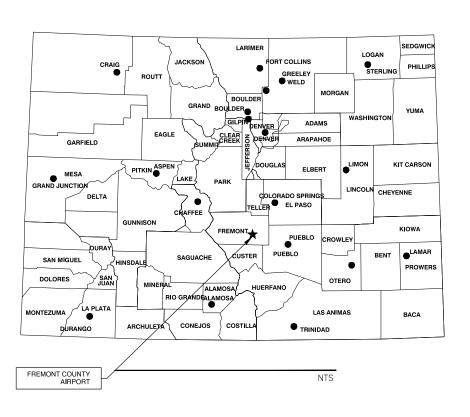
# FREMONT COUNTY AIRPORT FREMONT COUNTY, COLORADO AUTOMATED WEATHER OBSERVING SYSTEM REPLACEMENT

CDOT PROJECT NO. 25-1V6-02-C FAA AIP NO. 3-08-0009-025-2025



**ENGINEER** 

DENVER, CO 80222

JOHN CESSAR, P.E. 2696 SOUTH COLORADO BLVD

## **OWNERS**

FREMONT COUNTY WES BRANDT AIRPORT MANAGER 60298 HWY 50 PENROSE, CO 81240

# **SPONSORED BY:**

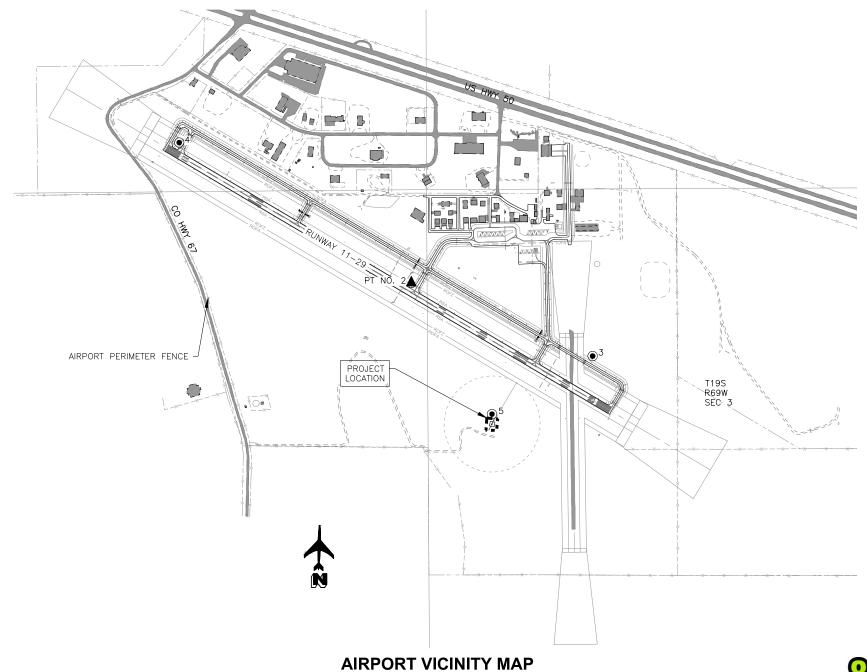
- FREMONT COUNTY
- FEDERAL AVIATION ADMINISTRATION

## **SURVEYOR**

DELTA FIELD SERVICES COREY WEBER, P.L.S. 2309 S BATTLEGROUND ROAD DEER PARK, TEXAS 77536

# **BENCHMARK**

▲ CONTROL PT. NO. 2 NGS PACS 1V6 A PUNCH HOLE TOP CENTER OF A STAINLESS STEEL ROD IN CONCRETE OBSERVED ELEV. 5399.90



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COUNTY AIRPORT REPLACEMENT

- 2. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL PROPERTY CORNERS AND AIRPORT SURVEY CONTROL POINTS. ANY SURVEY POINTS DISTURBED OR DAMAGED BY GRADING ACTIVITIES SHALL BE RESET BY A PROFESSIONAL LAND SURVEYOR LICENSED IN THE STATE OF COLORADO, AT THE CONTRACTOR'S EXPENSE
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTROLLING DOWNSTREAM EROSION AND SILTATION DURING ALL PHASES OF CONSTRUCTION. EROSION CONTROL MEASURES SHALL BE IN PLACE PRIOR TO BEGINNING SOIL DISTURBANCE ACTIVITIES.
- 4. DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CIVIL TECHNICAL SPECIFICATIONS AND THE APPLICABLE GENERAL AND SPECIAL PROVISIONS.

### **GENERAL NOTES**

- 1. IF DURING THE CONSTRUCTION PROCESS, CONDITIONS ARE ENCOUNTERED WHICH COULD INDICATE A SITUATION THAT IS NOT INDICATED IN THE PLANS OR SPECIFICATIONS, OR REPRESENT A SIGNIFICANT DIFFERENCE BETWEEN THE DOCUMENTS AND FIELD CONDITIONS, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IMMEDIATELY.
- THE CONTRACTOR SHALL OBTAIN APPROVAL FROM THE AIRPORT MANAGER, FREMONT COUNTY, PRIOR TO ESTABLISHING CONSTRUCTION ACCESS OR HAUL ROADS. EXISTING ROADS SHALL BE USED TO THE MAXIMUM EXTENT POSSIBLE.
- 3. ALL AREAS OUTSIDE THE CONTRACT WORK LIMITS DISTURBED BY THE CONTRACTOR SHALL BE REPAIRED AND RE-SEEDED AS REQUIRED. NO ADDITIONAL DIRECT COST SHALL BE PAID FOR THESE REPAIRS BUT RATHER SHALL BE CONSIDERED INCIDENTAL TO BID ITEM C-105-6.1MOBILIZATION.
- THE CONTRACTOR SHALL SUBMIT A WORK SCHEDULE AND PROPOSED CONSTRUCTION METHODS, CONSISTENT WITH THE DESIGNED PHASING PLAN, TEN (10) DAYS PRIOR TO COMMENCEMENT OF WORK. DURING CONSTRUCTION THE WORK SCHEDULE SHALL BE UPDATED
- CONTRACTOR IS RESPONSIBLE FOR ANY PERMITS AND INSPECTIONS THAT MIGHT BE REQUIRED BY THE COUNTY.
- ANY AND ALL FINES RECEIVED BY THE AIRPORT DUE TO THE CONTRACTOR'S OPERATIONS SHALL BE PAID BY THE CONTRACTOR.
- 7. THE LOCATION AND SIZE OF THE CONTRACTOR'S STAGING AREA IS SHOWN FOR REFERENCE ONLY. THE ACTUAL SIZE AND EXACT LOCATION MUST BE APPROVED BY THE ENGINEER AND THE AIRPORT MANAGER PRIOR TO CONSTRUCTION. THE FOLLOWING REQUIREMENTS WILL
- ALL REQUIRED UTILITIES INCLUDING WATER AND ELECTRICITY FOR THE CONTRACTOR'S STAGING AREA SHALL BE ARRANGED AND PAID FOR BY THE CONTRACTOR DIRECTLY WITH THE APPROPRIATE UTILITY AGENCY.
- ALL OF THE CONTRACTOR'S ACTIVITY WILL BE STAGED FROM THE CONTRACTOR STAGING AREA INCLUDING ANY FIELD OFFICE AND EMPLOYEE PARKING. THE CONTRACTOR WILL BE RESPONSIBLE FOR TRANSPORTING EMPLOYEES FROM THE STAGING AREAS TO AND FROM WORK AREA. WHEN NOT ENGAGED IN CONSTRUCTION ACTIVITY, CONSTRUCTION EQUIPMENT AND VEHICLES MUST BE PARKED IN THE STAGING AREA. NO PERSONAL VEHICLES ARE ALLOWED ACCESS TO THE WORKSITE.
- 12. ALL HAUL ROUTES, RUNWAY, TAXIWAYS, APRONS AND ROADWAYS MUST BE KEPT FREE OF FOREIGN OBJECTS AND DEBRIS (FOD), DIRT AND DUST. MAINTAINING CLEAN HAUL ROUTES AND WORK AREAS SHALL BE ON A CONTINUOUS BASIS AND IS INCIDENTAL TO PROJECT BID
- 13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING ALL EXISTING AREAS, PAVEMENTS, STRUCTURES, OR OTHER FACILITIES WITHIN THE IMMEDIATE WORK AREA OR ALONG ACCESSROUTES DAMAGED DURING CONSTRUCTION ACTIVITIES BY THE CONTRACTOR'S/SUBCONTRACTOR'S WORKFORCE, (NPI).
- 14. THE CONTRACTOR SHALL REMOVE ALL DEBRIS RESULTING FROM WORK UNDER THIS CONTRACT TO AN APPROVED DUMP SITE, UNLESS OTHERWISE DIRECTED BY THE TECHNICAL SPECIFICATIONS
- 15. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF THEIR OWN EQUIPMENT. CONTRACTOR MAY INSTALL TEMPORARY FENCING AROUND THE CONTRACTOR STAGING AREA AT THEIR OWN EXPENSE. (NPI)
- 16. CONTRACTOR SHALL PROTECT ALL HAUL ROAD ACCESS POINTS TO THE AIRFIELD FROM UNAUTHORIZED ENTRY. THE CONTRACTOR IS REQUIRED TO POST GATE GUARD(S) AT AIRFIELD ENTRY GATES DURING CONTRACTOR WORKING HOURS IF THE GATE IS LEFT UNLOCKED.
- BE RESPONSIBLE FOR PROVIDING INCIDENTAL INFRASTRUCTURE NECESSARY FOR THE TEMPORARY HAUL ROADS. ANY DISTURBED AREA SHALL BE RETURNED TO A CONDITION THAT IS EQUAL TO OR BETTER THAN ITS ORIGINAL CONDITION TO THE SATISFACTION OF THE AIRPORT
- 18. THE HAUL ROUTE WITHIN THE AIR OPERATIONS AREA (AOA) IS SUBJECT TO CHANGE, AT THE AIRPORT'S DISCRETION. TO ACCOMMODATE AIRCRAFT MOVEMENTS
- 19. THE CONTRACTOR SHALL POST CROSSING GUARDS/FLAGGERS ALONG TAXIWAYS LEADING TO THE THE RUNWAY DURING ALL RUNWAY CROSSING WORK.

# FREMONT COUNTY AIRPORT (1V6) AWOS REPLACEMENT 100% ESTIMATED QUANTITIES

LINE No.	ITEM No.	DESCRIPTION	APPROX. QTY.	UNIT	AS-BUILT QTY.
1	C-105-6.1	Mobilization	1	LS	
2	T-901-5.1	Seeding with Hydromulch	1	AC	
3	T-901-5.2	Landscape Stone with Herbicide & Plastic Sheeting (DET 1, SHT C1.1)	2500	SF	
4	L-100-5.1	Remove Existing AWOS Equipment, Tower, Electrical Sub-panel, and Cables. Excavate and Remove Tower Foundation. Existing Grounding to Remain - Protect in Place	1	LS	
5	L-100-5.2	New 30Amp, Single Phase, 12-Circuit Sub-panel, 100A Rated, NEMA 3R with Branch Circuit Breakers Complete	1	LS	
6	L-100-5.3	New Strut Rack for AWOS Step-Down Transformer and Disconnect.Provide New Transformer Ground if Required. Remove Existing Wood Pole.	1	EA	
7	L-100-5.4	Electrical Vault Upgrades Including Installation of New Circuit Breaker, Removal of AWOS Contactor, and All Associated Wiring, Complete	1	LS	
8	L-108-5.1	2 - #12 AWG, #12 Ground (Sensor & Obstruction Light Power)	200	LF	
9	L-108-5.2	2 - #10 AWG, #10 Neutral,#10 Ground (Sub-panel Feeder)	75	LF	
10	L-110-5.1	1-1" PVC, Direct Buried (If Required)	40	LF	
11	L-110-5.2	1-3/4" PVC, Direct Buried (If Required)	20	LF	
12	L-AWOS-6.1	New AWOS III P/T, Site Preparation - Sensors and Tower Foundations, Masts, Power and Communication Conduits, Enclosures and Cables, Installed and Commissioned, Per Manufacturer Requirements Complete	1	LS	
13	L-AWOS-6.2	New AWOS Tower on New Concrete Foundation, Adjusted to 1" Minimum Above Finished Grade Complete	1	LS	
14	L-AWOS-6.3	New L-810(L) LED Dual Obstruction Light, Installed on New AWOS Tower Complete	1	EA	
15	L-AWOS-6.4	Install New CDP, UHF Wireless Radio Kit, Antenna and Required Cables in Terminal Building, Tested and Commissioned Complete Per Manufacturer Requirements	1	LS	

SHEET INDEX							
SHT NO.	SHT ID	SHEET TITLE					
1	G1.0	COVER SHEET					
2	G1.1	GENERAL NOTES, ABBREVIATIONS, SHEET INDEX, AND QUANTITIES					
3	G1.2	AIRPORT SITE PLAN					
4	G1.3	SURVEY CONTROL PLAN					
5	G2.1 CONSTRUCTION PHASING & ACCESS PLAN						
6	C1.1	CONSTRUCTION PLAN					
7	E1.1	ELECTRICAL LEGEND AND NOTES					
8	E2.1	OVERALL ELECTRICAL PLAN					
9	E2.2 AWOS ELECTRICAL SITE PLAN						
10	10 E3.1 AWOS INSTALLATION AND GROUNDING DETAILS						
11	E4.1	ELECTRICAL DETAILS					
12	E4.2	ELECTRICAL DETAILS					
13	E5.1	SINGLE LINE DIAGRAM					

#### UTILITIES SURVEY

- PRIOR TO COMMENCING WORK FOR ANY EXCAVATION REQUIRED, IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO CONTACT THE APPROPRIATE UTILITY AGENCIES, UTILITY NOTIFICATION CENTERS, AND TO FIELD VERIFY THE LOCATIONS AND DEPTHS, THROUGH UTILITY LOCATES AND POTHOLES, OF ALL EXISTING UTILITIES WITHIN THE PROJECT LIMITS, AND STAGING AREAS.
- THE EXISTING UTILITIES LOCATIONS SHOWN ON THE PLANS ARE APPROXIMATE AND SHALL NOT BE SCALED FOR EXACT LOCATION. LOCATION OF EXISTING DUCT BANKS, CIRCUITING, UTILITIES AND STRUCTURES SHOWN ON THESE DRAWINGS IS BASED ON AVAILABLE INFORMATION AND IS NOT GUARANTEED TO BE EXACT, NOR IS IT GUARANTEED THAT ALL OF THESE ITEMS ARE SHOWN.
- THE CONTRACTOR SHALL FIELD VERIFY THE LOCATION AND DEPTH OF ALL EXISTING UTILITIES WITHIN PROJECT LIMITS, STAGING, AND HAUL ROUTE AREAS PRIOR TO COMMENCING WORK. LOCATION OF EXISTING UTILITIES AND STRUCTURES SHOWN ON THESE DRAWINGS ARE BASED ON AVAILABLE INFORMATION AND ARE NOT GUARANTEED TO BE EXACT. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CALLING THE UTILITY NOTIFICATION CENTER OF COLORADO (UNCC) AT 1-800-922-1987 AND THE FREMONT COUNTY AIRPORT OFFICE AT 719-784-3816 TO COORDINATE LOCATING OF ALL EXISTING UTILITIES ON THE AIRPORT PRIOR TO BEGINNING ANY GRADING OR UTILITY WORK. THE CONTRACTOR SHALL IMMEDIATELY REPAIR ANY UTILITIES DAMAGED DURING CONSTRUCTION TO THE SATISFACTION OF THE UTILITY OWNER AT NO COST.
- CONSTRUCTION MANAGER/SURVEYOR/CONTRACTOR SHALL COORDINATE WITH THE ENGINEER TO IDENTIFY AND LOCATE ALL EXISTING SITE CONTROL POINTS. THESE CONTROL POINTS SHALL THE BASIS FOR THE AS-BUILT SURVEY OF ALL UTILITY ALIGNMENTS AND ALL APPURTENANCES. CONTRACTOR SHALL PROVIDE DIGITAL AS-BUILT INFORMATION (AUTOCAD FILE & .TXT/.CSV) TO ENGINEER.
- STAKING OF THE WORK SHALL BE PROVIDED BY THE CONTRACTOR. THE ENGINEER WILL PROVIDE AN ELECTRONIC (CADD) FILE OF RELEVANT PORTIONS OF THE CIVIL WORK IN ADDITION TO THE HARD COPY DOCUMENTS. SUCH CADD FILES MAY NOT SHOW ALL ITEMS REQUIRED TO BE STAKED. IN THE EVENT OF A CONFLICT BETWEEN THE ELECTRONIC (CADD) FILE AND THE CONTRACT DRAWINGS AND SPECIFICATIONS, THE CONTRACT DRAWINGS AND SPECIFICATIONS SHALL GOVERN. THE AVAILABILITY AND USE OF CADD FILES SHALL NOT IN ANY WAY RELIEVE THE CONTRACTOR'S RESPONSIBILITY FOR THE PROPER CHECKING AND COORDINATION OF DIMENSIONS, LINES, GRADES, AND QUANTITIES OF MATERIALS AS REQUIRED FOR COMPLETE AND ACCURATE COMPLETION OF THE WORK.
- ALL PLAN QUANTITIES ARE CONSIDERED APPROXIMATE ONLY. ANY DISCREPANCIES OR OMISSIONS DISCOVERED DURING CONSTRUCTION SHALL BE REPORTED TO THE ENGINEER PRIOR TO PERFORMING THE WORK IN QUESTION OR THE WORK WILL BE DONE AT THE CONTRACTOR'S OWN EXPENSE.

**QUANTITIES** 

- 2. THE PROJECT PAY ITEMS PROVIDED ARE TO BE INCLUSIVE OF ALL WORK TO BE PERFORMED AS SHOWN IN THE PROJECT CONTRACT DOCUMENTS. ALL WORK NOT IDENTIFIED WITHIN A SPECIFIC PAY ITEM IS TO BE CONSIDERED REQUIRED WORK TO COMPLETE THE PROJECT AND IS TO BE INCIDENTAL TO THE COST OF PROJECT PAY ITEMS PROVIDED.
- 3. ALL ESTIMATES OF QUANTITIES ARE FOR INFORMATIONAL PURPOSES ONLY. THE CONTRACTOR AND SUBCONTRACTORS SHALL BE RESPONSIBLE FOR DETERMINING ALL AS-BUILT QUANTITIES. THE CONTRACTOR SHALL PROVIDE ALL WORK AND MATERIALS AS SHOWN ON THE PLANS.







GENERAL NOTES, ABBREVIATIONS SHEET INDEX, AND QUANTITIES COUNTY AIRPORT REPLACEMENT FREMONT ( AWOS F

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CONTRACTOR'S STAGING & STORAGE AREA

CONTRACTOR'S HAUL ROUTE

PRIMARY CONTROL POINT



CONTROL POINT



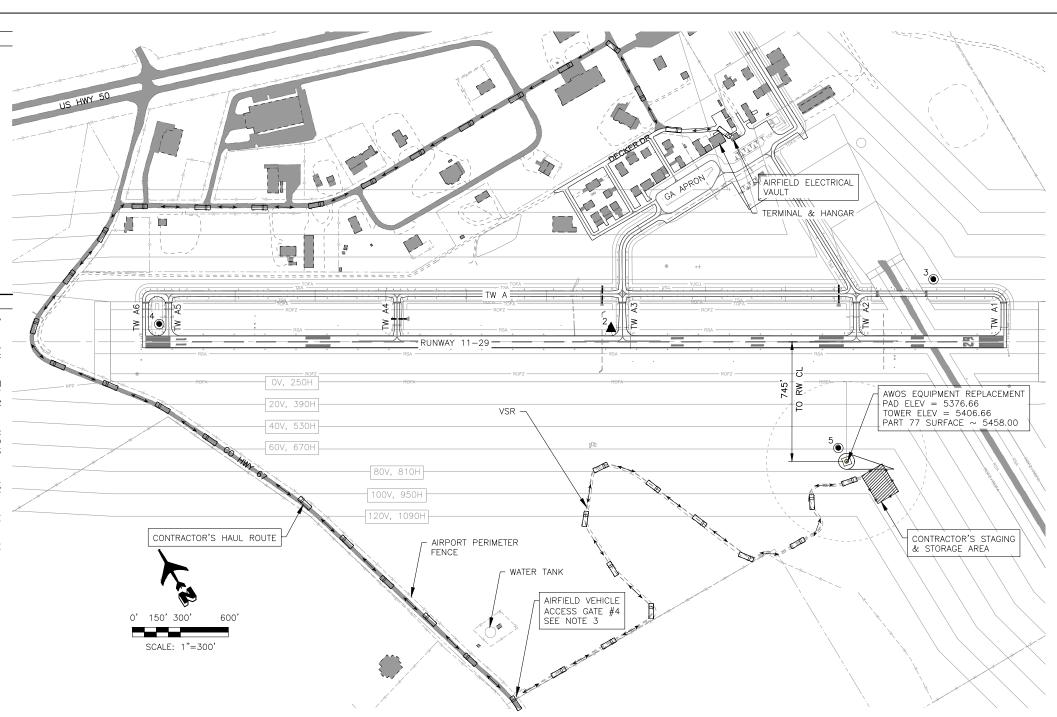
PROPOSED AWOS EQUIPMENT

(ABOVE RW CL ELEY.)

THE 14 CFR PART 77 PROMOTES SAFE, EFFICIENT USE, AND PRESERVATION OF NAVIGABLE AIRSPACE BY ESTABLISHING SEVERAL IMAGINARY SURFACES THAT ARE USED AS A GUIDE TO PROVIDE A SAFE AND UNOBSTRUCTED OPERATING ENVIRONMENT FOR AVIATION. THE CFR PART 77 CONTOURS SHOWN ARE FOR INFORMATION PURPOSES ONLY AND DEPICT THE MAXIMUM ALLOWABLE VERTICAL HEIGHT (IN FEET, LABEL V) OF CONSTRUCTION EQUIPMENT AND TERRAIN ABOVE THE RUNWAY CENTERLINE ELEVATION, AT A SPECIFIED HORIZONTAL DISTANCE FROM THE RUNWAY CENTERLINE (IN FEET, LABEL H). THE CONTRACTOR'S EQUIPMENT SHALL REMAIN BELOW ALL CFR PART 77 SURFACES AT ALL TIMES, UNLESS APPROVED OTHERWISE BY THE ENGINEER.

#### CONSTRUCTION NOTES

- 1. THE CONTRACTOR STAGING & STORAGE AREA SHALL BE APPROXIMATELY 100' X 75', CONFIRM WITH AIRPORT ONSITE
- 2. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTION OF HIS OWN EQUIPMENT. CONTRACTOR MAY INSTALL TEMPORARY FENCING AROUND THE CONTRACTOR STAGING & STORAGE AREAS AS SHOWN ON THIS SHEET AT HIS OWN EXPENSE. (NPI)
- 3. CONTRACTOR SHALL PROTECT ALL HAUL ROAD ACCESS POINTS TO THE AIRFIELD FROM UNAUTHORIZED ENTRY. CONTRACTOR IS REQUIRED TO POST GATE GUARD(S) AT AIRFIELD ACCESS GATES DURING CONTRACTOR WORKING HOURS (IF LEFT UNLOCKED OR
- 4. CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING INCIDENTAL GRADING & INFRASTRUCTURE NECESSARY FOR THE TEMPORARY HAUL ROUTES. ANY DISTURBED AREA SHALL BE RETURNED TO A CONDITION THAT IS EQUAL TO OR BETTER THAN ITS ORIGINAL CONDITION, TO THE SATISFACTION OF THE AIRPORT.
- 5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION & REPAIR OF ALL DAMAGE TO EXISTING PAVEMENT USED FOR HAUL ROUTES BY CONSTRUCTION OR HAULING EQUIPMENT.
- 6. THE HAUL ROUTE WITHIN THE AIRPORT PROPERTY IS SUBJECT TO CHANGE, AT THE AIRPORT'S DISCRETION, TO ACCOMMODATE AIRCRAFT MOVEMENTS.
- 7. ANY MOVEMENT IN THE AOA OF THE AIRFIELD MUST BE COORDINATED WITH THE AIRPORT AND ANY AIRCRAFT TRAFFIC IN THE VICINITY OF THE AIRPORT VIA RADIO.



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COUNTY AIRPORT REPLACEMENT

FREMONT ( AWOS F

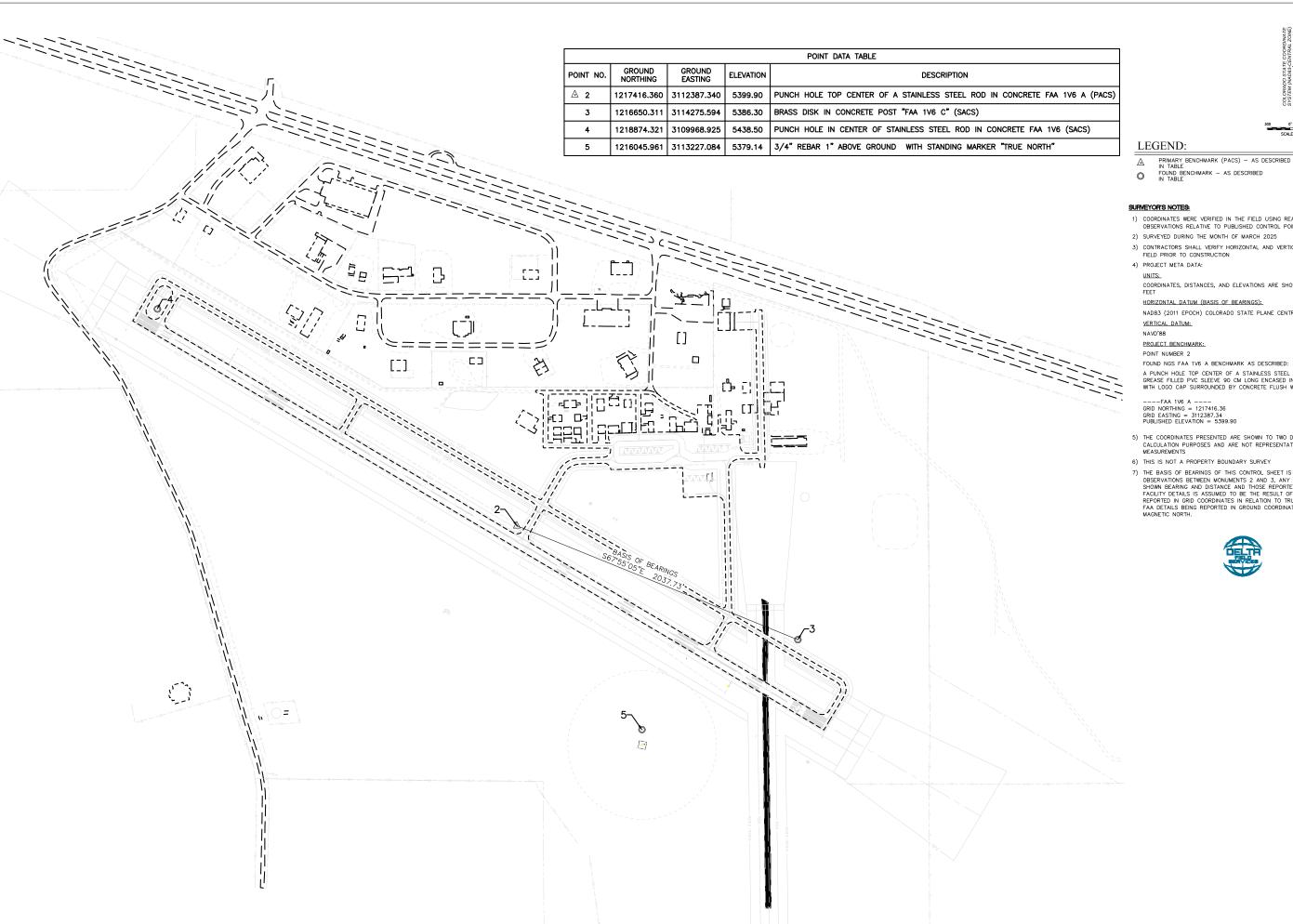
PLAN

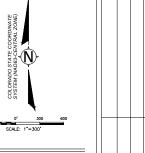
SITE

AIRPORT 8

M

DIB





- COORDINATES WERE VERIFIED IN THE FIELD USING REAL TIME KINEMATIC GPS OBSERVATIONS RELATIVE TO PUBLISHED CONTROL POINTS
- 2) SURVEYED DURING THE MONTH OF MARCH 2025
- 3) CONTRACTORS SHALL VERIFY HORIZONTAL AND VERTICAL CONTROLS IN THE FIELD PRIOR TO CONSTRUCTION

COORDINATES, DISTANCES, AND ELEVATIONS ARE SHOWN IN US SURVEY FEET

HORIZONTAL DATUM (BASIS OF BEARINGS):

NAD83 (2011 EPOCH) COLORADO STATE PLANE CENTRAL, GRID

A PUNCH HOLE TOP CENTER OF A STAINLESS STEEL ROD IN A 2.5 CM GREASE FILLED PVC SLEEVE 90 CM LONG ENCASED IN A 12.7 CM PVC PIPE WITH LOGO CAP SURROUNDED BY CONCRETE FLUSH WITH THE GROUND.

----FAA 1V6 A ----GRID NORTHING = 1217416.36 GRID EASTING = 3112387.34 PUBLISHED ELEVATION = 5399.90

- 5) THE COORDINATES PRESENTED ARE SHOWN TO TWO DECIMAL PLACES FOR CALCULATION PURPOSES AND ARE NOT REPRESENTATIVE OF THE SURVEY MEASUREMENTS
- 6) THIS IS NOT A PROPERTY BOUNDARY SURVEY
- 7) THE BASIS OF BEARINGS OF THIS CONTROL SHEET IS DETERMINED BY THE THE BASIS OF BEARINGS OF HIS CONTRICT SHEET IS DETERMINED BY THE OBSERVATIONS BETWEEN MONUMENTS 2 AND 3, ANY DIFFERENCE BETWEEN SHOWN BEARING AND DISTANCE AND THOSE REPORTED BY THE FAA ADIP FACILITY DETAILS IS ASSUMED TO BE THE RESULT OF THIS SURVEY BEING REPORTED IN GRID COORDINATES IN RELATION TO TRUE NORTH AND THE FAA DETAILS BEING REPORTED IN GROUND COORDINATES IN RELATION TO TRUE NORTH AND THE FAA DETAILS BEING REPORTED IN GROUND COORDINATES IN RELATION TO MAGNETIC NORTH.











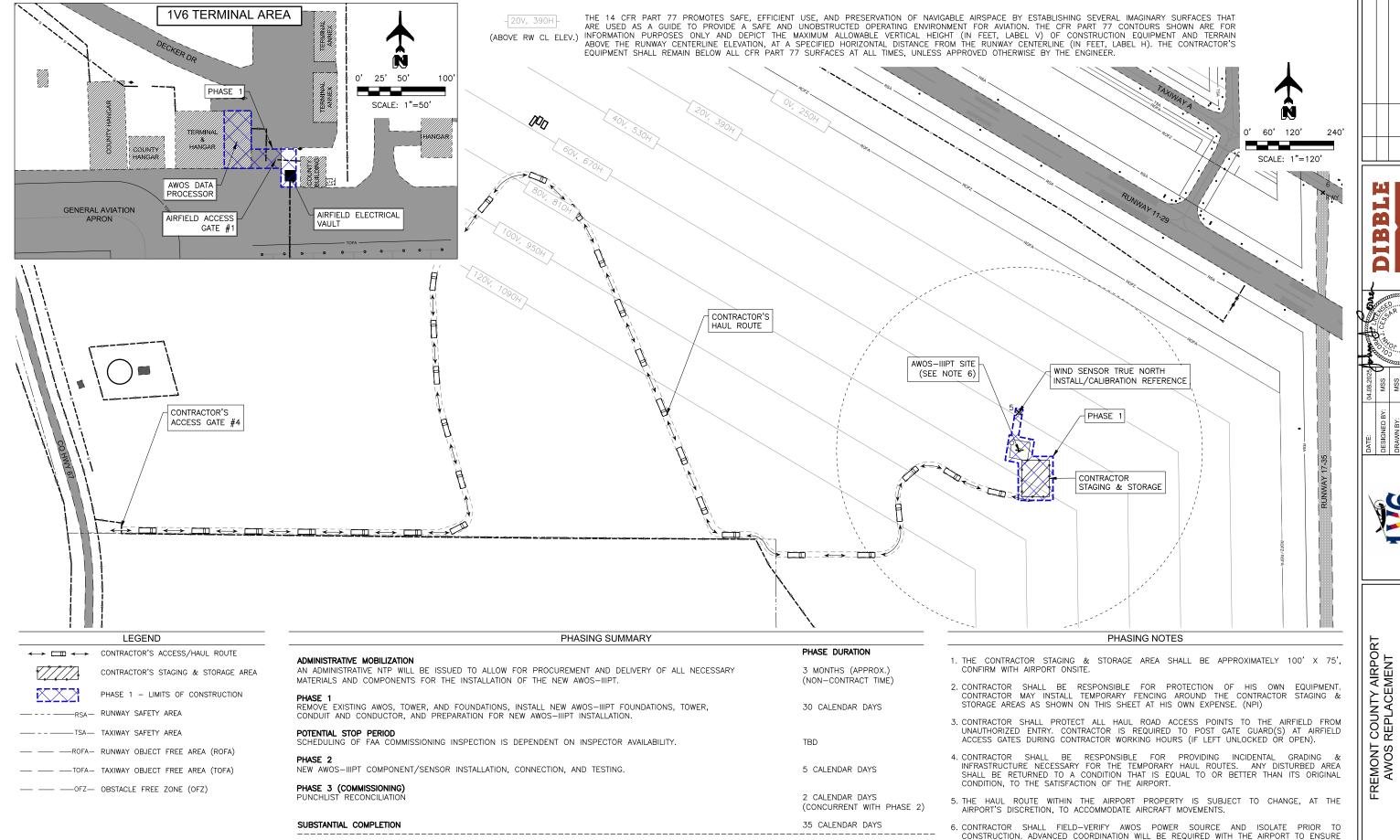
FREMONT COUNTY AIRPORT AWOS REPLACEMENT

**CONTROL PLAN** SURVEY

G1.3

SHEET#

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PUNCHLIST RECONCILIATION

FINAL COMPLETION:

SURE \_\_

APPROPRIATE NOTAMS ARE ISSUED, AS NEEDED.

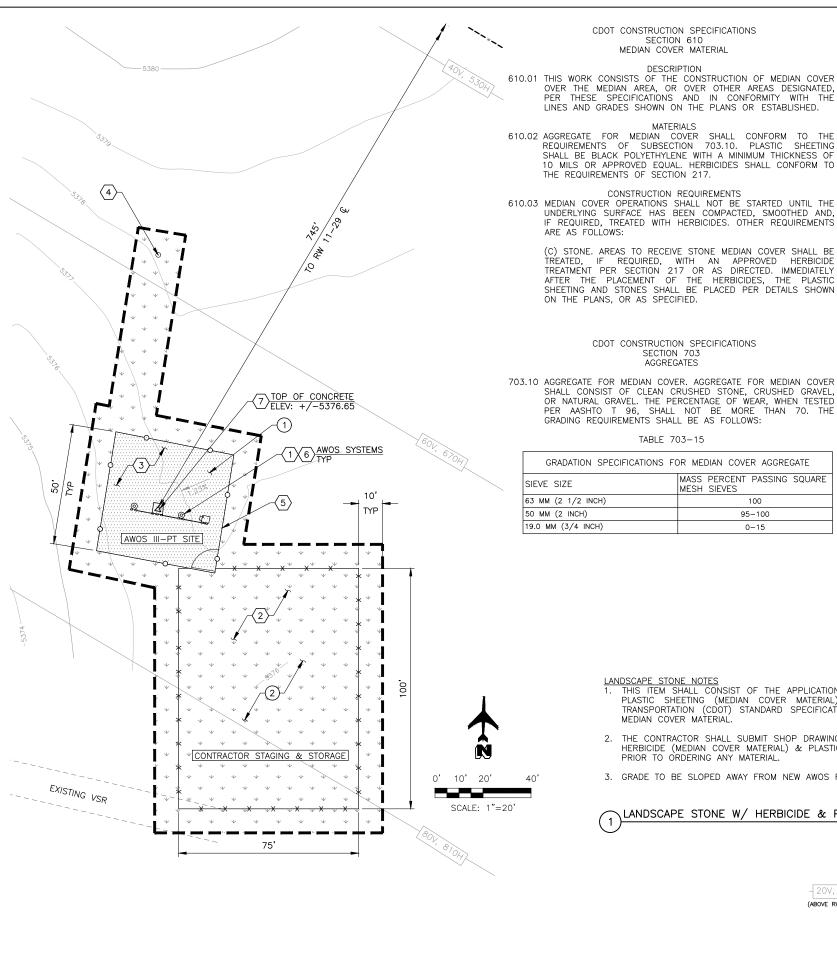
7 CALENDAR DAYS

42 CALENDAR DAYS

**G2.1**SHEET #

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CONSTRUCTION PHASING & ACCESS PLAN



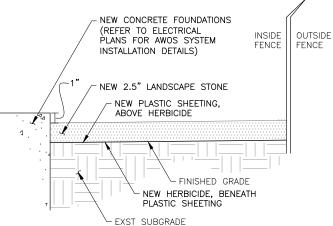
#### DESCRIPTION

217.01 THIS WORK CONSISTS OF FURNISHING AND APPLYING HERBICIDES TO PREVENT OR CONTROL PLANT GROWTH IN AREAS SHOWN ON THE PLANS OR DESIGNATED.

#### MATERIALS

217.02 HERBICIDES SHALL BE WATERBASED AND SUBMITTED TO RPR
FOR APPROVAL PRIOR TO APPLICATION. ALL HERBICIDE LABELS
SHALL BE CURRENTLY REGISTERED WITH THE COLORADO DEPARTMENT OF AGRICULTURE AS QUALIFIED APPLICATORS.

> THE CONTRACTOR SHALL FURNISH DOCUMENTATION OF SUCH LICENSING BEFORE HERBICIDE APPLICATION. HERBICIDE MIXING AND APPLICATION SHALL BE DONE PER INSTRUCTIONS ON THE REGISTERED PRODUCT LABEL. THE ENGINEER SHALL BE FURNISHED SUCH LABEL INFORMATION BEFORE MIXING AND APPLICATION. THE CONTRACTOR SHALL NOTIFY THE ENGINEER AT LEAST 24 HOURS BEFORE EACH HERBICIDE APPLICATION AND SHALL INDICATE THE TIME AND LOCATION APPLICATION WILL BEGIN. APPLICATION WILL NOT BE ALLOWED ON SATURDAYS. SUNDAYS, OR HOLIDAYS UNLESS OTHERWISE APPROVED BY THE ENGINEER. HERBICIDES SHALL NOT BE APPLIED WHEN WEATHER CONDITIONS, INCLUDING WIND CONDITIONS, ARE UNSUITABLE FOR SUCH WORK. HERBICIDES SHALL NOT BE APPLIED WHEN SOIL IS EXTREMELY DRY. HERBICIDE APPLICATION METHOD SHALL BE SUCH THAT PLANT GROWTH OUTSIDE THE DESIGNATED TREATMENT AREAS WILL NOT BE DAMAGED. ALL DAMAGE CAUSED BY IMPROPER HERBICIDE APPLICATION SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE. HERBICIDES SHALL NOT BE USED ON AREAS THAT ARE TO BE TOPSOIL SOURCES UNLESS OTHERWISE APPROVED BY THE ENGINEER.



SECTION 610

MEDIAN COVER MATERIAL

DESCRIPTION

MATERIALS

SECTION 703

**AGGREGATES** 

TABLE 703-15

- THIS ITEM SHALL CONSIST OF THE APPLICATION AND PLACEMENT OF LANDSCAPE STONE WITH HERBICIDE & PLASTIC SHEETING (MEDIAN COVER MATERIAL) IN ACCORDANCE WITH THE COLORADO DEPARTMENT OF TRANSPORTATION (CDOT) STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, SECTION 610
- 2. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS/MATERIAL INFORMATION FOR THE LANDSCAPE STONE WITH HERBICIDE (MEDIAN COVER MATERIAL) & PLASTIC SHEETING BEFORE REVIEW AND APPROVAL OF THE AIRPORT
- 3. GRADE TO BE SLOPED AWAY FROM NEW AWOS FOUNDATIONS AT SLOPE OF 1.0 TO 3.5%.

LANDSCAPE STONE W/ HERBICIDE & PLASTIC SHEETING

MASS PERCENT PASSING SQUARE

100

95-100

0 - 15

MESH SIEVES

20V, 390H THE 14 CFR PART 77 PROMOTES SAFE, EFFICIENT USE, AND (ABOVE RW CL ELEV.)

PRESERVATION OF NAVIGABLE AIRSPACE BY ESTABLISHING SEVERAL IMAGINARY SURFACES THAT ARE USED AS A GUIDE TO PROVIDE A SAFE AND UNOBSTRUCTED OPERATING ENVIRONMENT FOR AVIATION. THE CFR PART 77 CONTOURS SHOWN ARE FOR INFORMATION PURPOSES ONLY AND DEPICT THE MAXIMUM ALLOWABLE VERTICAL HEIGHT (IN FEET, LABEL V) OF CONSTRUCTION EQUIPMENT AND TERRAIN ABOVE THE RUNWAY CENTERLINE ELEVATION, AT A SPECIFIED HORIZONTAL DISTANCE FROM THE RUNWAY CENTERLINE (IN FEET, LABEL H). THE CONTRACTOR'S EQUIPMENT SHALL REMAIN BELOW ALL CFR PART 77 SURFACES AT ALL TIMES, UNLESS APPROVED OTHERWISE BY THE ENGINEER.

# CDOT CONSTRUCTION SPECIFICATIONS SECTION 217 HERBICIDE TREATMENT

DEPARTMENT OF AGRICULTURE AND THE U.S. ENVIRONMENTAL PROTECTION AGENCY. ALL HERBICIDES SHALL BE SUPPLIED TO THE PROJECT IN LABELED CONTAINERS. THE LABELS SHALL SHOW THE PRODUCT NAME, CHEMICAL COMPOSITION, EXPIRATION DATE, AND DIRECTIONS FOR USE. CONSTRUCTION REQUIREMENTS 217.03 ALL HERBICIDES SHALL BE APPLIED BY COMMERCIAL PESTICIDE APPLICATORS LICENSED BY THE COLORADO

# MISC LEGEND

AVAILABLE UPON REQUEST.

CONTRACTOR'S STAGING & STORAGE AREA

CONSTRUCTION NOTES

1) LANDSCAPE STONE W/ HERBICIDE & 2,500 SF

REFERENCE NOTES

(1) REFER TO ELECTRICAL PLANS FOR AWOS

2 ALL CLEARING & GRUBBING SHALL BE CONSIDERED INCIDENTAL TO THE PROJECT. THERE IS NO SEPARATE MEASUREMENT &

3 EXACT GRADING LIMITS WITHIN THE FENCED

PAYMENT FOR THIS ITEM. ALL WASTE MATERIAL

AREA TO BE DETERMINED IN THE FIELD BETWEEN THE CONTRACTOR & AIRPORT. FINAL

GRADES AFTER EXCAVATION SHALL BE LEFT IN SUCH A WAY THAT PROVIDES POSITIVE

TRUE NORTH MARKER (REBAR) W/ THE AWOS

IN KIND, AS NEEDED, TO PERFORM EQUIPMENT

INSTALLATIONS. ANY DAMAGED MATERIAL WILL BE REPLACED PER FAA F-162 SPECIFICATIONS.

(6) LAYOUT SHOWN IS FOR REFERENCE ONLY. 🎝 CONTRACTOR TO INSTALL PER MANUFACTURERS

TOP OF CONCRETE ELEVATION IS APPROXIMATE.

FINAL ELEVATION, PER THE MANUFACTURER'S

RECOMMENDED LAYOUT, SHALL BE REVIEWED &

**GENERAL NOTES** 

STRUCTURAL/FOUNDATION DESIGN FOR THE NEW AWOS TOWER & SENSORS. STRUCTURAL/FOUNDATION DESIGN SHALL BE

BY A STRUCTURAL ENGINEER REGISTERED IN

THE STATE OF COLORADO. IF STRUCTURAL FOUNDATION DESIGN IS PROVIDED BY AN AWOS MANUFACTURER, SUPPORTING DOCUMENTATION FOR THE DESIGN SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW. PAST GEOTECHNICAL REPORT INFORMATION IS

PROVIDE

SHALL

DRAINAGE SIMILAR TO EXISTING CONDITIONS.

(4) CONTRACTOR TO COORDINATE RELOCATION OF

(5) CONTRACTOR TO REMOVE & REPLACE FENCE

SYSTEM INSTALLATION DETAILS.

SHALL BE DISPOSED OF OFFSITE.

MANUFACTURER, (NPI)

APPROVED BY THE RPR.

REQUIREMENTS.

CONTRACTOR

0.36 AC

PLASTIC SHEETING (2.5-INCH DEPTH)

DET 1. THIS SHT (2) SEEDING W/ HYDROMULCH

LANDSCAPE STONE W/ HERBICIDE & PLASTIC SHEETING

SEEDING W/ HYDROMULCH

GRADING LIMITS

SECURITY FENCE

-7455-MAJOR CONTOUR (5' INTERVALS) - EXISTING MINOR CONTOUR (1' INTERVALS)

EXISTING

EXST FLOW



COUNTY AIRPORT REPLACEMENT PLAN

CONSTRUCTION EMONT AWOS F

C1.1

SHEET# or 13

### GENERAL ELECTRICAL REQUIREMENTS

- 1. THE COMPLETED INSTALLATION SHALL CONFORM TO ALL APPLICABLE FEDERAL, FAA, STATE AND LOCAL CODE ORDINANCES AND REGULATIONS. CONTRACTOR SHALL OBTAIN NECESSARY PERMITS AND INSPECTIONS REQUIRED BY THE AUTHORITIES HAVING JURISDICTION. ALL WORK SHALL BE DONE IN A NEAT, WORKMANLIKE, FINISHED, AND SAFE MANNER, ACCORDING TO THE LATEST PUBLISHED N.E.C.A. STANDARDS OF INSTALLATION, UNDER COMPETENT SUPERVISION. INSTALL GROUNDING AS REQUIRED BY THE CODE(S) AND FAA ADVISORY CIRCULAR REQUIREMENTS AS DETAILED PER THIS PLAN SET.
- 2. VISIT THE SITE PRIOR TO BIDDING TO BECOME FAMILIAR WITH EXISTING CONDITIONS AND ALL OTHER FACTORS WHICH MAY AFFECT THE EXECUTION OF THIS WORK. INCLUDE ALL RELATED COSTS IN THE INITIAL BID PROPOSAL.
- 3. ALL MATERIALS SHALL BE NEW AND OF THE BEST QUALITY, MANUFACTURED IN ACCORDANCE WITH NEMA, ANSI, U.L. OR OTHER APPLICABLE STANDARDS. THE USE OF MANUFACTURER'S NAMES, MODELS, AND NUMBERS IS INTENDED TO ESTABLISH STYLE, QUALITY, APPEARANCE, USEFULNESS AND BID PRICE. PROPOSED SUBSTITUTIONS SHALL BE SUBMITTED IN WRITING AND REVIEWED BY THE ENGINEER BEFORE ORDERING.
- 4. PROTECT ALL ELECTRICAL MATERIAL AND EQUIPMENT INSTALLED UNDER THIS DIVISION AGAINST DAMAGE BY OTHER TRADES, WEATHER CONDITIONS OR ANY OTHER CAUSES. EQUIPMENT FOUND DAMAGED OR IN OTHER THAN NEW CONDITION WILL BE REJECTED AS
- 5. LEAVE THE SITE CLEAN, REMOVE ALL DEBRIS, EMPTY CARTONS, TOOLS, CONDUIT, WIRE SCRAPS AND ALL MISCELLANEOUS SPARE EQUIPMENT AND MATERIALS USED IN THE WORK DURING CONSTRUCTION. ALL COMPONENTS SHALL BE FREE OF DUST, GRIT AND FOREIGN MATERIALS, LEFT AS NEW BEFORE FINAL ACCEPTANCE OF WORK.
- 6. EXPOSED CONDUITS TO BE GALVANIZED RIGID STEEL, MINIMUM SIZE 3/4", UNLESS OTHERWISE NOTED ON THE PLANS.
- 7. ALL SAFETY SWITCHES AND OTHER DISTRIBUTION AND CONTROL ELECTRICAL EQUIPMENT SHALL BE U.L. LISTED AND RATED FOR HEAVY DUTY SERVICE.
- 8. ALL WIRING DEVICES SHALL BE SPECIFICATION GRADE.
- ALL ELECTRICAL EQUIPMENT, CONDUIT, WIRING, BOXES, ETC. SHALL BE SUBMITTED TO THE ENGINEER FOR REVIEW PRIOR TO ORDERING. THE SUBMITTALS SHALL BE NEATLY GROUPED AND ORGANIZED. PERTINENT INFORMATION SHALL BE HIGHLIGHTED, AND THE SPECIFIC PRODUCT SHALL BE IDENTIFIED. ALL SUBMITTALS SHALL BE COMPLETE, AND PRESENTED IN ONE PACKAGE. THE SUBMITTAL SHALL INCLUDE A COMPLETE LIST OF THE EQUIPMENT AND MATERIALS, INCLUDING THE MANUFACTURER'S NAME, PRODUCT SPECIFICATION, DESCRIPTIVE DATA, TECHNICAL LITERATURE, PERFORMANCE CHARTS, CATALOG CUTS, INSTALLATION INSTRUCTIONS, AND SPARE PART RECOMMENDATIONS FOR EACH DIFFERENT ITEM OF THE EQUIPMENT SPECIFIED.
- CONDUIT/CONDUCTOR RUNS SHOWN ARE DIAGRAMMATICAL ONLY. THE BEST FINAL CONDUIT ROUTING SHALL BE AS DETERMINED BY THE ELECTRICAL CONTRACTOR AT THE TIME OF CONSTRUCTION. THE ENGINEER ORT REPRESENTATIVE MUST FIELD REVIEW CONTRACTOR'S PROPOSED CONDUIT ROUTING AND HANDHOLE LOCATIONS PRIOR TO ANY SAW CUTTING OR EXCAVATIONS.
- 11. IT IS THE OBLIGATION OF THE CONTRACTOR TO ORGANIZE HIS WORK, SO THAT A COMPLETE ELECTRICAL, INSTRUMENTATION, AND CONTROL SYSTEM FOR THE FACILITY WILL BE PROVIDED, AND WILL BE SUPPORTED BY ACCURATE SHOP AND RECORD DRAWINGS, AND O & M MANUALS.
- PRIOR TO PERFORMING UNDERGROUND EXCAVATION, THE CONTRACTOR SHALL CONTACT THE UNDERGROUND UTILITY COMPANY/OWNER TO OBTAIN FIELD UNDERGROUND UTILITIES LOCATION MARKING. THE CONTRACTOR SHALL UNCOVER, AHEAD OF CONSTRUCTION, ALL LINES BEING TIED INTO AND ALL INTERSECTING ELECTRICAL LINES AND UTILITIES AS SHOWN ON THE PLANS OR MARKED BY BLUE STAKE TO VERIFY THEIR LOCATION AND DEPTH.
  CONTRACTOR SHALL ASSUME THAT ALL EXISTING DUCTBANKS THAT CROSS EXISTING
  AIRFIELD PAVEMENTS OR ARE WITHIN RUNWAY OR TAXIWAY SAFETY AREAS ARE ENCASED. UTILITY SERVICES AND ALL EXISTING ELECTRICAL LINES SHALL BE LOCATED AND PROTECTED BY THE CONTRACTOR. COORDINATE WITH ENGINEER AND/OR APPROPRIATE UTILITY COMPANY. ALL PRECAUTIONS SHALL BE USED WHILE WORKING NEAR ALL UTILITIES, TO AVOID INJURY OR DEATH TO PERSONNEL, PROPERTY DAMAGE AND/OR INTERRUPTION
- THE CONTRACTOR SHALL ALLOW TWO WEEKS FOR REVIEW OF THE SUBMITTALS BY THE ENGINEER. THIS PERIOD SHALL BE CALCULATED FROM THE TIME THE ENGINEER HAS RECEIVED THE SUBMITTALS TO THE TIME THE SUBMITTALS LEAVE THE ENGINEER'S OFFICE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL DELAYS RESULTING FROM "FURNISH AS NOTED", "REVISE AND RESUBMIT", "NOT REVIEWED" AND/OR "REJECTED" SUBMITTALS. INCOMPLETE SUBMITTALS WILL BE RETURNED FOR RESUBMITTAL WITH NO CHANGE BEING ALLOWED TO THE CONSTRUCTION SCHEDULE. SUBMITTALS SHALL INCLUDE COMPREHENSIVE INFORMATION AND TECHNICAL DATA, CLEARLY IDENTIFYING AND SUBSTANTIATING THE CHARACTERISTICS REQUIRED BY THE CONSTRUCTION DOCUMENTS.
- ALL REQUESTS FOR INFORMATION (RFIs) SHALL BE PRESENTED TO THE ENGINEER ALLOWING TWO WEEKS FOR RESPONSE. THIS PROCESS SHALL BE CONSIDERED IN THE SCHEDULING PROCESS AND SHALL NOT CAUSE A DELAY IN THE COMPLETION OF THE

### **ELECTRICAL ABBREVIATIONS:**

ACU ACQUISITION CONTROL UNIT AIC AMP INTERRUPTING CABLE

AUTOMATED WEATHER OBSERVING SYSTEM AWOS

BARE COPPER GROUND BCG

CENTRAL DATA PLATFORM CDP

CE CONCRETE ENCASED

CKT CIRCUIT

DB

DCP

**EMT** 

**ELECTRICAL LEGEND:** DIRECT BURIED (UNLESS OTHERWISE NOTED ON PLANS)

DATA COLLECTION PACKAGE NEW CONDUIT AND CONDUCTORS (QUANTITY AND SIZE AS INDICATED ON

PLAN SHEETS) ELECTRIC METALLIC TUBING

FAA FEDERAL AVIATION ADMINISTRATION EXISTING ELECTRICAL CONDUIT AND CONDUCTOR

GRS GALVANIZED RIGID STEEL

**HDPE** HIGH DENSITY POLY ETHYLENE

НН HANDHOLE

JC JUNCTION CAN

LED LIGHT EMITTING DIODE

LF LINEAR FEET

NEC NATIONAL ELECTRICAL CODE

N.E.C.A. NATIONAL ELECTRICAL CONTRACTORS ASSOCIATION

NEMA NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION

NPI NON PAY ITEM

OFZ OBJECT FREE ZONE

OID OPERATOR INTERACTION DEVICE

PPF PERSONAL PROTECTIVE EQUIPMENT

PVC POLYVINYL CHLORIDE

ROFA RUNWAY OBJECT FREE AREA

RSA RUNWAY SAFETY AREA

SERVICE ENTRANCE SECTION SES

TOFA TAXIWAY OBJECT FREE AREA

TSA TAXIWAY SAFETY AREA

TYP **TYPICAL** 

# SHEET INDEX:

ELECTRICAL LEGEND AND NOTES E1.1 F2.1 OVERALL FLECTRICAL PLAN

E2.2 AWOS ELECTRICAL SITE PLAN

E3.1 AWOS INSTALLATION AND GROUNDING DETAILS

E4.1 ELECTRICAL DETAILS ELECTRICAL DETAILS F4.2

E5.1 SINGLE LINE DIAGRAM

## SELECTED FAA ADVISORY CIRCULARS FOR AIRPORT PROJECTS (LATEST VERSION):

150/5220-16 CHANGE 1 AUTOMATED WEATHER OBSERVING SYSTEM (AWOS) FOR NON-FEDERAL APPLICATIONS

150/5345-53 AIRPORT LIGHTING EQUIPMENT CERTIFICATION PROGRAM

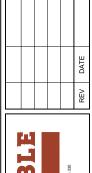
150/5370-2 OPERATIONAL SAFETY ON AIRPORTS DURING CONSTRUCTION

150/5345-7 SPECIFICATIONS FOR L-824 UNDERGROUND ELECTRICAL

CABLE FOR AIRPORT CIRCUITS

STANDARDS FOR SPECIFYING CONSTRUCTION OF AIRPORTS 150/5370-10



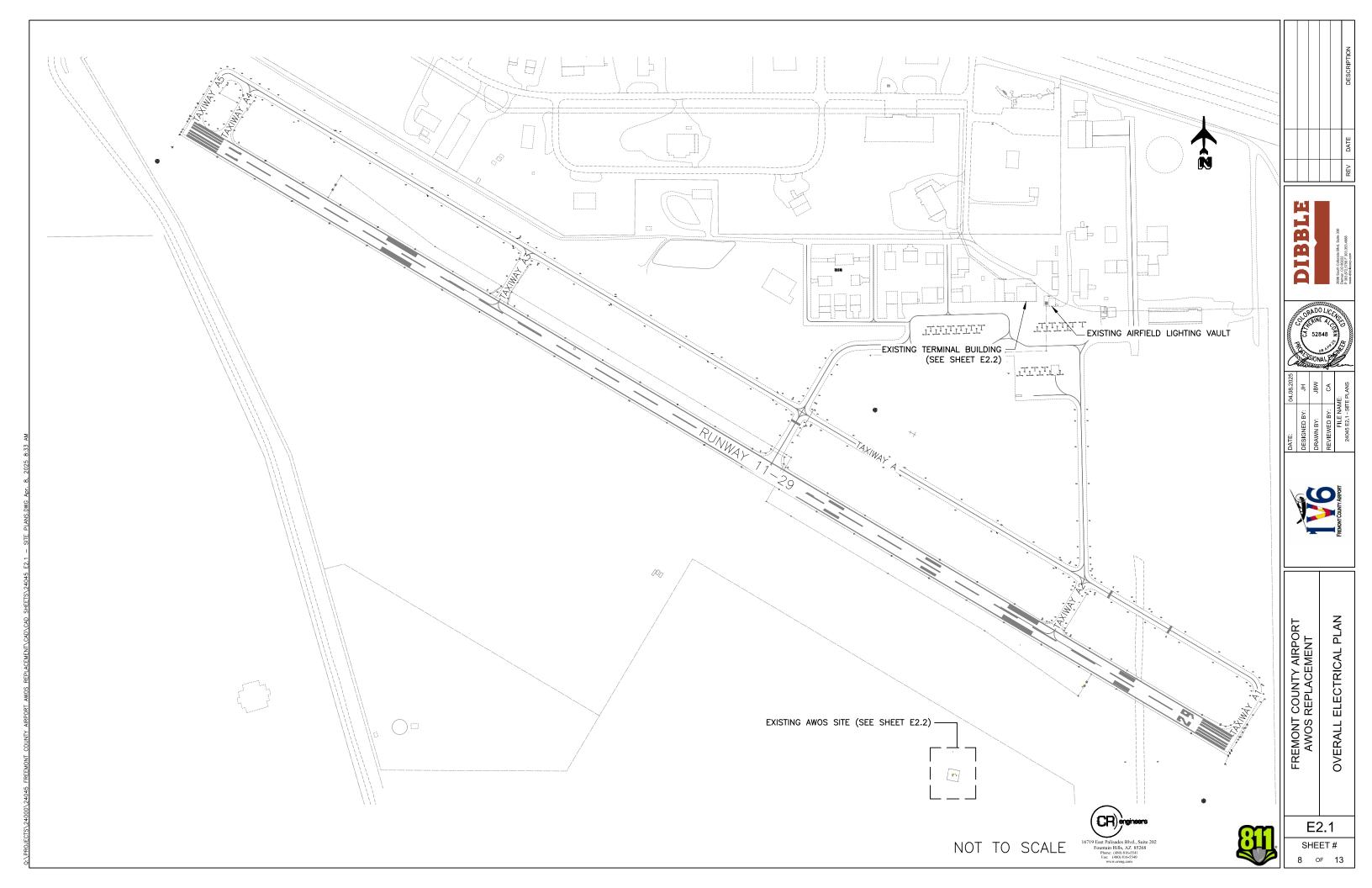




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04.08.2025	ЭH	JBW	CA	AE: I.1
DATE:	DESIGNED BY:	DRAWN BY:	REVIEWED BY:	FILE NAME: 24045 E1.1



E1.1 SHEET#



# EXISTING DISCONNECT AND TRANSFORMER



EXISTING TOWER FOUNDATION

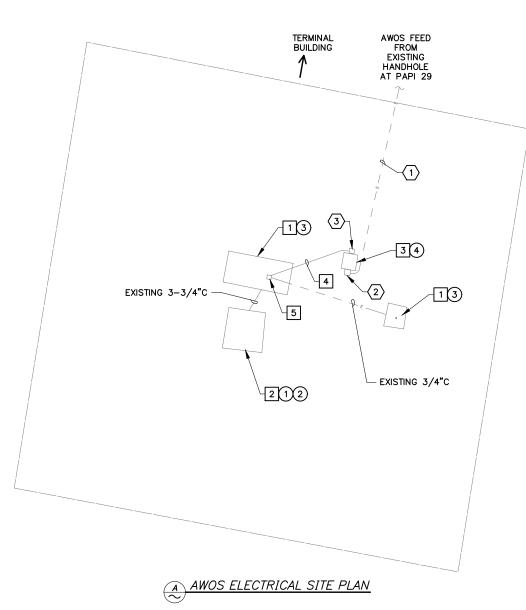


EXISTING AWOS ANTENNA LOCATION





EXISTING AWOS EQUIPMENT





EXISTING AWOS EQUIPMENT IN TERMINAL

# CONSTRUCTION NOTE

INSTALL NEW DCP, UHF WIRELESS RADIO KIT, ANTENNA AND REQUIRED CABLES IN TERMINAL BUILDING, TESTED AND COMMISSIONED COMPLETE PER MANUFACTURER REQUIREMENTS.



 $\downarrow$ 

SCALE: 3/16" = 1'-0"

REMOVAL NOTE

1 REMOVE EXISTING AWOS EQUIPMENT, SENSORS, AND CABLES. CONCRETE FOUNDATION AND AWOS EQUIPMENT RACK TO REMAIN.

2 REMOVE EXISTING TOWER AND CONCRETE FOUNDATION. EXISTING COMMUNICATION AND POWER CONDUITS TO REMAIN. RE-STUB AT NEW TOWER FOUNDATION.

REMOVE EXISTING WOOD POLE FOR INSTALLATION OF NEW STRUT RACK. MAINTAIN EXISTING FEEDER CONDUIT AND CABLE TO STEP-DOWN TRANSFORMER FROM PAPI 29. MAINTAIN EXISTING CONDUIT TO AWOS SUB PANEL – FEEDER TO BE REPLACED WITH NEW CABLES.

4 REMOVE EXISTING CABLE, CONDUIT TO REMAIN (AWOS PANEL FEEDER)

5 REMOVE EXISTING 4-CIRCUIT AWOS SUBPANEL FOR REPLACEMENT WITH NEW. EXISTING FEEDER CONDUIT TO REMAIN FOR RECONNECTION TO NEW AWOS PANEL WITH NEW FFFDER.

# O CONSTRUCTION NOTES O

1 INSTALL NEW AWOS TOWER ON NEW CONCRETE FOUNDATION. INSTALL AWOS TOWER FOUNDATION AT A MINIMUM OF 46" DIAMETER BY 72" DEPTH OR AS REQUIRED BY MANUFACTURER.

(2) INSTALL L-810(L) LED DUAL OBSTRUCTION LIGHT, CONDUIT, AND CABLE ON NEW AWOS TOWER.

(3) INSTALL NEW AWOS III P/T SENSORS, MASTS, POWER AND COMMUNICATION CONDUITS, ENCLOSURES AND CABLES. INSTALL NEW 30A, SINGLE PHASE, 12-SPACE, 100A RATED SUBPANEL IN NEMA 3R ENCLOSURE WITH BRANCH CIRCUIT BREAKERS. INSTALL NEW 2-#10, #10 NEUTRAL, #10 GND IN EXISTING 3/4" CONDUIT FROM EXISTING DISCONNECT TO NEW AWOS SUB PANEL.

(4) INSTALL EXISTING DISCONNECT AND TRANSFORMER ON NEW EQUIPMENT RACK. SEE DETAIL A ON SHEET E4.2. MAINTAIN EXISTING TRANSFORMER GROUND.

REFERENCE NOTES

EXISTING CONDUIT AND CONDUCTOR TO REMAIN - PROTECT IN PLACE

2 EXISTING 5KVA STEP-DOWN TRANSFORMER TO REMAIN

(3) EXISTING 30A, 240V DISCONNECT TO REMAIN

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16719 East Palisades Blvd., Suite 2: Fountain Hills, AZ 85268 Phone: (480) 816-5540 www.crenc.com



SHEET # 9 OF 13

D SHEETS\24045 E2.1 — SITE PLANS.DW

FREMONT COUNTY AIRPORT AWOS REPLACEMENT

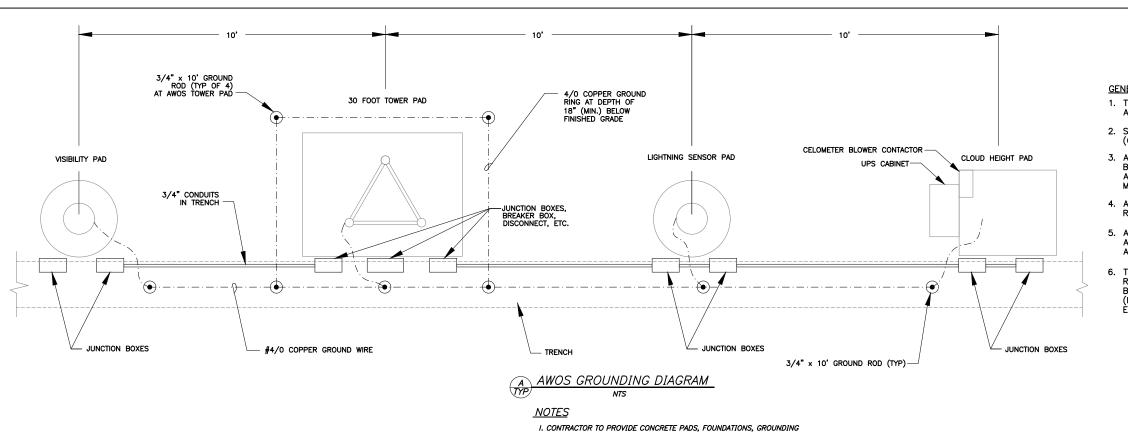
PLAN

SITE

ELECTRICAL

AWOS

E2.2 SHEET#



### GENERAL GROUNDING NOTES

- 1. THIS DETAIL IS PROVIDED IN ACCORDANCE WITH NATIONAL ELECTRICAL CODE ARTICLE 250-50 PERTAINING TO THE "GROUNDING ELECTRODE SYSTEM".
- 2. SPLICING OF CONDUCTORS SHALL BE ACCOMPLISHED BY EXOTHERMIC WELD (CAD WELD) ONLY.
- 3. ALL CONNECTIONS TO GROUND RODS BELOW GRADE OR IN CONCRETE SHALL BE MADE BY EXOTHERMIC WELD (CAD WELD) ONLY. CONNECTIONS MADE ABOVE GROUND LEVEL CAN BE ACCOMPLISHED UTILIZING A U.L. LISTED MECHANICAL CLAMP SUITABLE FOR THE PURPOSE.
- 4. ANY VARIANCE FROM THIS DRAWING AND/OR SPECIFICATION MUST BE REQUESTED AND APPROVED IN WRITING PRIOR TO INSTALLATION.
- ALL INSTALLATIONS SHALL COMPLY WITH THE LATEST ADOPTED EDITION OF ARTICLE 250 (ALL SUBPARAGRAPHS) OF THE NATIONAL ELECTRICAL CODE AND ALL STATE AND LOCAL CODE REQUIREMENTS.
- 6. THE GROUNDING SYSTEM SHALL PROVIDE NO GREATER THAN (5) FIVE OHMS RESISTANCE TO GROUND AT THE SERVICE CONNECTION. THE RESULTS SHALL BE VERIFIED BY AN INDEPENDENT TESTING AGENCY VIA GROUND TEST  $(\mbox{\it FALL-OF-POTENTIAL})$  and submitted in accordance with the electrical specifications.





DATE:	04.08.2025	_
DESIGNED BY:	JH	mo
DRAWN BY:	JBW	min.
REVIEWED BY:	CA	Me.
FILE NAME: 24045 E3.1 - AWOS INSTALL	IE: S INSTALL	

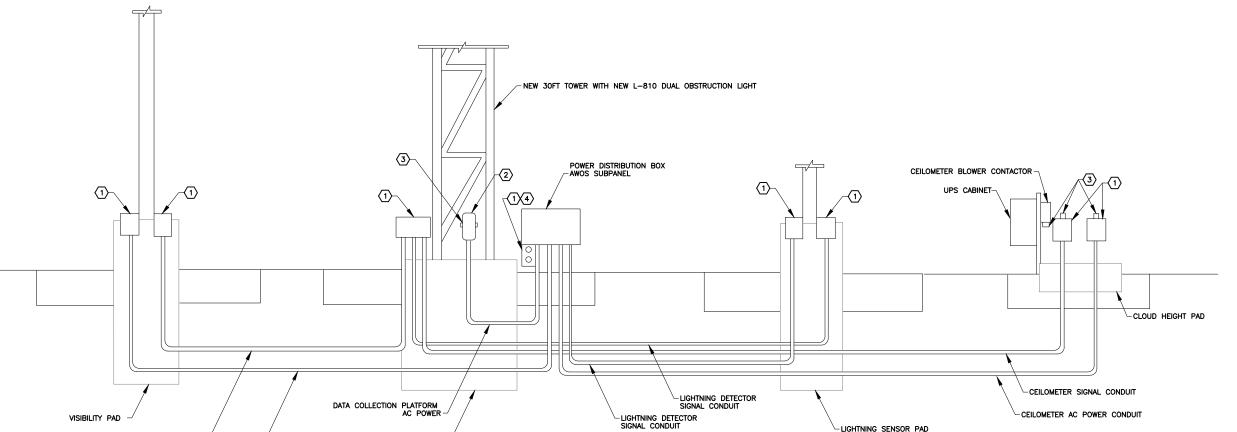


COUNTY AIRPORT REPLACEMENT

AWOS INSTALLATION AND GROUNDING DETAILS

E3.1

SHEET# 10 OF 13



AWOS III P/T INSTALLATION

I. CONTRACTOR TO PROVIDE CONCRETE PADS, FOUNDATIONS, GROUNDING

AND CONDUITS PER AWOS INSTALLATION SITE PREP MANUAL

30FT TOWER PAD-

VISIBILITY SIGNAL CONDUIT

VISIBILITY AC POWER CONDUIT

AND CONDUITS PER AWOS INSTALLATION SITE PREP MANUAL

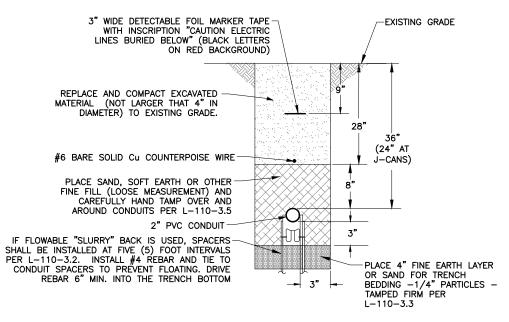
## KEYED NOTES

- WEATHER TIGHT JUNCTION BOXES.
  APPLETON C75-M WITH COVER K75-CM AND RUBBER GASKET GK75-N OR EQUIVALENT. 7 REQUIRED
- WEATHER TIGHT JUNCTION BOXES.
  APPLETON FDCC-1-75 WITH WEATHER TIGHT COVER FSK-IB-C OR EQUIVALENT.
- 3 STRAIN RELIEFS, TOMAS AND BETTS 2530 OR EQUIVALENT. 4 REQUIRED.
- 4 GFCI RECEPTACLE PLATE WITH GASKET AND COVER. HUBBEL WPFS26 OR EQUIVALENT AND GFCI RECEPTACLE, 15A, 125V HUBBEL GF-5262 OR EQUIVALENT.



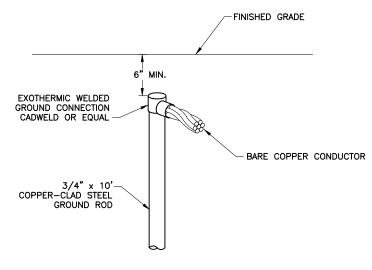
Fountain Hills, AZ 85268 Phone: (480) 816-5541 Fax: (480) 816-5540

# A COUNTERPOISE TO CABLE CONNECTION DETAIL

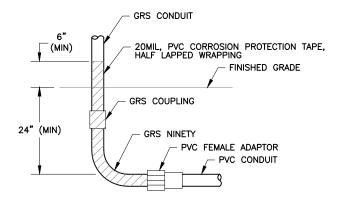


ALL DIMENSIONS ARE MINIMUM. DETAIL APPLICABLE FOR ALL CONDUIT BETWEEN L-867/868 BASE CANS.

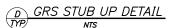




B CABLE TO GROUND ROD CONNECTION



NOTE: WHERE CONDUITS ARE RUN IN SLAB, THE 24" DIMENSION DOES NOT APPLY.





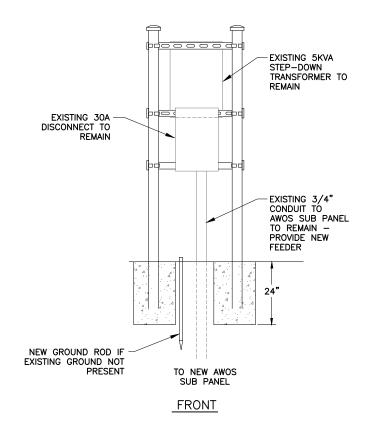


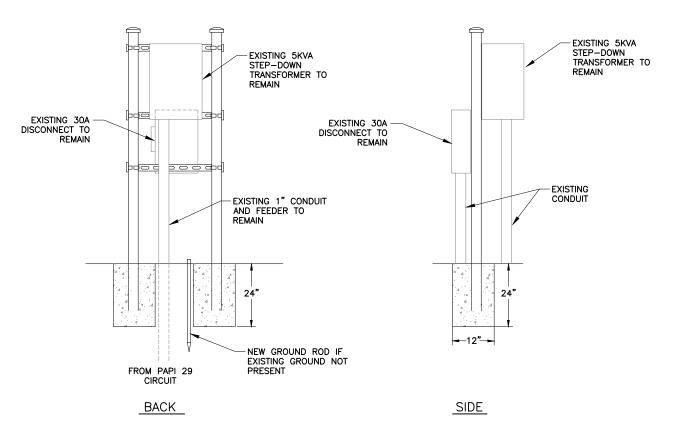






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# NEW POWER EQUIPMENT MOUNTING RACK DETAIL

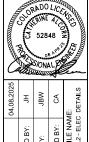
- 1. CONTRACTOR SHALL MOUNT EXISTING ELECTRICAL EQUIPMENT ON NEW MOUNTING RACK USING EXISTING CONDUITS.
- 2. MAINTAIN EXISTING FEEDER TO TRANSFORMER FROM PAPI 29.
- 3. MAINTAIN EXISTING GROUND TO TRANSFORMER AS REQUIRED.
- 4. EXISTING CONDUIT FROM DISCONNECT TO REMAIN FOR NEW FEEDER CABLES. REFER TO SINGLE LINE DIAGRAM AND SITE PLAN.
- 5. POSTS 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 FOR THE POST TO ALLOW FOR DRAINAGE.
- 6. IF NOT PRESENT, 5/8" x 8' GROUND ROD SHALL BE POSITIONED IN A PLACE WHERE IT DOES NOT POSE A TRIPPING HAZARD TO UTILITY OR THE PUBLIC. THERE SHALL BE MAINTAINED 3' x 3' CLEAR FLAT SAFE WORKING SPACE IN
- 7. ACORN CLAMP REQUIRED AT CONNECTION OF GROUND WIRE TO GROUND ROD. GROUNDING SHALL BE PROVIDED IN COMPLIANCE WITH NEC AND UTILITY. MADE ELECTRODES SHALL HAVE A RESISTANCE—TO—GROUND OF NOT MORE THAN 25
- 8. GROUND WIRE SHALL BE A MINIMUM SIZE OF #4 SOLID COPPER.













FREMONT COUNTY AIRPORT AWOS REPLACEMENT DETAILS

E4.2

SHEET# 12 OF 13



PANEL:	AWOS	VOLTAGE:	120/240	MAIN CE	3: 30	BUS AMP	S: 100
CB TYPE:	BOLT-ON	MOUNTING:	SURFACE	BRA CINC	G: 10K	BKR AIG	C: 10K
CIRCUIT DESCRIPTION	BKR	CIRCUIT	LINE 1	LINE 2	CIRCUIT	BKR	CIRCUIT DESCRIPTION
MAIN BREAKER	30	1					
	1		400		2	15 / 1	OBSTRUCTION LIGHTS
	2	3					
				500	4	15 / 1	DATA COLLECTION PLATFORM
RAIN GAUGE	15 / 1	5					
			200		6	15 / 1	PRESENT WEATHER SENSOR
GFCI DUPLEX OUTLET	15 / 1	7		500			
				400	8	15/1	VISIBILITY SENSOR
CLOUD HEIGHT SENSOR	20 / 1	9	1000				
			200		10	15 / 1	LIGHTNING SENSOR
SPARE	20 / 1	11					
					12		SPACE
CONNECTED KVA PER PHASE			1.8	1.4	NOTES:		
					VERIFY ALL B	REAKER AN	D WIRE REQUIRMENTS WITH
CONNECTED AMPS PER PHASE			15.0	11.7	A WOS MFR		
25% OF CONTINUOUS & LIGITING	LOAD (KVA)		0.0	0.0			
LARGEST MOTOR (25%)			0.0	0.0			
CODE KVA PER PHA SE			1.8	1.4			
CODE AMPS PER PHASE AT 120V			15.0	11.7			

B NEW AWOS SUB PANEL SCHEDULE

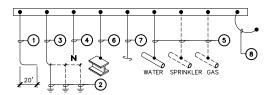
### GENERAL GROUNDING NOTES

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- ALL INSTALLATIONS SHALL COMPLY WITH THE LATEST ADOPTED EDITION OF ARTICLE 250 (ALL SUBPARAGRAPHS) OF THE NATIONAL ELECTRICAL CODE AND ALL STATE AND LOCAL CODE REQUIREMENTS.
- 6. THE GROUNDING SYSTEM SHALL PROVIDE NO GREATER THAN (5) FIVE OHMS RESISTANCE TO GROUND AT THE SERVICE CONNECTION. THE RESULTS SHALL BE VERIFIED BY AN INDEPENDENT TESTING AGENCY VIA GROUND TEST (FALL-OF-POTENTIAL) AND SUBMITTED IN ACCORDANCE WITH THE ELECTRICAL SPECIFICATIONS.

#### **GROUNDING KEY NOTES**

- ① CONCRETE ENCASED ELECTRODE (UFER) (GROUNDING ELECTRODE #1). SEE CHART FOR SIZE. MINIMUM 20'.
- COPPER CLAD STEEL GROUND ROD. SEE CHART FOR SIZE.
- GROUNDING ELECTRODE CONDUCTOR. SEE CHART FOR SIZE.
- BUS BAR MAIN BONDING JUMPER. SEE CHART FOR MINIMUM CONDUCTOR SIZE.
- METAL PIPE BOND WIRE, SEE CHART FOR MINIMUM SIZE. BOND TO ALL METAL PIPING (WATER, SPRINKLER, GAS, ETC.) WITHIN THE FIRST ACCESSIBLE 5' OF PIPES ENTRY INTO BUILDING.
- BUILDING STEEL BOND WIRE (IF REQUIRED PER BUILDING CONSTRUCTION TYPE). SEE CHART FOR MINIMUM SIZE.
- BOND WIRE FOR USE WITH MULTIPLE SERVICES (WHEN PRESENT). REFER TO CHART FOR MINIMUM SIZE.
- INTEGRATED (FACTORY BONDED) BUS BAR CASE BOND. SEE CHART FOR MINIMUM CONDUCTOR SIZE.

### **GROUNDING DIAGRAM**



# GROUNDING DETAIL

# CONDUCTOR SIZE CHART

SIZE OF LARGEST UNGROU CONDUCTOR OR EQUIVALI CONDUCTORS	SIZE OF GROUNDING ELECTRODE CONDUCTOR (AWG/kcmil)		
COPPER	ALUMINUM OR COPPER-CLAD ALUMINUM	COPPER ALUMINUM COPPER — ALUMINU	
2 OR SMALLER	1/0 OR SMALLER	8	6
1 OR 1/0	2/0 OR 3/0	6	4
2/0 OR 3/0	4/0 OR 250	4	2
OVER 3/0 THROUGH 350	OVER 250 THROUGH 500	2	1/0
OVER 350 THROUGH 600	OVER 500 THROUGH 900	1/0	3/0
OVER 600 THROUGH 1100	OVER 900 THROUGH 1750	2/0	4/0
OVER 1100	OVER 1750	3/0	250





E5.1 SHEET# 13 OF 13

COUNTY AIRPORT REPLACEMENT

FREMONT ( AWOS F

DIAGRAM

\$ 52848