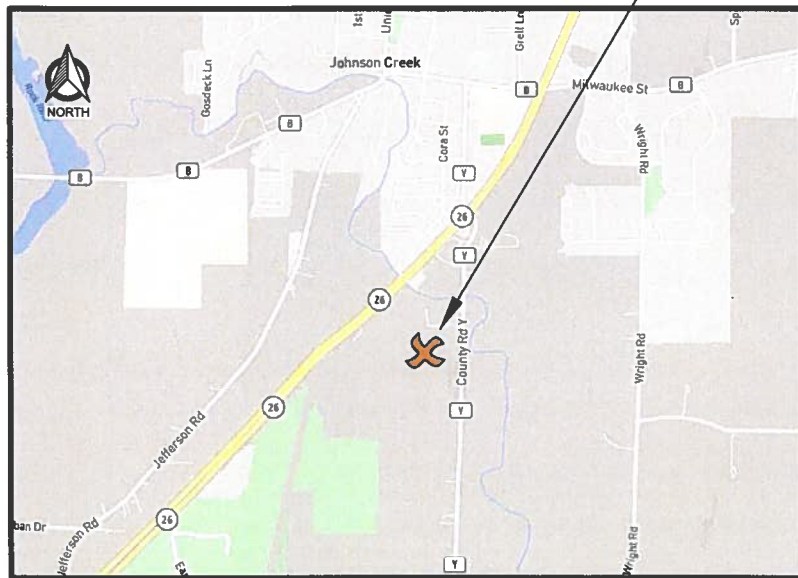


SITE LOCATION



JOHNSON CREEK (27649) JOHNSON CREEK, WISCONSIN 195' SELF-SUPPORT TOWER

PROJECT DIRECTORY

ENGINEERING COMPANY:
EDGE CONSULTING ENGINEERS, INC.
624 WATER STREET
PRAIRIE DU SAC, WI 53578
CONTACT: ARLEN OSTRENG
PHONE: (608) 644-1449

OWNER
JEFFERSON COUNTY SHERIFF'S OFFICE
411 S CENTER AVE.
JEFFERSON, WI 53549-1703
CONTACT: (920) 674-7346
NAME: TODD LINDERT

TECHNOLOGY CONSULTANT:
TRUE NORTH CONSULTING GROUP
140 3RD STREET SOUTH
STILLWATER, MN 55082
CONTACT: (651) 705-1255
NAME: JOHN THOMPSON

RADIO SYSTEM VENDOR:
GENERAL COMMUNICATIONS
2880 COMMERCE PARK DR.
MADISON, WI 53719
CONTACT: (608) 271-4848
NAME: CHAD TOMASZEWSKI

ELECTRICAL SERVICE PROVIDER:
WE ENERGIES
231 W. MICHIGAN ST.
MILWAUKEE, WI 53203
CONTACT: (414) 221-2345

PROJECT INFO

SITE ADDRESS:
N6131 COUNTY ROAD Y
JOHNSON CREEK, WI 53038

PROPERTY OWNER:
THOMAS E GALLITZ
KATHY L GALLITZ
W4546 STATE ROAD 18
JEFFERSON, WI 53549

TOWER OWNER:
BERTRAM WIRELESS
300 INDUSTRIAL DRIVE
RANDOM LAKE, WI 53075

TOWER COORDINATES (PER EDGE SURVEY):
LAT (NAD83/2011): 43°-03'-53" N (43.064722)
LONG (NAD83/2011): 88°-46'-24" W (-88.773333)
GROUND ELEVATION (NAVD 88): 832.4'
ASR NUMBER: NA

PLSS INFORMATION
PART OF SW 1/4 OF THE SW 1/4
SECTION 18, T7N, R15W
TOWN OF FARMINGTON
JEFFERSON COUNTY
WISCONSIN

PARCEL ID(S): 008-0715-1833-000
008-0715-1922-001

ZONING CLASSIFICATION(S): I - INDUSTRIAL
A-1 AG

SHEET INDEX

NO.:	SHEET TITLE
G-001	TITLE SHEET
C-101	OVERALL SITE PLAN
C-102	ENLARGED SITE PLAN
C-103	COMPOUND PLAN
C-104	GRADING AND EROSION CONTROL PLAN
C-501	SITE DETAILS
C-502	FENCE DETAILS
C-503	SHELTER FOUNDATION DETAILS
C-504	GENERATOR FUEL SYSTEM DETAILS
C-505	GRADING & EROSION CONTROL DETAILS
A-101	SHELTER FLOOR PLAN
A-201	SHELTER ELEVATIONS: EXTERIOR
A-202	SHELTER ELEVATIONS: INTERIOR
T-201	TOWER LOADING / ELEVATION
T-501	TRANSMISSION LINE INSTALLATION DETAILS
T-502	ICE BRIDGE DETAILS
T-503	ANTENNA INSTALLATION DETAILS
E-101	GROUNDING PLAN
E-102	UTILITY PLAN
E-104	SHELTER ELECTRICAL PLAN
E-501	GROUNDING DETAILS
E-502	GROUNDING DETAILS
E-503	GROUNDING DETAILS
E-504	UTILITY DETAILS
E-505	UTILITY RACK DETAILS

CONSULTANT:

Edge
Consulting Engineers, Inc.
824 WATER STREET
PRAIRIE DU SAC, WI 53578
608.644.1449 VOICE
608.644.1549 FAX
www.edgeconsult.com

CLIENT:



TITLE SHEET
JOHNSON CREEK (27649)
JOHNSON CREEK, WISCONSIN

SUBMITTAL:

INT.	DATE:	DESCRIPTION:

CHECKED BY	AJO
PLOT DATE	5/12/2021
PROJECT NUMBER	27649
SET TYPE	BD
SHEET NUMBER	G-001



TO OBTAIN LOCATION OF PARTICIPANTS' UNDERGROUND FACILITIES BEFORE YOU DIG IN WISCONSIN, CALL DIGGERS HOTLINE

TOLL FREE: 1-800-242-8511
FAX A LOCATE: 1-800-242-5811

WI STATUTE 182.0175 (1974) REQUIRES MIN. OF 3 WORK DAYS NOTICE BEFORE YOU EXCAVATE

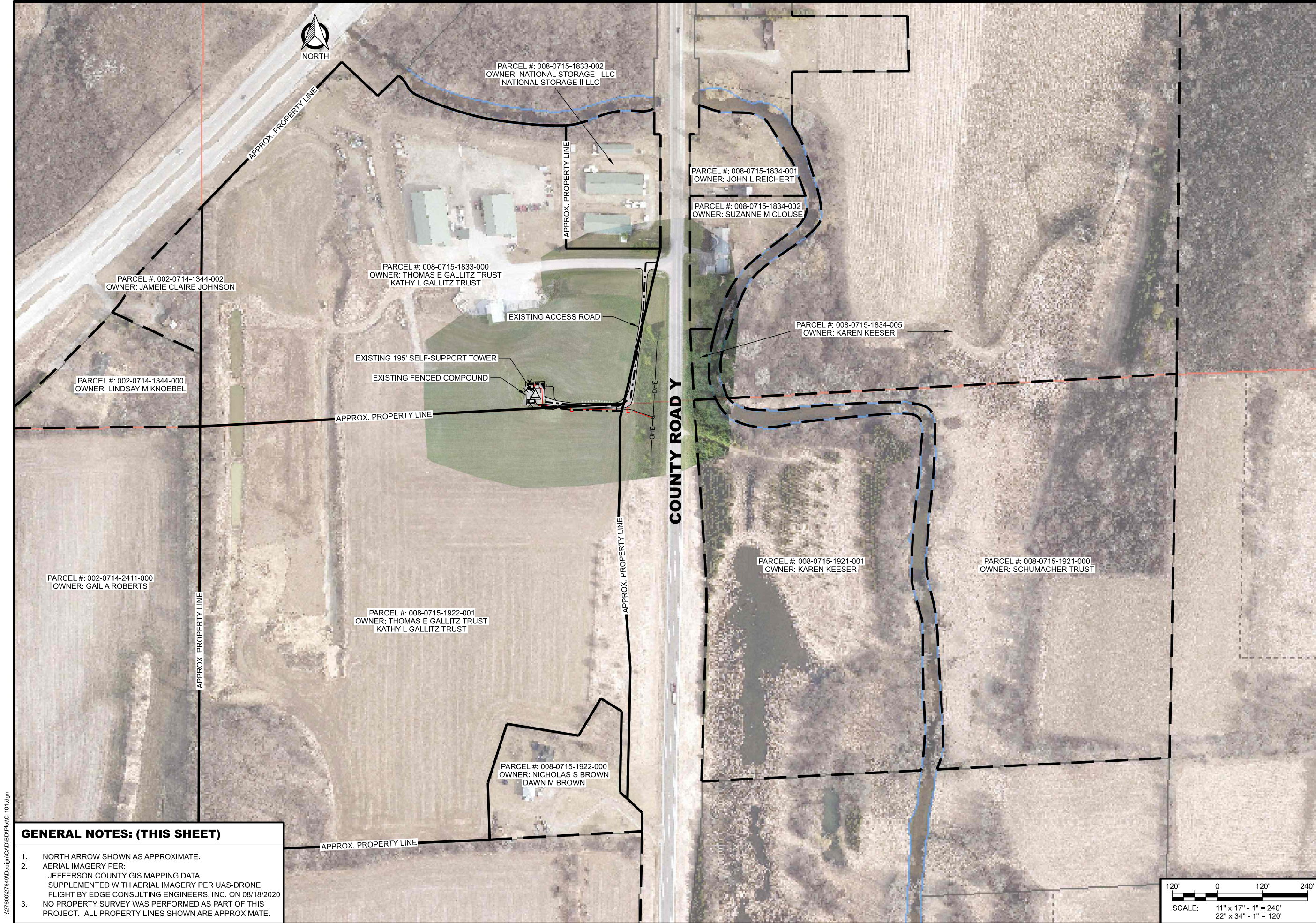
ENGINEER SEAL:



I HEREBY CERTIFY THAT THIS PLAN SET WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION OTHER THAN THE EXCEPTIONS NOTED IN THE SHEET INDEX, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF WISCONSIN.

SIGNATURE:

DATE: 5-12-2021



CONSULTANT:
Edge
Consulting Engineers, Inc.
624 WATER STREET
PRAIRIE DU SAC, WI 53578
608.644.1449 VOICE
608.644.1549 FAX
www.edgeconsult.com



OVERALL SITE PLAN

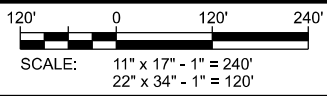
JOHNSON CREEK (27649)

JOHNSON CREEK, WISCONSIN

SUBMITTAL:		
INT.	DATE:	DESCRIPTION:

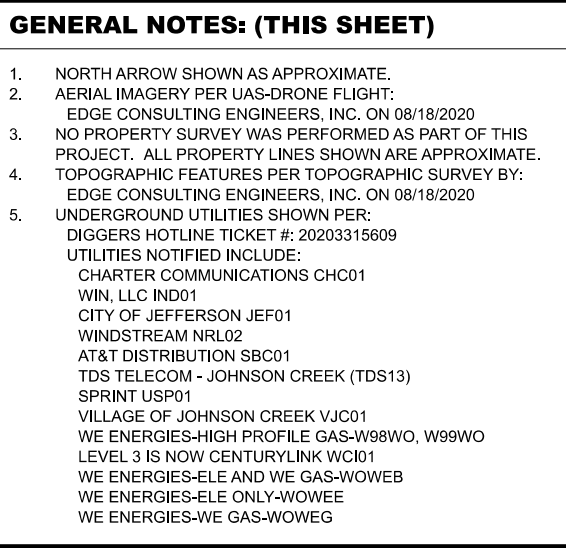
CHECKED BY:	AJO
PLOT DATE:	5/12/2021
PROJECT NUMBER:	27649
SET TYPE:	BD
SHEET NUMBER:	C-101

- GENERAL NOTES: (THIS SHEET)**
- NORTH ARROW SHOWN AS APPROXIMATE.
 - AERIAL IMAGERY PER:
JEFFERSON COUNTY GIS MAPPING DATA
SUPPLEMENTED WITH AERIAL IMAGERY PER UAS-DRONE
FLIGHT BY EDGE CONSULTING ENGINEERS, INC. ON 08/18/2020
 - NO PROPERTY SURVEY WAS PERFORMED AS PART OF THIS
PROJECT. ALL PROPERTY LINES SHOWN ARE APPROXIMATE.



N:\27600\27649\Design\CADD\BD\PlotC-101.dgn

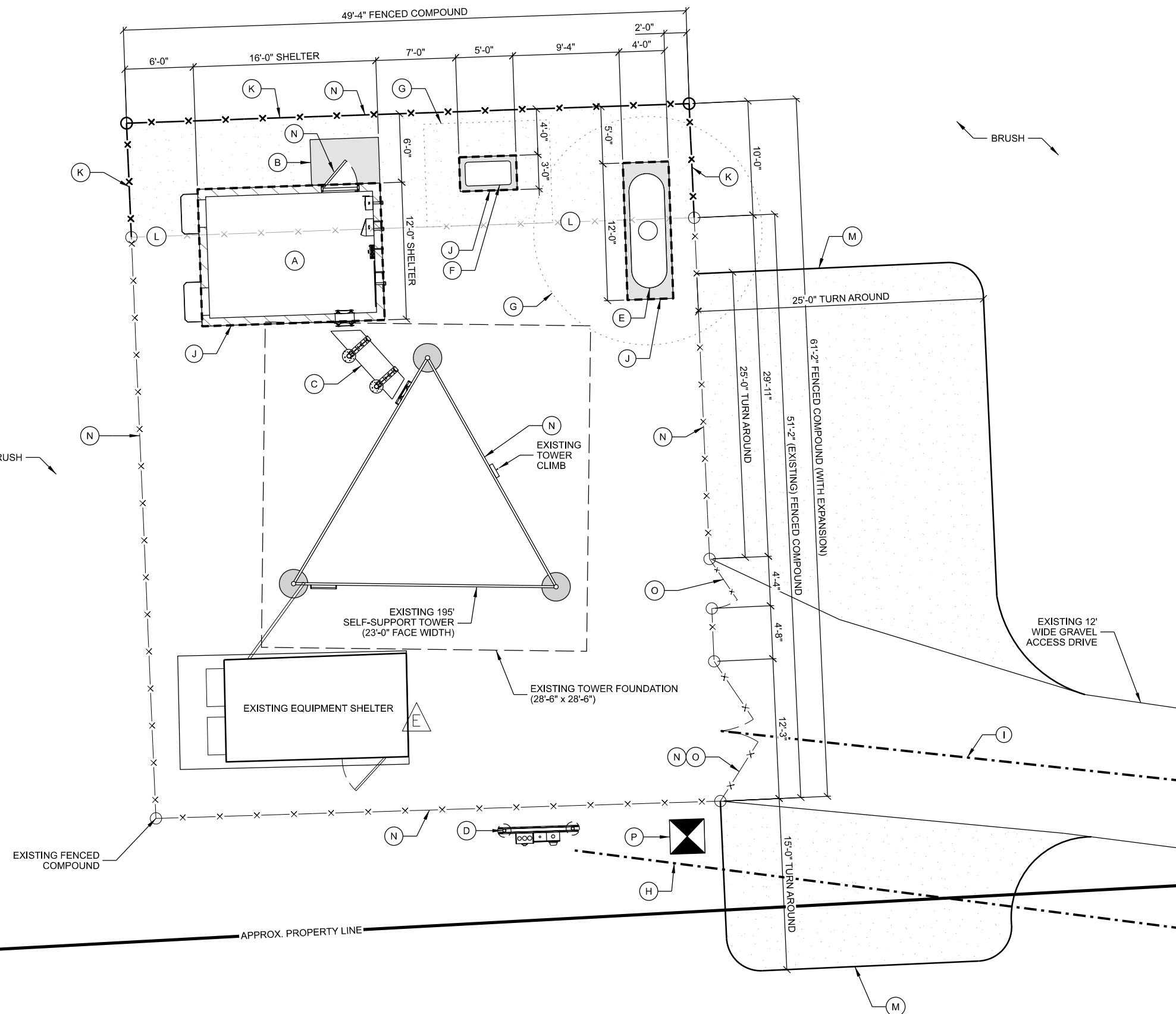
- A. JEFFERSON COUNTY EQUIPMENT SHELTER
- B. C/L OF 15' WIDE UTILITY EASEMENT
- C. C/L OF 20' WIDE ACCESS EASEMENT
- D. PRIMARY ELECTRIC SERVICE FROM ROW TO GROUND MOUNTED TRANSFORMER.
- E. JEFFERSON CO. LEASE AREAS:
 - 12' x 16' SHELTER
 - 3' x 5' GENERATOR
 - 12' x 4' LP TANK
- F. GRAVEL TURN AROUND



© EDGE CONSULTING ENGINEERS, INC.

KEYNOTES: (THIS SHEET)

- A. JEFFERSON COUNTY 12' x 16' EQUIPMENT SHELTER;
PROVIDED BY OWNER. INSTALLED BY CONTRACTOR.
SEE A-101 FOR DETAILS
- B. 4' x 6' CONCRETE STOOP;
SEE C-503 FOR DETAILS
- C. 24" WIDE ICE BRIDGE;
SEE T-502 FOR DETAILS
- D. MULTI-METER UTILITY RACK;
SEE E-504 FOR DETAILS
- E. 500 GAL. LP FUEL TANK ON CONCRETE SLAB;
SEE C-504 FOR DETAILS
- F. 22 kW GENERATOR ON CONCRETE SLAB;
GENERATOR PROVIDED BY OWNER
AND INSTALLED BY CONTRACTOR.
CONCRETE PAD BY CONTRACTOR.
SEE C-504 FOR DETAILS
- G. CLEARNACE ZONE/SETBACKS
- 10' AROUND LP TANK
- 3' AROUND GENERATOR
- H. C/L OF 15' WIDE UTILITY EASEMENT
- I. C/L OF 20' WIDE ACCESS EASEMENT
- J. JEFFERSON CO. LEASE AREAS:
12' x 16' SHELTER
3' x 5' GENERATOR
12' x 4' LP TANK
- K. FENCE EXPANSION;
SEE C-502 FOR DETAILS
- L. EXISTING FENCE TO BE REMOVED
- M. GRAVEL TURN AROUND;
SEE DETAIL A/C-501
- N. SIGNAGE:
- (0) ASR. INSTALL ON VEHICLE GATE.
- (1) SITE IDENTIFICATION. INSTALL ON SHELTER DOOR
- (4) RF NOTICE. INSTALL ON EACH SIDE OF FENCE.
- (2) RF CAUTION. INSTALL ON SHELTER DOOR AND TOWER.
- (1) OSHA DANGER. INSTALL ON VEHICLE GATE.
- (1) NFPA LP FUEL. INSTALL ON VEHICLE GATE.
- O. GATE LOCKS
(1) MULTI-USER LOCK SYSTEM WITH PADLOCK ON
VEHICLE GATE
(1) MULTI-USER LOCK SYSTEM WITH PADLOCK ON MAN
GATE
- P. GROUND MOUNTED ELECTRIC TRANSFORMER



GENERAL NOTES: (THIS SHEET)

1. NORTH ARROW SHOWN AS APPROXIMATE.

CONSULTANT:



CLIENT:



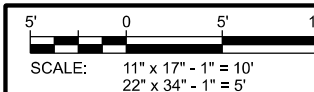
COMPOUND PLAN
JOHNSON CREEK (27649)
JOHNSON CREEK, WISCONSIN

SUBMITTAL:

INT.	DATE:	DESCRIPTION:

CHECKED BY:	AJO
PLOT DATE:	5/12/2021
PROJECT NUMBER:	27649
SET TYPE:	BD

SHEET NUMBER
C-103





GRADING NOTES: (THIS SHEET)

1. CONTOUR INTERVAL IS 1 FOOT.
2. PERIMETER CONTROLS AND STONE TRACKING PADS SHALL BE INSTALLED PRIOR TO ANY LAND DISTURBING ACTIVITIES, INCLUDING CLEARING AND GRUBBING OPERATIONS. STONE TRACKING PAD SHALL BE A 12'X50' MIN. CONSISTING OF 3" BREAKER STONE.
3. CONTRACTOR SHALL INSTALL ADDITIONAL EROSION CONTROL MEASURES, BEYOND THOSE SHOWN IN THIS PLAN, SUITABLE FOR THEIR MEANS AND METHODS TO KEEP ALL SEDIMENT ON SITE DURING CONSTRUCTION ACTIVITIES. THIS INCLUDES IMPLEMENTATION OF SILT FENCE, EROSION BALES, TRACKING PADS, DIVERSION BERMS AND/OR OTHER APPROPRIATE DEVICES.
4. CONTRACTOR SHALL GRADUALLY MATCH INTO EXISTING GRADE. NO PROPOSED EARTHWORK SHALL HAVE A GREATER SLOPE THAN 3:1. FINISHED SITE TO BE GRADED TO MAINTAIN POSITIVE DRAINAGE IN ALL AREAS.
5. DRIVEWAY GRADE WITHIN 25 FEET OF PUBLIC ROAD ACCESS POINT SHALL BE LESS THAN 10% (10:1).
6. FINISHED GRADE SLOPES GREATER THAN 10:1, DITCH BOTTOMS AND GRASS SURFACES WITHIN 6 FEET OF ANY PAVED OR GRAVEL SURFACE REQUIRE EROSION MAT (CLASS II, URBAN TYPE B)
7. ALL DISTURBED GRASS/TURF AREAS SHALL BE RESTORED WITH TOPSOIL, SEED AND MULCH. TOPSOIL TO BE 6-INCHES MINIMUM. SEED TO CONSIST OF NATIVE PURE LIVE SEED (PLS) AT 98% PURITY AND 95% GERMINATION. MULCH TO BE WEED-FREE GRAIN STRAW.
8. CONTRACTOR TO PERFORM MAINTENANCE AND INSPECTION OF EROSION CONTROL DEVICES AND EXPOSED GRADE THROUGHOUT CONSTRUCTION. THE CONTRACTOR SHALL INSPECT THE EROSION AND SEDIMENT CONTROL BEST MANAGEMENT PRACTICES ON A WEEKLY BASIS AND WITHIN 24 HOURS AFTER A PRECIPITATION EVENT 0.5 INCHES OR GREATER WHICH RESULTS IN RUNOFF. CONTRACTOR SHALL CONTINUE MAINTENANCE AND INSPECTION UNTIL FULL VEGETATION ESTABLISHMENT AND/OR PROJECT ACCEPTANCE.
9. CONTRACTOR TO REMOVE EROSION CONTROL MEASURES AFTER PROJECT ACCEPTANCE.

GENERAL NOTES: (THIS SHEET)

1. EXISTING SITE MAPPING DATA IS FROM TOPOGRAPHIC SURVEY PERFORMED BY EDGE CONSULTING ENGINEERS ON 19-08-2020.
2. CONTRACTOR IS RESPONSIBLE FOR EARTHWORK NECESSARY TO ACHIEVE DESIGN GRADES. THIS INCLUDES IMPORT OR EXPORT OF MATERIAL.

CONSULTANT:



CLIENT:



GRADING & EROSION CONTROL PLAN JOHNSON CREEK (27649) JOHNSON CREEK, WISCONSIN

SUBMITTAL:

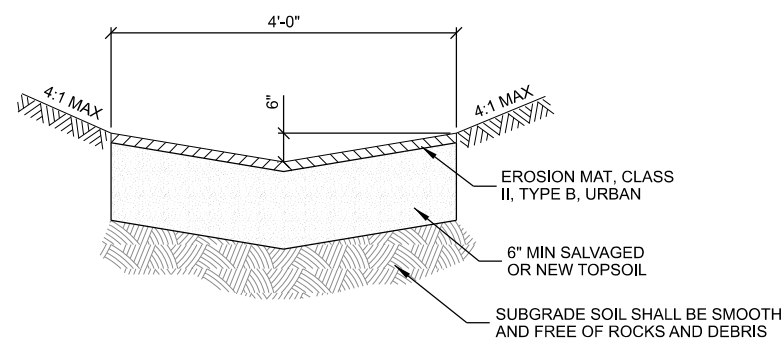
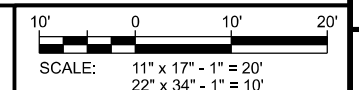
INT.	DATE:	DESCRIPTION:

CHECKED BY:	AJO
PLOT DATE:	5/12/2021
PROJECT NUMBER:	27649
SET TYPE:	BD

SHEET NUMBER **C-104**

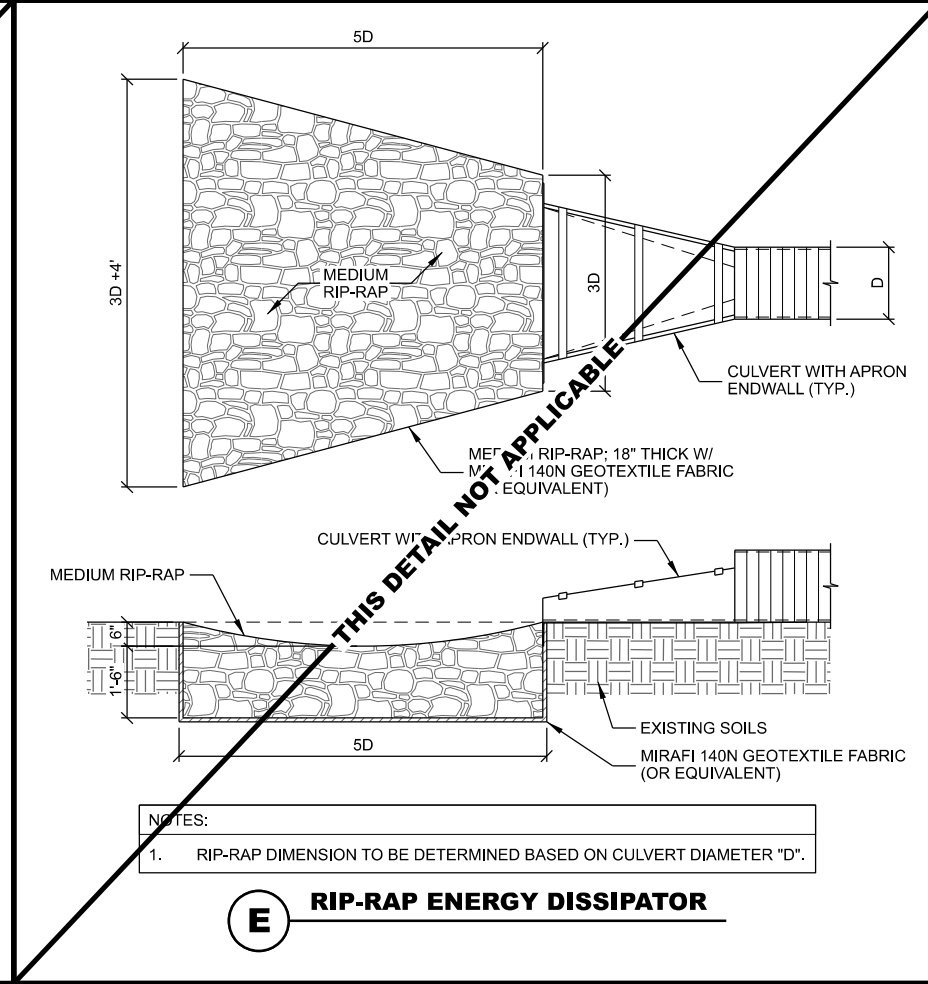
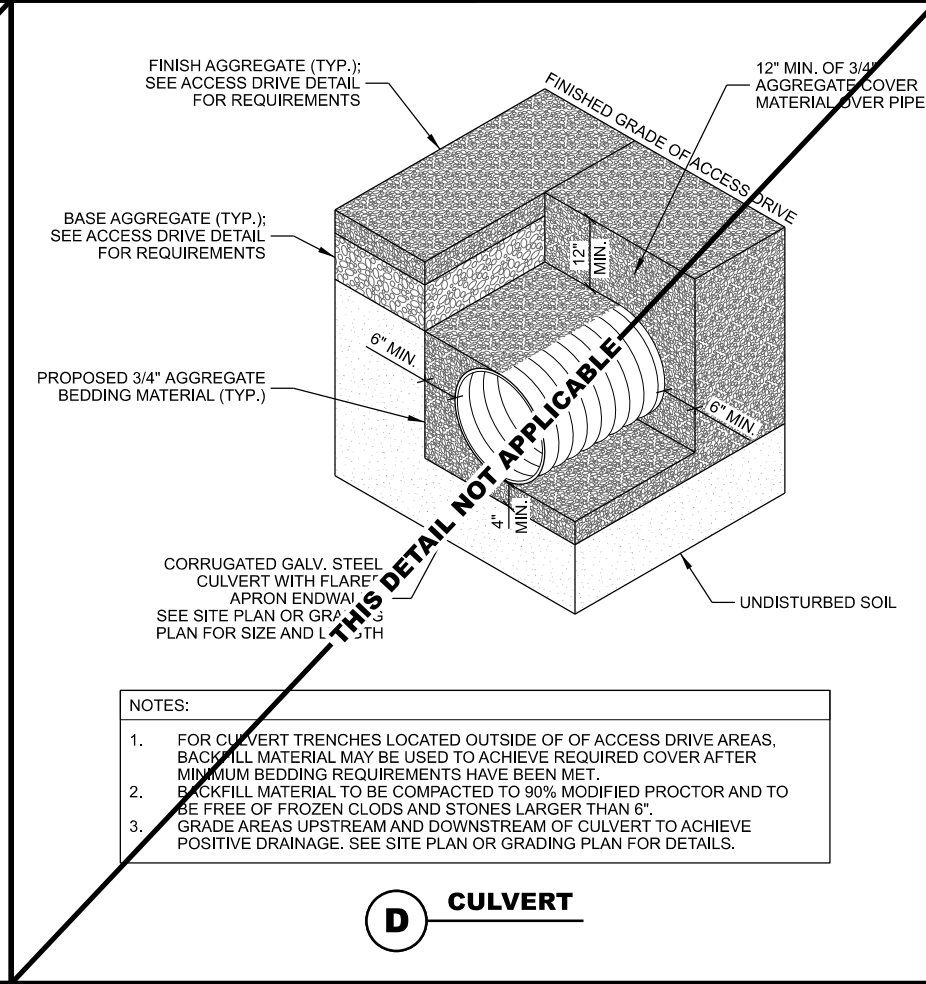
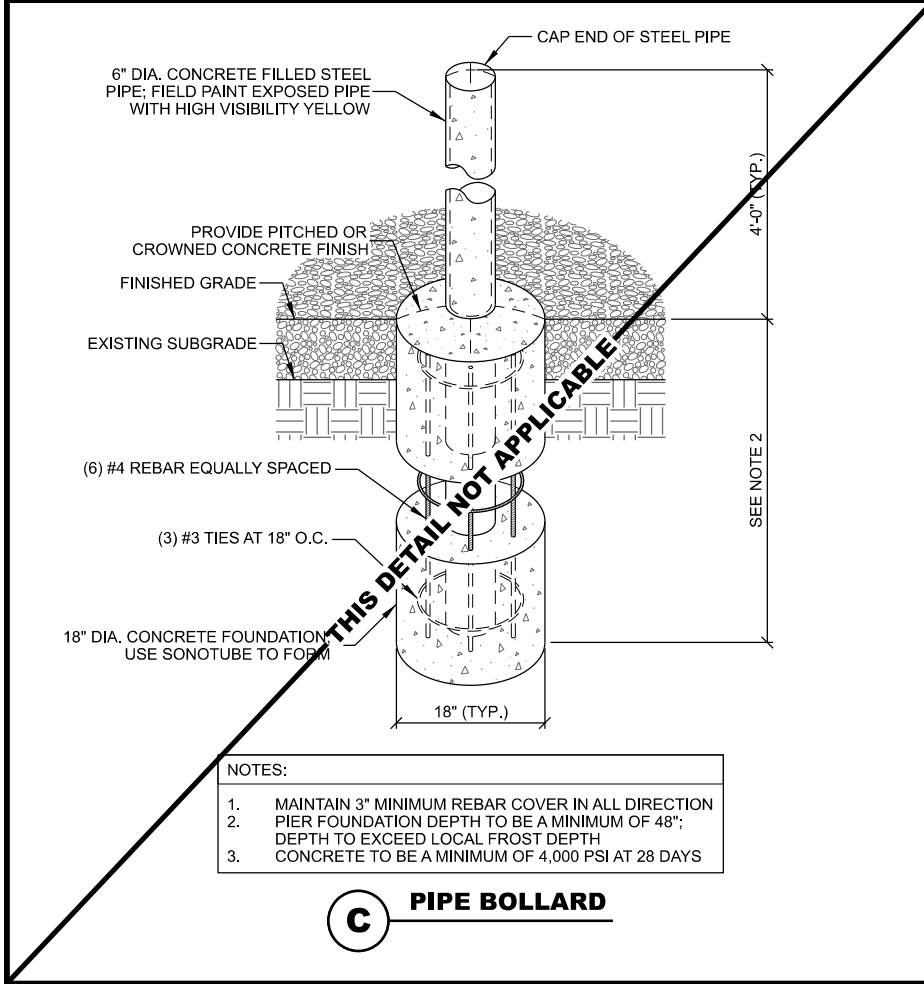
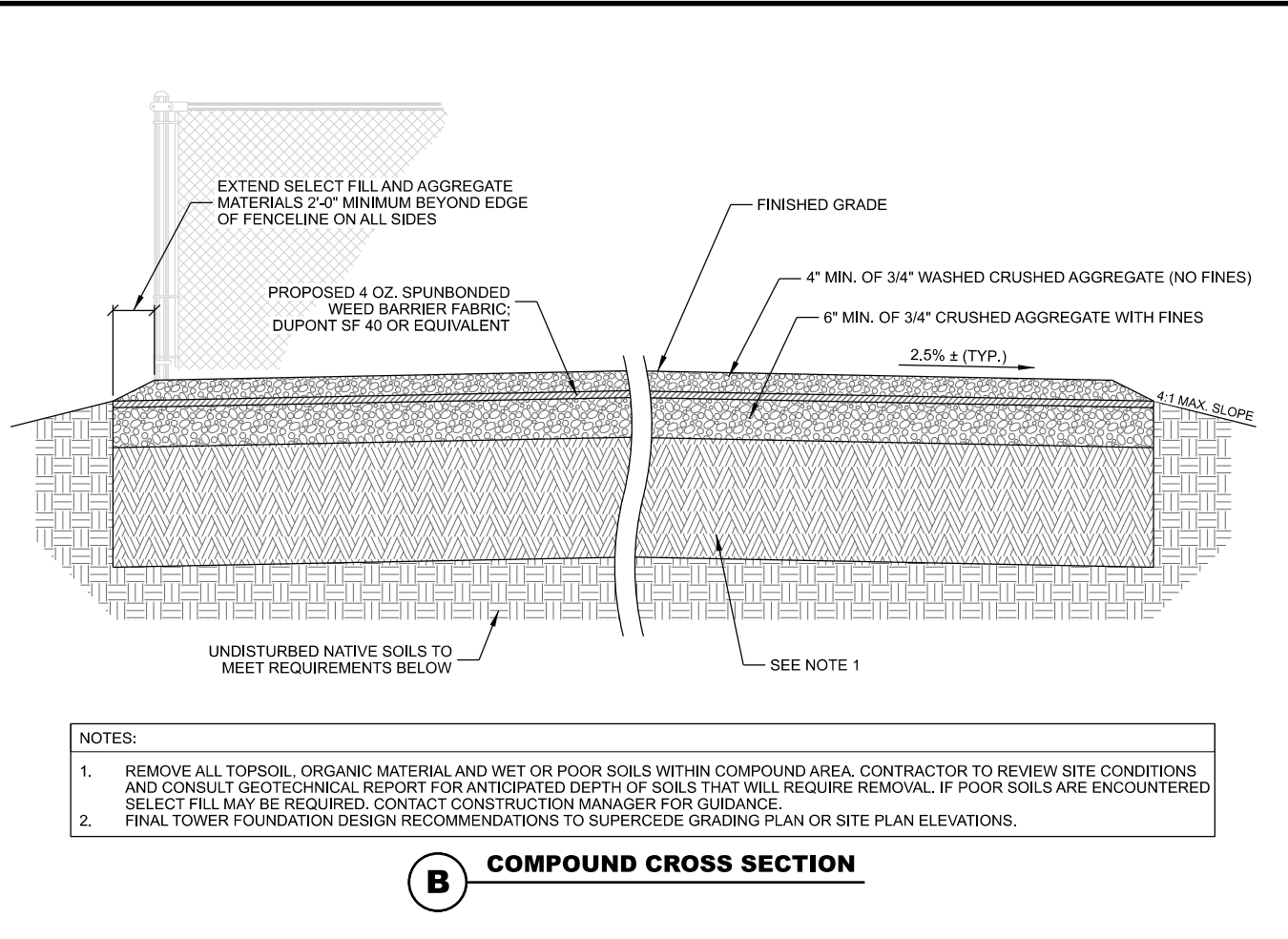
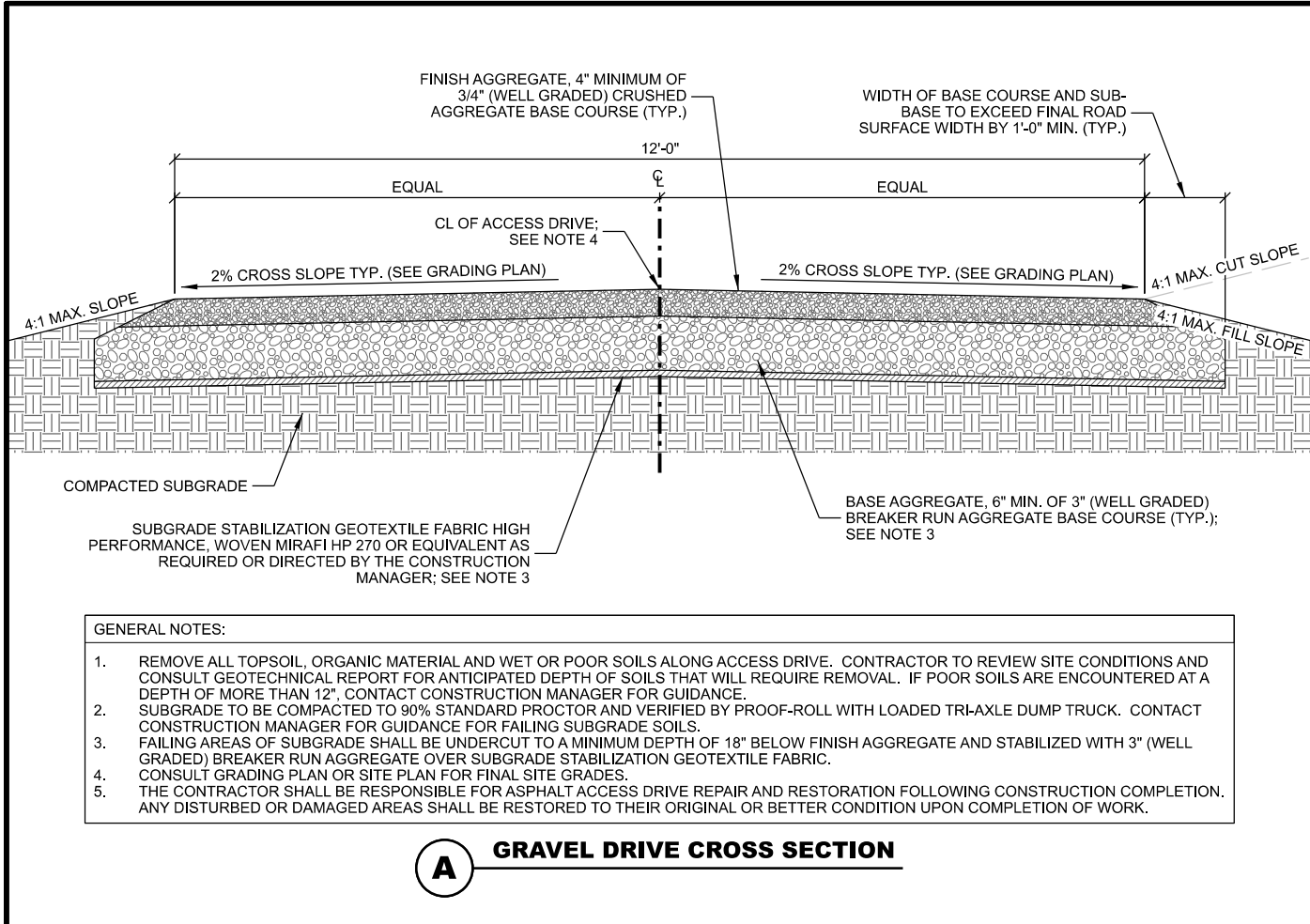
LEGEND: (THIS SHEET)

	EXISTING CONTOUR GRADES
	PROPOSED CONTOUR GRADES
	SPOT ELEVATIONS P = PROPOSED ELEV. E = EXISTING ELEV. TOC = TOP OF CONC.
	PROPOSED DRAINAGE PATH
	SILT FENCE
	LIMITS OF DISTURBANCE
	EROSION MAT



A GRASS SWALE CROSS SECTION DETAIL

SCALE: NTS



CONSULTANT:

Edge
Consulting Engineers, Inc.
624 WATER STREET
PRAIRIE DU SAC, WI 53578
608.644.1449 VOICE
608.644.1549 FAX
www.edgeconsult.com

CLIENT:

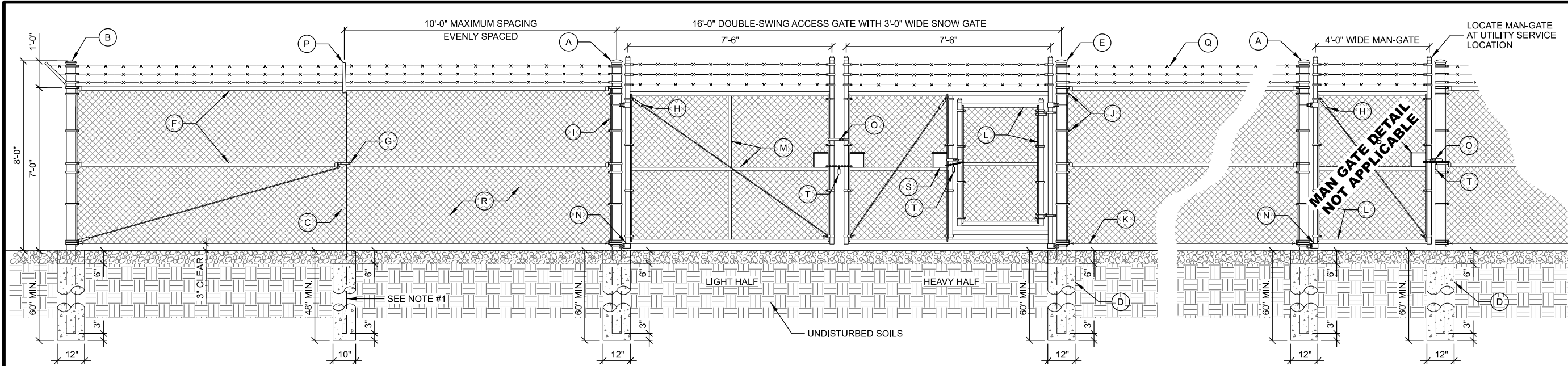
JEFFERSON COUNTY WI
ESTABLISHED 1838

SITE DETAILS
JOHNSON CREEK (27649)
JOHNSON CREEK, WISCONSIN

SUBMITTAL:		
INT.	DATE:	DESCRIPTION:

CHECKED BY:	AJO
PLOT DATE:	5/12/2021
PROJECT NUMBER:	27649
SET TYPE:	BD
SHEET NUMBER:	C-501

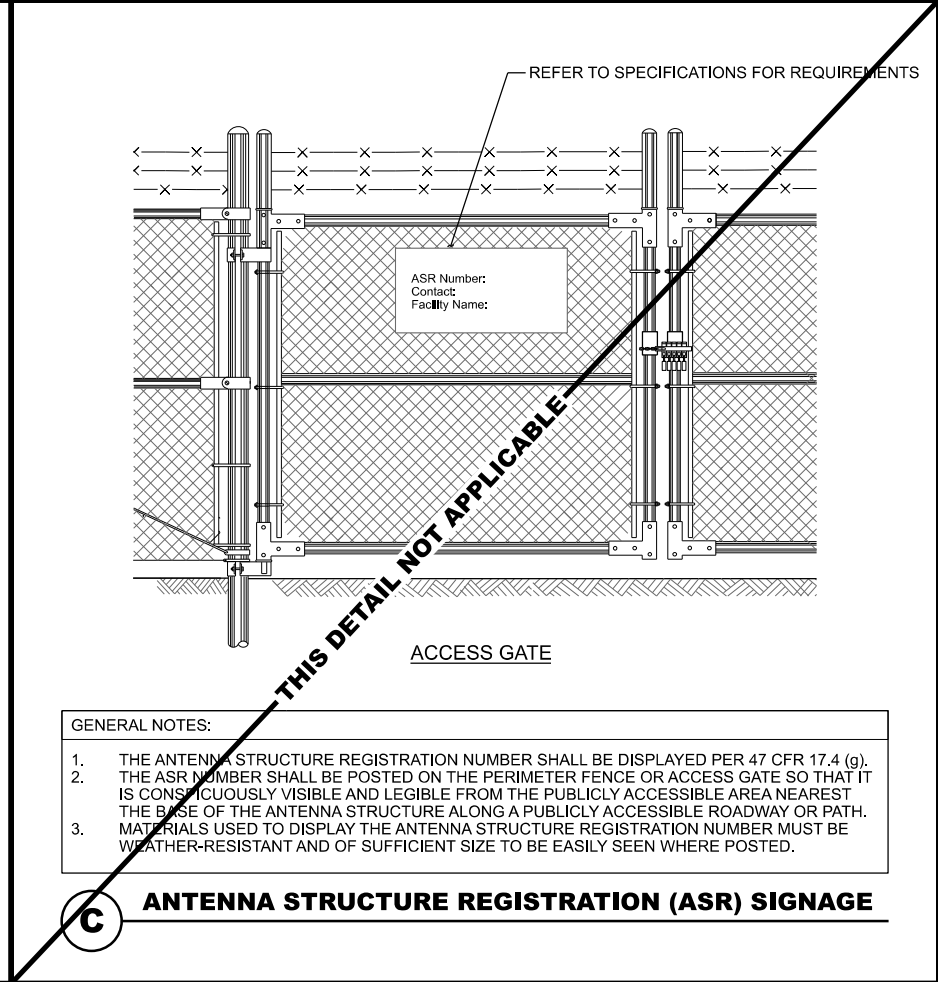
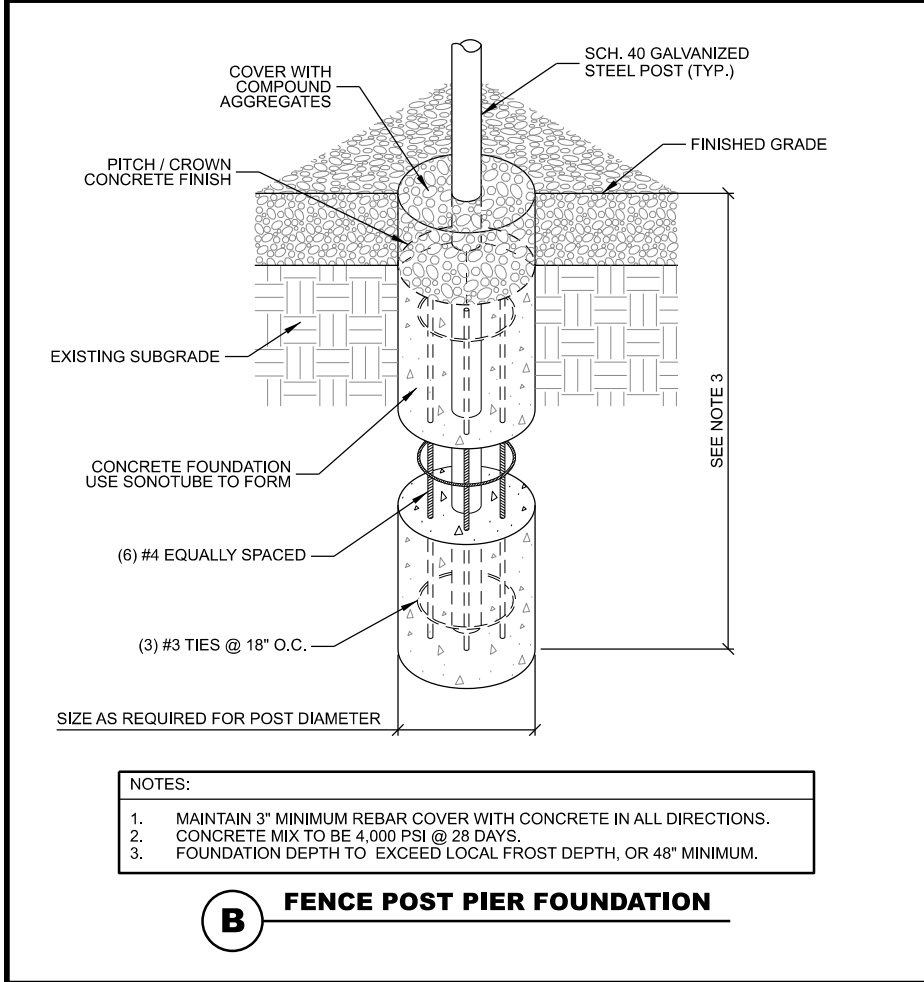
© EDGE CONSULTING ENGINEERS, INC.



- KEY NOTES: (THIS DETAIL)**
- | | | |
|---|---|---|
| (A) 3-1/2" (4" O.D.) SCH. 40 GALV. STEEL GATE POST | (G) OFFSET BRACE RAIL ENDS FOR MID BRACE RAIL | (N) MALLEABLE BUTT HINGES (TYP.) |
| (B) 2-1/2" (2-7/8" O.D.) SCH. 40 GALV. STEEL CORNER POST | (H) 5/16" O.D. TRUSS ROD WITH TRUSS TIGHTENER ASSEMBLY | (O) GATE LATCH; VERIFY REQUIREMENTS WITH FENCE MANUFACTURER |
| (C) 2" (2-3/8" O.D.) SCH. 40 GALV. STEEL LINE POSTS; LINE POSTS SHALL BE EQUALLY SPACED AT MAXIMUM 10'-0" O.C.; SEE NOTE #1 | (I) 3/16" x 3/4" STRETCHER BAR; TO EXTEND FULL HEIGHT OF FENCE FABRIC | (P) 45° BARB ARM FENCE POST CAP |
| (D) CONCRETE POST FOUNDATION: 12" DIA. AT GATE & CORNER POSTS, 10" DIA. AT LINE POSTS SEE DETAIL BELOW | (J) 3/4" TENSION BAND (TYP.). | (Q) (3) STRANDS OF 4 PT. GALV. BARB WIRE |
| (E) FENCE POST CAP (SIZE VARIES) | (K) TENSION WIRE (7 GAUGE) | (R) FENCE FABRIC; #9 GAUGE GALV. COATED, 2" DIAMOND PATTERN CHAIN LINK; TWISTED TOP SELVAGE AND KNUCKLED BOTTOM SELVAGE |
| (F) 1-1/4" (1.66" O.D.) TOP RAIL & MID BRACE RAIL PIPE | (L) 1-1/2" (1.9" O.D.) SCH. 40 GALV. STEEL FENCE GATE FRAME | (S) 6" x 6" HANDHOLE FOR CHAIN LOCK |
| | (M) 1-1/4" (1.66" O.D.) SCH. 40 GALV. STEEL HORIZONTAL AND VERTICAL GATE BRACES | (T) GATE LOCK |

- NOTES:**
- ALL LINE POSTS MAY BE EITHER DRIVEN OR SET IN CONCRETE AT CONTRACTORS OPTION. SEE DETAIL FOR DEPTH AND FOOTING REQUIREMENTS. IF DRIVEN, DRIVE LINE POSTS TO 60" DEPTH MIN.
 - ALL FENCE POSTS AND FRAMING TO BE SCH. 40 GALVANIZED STEEL. SEE DETAIL FOR SIZES.

A COMPOUND FENCE



CONSULTANT:

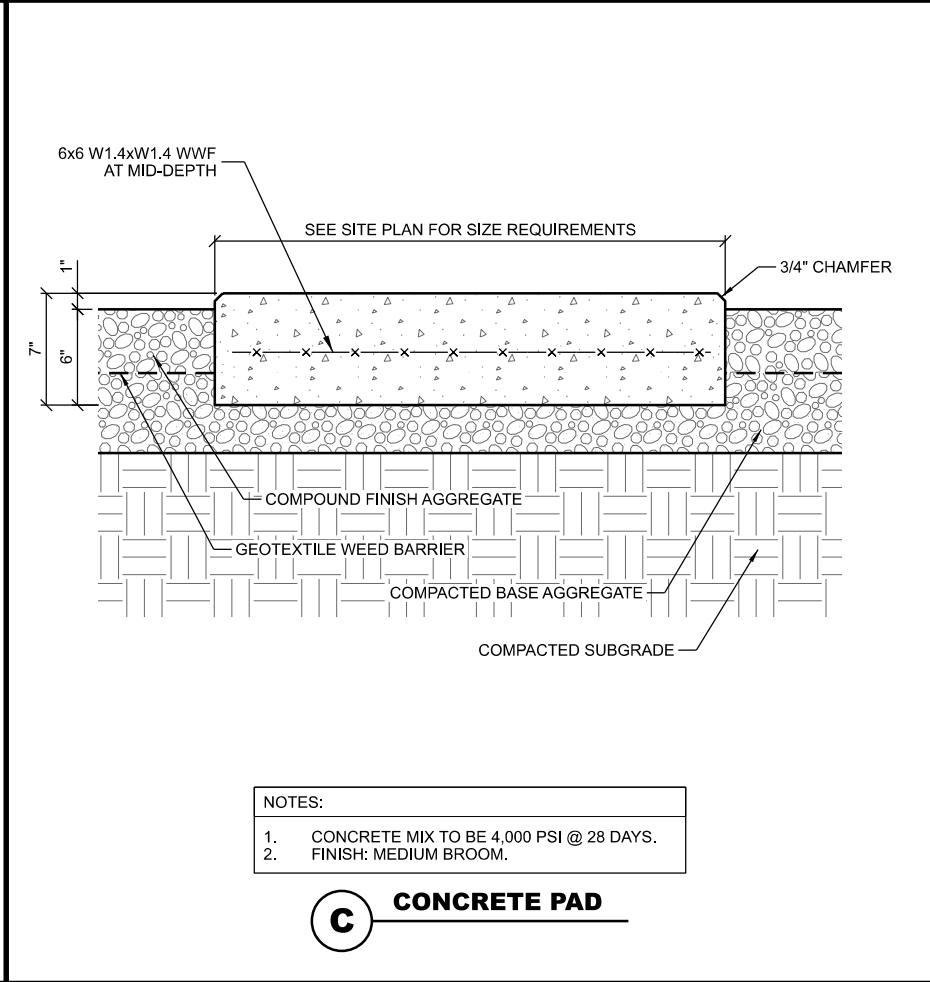
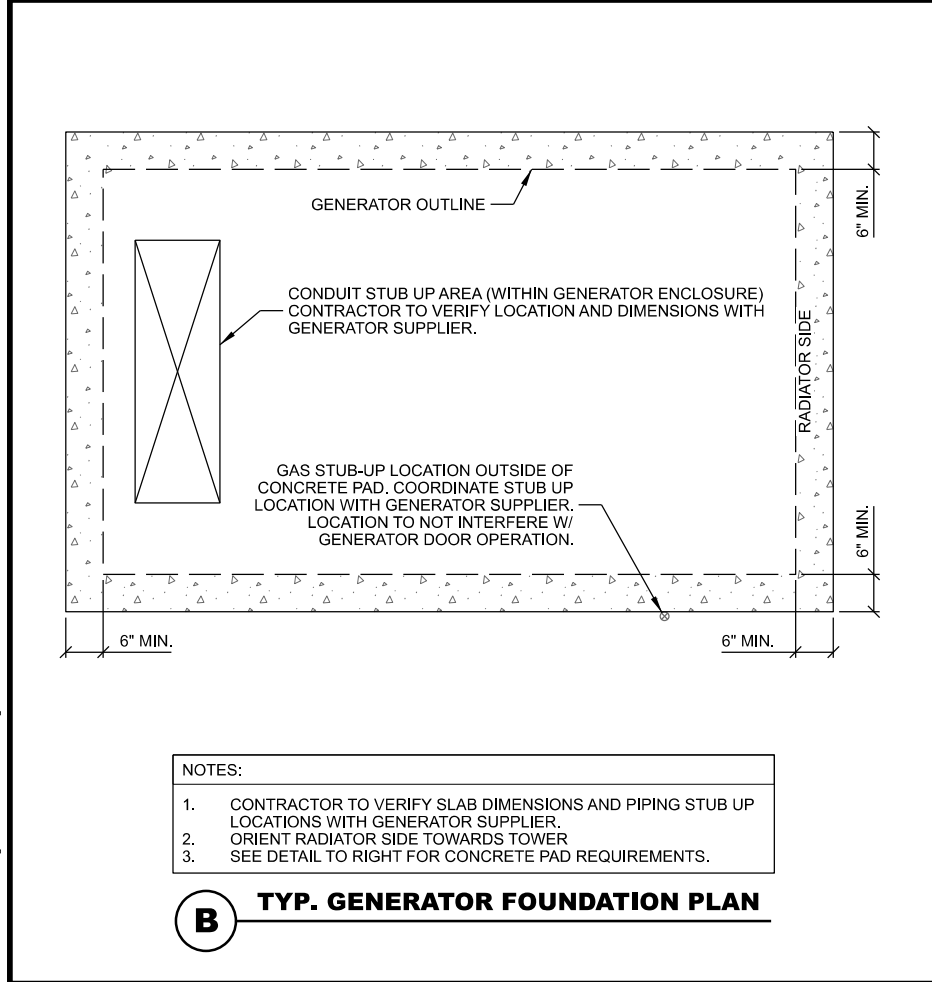
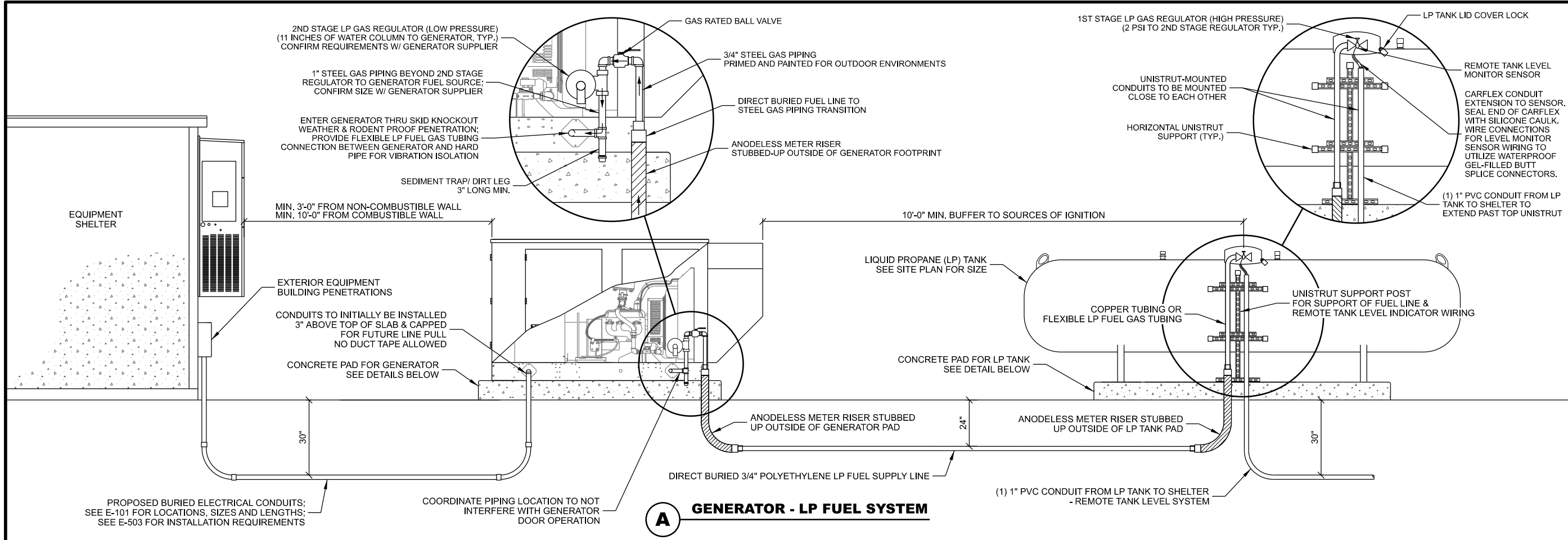
Edge
Consulting Engineers, Inc.
624 WATER STREET
PRAIRIE DU SAC, WI 53578
608.644.1449 VOICE
608.644.1549 FAX
www.edgeconsult.com



FENCE DETAILS
JOHNSON CREEK (27649)
JOHNSON CREEK, WISCONSIN

SUBMITTAL:		
INT.	DATE:	DESCRIPTION:
CHECKED BY:	AJO	
PLOT DATE:	5/12/2021	
PROJECT NUMBER:	27649	
SET TYPE:	BD	
SHEET NUMBER:	C-502	

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CONSULTANT:

Edge
Consulting Engineers, Inc.

624 WATER STREET
PRAIRIE DU SAC, WI 53578
608.644.1449 VOICE
608.644.1549 FAX
www.edgeconsult.com

CLIENT:

JEFFERSON COUNTY WI
ESTABLISHED 1838

GENERATOR FUEL SYSTEM DETAILS
JOHNSON CREEK (27649)
JOHNSON CREEK, WISCONSIN

SUBMITTAL:

INT.	DATE	DESCRIPTION:

CHECKED BY: AJO

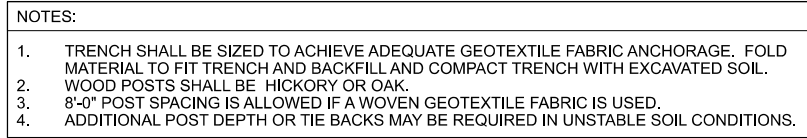
PLOT DATE: 5/12/2021

PROJECT NUMBER: 27649

SET TYPE: BD

SHEET NUMBER: **C-504**

© EDGE CONSULTING ENGINEERS, INC.



PROPOSED 2" x 2" x 30" (MINIMUM) WOOD STAKES; INSTALL (2) PER BALE (TYP.)

PROPOSED STRAW BALE (TYP.)

30" MINIMUM

18" (TYP.)

14" (TYP.)

DIRECTION OF FLOW

PROPOSED STRAW BALE (TYP.)

DRIVE WOODEN STAKES FLUSH WITH TOP OF STRAW BALES

30" MINIMUM

18" (TYP.)

4"

EXISTING SOILS

GRADE

PROPOSED WOOD STAKES (TYP.)

B STRAW BALE DITCH CHECK

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GRADING & EROSION CONTROL DETAILS
JOHNSON CREEK (27649)
JOHNSON CREEK, WISCONSIN

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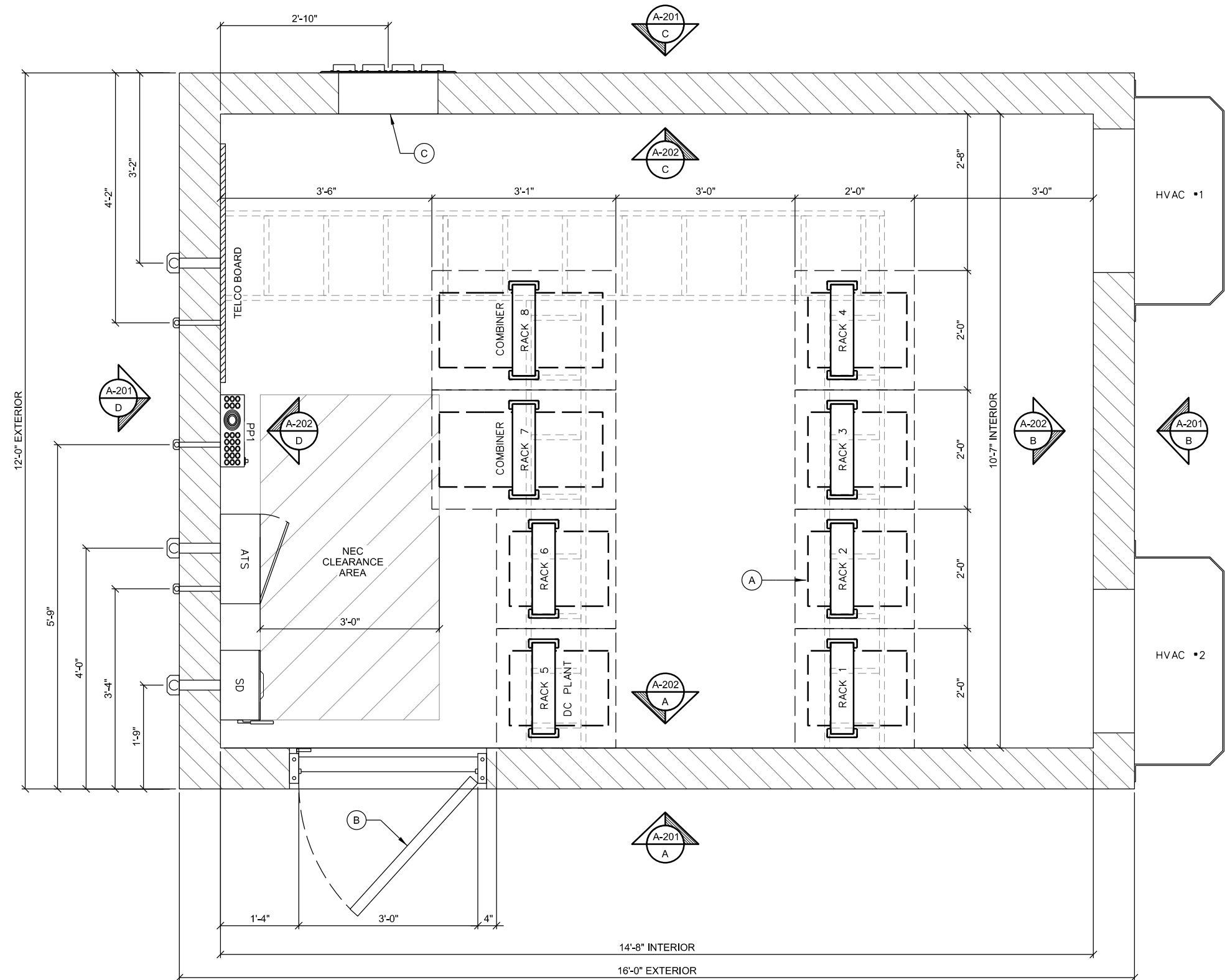
KEYNOTES: (THIS SHEET)

- A. RADIO EQUIPMENT RACK
INSTALLED BY OTHERS (RADIO VENDOR)
- B. 3'-0" ENTRY DOOR
- C. 12 HOLE (4x3) ENTRY PANEL PORT

GENERAL NOTES: (THIS SHEET)

1. CONTRACTOR TO FIELD VERIFY PENETRATION LOCATION
DIMENSIONS WITH SUPPLIED BUILDING. DIMENSIONS
SHOWN ARE APPROXIMATE.

****SHELTER PROVIDED BY OWNER &
INSTALLED BY CONTRACTOR****



A SHELTER FLOOR PLAN
SCALE: 11" x 17" - 1/2" = 1'-0"
22" x 34" - 1" = 1'-0"

CONSULTANT:

Edge
Consulting Engineers, Inc.
624 WATER STREET
PRAIRIE DU SAC, WI 53578
608.644.1449 VOICE
608.644.1549 FAX
www.edgeconsult.com

CLIENT:



SHELTER FLOOR PLAN
JOHNSON CREEK (27649)
JOHNSON CREEK, WISCONSIN

SUBMITTAL:

INT.	DATE:	DESCRIPTION:

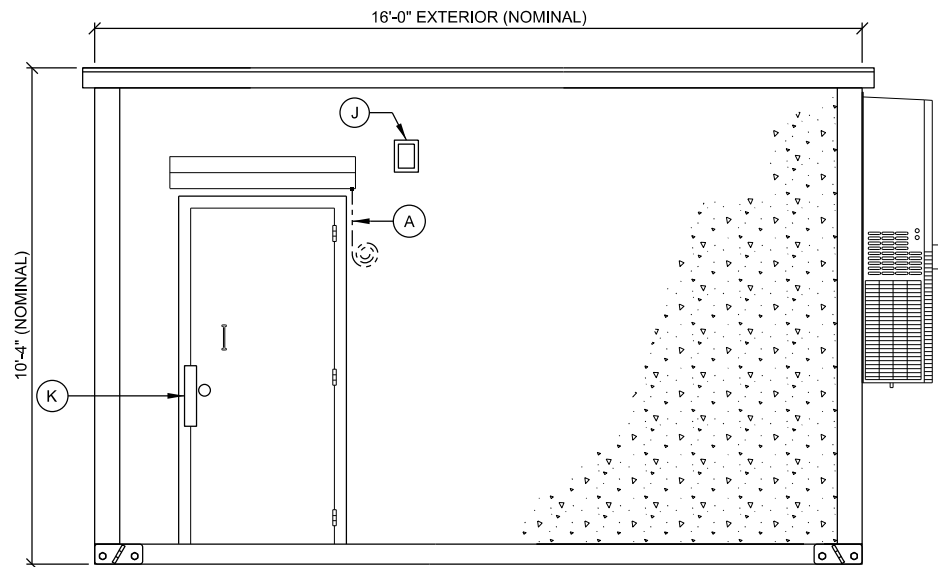
CHECKED BY:	AJO
PLOT DATE:	5/12/2021
PROJECT NUMBER:	27649
SET TYPE:	BD
SHEET NUMBER:	A-101

KEYNOTES: (THIS SHEET)

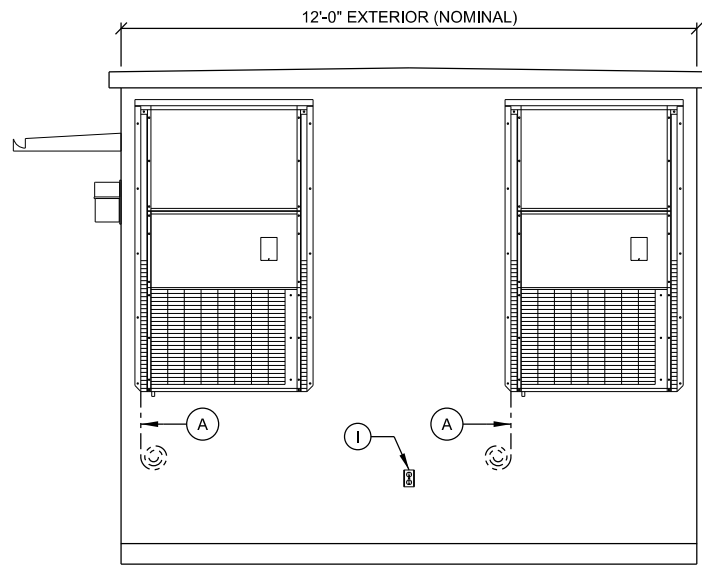
- A. (2) #2 SOLID TINNED GROUND LEADS TO SITE GROUND SYSTEM
- B. 2" CONDUIT TO UTILITY RACK (AC POWER)
- C. 2" CONDUIT TO GENERATOR (AC POWER)
- D. 1" CONDUIT TO GENERATOR (CONTROL & ALARM)
- E. ~~1" CONDUIT TO GENERATOR (CONVENIENCE OUTLET) (NOT REQ'D)~~
- F. 1" CONDUIT TO LP TANK (REMOTE MONITOR)
- G. #6 STRANDED INSULATED BONDING JUMPER TO ENTRY PORT PLATE
- H. 2" PENETRATION (FUTURE COMMUNICATION SERVICE)
- I. EXTERIOR GFCI RECEPTACLE
- J. EXTERIOR LIGHT (WALL PACK)
- K. DOOR HARDWARE

GENERAL NOTES: (THIS SHEET)

1. ALL PVC CONDUITS TO BUILDING TO INCLUDE SLIP JOINTS WHEN EXITING GRADE.
2. ALL MECHANICAL GROUND CONNECTIONS TO UTILIZE 2-HOLE LUGS AND STAINLESS STEEL HARDWARE. PROVIDE ANTI OXIDANT COMPOUND BETWEEN LUG & CONNECTION POINT. USE COPPER ANTI-OXIDANT FOR COPPER TO COPPER CONNECTIONS.
3. SELF TAPPING SCREW CONNECTIONS ARE NOT ALLOWED.
4. ALL EXTERIOR METALLIC CONDUITS AND BOXES TO BE PROVIDED WITH GROUND BOND CONNECTION VIA THROUGH WALL HUG CONNECTION TO INTERIOR GROUNDED DEVICE OR OTHER DIRECT CONNECTION TO GROUND SYSTEM.

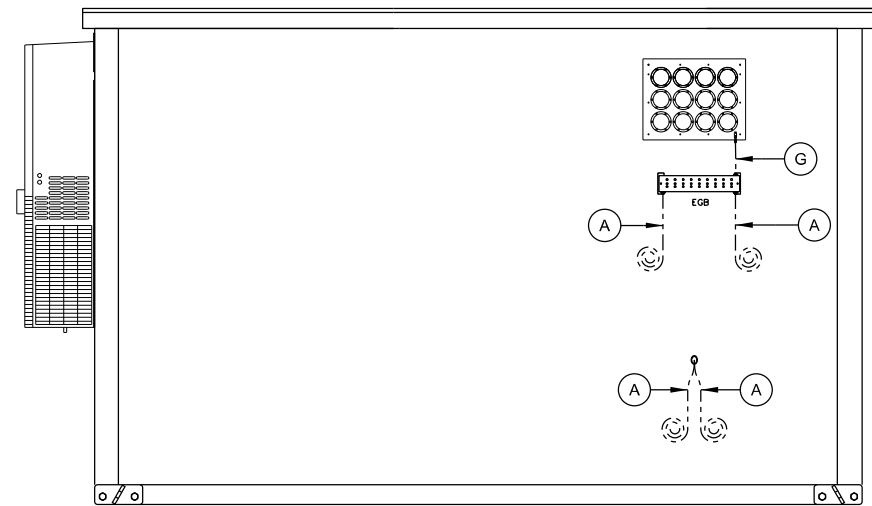


A EXTERIOR ELEVATION
SCALE: 11" x 17" - 1/4" = 1'-0"
22" x 34" - 1/2" = 1'-0"

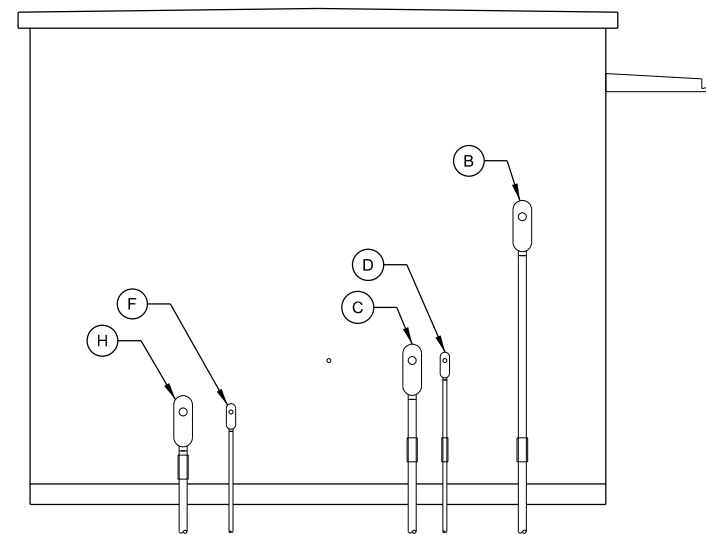


B EXTERIOR ELEVATION
SCALE: 11" x 17" - 1/4" = 1'-0"
22" x 34" - 1/2" = 1'-0"

****SHELTER PROVIDED BY OWNER & INSTALLED BY CONTRACTOR****



C EXTERIOR ELEVATION
SCALE: 11" x 17" - 1/4" = 1'-0"
22" x 34" - 1/2" = 1'-0"



D EXTERIOR ELEVATION
SCALE: 11" x 17" - 1/4" = 1'-0"
22" x 34" - 1/2" = 1'-0"

CONSULTANT:



CLIENT:



SHELTER ELEVATIONS: EXTERIOR
JOHNSON CREEK (27649)
JOHNSON CREEK, WISCONSIN

SUBMITTAL:

INT.	DATE	DESCRIPTION

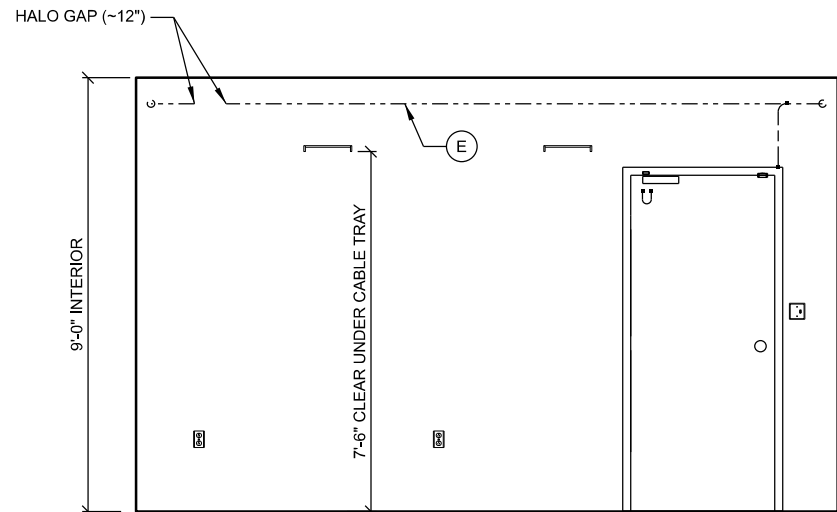
CHECKED BY	AJO
PLOT DATE	5/12/2021
PROJECT NUMBER	27649
SET TYPE	BD
SHEET NUMBER	A-201

KEYNOTES: (THIS SHEET)

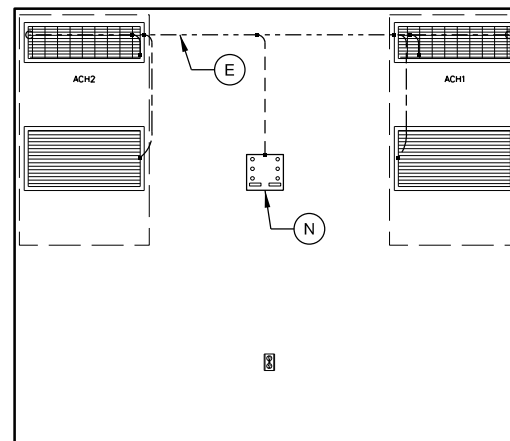
- A. AUTOMATIC TRANSFER SWITCH (ATS)
BY CONTRACTOR
INSTALL AT 6'-0" ABOVE FINISH FLOOR
- B. CONDUIT/RACEWAY BETWEEN ELECTRIC SERVICE
DISCONNECT (SD) & ATS
- C. 60A CIRCUIT BREAKER & SPD1 ON ELEC. SERVICE
DISCONNECT
- D. BOND ALL DEVICE BOXES (ATS, SPD1 & SPD2) TO HALO (#6
STRANDED INSULATED)
- E. GROUNDING HALO (#2 STRANDED INSULATED)
- F. SPD2 ON DIST. PANEL (PP1)
- G. LP TANK LEVEL MONITOR BY CONTRACTOR
- H. MASTER GROUND BAR. FOLLOW PANI SYSTEM FOR
ORGANIZATION OF CONNECTIONS TO BAR
- I. COAXIAL SURGE PROTECTOR TRAPEZE GROUND SYSTEM
- J. LP MONITOR DOUBLE DUPLEX OUTLET
- K. ALARM WIRING FROM EXISTING AND INSTALLED DEVICES
- L. R66 ALARM BLOCK
- M. NEUTRAL-GROUND BOND CONNECTION FROM SD GROUND
TERMINAL TO MGB (#2 STRANDED INSULATED). ROUTE
ALONG PERIMETER WALL BELOW HALO OR ALONG CABLE
TRAY
- N. HVAC LEAD LAG CONTROLLER
- O. 3/4" ALARM WIRING CONDUIT
- P. HIGH & LOW TEMP ALARMS

GENERAL NOTES: (THIS SHEET)

1. ALL INTERIOR CONDUITS TO BE RGS OR EMT. UTILIZE
COMPRESSION FITTINGS FOR EMT INSTALLATIONS.
2. ALL MECHANICAL GROUND CONNECTIONS TO UTILIZE 2-
HOLE LUGS AND STAINLESS STEEL HARDWARE. PROVIDE
ANTI-OXIDANT COMPOUND BETWEEN LUG & CONNECTION
POINT. USE COPPER ANTI-OXIDANT FOR COPPER TO
COPPER CONNECTIONS. SELF-TAPPING SCREWS ARE NOT
ALLOWED.
3. PROVIDE EMT CONDUIT FOR ALL ALARM AND LOW VOLTAGE
WIRING FROM DEVICE TO ALARM BOARD. CONDUITS NEED
NOT BE FULL LENGTH AND MAY UTILIZE CABLE TRAY FOR
HORIZONTAL RUNS. CONDUITS SHALL EXTEND ABOVE AND
OVER TO CABLE TRAY AND PROVIDE BUSHINGS ON ENDS.
4. ALL METALLIC CONDUITS AND BOXES TO BE GROUND
BONDED TO HALO.

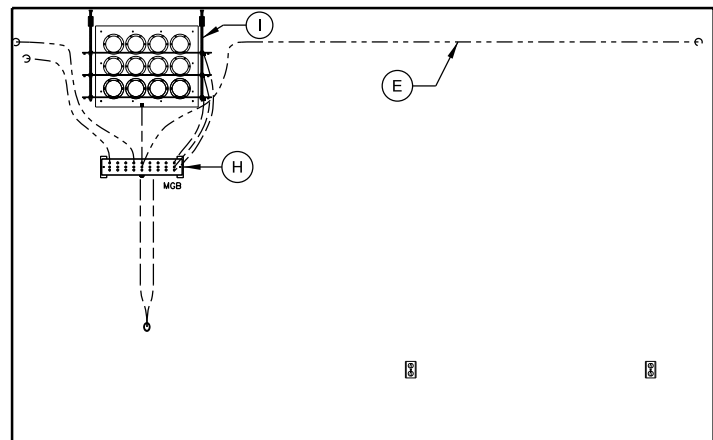


A INTERIOR ELEVATION
SCALE: 11" x 17" - 1/4" = 1'-0"
22" x 34" - 1/2" = 1'-0"

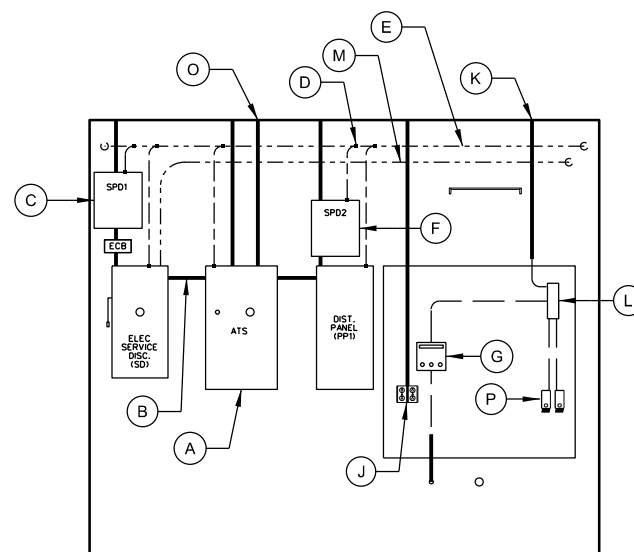


B INTERIOR ELEVATION
SCALE: 11" x 17" - 1/4" = 1'-0"
22" x 34" - 1/2" = 1'-0"

****SHELTER PROVIDED BY OWNER & INSTALLED BY CONTRACTOR****
ATS AND LP TANK LEVEL MONITOR ARE BY CONTRACTOR



C INTERIOR ELEVATION
SCALE: 11" x 17" - 1/4" = 1'-0"
22" x 34" - 1/2" = 1'-0"



D INTERIOR ELEVATION
SCALE: 11" x 17" - 1/4" = 1'-0"
22" x 34" - 1/2" = 1'-0"

CONSULTANT:

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CLIENT:

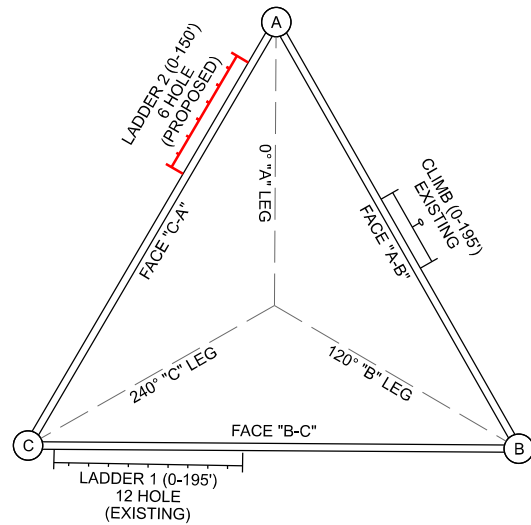


SHELTER ELEVATIONS: INTERIOR
JOHNSON CREEK (27649)
JOHNSON CREEK, WISCONSIN

SUBMITTAL:

INT.	DATE:	DESCRIPTION:

CHECKED BY:	AJO
PLOT DATE:	5/12/2021
PROJECT NUMBER:	27649
SET TYPE:	BD
SHEET NUMBER:	A-202



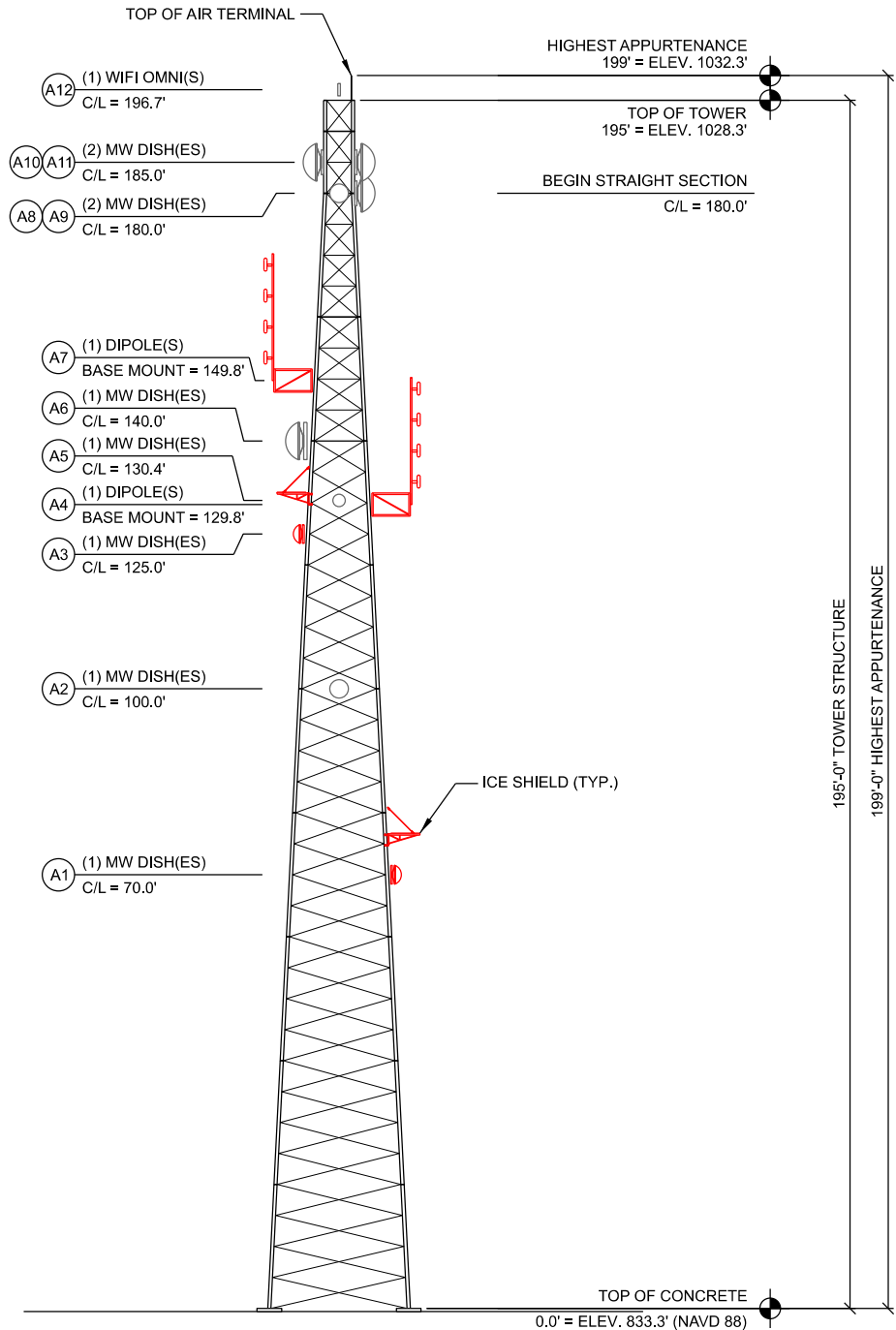
A TOWER ORIENTATION

TOWER LOADING													
ANTENNA ID	ANTENNA TYPE	(QTY.) ANTENNA MODEL SIZE & WEIGHT	TOWER LEG	ANTENNA MOUNT SIZE & WEIGHT	MOUNT HEIGHT (T.O.C.)	C/L HEIGHT (T.O.C.)	C/L ELEV. (NAVD 88)	ANTENNA AZIMUTH	TILT (+/-)	Tx LINE (QTY.) SIZE	FREQUENCY (MHz)	OWNER USE	NOTES
A1	MW Dish	(1) radiowaves HP3-11 (TR) 3' Dia. 50 lbs.	C	Leg Mount (PM-SU4-63) 4.5" OD x 63" Mast Pipe 138.0 lbs.	70.0'	70.0'	903.3'	285.74°		(1) LDF2-50 (3/8")	11200	Jefferson Co. Path to Lake Mills	Ice Shield @ 76.5'
A2	MW Dish	(1) Unknown MW Dish 3' Dia.	B	Pipe-to-Pipe Clamp Mount	100.0'	100.0'	933.3'	328.73°				Bertram Communications	
A3	MW Dish	(1) radiowaves HP3-11 (TR) 3' Dia. 50 lbs.	A	Leg Mount (PM-SU4-63) 4.5" OD x 63" Mast Pipe 138.0 lbs.	125.0'	125.0'	958.3'	15.41°		(1) LDF2-50 (3/8")	11200	Jefferson Co. Path to Watertown	Ice Shield @ 131.5'
A4	Dipole	(1) Comprod 876F-70TM-1/2 20.5' Long 67 lbs.	C	Commscope HS-600 Stand-Off 42" High x 72" Long 107.4 lbs.	129.8'	140.0'	973.3'			(1) LCF78-50JA (7/8")	138-174	Jefferson Co. V/LAW31	Combiner system antenna for entire site
A5	MW Dish	(1) Unknown MW Dish 2' Dia.	B	Leg Mount	130.4'	130.4'	963.7'					Bertram Communications	
A6	MW Dish	(1) Unknown MW Dish 6' Dia.	A	Pipe-to-Pipe Clamp Mount	140.0'	140.0'	973.3'	28°				Bertram Communications	
A7	Dipole	(1) Comprod 876F-70-TM40-1/4 20.5' Long 67 lbs.	A	Commscope HS-600 Stand-Off 42" High x 72" Long 107.4 lbs.	149.8'	160.0'	993.3'	0°		(2) LCF78-50JA (7/8")	138-174	Jefferson Co. P25 Dual Rx/Tx	
A8	MW Dish	(1) Unknown MW Dish 3' Dia.	B	Pipe-to-Pipe Clamp Mount	180.0'	180.0'	1013.3'	90°				Bertram Communications	
A9	MW Dish	(1) Unknown MW Dish 6' Dia.		Pipe-to-Pipe Clamp Mount	180.0'	180.0'	1013.3'	183°				Bertram Communications	
A10	MW Dish	(1) Triango Systems MW Dish 6' Dia.	A	Pipe-to-Pipe Clamp Mount	185.0'	185.0'	1018.3'	25.87°				Bertram Communications	
A11	MW Dish	(1) Unknown MW Dish 6' Dia.	C	Pipe-to-Pipe Clamp Mount	185.0'	185.0'	1018.3'	251°				Bertram Communications	
A12	WiFi Omni	(1) WiFi Omni 2' Tall	B	Leg Mount	195.7'	196.7'	1030.0'					Bertram Communications	TTA @ 194.5'. Antenna was scheduled to be replaced in late 2020

**** ANTENNA AND LINE INSTALLATION BY OTHERS ****
NOT PART OF CONTRACT
LADDER INSTALLATION IS PART OF CONTRACT

- NOTES:
- REFER TO ANTENNA MOUNTING DETAILS FOR ADDITIONAL INFO ON MOUNT DESIGN AND MOUNTING REQUIREMENTS.
 - PROPOSED JEFFERSON CO ANTENNA AND MICROWAVE LOADING IS BASED ON DESIGN SUPPLIED BY GENERAL COMMUNICATIONS, DATED 04/01/2021
 - EXISTING BERTRAM ANTENNA AND MICROWAVE LOADING IS BASED ON DOCUMENTATION SUPPLIED BY BERTRAM COMMUNICATIONS ON 04/11/2021.

B TOWER LOADING SUMMARY



- NOTES:
- ALL DIMENSIONS SHOWN ARE REFERENCED FROM THE TOP OF TOWER FOUNDATION CONCRETE.
 - ALL ANTENNAS, DISHES, MOUNTS, ICE SHIELDS AND LINES SHALL BE SUPPLIED AND INSTALLED BY OTHERS.
 - TOWER MANUFACTURER: SABRE MODEL/SERIAL #: 195' S3TL SERIES HD1 JOB #: 175414 REV D DATE: 1/12/2018

C TOWER PROFILE (ELEVATION)

CONSULTANT:
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TOWER LOADING / ELEVATION
JOHNSON CREEK (27649)
JOHNSON CREEK, WISCONSIN

SUBMITTAL:		
INT.	DATE:	DESCRIPTION:

CHECKED BY:	AJO
PLOT DATE:	5/12/2021
PROJECT NUMBER:	27649
SET TYPE:	BD
SHEET NUMBER:	T-201

LEGEND: (THIS SHEET)

SIZE	SYMBOL	O.D.	MIN. BEND RAD.
1-5/8"		1.98"	20"
1-1/4"		1.55"	15"
7/8"		1.09"	10"
1/2"		0.63"	5"
CAT5		0.35"	3"
EW63		2"x1.16"	20"
EWP90-107		1.3"x0.8"	13"
LMR-400		0.4"	1"

LADDER #1 (BERTRAM - EXISTING) 0' - 195'

EXISTING COAX
ZIP-TIED TO LADDER

LADDER #2 (COUNTY) 0' - 150'

ANTENNA ID;
SEE T-201 FOR DETAILS

NOTES:

1. REFER TO SHEET T-201 FOR ANTENNA ID REFERENCE AND LADDER INSTALLATION LOCATION.

2. DOUBLE STACKING OF 1-5/8" AND TRIPLE STACKING OF 7/8" COAX IS ALLOWED.

3. DOUBLE STACKING OF WAVEGUIDE IS ALLOWED WHEN USING CUSHION TYPE SNAP IN HANGERS.

4. GROUP LINES WITHIN LADDERS FOR SIMILAR TERMINATION LEVEL. SEPARATE WAVEGUIDE FROM COAX.

5. PROVIDE & INSTALL PROPERLY SIZED SNAP-INS FOR EACH COAX.

6. TOWER LOADING DESIGN SHALL ASSUME (3) COAX LADDERS INSTALLED

ENTRY PANEL PORT ASSIGNMENT

PORT #	ANTENNA ID	ANTENNA SYSTEM	(QTY.) CABLE SIZE
1	A1	MW DISH	(1) 3/8"
2	A3	MW DISH	(1) 3/8"
3			
4			
5	A4	DIPOLE (VLAW31)	(1) 7/8"
6	A7	DIPOLE (P25 Rx/Tx)	(2) 7/8"
7			
8			
9			
10			
11			
12			

ENTRY PANEL 1
(AS VIEWED FROM INSIDE SHELTER)

NOTES:

1. REFER TO SHEET T-201 FOR ANTENNA ID REFERENCE

2. PORT OPENINGS ARE 4" DIA UNLESS OTHERWISE NOTED.

3. PROVIDE AND INSTALL PROPERLY SIZED BOOTS, CUSHIONS AND PLUGS FOR EACH PORT OPENING INSIDE AND OUTSIDE OF SHELTER.

4. ALL UNUSED PORTS ON ALL ENTRY PANELS TO BE CAPPED & SECURED IN PLACE W/ BLACK CABLE TIE.

A

TRANSMISSION LINE LADDER ROUTING

TRANSMISSION LINE INSTALLATION BY OTHERS

NOT PART OF CONTRACT

LADDER INSTALLATION IS PART OF CONTRACT

C

VERTICAL TRANSMISSION LINE LADDER

3/4" DIA. HOLES FOR SNAP-IN
TYPE COAX HANGERS

HARDWARE PROVIDED FOR
FOUR ATTACHMENT POINTS
PER SECTION

TOWER GIRT OR DIAGONAL

20' MAX. SECTION LENGTH

5" MAX.

D

CABLE ENTRY

INDOOR OUTDOOR

12" +/-

SHELTER ROOF

INTERIOR GROUND HALO

SURGE PROTECTION DEVICE
(POLYPHASERS)

COAX ROUTING
INSIDE BUILDING

ARRESTOR TRAPEZE SYSTEM &
CONNECTION TO INTERIOR MASTER
GROUND BAR (BY CONTRACTOR)
SITE PRO 1 MODEL #: ATK306U OR
APPROVED EQUAL

INDEPENDENT GROUND LEADS TO MGB
(#2 STRANDED INSULATED)

INTERIOR MASTER GROUND BAR

SHELTER WALL

ENTRY PANEL PORT

GROUND KIT

GROUND CABLE BEFORE
ENTERING BUILDING USING
#6 AWG GROUND LEAD

EXTERIOR SHELTER
GROUND BAR

B

ENTRY PANEL ROUTING

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CLIENT:

JEFFERSON COUNTY WI

ESTABLISHED 1838

TRANSMISSION LINE INSTALLATION DETAILS

JOHNSON CREEK (27649)

JOHNSON CREEK, WISCONSIN

SUBMITTAL:

INT.	DATE:	DESCRIPTION:

CHECKED BY:

AJO

PLOT DATE:

5/12/2021

PROJECT NUMBER:

27649

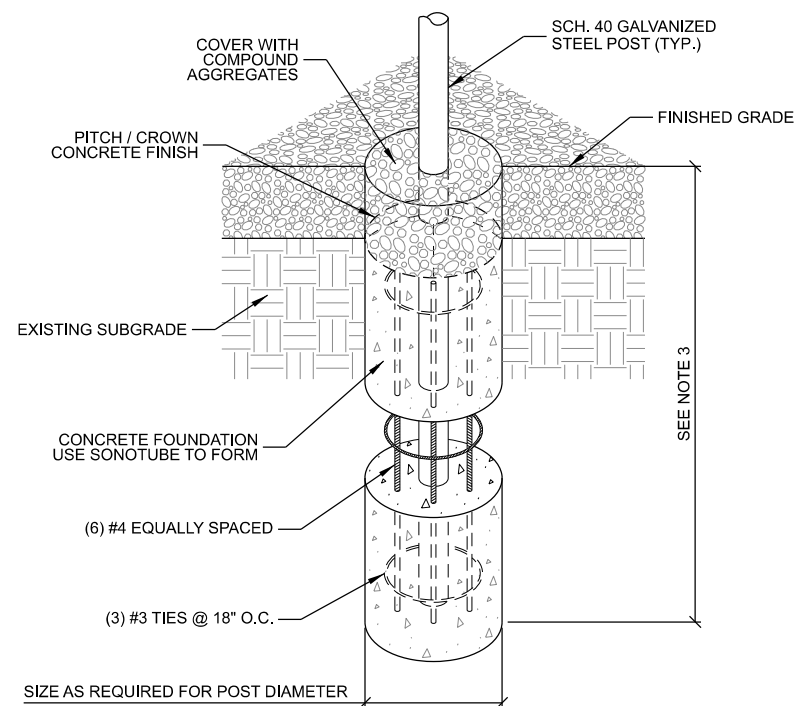
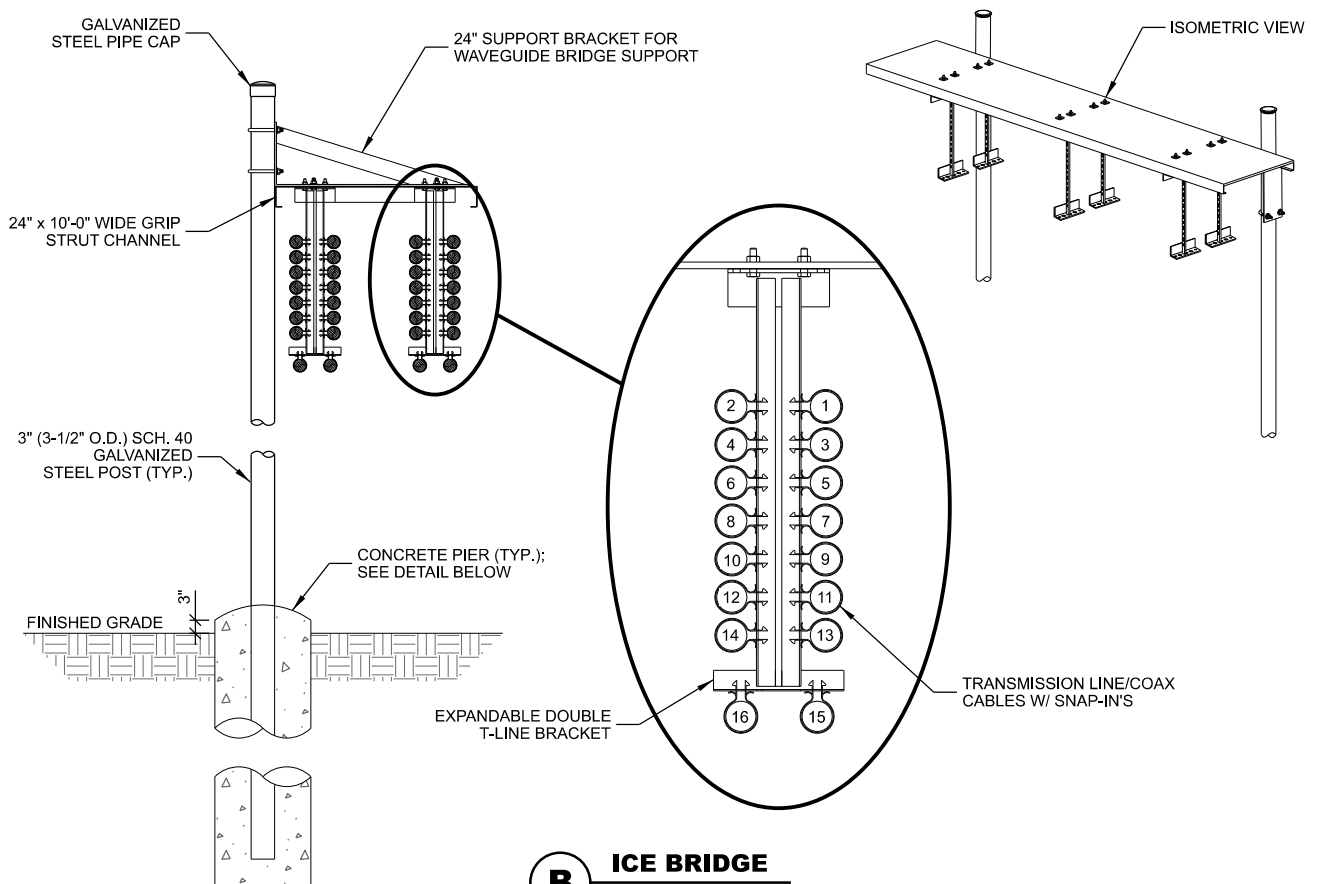
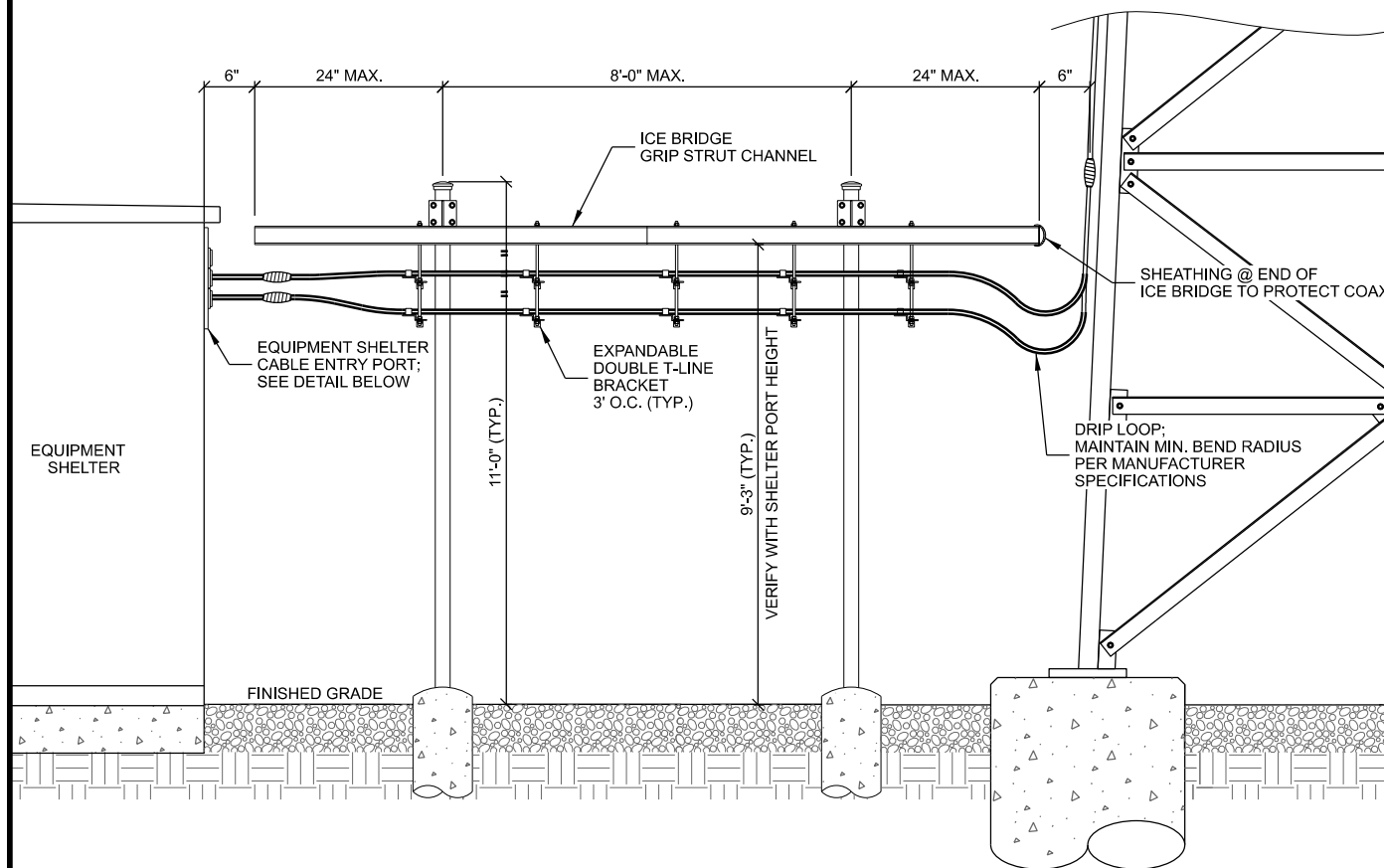
SET TYPE:

BD

SHEET NUMBER:

T-501

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- ICE BRIDGE NOTES : (THIS SHEET)**

1. FOR COMPONENTS AS SHOWN IN STANDARD DETAILS, MAXIMUM ALLOWABLE SPAN BETWEEN SUPPORTS ON A CONTINUOUS SINGLE SECTION OF BRIDGE CHANNEL SHALL BE 8' FOR A 10' SECTION.
2. SPLICES IN SECTIONS OF BRIDGE CHANNEL SHALL BE INSTALLED AT SUPPORTS, WHERE POSSIBLE, OR AT MOST 2' FROM A SUPPORT.
3. FREE ENDS OF ICE BRIDGE CHANNELS SHALL NOT EXCEED A CANTILEVER DISTANCE OF 2' FROM A SUPPORT.
4. CUT BRIDGE CHANNEL SECTIONS SHALL HAVE RAW EDGES TREATED WITH COLD GALVANIZING SPRAY.
5. DEVIATIONS FROM STANDARDS FOR COMPONENT INSTALLATIONS ARE PERMITTED WITH MANUFACTURER'S AND ENGINEER'S APPROVAL.
6. DEVIATIONS FROM ICE BRIDGE FOUNDATIONS SHOWN ON SITE SPECIFIC DRAWINGS OR STANDARD DETAILS REQUIRE ENGINEERING APPROVAL.
7. INSTALL PROTECTIVE SHEATHING AT TOWER END OF ICE BRIDGE TO PROTECT CABLING.

CONSULTANT:

CLIENT:

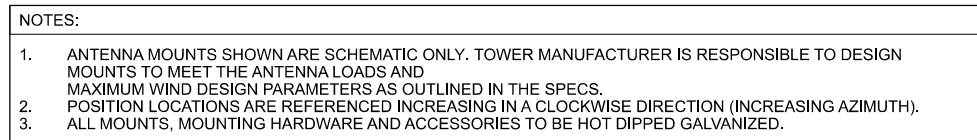


ICE BRIDE DETAILS
JOHNSON CREEK (27649)
JOHNSON CREEK, WISCONSIN

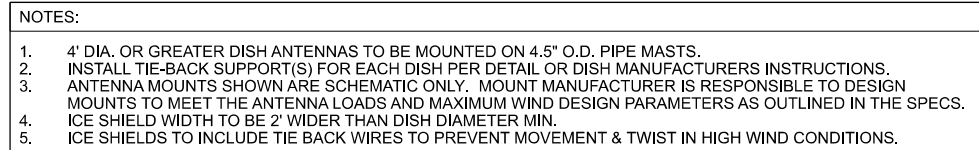
SUBMITTAL:

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PLOT DATE	5/12/2021
PROJECT NUMBER	27649
SET TYPE	BD
SHEET NUMBER	T-502



B DISH MOUNTING



 **Edge**
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ANTENNA INSTALLATION DETAILS
JOHNSON CREEK (27649)
JOHNSON CREEK, WISCONSIN

*** * ANTENNA INSTALLATION BY OTHERS * ***
NOT PART OF CONTRACT

[illegible]

GROUNDING LEGEND: (THIS SHEET)

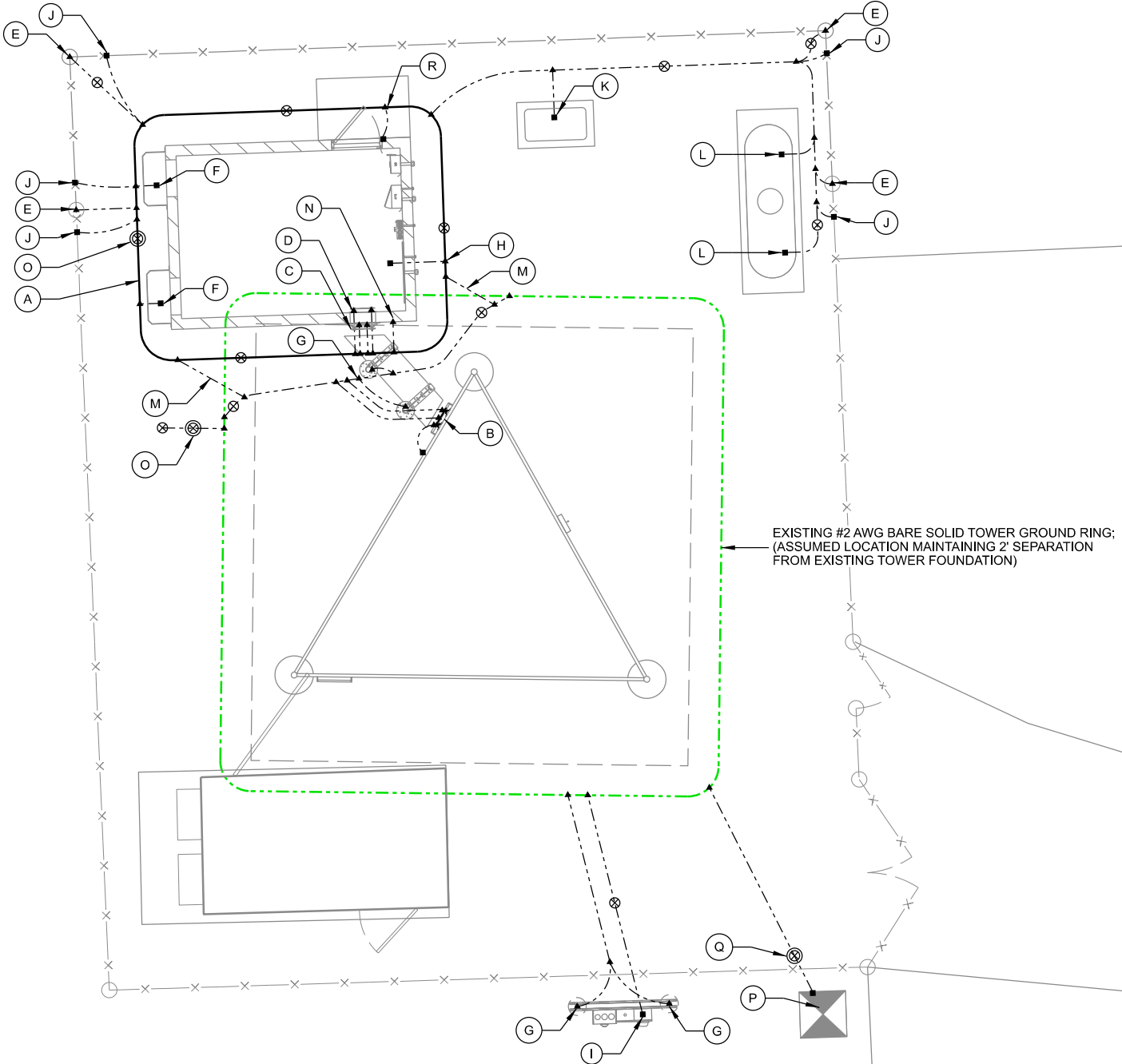
- ⊗ GROUND TEST WELL, SEE E-502 FOR DETAILS
- ⊗ COPPER CLAD GROUND ROD, (5/8" DIA. x 10' LONG)
SPACE @ 2X GROUND ROD LENGTH (20' O.C. MAX., 6' MIN.)
- ⊗ COPPER PLATE, (18" x 18" x 0.032" THK)
SPACE @ 2X GROUND ROD LENGTH (20' O.C. MAX., 6' MIN.)
- ▲ EXOTHERMIC OR UL RATED IRREVERSIBLE CONNECTION
(CADWELD OR HYGROUND)
- MECHANICAL CONNECTION
(BURNEDY 2-HOLE LUG OR APPROVED EQUAL)
- #2 AWG BARE SOLID TINNED COPPER CONDUCTOR
IN STANDARD GROUND TRENCH, SEE E-502 FOR DETAILS
- #2/0 AWG BARE STRANDED TINNED COPPER CONDUCTOR
IN STANDARD GROUND TRENCH, SEE E-502 FOR DETAILS
- #2 AWG BARE SOLID TINNED COPPER CONDUCTOR
IN ENHANCED GROUND TRENCH, SEE E-502 FOR DETAILS

KEYNOTES: (THIS SHEET)

- A. SHELTER GROUND RING, MAINTAIN 2' SEPARATION FROM SHELTER FOUNDATION
- B. TOWER GROUND BAR, (2) LEADS TO TOWER GROUND RING & (1) TO TOWER STEEL
- C. EXTERIOR SHELTER GROUND BAR, (2) LEADS TO SHELTER GROUND RING
- D. INTERIOR SHELTER GROUND BAR (MGB), (2) LEADS TO SHELTER GROUND RING
- E. FENCE CORNER POST GROUND, SEE E-502 FOR DETAILS
- F. SHELTER EXTERIOR AC UNIT GROUND
- G. ICE BRIDGE/UTILITY POST GROUND, SEE E-501 FOR DETAILS
- H. SHELTER FOUNDATION GROUND, SEE E-502 FOR DETAILS
- I. A/C METER BOX GROUND
- J. FENCE FABRIC & DETERRENT WIRING BONDING, SEE E-502 FOR DETAILS
- K. GROUND GENERATOR ENCLOSURE, (1) LEAD
- L. GROUND LP TANK, EACH LEG
- M. SHELTER GROUND RING TO TOWER GROUND RING, (2) LEADS
- N. SHELTER ANCHOR TAB GROUND. CLOSEST TAB TO RF ENTRY PORT (1 REQ'D)
- O. GROUND TEST WELL, SEE DETAIL C/E-502
- P. TRANSFORMER GROUND, (1) LEAD
- Q. TRANSFORMER GROUND DISCONNECT, SEE E-502 FOR DETAILS
- R. SHELTER AWNING GROUND. TIE TO SHELTER GROUND RING.

GENERAL NOTES: (THIS SHEET)

1. ALL EXTERIOR GROUNDING SHALL MEET OR EXCEED THE CURRENT HARRIS SITE GROUNDING AND LIGHTNING PROTECTION GUIDELINES. REFER TO INSTALLATION MANUAL AE/LZT 123 4618/1 REV F (JUNE 2017).
2. THE GROUNDING SYSTEM & CONDUCTORS SHALL BE TESTED BY THE CONTRACTOR PRIOR TO BACK FILLING. SYSTEM SHALL PROVIDE 3 OHM OR LESS RESISTANCE UPON COMPLETION.
3. ALL NON-INSULATED GROUND LEADS EXTENDING ABOVE GROUND LEVEL SHALL BE ENCASED IN 1/2" PVC & SEALED WITH SILICONE.
4. GROUND RINGS & TOP OF RODS SHALL BE INSTALLED AT 30" BELOW FINISHED GRADE. (SEE DETAIL A/E-501)
5. INSTALL 18"x18" COPPER PLATES IN LIEU OF GROUND RODS WHEN INSTALLING OVER TOWER FOUNDATION OR WHERE DRIVING GROUND RODS IS NOT FEASIBLE. REFER TO GEOTECH REPORT FOR SOIL CONDITIONS.
6. ALL MECHANICAL GROUND CONNECTIONS TO UTILIZE 2-HOLE LUGS AND STAINLESS STEEL HARDWARE. PROVIDE ANTI-OXIDANT COMPOUND BETWEEN LUG & CONNECTION POINT. USE COPPER ANTI-OXIDANT FOR COPPER TO COPPER CONNECTIONS. SELF-TAPPING SCREWS ARE NOT ALLOWED.
7. ALL ABOVE GRADE CADWELD CONNECTIONS (TO GALVANIZED ITEMS) SHALL BE SPRAYED WITH COLD GALVANIZING COMPOUND TO PREVENT CORROSION.



CONSULTANT:



CLIENT:

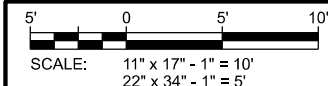


GROUNDING PLAN
JOHNSON CREEK (27649)
JOHNSON CREEK, WISCONSIN

SUBMITTAL:

INT.	DATE:	DESCRIPTION:

CHECKED BY:	AJO
PLOT DATE:	5/12/2021
PROJECT NUMBER:	27649
SET TYPE:	BD
SHEET NUMBER:	E-101



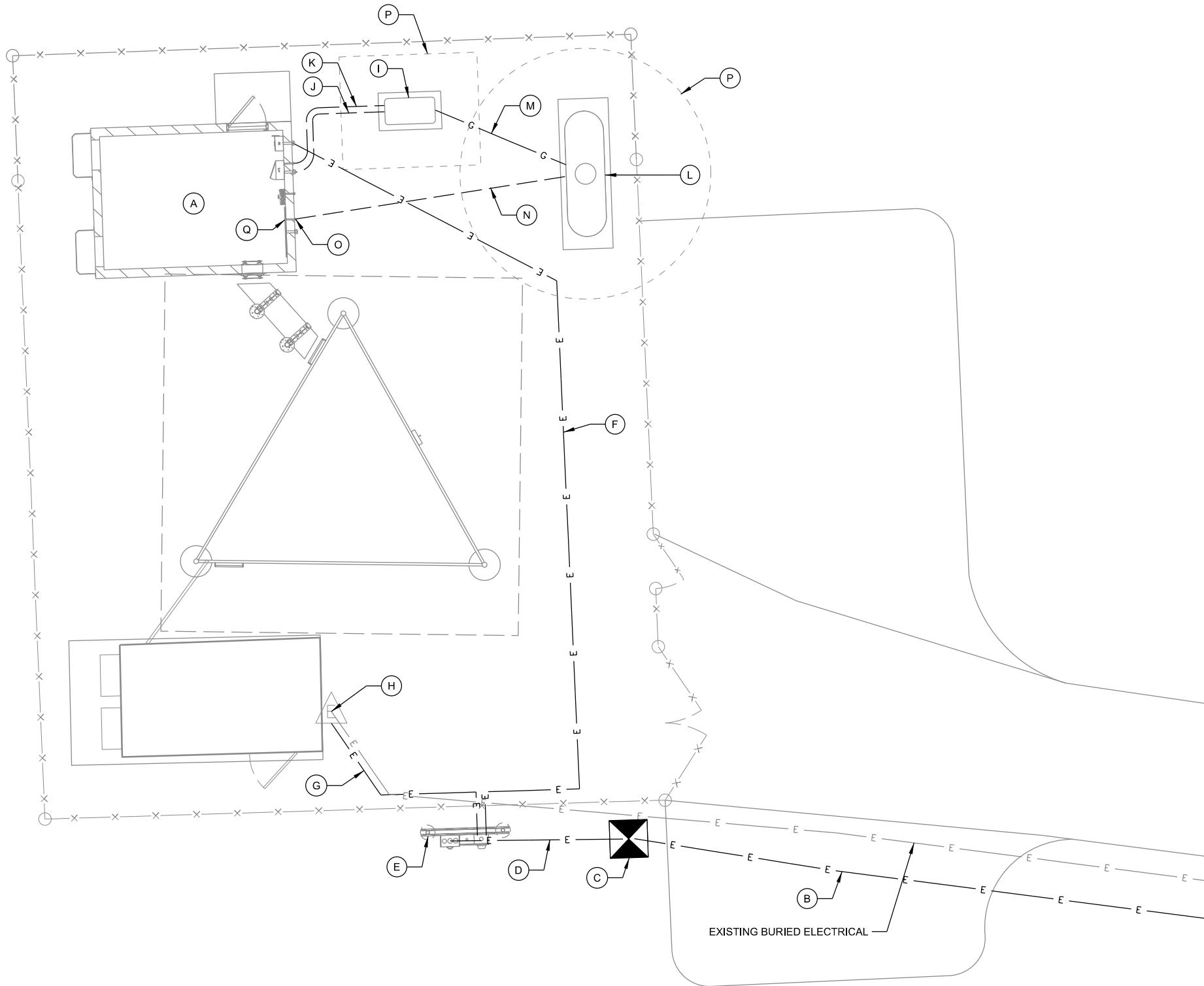
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KEYNOTES: (THIS SHEET)

- A. EQUIPMENT SHELTER PROVIDED BY OWNER. INSTALLED BY CONTRACTOR.
- B. PRIMARY ELECTRIC SERVICE FROM ROW TO GROUND MOUNTED ELECTRIC TRANSFORMER. BY UTILITY PROVIDER. (SEE C-102 FOR DETAILS)
- C. GROUND MOUNTED ELECTRIC TRANSFORMER BY UTILITY PROVIDER.
- D. 600A 120/240V 1P SECONDARY ELECTRIC SERVICE TO UTILITY RACK. (2) 4" CONDUITS INSTALLED BY CONTRACTOR; COORDINATE INSTALLATION WITH UTILITY PROVIDER
- E. UTILITY RACK INSTALLED BY CONTRACTOR E-504 FOR DETAILS
- F. 200A 120/240V 1P ELECTRIC SERVICE TO JEFFERSON COUNTY EQUIPMENT BUILDING; (1) 2" CONDUIT INSTALLED BY CONTRACTOR
- G. 200A 120/240V 1P ELECTRIC SERVICE TO EXISTING BERTRAM WIRELESS BUILDING. (1) 2" CONDUIT INSTALLED BY CONTRACTOR.
- H. RELOCATE EXISTING METER TO NEW UTILITY RACK. COORDINATE OUTAGE WITH BERTRAM WIRELESS. REMOVE EXISTING METER SOCKET. CONNECT TO EXISTING ELECTRIC SERVICE CONDUIT. INSTALL SLIP JOINT.
- I. 22kW GENERATOR ON CONCRETE SUPPORT SLAB; GENERATOR PROVIDED BY OWNER AND INSTALLED BY CONTRACTOR. CONCRETE PAD & CONDUITS BY CONTRACTOR. SEE C-504 FOR DETAILS
- J. GENERATOR AC ELECTRIC; (1) 2" CONDUIT BY CONTRACTOR.
- K. GENERATOR CONTROL & ALARM; (1) 1" CONDUIT BY CONTRACTOR.
- L. 500 GAL. LP TANK, SEE C-504 FOR DETAILS
- M. LP FUEL LINE, SEE E-505 FOR DETAILS
- N. REMOTE LP FUEL TANK LEVEL MONITOR CONDUIT; (1) 1" CONDUIT
- O. STUB ALL CONDUITS ON OUTSIDE OF CONCRETE FOUNDATION. ALL OUTSIDE BUILDING PENETRATIONS TO BE WEATHERPROOF LB, SEE E-503 FOR DETAILS
- P. UTILITY SETBACK / CLEARANCES. 3' AROUND GENERATOR. 10' AROUND LP TANK VALVE
- Q. REMOTE LP FUEL TANK LEVEL MONITOR BY CONTRACTOR

GENERAL NOTES: (THIS SHEET)

1. CONTRACTOR SHALL FIELD VERIFY DEPTHS, LOCATIONS, & SIZES OF ALL EXISTING UTILITIES.
2. ALL UTILITIES SHALL BE INSTALLED ACCORDING TO STATE AND LOCAL REQUIREMENTS.
3. ALL ELECTRICAL WORK SHALL CONFORM TO NATIONAL, STATE, AND LOCAL CODES.
4. ALL UNDERGROUND TRENCHING, PIPE AND CONDUIT INSTALLATION TO BE COMPLETED PRIOR TO FINAL SUBGRADE COMPACTION AND AGGREGATE INSTALLATION.
5. ALL CONDUCTORS TO BE COPPER.
6. ALL UNDERGROUND ELECTRICAL & TELCO CONDUITS TO BE SCH. 80 PVC UNLESS OTHERWISE REQUIRED BY THE UTILITY PROVIDER.
7. ALL OUTDOOR ABOVE GRADE EXPOSED ELECTRICAL CONDUIT RUNS TO BE RIGID GALVANIZED STEEL (RGS). ALL BELOW GRADE CONDUIT STUB UPS TO BE SCH 80 PVC WITH SLIP JOINT.
8. REFERENCE MANUFACTURER AND CATALOG NUMBERS ARE USED FOR QUALITY AND PERFORMANCE ONLY. EQUIPMENT MFR. BY OTHERS ARE EQUALLY ACCEPTABLE PROVIDED THEY MEET OR EXCEED THE SPEC.
9. PROVIDE AND INSTALL ALL NECESSARY WIRING AND CONDUITS FROM EXTERIOR ELECTRICAL ITEMS TO DISTRIBUTION PANEL WITHIN EQUIPMENT BUILDING.
10. ALL CONDUIT STUBS IN BUILDINGS & PULL BOXES TO BE IDENTIFIED AND LABELED.
11. PROVIDE PULL STRINGS IN ALL CONDUITS.
12. ALL INDOOR EXPOSED CONDUIT TO BE METALLIC (EMT OR RGS). COMPRESSION FITTINGS ARE REQUIRED FOR EMT CONDUITS.
13. SEE E-503 FOR CONDUIT INSTALLATION REQUIREMENTS.



CONSULTANT:



CLIENT:



UTILITY PLAN
JOHNSON CREEK (27649)
JOHNSON CREEK, WISCONSIN

SUBMITTAL:

INT.	DATE:	DESCRIPTION:

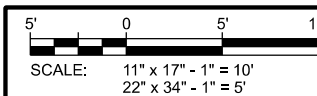
CHECKED BY: AJO

PLOT DATE: 5/12/2021

PROJECT NUMBER: 27649

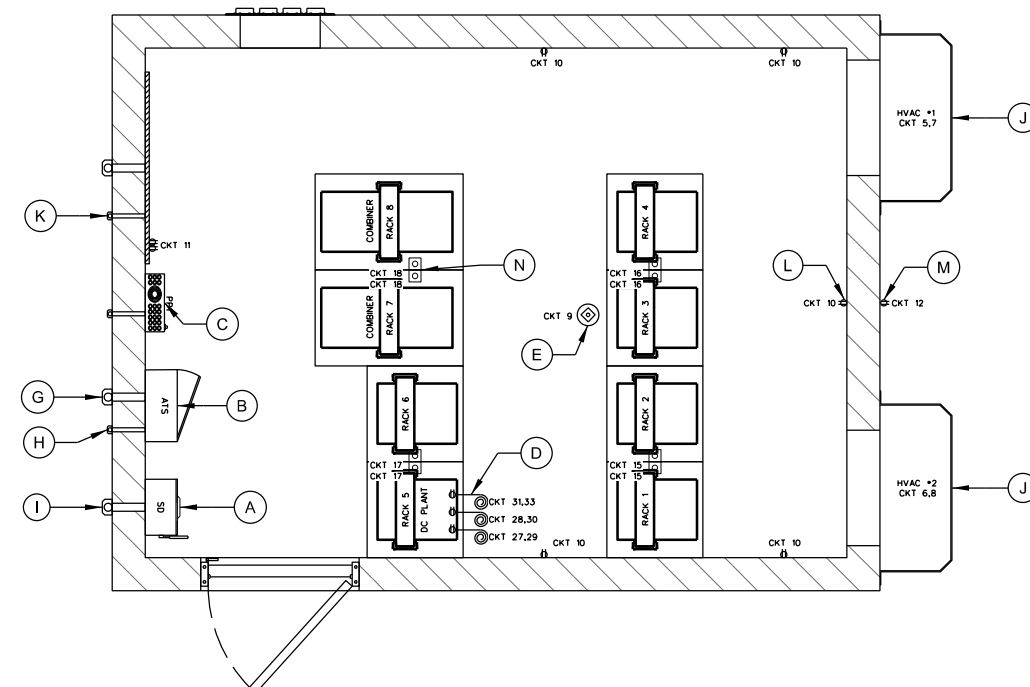
SET TYPE: BD

SHEET NUMBER: E-102



- A. SERVICE DISCONNECT
- B. AUTOMATIC TRANSFER SWITCH (ATS)
200A GENERAC (30"Hx13.5"Wx7"D)
BY CONTRACTOR
- C. DISTRIBUTION PANEL (PP1)
- D. (3) DC PLANT POWER FEEDS.
PROVIDE PIGTAIL LEADS FROM CEILING MOUNTED
JUNCTION BOX.
CONNECTION TO RACKS BY RADIO VENDOR.
- E. SMOKE ALARM
- F. ~~GENERATOR CONVENIENCE OUTLET~~ (NOT REQ'D)
- G. GENERATOR A/C POWER FEED
- H. GENERATOR CONTROL WIRING FEED
- I. ELECTRIC UTILITY SERVICE FEED
- J. HVAC UNIT (2 TON)
- K. LP TANK MONITOR RECEPTACLE
- L. INTERIOR CONVENIENCE OUTLET
- M. EXTERIOR CONVENIENCE OUTLET
- N. (2) 20A 120V TWIST LOCK RECEPTACLES, CEILING MOUNTED
IN 2 GANG BOX, LOCATED BETWEEN (2) ADJACENT RACKS.
(1) 20A, 120V CIRCUIT PER EACH PAIR OF TWIST LOCKS.

1. ALL ELECTRICAL WORK SHALL CONFORM TO NATIONAL, STATE AND LOCAL CODES.
2. ALL WIRE AND CONDUIT SIZES SPECIFIED ARE MINIMUMS. LARGER SIZES MAY BE REQUIRED BY CODE. ANY DISCREPANCIES BETWEEN THE DRAWINGS AND CODE REQUIREMENTS SHALL BE BROUGHT TO THE ATTENTION OF THE ENGINEER.
3. ALL CONDUCTORS SHALL BE COPPER.
4. ALL INDOOR RACEWAY TO BE EMT OR RGS. EMT INSTALLATIONS SHALL UTILIZE COMPRESSION FITTINGS.
5. CONTRACTOR SHALL PROVIDE AND INSTALL ALL NECESSARY WIRING AND CONDUITS FROM ELECTRICAL DEVICES REQUIRED ON PROJECT TO THE DISTRIBUTION PANELS.
6. ALL ELECTRICAL WORK SHALL BE COMPLETED UNDER THE DIRECT SUPERVISION OF A LICENSED MASTER ELECTRICIAN.
7. CONTRACTOR SHALL PERFORM AN INSPECTION OF THE EXISTING ELECTRICAL EQUIPMENT AND INSTALLATION WITHIN THE PRE-MANUFACTURED BUILDING PROVIDED BY THE OWNER FOR CONFORMANCE WITH STATE AND LOCAL ELECTRICAL CODE. ELECTRICAL CONTRACTOR SHALL NOTIFY ENGINEER OF ANY NON-CONFORMING ITEMS.



The diagram illustrates a 120/240V, 1-phase power system. It features a generator (G) connected to a 100A, 2P circuit breaker, which is controlled by a GEN. CONTROL line. The generator is rated at 22KW, 22KVA, 120/240V, 1 PHASE, LP FUELED. The system includes a SERVICE DISCONNECT (SD) with a 200A, 2P rating, and a MAIN BRK (Main Breaker) with a 200A, 2P rating. A DIST. PANEL (PP1) is also shown, rated at 200A, 120/240V, 1 PHASE, 2P, 3W, 42 SLOT. The system is grounded through a SERVICE GROUND and a NEUTRAL-GROUND BOND CONNECTION TIE TO MGB. A PUNCH BLOCK (R66) is connected to the system. The diagram also shows a BY UTILITY connection with an XFMR (120/240V, 1P, 60Hz) and a METER BANK. The system is labeled PROVIDED W/ SHELTER.

DIST. PANEL (PP1)	PHASE/WIRE				BUS SIZE	MAIN				AIC RATING	
120/240VAC	1/3				200A	LUGS				10,000	
LOAD	WIRE	POLE	TRIP	CKT#	A	B	CKT#	TRIP	POLE	WIRE	LOAD
Surge Arrestor	8	2	50	1			2	20	2	12	Power Fail
	-	-	-	3			4	-	-	-	
HVAC #1	10	2	30	5			6	30	2	10	HVAC #2
	-	-	-	7			8	-	-	-	
Smoke Detector	12	1	20	9			10	20	1	12	Receptacles - Interior
LP Tank Monitor	12	1	20	11			12	20	1	12	Receptacles - Exterior
Gen Outlet	12	1	20	13			14	20	1	12	Lights - Int/Emer/Door
Twist Lock Recepts. 1&2	12	1	20	15			16	20	1	12	TwistLock Recepts. 3&4
Twist Lock Recepts. 5&6	12	1	20	17			18	20	1	12	TwistLock Recepts. 7&8
SPARE	-	-	-	19			20	20	1	12	Exterior Disc
SPARE	-	-	-	21			22	-	-	-	SPARE
SPARE	-	-	-	23			24	-	-	-	SPARE
SPARE	-	-	-	25			26	-	-	-	SPARE
DC Drop #1	12	2	20	27			28	20	2	12	DC Drop #2
	-	-	-	29			30	-	-	-	
DC Drop #3	12	2	20	31			32	-	-	-	SPARE
	-	-	-	33			34	-	-	-	SPARE
SPARE	-	-	-	35			36	-	-	-	SPARE
SPARE	-	-	-	37			38	-	-	-	SPARE
SPARE	-	-	-	39			40	-	-	-	SPARE
SPARE	-	-	-	41			42	-	-	-	SPARE

CONSULTANT:

 **Edge**
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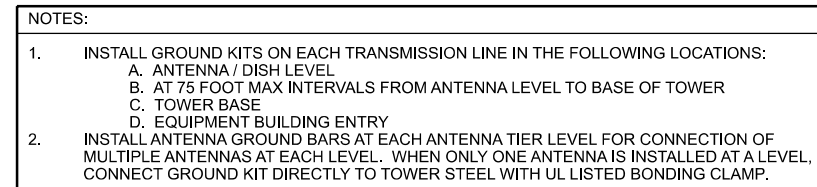
CLIENT:

The seal of Jefferson County, Wisconsin, is a circular emblem. It features a central five-pointed star. Inside the star, there is a profile of a Native American man facing left. The points of the star contain various symbols: a plow, a sheaf of wheat, a cow, a sheaf of wheat, and a sheaf of wheat. The words "JEFFERSON COUNTY WI." are written in a blue arc across the top of the circle, and "ESTABLISHED 1836" is written in a blue arc across the bottom.

SHELTER ELECTRICAL PLAN
JOHNSON CREEK (27649)
JOHNSON CREEK, WISCONSIN

SUBMITTAL:		
INT.	DATE:	DESCRIPTION:
CHECKED BY	AJO	
PLOT DATE	5/12/2021	
PROJECT NUMBER	27649	
SET TYPE	BD	
SHEET NUMBER	E-104	

- A. AIR TERMINAL:
EXTEND 2' ABOVE HIGHEST ANTENNA MIN. ON MAST PIPE
MECHANICALLY FASTEN AIR TERMINAL TO MAST PIPE MAST
PIPE TO BE MECHANICALLY CONNECTED TO TOWER STEEL
- B. COAX / WAVEGUIDE TRANSMISSION LINE GROUND KIT;
SEE DETAIL THIS PAGE
- C. GROUND KIT JUMPER;
CONNECT TO GROUND BAR WITH 2 HOLE LONG BARREL LUG
- D. ANTENNA GROUND BAR (TINNED);
FOR CONNECTION OF MULTIPLE GROUND KITS AT ONE
LEVEL MOUNT TO TOWER STEEL;
INSTALL #2 STRANDED LEAD FROM GROUND BAR TO TOWER
STEEL
- E. FOR SINGLE ANTENNAS AT ONE LEVEL OMIT ANTENNA
GROUND BAR CONNECT GROUND KIT JUMPER DIRECTLY TO
TOWER STEEL WITH UL LISTED BONDING CLAMP
- F. UL LISTED BONDING CLAMP:
- HARGER BGC41.25-2 PIPE CLAMPS FOR
1-1/4" TO 2" DIA. ROUND MEMBERS
OR
- HARGER #223T HEAVY DUTY TINNED FLANGE
BONDING PLATE
- USE EXTERNAL ANTI-OXIDATION COMPOUND.
- PAINT WITH COLD GALV. COMPOUND AFTER BONDING.
- G. TOWER GROUND BAR (TGB) (TINNED);
4" x 18" x 1/4" - SIZED FOR (30) 2 HOLE GROUND LUGS MOUNT
DIAGONALLY FOR EASIER HOOK-UP OF GROUNDING KIT
LEADS INSTALL ON TOWER WITH INSULATORS AT 12" (ABOVE
ICE BRIDGE)
- H. TGB GROUNDS;
#2 BARE SOLID TINNED ENCASED IN CARFLEX CONDUIT
FROM TGB TO TOWER GROUND RING (2) REQ'D AND FROM
TGB TO TOWER STEEL (1) REQ'D
- I. TOWER STEEL GROUNDS;
#2 BARE SOLID TINNED ENCASED IN CARFLEX CONDUIT
FROM TOWER STEEL TO TOWER GROUND RING (3) REQ'D.
- J. TOWER FOUNDATION GROUNDS, (1 REQ'D);
SEE E-502 FOR DETAILS
- K. SHELTER EXTERIOR GROUND BAR (EGB) (TINNED);
SEE DETAIL THIS PAGE
- L. EGB GROUNDS;
#2 BARE SOLID TINNED
SEE DETAIL THIS PAGE
ENCASE IN CARFLEX CONDUIT FROM EGB TO SHELTER
GROUND RING (2) REQ'D.
- M. SURGE ARRESTOR/POLY PHASER
- N. INTERIOR SHELTER GROUND BAR / MASTER GROUND BAR
(MGB);
SEE DETAIL THIS PAGE
- O. #2 BARE SOLID TINNED, ENCASE IN CARFLEX CONDUIT
FROM MGB TO SHELTER GROUND RING (2) REQ'D;
SEE DETAIL THIS PAGE
- P. ICE BRIDGE POST GROUNDS;
#2 BARE SOLID TINNED ENCASE IN CARFLEX CONDUIT TO 24"
BELOW GRADE;
SEE E-502 FOR DETAILS
- Q. ICE BRIDGE SECTION GROUNDS;
#6 STRANDED INSULATED
2 HOLE LONG BARREL ON EACH END (TYP.)
- R. ICE BRIDGE SECTION TO POST GROUNDS;
#6 STRANDED INSULATED
2 HOLE LONG BARREL ON SECTION & CADWELD TO POST
ORIENT LEAD WITH HIGH SIDE TOWARDS TOWER
- S. ENTRY PANEL GROUND;
#6 STRANDED INSULATED
2 HOLE LONG BARREL ON EACH END (TYP.)



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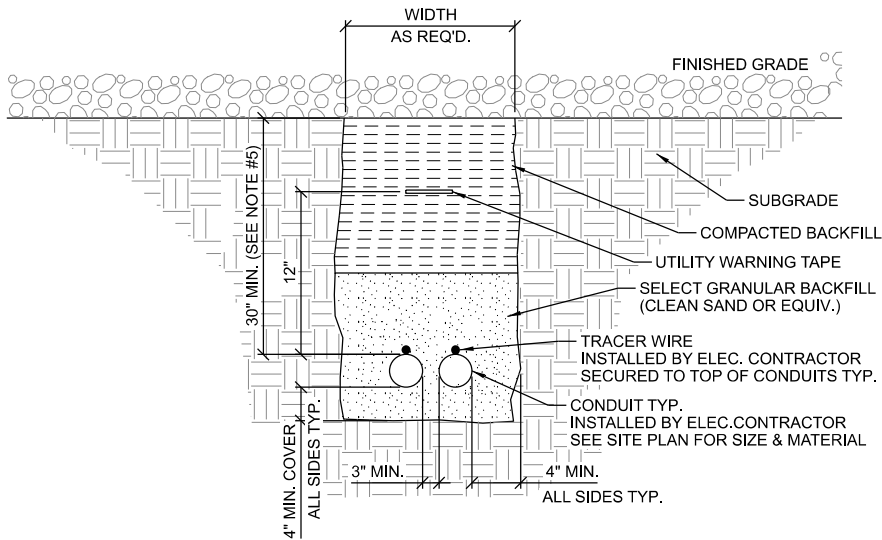


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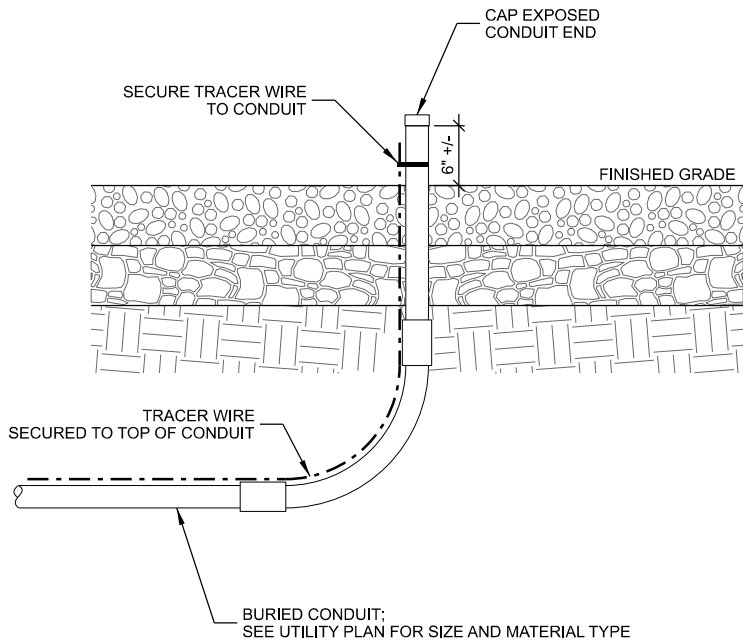
GROUNDING DETAILS
JOHNSON CREEK (27649)
JOHNSON CREEK, WISCONSIN

SUBMITTAL:		
INT.	DATE:	DESCRIPTION:
CHECKED BY	AJO	
PLOT DATE	5/12/2021	
PROJECT NUMBER	27649	
SET TYPE	BD	
SHEET NUMBER	E-501	

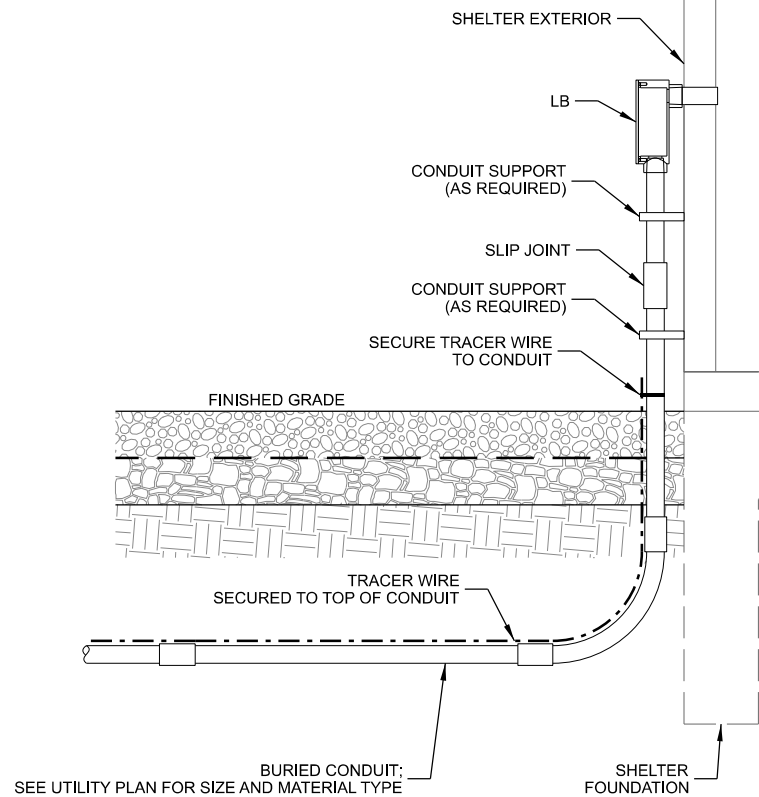


- NOTES:
1. ALL CONDUITS TO BE EQUIPPED W/ PULL CORDS & CAPPED FOR FUTURE LINE PULLS. NO DUCT TAPE CAPS ALLOWED
 2. WARNING TAPE TO RUN CONTINUOUSLY ALONG THE ENTIRE CONDUIT LENGTH. INSTALL TAPE 12" ABOVE THE TOP OF THE CONDUITS.
 3. TRACER WIRE TO BE 14 GA. SOLID COPPER WIRE WITH CORROSION PROTECTIVE COATING. SECURE TO TOP OF CONDUIT AND RUN CONTINUOUSLY ALONG THE ENTIRE LENGTH. EXTEND TO GRADE AT BOTH ENDS - LOOP AND WRAP AROUND APPROPRIATE CONDUIT.
 4. CONTRACTOR TO CHECK CONTINUITY OF TRACER WIRE BEFORE AND AFTER BURIAL.
 5. VERIFY CONDUIT DEPTH REQUIREMENTS WITH LOCAL UTILITY PROVIDER.

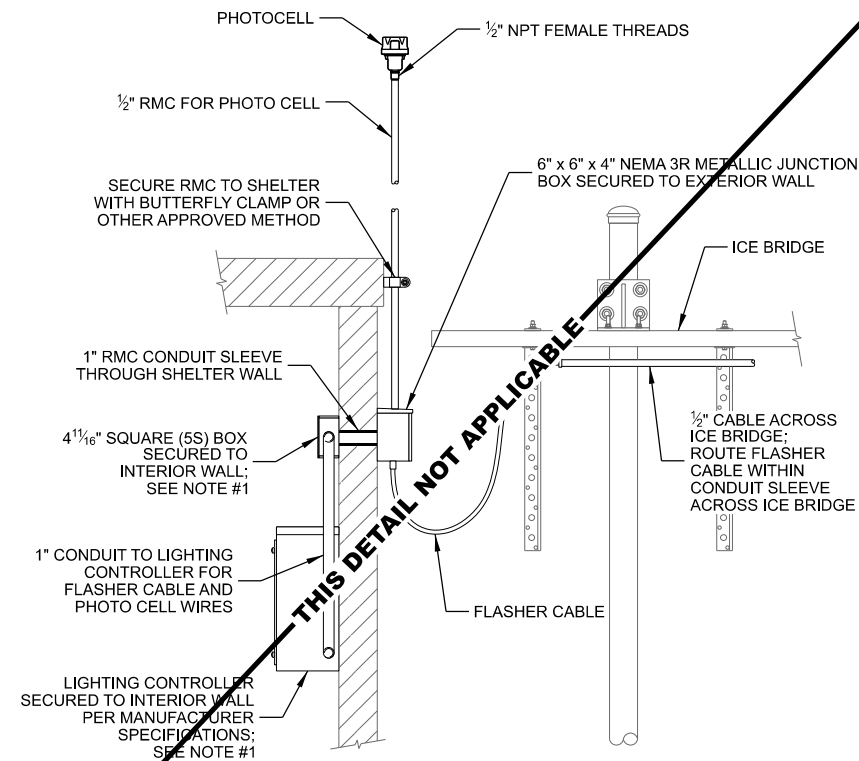
A UTILITY TRENCH



B CONDUIT STUB-UP



C CONDUIT STUB-UP AT SHELTER



- NOTES:
1. PROVIDE GROUND BOND FROM LIGHTING CONTROLLER BOX AND INTERIOR JUNCTION BOX TO INTERIOR GROUND HALO SYSTEM.

D TOWER LIGHTING INSTALLATION

CONSULTANT:

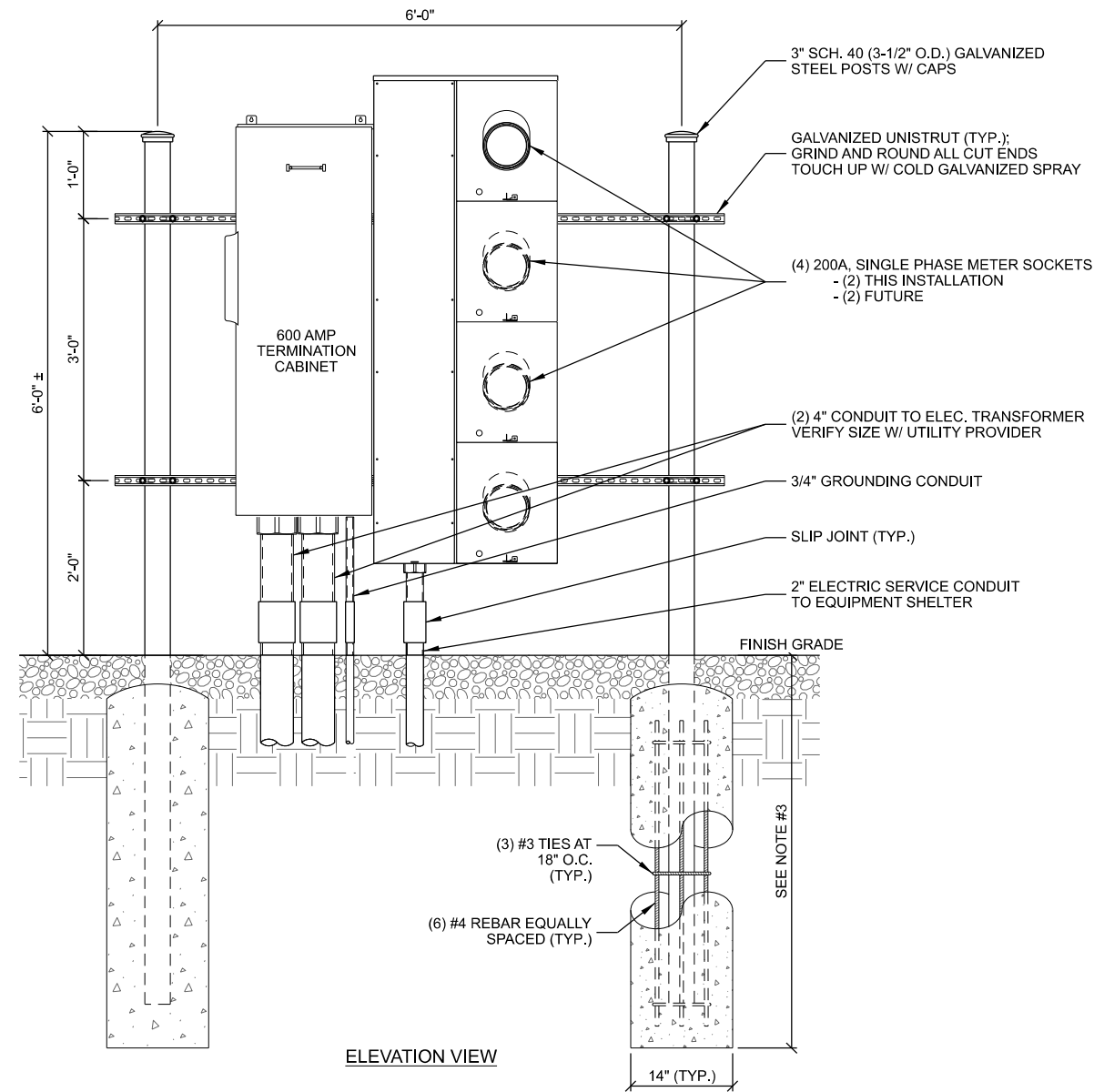
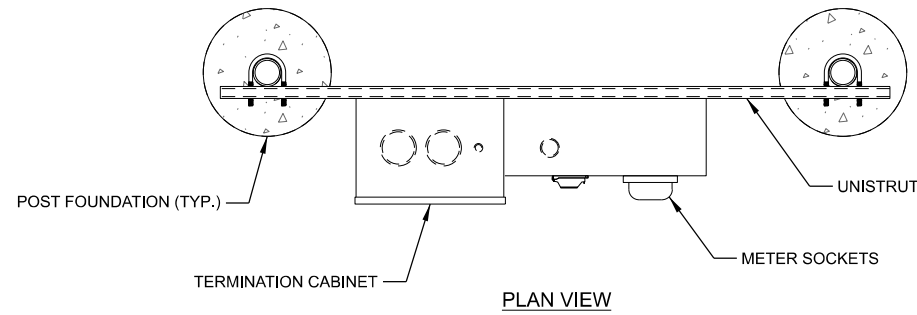
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UTILITY DETAILS
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JOHNSON CREEK, WISCONSIN

SUBMITTAL:		
INT.	DATE:	DESCRIPTION:

CHECKED BY:	AJO
PLOT DATE:	5/12/2021
PROJECT NUMBER:	27649
SET TYPE:	BD
SHEET NUMBER:	E-504



NOTES:

1. CONCRETE FOR PIER TO BE A MINIMUM OF 4,000 PSI AT 28 DAYS.
2. MAINTAIN 3" MINIMUM REBAR COVER IN ALL DIRECTIONS.
3. PIER FOUNDATION DEPTH TO BE A MINIMUM OF 48"; DEPTH TO EXCEED LOCAL FROST DEPTH.

A MULTI-METER UTILITY RACK

SCALE: 11" x 17" - 1/2" = 1'-0"
22" x 34" - 1" = 1'-0"

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UTILITY RACK DETAILS
JOHNSON CREEK (27649)
JOHNSON CREEK, WISCONSIN

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SHEET NUMBER:	E-505