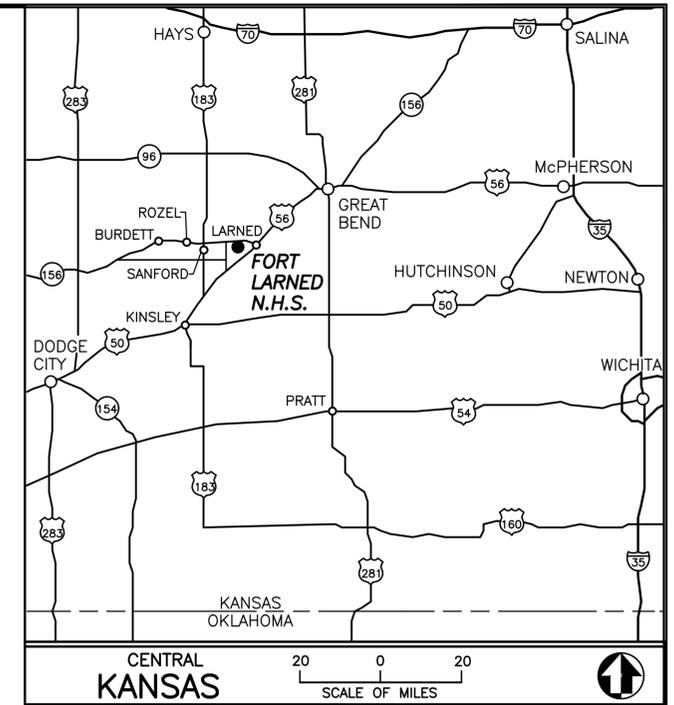
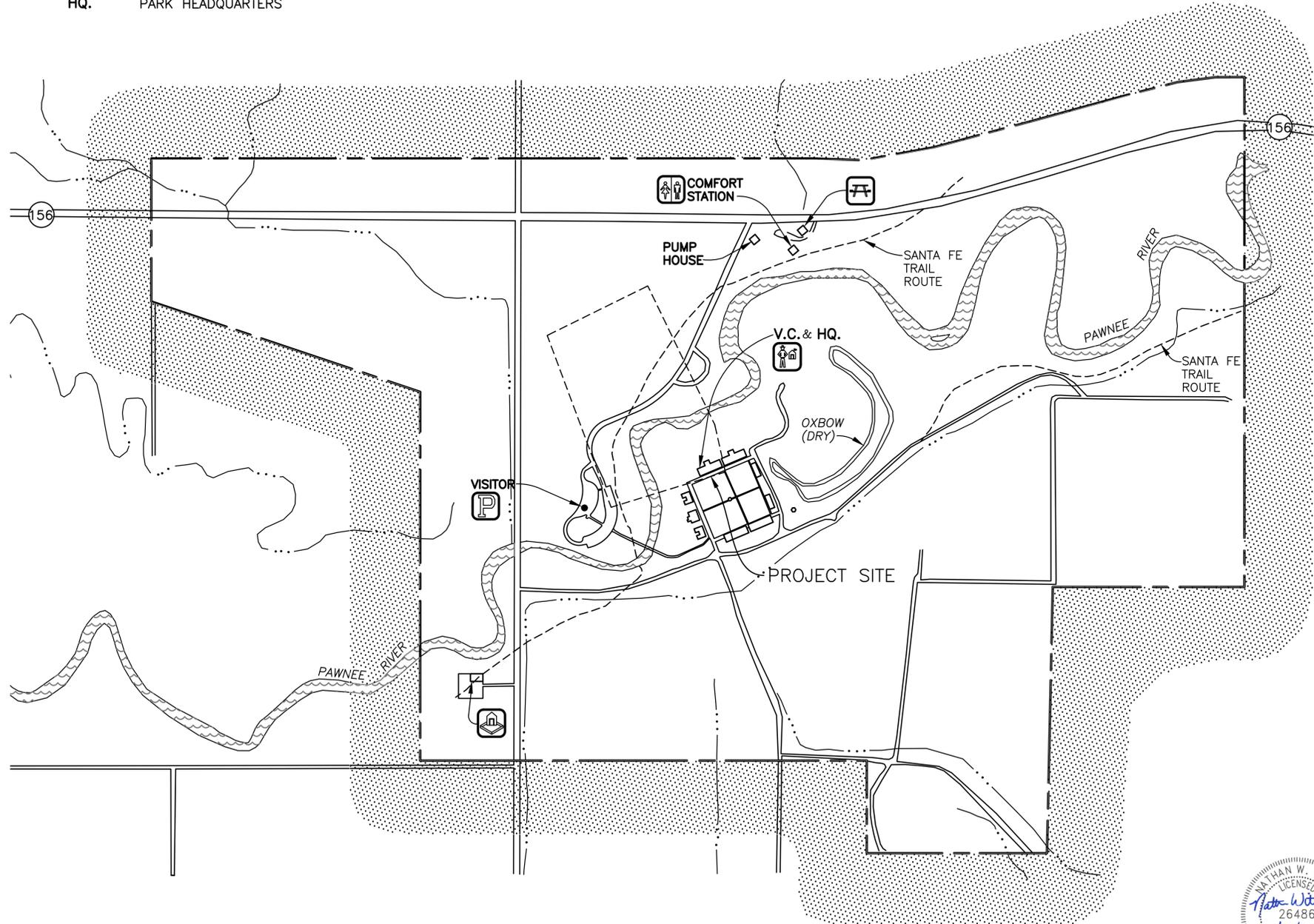


**LEGEND**

- PARK BOUNDARY
- STATE LINE
- == ROADS
- - - SANTA FE TRAIL ROUTE
- ... CREEK
- V.C. VISITOR CENTER
- HQ. PARK HEADQUARTERS
-  RANGER STATION
-  PARKING
-  PICNIC AREA
-  MAINTENANCE AREA
-  RESTROOMS



**INDEX**

SHEET	SUB SHEET	TITLE OF SHEET
1		<b>GENERAL</b> COVER SHEET & INDEX OF DRAWINGS
2	G1	LEGENDS
3	G2	ABBREVIATIONS
4	C1	<b>CIVIL</b> TOPOGRAPHIC SURVEY
5	C2	OVERALL SITE LAYOUT
6	C3	EROSION CONTROL LAYOUT
7	C4	EXISTING CONDITIONS & REMOVALS
8	C5	SITE LAYOUT POINTS & TABLE & ALIGNMENT TABLE
9	C6	SANITARY SEWER PLAN & PROFILE
10	C7	DETAILS
11	C8	DETAILS
12	C9	DETAILS
13	E1	<b>ELECTRICAL</b> ELECTRICAL LEGEND
14	E2	ELECTRICAL SITE LAYOUT
15	E3	ELECTRICAL ONE LINE DIAGRAMS, DETAILS & SCHEDULES

**FORT LARNED NATIONAL HISTORIC SITE**

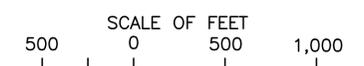


ENGINEER:  
ELECTRICAL  
NATHAN W. WITTE  
KS PE NO. 26486



ENGINEER:  
CIVIL  
TRAVIS HEIER  
KS PE NO. 21598

PMIS# 226825



	CONSTRUCTION DRAWINGS		TITLE OF PROJECT REPLACE THE VC SEPTIC TANK AND LEACH FIELD	DRAWING NO. 80085
	UNITED STATES DEPARTMENT OF INTERIOR		LOCATION WITH PARK VISITOR CENTER	SHEET <b>1</b> OF 15
	NATIONAL PARK SERVICE MIDWEST REGIONAL OFFICE		NAME OF PARK FORT LARNED NATIONAL HISTORIC SITE REGION: MIDWEST COUNTY: PAWNEE STATE: KANSAS	

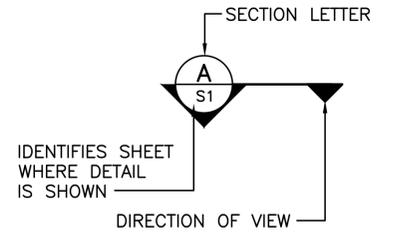
**SITE PLAN SYMBOLOGY**

-  BENCHMARK
-  CLEANOUT
-  ELEVATION TARGET
-  KEY NOTE
-  SOIL TEST HOLE
-  REFERENCE MONUMENT
-  NEW RISER POLE

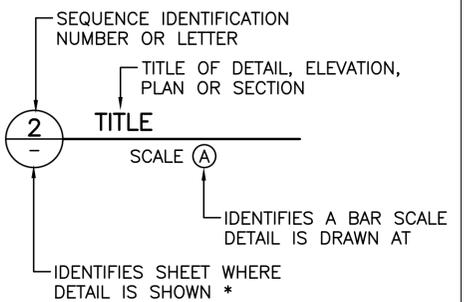
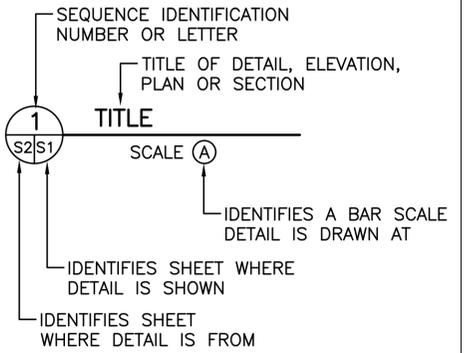
-  CENTERLINE
-  EXISTING MAJOR CONTOUR
-  EXISTING MINOR CONTOUR
-  NEW MAJOR CONTOUR
-  NEW MINOR CONTOUR
-  LIMITS OF CONSTRUCTION

**GENERAL SYMBOLOGY**

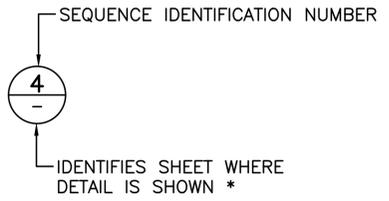
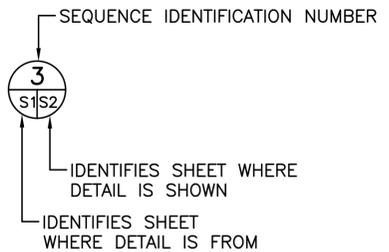
**SECTION CUT MARKER**



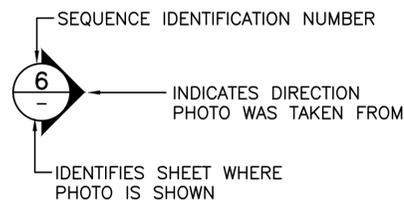
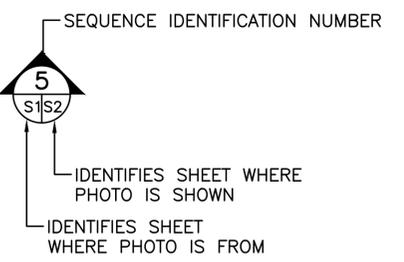
**DETAIL, ELEVATION, PLAN OR SECTION TITLE**



**DETAIL, ELEVATION OR PLAN MARKERS**



**PHOTO MARKERS**



\* FOR COMMON DETAILS AND SECTIONS OR DETAILS THAT ARE CUT OR CALLED OUT ON MULTIPLE SHEETS, THE SUB SHEET NUMBER IS REPLACE BY A DASH (-).



ENGINEER:  
CIVIL  
TRAVIS HEIER  
KS PE NO. 21598

DESIGNED: L. SHAGLA	SUB SHEET NO. <b>G1</b>	TITLE OF SHEET <b>LEGENDS</b>	DRAWING NO. <b>80085</b>
TECH. REVIEW: C. BAILEY			PMIS/PKG NO. 226825
DATE: 02/25/22		FORT LARNED NATIONAL HISTORIC SITE	SHEET <b>2</b> of <b>15</b>

A/C	AIR CONDITIONING	CLG	CEILING	F TO F	FACE TO FACE	ID	INSIDE DIAMETER, INTERIOR DIMENSION	N	NORTH, NEUTRAL	R&R	REMOVE AND REPLACE	TOB	TOP OF BOLT, TOP OF BANK,
A/E	ARCHITECT/ENGINEER	CLJ	CONTROL JOINT	F&B	FACE & BYPASS	IE	INVERT ELEVATION	NA	NOT APPLICABLE	R&S	REMOVE AND SALVAGE	TOC	TOP OF BEAM, TOP OF BERM
A	AMPERE	CLKG	CAULKING	FAB	FABRIKATE	IF	INSIDE FACE	NAT	NATURAL, NATIONAL	R	RADIUS, REGISTER, RISER	TOD	TOP OF CURB, TOP OF CONCRETE
AB	ANCHOR BOLT	CLR	CLEAR	FB	FLOOR BEAM	IH	INTAKE HOOD	NC	NORMALLY CLOSED	RA	RETURN AIR	TOF	TOP OF DECK
ABAN	ABANDON	CMH	COMMUNICATION MANHOLE	FBD	FIBERBOARD	IMP	IMPACT	NEG	NEGATIVE	RB	RESILIENT BASE, ROCK BERM	TOG	TOP OF FOOTING
ABC	AGGREGATE BASE COURSE	CMP	CORRUGATED METAL PIPE	FBC	FIBERGLASS	IN	INCH	NF	NEAR FACE, NON-FUSED	RCPT	RECEPTACLE	TOG	TOP OF GROUT
ABT	ABOUT	CMU	CONCRETE MASONRY UNIT	FBM	BOARD FOOT MEASURE	INC	INCLUDE, INCANDESCENT	NIC	NOT IN CONTRACT	RD	ROOF DRAIN	TOL	TOLERANCE, TOP OF LEDGER
AC	ALTERNATING CURRENT	CO	CLEANOUT, CONCRETE OPENING	FBO	FURNISHED BY OWNER	INF	INFLUENT	NO	NORMALLY OPEN, NUMBER	REC	RECESS	TOM	TOP OF MASONRY
ACK	ACKNOWLEDGE	COL	COLUMN	FC	FLUSHING CONNECTION	INSTR	INSTRUMENTATION	NOM	NOMINAL	RECD	RECEIVED	TOP	TOP OF PLATE
ACP	ACOUSTIC CEILING PANEL, ASPHALTIC CONCRETE PAVEMENT	COM	COMMON	FCA	FLANGED COUPLING ADAPTER	INSUL	INSULATION	NPS	NOMINAL PIPE SIZE	RECT	RECTANGULAR	TOPO	TOPOGRAPHY
ACST	ACOUSTIC	COMB	COMBINATION	FD	FLOOR DRAIN	INT	INTERIOR, INTERSECTION	NPT	NATIONAL PIPE THREAD	RED	REDUCER	TOS	TOP OF SLAB, TOP OF STEEL, TOE OF SLOPE
AD	ADDENDUM, AREA DRAIN	COMM	COMMUNICATION	FDC	FLEXIBLE DUCT CONNECTION	INTR	INTERMEDIATE, INTERIOR	NS	NEAR SIDE	REF	REFERENCE	TOW	TOP OF WALL
ADDL	ADDITIONAL	COMP	COMPOSITION, COMPRESSIBLE, COMPOSITE	FDR	FEEDER	INV	INVERT	NTS	NOT TO SCALE	REINF	REINFORCING	TP	TOILET PARTITION, TELEPHONE POLE, TOE PLATE, TRAP PRIMER
ADH	ADHESIVE	CON	CONCENTRIC	FDTN	FOUNDATION	IPS	IRON PIPE SIZE	NWL	NORMAL WATER LEVEL	REM	REMOVE	TPG	TOPPING, THROUGH PLATE GIRDER
ADJ	ADJUSTABLE, ADJACENT	CONC	CONCRETE	FE	FLANGED END	IPT	INTERNAL PIPE THREAD			REQD	REQUIRED	TR	TRANSOM
AF	AMP FRAME, AMP FUSE	CONN	CONNECTION	FEC	FIRE EXTINGUISHER CABINET	IR	INSIDE RADIUS, IRON ROD			RESIL	RESILIENT	TRD	TRENCH DRAIN
AFF	ABOVE FINISH FLOOR	CONST	CONSTRUCTION	FES	FLARED END SECTION	IRR	IRRIGATION			RET	RETAINING, RETURN	TRNS	TRANSITION
AFG	ABOVE FINISH GRADE	CONT	CONTINUOUS	FEXT	FIRE EXTINGUISHER	ISO	ISOMETRIC			REV	REVISION, REVERSE	TRD	TRENCH DRAIN
AGGR	AGGREGATE	COOR	COORDINATE	FF	FAR FACE, FACTORY FINISH, FLAT FACE					RF	RESILIENT FLOORING	TYP	TYPICAL
AI	AREA INLET, ANALOG INPUT	CORR	CORROSION, CORRUGATED	FG	FINISHED GRADE	JB	JUNCTION BOX			RFG	ROOFING		
AIC	AMPS INTERRUPTING CAPACITY	CP	CHECKER PLATE, CONTROL POINT	FH	FIRE HYDRANT	JCT	JUNCTION			RFL	REFLECTED, REFLECTOR		
ALIG	ALIGNMENT	CPLG	COUPLING	FIG	FIGURE	JF	JOINT FILLER			RGH	ROUGH		
ALT	ALTERNATE, ALTITUDE	CRL	CORROSION-RESISTANT LINING	FIN	FINISH	JST	JOIST			RGS	RIGID GALVANIZED STEEL		
ALUM	ALUMINUM	CSC	COMPRESSION SLEEVE COUPLING	FJT	FLUSH JOINT	JT	JOINT			RGS-PVC	PVC COATED RGS		
AM	ACOUSTICAL MATERIAL	CSK	CONCRETE SINK	FL	FLOW, FLOW LINE	K	KIP			OH	OVERHEAD		
AMB	AMBIENT	CSX	CERAMIC SERVICE SINK	FLEX	FLEXIBLE	KB	KNEE BRACE			OPNG	OPENING		
ANC	ANCHOR	CT	CERAMIC TILE	FLG	FLANGE	KCMIL	THOUSAND CIRCULAR MILS			OPP	OPPOSITE		
AO	ANALOG OUTPUT	CTR	CENTER	FLR	FLUORESCENT	KD	KNOCK DOWN			OPT	OPTIONAL		
AP	ACCESS PANEL	CTRL	CONTROL	FLR	FLOOR	KO	KNOCK OUT			OR	OUTSIDE RADIUS		
APRX	APPROXIMATE	CVT	CULVERT	FLS	FLASHING, FLUSH	KSI	KIPS PER SQUARE INCH			ORD	OVERFLOW ROOF DRAIN		
APWD	APPROVED	CJ	COPPER, CUBIC	FN	FENCE	KW	KILOWATT			ORIG	ORIGINAL		
ARCH	ARCHITECTURAL	CW	CLOCKWISE	FO	FINISHED OPENING	L	ANGLE, LENGTH, LAVATORY			OVFL	OVERFLOW		
ASSY	ASSEMBLY	CY	CUBIC YARD	FOB	FLAT ON BOTTOM	LAD	LADDER			OVHG	OVERHANG		
AT	ACOUSTICAL TILE, AMP TRIP			FOC	FACE OF CONCRETE, FACE OF CURB	LAM	LAMINATE			OZ	OUNCE		
ATC	ACOUSTICAL TILE CEILING	d	PENNY (NAIL MEASURE)	FOF	FACE OF FINISH	LATL	LATERAL			P	PAINT		
ATM	ATMOSPHERE	D	DEEP, DIFFUSER, DRAIN	FOM	FACE OF MASONRY	LB	LAG BOLT, POUND			PA	PUBLIC ADDRESS		
AUTO	AUTOMATIC	DB	DUCT BANK, DECIBEL, DRY BULB	FOS	FACE OF STUDS	LCTB	LIQUID CHALK AND TACK BOARD			PAR	PARALLEL, PARAPET		
AUX	AUXILIARY	DBA	DEFORMED BAR ANCHOR	FOT	FLAT ON TOP	LDG	LANDING			PB	PANIC BAR, PULL BOX		
AUX	AUXILIARY	DBL	DOUBLE	FPT	FEMALE PIPE THREAD	LE	LIFTING EYE			PBD	PARTICLE BOARD		
AVE	AVENUE	DC	DIRECT CURRENT	FR	FRAME	LF	LINEAR FOOT			LG	LONG		
AVG	AVERAGE	DEG	DEGREE	FRP	FIBERGLASS REINFORCED PLASTIC	LH	LEFT HAND			LIN	LINEAR		
AWG	AMERICAN WIRE GAGE	DEG C	DEGREE CENTIGRADE	FRTM	FIRE RETARDANT TREATED MATERIAL	LIQ	LIQUID			LIQ	LIQUID		
AWT	ACOUSTICAL WALL TILE	DEG F	DEGREE FAHRENHEIT	FT	FEET, FOOT	LLH	LONG LEG HORIZONTAL			LLV	LONG LEG VERTICAL		
		DEMO	DEMOLITION	FTG	FOOTING, FITTING	LLU	LONG LEG LECTURE UNIT			LNG	LONGITUDINAL		
B TO B	BACK TO BACK	DEP	DEPRESSED	FUR	FURRING	LOC	LOCATION			LNG	LONGITUDINAL		
BAL	BALANCE	DEPT	DEPARTMENT	FUR	FURRING	LP	LOW POINT			LPS	LOW-PRESSURE SODIUM		
BBD	BULLETIN BOARD	DET	DETAIL	FURN	FURNITURE, FURNISH	LR	LONG RADIUS			LT	LEFT		
BC	BASE CABINET, BOTTOM CHORD, BOLT CENTER, BOLT CIRCLE	DI	DROP INLET, DUCTILE IRON, DIGITAL INPUT	FUTR	FUTURE	LTD	LIMITED			LTG	LIGHTING		
BD	BOARD	DIA	DIAMETER	FV	FACE VELOCITY	LTG	LIGHTING			LTL	LINTEL		
BE	BOTH ENDS, BELL END	DIAG	DIAGONAL, DIAGRAM	FW	FIELD WELD, FIRE WALL	LTNG	LIGHTNING			LV	LOW VOLTAGE		
BF	BOTH ENDS, BELL END	DIFF	DIFFERENTIAL, DIFFERENCE	FWD	FORWARD	LVL	LAMINATED VENEER LUMBER			LVR	LOUVER		
BF	BOTH FACES, BOTTOM FACE, BLIND FLANGE, BOARD FEET	DIM	DIMENSION	FWE	FURNISH WITH EQUIPMENT	LW	LIGHTWEIGHT CONCRETE			LWC	LIGHTWEIGHT CONCRETE		
BITUM	BITUMINOUS	DISCH	DISCHARGE	FXTR	FIXTURE	LWL	LOW WATER LEVEL			MA	MIXED AIR		
BKG	BACKING	DIST	DISTANCE, DISTRIBUTION	G	GRILLE, GROUND	GA	GAGE (METAL THICKNESS)			MACH	MACHINED		
BL	BASE LINE	DIV	DIVISION	GAL	GALLON	GAL	GALLON			MAINT	MAINTENANCE		
BLDG	BUILDING	DL	DEAD LOAD	GALV	GALVANIZED	GB	GRAB BAR, GRADE BREAK			MAN	MANUAL		
BLK	BLOCK	DMJ	DOUBLE MECHANICAL JOINT	GB	GRAB BAR, GRADE BREAK	GC	GROOVED COUPLING			MATL	MATERIAL		
BLKG	BLOCKING	DMPF	DAMP PROOFING	GC	GROOVED COUPLING	GD	GUARD			MAX	MAXIMUM		
BM	BENCHMARK, BEAM	DN	DOWN	GD	GUARD	GEN	GENERAL			MB	MACHINE BOLT		
BOC	BACK OF CURB	DO	DISSOLVED OXYGEN, DIGITAL OUTPUT, DITTO	GEN	GENERAL	GFCI	GROUND FAULT CIRCUIT INTERRUPTER			MBR	MEMBER		
BOD	BOTTOM OF DUCT	DP	DEPTH	GFMU	GROUND FACE MASONRY UNIT	GJ	GROOVED JOINT			MC	MECHANICAL CONTRACTOR, MECHANICAL COUPLING		
BOG	BOTTOM OF GRILLE	DPDT	DOUBLE POLE, DOUBLE THROW	GL	GLASS	GG	GUTTER GRADE			MCB	METAL CORNER BEAD		
BOL	BOTTOM OF LOUVER, BOLLARD	DS	DOWN SPOUT	GLB	GLASS BLOCK, GLULAM BEAM	GJ	GROOVED JOINT			MCJ	MASONRY CONTROL JOINT		
BOP	BOTTOM OF PIPE	DUP	DOUBLE TEE, DRIP TRAP ASSEMBLY	GLD	GROUND	GL	GLASS			MDMJ	MODIFIED DOUBLE MECHANICAL JOINT		
BOR	BOTTOM OF REGISTER	DW	DRAWING	GLB	GLASS BLOCK, GLULAM BEAM	GP	GUY POLE			MECH	MECHANICAL		
BOT	BOTTOM	DWL	DOWEL	GR	GRADE	H	HIGH			MED	MEDIUM		
BOU	BOTTOM OF UNIT	DWR	DRAWER	GR	GRADE	HB	HOSE BIB			MFR	MANUFACTURER		
BP	BASE PLATE	E	EAST	EA	EACH, EXHAUST AIR	HBD	HARDBOARD			MH	MANHOLE, METAL HALIDE		
BRG	BEARING	EA	EACH, EXHAUST AIR	EC	ELECTRICAL CONTRACTOR	HC	HANDICAPPED, HOLLOW CORE, HORIZONTAL CURVE, HORIZONTAL CENTERLINE			MIN	MINIMUM		
BRGP	BEARING PLATE	EC	ELECTRICAL CONTRACTOR	ECC	ECCENTRIC	HD	HEADER			MIR	MIRROR		
BRKT	BRACKET	ED	EQUIPMENT DRAIN	ECC	ECCENTRIC	HDW	HEADER			MISC	MISCELLANEOUS		
BS	BOTH SIDES	EDB	ELECTRICAL DUCT BANK	ED	EQUIPMENT DRAIN	HEX	HEXAGONAL			MJ	MECHANICAL JOINT		
BTU	BRITISH THERMAL UNIT	EE	EACH END	EDB	ELECTRICAL DUCT BANK	HGR	HANGER			MLO	MAIN LUGS ONLY		
BTW	BETWEEN	EF	EACH FACE	EE	EACH END	HH	HANDHOLE			MMB	MEMBRANE		
BTWLD	BUTT WELD	EFF	EFFLUENT, EFFICIENCY	EE	EACH END	HID	HIGH-INTENSITY DISCHARGE			MO	MASONRY OPENING		
BU	BELL UP, BUILT-UP	EHH	ELECTRICAL HANDHOLE	EF	EACH FACE	HIM	HOLLOW METAL			MON	MONUMENT		
BUR	BUILT-UP ROOFING	EIFS	EXTERIOR INSULATION & FINISH SYSTEM	EFF	EFFLUENT, EFFICIENCY	HORIZ	HORIZONTAL			MPT	MALE PIPE THREAD		
BW	BOTH WAYS	EJ	EXPANSION JOINT	EHH	ELECTRICAL HANDHOLE	HP	HIGH POINT, HORSEPOWER			MRGWB	MOISTURE-RESISTANT GYPSUM WALLBOARD		
BYP	BYPASS	EL	ELBOW, ELEVATION	EIFS	EXTERIOR INSULATION & FINISH SYSTEM	HPC	HORIZONTAL POINT OF CURVATURE			MS	MOP SINK		
C TO C	CENTER TO CENTER	ELEC	ELECTRICAL	EJ	EXPANSION JOINT	HPS	HIGH-PRESSURE SODIUM			MSL	MEAN SEA LEVEL		
C&G	CURB AND GUTTER	EMBD	EMBEDDED	EL	ELBOW, ELEVATION	HPT	HORIZONTAL POINT OF TANGENCY			MT	MOUNT		
C	CHANNEL SHAPE, CENTIGRADE, CONDUIT	EMER	EMERGENCY	ELEC	ELECTRICAL	HS	HEADED STUD, HIGH STRENGTH			MU	MASONRY UNIT		
CAB	CABINET	EMH	ELECTRICAL MANHOLE	ELEC	ELECTRICAL	HSS	HOLLOW STRUCTURAL SHAPE			MULL	MULLION		
CAP	CAPACITY	ENCL	ENCLOSURE	ELEC	ELECTRICAL	HT	HEIGHT			MV	MEDIUM VOLTAGE		
CAT	CATALOG, CATALOGIORY	ENGR	ENGINEER	EMER	EMERGENCY	HTG	HEATING			MW	MONITORING WELL		
CAV	CAVITY	ENTR	ENTRANCE	EMH	ELECTRICAL MANHOLE	HV	HIGH VOLTAGE						
CB	CATCH BASIN	EOP	EDGE OF PAVEMENT	EMH	ELECTRICAL MANHOLE	HVAC	HEATING, VENTILATING AND AIR CONDITIONING						
CCB	CONCRETE BLOCK	EQ	EQUAL	ENCL	ENCLOSURE	HWD	HARDWOOD						
CCW	COUNTER CLOCKWISE	EQU	EQUIVALENT	ENGR	ENGINEER	HWL	HIGH WATER LEVEL						
CD	CONTROLLED-DENSITY FILL	EQUIP	EQUIPMENT	ENTR	ENTRANCE	HYD	HYDRAULIC						
CE	CONCRETE EDGE	EQUIV	EQUIVALENT	EOP	EDGE OF PAVEMENT	HZ	HERTZ, CYCLES PER SECOND						
CER	CERAMIC	ES	EACH SIDE, EQUAL SPACE, EMERGENCY SHOWER	EQ	EQUAL								
CF	CUBIC FEET (FOOT)	ESEW	EMERGENCY SHOWER AND EYE WASH	EQU	EQUIVALENT								
CFL	COUNTER FLASHING	EST	ESTIMATE	EQU	EQUIVALENT								
CHD	CHORD	EW	EACH WAY, EMERGENCY EYE/FACE WASH	EQU	EQUIVALENT								
CHFR	CHAMFER	EWC	ELECTRIC WATER COOLER	EQU	EQUIVALENT								
CHH	COMMUNICATION HANDHOLE	EWFB	EACH WAY, TOP AND BOTTOM	EQU	EQUIVALENT								
CI	CURB INLET	EXC	EXCAVATION	EQU	EQUIVALENT								
CIP	CAST-IN-PLACE	EXH	EXHAUST	EQU	EQUIVALENT								
CIPB	CONCRETE INTERLOCKING PAVER BALLAST	EXP	EXPANSION, EXPOSED	EQU	EQUIVALENT								
CIRC	CIRCULATION, CIRCULAR	EXST	EXISTING	EQU	EQUIVALENT								
CJ	CONSTRUCTION JOINT	EXT	EXTERIOR, EXTERNAL, EXTENSION	EQU	EQUIVALENT								
CJP	COMPLETE JOINT PENETRATION			EQU	EQUIVALENT								
CKT	CIRCUIT			EQU	EQUIVALENT								
CL	CENTERLINE, CLASS, CLOSE			EQU	EQUIVALENT								

**GENERAL NOTES:**

- THESE ABBREVIATIONS APPLY TO THE ENTIRE SET OF CONTRACT DRAWINGS.
- LISTING OF ABBREVIATIONS DOES NOT IMPLY THAT ALL ABBREVIATIONS ARE USED IN THE CONTRACT DRAWINGS.
- ABBREVIATIONS SHOWN ON THIS SHEET INCLUDE VARIATIONS OF A WORD. FOR EXAMPLE, "MOD" MAY MEAN MODIFY OR MODIFICATION; "INC" MAY MEAN INCLUDED OR INCLUDING AND "REINF" MAY MEAN EITHER REINFORCE OR REINFORCING.
- SEE INSTRUMENTATION LEGEND SHEET FOR PROJECT-SPECIFIC EQUIPMENT SYMBOLS, EQUIPMENT ABBREVIATIONS, AND PIPING SYSTEM ABBREVIATIONS.



ENGINEER:  
CIVIL  
TRAVIS HEIER  
KS PE NO. 21598

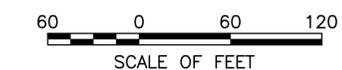
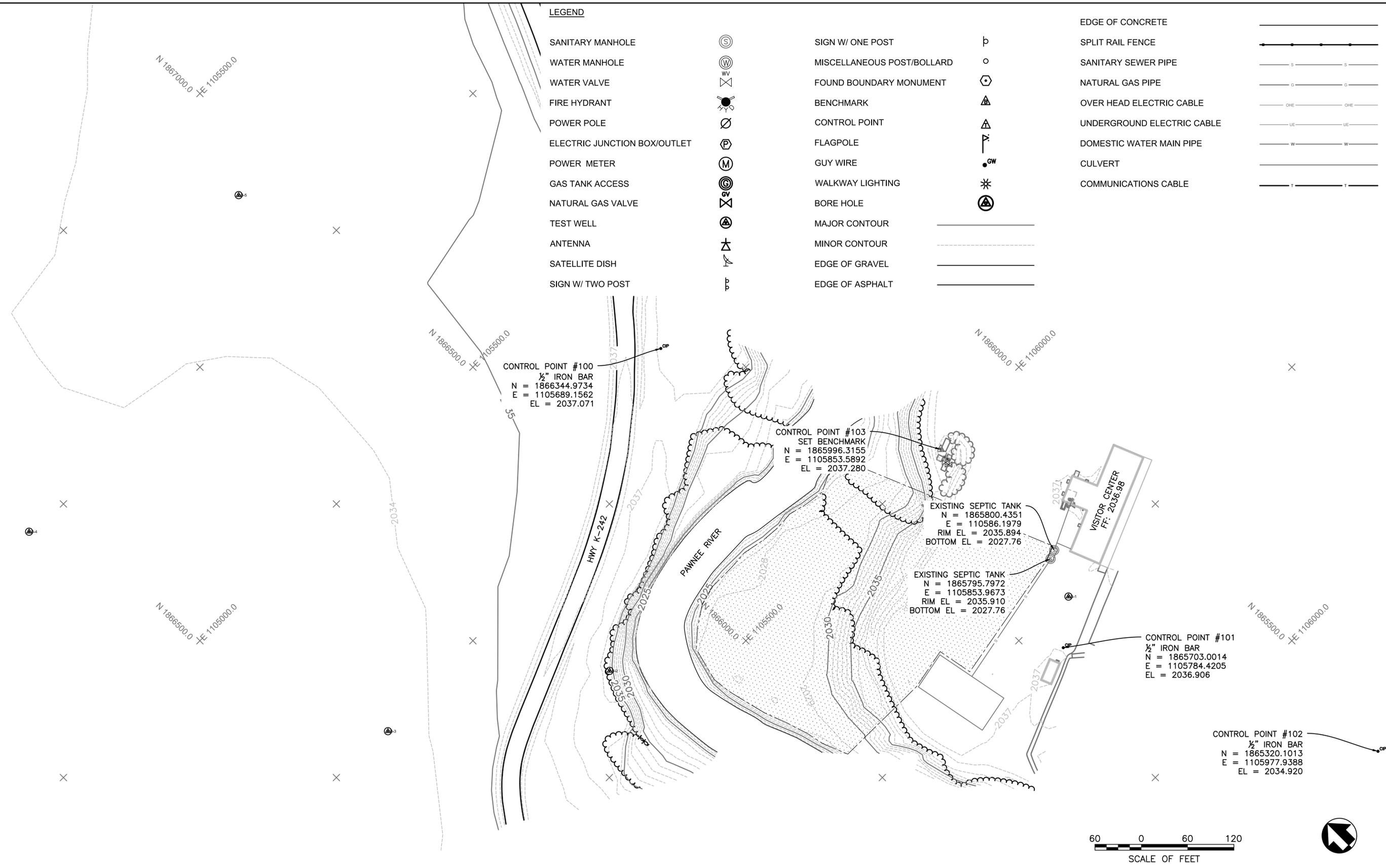
DESIGNED: L. SHAGLA	SUB SHEET NO.  <b>G2</b>	TITLE OF SHEET  <b>ABBREVIATIONS</b>	DRAWING NO.  <b>80085</b>
TECH. REVIEW: C. BAILY			PMIS/PKG NO. 226825
DATE: 02/25/22			SHEET 3 of 15
			FORT LARNED NATIONAL HISTORIC SITE

**LEGEND**

- SANITARY MANHOLE 
- WATER MANHOLE 
- WATER VALVE 
- FIRE HYDRANT 
- POWER POLE 
- ELECTRIC JUNCTION BOX/OUTLET 
- POWER METER 
- GAS TANK ACCESS 
- NATURAL GAS VALVE 
- TEST WELL 
- ANTENNA 
- SATELLITE DISH 
- SIGN W/ TWO POST 

- SIGN W/ ONE POST 
- MISCELLANEOUS POST/BOLLARD 
- FOUND BOUNDARY MONUMENT 
- BENCHMARK 
- CONTROL POINT 
- FLAGPOLE 
- GUY WIRE 
- WALKWAY LIGHTING 
- BORE HOLE 
- MAJOR CONTOUR 
- MINOR CONTOUR 
- EDGE OF GRAVEL 
- EDGE OF ASPHALT 

- EDGE OF CONCRETE 
- SPLIT RAIL FENCE 
- SANITARY SEWER PIPE 
- NATURAL GAS PIPE 
- OVER HEAD ELECTRIC CABLE 
- UNDERGROUND ELECTRIC CABLE 
- DOMESTIC WATER MAIN PIPE 
- CULVERT 
- COMMUNICATIONS CABLE 



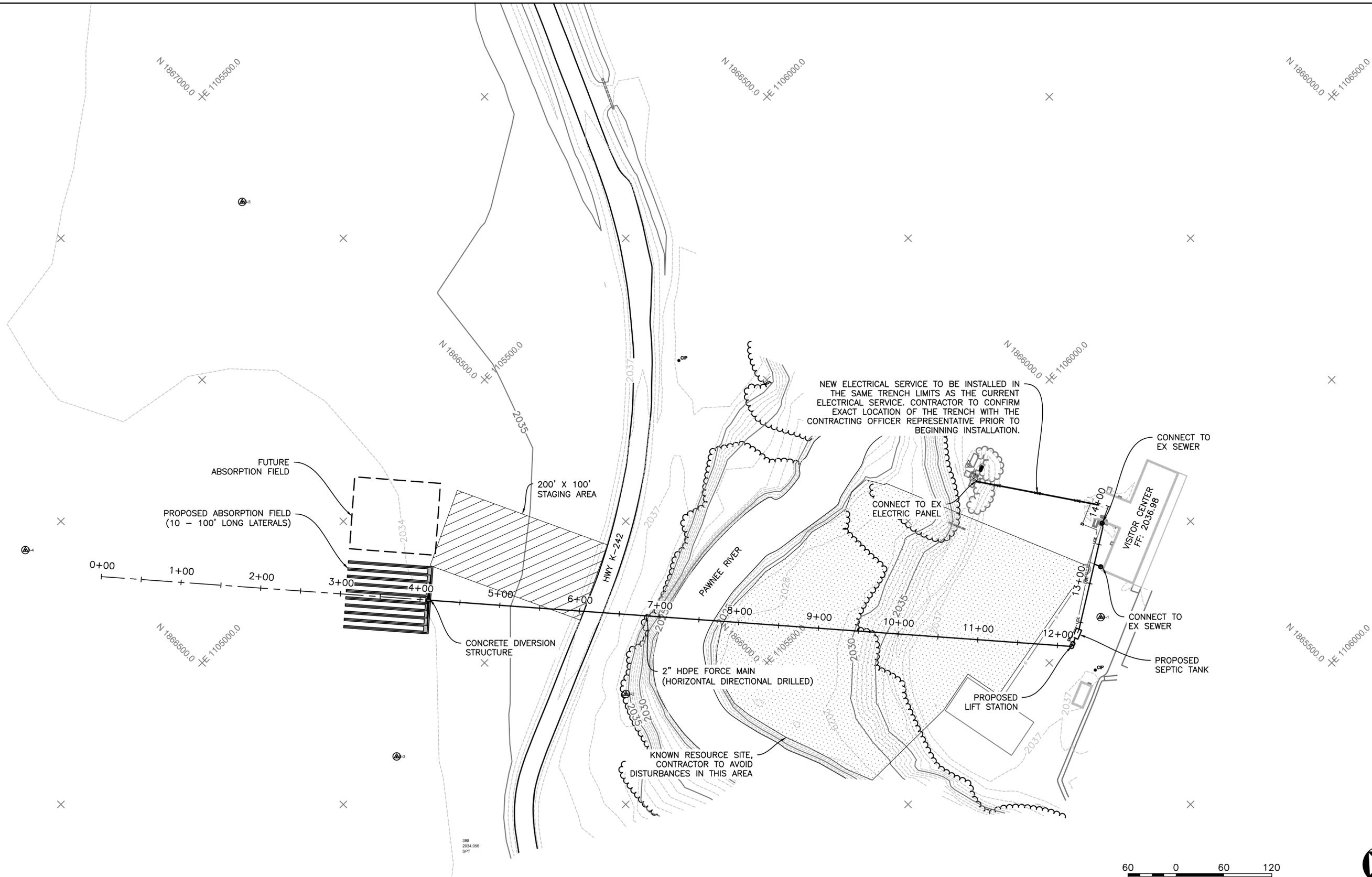
**COORDINATE SYSTEM DETAILS**  
 HORIZONTAL DATUM: NORTH AMERICAN DATUM OF 1983  
 HORIZONTAL PROJECTION: KANSAS STATE PLANE - SOUTH ZONE  
 VERTICAL DATUM: NORTH AMERICAN VERTICAL DATUM OF 1988  
 GEOID MODEL: GEOID 12B

**NOTE:**  
 AN OPUS SOLUTION WAS USED TO OBTAIN THE HORIZONTAL AND VERTICAL POSITION OF CONTROL POINT 100, 101, 102 AND SET BENCHMARK 103.



ENGINEER:  
 CIVIL  
 TRAVIS HEIER  
 KS PE NO. 21598

DESIGNED: L. SHAGLA	C1	TITLE OF SHEET <b>TOPOGRAPHIC SURVEY</b>	DRAWING NO. <b>80085</b>
TECH. REVIEW: C. BAILEY		FORT LARNED NATIONAL HISTORIC SITE	PMIS/PKG NO. 226825
DATE: 02/25/22			SHEET 4 of 15



NEW ELECTRICAL SERVICE TO BE INSTALLED IN THE SAME TRENCH LIMITS AS THE CURRENT ELECTRICAL SERVICE. CONTRACTOR TO CONFIRM EXACT LOCATION OF THE TRENCH WITH THE CONTRACTING OFFICER REPRESENTATIVE PRIOR TO BEGINNING INSTALLATION.

FUTURE ABSORPTION FIELD  
 PROPOSED ABSORPTION FIELD (10 - 100' LONG LATERALS)

200' X 100' STAGING AREA

CONNECT TO EX ELECTRIC PANEL

CONNECT TO EX SEWER

0+00 1+00 2+00 3+00 4+00

CONCRETE DIVERSION STRUCTURE

2" HDPE FORCE MAIN (HORIZONTAL DIRECTIONAL DRILLED)

CONNECT TO EX SEWER

PROPOSED SEPTIC TANK

PROPOSED LIFT STATION

KNOWN RESOURCE SITE, CONTRACTOR TO AVOID DISTURBANCES IN THIS AREA

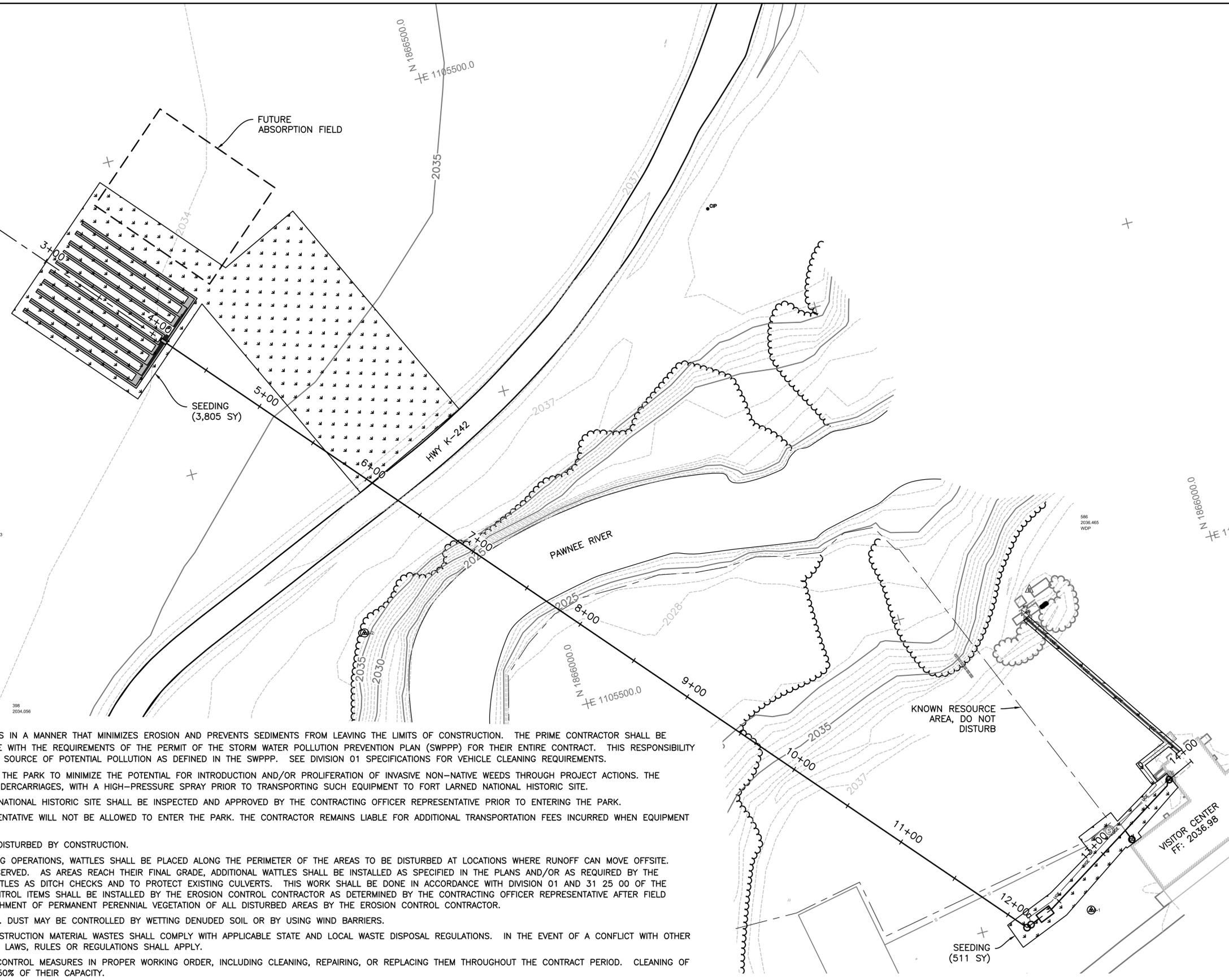


ENGINEER:  
 CIVIL  
 TRAVIS HEIER  
 KS PE NO. 21598

DESIGNED: L. SHAGLA	SUB SHEET NO. <b>C2</b>	TITLE OF SHEET <b>OVERALL SITE LAYOUT</b>	DRAWING NO. <b>80085</b>
TECH. REVIEW: C. BAILEY		FORT LARNED NATIONAL HISTORIC SITE	PMIS/PKG NO. 226825
DATE: 02/25/22			SHEET 5 of 15



ENGINEER:  
CIVIL  
TRAVIS HEIER  
KS PE NO. 21598



**SWPPP NOTES:**

1. ALL CONTRACTORS/SUBCONTRACTORS SHALL CONDUCT THEIR OPERATIONS IN A MANNER THAT MINIMIZES EROSION AND PREVENTS SEDIMENTS FROM LEAVING THE LIMITS OF CONSTRUCTION. THE PRIME CONTRACTOR SHALL BE RESPONSIBLE FOR THE DEVELOPMENT, IMPLEMENTATION AND COMPLIANCE WITH THE REQUIREMENTS OF THE PERMIT OF THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) FOR THEIR ENTIRE CONTRACT. THIS RESPONSIBILITY SHALL BE FURTHER SHARED WITH SUBCONTRACTORS WHOSE WORK IS A SOURCE OF POTENTIAL POLLUTION AS DEFINED IN THE SWPPP. SEE DIVISION 01 SPECIFICATIONS FOR VEHICLE CLEANING REQUIREMENTS.
2. CLEAN VEHICLES AND CONSTRUCTION EQUIPMENT PRIOR TO ENTRY INTO THE PARK TO MINIMIZE THE POTENTIAL FOR INTRODUCTION AND/OR PROLIFERATION OF INVASIVE NON-NATIVE WEEDS THROUGH PROJECT ACTIONS. THE CONTRACTOR IS REQUIRED TO WASH EQUIPMENT, WITH EMPHASIS ON UNDERCARRIAGES, WITH A HIGH-PRESSURE SPRAY PRIOR TO TRANSPORTING SUCH EQUIPMENT TO FORT LARNED NATIONAL HISTORIC SITE.
3. ALL VEHICLES AND CONSTRUCTION EQUIPMENT ENTERING FORT LARNED NATIONAL HISTORIC SITE SHALL BE INSPECTED AND APPROVED BY THE CONTRACTING OFFICER REPRESENTATIVE PRIOR TO ENTERING THE PARK.
4. EQUIPMENT NOT DEEMED CLEAN BY THE CONTRACTING OFFICER REPRESENTATIVE WILL NOT BE ALLOWED TO ENTER THE PARK. THE CONTRACTOR REMAINS LIABLE FOR ADDITIONAL TRANSPORTATION FEES INCURRED WHEN EQUIPMENT FAILS INSPECTION.
5. USE APPROVED NATIVE SEED AND/OR PLANTS AND REVEGETATE AREAS DISTURBED BY CONSTRUCTION.
6. PRIOR TO BEGINNING GRADING, EXCAVATION, OR CLEARING AND GRUBBING OPERATIONS, WATTLES SHALL BE PLACED ALONG THE PERIMETER OF THE AREAS TO BE DISTURBED AT LOCATIONS WHERE RUNOFF CAN MOVE OFFSITE. VEGETATION IN AREAS NOT NEEDED FOR CONSTRUCTION SHALL BE PRESERVED. AS AREAS REACH THEIR FINAL GRADE, ADDITIONAL WATTLES SHALL BE INSTALLED AS SPECIFIED IN THE PLANS AND/OR AS REQUIRED BY THE CONTRACTING OFFICER REPRESENTATIVE. THIS WILL INCLUDE USING WATTLES AS DITCH CHECKS AND TO PROTECT EXISTING CULVERTS. THIS WORK SHALL BE DONE IN ACCORDANCE WITH DIVISION 01 AND 31 25 00 OF THE SPECIFICATIONS. AS THE WORK PROGRESSES, ADDITIONAL EROSION CONTROL ITEMS SHALL BE INSTALLED BY THE EROSION CONTROL CONTRACTOR AS DETERMINED BY THE CONTRACTING OFFICER REPRESENTATIVE AFTER FIELD INVESTIGATION. THE CONSTRUCTION WILL BE COMPLETED WITH ESTABLISHMENT OF PERMANENT PERENNIAL VEGETATION OF ALL DISTURBED AREAS BY THE EROSION CONTROL CONTRACTOR.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ON SITE DUST CONTROL. DUST MAY BE CONTROLLED BY WETTING DENUDED SOIL OR BY USING WIND BARRIERS.
8. CONTRACTOR DISPOSAL OF UNUSED CONSTRUCTION MATERIALS AND CONSTRUCTION MATERIAL WASTES SHALL COMPLY WITH APPLICABLE STATE AND LOCAL WASTE DISPOSAL REGULATIONS. IN THE EVENT OF A CONFLICT WITH OTHER GOVERNMENTAL LAWS, RULES AND REGULATIONS, THE MORE RESTRICTIVE LAWS, RULES OR REGULATIONS SHALL APPLY.
9. THE CONTRACTOR IS REQUIRED TO MAINTAIN ALL TEMPORARY EROSION CONTROL MEASURES IN PROPER WORKING ORDER, INCLUDING CLEANING, REPAIRING, OR REPLACING THEM THROUGHOUT THE CONTRACT PERIOD. CLEANING OF SILT CONTROL DEVICES SHALL BEGIN WHEN THE FEATURES HAVE LOST 50% OF THEIR CAPACITY.
10. PERMITTEES MUST INSPECT DESIGNATED AREAS AT LEAST ONCE EVERY 14 CALENDAR DAYS AND WITHIN 24 HOURS AFTER ANY STORM EVENT OF 0.5 INCHES OR GREATER. KANSAS DEPARTMENT OF HEALTH AND ENVIRONMENT ALSO RECOMMENDS THAT PERMITTEES PERFORM A 'WALK THROUGH' INSPECTION OF THE CONSTRUCTION SITE BEFORE ANTICIPATED STORM EVENTS (OR SERIES OF EVENTS SUCH AS INTERMITTENT SHOWERS OVER A PERIOD OF DAYS) THAT COULD POTENTIALLY YIELD A SIGNIFICANT AMOUNT OF RUNOFF. INSPECTIONS MUST BE PERFORMED BY QUALIFIED PERSONNEL WITH EITHER THE OPERATOR'S OWN PERSONNEL OR CONSULTANTS HIRED TO PERFORM THE INSPECTIONS. THE INSPECTORS MUST BE KNOWLEDGEABLE AND POSSESS THE SKILLS TO ASSESS CONDITIONS AT THE CONSTRUCTION SITE THAT COULD IMPACT STORM WATER QUALITY AND ASSESS THE EFFECTIVENESS OF CONDITIONS AT THE CONSTRUCTION SITE THAT COULD IMPACT STORM WATER QUALITY AND ASSESS THE EFFECTIVENESS OF SEDIMENTATION AND EROSION CONTROL MEASURE CHOSEN TO CONTROL THE QUALITY OF THE SITES STORM WATER DISCHARGES.

**SEEDING NOTES:**

1. AFTER FINAL GRADING AND TOPSOIL PLACEMENT, SEED AND MULCH ALL AREAS WITHIN THE LIMITS OF CONSTRUCTION NOT INDICATED FOR OTHER SURFACING.

DESIGNED: L. SHAGLA	SUB SHEET NO. <b>C3</b>	TITLE OF SHEET <b>EROSION CONTROL</b>	DRAWING NO. <b>80085</b>
TECH. REVIEW: C. BAILEY			PMIS/PKG NO. 226825
DATE: 02/25/22		FORT LARNED NATIONAL HISTORIC SITE	SHEET <b>6</b> of <b>15</b>

PAWNEE RIVER

S88  
2036.465  
WDP

0'00096981 N  
+E 1106000.0

0'00096981 N  
+E 1105500.0

NEW ELECTRICAL SERVICE SHALL BE INSTALLED THROUGH THE EXISTING GAP IN THE SHRUBS AND TREES, ANY TREE AND SHRUB REMOVAL NECESSARY FOR INSTALLATION SHALL BE COORDINATED AND APPROVED IN ADVANCE BY THE CONTRACTING OFFICER REPRESENTATIVE.

KNOWN RESOURCE AREA, DO NOT DISTURB

REMOVE OLD SEWER LINE AS NEEDED FOR INSTALLATION OF NEW SYSTEM

REMOVE AND DISPOSE OF EX SEPTIC TANK. EX TANK IS BELIEVED TO BE 2,000 GAL AND CONCRETE, EXACT SIZE MAY VARY.

INSTALL WATER TIGHT CAP ON EX SEWER MAIN

VISITOR CENTER  
FF: 2036.98

ABANDON EX ABSORPTION FIELD IN-PLACE



ENGINEER:  
CIVIL  
TRAVIS HEIER  
KS PE NO. 21598



NOTES:

1. REMOVAL/ABANDONMENT OF THE EXISTING SEPTIC SYSTEM SHALL BE COMPLETED AFTER THE NEW SEPTIC SYSTEM IS OPERATIONAL.
2. CONTRACTOR IS RESPONSIBLE FOR PUMPING OUT THE EXISTING SEPTIC TANK AS NEEDED DURING CONSTRUCTION AND PRIOR TO DISPOSING OF THE TANK ONCE THE NEW SYSTEM IS OPERATIONAL. WASTE PUMPED FROM THE TANK SHALL BE DISPOSED OF AT AN APPROVED DISPOSAL LOCATION AND DOCUMENTATION OF DISPOSAL PROVIDED TO THE CONTRACTING OFFICER REPRESENTATIVE.

DESIGNED: L. SHAGLA	SUB SHEET NO. <b>C4</b>	TITLE OF SHEET <b>EXISTING CONDITIONS &amp; REMOVALS</b>	DRAWING NO. <b>80085</b>
TECH. REVIEW: C. BAILEY		FORT LARNED NATIONAL HISTORIC SITE	PMIS/PKG NO. 226825
DATE: 02/25/22			SHEET <b>7 of 15</b>

COORDINATE POINTS TABLE

X	NORTHING	EASTING	ELEVATION	DESCRIPTION
1	1866406.76	1105157.49	2030.68	INV @ END OF 4" LATERAL
2	1866327.61	1105225.99	2031.03	INV @ 90° PIPE BEND
3	1866459.76	1105218.74	2030.68	INV @ END OF 4" LATERAL
4	1866380.62	1105287.24	2031.03	INV @ 90° PIPE BEND
5	1866355.03	1105255.82	2034.51	DIVERSION STRUCTURE RIM ELEV
6	1866353.10	1105257.49	2031.99	INV @ CONNECT TO DIVERSION STRUCTURE
7	1865746.60	1105782.75	2032.47	INV @ CONNECT TO VALVE VAULT
8	1865745.41	1105786.11	2036.86	LIFT STATION & VALVE VAULT RIM ELEV
9	1865747.06	1105790.23	2031.37	INV @ CONNECT TO LIFT STATION
10	1865748.96	1105794.96	2031.47	INV @ CONNECT TO SEPTIC TANK
11	1865753.41	1105806.11	2031.71	INV @ CONNECT TO SEPTIC TANK
12	1865751.18	1105800.54	2036.86	PROPOSED SEPTIC TANK RIM ELEV
13	1865822.53	1105917.56	2034.33	INV @ 6" 45° PIPE BEND
14	1865825.92	1105918.77	2034.40	INV @ 6" 45° PIPE BEND
15	1865826.60	1105920.23	2034.44	INV @ 6" CLEAN OUT
16	1865827.27	1105921.69	2034.47	INV @ CONNECT TO EX SEWER
17	1865797.50	1105877.19	2033.38	INV @ 6"x4" WYE
18	1865789.44	1105880.37	2034.44	INV @ 4" CLEAN OUT
19	1865786.63	1105881.52	2034.47	INV @ CONNECT TO EX SEWER

Sanitary Sewer CL

NUMBER	PI STA	LENGTH	RADIUS	LINE/CHORD DIRECTION
L1	NA	1217.88'	NA	S40°53'39"E
L2	NA	23.40'	NA	N68°12'46"E
L3	NA	131.15'	NA	N58°11'29"E
L4	NA	3.60'	NA	N19°33'55"E
L5	NA	23.97'	NA	N65°17'10"E



ENGINEER:  
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KS PE NO. 21598

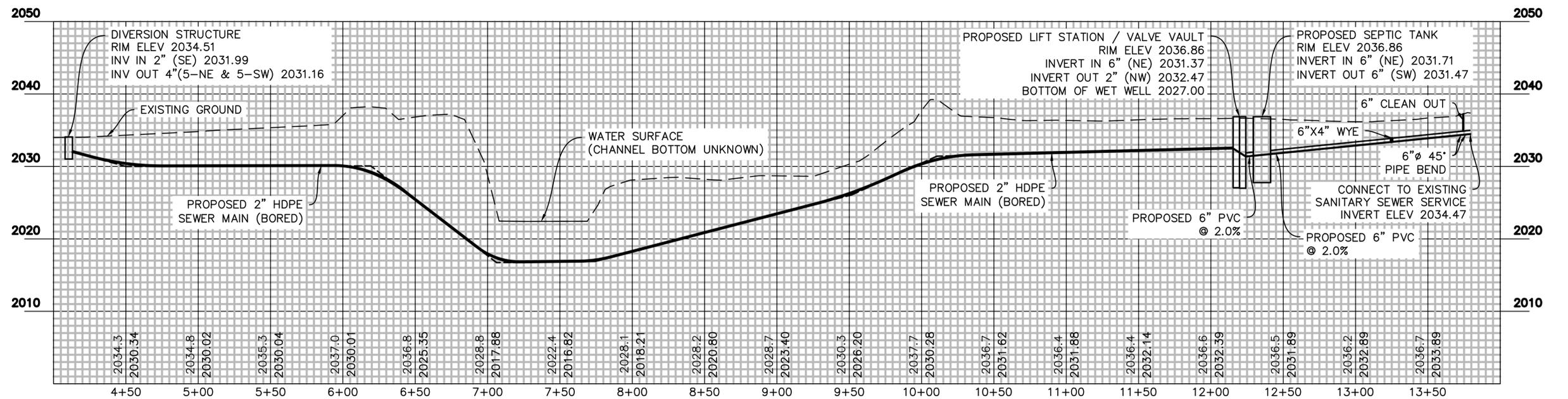
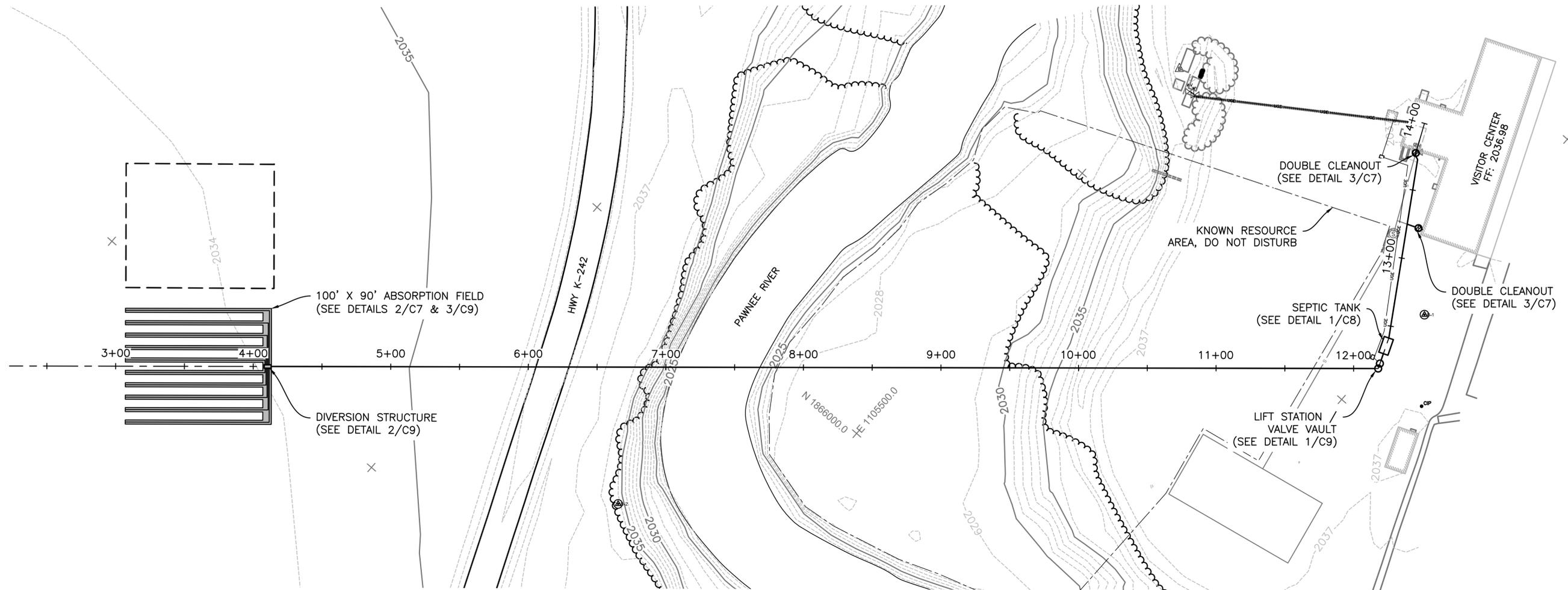


DESIGNED:  
L. SHAGLA  
L. SHAGLA  
TECH. REVIEW:  
C. BAILEY  
DATE:  
02/25/22

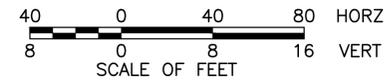
SUB SHEET NO.  
**C5**

TITLE OF SHEET  
**SITE LAYOUT POINTS & TABLE  
& ALIGNMENT TABLE**  
FORT LARNED NATIONAL HISTORIC SITE

DRAWING NO.  
**80085**  
PMIS/PKG NO.  
226825  
SHEET  
8 of 15



ENGINEER:  
CIVIL  
TRAVIS HEIER  
KS PE NO. 21598

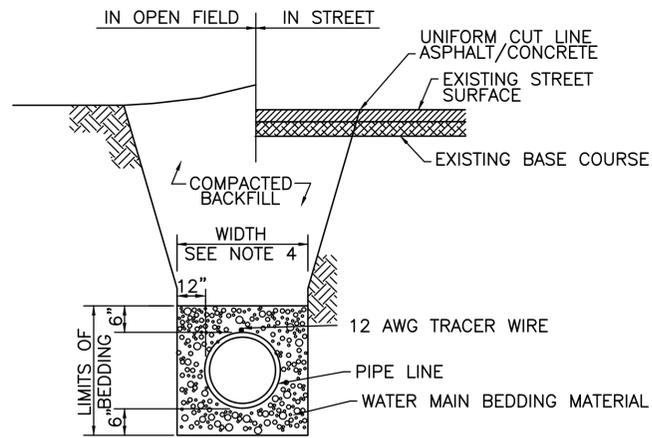


DESIGNED:  
L. SHAGLA  
L. SHAGLA  
TECH. REVIEW:  
C. BAILEY  
DATE:  
02/25/22

SUB SHEET NO.  
**C6**

TITLE OF SHEET  
**SANITARY SEWER  
PLAN & PROFILE**  
FORT LARNED NATIONAL HISTORIC SITE

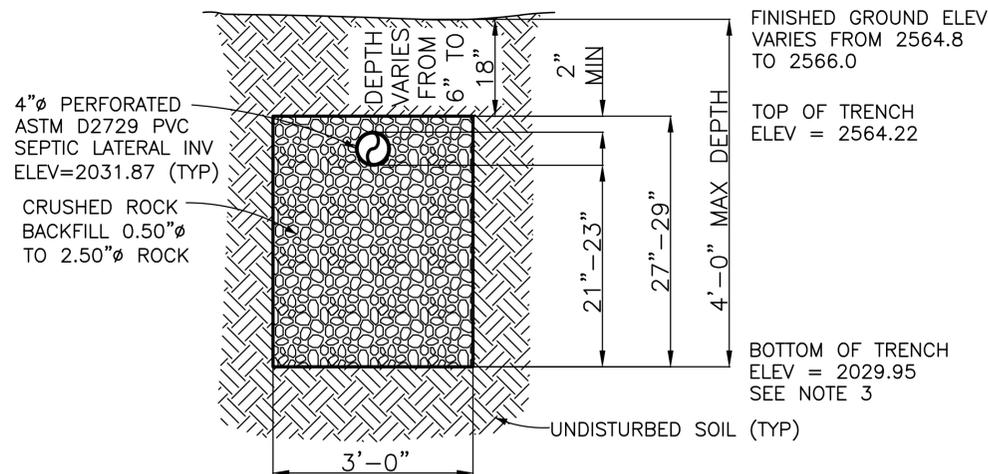
DRAWING NO.  
**80085**  
PMS/PKG NO.  
226825  
SHEET  
9 of 15



**NOTES:**

1. MINIMUM COVER TO BE 5' BELOW OFFICIAL STREET GRADE.
2. TRENCH TO BE BRACED OR SHEETED AS NECESSARY FOR THE SAFETY OF THE WORKMEN AND PROTECTION OF OTHER UTILITIES IN ACCORDANCE WITH APPLICABLE LOCAL, STATE AND FEDERAL SAFETY REGULATIONS.
3. PIPE SHALL BE BEDDED FROM 6" BELOW THE BOTTOM OF THE PIPE TO 6" ABOVE THE TOP OF THE PIPE.
4. TRENCH WIDTH SHALL NOT BE MORE THAN 16" NOR LESS THAN 12" WIDER THAN THE LARGEST OUTSIDE DIAMETER OF THE PIPE.
5. SHOULD THE TRENCH BE EXCAVATED WIDER THAN ALLOWED A CONCRETE CRADLE SHALL BE PLACED WITH 2,500 P.S.I CONCRETE FROM TRENCH BOTTOM TO PIPE SPRINGLINE.
6. INSTALLATION OF BEDDING AND PIPE: AFTER COMPLETION OF THE TRENCH EXCAVATION AND PROPER PREPARATION OF THE FOUNDATION, SIX INCHES (6") OF BEDDING MATERIAL SHALL BE PLACED ON THE TRENCH BOTTOM FOR SUPPORT UNDER THE PIPE. BELL HOLES SHALL BE DUG DEEP ENOUGH TO PROVIDE A MINIMUM OF TWO INCHES (2") OF CLEARANCE BETWEEN THE BELL AND BEDDING MATERIAL. ALL PIPE SHALL BE INSTALLED IN SUCH A MANNER AS TO INSURE FULL SUPPORT OF THE PIPE BARREL OVER ITS ENTIRE LENGTH. AFTER THE PIPE IS ADJUSTED FOR LINE AND GRADE, AND THE JOINT IS MADE, THE BEDDING MATERIAL SHALL BE CAREFULLY PLACED AND TAMPED UNDER THE HAUNCHES OF THE PIPE AND IN THE PREVIOUSLY DUG BELL HOLES.

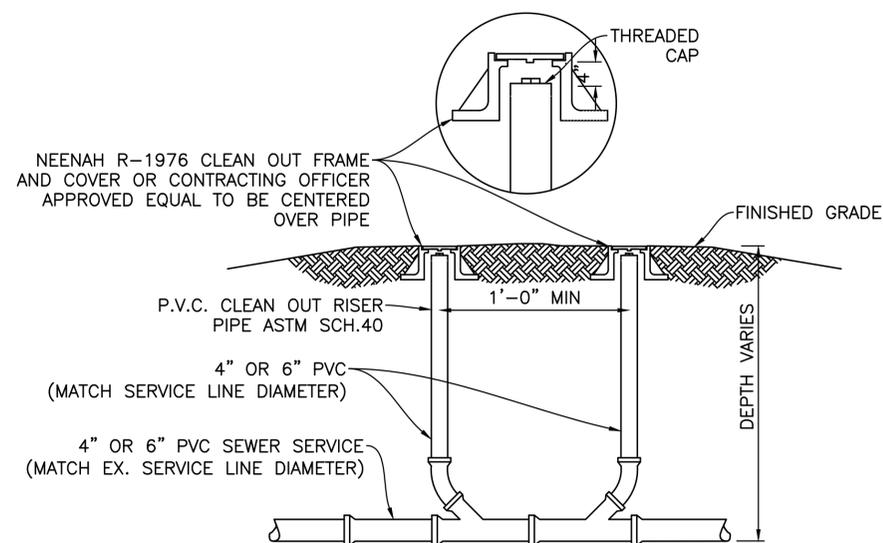
**1** TYPICAL TRENCH SECTION  
C7 NO SCALE



**NOTES:**

1. PROVIDE 6' OF UNDISTURBED SOIL BETWEEN THE TRENCHES.
2. ALL PIPING IS PVC, 4"Ø.
3. SLOPE TRENCH BOTTOM 4" PER 100' AWAY FROM DIVERSION STRUCTURE.
4. TRENCH EXCAVATION SHALL BE MADE WITH BUCKET EQUIPMENT HAVING SIDE CUTTERS OR RAKE TOOTH.

**2** TYPICAL LATERAL TRENCH DETAIL  
C7 NO SCALE

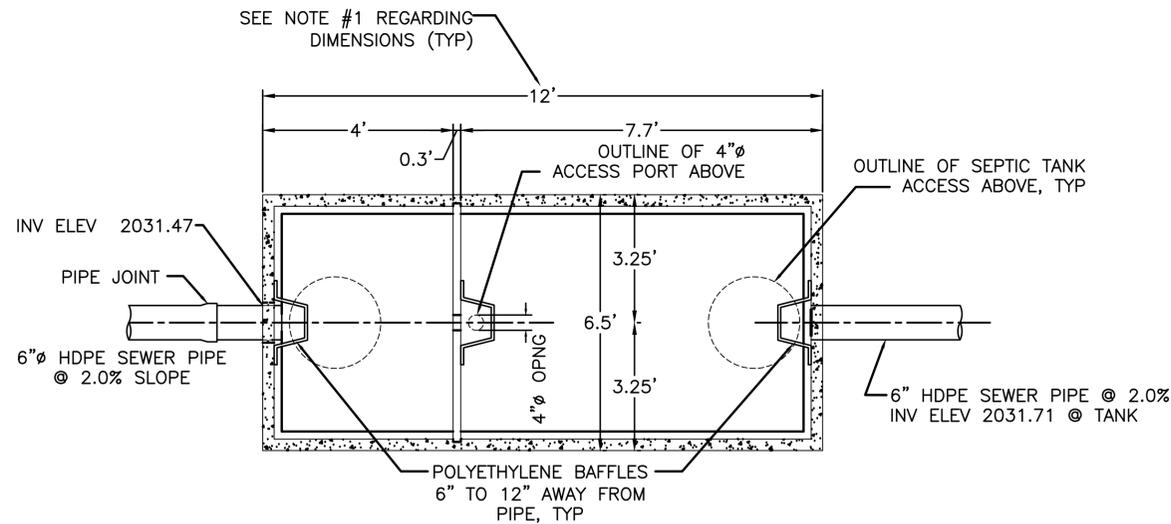
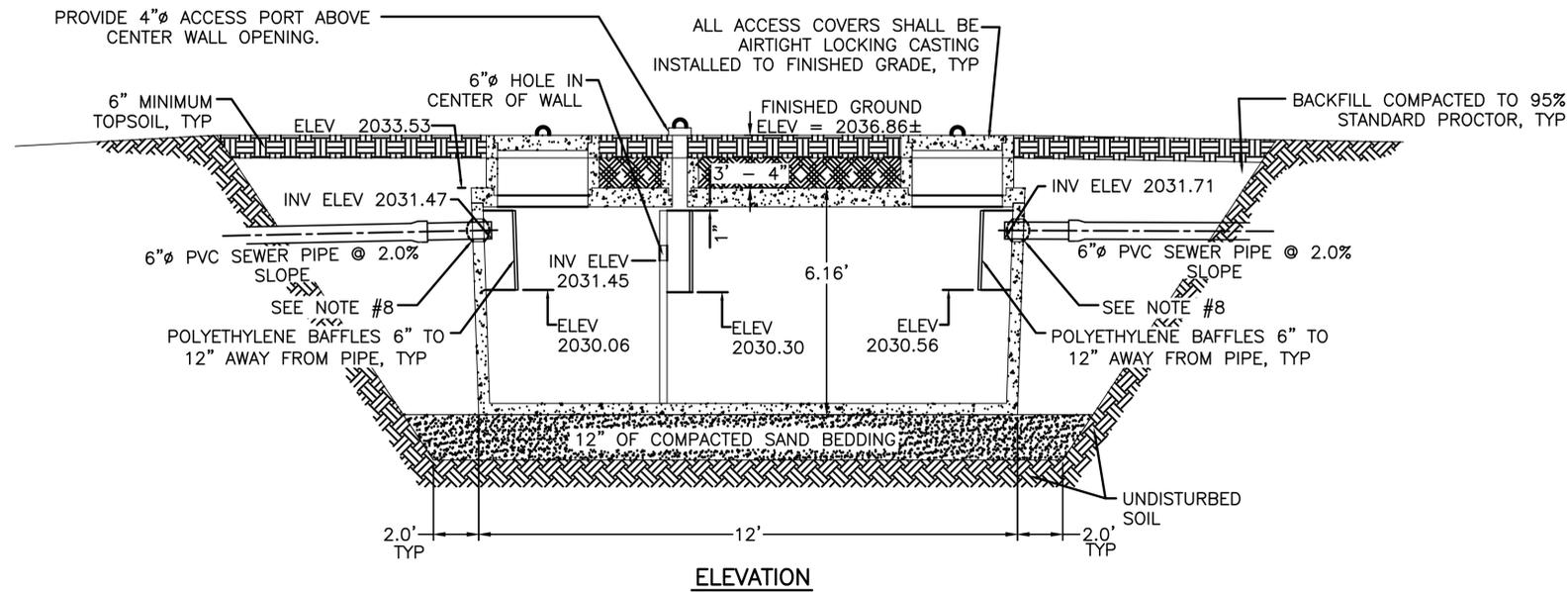


**3** DOUBLE CLEANOUT DETAIL  
C7 NO SCALE



ENGINEER:  
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TRAVIS HEIER  
KS PE NO. 21598

DESIGNED: L. SHAGLA	SUB SHEET NO. <b>C7</b>	TITLE OF SHEET <b>DETAILS</b>	DRAWING NO. <b>80085</b>
TECH. REVIEW: C. BAILEY			PMIS/PKG NO. 226825
DATE: 02/25/22		FORT LARNED NATIONAL HISTORIC SITE	SHEET 10 of 15



**PLAN**

1
C8
**SEPTIC TANK**  
 NO SCALE

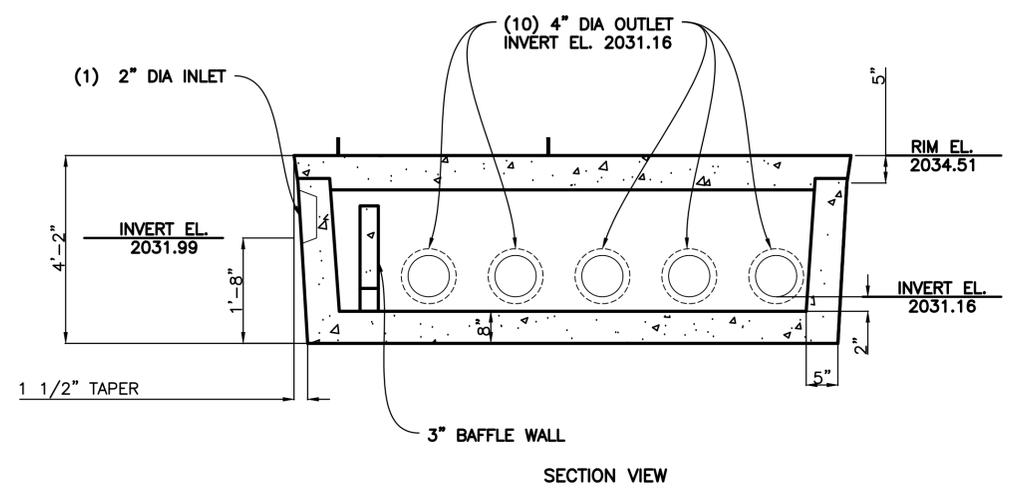
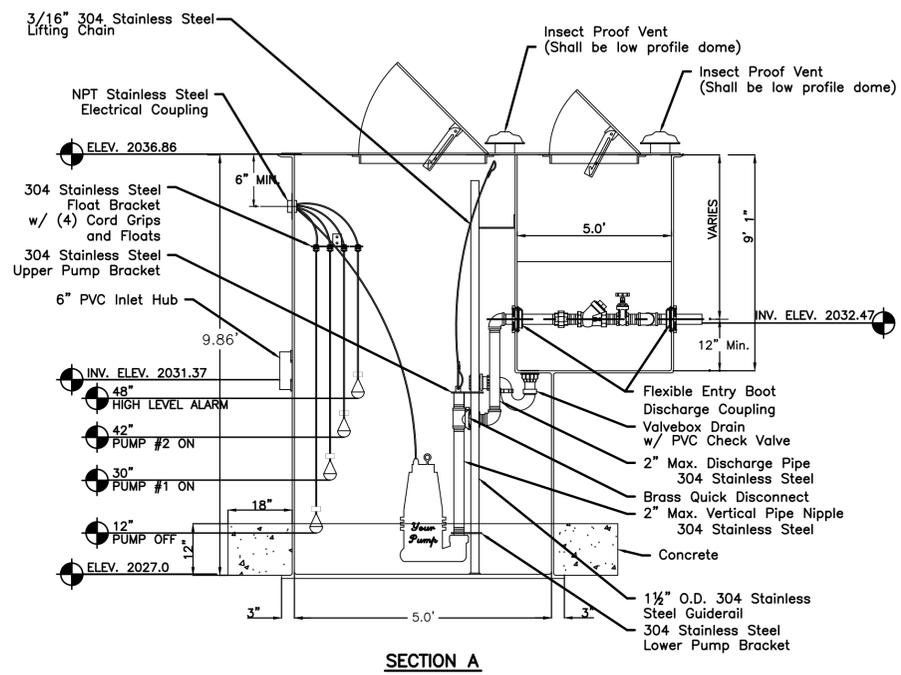
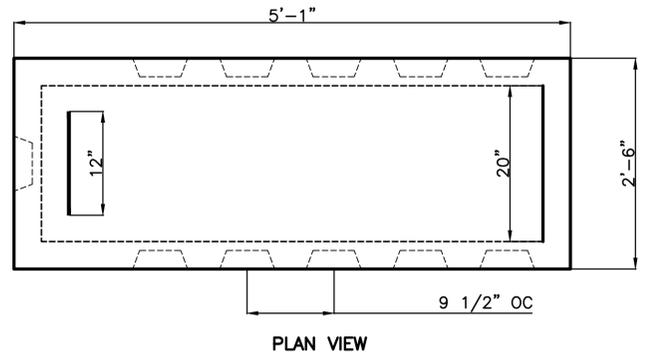
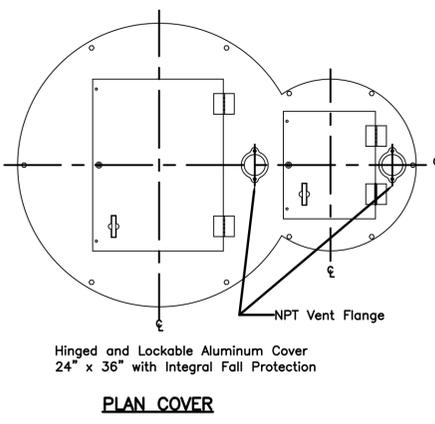
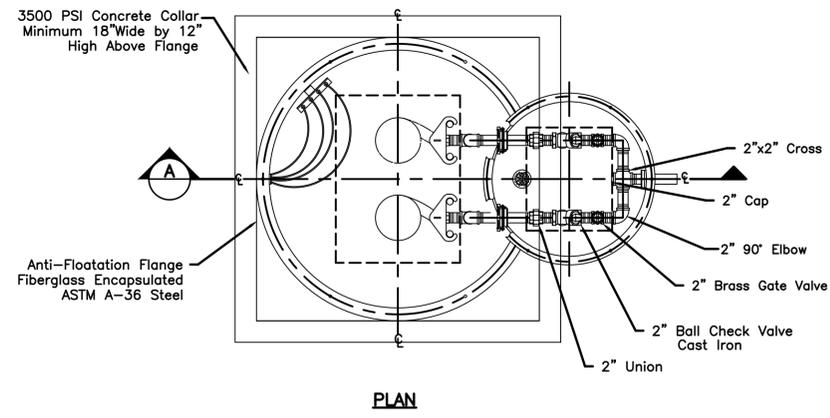
**GENERAL NOTES:**

1. SEPTIC TANK SHALL HAVE A MINIMUM STORAGE VOLUME OF 1,800 GALLONS. DIMENSIONS MAY DIFFER DEPENDING ON MANUFACTURER.
2. PROVIDE SEPTIC TANKS MEETING THE REQUIREMENTS OF ASTM C1227-13.
3. THE SEPTIC TANK, INCLUDING BAFFLES OR TEES, SHALL BE CONSTRUCTED OF MATERIALS RESISTANT TO ACID, DECAY, AND CORROSION.
4. TANKS SHALL BE CAPABLE OF SUPPORTING A STATIC VERTICAL LOAD OF AT LEAST 1000 POUNDS PER SQUARE FOOT WHEN BEDDED AND BACKFILLED TO THE TOP OF THE TANK.
5. CONCRETE SEPTIC TANKS SHALL BE CONSTRUCTED OF PORTLAND TYPE V SULFATE-RESISTANT CEMENT WITH A MINIMUM STRENGTH OF 4500 POUNDS PER SQUARE INCH.
6. THE WALLS AND COVERS OF CONCRETE SEPTIC TANKS SHALL BE AT LEAST 5" THICK AND THE BASE AT LEAST 8" THICK WITH REINFORCING BARS AND WELDED WIRE MESH.
7. HYDROSTATIC TESTING: CONTRACTOR SHALL SEAL THE TANK, FILL WITH WATER, AND LET STAND FOR 24 HOURS. THE TANK SHALL THEN BE REFILLED. THE TANK IS APPROVED IF WATER LEVEL IS HELD FOR 1 HOUR AFTER THE REFILL. IF THE TANK DOES NOT PASS THE HYDROSTATIC TEST, THE CONTRACTOR SHALL REPAIR THE TANK PER THE MANUFACTURER'S RECOMMENDATIONS AND RETEST. THE PROCEDURE SHALL BE REPEATED UNTIL THE TANK PASSES THE TEST.
8. PROVIDE WATERTIGHT SEAL WITH CORROSION RESISTANT NON-SHRINK GROUT, TYP ALL PIPE PENETRATIONS.



ENGINEER:  
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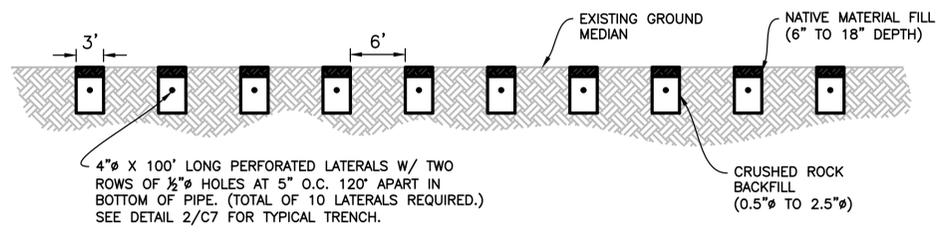
DESIGNED: L. SHAGLA	SUB SHEET NO. <b>C8</b>	TITLE OF SHEET <b>DETAILS</b>	DRAWING NO. <b>80085</b>
TECH. REVIEW: C. BAILEY			PMIS/PKG NO. 226825
DATE: 02/25/22		FORT LARNED NATIONAL HISTORIC SITE	SHEET <b>11</b> of <b>15</b>



NOTES:  
 1. CONCRETE: 4,500 PSI MINIMUM AFTER 28 DAYS.

1 PACKAGED LIFT STATION AND VALVE VAULT PLAN  
 C9 NO SCALE

2 DIVERSION STRUCTURE  
 C9 NO SCALE



3 TYPICAL LATERAL TRENCH LAYOUT DETAIL  
 C9 NO SCALE



ENGINEER:  
 CIVIL  
 TRAVIS HEIER  
 KS PE NO. 21598

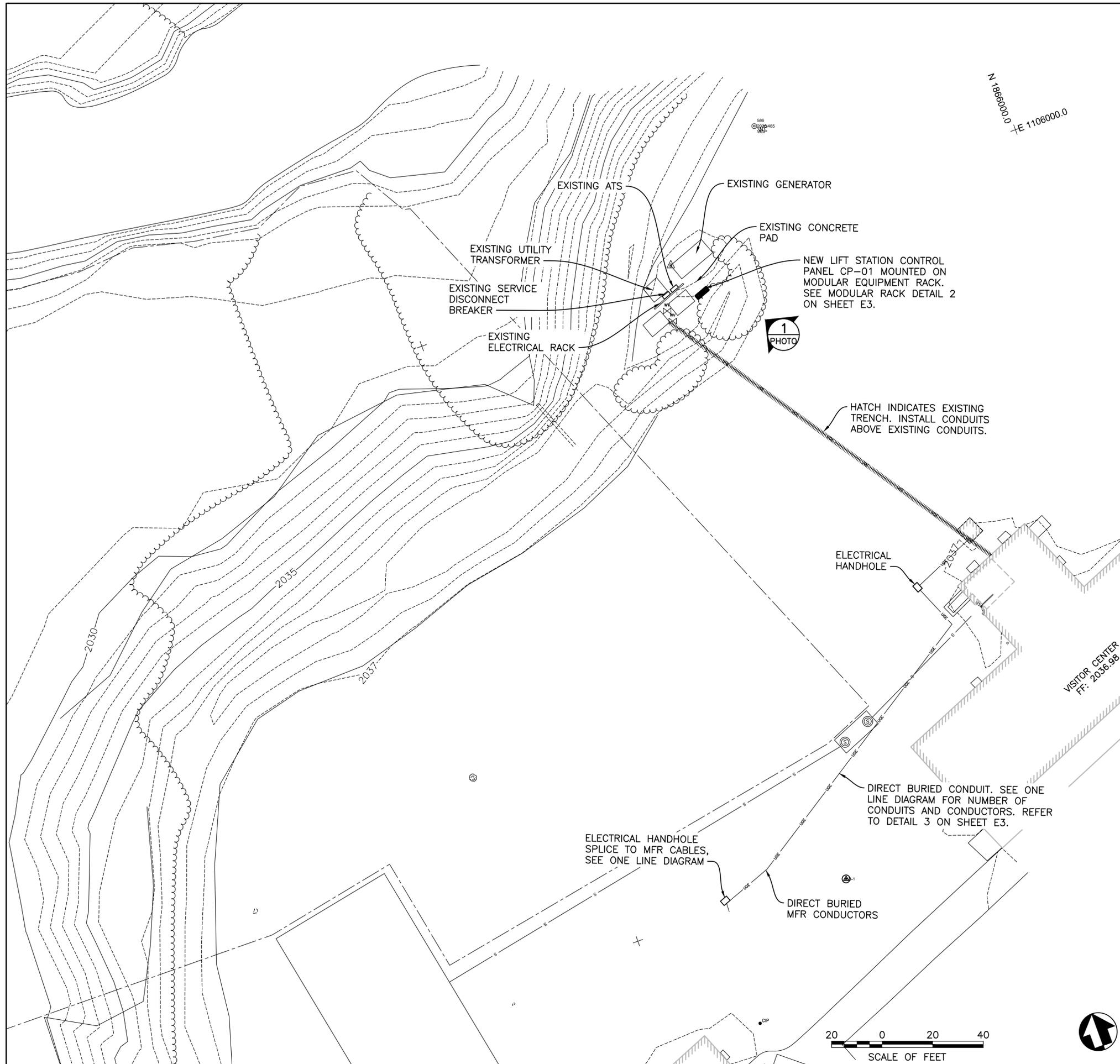
DESIGNED: L. SHAGLA	SUB SHEET NO. <b>C9</b>	TITLE OF SHEET <b>DETAILS</b>	DRAWING NO. <b>80085</b>
TECH. REVIEW: C. BAILEY			PMIS/PKG NO. 226825
DATE: 02/25/22			SHEET 12 of 15
FORT LARNED NATIONAL HISTORIC SITE			

# ONE-LINE, POWER, AND LIGHTING SYMBOLOLOGY

<p> LOW VOLTAGE CIRCUIT BREAKER (CB). RATING AND NO. OF POLES AS SHOWN. WHEN SPECIFIC TYPE, OTHER THAN MCCB, IS REQUIRED, X INDICATES TYPE.</p> <p><b>TYPES:</b>  MCCB - MOLDED CASE  ICCB - INSULATED CASE  LVP - LOW VOLTAGE POWER  MCP - MOTOR CIRCUIT PROTECTOR  (RATING PER CONNECTED LOAD)</p> <p><b>TRIP UNIT:</b>  L - LONG TIME PICKUP  S - SHORT TIME PICKUP  I - INSTANTANEOUS PICKUP  G - GROUND FAULT PICKUP  A - ARC ENERGY REDUCTION MODE</p> <p> INTERLOCK: X - INDICATES TYPE</p> <p><b>TYPES:</b>  E - ELECTRICAL  M - MECHANICAL  K - KEY</p> <p> GROUND FAULT PROTECTION</p> <p> MEDIUM VOLTAGE CIRCUIT BREAKER</p> <p> FUSE, RATING, AND NUMBER OF FUSES AS NOTED</p> <p> FUSED CUTOUT, CURRENT RATING, FUSE RATING, AND QUANTITY AS NOTED</p> <p> FUSIBLE SWITCH, CURRENT RATING, FUSE RATING, AND QUANTITY AS NOTED (3 POLE UON)</p> <p> NON-FUSED SWITCH, CURRENT RATING, AND NUMBER OF POLES AS NOTED (3 POLE UON)</p> <p> DISCONNECT OR DRAWOUT CONNECTION</p> <p> MAGNETIC MOTOR STARTER AND SEPARATELY MOUNTED COMBINATION MAGNETIC MOTOR STARTER</p> <p> MOTOR/LOAD CONTROLLER AND SEPARATELY MOUNTED MOTOR/LOAD CONTROLLER WITH SHORT CIRCUIT PROTECTION AND DISCONNECT</p> <p><b>MOTOR STARTER AND CONTROLLER SUBSCRIPTS:</b></p> <p>A - MAGNETIC STARTER NEMA SIZE</p> <p>B - STARTER TYPE  NONE - FULL VOLTAGE NON-REVERSING (FVNR)  FVR - FULL VOLTAGE REVERSING  2S - TWO SPEED  RVAT - REDUCED VOLTAGE AUTO TRANSFORMER</p> <p>C - CONTROL DIAGRAM OR CONTROLS SCHEDULE NUMBER (IF REQUIRED)</p> <p>D - CONTROLLER TYPE  VFD - VARIABLE FREQUENCY DRIVE  SS - SOLID STATE  CONT - CONTACTOR</p> <p> SEPARATELY MOUNTED COMBINATION MOTOR STARTER OR CONTROLLER; SEE ELECTRICAL ONE - LINE DIAGRAM OR SCHEDULE FOR DESCRIPTION</p> <p> SEPARATELY MOUNTED MOTOR STARTER OR CONTROLLER; SEE ELECTRICAL ONE-LINE DIAGRAM OR SCHEDULE FOR DESCRIPTION.</p> <p> NON-FUSED SAFETY SWITCH, 30A, 3P, X INDICATES AMP RATING GREATER THAN 30A</p> <p> FUSED SAFETY SWITCH, 3P, X INDICATES AMP RATING GREATER THAN 30A, Y INDICATES FUSE SIZE</p> <p> SEPARATELY MOUNTED CIRCUIT BREAKER; SEE ELECTRICAL ONE - LINE DIAGRAM OR SCHEDULE FOR DESCRIPTION</p>	<p> MOTOR WITH DESIGN HORSEPOWER (WHEN INDICATED)</p> <p> GENERATOR</p> <p> TRANSFER SWITCH, CURRENT RATING, AND NUMBER OF POLES AS NOTED  ATS - AUTOMATIC  MTS - MANUAL</p> <p> TRANSFORMER  Δ 3-PHASE, 3-WIRE DELTA CONNECTION  ⏚ 3-PHASE, 4-WIRE GROUNDED WYE CONNECTION</p> <p> SWITCHBOARD OR PANELBOARD; NAME, VOLTAGE, PHASE, NUMBER OF WIRES WHEN INDICATED</p> <p> NON-MOTOR LOAD WITH DESIGN KVA, KW, OR AMP</p> <p> VOLTAGE TRANSFORMER (VT, PT, OR CPT)</p> <p> CURRENT TRANSFORMER (CT)</p> <p> UTILITY WATT-HOUR METER PER UTILITY REQUIREMENTS</p> <p> DIGITAL METERING PACKAGE</p> <p> GROUND</p> <p> LIGHTNING ARRESTER</p> <p> LOW VOLTAGE SURGE PROTECTIVE DEVICE</p> <p> SELECTOR SWITCH</p> <p> PUSHBUTTON</p> <p> INSTRUMENTATION / CONTROL DEVICE</p> <p> SOLENOID VALVE</p> <p> CONTROL PANEL INTEGRAL OR PROVIDED WITH ASSOCIATED EQUIPMENT</p> <p> CONTROL PANEL WITH DISCONNECT SWITCH INTEGRAL OR PROVIDED WITH ASSOCIATED EQUIPMENT</p> <p> JUNCTION OR PULL BOX</p> <p> PANELBOARD (250V TO 600V)</p> <p> PANELBOARD (LESS THAN 250V)</p> <p> ELECTRICAL EQUIPMENT ENCLOSURE: SWITCHBOARD, MOTOR CONTROL CENTER, CONTROL PANEL, TRANSFORMER OR OTHER EQUIPMENT AS INDICATED. ESTIMATED SIZE AS INDICATED. WHEN USED X INDICATES EQUIPMENT TYPE.</p> <p><b>EQUIPMENT TYPES:</b>  ATS - AUTOMATIC TRANSFER SWITCH  CP - CONTROL PANEL  MTS - MANUAL TRANSFER SWITCH  MCC - MOTOR CONTROL CENTER  UPS - UNINTERRUPTIBLE POWER SUPPLY  VFD - VARIABLE FREQUENCY DRIVE  SB - SWITCHBOARD  SG - SWITCHGEAR  T - TRANSFORMER</p>	<p> CEILING/PENDANT/BOLLARD MOUNTED LUMINAIRE, LAMP TYPE AS SPECIFIED</p> <p> CEILING/PENDANT/BOLLARD MOUNTED LUMINAIRE, LAMP TYPE AS SPECIFIED, EMERGENCY (INTERNAL OR EXTERNAL POWER SOURCE AS INDICATED)</p> <p> WALL MOUNTED LUMINAIRE, LAMP TYPE AS SPECIFIED</p> <p> WALL MOUNTED LUMINAIRE, LAMP TYPE AS SPECIFIED, EMERGENCY (INTERNAL OR EXTERNAL POWER SOURCE AS INDICATED)</p> <p> WALL MOUNTED FLOOD LUMINAIRE, LAMP TYPE AS SPECIFIED</p> <p> POLE/STANCHION MOUNTED LUMINAIRE, LAMP TYPE AS SPECIFIED</p> <p> POLE/STANCHION MOUNTED LUMINAIRE, LAMP TYPE AS SPECIFIED, EMERGENCY (INTERNAL OR EXTERNAL POWER SOURCE AS INDICATED)</p> <p> POLE/STANCHION MOUNTED FLOOR LUMINAIRE, LAMP TYPE AS SPECIFIED</p> <p> CEILING/PENDANT MOUNTED LUMINAIRE, LAMP TYPE AS SPECIFIED</p> <p> WALL MOUNTED LUMINAIRE, LAMP TYPE AS SPECIFIED</p> <p> CEILING/PENDANT MOUNTED LUMINAIRE, LAMP TYPE AS SPECIFIED, ALL OR PARTIAL EMERGENCY (INTERNAL OR EXTERNAL POWER SOURCE AS INDICATED)</p> <p> WALL MOUNTED LUMINAIRE, LAMP TYPE AS SPECIFIED, ALL OR PARTIAL EMERGENCY (INTERNAL OR EXTERNAL POWER SOURCE AS INDICATED)</p> <p> EMERGENCY LIGHT, NUMBER OF ATTACHED HEADS AS SHOWN</p> <p> EMERGENCY LIGHT, REMOTE MOUNTED HEAD</p> <p> DOUBLE-FACED CEILING OR WALL MOUNTED EXIT LIGHT; DIRECTIONAL ARROWS (IF REQUIRED) AS INDICATED ON PLANS</p> <p> SINGLE-FACED CEILING OR WALL MOUNTED EXIT LIGHT; DIRECTIONAL ARROWS (IF REQUIRED) AS INDICATED ON PLANS</p> <p><b>LIGHTING FIXTURE SUBSCRIPTS:</b>  X - INDICATES LUMINAIRE TYPE PER LUMINAIRE SCHEDULE  Y - INDICATES CIRCUIT NUMBER FROM PANELBOARD  Z - INDICATES CONTROLLING SWITCH (IF REQUIRED)  NL - NIGHT LIGHT UNSWITCHED</p> <p> WALL SWITCH</p> <p><b>SUBSCRIPTS:</b>  X - INDICATES TYPE  NONE - SINGLE POLE  2 - DOUBLE POLE  3 - THREE-WAY  4 - FOUR-WAY  K - KEY SWITCH  P - PILOT LIGHT  L - LIGHTED HANDLE  DM - DIMMING  MC - MOMENTARY CONTACT  T - TIMER</p> <p>Y - INDICATES CONTROLLING SWITCH (IF REQUIRED)</p> <p> MANUAL MOTOR STARTER</p> <p><b>SUBSCRIPTS:</b>  X - INDICATES TYPE  HP - HORSEPOWER RATED  TE - HORSEPOWER RATED WITH THERMAL ELEMENT  FT - HORSEPOWER RATED WITH FUSETRON FUSE</p> <p>Y - INDICATES SWITCH TYPE  NONE - TOGGLE SWITCH TYPE  R - ROTARY SWITCH TYPE</p> <p> PHOTOCELL</p> <p> TIME CLOCK</p> <p> LIGHTING CONTROL OCCUPANCY SENSOR, WALL MOUNTED, X INDICATES SPECIFIC TYPE AS SPECIFIED</p> <p> LIGHTING CONTROL OCCUPANCY SENSOR, CEILING MOUNTED, X INDICATES SPECIFIC TYPE AS SPECIFIED</p> <p> ROOM/AREA LIGHTING CONTROL TYPE, SEE LIGHTING CONTROL SCHEDULE FOR REQUIREMENTS</p> <p> LOW VOLTAGE DIGITAL WALL SWITCH, NUMBER INDICATES QUANTITY OF PUSH BUTTONS PER SINGLE GANG PLATE, LETTER INDICATES CONTROL ZONE WHEN SHOWN</p>	<p> PLUG-IN RECEPTACLE STRIP, QUANTITY AND SPACING OF RECEPTACLES AS NOTED OR SPECIFIED</p> <p> SPECIAL-PURPOSE RECEPTACLE AS DEFINED ON PLANS</p> <p> TWO RECEPTACLES IN 2-GANG BOX UNDER COMMON COVER PLATE</p> <p> DUPLEX RECEPTACLE</p> <p> SIMPLEX RECEPTACLE</p> <p> RECESSED FLOOR MOUNTED BOX, QUANTITY AND TYPE OF RECEPTACLES AS INDICATED</p> <p><b>SUBSCRIPTS:</b>  X - INDICATES TYPE  GFCI - GROUND FAULT CIRCUIT INTERRUPTER  IG - ISOLATED GROUND  TR - TAMPER RESISTANT  PLH - PLUG LOAD HALF CONTROLLED  PLD - PLUG LOAD DUAL CONTROLLED  USB - USB CHARGING STATION  SPD - SURGE PROTECTIVE DEVICE</p> <p>Y - INDICATES CIRCUIT NUMBER FROM PANELBOARD</p> <p> CONDUIT TURNING UP</p> <p> CONDUIT TURNING DOWN</p> <p> HOMERUN TO SOURCE (E.G. PANELBOARD, MCC) NUMBER IN PARENTHESES REPRESENTS CONDUCTOR SIZE OTHER THAN #12 SINGLE PHASE: 2#12, 1#12G IN 3/4" C THREE PHASE: 3#12, 1#12G IN 3/4" C UNLESS OTHERWISE NOTED, CONDUCTOR SIZE IS FOR ENTIRE CIRCUIT, SOURCE TO LAST DEVICE. ALSO, SEE ONE LINE DIAGRAM FOR CIRCUIT REQUIREMENTS</p> <p> CONDUIT CONNECTION TO EQUIPMENT</p> <p> CIRCUIT RUN BETWEEN DEVICES EXPOSED IN NON-ARCHITECTURALLY FINISHED AREAS; CONCEALED IN ARCHITECTURALLY FINISHED AREAS. CONDUIT AND CONDUCTOR SIZES SHALL BE THE SAME AS THE HOMERUN FOR THE CIRCUIT.</p> <p> CONDUIT RUN BETWEEN DEVICES CONCEALED IN NON-ARCHITECTURALLY FINISHED AREAS OR UNDER FLOOR SLAB. CONDUIT AND CONDUCTOR SIZES SHALL BE THE SAME AS THE HOMERUN FOR THE CIRCUIT.</p> <p> CIRCUIT HASH MARKS (WHEN INDICATED); LONG, SHORT, SINGLE DOT, AND DOUBLE DOT REPRESENT PHASE, NEUTRAL, EQUIPMENT GROUND, AND ISOLATED EQUIPMENT GROUND, RESPECTIVELY. X REPRESENTS CONDUCTOR SIZE OTHER THAN #12 IN 3/4" CONDUIT.</p> <p> CIRCUIT CONTINUATION</p> <p> CONDUIT STUBBED OUT AND CAPPED</p> <p> CORD AND PLUG CONNECTION</p> <p> CONDUIT TAG OR CIRCUIT NUMBER - WIRE AND CONDUIT SIZE AS SPECIFIED IN CIRCUIT SCHEDULE ON THE SHEETS</p> <p> GROUND CABLE</p> <p> GROUND ROD</p> <p><b>GENERAL NOTES:</b></p> <ol style="list-style-type: none"> <li>THIS IS A STANDARD ELECTRICAL SYMBOLOLOGY SHEET. NOT ALL SYMBOLS MAY BE USED ON THIS PROJECT.</li> <li>SCREENING OR SHADING OF WORK IS USED TO INDICATE EXISTING COMPONENTS OR TO DE-EMPHASIZE PROPOSED IMPROVEMENTS TO HIGHLIGHT SELECTED TRADE WORK. REFER TO CONTEXT OF EACH SHEET FOR USAGE.</li> <li>SEE P&amp;ID LEGEND SHEET FOR PROJECT SPECIFIC EQUIPMENT SYMBOLS, EQUIPMENT ABBREVIATIONS, AND PIPING SYSTEM ABBREVIATIONS.</li> </ol>
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ENGINEER:  
ELECTRICAL  
NATHAN W. WITTE  
KS PE NO. 26486

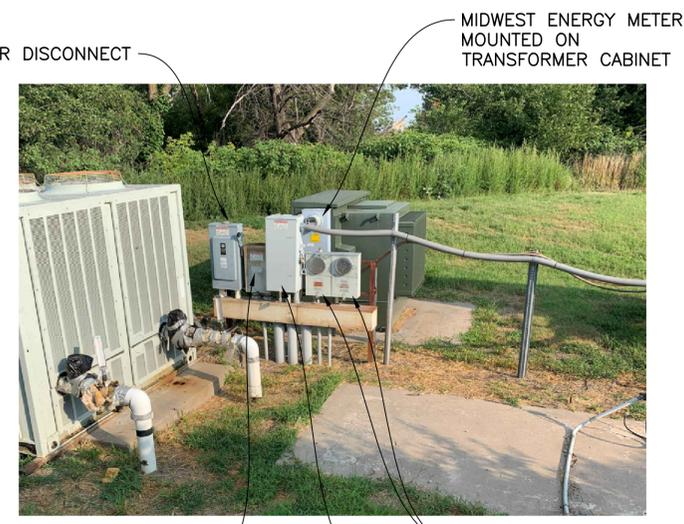
DESIGNED: J. MURPHY	SUB SHEET NO. <b>E1</b>	TITLE OF SHEET <b>ELECTRICAL SYMBOLS</b>	DRAWING NO. <b>80085</b>
TECH. REVIEW: R. BRICKEY			PMS/PKG NO. 226825
DATE: 02/25/22		FORT LARNED NATIONAL HISTORIC SITE	SHEET 13 of 15



N 1866000.0  
E 1106000.0

**ELECTRICAL NOTE:**

1. THIS DRAWING IS PREPARED FROM LIMITED EXISTING DRAWINGS. FIELD VERIFY EXISTING CONDITIONS FOR ACCURACY. COORDINATE AND ADJUST ROUTING AND GRADING OF NEW CONDUIT TO AVOID INTERFERENCES.
2. VERIFY EXACT LOCATION AND RATING OF EXISTING EQUIPMENT MODIFIED BY THIS INSTALLATION AND CONFIRM WITH ENGINEER ANY DISCREPANCIES FOUND.
3. UNLESS NOTED OTHERWISE, ALL EXISTING ELECTRICAL EQUIPMENT SHALL REMAIN OPERATIONAL. COORDINATE OUTAGES WITH OWNER.
4. ALL CONDUIT MUST BE SCHED 40 PVC, WITH PVC COATED RGS RISER TO GRADE PER NPS STANDARD.
5. LIFT STATION HAZARDOUS CLASSIFICATION:
  - 5.a. INSIDE WETWELL: CLASS 1 DIVISION 1 PER NFPA 820 TABLE 4 LINE 14A.
  - 5.b. OUTSIDE WETWELL: CLASS 1 DIVISION 2 ENVELOPE EXISTS WITHIN RADIUS OF 3 FT ABOVE HATCHES FROM GROUND LEVEL UP TO 18" HEIGHT.
  - 5.c. VENT: CLASS 1 DIVISION 1 WITHIN 3 FT RADIUS OF TOP OF VENT, AND CLASS 1 DIVISION 2 FROM 3-5 FT RADIUS OF TOP OF VENT.



COOLING TOWER DISCONNECT

MIDWEST ENERGY METER MOUNTED ON TRANSFORMER CABINET

SERVICE DISCONNECT BREAKER

METERS  
MANUAL TRANSFER SWITCH

REFERENCE PHOTO #1

DIRECT BURIED CONDUIT. SEE ONE LINE DIAGRAM FOR NUMBER OF CONDUITS AND CONDUCTORS. REFER TO DETAIL 3 ON SHEET E3.

ELECTRICAL HANDHOLE SPLICE TO MFR CABLES, SEE ONE LINE DIAGRAM

DIRECT BURIED MFR CONDUCTORS

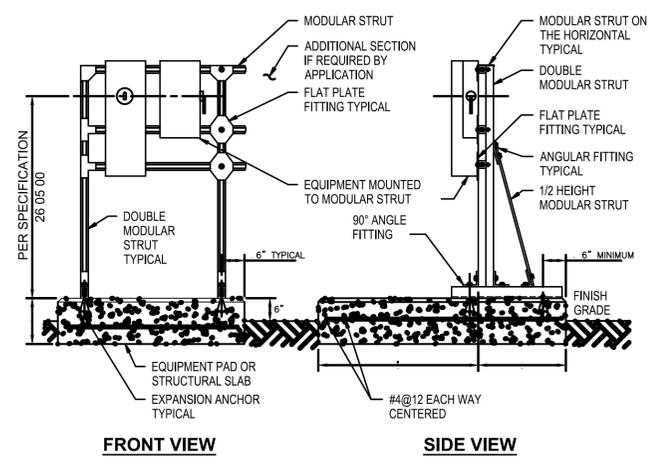
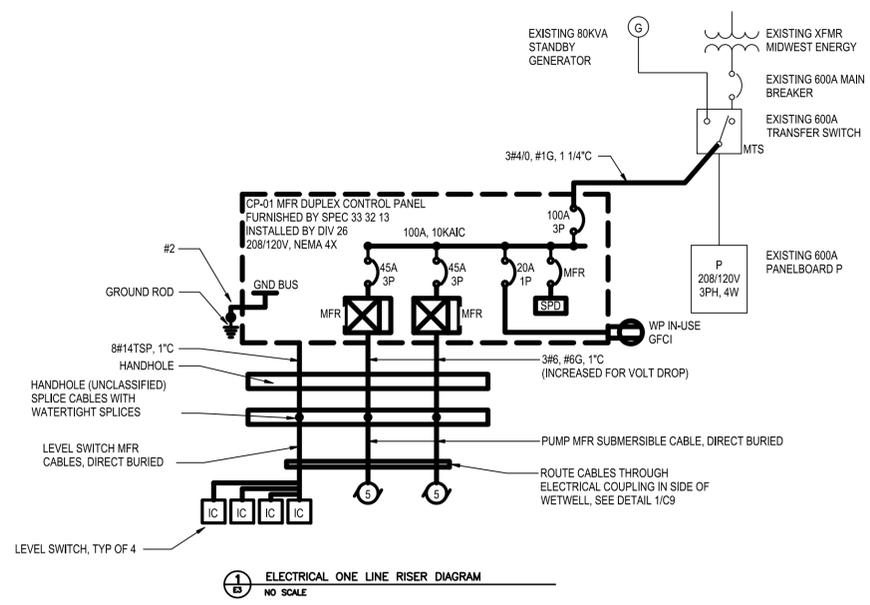
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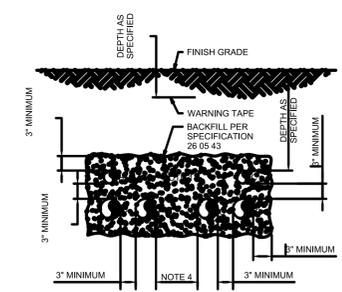
ENGINEER:  
ELECTRICAL  
NATHAN W. WITTE  
KS PE NO. 26486

DESIGNED: J. MURPHY R. BRICKEY TECH. REVIEW: X. XXXX DATE: 02/25/22	SUB SHEET NO. <b>E2</b>	TITLE OF SHEET <b>ELECTRICAL SITE LAYOUT</b> FORT LARNED NATIONAL HISTORIC SITE	DRAWING NO. <b>80085</b> PMS/PKG NO. 226825 SHEET 14 of 15
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- GENERAL NOTES:
- THIS DRAWING WAS PREPARED FROM LIMITED EXISTING DRAWINGS. FIELD VERIFY EXISTING CONDITIONS FOR ACCURACY EXISTING TRANSFORMER, GENERATOR KVA RATINGS ARE UNKNOWN AT TIME OF DESIGN.
  - EXISTING MAIN BREAKER AND TRANSFER SWITCH SIZES ARE NOT SHOWN ON RECORD DRAWINGS AND SIZES ARE ASSUMED. VERIFY THE EXACT LOCATION AND RATINGS OF EXISTING EQUIPMENT MODIFIED BY THIS INSTALLATION AND CONFIRM WITH ENGINEER ANY DISCREPANCIES FOUND.
  - EXISTING EQUIPMENT IS SHOWN SCREENED. NEW EQUIPMENT IS SHOWN BOLD.



- NOTES
- COMBINED EQUIPMENT LOADS PER 36" SPAN SHALL NOT EXCEED 500LBS.
  - PROVIDE GROUNDING FOR OUTDOOR INSTALLATIONS, PER SPECIFICATION 26 05 00.
  - MODULAR STRUT WIDTH: 15/8"
  - RACK ASSEMBLY MATERIAL: GALVANIZED PER SPECIFICATION 26 05 00.
  - ANCHORS: STAINLESS STEEL, 1/2" DIAMETER, 3 1/2" EMBEDMENT.
  - PROTECT SURFACES WITH DISSIMILAR MATERIALS.
  - REPAIR CUT ENDS AND DAMAGED SURFACES IN ACCORDANCE WITH SPECIFICATION.



- NOTES:
- NUMBER OF CONDUITS AS REQUIRED FOR THE APPLICATION.
  - P SUBSCRIPT ELECTRICAL POWER OR CONTROL CONDUIT.
  - C SUBSCRIPT COMMUNICATION (TELEPHONE, DATA, INSTRUMENTATION) CONDUIT.
  - 6" MINIMUM WHEN POWER CONDUIT CONTAINS LESS THAN 1000V. 12" MINIMUM WHEN POWER CONDUIT CONTAINS MORE THAN 1000V.

PANEL NAME	ADDITIONAL CONNECTED KVA	ADDITIONAL CONNECTED CURRENT	ADDITIONAL ESTIMATED DEMAND KVA	ADDITIONAL ESTIMATED DEMAND CURRENT AMPS	EXISTING DEMAND LOAD KVA	EXISTING DEMAND LOAD AMPS	ADDITIONAL + 125% EXISTING DEMAND LOAD KVA	ADDITIONAL + 125% EXISTING DEMAND LOAD AMPS
MTS	12.8	35.5	12.8	35.5	43.4	120.5	67.0	186.1



ENGINEER:  
ELECTRICAL  
NATHAN W. WITTE  
KS PE NO. 26486

DESIGNED: <b>J. MURPHY</b>	SUB SHEET NO. <b>E3</b>	TITLE OF SHEET <b>ELECTRICAL ONE LINE DIAGRAMS, DETAILS AND SCHEDULES</b>	DRAWING NO. <b>80085</b>
TECH. REVIEW: <b>R. BRICKEY</b>			PMIS/PKG NO. <b>226825</b>
DATE: <b>02/25/22</b>		FORT LARNED NATIONAL HISTORIC SITE	SHEET <b>15</b> of <b>15</b>