8"Øx10' LONG COPPER CLAD GROUND ROD (TYP.)
19. NOT USED
20. OUTLINE OF EQUIPMENT SHELTER
21. ARRESTOR TRAPEZE KIT IF NEEDED
22. CABLE ENTRY PORT
23. MAIN GROUND BUS BAR (MGB)
24. #2 AWG SOLID TINNED BARE COPPER GROUND CONDUCTOR TO GROUND RING
25. FINISHED FLOOR OF SHELTER
26. BOND BASE OF GROUNDING STRAP TO GROUND RING



GRND. CONDUCTOR SIZE DETAIL SCALE: N.T.S. 2

GROUND RING TRENCHING KEYED NOTES: #

1. BACKFILL PER SPECIFICATIONS
2. FINISHED GRADE
3. #2 AWG SOLID TINNED BARE COPPER WIRE



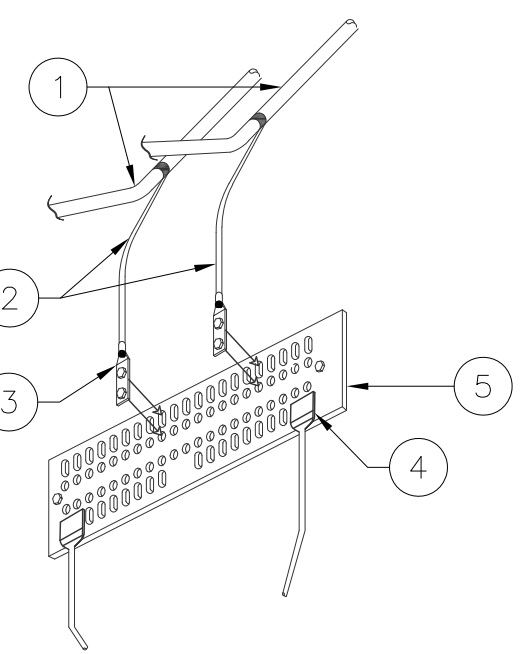
NOTES:
1. DEPTH TO BE 30" OR 6" BELOW FROST LINE, WHICHEVER IS GREATER.
2. GROUND RINGS SHOULD CONSIST OF AT LEAST 20' OF #2 AWG OR LARGER BARE COPPER CONDUCTOR.
3. BURY THE RINGS IN DIRECT CONTACT WITH SOIL.

GROUND RING TRENCH SCALE: N.T.S. 3

FENCE GROUNDING DETAIL SCALE: N.T.S. 5

POLE GROUNDING KEYED NOTES: #

1. HYBRID
2. HYBRID GROUNDING KIT
3. HEX BOLTS; APPROVED TWO HOLE LUG CONNECTION WITH STAINLESS HARDWARE
4. EXOTHERMIC WELD #2 AWG STRANDED BARE TINNED COPPER
5. TINNED COPPER POLE GROUND BUSS BAR

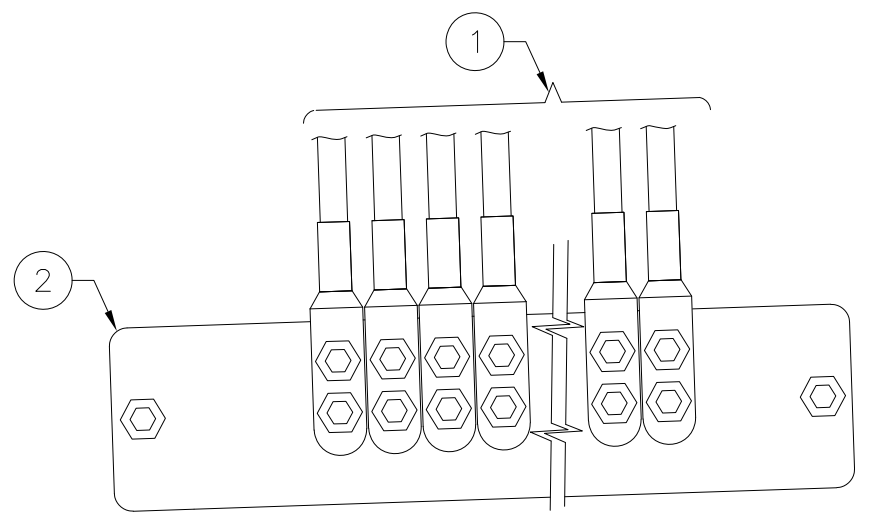


POLE GROUND BUSS BAR SCALE: N.T.S. 6

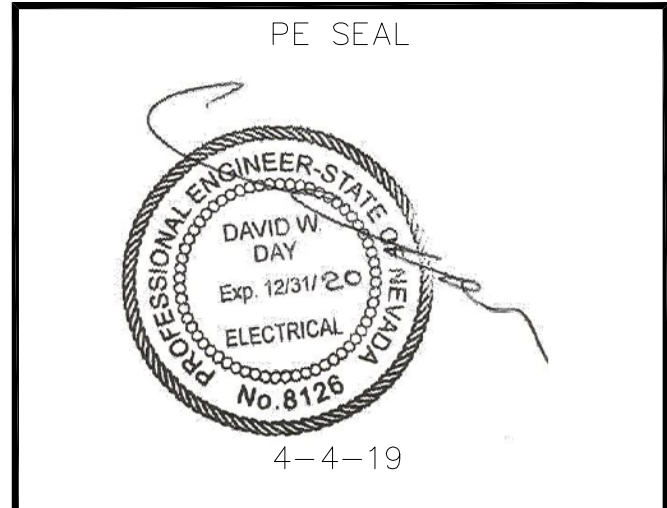
WEATHERPROOF DETAIL SCALE: N.T.S. 8

ANTENNA BUSS BAR KEYED NOTES: #

1. #2 AWG STRANDED Cu WIRE WITH GREEN, 600V, THWN INSULATION OR BLACK MARKED AS REQUIRED BY NEC
2. TINNED COPPER POLE BUSS BAR ATTACHED DIRECTLY TO POLE STEEL



ANTENNA BUSS BAR DETAIL SCALE: N.T.S. 9



DESIGNER: JASON NGO

LEAD EE: SB

LEAD CE/SE: SAM

SUBMITTALS			
REV.	DATE	DESCRIPTION	BY
H	1/25/19	COMMENTS	JN
I	2/13/19	COMMENTS	JN
J	2/18/19	COMMENTS	JN
K	2/19/19	FINAL CD	JN
L	4/3/19	REVISED CD	JN

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SITE NAME
VYA, NEVADA

PROJECT
RAW LAND MONOPOLE

SITE ADDRESS
LAT: 41° 35' 30.76358"N
LONG: 119° 52' 47.14752"W
89000A DUGWAY ROAD
GERLACH, NV 89413

SHEET TITLE
GROUNDING DETAILS

SHEET NUMBER
G-2