



please show height of structure with measurement somewhere in this document.

DN04161A

APPROVAL SIGNATURE BLOCK

The following parties have reviewed these documents.
All documents are subject to review by the local zoning/building departments and may impose changes or modifications.

<div><div></div><div>Project Manager (Print)</div></div>	<div><div></div><div>Project Manager</div></div>	<div><div><input type="checkbox"/> Approved</div><div><input type="checkbox"/> Rejected</div></div>	<div><div></div><div>Date</div></div>
<div><div></div><div>RF Engineer (Print)</div></div>	<div><div></div><div>RF Engineer</div></div>	<div><div><input type="checkbox"/> Approved</div><div><input type="checkbox"/> Rejected</div></div>	<div><div></div><div>Date</div></div>
<div><div></div><div>Site Acquisition (Print)</div></div>	<div><div></div><div>Site Acquisition</div></div>	<div><div><input type="checkbox"/> Approved</div><div><input type="checkbox"/> Rejected</div></div>	<div><div></div><div>Date</div></div>
<div><div></div><div>Construction Manager (Print)</div></div>	<div><div></div><div>Construction Manager</div></div>	<div><div><input type="checkbox"/> Approved</div><div><input type="checkbox"/> Rejected</div></div>	<div><div></div><div>Date</div></div>
<div><div></div><div>TMO Quality Assurance (Print)</div></div>	<div><div></div><div>TMO Quality Assurance</div></div>	<div><div><input type="checkbox"/> Approved</div><div><input type="checkbox"/> Rejected</div></div>	<div><div></div><div>Date</div></div>

GENERAL NOTES

1. FOR THE PURPOSE OF CONSTRUCTION DRAWING, THE FOLLOWING DEFINITIONS SHALL APPLY:
CONTRACTOR - GENERAL CONTRACTOR (CONSTRUCTION)
OWNER - T-MOBILE
2. THIS FACILITY IS AN UNMANNED WIRELESS COMMUNICATION EQUIPMENT FACILITY.
3. PRIOR TO SUBMISSION OF BIDS, THE BIDDING CONTRACTOR/SUBCONTRACTOR SHALL VISIT THE CELL SITE TO FAMILIARIZE WITH THE EXISTING CONDITIONS AND TO CONFIRM THAT THE WORK CAN BE ACCOMPLISHED AS SHOWN ON THE CONSTRUCTION DRAWINGS. ANY DISCREPANCY FOUND SHALL BE BROUGHT TO THE ATTENTION OF THE T-MOBILE CONSTRUCTION MANAGER AND ENGINEER/A&E FIRM.
4. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS AND DIMENSIONS PRIOR TO SUBMITTING BID, ANY DISCREPANCIES, CONFLICTS OR OMISSIONS SHALL BE REPORTED TO THE ENGINEER PRIOR TO SUBMITTING BIDS, AND PROCEEDING WITH WORK.
5. THE CONTRACTOR SHALL NOTIFY ARCHITECT/ENGINEER OF ANY ERRORS, OMISSIONS, OR DISCREPANCIES AS THEY MAY BE DISCOVERED IN THE PLANS. SPECIFICATIONS & NOTES PRIOR TO STARTING CONSTRUCTION, INCLUDING BUT NOT LIMITED BY DEMOLITION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTING ANY ERRORS, OMISSION, OR INCONSISTENCY AFTER THE START OF CONSTRUCTION WHICH HAVE NOT BEEN BROUGHT TO THE ATTENTION OF THE ARCHITECT/ENGINEER AND SHALL INCUR ANY EXPENSES TO RECTIFY THE SITUATION. THE METHOD OF CORRECTION SHALL BE APPROVED BY THE ARCHITECT/ENGINEER RESPONSIBLE OF THE PROJECT.
6. PRIOR TO STARTING CONSTRUCTION, THE CONTRACTOR SHALL PROTECT ALL AREAS FROM DAMAGE WHICH MAY OCCUR DURING CONSTRUCTION. ANY DAMAGE TO NEW OR EXISTING SURFACES, STRUCTURES OR EQUIPMENT SHALL BE IMMEDIATELY REPAIRED OR REPLACED TO THE SATISFACTION OF THE PROPERTY OWNER AND T-MOBILE. THE CONTRACTOR SHALL BEAR THE EXPENSE OF REPAIRING OR REPLACING DAMAGED AREAS.
7. PRIOR TO STARTING CONSTRUCTION, THE CONTRACTOR HAS THE RESPONSIBILITY TO LOCATE ALL EXISTING UTILITIES, WHETHER OR NOT SHOWN ON THE PLANS AND TO PROTECT THEM FROM DAMAGE. THE CONTRACTOR OR SUBCONTRACTOR SHALL BEAR THE EXPENSE OF REPLACING OR REPAIRING ANY DAMAGE TO THE UTILITIES CAUSED DURING THE EXECUTION OF THE WORK. CONTACT UTILITY LOCATE SERVICE @ 811.
8. A COPY OF THE APPROVED PLANS SHALL BE KEPT IN A PLACE SPECIFIED BY THE GOVERNING AGENCY AND BE AVAILABLE FOR INSPECTION AT ALL TIMES. IT IS THE CONTRACTORS RESPONSIBILITY TO ENSURE ALL CONTRACTOR SETS REFLECT THE SAME INFORMATION AS THE APPROVED PLANS. THE CONTRACTOR SHALL ALSO MAINTAIN ONE SET OF PLANS AT THE SITE FOR THE PURPOSE OF DOCUMENTING ALL AS-BUILT CHANGES, REVISIONS, ADDENDA, OR CHANGE ORDERS. THE CONTRACTOR SHALL FORWARD THE AS-BUILT DRAWINGS TO THE ARCHITECT OR THE ENGINEER RESPONSIBLE OF THE PROJECT AT THE CONCLUSION OF THE PROJECT.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE COMPLETE SECURITY OF THE SITE WHILE WORK IS IN PROGRESS UNTIL THE JOB IS COMPLETE AND ACCEPTED BY THE PROJECT OWNER.
10. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE TEMPORARY POWER, WATER AND TOILET FACILITIES AS REQUIRED BY THE PROPERTY OWNER OR GOVERNING AGENCY.
11. ALL CONSTRUCTION THROUGH THE PROJECT SHALL CONFORM TO THE LATEST BUILDING CODE AND ALL OTHER GOVERNING CODES. WHERE DISCREPANCIES ARISE THE MOST RESTRICTIVE CODE SHALL GOVERN.
12. THE CONTRACTOR AND SUBCONTRACTOR SHALL COMPLY WITH ALL LOCAL AND STATE REGULATIONS INCLUDING ALL OSHA REQUIREMENTS.
13. STORED MATERIALS SHALL BE EVENLY DISTRIBUTED OVER THE FLOOR OR ROOF SO AS NOT TO EXCEED THE DESIGNED LIVE LOADS FOR THE STRUCTURE. TEMPORARY SHORING OR BRACING SHALL BE PROVIDED WHERE THE STRUCTURE OR SOIL HAS NOT ATTAINED THE DESIGN STRENGTH FOR THE CONDITIONS PRESENT.
14. THE CONTRACTOR SHALL SUPERVISE AND COORDINATE ALL WORK, USING HIS PROFESSIONAL KNOWLEDGE AND SKILLS. HE IS SOLELY RESPONSIBLE FOR ALL CONSTRUCTION MEANS, METHODS, AND TECHNIQUES, PROCEDURES AND SEQUENCING AND COORDINATING ALL PORTIONS OF THE WORK UNDER THE PROJECT.
15. ALL DIMENSIONS TAKE PRECEDENCE OVER SCALE. DRAWINGS ARE NOT TO BE SCALED.
16. NEW CONSTRUCTION ADDED TO EXISTING CONSTRUCTION SHALL BE MATCHED IN FORM, TEXTURE, MATERIAL AND PAINT COLOR EXCEPT AS NOTED IN THE PLANS.
17. THE CONTRACTOR SHALL PROVIDE PORTABLE FIRE EXTINGUISHERS HAVING A MINIMUM 2A:10-B:C RATING WITHIN 75 FEET OF TRAVEL TO ALL PORTIONS OF THE CONSTRUCTION AREA.
18. MATERIALS TESTING SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AVAILABLE AS REQUIRED BY THE LOCAL GOVERNING AGENCY RESPONSIBLE FOR APPROVING THE RESULTS.
19. ALL GENERAL NOTES AND STANDARD DETAILS ARE THE MINIMUM REQUIREMENTS TO BE USED IN CONDITIONS WHICH ARE NOT SPECIFICALLY SHOWN OTHERWISE.
20. ALL DEBRIS AND REFUSE IS TO BE REMOVED FROM THE PROJECT. PREMISES SHALL BE LEFT IN A CLEAN BROOM FINISHED CONDITION AT ALL TIMES.
21. BUILDING INSPECTORS AND/OR OTHER BUILDING OFFICIALS ARE TO BE NOTIFIED PRIOR TO ANY CONSTRUCTION EFFORT AS REQUIRED BY THE GOVERNING AGENCY.
22. ALL SYMBOLS AND ABBREVIATIONS ARE CONSIDERED CONSTRUCTION INDUSTRY STANDARDS. IF A CONTRACTOR HAS A QUESTION REGARDING THEIR EXACT MEANING THE ARCHITECT OR THE ENGINEER RESPONSIBLE OF THE PROJECT BE NOTIFIED FOR CLARIFICATIONS.
23. UNLESS OTHERWISE NOTED THE WORK SHALL INCLUDE FURNISHING MATERIALS, EQUIPMENT, APPURTENANCES, AND LABOR NECESSARY TO COMPLETE ALL INSTALLATIONS AS INDICATED ON THE DRAWINGS.
24. ALL MATERIALS FURNISHED AND INSTALLED SHALL BE IN STRICT ACCORDANCE WITH ALL APPLICABLE CODES, REGULATIONS, AND ORDINANCES. SUBCONTRACTOR SHALL ISSUE ALL APPROPRIATE NOTICES AND COMPLY WITH ALL LAWS, ORDINANCES, RULES, REGULATIONS, AND LAWFUL ORDERS OF ANY PUBLIC AUTHORITY REGARDING THE PERFORMANCE OF THE WORK. ALL WORK CARRIED OUT SHALL COMPLY WITH ALL APPLICABLE MUNICIPAL AND UTILITY COMPANY SPECIFICATIONS AND LOCAL JURISDICTIONAL CODES, ORDINANCES AND APPLICABLE REGULATIONS.
25. THE SUBCONTRACTOR SHALL INSTALL ALL EQUIPMENT AND MATERIALS IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS UNLESS SPECIFICALLY STATED OTHERWISE.
26. IF THE SPECIFIED EQUIPMENT CAN NOT BE INSTALLED AS SHOWN ON THESE DRAWINGS THE SUBCONTRACTOR SHALL PROPOSE AN ALTERNATIVE INSTALLATION SPACE FOR APPROVAL BY THE CONTRACTOR.
27. SUBCONTRACTOR SHALL DETERMINE ACTUAL ROUTING OF CONDUIT, POWER AND T1 CABLES, GROUNDING AND TELCO PLAN DRAWING. SUBCONTRACTOR SHALL UTILIZE EXISTING TRAYS AND/OR SHALL ADD NEW TRAYS AS NECESSARY. SUBCONTRACTOR SHALL CONFIRM THE ACTUAL ROUTING WITH THE CONTRACTOR.
28. SUBCONTRACTOR SHALL LEGALLY DISPOSE OF ALL SCRAP MATERIALS SUCH AS COAXIAL CABLES AND OTHER ITEMS REMOVED FROM THE EXISTING FACILITY. ANTENNAS REMOVED SHALL BE RETURNED TO THE OWNERS DESIGNATED LOCATION.
29. ALL CONCRETE REPAIR WORK SHALL BE DONE IN ACCORDANCE WITH THE AMERICAN CONCRETE INSTITUTE (ACI) 301.
30. ALL STRUCTURAL STEEL WORK SHALL BE DETAILED, FABRICATED AND ERECTED IN ACCORDANCE WITH AISC SPECIFICATIONS. ALL STRUCTURAL STEEL SHALL BE ASTM A36 (FY = 36KSI) UNLESS OTHERWISE NOTED. PIPES SHALL BE ASTM A53 TYPE E (FY = 35KSI). ALL STEEL EXPOSED TO WEATHER SHALL BE HOT DIPPED GALVANIZED. TOUCH-UP ALL SCRATCHES AND OTHER MARKS IN THE FIELD AFTER STEEL IS ERECTED USING A COMPATIBLE ZINC RICH PAINT.
31. CONSTRUCTION SHALL COMPLY WITH "GENERAL CONSTRUCTION SERVICES FOR CONSTRUCTION OF T-MOBILE SITES."

32. THE EXISTING CELL SITE IS IN FULL COMMERCIAL OPERATION. ANY CONSTRUCTION WORK BY SUBCONTRACTOR SHALL NOT DISRUPT THE EXISTING NORMAL OPERATION. ANY WORK ON EXISTING EQUIPMENT MUST BE COORDINATED WITH T-MOBILE. ALSO, WORK SHOULD BE SCHEDULED FOR AN APPROPRIATE MAINTENANCE WINDOW USUALLY IN LOW TRAFFIC PERIODS AFTER MIDNIGHT.

33. SINCE THE CELL SITE IS ACTIVE, ALL THE SAFETY PRECAUTIONS MUST BE TAKEN WHEN WORKING AROUND HIGH LEVELS OF ELECTROMAGNETIC RADIATION. EQUIPMENT SHOULD BE SHUTDOWN PRIOR TO PERFORMING ANY WORK THAT COULD EXPOSE THE WORKERS TO DANGER. PERSONAL RF EXPOSURE MONITORS ARE ADVISED TO BE WORN TO ALERT OF ANY DANGEROUS EXPOSURE LEVELS.

34. APPLICABLE BUILDING CODES:
SUBCONTRACTOR'S WORK SHALL COMPLY WITH ALL APPLICABLE NATIONAL, STATE, AND LOCAL CODES AS ADOPTED BY THE LOCAL AUTHORITY HAVING JURISDICTION (AHJ) FOR THE LOCATION. THE EDITION OF THE AHJ ADOPTED CODES AND STANDARDS IN EFFECT ON THE DATE OF CONTRACT AWARD SHALL GOVERN THE DESIGN.

SUBCONTRACTOR'S WORK SHALL COMPLY WITH THE LATEST EDITION OF THE FOLLOWING STANDARDS:

AMERICAN CONCRETE INSTITUTE (ACI) 318; BUILDING CODE REQUIREMENTS FOR STRUCTURAL CONCRETE

AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC) MANUAL OF STEEL CONSTRUCTION, FOURTEENTH EDITION

TELECOMMUNICATIONS INDUSTRY ASSOCIATION (TIA) 222-G, STRUCTURAL STANDARDS FOR STEEL

ANTENNA TOWER AND ANTENNA SUPPORTING STRUCTURES; REFER TO ELECTRICAL DRAWINGS FOR SPECIFIC ELECTRICAL STANDARDS

FOR ANY CONFLICTS BETWEEN SECTIONS OF LISTED CODES AND STANDARDS REGARDING MATERIAL, METHODS OF CONSTRUCTION, OR OTHER REQUIREMENTS, THE MOST RESTRICTIVE REQUIREMENT SHALL GOVERN. WHERE THERE IS CONFLICT BETWEEN A GENERAL REQUIREMENT AND A SPECIFIC REQUIREMENT, THE SPECIFIC REQUIREMENT SHALL GOVERN.

SITE WORK

1. THE PREPARATION OF THE SITE FOR CONSTRUCTION SHALL INCLUDE THE REMOVAL OF ALL BROKEN CONCRETE, TREE TRUNKS, AND ANY OTHER DEBRIS THAT WOULD BE DAMAGING TO THE FOOTINGS OF THE NEW STRUCTURE.

2. BACKFILLING AT THE NEW TRENCHES SHALL BE OF CLEAN, MEETING THE REQUIREMENTS OF (AASHTO NO. 89) GRANULAR MATERIAL SOIL. BACKFILLING SHALL BE DONE IN 8 INCH LAYERS, MOISTURE CONDITIONED AND PROPERLY COMPACTED TO SPECIFIED COMPACTION PERCENTAGE PER ASTM D1557 (90% MIN). ADEQUATE DRAINAGE SHALL BE PROVIDED SUCH THAT NO PONDING OCCURS AFTER.

3. ALL FOUNDATION FOOTINGS SHALL EXTEND INTO AND BEAR AGAINST NATURAL UNDISTURBED SOIL OR APPROVED COMPACTED FILL. FOOTINGS SHALL EXTEND INTO SOIL DEPTH INDICATED ON DETAILS.

4. SHOULD ANY LOOSE FILL, EXPANSIVE SOIL, GROUND WATER OR ANY OTHER DANGEROUS CONDITIONS BE ENCOUNTERED DURING THE EXCAVATION FOR THE NEW FOUNDATION, THE CONTRACTOR SHALL NOTIFY THE PROJECT MANAGER OR OWNERS REPRESENTATIVE AND ALL FOUNDATION WORK SHALL CEASE IMMEDIATELY.

SITE STORM WATER RUNOFF CONTROL

1. SUFFICIENT BMP'S MUST BE IMPLEMENTED TO PREVENT SILT, MUD, OR OTHER CONTRACTOR DEBRIS FROM BEING TRACKED INTO THE ADJACENT STREET(S) OR STORM WATER CONVEYANCE SYSTEM DUE TO CONSTRUCTION VEHICLES OR ANY OTHER CONTRACTOR ACTIVITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CLEANING ANY SUCH DEBRIS THAT MAY BE IN THE STREET AT THE END OF EACH WORK DAY OR AFTER A STORM EVENT THAT CAUSES A BREACH IN THE INSTALLED CONTRACTOR BMP'S.

2. A CONCRETE WASHOUT SHALL BE PROVIDED ON ALL PROJECTS WHICH PROPOSE THE CONSTRUCTION OF ANY CONCRETE IMPROVEMENTS THAT ARE TO BE POURED INTO PLACE IN THE SITE.

3. ALL EROSION/SEDIMENT CONTROL DEVICES SHALL BE MAINTAINED IN WORKING ORDER AT ALL TIMES.

4. ALL SLOPES THAT ARE CREATED OR DISTURBED BY CONTRACTOR ACTIVITY MUST BE PROTECTED AGAINST EROSION & SEDIMENT TRANSPORT AT ALL TIMES.

5. THE STORAGE OF ALL CONSTRUCTION MATERIALS AND EQUIPMENT MUST BE PROTECTED AGAINST ANY POTENTIAL RELEASE OF POLLUTANTS INTO THE ENVIRONMENT.

NATURAL GAS PIPING

1. ALL WORK SHALL COMPLY WITH MECHANICAL CODE, NFPA 54, "NATIONAL FUEL GAS CODE" & APPLICABLE PARTS OF NFPA 58, "LIQUEFIED PETROLEUM GAS CODE" & NFPA 70, "NATIONAL ELECTRICAL CODE" FOR ELECTRICAL CONNECTIONS BETWEEN WIRING AND ELECTRICALLY OPERATED CONTROL DEVICES.

2. ABOVE GROUND PIPE SHALL BE ASTM A54 STEEL PIPE, TYPE E, ELECTRIC-RESISTANCE WELDED OR TYPE S, SEAMLESS; GRADE B SCHEDULE 40; BLACK.

3. FITTINGS SHALL BE MALLEABLE-IRON THREADED FITTINGS, ASME B16.3, CLASS 150 STANDARD PATTERN, WITH THREADED ENDS CONFORMING TO ASME B1.20.1.

4. UNDERGROUND PIPING SHALL BE SDR 11 POLYETHYLENE PLASTIC PIPE, TUBING AND FITTINGS IN CONFORMANCE WITH THE 2009 EDITION OF ASTM D 2513.

5. JOINT COMPOUND AND TAPE SHALL BE SUITABLE FOR NATURAL GAS.

6. VALVES SHALL BE ASME B16.33, 150 PSIG WOG, BRONZE BODY, BRONZE PLUG, SQUARE HEAD, TAPERED-PLUG TYPE, WITH THREADED ENDS CONFORMING TO ASME B1.20.1.

7. CLOSE EQUIPMENT SHUTOFF VALVES BEFORE TURNING OFF GAS TO PREMISES OR SECTION OF PIPING. PERFORM LEAKAGE TESTING TO DETERMINE THAT ALL EQUIPMENT IS TURNED OFF IN THE AFFECTED PIPING SECTION.

8. INSTALL SHUTOFF VALVE, DOWNSTREAM FROM GAS METER, OUTSIDE BUILDING AT GAS SERVICE ENTRANCE.

9. PIPING INSTALLATIONS:

CONCEALED LOCATIONS: EXCEPT AS SPECIFIED BELOW, INSTALL CONCEALED GAS PIPING IN AIRTIGHT CONDUIT CONSTRUCTED OF SCHEDULE 40, SEAMLESS, BLACK STEEL PIPE OR SCHEDULE 40, PVC DWV PIPE WITH WELDED JOINTS. VENT CONDUIT TO OUTSIDE AND TERMINATED WITH SCREENED VENT CAP. INSTALL AS SHOWN ON DRAWINGS.

ABOVE CEILING LOCATIONS: GAS PIPING MAY BE INSTALLED IN ACCESSIBLE SPACES, SUBJECT TO APPROVAL OF AUTHORITIES HAVING JURISDICTION, WITH OR NOT SUCH SPACES ARE USED AS PLENUMS. DO NOT LOCATED VALVES IN SUCH SPACES.

IN WALLS: GAS PIPING WITH WELDED JOINTS AND PROTECTIVE WRAPPING MAY BE INSTALLED IN MASONRY WALLS, SUBJECT TO APPROVAL OF AUTHORITIES HAVING JURISDICTION.

IN VERTICAL PIPE CHASES: CHASES SHALL NOT CONTINUE ABOVE CEILINGS.

PROHIBITED LOCATIONS: DO NOT INSTALL GAS PIPING IN WALLS OR UNDER FLOORS, EXCEPT IN ACCESSIBLE ABOVE CEILING SPACES AS SPECIFIED ABOVE, TURNING PASSING THROUGH PARTITIONS OR WALLS; AND IN VENTED SLEEVES AS INDICATED ABOVE AND ON DRAWINGS.

T

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18400 EAST 22ND AVE. AURORA, CO 80216

S

STRYKER

[SITE SERVICES, LLC]

PROJECT INFORMATION:

SITE NAME:

STRATMOOR HILLS WATER TOWER

SITE ID:

DN04161A

12 EAST CLOVER CIRCLE

COLORADO SPRINGS, CO 80906

EL PASO COUNTY

Rev:	Date:	Description:	By:
0	12/16/20	PRELIMINARY	MC
1	01/27/21	100% CONSTRUCTION	MC
2	04/24/21	FINAL STAMPED	MC

PLANS PREPARED BY:

TeleMtn

ENGINEERING

104 BROADWAY, SUITE 600, DENVER, CO 80203

LICENSURE NO:

COLORADO LICENSED

CHRISTOPHER JAMES SCOTT

34610

04/26/2021

PROFESSIONAL ENGINEER

DRAWN BY:	CHK BY:	APV BY:
MC	CS	KS

Sheet Title:

GENERAL
NOTES

Sheet Number:

GN1

HAND DIGGING REQUIRED FOR TRENCH EXCAVATION. EXISTING UNDERGROUND UTILITY LOCATIONS ARE UNKNOWN. GENERAL CONTRACTOR SHALL HAND-EXCAVATE TO REQUIRED SUB-GRADE DEPTH. ALL PROPOSED UNDERGROUND UTILITY TRENCHES SHALL BE HAND-EXCAVATED. GENERAL CONTRACTOR IS RESPONSIBLE FOR ANY REQUIRED SPECIAL TEMPORARY PROTECTION OF, PHYSICAL DAMAGE TO, OR REPAIR OF EXISTING UNDERGROUND CONDUIT INCLUDING RESTORATION OF SERVICE.



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STRATMOOR HILLS WATER TOWER
SITE ID:
DN04161A

12 EAST CLOVER CIRCLE
COLORADO SPRINGS, CO 80906
EL PASO COUNTY


[illegible]

PLANS PREPARED BY:



TeleMtn
ENGINEERING

104 BROADWAY, SUITE 600, DENVER, CO 80203

LICENSURE NO: 

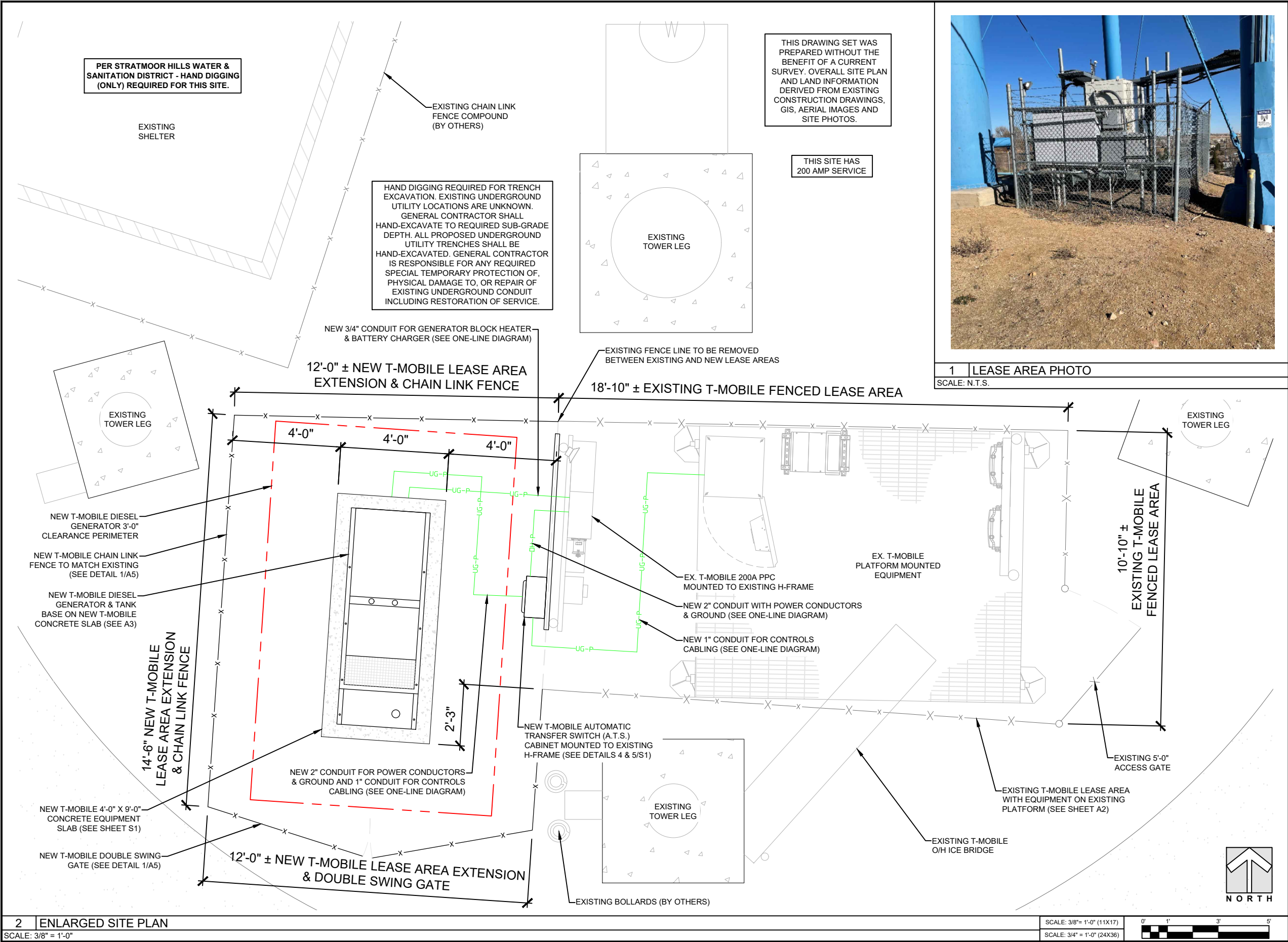
DRAWN BY:	CHK BY:	APV BY:
MC	CS	KS

Sheet Title:

**OVERALL
SITE
PLAN**

Sheet Number:

A1



1 LEASE AREA PHOTO
SCALE: N.T.S.

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SITE ID:
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12 EAST CLOVER CIRCLE
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PLANS PREPARED BY:



LICENSURE NO:



DRAWN BY:	CHK BY:	APV BY:
MC	CS	KS

Sheet Title:

**ENLARGED
SITE
PLAN**

Sheet Number:

A2

RD048 | 3.4L | 48 kW
INDUSTRIAL DIESEL GENERATOR SET
EPA Certified Stationary Emergency



Standby Power Rating
48 kW, 60 KVA, 60 Hz



ENGINE SPECIFICATIONS

General

Make	Generac
Cylinder #	4
Type	In-Line
Displacement - in ³ (L)	3.4 (207.48)
Bore - in (mm)	3.86 (98)
Stroke - in (mm)	4.45 (113)
Compression Ratio	18.5:1
Intake Air Method	Turbocharged/Aftercooled
Cylinder Head	Cast Iron GHV
Piston Type	Aluminum

Engine Governing

Governor	Electronic
Frequency Regulation (Steady State)	±0.25%

Lubrication System

Oil Pump Type	Gear
Oil Filter Type	Full Flow Spin-On Canister
Crankcase Capacity with Filters- qt (L)	7.4 (7.0)

Cooling System

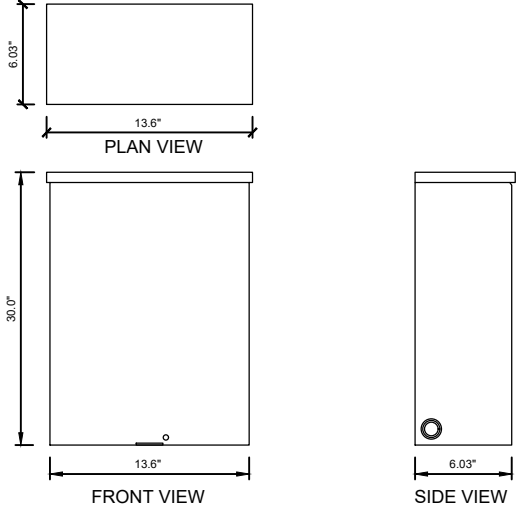
Cooling System Type	Closed Recovery
Fan Type	Pusher
Fan Speed- rpm	2,029
Fan Diameter - in (mm)	22 (559)

Fuel System

Fuel Type	Ultra Low Sulfur Diesel Fuel
Fuel Specification	ASTM
Fuel Pump Type	Mechanical Engine Driven Gear
Injector Type	Mechanical
Fuel Supply Lin (mm/in)	7.94/0.31 (ID)
Fuel Return Line (mm/in)	7.94/0.31 (ID)
Fuel Filtering (microns)	25

Engine Electrical System

System Voltage	12 VDC
Battery Charger Alternator	Standard
Battery Size	Group 27F
Battery Voltage	12 VDC
Ground Polarity	Negative



GENERAC RXSW200A3 AUTOMATIC TRANSFER SWITCH	
PROPERTY	VALUE
AMPS	200
VOLTAGE	120/240, 1Ø
LOAD TRANSITION TYPE	OPEN TRANSITION SERVICE RATED (AUTOMATIC)
ENCLOSURE TYPE	NEMA/UL 3R
UL RATING	UL
WITHSTAND RATING	22,000 AMPS
LUG RATING	250 MCM - #6
LENGTH	30.0"
WIDTH	13.6"
DEPTH	6.03"
WEIGHT	39 LBS
NOTES: SERVICE RATED (RXSW) SWITCHES ARE HOUSED IN AN ALUMINUM NEMA/UL TYPE 3R ENCLOSURE.	

2 AUTOMATIC TRASFER SWITCH (A.T.S.) SPECIFICATIONS

SCALE: NOT TO SCALE

- GENERATOR MUST BE INSTALLED SUCH THAT FRESH COOLING AIR IS AVAILABLE AND THAT DISCHARGE FROM RADIATOR IS NOT RECIRCULATED.
- RECOMMENDED MINIMUM PERIMETER (3 FT) AND VERTICAL OVER EXHAUST (5 FT) CLEARANCE FOR SITE LOCATION.
- ALLOW SUFFICIENT ROOM ON ALL SIDES OF THE GENERATOR FOR MAINTENANCE AND SERVICING. THIS UNIT MUST BE INSTALLED IN ACCORDANCE WITH CURRENT APPLICABLE NFPA 37 AND NFPA 70 STANDARDS AS WELL AS ANY OTHER FEDERAL, STATE, AND LOCAL CODES FOR MINIMUM DISTANCES FROM OTHER STRUCTURES.
- 10' MINIMUM DISTANCE FROM EXHAUST TO ANY OPERABLE OPENING IN A BUILDING. (IMC-09)
- 5' MINIMUM DISTANCE FROM GENERATOR TO ANY STRUCTURE HAVING COMBUSTIBLE WALLS (LESS THAN 1 HOUR RATED) OR ANY OPENINGS IN WALLS. (NFPA - 37)

3 GENERATOR NOTES

SCALE: NOT TO SCALE

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LICENSURE NO:



DRAWN BY:	CHK BY:	APV BY:
MC	CS	KS

Sheet Title:

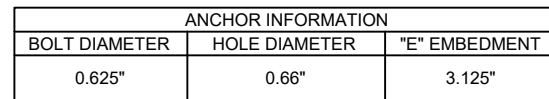
EQUIPMENT
DETAILS

Sheet Number:

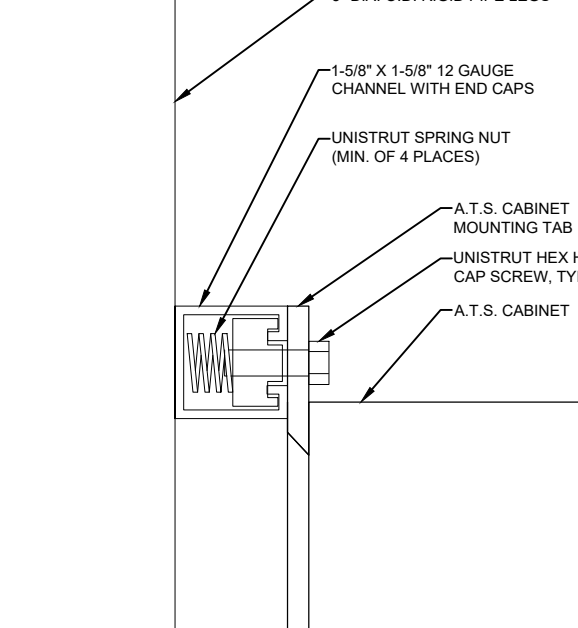
A3

1 DIESEL GENERATOR SPECIFICATIONS

SCALE: NOT TO SCALE



1	CONCRETE ANCHOR DETAIL
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3" DIA. O.D. RIGID PIPE LEGS

1-5/8" X 1-5/8" 12 GAUGE CHANNEL WITH END CAPS

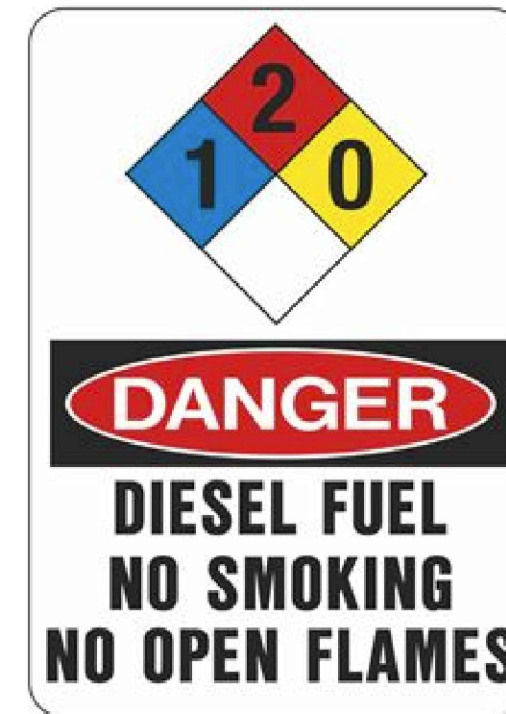
UNISTRUT SPRING NUT (MIN. OF 4 PLACES)

A.T.S. CABINET MOUNTING TAB

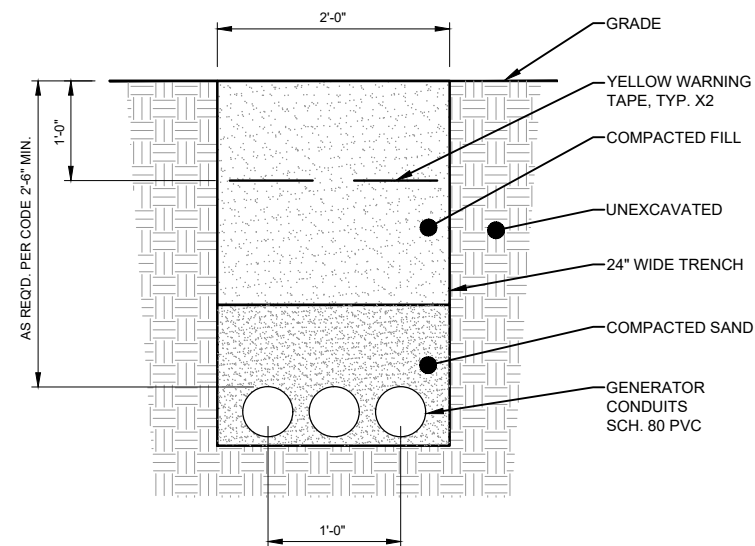
UNISTRUT HEX HEAD CAP SCREW, TYP.

A.T.S. CABINET

2	H-FRAME MOUNTING DETAIL
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3	DIESEL FUEL WARNING SIGN
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PER STRATMOOR HILLS WATER & SANITATION DISTRICT - HAND DIGGING (ONLY) REQUIRED FOR THIS SITE.

6	NOT USED
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[illegible]

DRAWN BY:	CHK BY:	APV BY:
MC	CS	KS

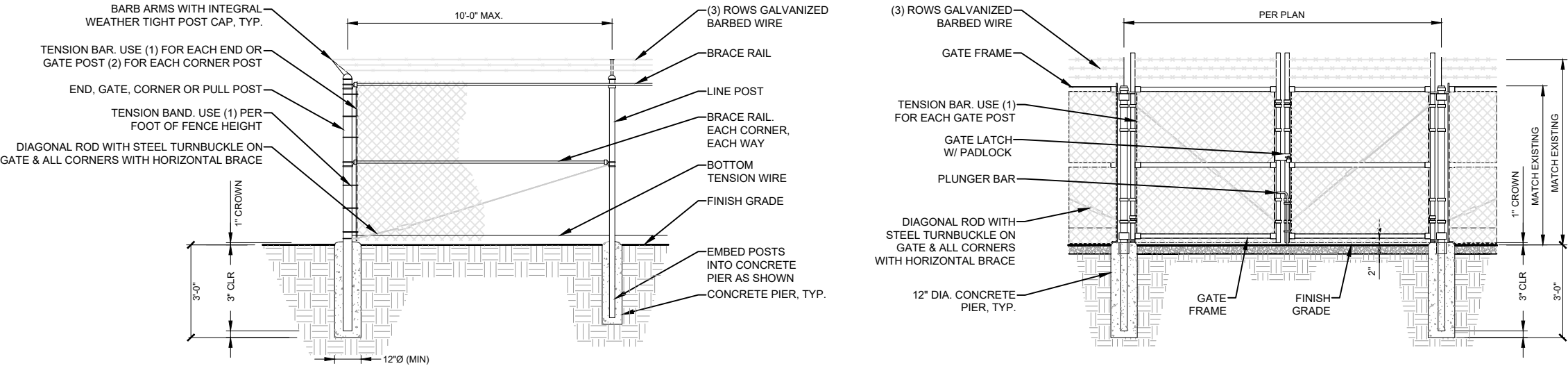
Sheet Title:

EQUIPMENT DETAILS

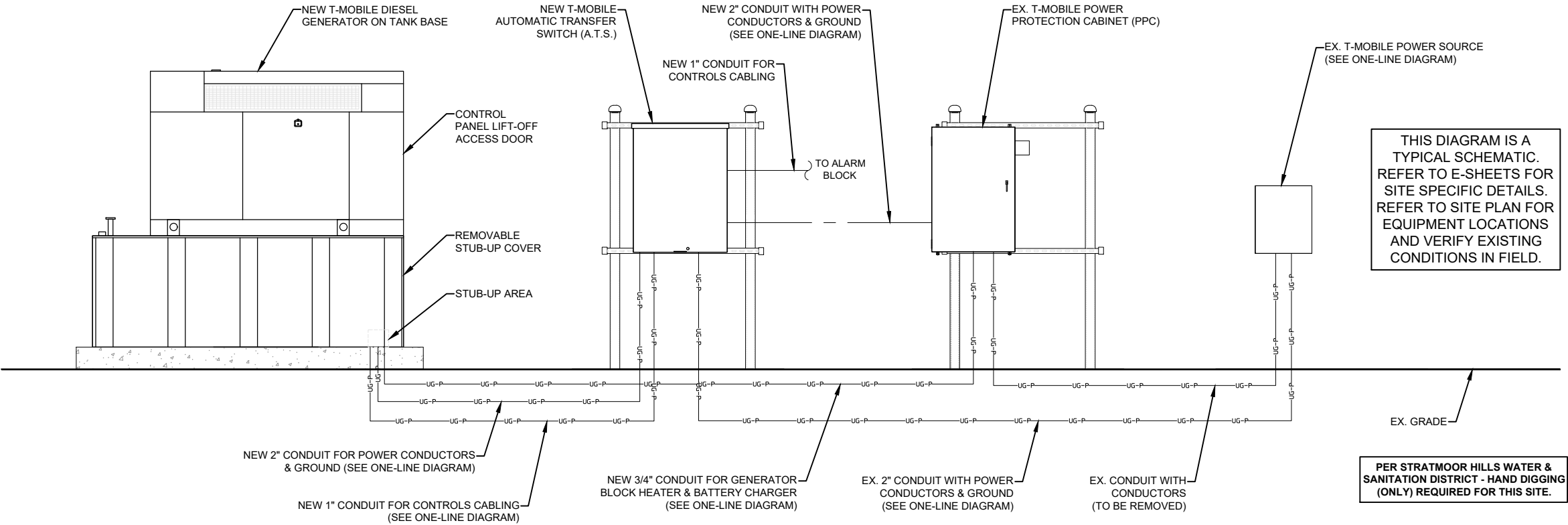
Sheet Number:

A4

CHAIN-LINK GATE/FENCE SPECIFICATIONS:		
(INSTALL FENCING PER ASTM F567 / SWING GATES PER ASTM F900)		NOTES
GATE POST	4.500" O.D. SCHEDULE 40 PIPE FOR GATE WIDTHS UP TO 6 FEET, PER ASTM F1083.	POST & FENCE PIPE SIZES ARE FENCE INDUSTRY STANDARD. ALL PIPE TO BE GALV. (HOT-DIP, ASTM A120 GRADE "A" STEEL). CROSS BRACE ALL POSTS EXCEPT INTERMEDIATES.
LINE POST	2.375" O.D. SCHEDULE 40 PIPE PER ASTM F1083. 10'-0" MAX. SPACING BETWEEN POSTS.	
CORNER POST	3.500" O.D. SCHEDULE 40 PIPE PER ASTM F1083.	
TOP RAIL/BRACE RAIL	1.875" O.D. SCHEDULE 40 PIPE, PER ASTM F1083.	
GATE FRAME	1.875" O.D. SCHEDULED 40 PIPE, PER ASTM F1083.	
GATE LATCH	1.375" O.D. PLUNGER ROD W/ LATCH & LOCK.	CONTRACTOR TO INSTALL (2) GATE HOLDBACKS TO HOLD GATE OPEN DURING USE.
FABRIC		
TIE WIRE	MINIMUM 11 GA. GALVANIZED STEEL AT POSTS AND RAILS A SINGLE WRAP OF FABRIC TIE AND AT TENSION WIRE BY HOG RINGS SPACED MAX. 24" INTERVALS.	
TENSION WIRE	7 GA. GALVANIZED STEEL.	LOCAL ORDINANCE OF BARBED WIRE PERMIT REQUIREMENTS SHALL BE COMPLIED WITH IF REQUIRED.
BARBED WIRE	DOUBLE STRAND 12-1/2" O.D. TWISTED WIRE TO MATCH WITH FABRIC 14 GA. 4 PT. BARBS SPACED ON APPROXIMATELY 5" CENTERS.	



1 CHAIN LINK FENCE & GATE DETAIL
SCALE: NOT TO SCALE



2 TYPICAL ELECTRICAL CONDUIT SCHEMATIC
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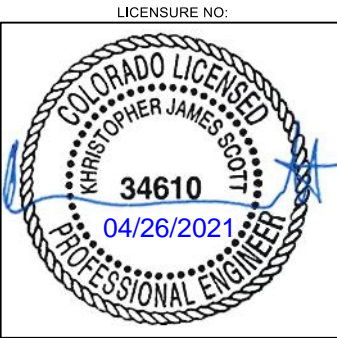


PROJECT INFORMATION:
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SITE ID:
DN04161A
12 EAST CLOVER CIRCLE
COLORADO SPRINGS, CO 80906
EL PASO COUNTY

Rev:	Date:	Description:	By:
0	12/16/20	PRELIMINARY	MC
1	01/27/21	100% CONSTRUCTION	MC
2	04/24/21	FINAL STAMPED	MC

PLANS PREPARED BY:

104 BROADWAY, SUITE 600, DENVER, CO 80203



DRAWN BY:	CHK BY:	APV BY:
MC	CS	KS

Sheet Title:
**CHAIN LINK FENCE &
TYPICAL ELECTRICAL
CONDUIT SCHEMATIC**

Sheet Number:
A5

1. ALL CONCRETE CONSTRUCTION SHALL MEET THE REQUIREMENTS OF THE AMERICAN CONCRETE INSTITUTE (ACI 318) BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE AND (ACI 301) STANDARD SPECIFICATIONS FOR STRUCTURAL CONCRETE. ALL CONCRETE WORK SHALL BE IN ACCORDANCE WITH THE ACI3081, ACI30818, ASTM A184 AND ASTM A185.
2. MINIMUM ALLOWABLE CONCRETE COMPRESSIVE STRENGTH SHALL BE 4000 PSI AT 28 DAYS WHEN TESTED IN ACCORDANCE WITH THE AMERICAN SOCIETY FOR TESTING AND MATERIALS METHODS STANDARDS ASTM C172, ASTM C31 AND ASTM C39 UNLESS NOTED OTHERWISE.
3. REINFORCING STEEL SHALL CONFORM TO ASTM A615, GRADE 60, DEFORMED UNLESS NOTED OTHERWISE. WELDING WIRE FABRIC SHALL CONFORM TO ASTM A185 WELDED STEEL FABRIC UNLESS NOTED OTHERWISE. SPLICES SHALL BE CLASS "B" AND ALL HOOKS SHALL BE STANDARD, UNLESS OTHERWISE NOTED.
4. DETAILING SHALL BE IN ACCORDANCE WITH THE MANUAL OF STANDARD PRACTICE OF DETAILING REINFORCED CONCRETE STRUCTURES (ACI STD-318/SP-66(04): ACI DETAILING MANUAL - 2004.
5. CHAMFER ALL EXPOSED EDGES OF CONCRETE 3/4" IN ACCORDANCE WITH ACI 301 SECTION 4.2.2 UNLESS OTHERWISE NOTED.
6. REINFORCING STEEL SHALL BE ACCURATELY PLACED AND ADEQUATELY SECURED IN POSITION. LOCATION OF REINFORCEMENT SHALL BE INDICATED ON THE DRAWINGS, CONCRETE COVER SHALL BE 3" MINIMUM.
7. TOP OF FOUNDATION TO HAVE A "BRUSH FINISH"
8. EXPOSED FINISH SURFACE IS NOT TO HOLD WATER.
9. ALL SURFACES ARE TO BE CLEANED OF ANY RESIDUAL CONCRETE FROM SPLASHING OR SPILLS.

1. EXCAVATE AS REQUIRED TO REMOVE VEGETATION AND TOPSOIL, EXPOSE UNDISTURBED NATURAL SUBGRADE, AND PLACE CRUSHED STONE AS REQUIRED.
2. COMPACTION CERTIFICATION: AN INSPECTION AND WRITTEN CERTIFICATION BY A QUALIFIED GEOTECHNICAL OR ENGINEER IS ACCEPTABLE.
3. AS AN ALTERNATIVE TO INSPECTION AND WRITTEN CERTIFICATION, THE "UNDISTURBED SOIL" BASE SHALL BE COMPACTED WITH "COMPACTION EQUIPMENT", LISTED BELOW, TO AT LEAST 95% STANDARD PROCTOR MAXIMUM DENSITY PER ASTM D 698.
4. COMPACTED SUB BASE SHALL BE UNIFORM AND LEVELED. PROVIDE 6" MINIMUM CRUSHED STONE OR GRAVEL COMPACTED TO 3" LIFTS ABOVE COMPACTED SOIL. GRAVEL SHALL BE NATURAL OR CRUSHED WITH 100% PASSING 1" SIEVE.
5. AS AN ALTERNATIVE TO ITEMS 2 & 3, PROOF ROLL THE SUB GRADE SOILS WITH 5 PASSES OF A MEDIUM SIZED VIBRATORY PLATE COMPACTOR (SUCH AS BOMAG BPR 30/38) OR HAND-OPERATED SINGLE DRUM VIBRATORY ROLLER (SUCH AS BOMAG BW 55E). ANY SOFT AREAS THAT ARE ENCOUNTERED SHOULD BE REMOVED AND REPLACED WITH A WELL-GRADEDED GRANULAR FILL AND BE COMPACTED AS STATED ABOVE.

1. HAND-OPERATED DOUBLE DRUM, VIBRATORY ROLLER, VIBRATORY PLATE COMPACTOR OR JUMPING JACK COMPACTOR

-
- Diagram illustrating a concrete slab with a broom finish. The slab is labeled "PER PLAN" for both width and height. A central area is marked with a grid and labeled "SEE NOTE 4". The entire slab surface is labeled "BROOM FINISH". A circular callout at the bottom left indicates a section cut, labeled "3" and "S1".

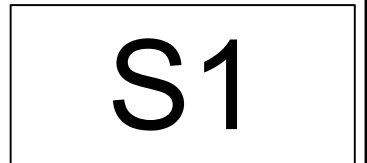


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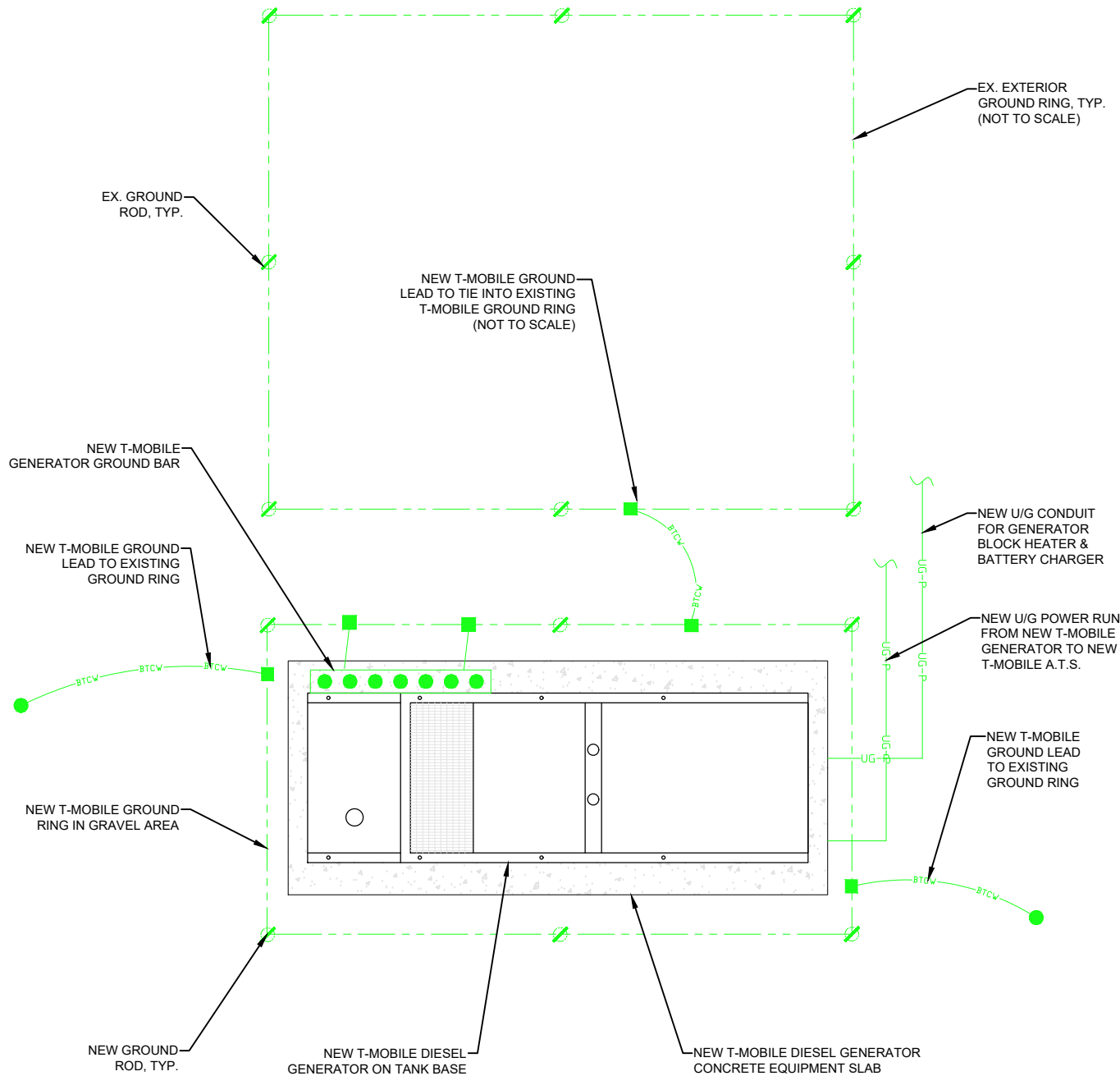
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- SCALE: NOT TO SCALE



THIS IS A SCHEMATIC REPRESENTATION ONLY. SEE SITE PLAN FOR FINAL EQUIPMENT LAYOUT. OBSERVE NEC AND LOCAL UTILITY REQUIREMENTS FOR ELECTRICAL SERVICE GROUNDING.

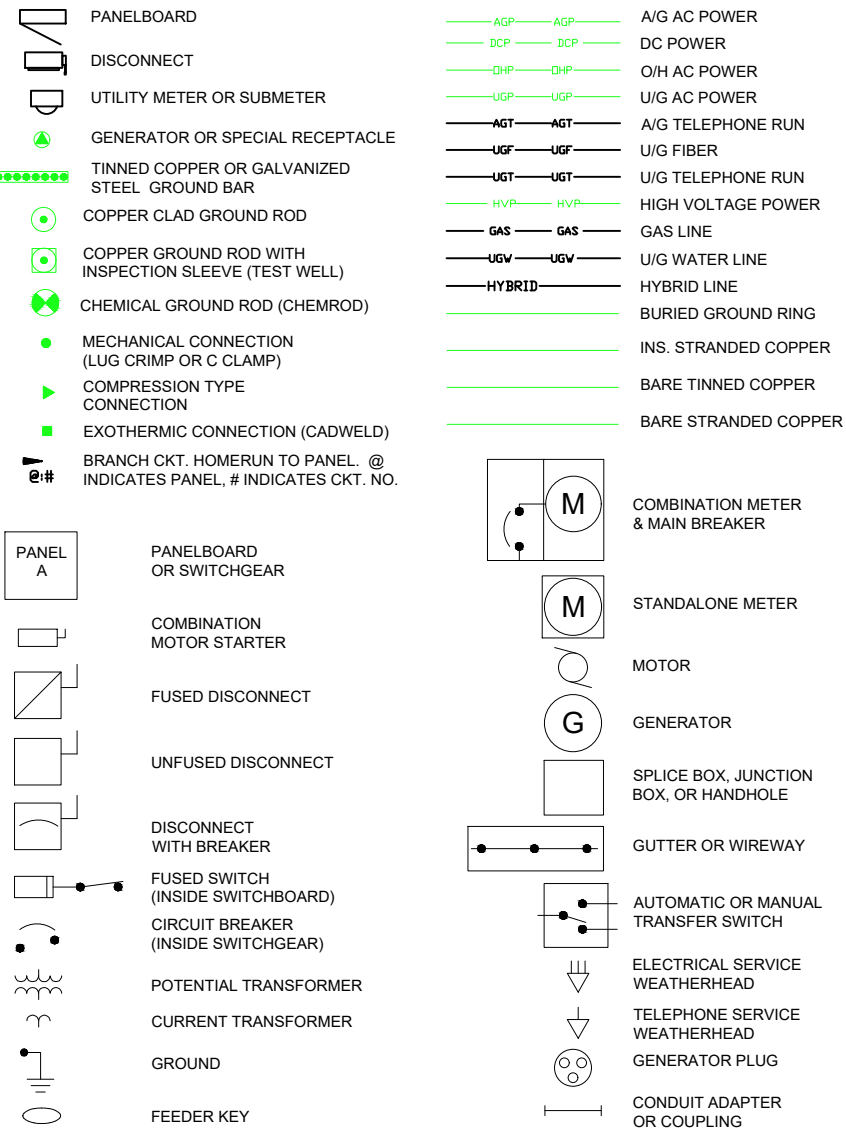
PER STRATMOOR HILLS WATER & SANITATION DISTRICT - HAND DIGGING (ONLY) REQUIRED FOR THIS SITE.



1 TYPICAL ELECTRICAL & GROUNDING SITE PLAN - DIESEL
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GENERAL ELECTRICAL NOTES

1. ALL ELECTRICAL WORK SHALL CONFORM TO THE REQUIREMENTS OF THE NATIONAL ELECTRICAL CODE (NEC) AS WELL AS APPLICABLE STATE AND LOCAL CODES.
2. ALL ELECTRICAL ITEMS SHALL BE U.L. APPROVED OR LISTED AND PROCURED PER SPECIFICATION REQUIREMENTS.
3. THE ELECTRICAL WORK INCLUDES ALL LABOR AND MATERIAL DESCRIBED BY DRAWINGS AND SPECIFICATIONS INCLUDING INCIDENTAL WORK TO PROVIDE AN APPROVED, COMPLETE AND OPERATING ELECTRICAL SYSTEM.
4. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING REQUIRED BUILDING PERMITS AND THE COORDINATION OF INSPECTIONS.
5. ELECTRICAL AND TELCO WIRING OUTSIDE OF A BUILDING AND EXPOSED TO WEATHER SHALL BE IN WATER TIGHT GALVANIZED RIGID STEEL CONDUITS OR SCHEDULE 80 PVC (AS PERMITTED BY CODE) AND WHERE REQUIRED IN LIQUID TIGHT FLEXIBLE METAL OR NONMETALLIC CONDUITS.
6. RIGID STEEL CONDUITS SHALL BE GROUNDED AT BOTH ENDS.
7. ELECTRICAL WIRING SHALL BE COPPER WITH TYPE XHHW, THWN, OR THHN INSULATION AS REQUIRED BY NEC.
8. ALL EQUIPMENT LOCATED OUTSIDE SHALL HAVE A NEMA 3R ENCLOSURE.
9. CONTRACTOR TO CONFIRM THAT ALL EXISTING ELECTRICAL EQUIPMENT / RATINGS ARE INSTALLED PER NEC AND LOCAL CODES.
10. CONTRACTOR SHALL FIELD VERIFY THE LOCATION OF THE MAIN BONDING JUMPER AND GROUNDING ELECTRODE CONDUCTOR ARE INSTALLED PROPERLY IF DISTURBED DURING CONSTRUCTION.
11. FOR ALL INTERNAL WIRING AND ARRANGEMENT, REFER TO DRAWINGS AND SPECIFICATIONS PROVIDED BY THE EQUIPMENT MANUFACTURER.
12. PROVIDE SIGNS AT THE SERVICE ENTRANCE EQUIPMENT INDICATING THAT THE SITE HAS ON-SITE AUTOMATIC START STANDBY GENERATOR IN ACCORDANCE WITH NEC ARTICLE 702.8.
13. PROVIDE CIRCUIT BREAKERS FOR ATS AND PPC / PANEL AS REQUIRED.
14. IF NEW H-FRAME IS REQUIRED, BOND TO EXISTING GROUND RING WITH #2 SOLID CU TINNED CONDUCTOR.
15. ALL TRENCHING SHALL BE HAND DUG.
16. REPAIR ANY DAMAGE TO EXISTING GROUND RING DURING TRENCHING OPERATIONS.
17. SEE GROUNDING DETAILS AND CADWELD GENERATOR GROUND TO EXISTING GROUND RING.



2 ELECTRICAL NOTES & LEGEND
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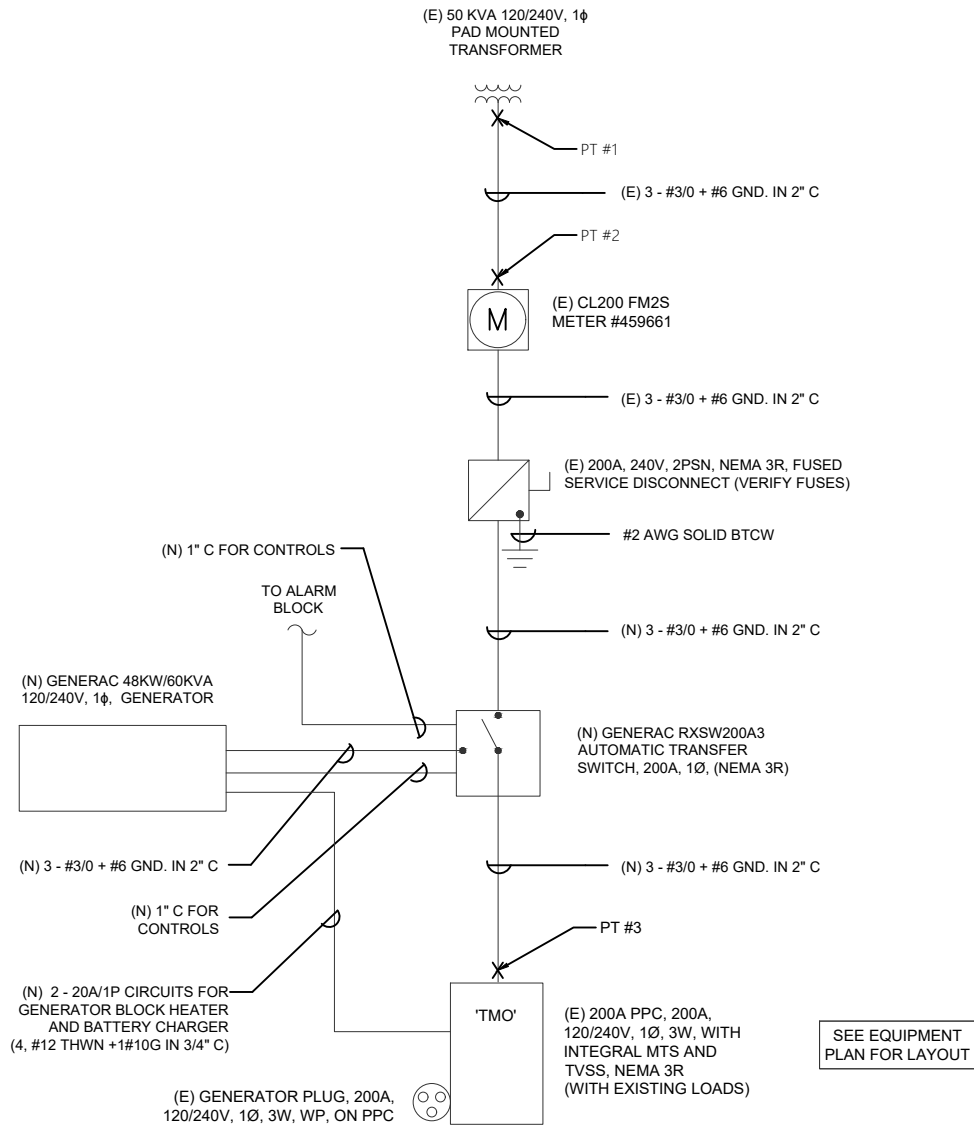
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MC	CS	KS

Sheet Title:
ELECTRICAL SITE PLAN, GROUNDING PLAN & NOTES

Sheet Number:
E1

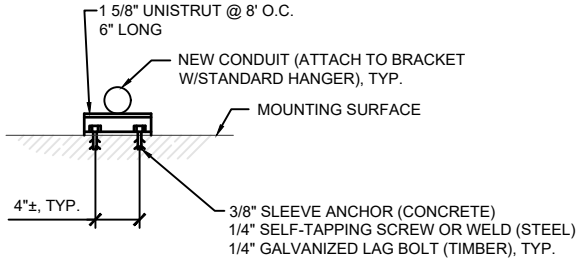
NOTES:

1. EXISTING CONDUIT, CONDUCTORS, AND OTHER ITEMS SHOWN ARE AS DESCRIBED TO THE BEST OF THE KNOWLEDGE OF THE ENGINEER, BASED UPON PHOTOGRAPHS AND/OR PREVIOUS DRAWINGS. IF FIELD CONDITIONS DEVIATE SUBSTANTIALLY FROM WHAT IS SHOWN HERE, DRAWINGS AND CALCULATIONS MAY NEED TO BE UPDATED.
2. FINAL TRANSFORMER LOCATION AND SIZING PER XCEL ENERGY. IF A DIFFERENT TRANSFORMER IS INSTALLED, OR IT IS INSTALLED IN A DIFFERENT LOCATION, FAULT CALCULATIONS AND LABELING SHOULD BE REVISED BY ENGINEER.
3. ACTUAL VALUES FOR FAULT CURRENT SHOWN IN DETAIL 2.
4. CONDUIT SUBJECT TO FOOT TRAFFIC SHALL BE GRC. FINAL CONDUIT RUN TO CABINET SHALL BE LTFC.



Single Phase Xfmr Power source	Xfmr(kVA)	Pole/Pad	$V_{(L-L)}$	$V_{(L-N)}$	Phases	Available fault current				$I_{sc} (A) L-L$
Pt. 1: Point of delivery	50	Pad	240	120	1					14,800
Fault Current location	# of Runs	Conductor	$V_{(L-L)}$	$V_{(L-N)}$	2=non-met	$L_n (ft)$	C_n	$F_{(L-L)}$	$M_{(L-L)}$	$I_{sc} (A) L-L$
Pt. 2: Meter/200A disconnect	1	#3/0	240	120	2	35	13923	0.31	0.7634	11,298
Pt. 3: T-Mobile 200A PPC	1	#3/0	240	120	1	5	12844	0.0367	0.9646	10,898

2 FAULT CALCULATIONS



1 ELECTRICAL ONE-LINE DIAGRAM

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3 CONDUIT DETAIL

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Sheet Title:

ONE-LINE DIAGRAM
PANEL SCHEDULES
& CALCULATIONS

Sheet Number:

E2