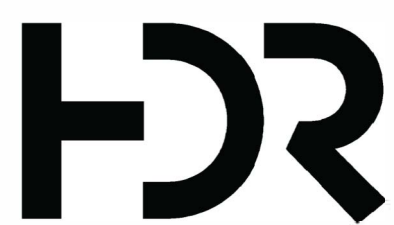


# Gravel Mitigation

## Ha Ha Tonka State Park

### Camdenton, Missouri



OWNER: STATE OF MISSOURI  
MICHAEL L. PARSON,  
GOVERNOR  
  
DEPARTMENT NATURAL RESOURCES  
DIVISION OF STATE PARKS

PROJECT  
MANAGEMENT: OFFICE OF ADMINISTRATION  
DIVISION OF FACILITIES MANAGEMENT,  
DESIGN AND CONSTRUCTION

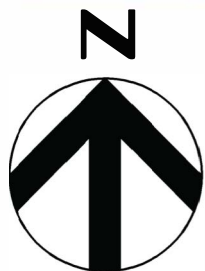
DESIGNER: HDR Engineering

PROJECT NUMBER: X2116-01

SITE NUMBER: 5304  
ASSET NUMBER: 7815304026

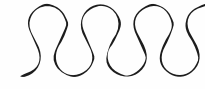


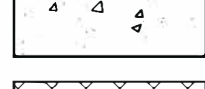






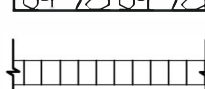



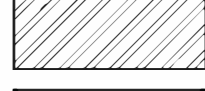

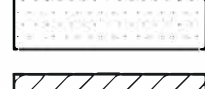
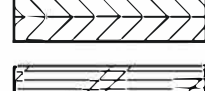
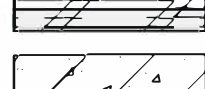
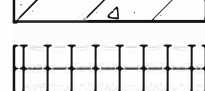





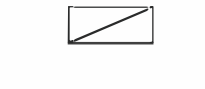




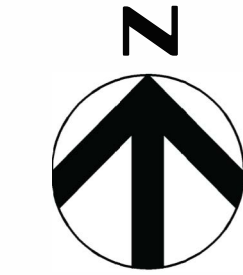
PROJECT LOCATION N.T.S.



SHEET NUMBER:  
**G-001**  
1 OF 9 SHEETS  
10/20/2022



	BATT INSULATION (SECTION)
	BRICK MASONRY (PLAN AND/OR SECTION)
	CHECKERED PLATE (PLAN)
	CONCRETE (PLAN AND/OR SECTION)
	CONCRETE MASONRY (PLAN AND/OR SECTION)
	DEMOLITION (PLAN AND/OR SECTION)
	EARTH (SECTION)
	FILTER POINT MAT (PLAN)
	FINISHED WOOD (SECTION)
	GLULAM LUMBER (SECTION)
	GRANULAR FILL (SECTION)
	GRATING (SECTION)
	GRATING (PLAN)
	GROUT (SECTION)
	GYPSUM BOARD (SECTION)
	METAL (SECTION)
	ORIENTED STRAND BOARD (SECTION)
	PARTICLE BOARD (SECTION)
	PLYWOOD (LARGE-SCALE SECTION)
	PLYWOOD (SMALL-SCALE SECTION)
	PRECAST CONCRETE (PLAN AND/OR SECTION)
	RIGID INSULATION (SECTION)
	RIPRAP (PLAN AND/OR SECTION)
	SAND (SECTION)
	SOD (SECTION)
	WEEP JOINT MORTAR PROTECTION SYSTEM (SECTION)
	WOOD - CONTINUOUS (SECTION)
	WOOD BLOCKING (SECTION)

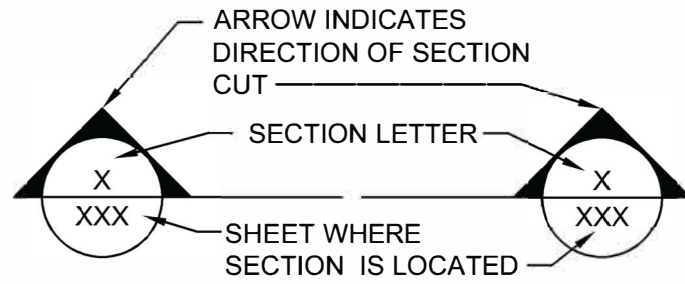


NORTH ARROW

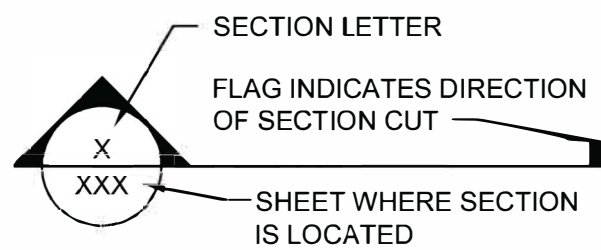
PLAN

1/4" = 1'-0"

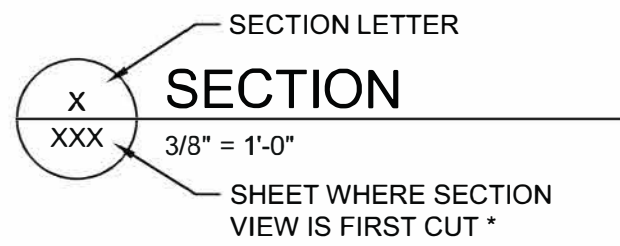
PLAN TITLE



FULL BUILDING SECTION CUT MARKER

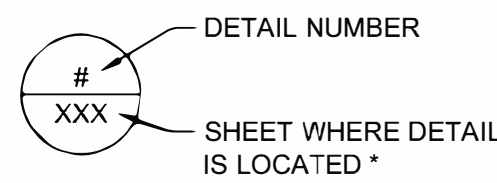


SECTION CUT MARKER



SECTION

SECTION TITLE



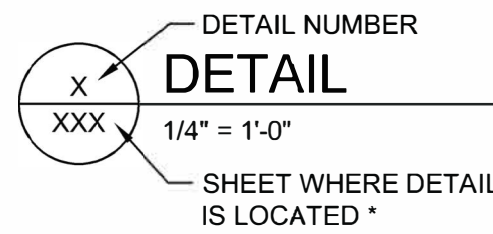
DETAIL MARKER

FOR REFERENCING DETAILS INCLUDED IN DRAWING SET.



DETAIL MARKER

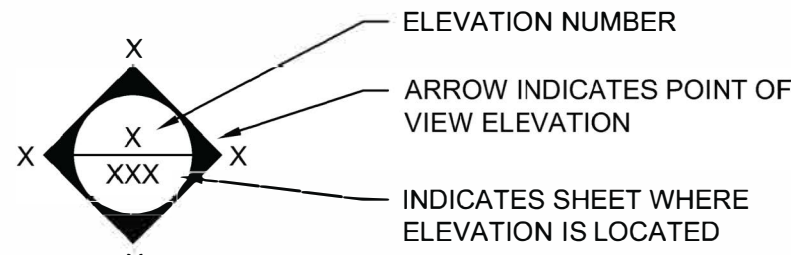
FOR REFERENCING DETAILS BOUND IN SPECIFICATIONS OR SEPARATE VOLUME.



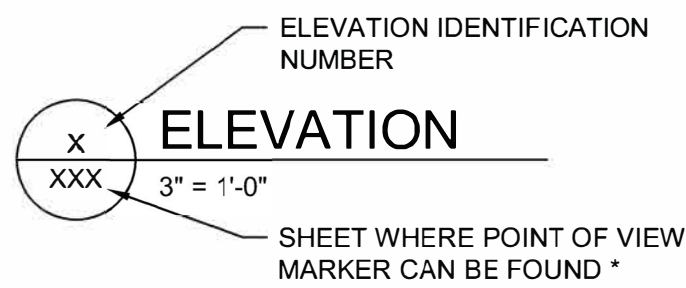
DETAIL

DETAIL TITLE

- \* EXCEPTIONS WHERE THE SHEET NUMBER IS REPLACED BY A DASH (-).
- 1) FOR COMMON DETAILS, SECTIONS, ELEVATIONS OR DETAILS THAT ARE CUT OR CALLED OUT ON MULTIPLE SHEETS.
  - 2) SECTIONS, ELEVATIONS OR DETAILS THAT ARE LOCATED ON THE SAME SHEET THEY ARE CUT OR CALLED OUT ON.



MULTIPLE ELEVATION OR PHOTO MARKER



ELEVATION

ELEVATION TITLE



TARGET ELEVATION

ARCHITECTURAL



ROOM NAME

ROOM NUMBER



DOOR NUMBER



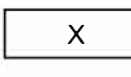
COLUMN GRID LINE



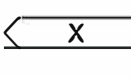
WALL TYPE



WINDOW TYPE

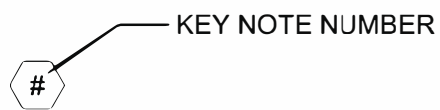


LOUVER



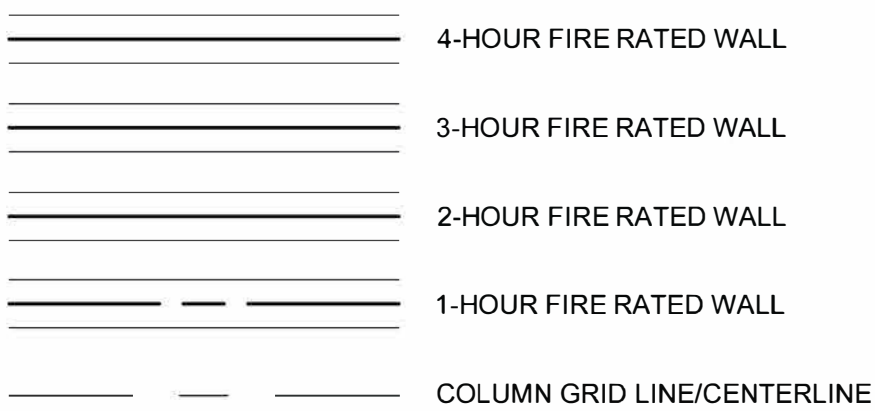
ACCESSORY, FURNITURE, AND MISCELLANEOUS EQUIPMENT IDENTIFIER

KEY NOTE DESIGNATION



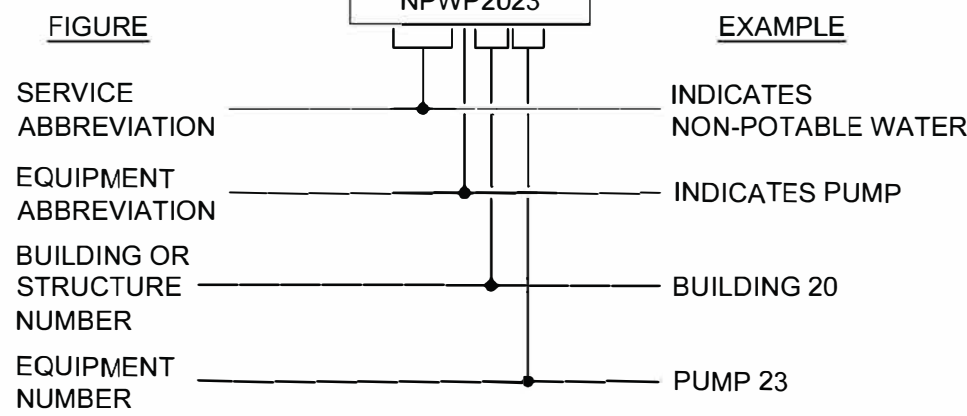
KEY NOTE NUMBER

GENERAL LINE SYMBOLOGY

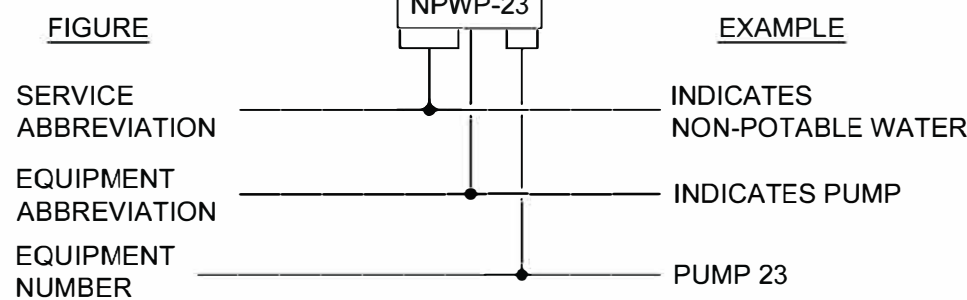


EQUIPMENT IDENTIFICATION

ALTERNATIVE 1



ALTERNATIVE 2

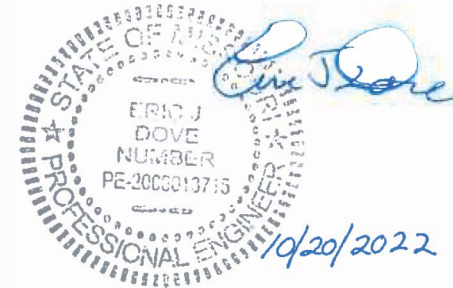


GENERAL NOTES:

1. THIS IS A STANDARD SHEET SHOWING COMMON SYMBOLOGY. ALL SYMBOLS ARE NOT NECESSARILY USED ON THIS PROJECT.
2. 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.

INDEX OF SHEETS			
Title	Sheet #	Count	Date
Title Sheet	G-001	1 OF 9	Oct-22
General Legend	G-002	2 OF 9	Oct-22
Abbreviations	G-003	3 OF 9	Oct-22
Civil Legend	G-004	4 OF 9	Oct-22
Overall Site Plan	C-101	5 OF 9	Oct-22
Existing Site Features and Water Depths	C-102	6 OF 9	Oct-22
Site Grading Plan	C-103	7 OF 9	Oct-22
Civil Sections & Details	C-501	8 OF 9	Oct-22
Civil Sections & Details	C-502	9 OF 9	Oct-22

STATE OF MISSOURI  
MICHAEL L. PARSON,  
GOVERNOR



OFFICE OF ADMINISTRATION  
DIVISION OF FACILITIES  
MANAGEMENT,  
DESIGN AND CONSTRUCTION

DEPARTMENT OF NATURAL  
RESOURCES DIVISION OF  
MISSOURI STATE PARKS

Gravel Mitigation  
Ha Ha Tonka State Park  
1491 State Road D  
Camdenton, Missouri 65020

PROJECT # X2116-01  
SITE # 5304  
ASSET # 7815304026

REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
ISSUE DATE: \_\_\_\_\_

CAD DWG FILE: \_\_\_\_\_  
DRAWN BY: \_\_\_\_\_  
CHECKED BY: \_\_\_\_\_  
DESIGNED BY: \_\_\_\_\_

SHEET TITLE:

GENERAL  
LEGEND

SHEET NUMBER:

G-002

2 OF 9 SHEETS  
10/20/2022



C:\pwworking\central\01\20395952\G-003.dwg Plot: 10/20/2022 2:20:11 PM \_JCALLAHAN

A/C	AIR CONDITIONING	CLKG	CAULKING	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	CLR	CLEAR	F&B	FACE AND BYPASS	IE	INVERT ELEVATION, FOR EXAMPLE	NA	NOT APPLICABLE	R&S	REMOVE AND SALVAGE	TOD	TOP OF BEAM, TOP OF BERM
AB	ANCHORE	CMH	COMMUNICATION MANHOLE	F&B	FABRICATED	IF	INSIDE FACE	NAF	NATURAL, NATIONAL	S	UPRIGTS, REGISTERS, RISER	TOD	TOP OF CURB, TOP OF CONCRETE
ABAN	ABANDON	CMP	CORRUGATED METAL PIPE	FB	FLOOR BEAM	IH	INTAKE HOOD	NC	NORMALLY CLOSED	RA	RETURN AIR	TOF	TOP OF FOOTING
ABC	AGGREGATE BASE COURSE	CMU	CONCRETE MASONRY UNIT	FBD	FIBERBOARD	IMP	IMPACT	NEG	NEGATIVE	RB	RESILIENT BASE, ROCK BERM	TOG	TOP OF GRATING
ABT	ABOUT	CO	CLEANOUT, CONCRETE OPENING	FBG	FIBERGLASS	IN	INCH	NF	NEAR FACE, NON-FUSED	RCT	RECEPCTACLE	TOL	TOLERANCE, TOP OF LEDGER
AC	ALTERNATING CURRENT	COL	COLUMN	FBM	BOARD FOOT MEASURE	INC	INCLUDE, INCANDESCENT	NC	NOT IN CONTRACT	RD	ROOF DRAIN	TOM	TOP OF MASONRY
ACK	ACKNOWLEDGE	COM	COMMON	FBO	FURNISHED BY OWNER	INF	INFLUENT	NO	NORMALLY OPEN, NUMBER	REC	RECESS	TOP	TOP OF PLATE
ACP	ACROUSTIC CEILING PANEL,	COMB	COMBINATION	FC	FLUSHING CONNECTION	INSTR	INSTRUMENTATION	NOM	NOMINAL	RECD	RECEIVED	TOPO	TOP OF PLATE
	ASPHALTIC CONCRETE PAVEMENT	COMM	COMMUNICATION	FCG	FLANGED COUPLING ADAPTER	INSUL	INSULATION	NPS	NOMINAL PIPE SIZE	RECT	RECTANGULAR	TOS	TOP OF SLAB, TOP OF STEEL,
ACST	ACOUSTIC	COMP	COMPOSITION, COMPRESSIBLE, COMPOSITE	FD	FLOOR DRAIN	INT	INTERIOR, INTERSECTION	NPT	NATIONAL PIPE THREAD	RED	REDUCER		TOE OF SLOPE
AD	ADDENDUM, AREA DRAIN	CON	CONCENTRIC	FDC	FLEXIBLE DUCT CONNECTION	INTR	INTERMEDIATE, INTERIOR	NS	NEAR SIDE	REF	REFERENCE	TOW	TOP OF WALL
ADDL	ADDITIONAL	CONC	CONCRETE	FDR	FEEDER	INV	INVERT	NTS	NOT TO SCALE	REINF	REINFORCING	TP	TOILET PARTITION, TELEPHONE POLE,
ADH	ADHESIVE	CONN	CONNECTION	FDTN	FOUNDATION	IPS	IRON PIPE SIZE	NWL	NORMAL WATER LEVEL	REM	REMOVE		TOE PLATE, TRAP PRIMER
ADJ	ADJUSTABLE, ADJACENT	CONST	CONSTRUCTION	FE	FLANGED END	IPT	INTERNAL PIPE THREAD			REQD	REQUIRED	TPD	TOILET PAPER DISPENSER
AF	AMP FRAME, AMP FUSE	CONT	CONTINUOUS	FEC	FIRE EXTINGUISHER CABINET	IR	INSIDE RADIUS, IRON ROD			RESIL	RESILIENT	TPG	TORPING, THROUGH PLATE GIRDER
AFD	ABOVE FINISH FLOOR	COORD	COORDINATE	FES	FIRE END SECTION	IRR	IRRIGATION			RET	RETAINING, RETURN	TR	TRANSOM
AFG	ABOVE FINISH GRADE	CORR	CORROSIVE, CORRUGATED	FEFT	FIRE EXTINGUISHER	ISO	ISOMETRIC			REV	REVISION, REVERSE	TRANS	TRANSITION
AGGR	AGGREGATE	CP	CHECKER PLATE, CONTROL POINT	FF	FAR FACE, FACTORY FINISH, FLAT FACE	JB	JUNCTION BOX			RFG	ROOFING	TRD	TRENCH DRAIN
AI	AREA INLET, ANALOG INPUT	CPLG	COUPLING	FG	FINISHED GRADE	JCT	JUNCTION			RFL	REFLECTED, REFLECTOR	TYP	TYPICAL
AIC	AMPS INTERRUPTING CAPACITY	CRL	CORROSION-RESISTANT LINING	FH	FIRE HYDRANT	JF	JOINT FILLER			RGH	ROUGH		
ALIG	ALIGNMENT	CSC	COMPRESSION SLEEVE COUPLING	FIG	FIGURE	JST	JOIST			RGS	RIGID GALVANIZED STEEL	U	URINAL
ALT	ALTERNATE, ALTITUDE	CSK	COUNTERSINK	FIN	FINISH	JT	JOINT			RH	RELIEF HOOD, RIGHT HAND,	UG	UNDERGROUND
ALUM	ALUMINUM	CSS	CLINIC SERVICE SINK	FJT	FLUSH JOINT	K	KIP				OWG	ULT	ULTRAMATE
AM	ACOUSTICAL MATERIAL	CT	CERAMIC TILE	FL	FLAME, FLAW LINE	KB	KNEE BRACE			OG	ORIGINAL GROUND	UNFN	UNFINISHED
AMB	AMBIENT	CTJ	CONTRACTION JOINT	FLEX	FLEXIBLE	KCML	THOUSAND CIRCULAR MILS			OH	OVERHEAD	UNO	UNLESS NOTED OTHERWISE
ANC	ANCHOR	CTR	CENTER	FLG	FLANGE	KD	KNOCK DOWN			OPNG	OPENING	UTIL	UTILITY
AO	ANALOG OUTPUT	CTRL	CONTROL	FLR	FLUORESCENT	KO	KNOCK OUT			OPP	OPPOSITE		
AP	ACCESS PANEL	CVT	CULVERT	FLS	FLASHING, FLUSH	KSI	KIPS PER SQUARE INCH			OPT	OPT ONAL	V	VENT, VELOCITY, VOLT
APRX	APPROXIMATE	CW	CLOCKWISE	FN	FENCE	KW	KILOWATT			OR	OUTSIDE RADIUS	VA	VOLT AMPERE
APVD	APPROVED	CY	CUBIC YARD	FO	FINISHED OPENING, FIBER OPTIC					ORIG	ORIGINAL	VAR	VARNISH, VARIABLE,
ARCH	ARCHITECTURAL			FGB	FLAT ON BOTTOM	L	ANGLE, LENGTH, LAVATORY, LINTEL			OVFL	OVERFLOW		VOLT AMPERES REACTIVE
ASSY	ASSEMBLY	d	PENNY (NAIL MEASURE)	FOC	FACE OF CONCRETE, FACE OF CURB	LAD	LADDER			OZH	OVERHANG	VB	VAPOR BARRIER, VINYL BASE,
AT	ACOUSTICAL TILE, AMP TRIP	D	DEEP, DIFFUSER, DRAIN	FOF	FACE OF FINISH	LAM	LAMINATE			OZ	OUNCE	VC	VERTICAL CURVE
ATC	ACOUSTICAL TILE CEILING	DB	DECIBEL, DRY BULB	FOM	FACE OF MASONRY	LATL	LATERAL			P	PAINT	VCP	VITRIFIED CLAY PIPE
ATM	ATMOSPHERE	DBA	DEFORMED BAR ANCHOR	FOS	FACE OF STUDS	LCB	LAG BOLT, POUND			PAR	PUBLIC ADDRESS	VCT	VERTICAL COMPOSITION TILE,
AUTO	AUTOMATIC	DBL	DOUBLE	FOT	FLAT ON TOP	LCTB	LIQUID CHALK AND TACK BOARD			PB	PARALLEL, PARAPET		VERTICAL CENTERLINE
AUX	AUXILIARY	DC	DIRECT CURRENT	FPT	FEMALE PIPE THREAD	LDG	LANDING			PBD	PANIC BAR, PULL BOX	VEL	VELOCITY
AVE	AVENUE	DEG	DEGREE	FR	FRAME	LDR	LEADER			PC	PARTICLE BOARD	VENT	VENTILATION
AVG	AVERAGE	DEG C	DEGREE CENTIGRADE	FRP	FIBERGLASS REINFORCED PLASTIC	LE	LIFTING EYE			PCC	POINT OF CURVE, PIECE, PRECAST	VERT	VERTICAL
AWG	AMERICAN WIRE GAGE	DEG F	DEGREE FAHRENHEIT	FRTM	FIRE RETARDANT TREATED MATERIAL	LF	LINEAR FOOT			PCF	POUND PER CUBIC FOOT	VERTS	VERTICAL REINFORCING
AWT	ACOUSTICAL WALL TILE	DEMO	DEMOLITION	FS	FLOOR SINK, FAR SIDE	LG	LONG			PCT	PERCENT	VG	VERTICAL GRAIN
		DEP	DEPRESSED	FT	FEET, FOOT	LH	LEFT HAND			PE	PLAIN END	VIN	VERIFY IN FIELD
B TO B	BACK TO BACK	DEPT	DEPARTMENT	FTG	FOOTING, FITTING	LIQ	LIQUID			PED	PEDESTAL	VOL	VOLUME
BAL	BALANCE	DET	DETAIL	FUR	FURRED, FURNISH	LLV	LONG LEG VERTICAL			PEN	PENETRATION	VPC	VERTICAL POINT OF CURVATURE
BBD	BULLETIN BOARD	DIA	DIAMETER	FURN	FURNITURE, FURNISH	LMU	LIQUID MARKER LECTURE UNIT			PERF	PERFORATED	VPI	VERTICAL POINT OF INTERSECTION
BC	BASE CABINET, BOTTOM CHORD,	DIFF	DIFFERENTIAL, DIFFERENCE	FUT	FUTURE	LNG	LONGITUDINAL			PERM	PERMANENT	VPT	VERTICAL POINT OF TANGENCY
BD	BOARD	DIM	DIMENSION	FV	FACE VELOCITY	LOC	LOCATION			PERP	PERPENDICULAR	VS	VERSUS, VAPOR SEAL
BE	BOTH ENDS, BELL END	DISCH	DISCHARGE	FW	FIELD WELD, FIRE WALL	LP	LOW POINT			PF	POWER FACTOR	VTH	VENT THROUGH ROOF
BF	BOTH FACES, BOTTOM FACE,	DIST	DISTANCE, DISTRIBUTION	FWE	FURNISHED WITH EQUIPMENT	LPS	LOW-PRESSURE SODIUM			PFMU	PREFACED MASONRY UNIT	VWC	VINYL WALL COVERING
	BLIND FLANGE, BOARD FEET	DIV	DIVISION	FXTR	FIXTURE	LT	LEFT			PI	POINT OF INTERSECTION	W/	WITH
BITUM	BITUMINUS	DL	DEAD LOAD	G	GRILLE, GROUND	LTD	LIMITED			PKG	PACKAGE	W/O	WITHOUT
BKG	BACKING	DMJ	DOUBLE MECHANICAL JOINT	GA	GAGE (METAL THICKNESS)	LTG	LIGHTING			PL	PLATE, PROPERTY LINE,	W	WATT, WEST, WIDE, WINDOW, WIRE,
BL	BASE LINE	DMPF	DAMP PROOFING	GAL	GALLON	LTL	LINTEL			PLAS	PRECAST LINTEL	WB	WIDE FLANGE BEAM
BLDG	BUILDING	DN	DOWN	GALV	GALVANIZED	LTVG	LIGHTNING			GC	GROUT, GROUTING	WC	WOOD BASE
BLK	BLOCK	DO	DISSOLVED OXYGEN, DIGITAL OUTPUT, DITTO	GB	GRAB BAR, GRADE BREAK	LVL	LONG VOLTAGE			PLAT	PLASTER	WD	WOOD, WIDTH
BLKG	BLOCKING	DP	DEPTH	GD	GRADED COUPLING	LVR	LOUVER			PLBG	PLUMBING	WF	WIDE FLANGE, WASH FOUNTAIN
BM	BENCHMARK, BEAM	DPST	DOUBLE POLE, DOUBLE THROW	GEN	GENERAL	LW	LIGHTWEIGHT			PLG	PROFILE GRADE	WG	WIRE GLASS, WATER GAGE
BOC	BACK OF CURB	DS	DOWN SPOUT	GFCI	GROUND FAULT CIRCUIT INTERRUPTER	LWC	LIGHTWEIGHT CONCRETE			PNEU	PNEUMATIC	WH	WALL HYDRANT, WEEP HOLE
BOD	BOTTOM OF DUCT	DT	DOUBLE TEE, DRIP TRAP ASSEMBLY	GFMU	GROUND FACE MASONRY UNIT	LWL	LOW WATER LEVEL			POL	POLISH	WI	WROUGHT IRON
BOG	BOTTOM OF GRILLE	DTR	DECIDUOUS TREE	GG	GUTTER GRADE	MA	MIXED AIR			POS	POSITIVE, POSITION	WL	WALL LEVEL
BOL	BOTTOM OF LOUVER, BOLLARD	DUP	DUPLICATE	GJ	GROOVED JOINT	MACH	MACHINED			PP	POLYPROPYLENE, POWER POLE	WLD	WELDED
BOP	BOTTOM OF PIPE	DWG	DRAWING	GLB	GLASS BLOCK, GLULAM BEAM	MAINT	MAINTENANCE			PRC	POINT OF REVERSE CURVATURE	WM	WIRE MESH
BOR	BOTTOM OF REGISTER	DWL	DRAWER	GND	GROUND	MAN	MANHOLE, METAL HALIDE			PREF	PREFINISHED	WP	WEATHERPROOF
BOU	BOTTOM OF UNIT	E	EAST	GR	GUY POLE	MATL	MATERIAL			PREFAB	PREFABRICATED	WS	WATERSTOP, WATER SURFACE
BP	BASE PLATE	EA	EACH, EXHAUST AIR	GRTG	GRATING	MAX	MAXIMUM			PRELIM	PRELIMINARY	WSCT	WAINSCOT
BRG	BEARING	EC	ELECTRICAL CONTRACTOR	GSSB	GYPSUM SHEATHING BOARD	MB	MACHINE BOLT			PRES	PREPARE	WT	WEIGHT, WATER TIGHT
BRGP	BEARING PLATE	ECC	ECCENTRIC	GT	GREASE TRAP	MBR	MEMBER			PRESS	PRESSURE	WTHP	WATERPROOF, WORKING POINT
BRKT	BRACKET	ED	EQUIPMENT DRAIN	GVL	GRAVEL	MC	MECHANICAL CONTRACTOR,			PRJ	PROPERTY, PROPOSED	WWF	WELDED WIRE FABRIC
BS	BOTH SIDES	EDB	ELECTRICAL DUCT BANK	GW	GUY WIRE		MECHANICAL COUPLING,			PROP	PROTECTION		
BTU	BRITISH THERMAL UNIT	EE	EACH END	GW/B	GYPSUM WALLBOARD		MOMENT CONNECTION			PROT	PIPE SUPPORT	XP	EXPLOSION-PROOF
BTW	BETWEEN	EFF	EFFLUENT, EFFICIENCY	GYP	GYPSUM HARDBOARD	MCB	METAL CORNER BEAD			PS	POUNDS PER SQUARE FOOT	XS	EXTRA STRONG
BTWLD	BUTT WELD	EHH	ELECTRICAL HANDHOLE			MDJ	MODIFIED DOUBLE MECHANICAL JOINT			PSF	POUNDS PER SQUARE INCH	XSECT	CROSS SECTION
BU	BELL UP, BUILT-UP	EIFS	EXTERIOR INSULATION & FINISH SYSTEM	H	HIGH	MED	MEDIUM			PSI	POUNDS PER SQUARE INCH ABSOLUTE	XXS	DOUBLE EXTRA STRONG
BUR	BUILT-UP ROOFING	EL	ELBOW, ELEVATION	HB	HOSE BIBB	MFR	MANUFACTURER			PSIA	POUNDS PER SQUARE INCH GAGE		
BW	BOTH WAYS	ELEC	ELECTRICAL	HBD	HARDBOARD	MH	MANHOLE, METAL HALIDE			PST	PRESTRESSED	YH	YARD HYDRANT
BYP	BYPASS	EMER	EMERGENCY	HC	HANDICAPPED, HOLLOW CORE, HORIZONTAL,	MIN	MINIMUM			PT	POINT, POINT OF TANGENCY	YS	YIELD STRENGTH
		EMBD	EMBEDDED		CURVE, HORIZONTAL CENTERLINE	MIR	MIRROR			PTN	PARTITION		
C TO C	CENTER TO CENTER	EMER	EMERGENCY	HD	HEAD, HOT DIP	MISC	MISCELLANEOUS			PVC	POLYVINYL CHLORIDE, POINT OF		
C&G	CURB AND GUTTER	EMH	ELECTRICAL MANHOLE	HDR	HEADER	MJ	MECHANICAL JOINT			PVC-RGS	PVC COATED RGS		
C	CHANNEL SHAPE, CENTIGRADE, CONDUIT	ENCL	ENCLOSURE	HDW	HARDWARE	ML	MASONRY LINTEL			PWD	PLYWOOD		
CAB	CABINET	ENGR	ENGINEER	HGT	HEIGHT	MLO	MAIN LUGS ONLY			PWJ	PLYWOOD WEB JOIST		
CAP	CAPACITY	ENTR	ENTRANCE	HHS	HOLLOW STRUCTURAL SHAPE	MMB	MEMBRANE			PZ	PIEZOMETER		
CAT	CATALOG, CATEGORY	EOP	EDGE OF PAVEMENT	HH	HANDHOLE	MO	MASONRY OPENING			Q	RATE OF FLOW		
CAT	CATALOG, CATEGORY	EQ	EQUAL	HID	HIGH-INTENSITY DISCHARGE	MOD	MODULAR, MODIFY			QT	QUARRY TILE		
CAV	CAVITY	EQUIP	EQUIPMENT	HMT	HOLLOW METAL	MON	MONUMENT			QTR	QUARTER		
CBI	CATCH BASIN	EQUIV	EQUIVALENT	HORIZ	HORIZONTAL	MRGWB	MOISTURE-RESISTANT GYPSUM WALLBOARD			QTY	QUANTITY		
CCB	CONCRETE BLOCK	ES	EXPANSION JOINT	HPS	HIGH-PRESSURE SODIUM	MS	MOP SINK			QUAL	QUALITY		
CCW	COUNTER CLOCKWISE	ESEW	EMERGENCY SHOWER AND EYE WASH	HPT	HORIZONTAL POINT OF TANGENCY	MT	MOUNT						
CD	CONTROLLED-DENSITY FILL	EST	ESTIMATE	HR	HOSE REEL, HOUR	MSL	MEAN SEA LEVEL						
CE	CONCRETE EDGE	EW	ELECTRIC WATER COOLER	HS	HEADED STUD, HIGH STRENGTH	MU	MASONRY UNIT						
CER	CERAMIC	EWEF	EACH WAY, EMERGENCY, EYE/FACE WASH	HSS	HOLLOW STRUCTURAL SHAPE	MULL	MULLION						
CF	CUBIC FEET (FOOT)	EWTB	EACH WAY, TOP AND BOTTOM	HT	HEIGHT	MV	MEDIUM VOLTAGE						
CFL	COUNTER FLASHING	EXC	EXCAVATION	HTG	HEATING	MW	MONITORING WELL						
CHBD	CHALKBOARD	EXP	EXPANSION, EXPOSED	HV	HIGH VOLTAGE								
CHD	CHORD	EXT	EXISTING	HVAC	HEATING, VENTILATING AND AIR CONDITIONING								
CHFR	CHAMFER			HWD	HARDWOOD								
CHH	COMMUNICATION HANDHOLE			HWL	HIGH WATER LEVEL								
CI	CURB INLET			HYD	HYDRAULIC								
CIP	CAST-IN-PLACE			HZ	HERTZ, CYCLES PER SECOND								
CIPB	CONCRETE INTERLOCKING PAVER BALLAST												
CIRC	CIRCULATION, CIRCULAR												
CJ	CONSTRUCTION JOINT												
CKT	CIRCUIT												
CL	CENTERLINE, CLASS, CLOSE												
CLG	CEILING												

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 "REIN" MAY MEAN EITHER REINFORCE OR REINFORCING.
- SEE INSTRUMENTATION LEGEND SHEET FOR PROJECT-SPECIFIC EQUIPMENT SYMBOLS, EQUIPMENT ABBREVIATIONS, AND PIPING SYSTEM ABBREVIATIONS.

STATE OF MISSOURI  
MICHAEL L. PARSON,  
GOVERNOR



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DEPARTMENT OF NATURAL  
RESOURCES DIVISION OF  
MISSOURI STATE PARKS

Gravel Mitigation  
Ha Ha Tonka State Park  
1491 State Road D  
Camdenton, Missouri 65020

PROJECT # X2116-01  
SITE # 5304  
ASSET # 7815304026

REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_

ISSUE DATE: \_\_\_\_\_

CAD DWG FILE: \_\_\_\_\_  
DRAWN BY: \_\_\_\_\_  
CHECKED BY: \_\_\_\_\_  
DESIGNED BY: \_\_\_\_\_

SHEET TITLE:

ABBREVIATIONS

SHEET NUMBER:

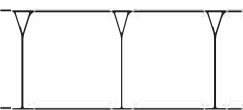


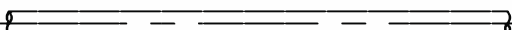
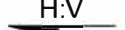



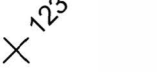













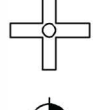










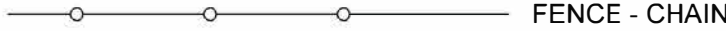

















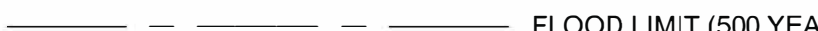











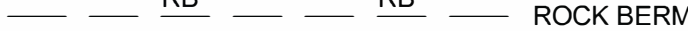

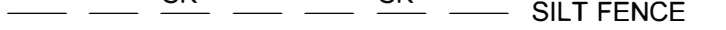











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10/20/2022



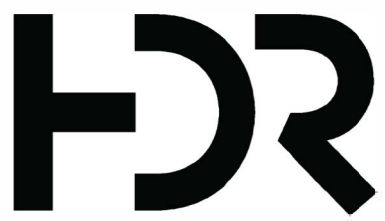
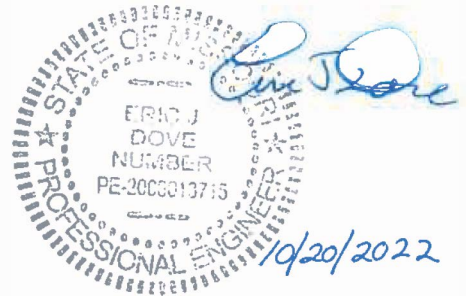
C:\pwworking\central\01\23\98952\G-004.dwg Plot: 10/20/2022 2:21:03 PM \_JCALLAHAN

CIVIL MAPPING SYMBOLOGY		UTILITY/CIVIL LINE SYMBOLOGY	
	EMBANKMENT SLOPE (CUT)		PIPELINE
	EMBANKMENT SLOPE (FILL)		LARGE PIPELINE
	EMBANKMENT SLOPE RIGHT ARROW RIGHT		UTILITY BENEATH STRUCTURE
	EMBANKMENT SLOPE LEFT ARROW LEFT		RAILROAD
	SPOT ELEVATION/POINT #		CENTERLINE
	SURVEY BENCHMARK		BOTTOM OF DITCH
	SURVEY CONTROL POINT		PROPERTY LINE
	HORIZONTAL CONTROL POINT		EASEMENT
	VERTICAL CONTROL POINT		LIMITS OF CONSTRUCTION
	PROPERTY PIN LOCATED		ROW
	SECTION CORNER MONUMENT		EXISTING CONTOUR (MINOR)
	SECTION CORNER NO MONUMENT		EXISTING CONTOUR W/ELEVATION (MAJOR)
	IDENTIFICATION AND APPROXIMATE LOCATION OF SOIL BORING		EXISTING FENCE
	BUOY		EXISTING VEGETATION/BRUSH LINE
	FLOW ARROW		FENCE - BARB WIRE
	WATER LEVEL IN SECTION/PROFILE		FENCE - CHAIN LINK
	TIDE GAUGE		FENCE - FIELD
	EXISTING UTILITY POLE		FENCE - OTHER
	DOWNGUY		FENCE - WOOD
	EXTERIOR UTILITY JUNCTION BOX		FENCE - WOVEN WIRE
	INTERSTATE HIGHWAY SYMBOL		FLOOD LIMIT (25 YEAR)
	US HIGHWAY SYMBOL		FLOOD LIMIT (50 YEAR)
	STATE HIGHWAY SYMBOL		FLOOD LIMIT (100 YEAR)
	HAY BALE SILT CHECK		FLOOD LIMIT (200 YEAR)
	TEMPORARY SEDIMENT TRAP		FLOOD LIMIT (500 YEAR)
	PIEZOMETER		HIGHWAY GUARDRAIL
	RAIL SIGNAL		LEVEE TOP
	RAIL SWITCH		LEVEE TOE
	SIGN		NEW CONTOUR (MINOR)
	TIRE TREDDLE		NEW CONTOUR (MAJOR)
	TRAFFIC ARM WITH CARD READER		ROCK BERM
	TRAFFIC ARM MECHANICAL SWING		SILT FENCE
			SILT FENCE
			TOE OF SLOPE
			TOP OF SLOPE
			GRAVEL FILTER
			FIBER OPTIC
			NATURAL GAS
			SANITARY SEWER
			STORM SEWER
			DOMESTIC WATER
			DOMESTIC WATER NON-POTABLE
			OVERHEAD ELECTRIC
			UNDERGROUND ELECTRIC
			UNDERGROUND TELEPHONE

**GENERAL NOTES:**

1. THIS IS A STANDARD CIVIL SYMBOLOGY SHEET. ALL SYMBOLS ARE NOT NECESSARILY USED ON THIS PROJECT.
2. 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.

STATE OF MISSOURI  
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Gravel Mitigation  
Ha Ha Tonka State Park  
1491 State Road D  
Camdenton, Missouri 65020

PROJECT # X2116-01  
SITE # 5304  
ASSET # 7815304026

REVISION: \_\_\_\_\_  
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REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
ISSUE DATE: \_\_\_\_\_

CAD DWG FILE: \_\_\_\_\_  
DRAWN BY: \_\_\_\_\_  
CHECKED BY: \_\_\_\_\_  
DESIGNED BY: \_\_\_\_\_

SHEET TITLE:

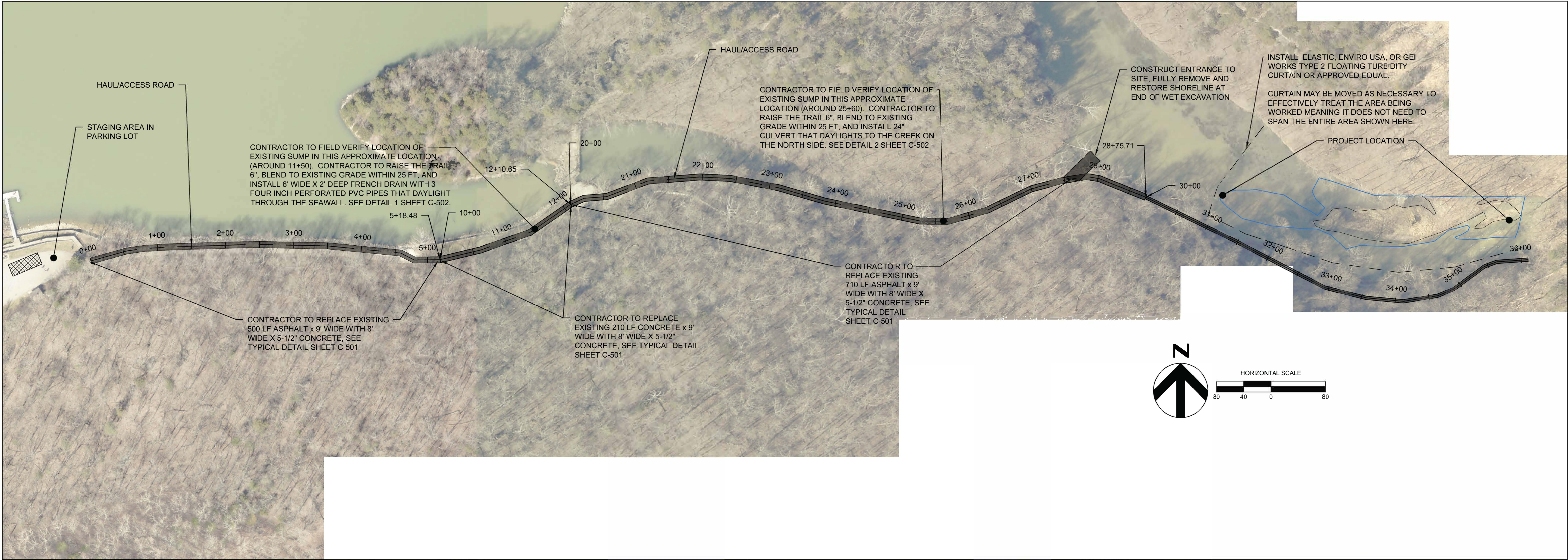
CIVIL  
LEGEND

SHEET NUMBER:

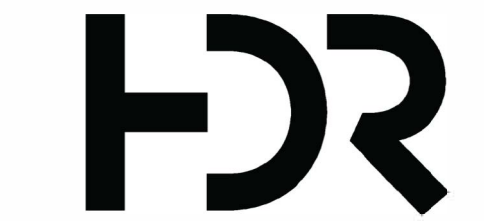
G-004

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10/20/2022





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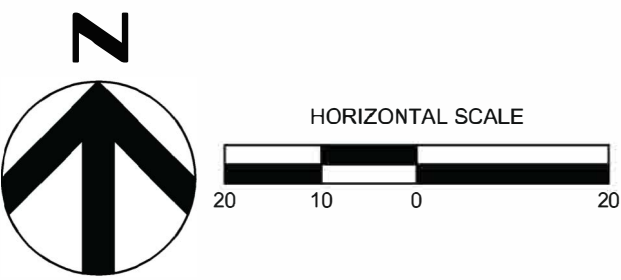
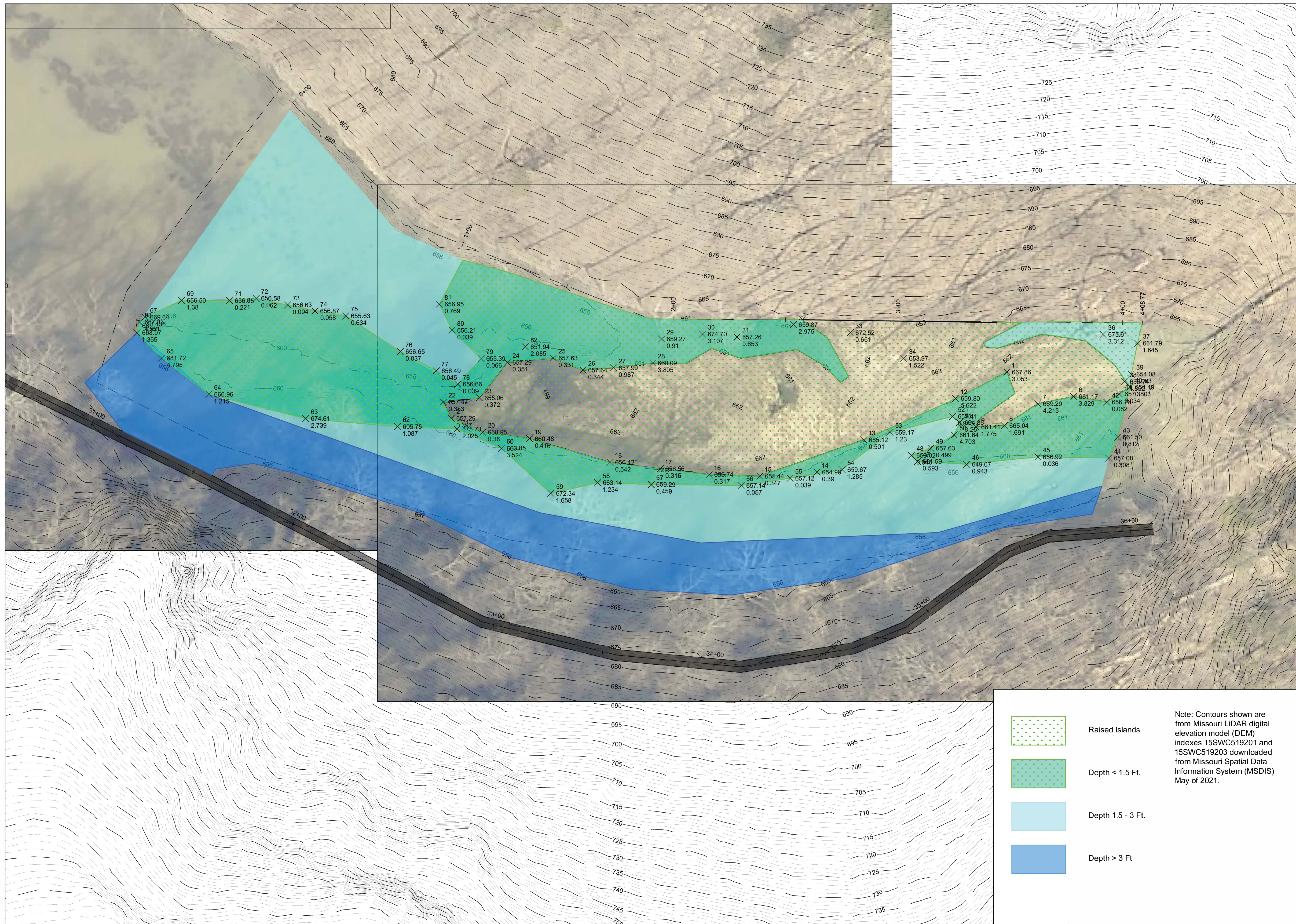
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SHEET TITLE:  
**OVERALL  
SITE  
PLAN**

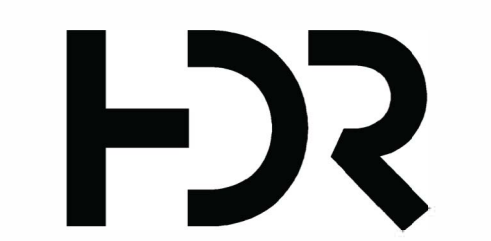
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**C-101**

5 OF 9 SHEETS  
10/20/2022





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REVISION: \_\_\_\_\_  
DATE: \_\_\_\_\_  
ISSUE DATE: \_\_\_\_\_

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 CHECKED BY: \_\_\_\_\_  
 DESIGNED BY: \_\_\_\_\_

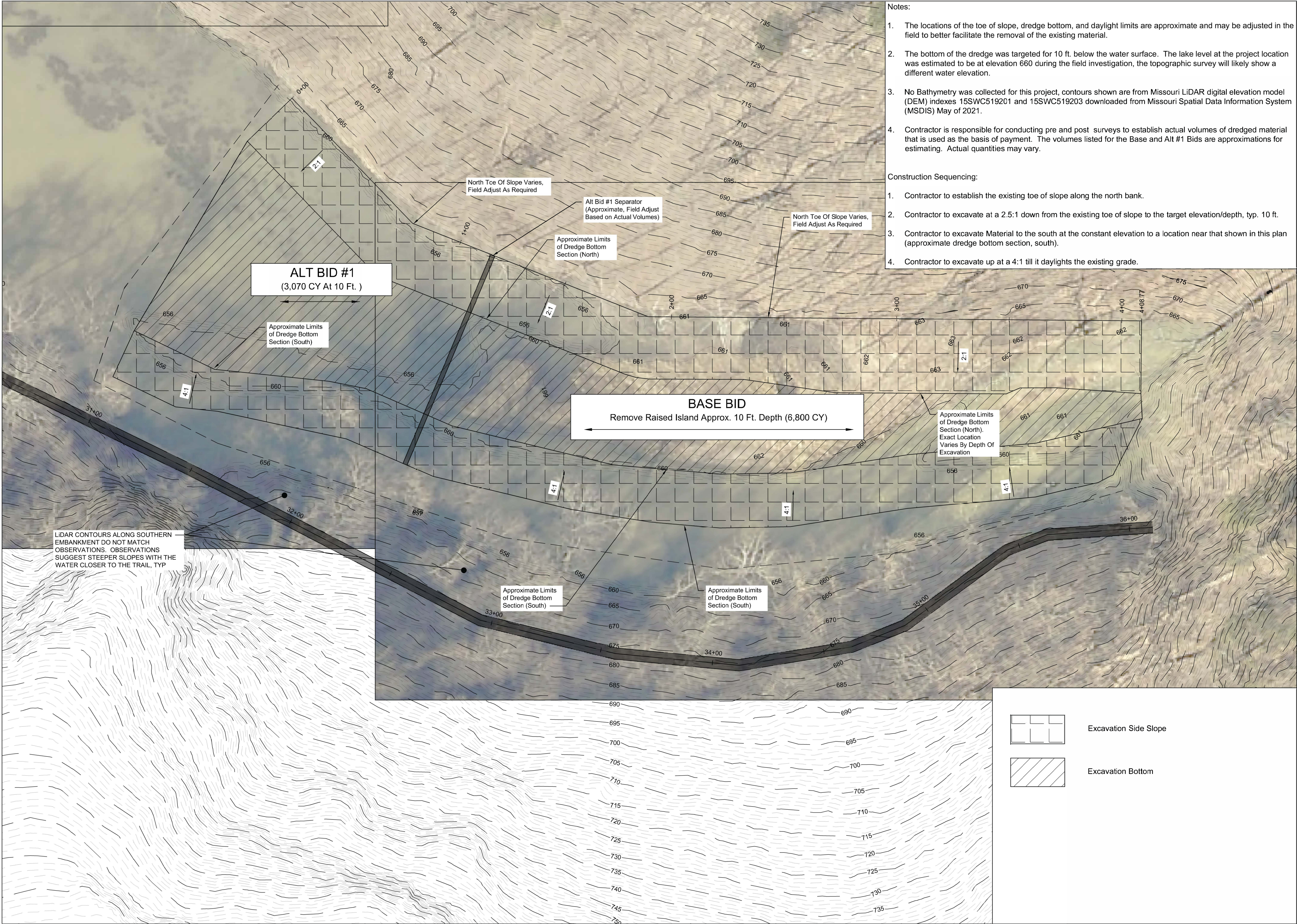
SHEET TITLE:  
EXISTING SITE  
FEATURES &  
WATER DEPTHS

SHEET NUMBER:

# C-102

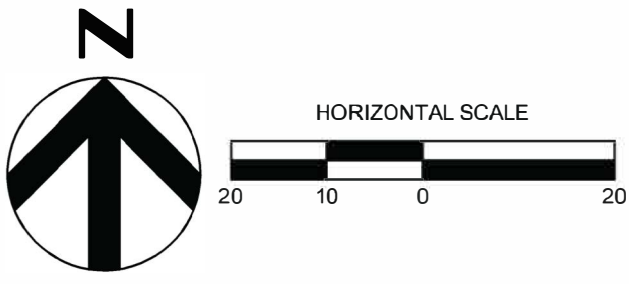
6 OF 9 SHEETS  
10/20/2022





- Notes:
1. The locations of the toe of slope, dredge bottom, and daylight limits are approximate and may be adjusted in the field to better facilitate the removal of the existing material.
  2. The bottom of the dredge was targeted for 10 ft. below the water surface. The lake level at the project location was estimated to be at elevation 660 during the field investigation, the topographic survey will likely show a different water elevation.
  3. No Bathymetry was collected for this project, contours shown are from Missouri LiDAR digital elevation model (DEM) indexes 15SWC519201 and 15SWC519203 downloaded from Missouri Spatial Data Information System (MSDIS) May of 2021.
  4. Contractor is responsible for conducting pre and post surveys to establish actual volumes of dredged material that is used as the basis of payment. The volumes listed for the Base and Alt #1 Bids are approximations for estimating. Actual quantities may vary.

- Construction Sequencing:
1. Contractor to establish the existing toe of slope along the north bank.
  2. Contractor to excavate at a 2.5:1 down from the existing toe of slope to the target elevation/depth, typ. 10 ft.
  3. Contractor to excavate Material to the south at the constant elevation to a location near that shown in this plan (approximate dredge bottom section, south).
  4. Contractor to excavate up at a 4:1 till it daylights the existing grade.



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ISSUE DATE: \_\_\_\_\_

CAD DWG FILE: \_\_\_\_\_  
DRAWN BY: \_\_\_\_\_  
CHECKED BY: \_\_\_\_\_  
DESIGNED BY: \_\_\_\_\_

SHEET TITLE:

SITE  
GRADING  
PLAN

SHEET NUMBER:

C-103

7 OF 9 SHEETS  
10/20/2022





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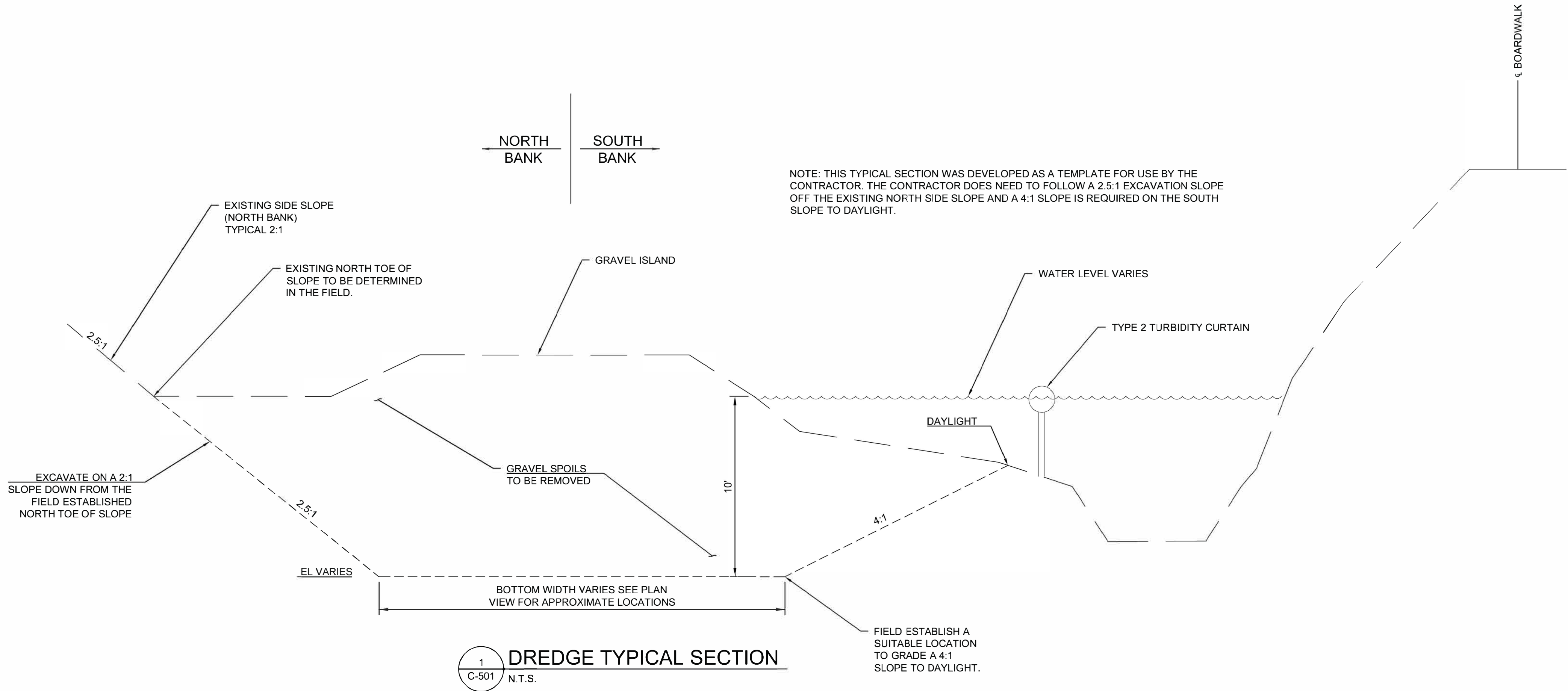
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DRAWN BY: \_\_\_\_\_  
CHECKED BY: \_\_\_\_\_  
DESIGNED BY: \_\_\_\_\_

SHEET TITLE:  
**CIVIL SECTION  
AND DETAILS**

SHEET NUMBER:

**C-501**

8 OF 9 SHEETS  
10/20/2022



NOTE: THE CONCRETE TRAIL IS TO BE USED FOR ALL TRAIL REPLACEMENT REGARDLESS OF THE EXISTING TRAIL MATERIAL

NOTE:

1. MAXIMUM CONTRACTION JOINT SPACING IS 8 FEET.
2. MAXIMUM EXPANSION JOINT SPACING IS 100 FEET.

