

N/A

CONVENTIONAL SYMBOLS (USED IN PLANS)

EXISTING	NEW
	
	
	
	
	
	
	
	
	
	
	
	
	
	
	

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION PLANS FOR PROPOSED IMPROVEMENTS TO BOSCHERT CREEK

STA 50+00.00
BEGIN PROJECT

NEW TOWN BLVD

BASIN 2

ELM POINT INDUSTRIAL DR

BOSCHERT CREEK

MUELLER RD

BASIN 1

ELM ST

BOSCHERTOWN RD

PROJECT LIMITS
GRADING, DRAINAGE

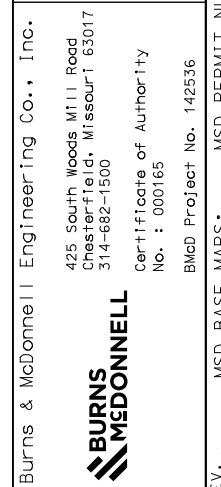
STA 115+92.51
END PROJECT

370

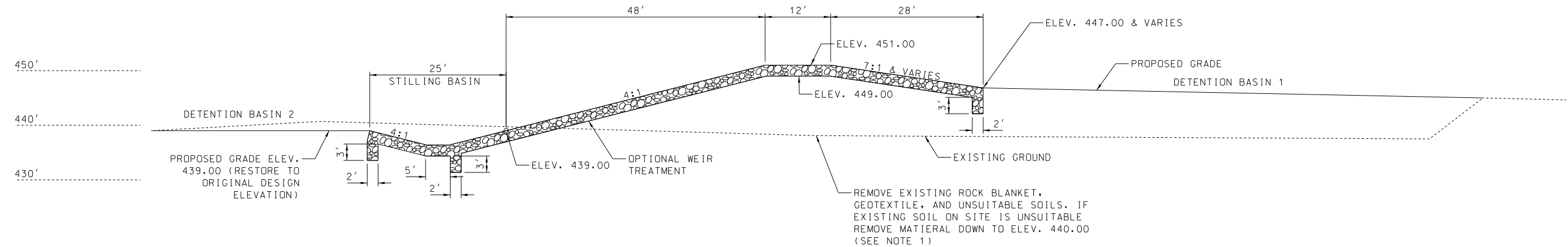
N.T.S.

N.T.S.

DISTURBED AREA:	22	ACRES
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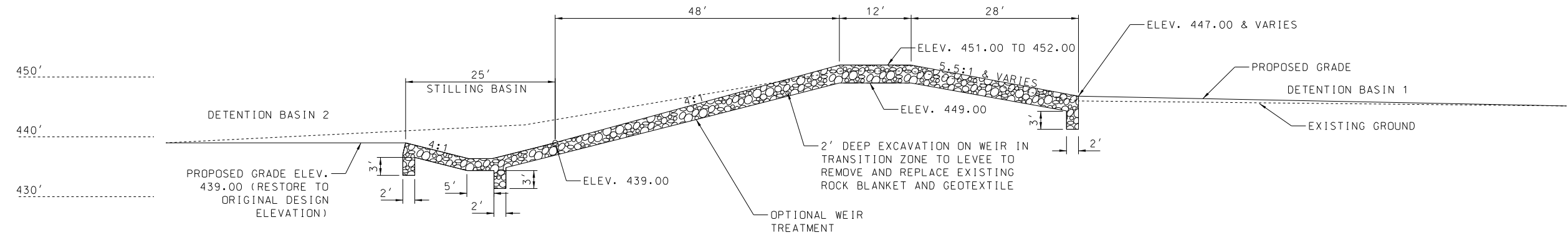
[illegible]

NOTES:
1. UNSUITABLE MATERIAL SUCH AS FAT CLAY SHALL BE REMOVED AND NOT REUSED AS FILL WITHIN THE LEVEE AND WEIR REPAIR SECTIONS. UNSUITABLE MATERIAL MAY BE USED AS FILL MATERIAL FOR GRADING REQUIREMENTS IN BASIN 1 AND BASIN 2. THE SITE SHALL BE PROOFROLLED PRIOR TO PLACING FILL WITH A LOADED TANDEM AXLE DUMP TRUCK OR SIMILAR CONVENTIONAL COMPACTION EQUIPMENT. FILL SHALL BE COMPACTED TO A MINIMUM OF 90% STANDARD COMPACTION TEST, WITH A MAXIMUM OF 8-INCH LIFTS IN ACCORDANCE WITH MODOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.



TYPICAL SECTION - WEIR REPAIR
(PLAN SHEET 4 AND DETAIL SHEET 1)

OPTIONAL WEIR TREATMENTS:	
A.	TYPE 2 ROCK BLANKET (2' THICK) WITH GEOTEXTILE
B.	INSTATURF SHEARFORCE10 INSTANT ARMOR MAT



TYPICAL SECTION - WEIR REPAIR TRANSITION ZONE
(PLAN SHEET 4 AND DETAIL SHEET 1)



DATE 05/04/2023	
DATE PREPARED 5/22/2023	
ROUTE 370	STATE MO
DISTRICT SL	SHEET NO. 2
COUNTY ST. CHARLES	
JOB NO. J6M3422	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

MoDOT

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-278-6636)

Burns & McDonnell Engineering Co., Inc.

425 South Woods Mill Road
Chesterfield, Missouri 63017
314-682-1500

**BURNS
MEDONNELL**

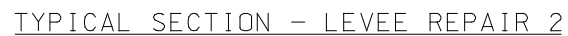
Certificate of Authority
No. : 000165
BMO Project No. 142536

REV. MSD BASE MAPS: MSD PERMIT NUMBER: IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

1. UNSUITABLE MATERIAL SUCH AS FAT CLAY SHALL BE REMOVED AND NOT REUSED AS FILL WITHIN THE LEVEE AND WEIR REPAIR SECTIONS. UNSUITABLE MATERIAL MAY BE USED AS FILL MATERIAL FOR GRADING REQUIREMENTS IN BASIN 1 AND BASIN 2. THE SITE SHALL BE PROOFROLLED PRIOR TO PLACING FILL WITH A LOADED TANDEM AXLE DUMP TRUCK OR SIMILAR CONVENTIONAL COMPACTION EQUIPMENT. FILL SHALL BE COMPACTED TO A MINIMUM OF 90% STANDARD COMPACTION TEST, WITH A MAXIMUM OF 8-INCH LIFTS IN ACCORDANCE WITH MDDOT STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.



BREACH AREA 1: STA 111+12.69 TO 112+41.63
(PLAN SHEET 6 AND DETAIL SHEET 2)



BREACH AREA 2: STA 114+53.19 TO 115+61.12
(PLAN SHEET 6 AND DETAIL SHEET 2)

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CLEARING AND GRUBBING						
SHEET NUMBER	DETENTION BASIN	AREA	AREA	CLEARING AND GRUBBING	CLEAR AND GRUB FOR HAUL ROUTE	REMARKS
		(SF)	(ACRE)	(ACRE)	(ACRE)	
4-7	2	138450.00	3.18	-	3.18	HAUL ROUTE
7-9	1	719077.00	16.51	16.51	-	DETENTION BASIN 1 - WITHOUT AMEREN PROPERTY AREA
TOTAL				16.51	3.18	
PAY TOTAL				17.00	4.00	

EARTHWORK								
SHEET NUMBER	LOCATION DESCRIPTION	CUT VOLUME	FILL VOLUME (OFF-SITE)	FILL VOLUME (ON-SITE)	CLASS A EXCAVATION	EMBANKMENT IN PLACE	COMPACTING EMBANKMENT	REMARKS
		(CY)	(CY)	(CY)	(CY)	(CY)	(CY)	
7	WEIR REPAIR	6548.00	3024.00	1037.00	6548.00	3024.00	1037.00	SEE JSP'S ON RE-USE OF EXCAVATED MATERIAL
9	LEVEE 1 REPAIRS	1208.00	116.00	12.00	1208.00	116.00	12.00	SEE JSP'S ON RE-USE OF EXCAVATED MATERIAL
9	LEVEE 2 REPAIRS	619.00	22.00	0.00	619.00	22.00	0.00	SEE JSP'S ON RE-USE OF EXCAVATED MATERIAL
-	-	-	-	-	1000.00	250.00	0.00	AT DISCRETION OF ENGINEER
TOTAL					9375.00	3412.00	1049.00	
PAY TOTAL					9375.00	3412.00	1049.00	

TYPE 2 ROCK BLANKET								
SHEET NUMBER	LOCATION DESCRIPTION	AREA	VOLUME	VOLUME	PLACING TYPE 2 ROCK BLANKET	FURNISHING TYPE 2 ROCK BLANKET	PERMANENT EROSION CONTROL GEOTEXTILE	REMARKS
		(SF)	(CF)	(CY)	(CY)	(CY)	(SY)	
9	LEVEE REPAIR 1	10940.00	27350	1012.96	1012.96	1012.96	1215.56	SEE JSP'S FOR ROCK BLANKET MATERIAL SPECIFICATIONS
9	LEVEE REPAIR 2	6623.00	16558	613.26	613.26	613.26	735.89	SEE JSP'S FOR ROCK BLANKET MATERIAL SPECIFICATIONS
7-9	ROCK LINING FOR CULVERT OUTLET	148.00	296	10.96	10.96	10.96	16.44	SEE JSP'S FOR ROCK BLANKET MATERIAL SPECIFICATIONS
-	-	-	-	-	100.00	100.00	500.00	AT DISCRETION OF ENGINEER
TOTAL					1737.18	1737.18	2467.89	
PAY TOTAL					1738.00	1738.00	2468.00	

OPTIONAL WEIR TREATMENTS								
SHEET NUMBER	LOCATION DESCRIPTION	AREA	VOLUME	VOLUME	PLACING TYPE 2 ROCK BLANKET	FURNISHING TYPE 2 ROCK BLANKET	PERMANENT EROSION CONTROL GEOTEXTILE	INSTATURF SHEARFORCE10 INSTANT ARMOR MAT
		(SY)	(CF)	(CY)	(CY)	(CY)	(SY)	(SY)
7	WEIR REPAIR OPTION A ROCK BLANKET	3121.00	78630	2912.22	2912.22	2912.22	3120.22	
7	WEIR REPAIR OPTION B INSTATURF	3121.00						3121.00
								SEE JSP'S FOR OPTIONAL BIDDING REQUIREMENTS. QUANTITIES SHOWN FOR ILLUSTRATION. PAY WILL BE MADE PER SY OF OPTIONAL WEIR TREATMENT.



THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE
05/04/2023

DATE PREPARED
5/22/2023

ROUTE 370	STATE MO
DISTRICT SL	SHEET NO. 3

COUNTY
ST. CHARLES

JOB NO.
J6M3422

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION									
DATE									

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION



105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.

425 South Woods Mill Road
Chesterfield, Missouri 63017
314-682-1500

Certificate of Authority
No. : 000165
BMD Project No. 142536



MSD BASE MAPS: MSD PERMIT NUMBER:

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

SHEET NUMBER	DETENTION BASIN	CULVERT CLEANOUT	42 IN. CHECK VALVE	PIPE LINER FOR EXISTING CULVERT	REMARKS
		(EACH)	(EACH)	(LF)	
7-9	1	6.00	-	-	
4	2	-	1.00	100.00	PIPE LINER FOR EXISTING 42" CULVERT
TOTAL		6.00	1.00	100.00	
PAY TOTAL		6.00	1.00	100.00	

TEMPORARY EROSION CONTROL													
SHEET NUMBER	ALIGNMENT	STA	to STA	AREA	LENGTH	LOCATION DESCRIPTION	SILT FENCE	ROCK DITCH CHECK	SEDIMENT REMOVAL	SEEDING- WARM SEASON GRASSES	MULCHING	TEMPORARY SEEDING	REMARKS
				(SF)	(LF)		(LF)	(LF)	(CY)	(ACRE)	(ACRE)	(ACRE)	
16-19	BOSCHERT CREEK	51+00.00	86+50.00	138450.00	3550.00	HAUL ROUTE	3550.00	-	-	3.18	3.18	3.18	
16	BOSCHERT CREEK	52+75.00	-	-	75.00	INLET PROTECTION DETENTION BASIN 2	-	75.00	5.00	-	-	-	
19	WEIR	07+50.00	03+50.00	23873.00	-	SEEDING ADJACENT TO WEIR REPAIR	-	-	-	0.55	0.55	0.55	
19-21	BOSCHERT CREEK	88+50.00	107+50.00	-	270.00	INLET PROTECTION DETENTION BASIN 1	-	270.00	18.00	-	-	-	
21	BOSCHERT CREEK	114+25.00	115+75.00	-	150.00	LEVEE 2 REPAIRS	150.00	-	-	-	-	-	
19-21	BOSCHERT CREEK	87+00.00	116+25.00	720144.00	-	DETENTION BASIN 1 - WITHOUT AMEREN PROPERTY AREA	-	-	-	16.53	16.53	16.53	
						-	500.00	-	-	-	-	-	AT DISCRETION OF ENGINEER
TOTAL							4200.00	345.00	23.00	20.26	20.26	20.26	
PAY TOTAL							4200.00	345.00	23.00	21.00	21.00	21.00	



THIS SHEET HAS BEEN
STORED, SEALED, AND DATED
ELECTRONICALLY

DATE
05/04/2023

DATE PREPARED
5/22/2023

ROUTE
370

DISTRICT
SL

STATE
MO

SHEET NO.
3

COUNTY
ST. CHARLES

JOB NO.
J6M3422

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION



105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-278-6636)

Burns & McDonnell Engineering Co., Inc.
425 South Woods Mill Road
Chesterfield, Missouri 63017
314-682-1500



Certificate of Authority
No. : 000165
BMd Project No. 142536

MSD BASE MAPS: MSD PERMIT NUMBER:

SUMMARY OF QUANTITIES
SHEET 2 OF 4

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MOBILIZATION		
TOTAL	1.00	LUMP SUM

ADDITIONAL MOBILIZATION FOR SEEDING		
TOTAL	2.00	LUMP SUM

CONTRACTOR FURNISHED SURVEYING AND STAKING		
TOTAL	1.00	LUMP SUM

BEAVER DAM REMOVAL		
TOTAL	24.00	EACH

SUMMARY OF QUANTITIES
SHEET 3 OF 4



BURNS
MCDONNELL

Burns & McDonnell Engineering Co., Inc.
425 South Woods Mill Road
Chesterfield, Missouri 63017
314-682-1500

Certificate of Authority
No. : 000165
BMD Project No. 142536

MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION



105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

DATE

DESCRIPTION



THIS SHEET HAS BEEN
STORED, SEALED AND DATED
ELECTRONICALLY

DATE
05/04/2023

DATE PREPARED
5/22/2023

ROUTE
370

DISTRICT
SL

STATE
MO

SHEET NO.
3

COUNTY
ST. CHARLES

JOB NO.
J6M3422

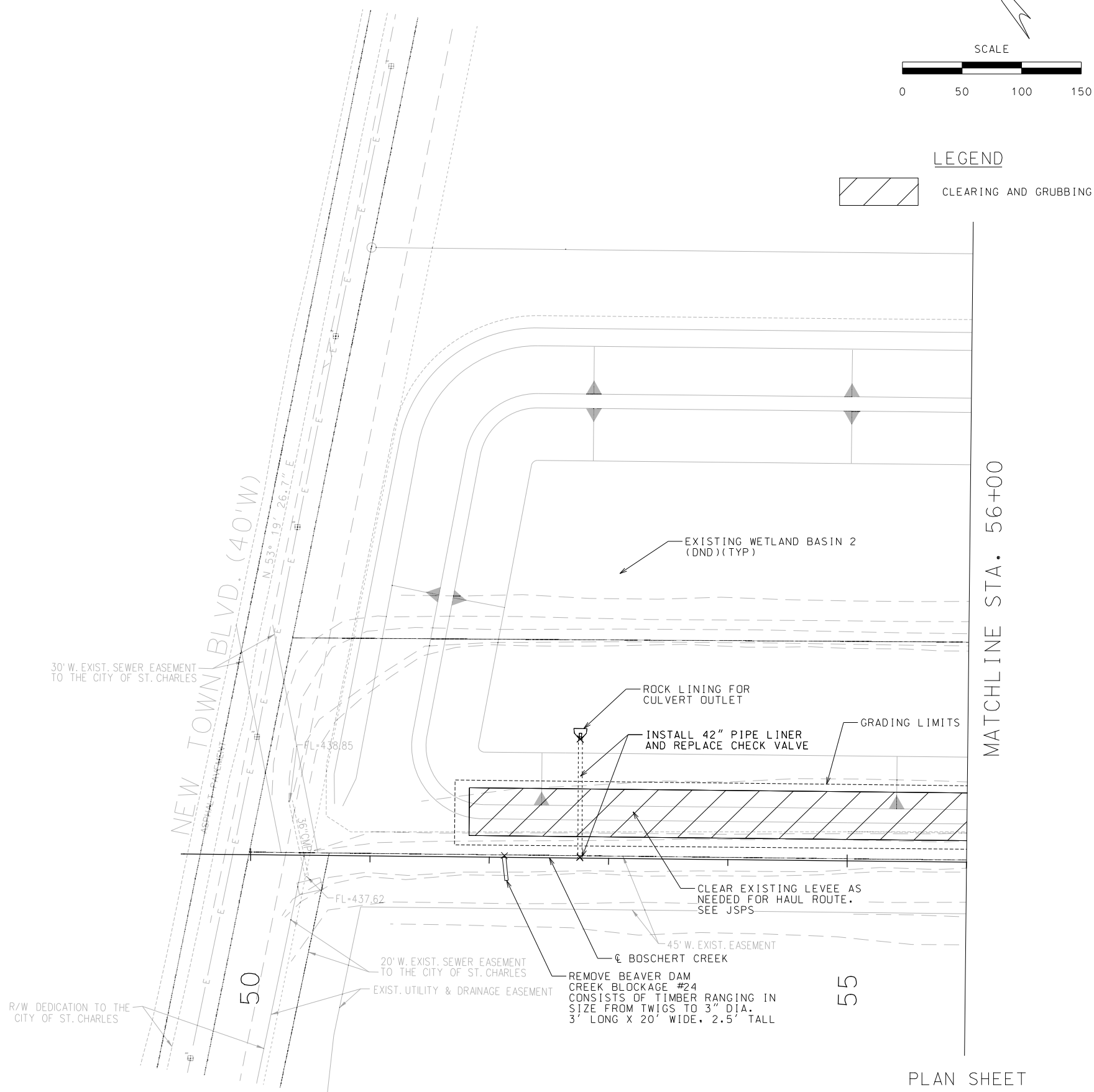
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PROJECT NO.
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BRIDGE NO.
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REV. MSD BASE MAPS: MSD PERMIT NUMBER: IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

THE EXISTENCE AND APPROXIMATE LOCATION OF UTILITY FACILITIES KNOWN TO EXIST, AS SHOWN ON THE PLANS, ARE BASED ON THE BEST INFORMATION AVAILABLE TO THE COMMISSION AT THE TIME. THIS INFORMATION IS PROVIDED BY THE COMMISSION "AS IS" AND THE COMMISSION MAKES NO REPRESENTATION OR WARRANTY AS TO THE COMPLETENESS OR ACCURACY OR SUITABILITY OF THE INFORMATION FOR ANY USE. RELIANCE UPON THIS INFORMATION IS DONE AT THE RISK AND PERIL OF THE USER, AND THE COMMISSION SHALL NOT BE LIABLE FOR ANY DAMAGES THAT MAY ARISE FROM ANY ERROR IN THE INFORMATION. IT IS THEREFORE, THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE EXISTENCE, LOCATION AND STATUS OF ANY FACILITY. SUCH VERIFICATION INCLUDES DIRECT CONTACT WITH THE LISTED UTILITIES.



PLAN SHEET
SHEET 1 OF 6



DATE
05/04/2023

DATE PREPARED
5/22/202

ROUTE	STATE
370	MO

DISTRICT	SHEET NO.
S.L.	4

COUNTY
ST. CHARLES

JOB NO.
J6M342

CONTRACT ID

PROJECT NO.

BRIDGE NO.

[illegible]

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION



105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

Burns & McDonnell Engineering Co., Inc.

425 South Woods Mill Road
Chesterfield, Missouri 63017
417-866-4500

314-682-1500
Certificate of Authority

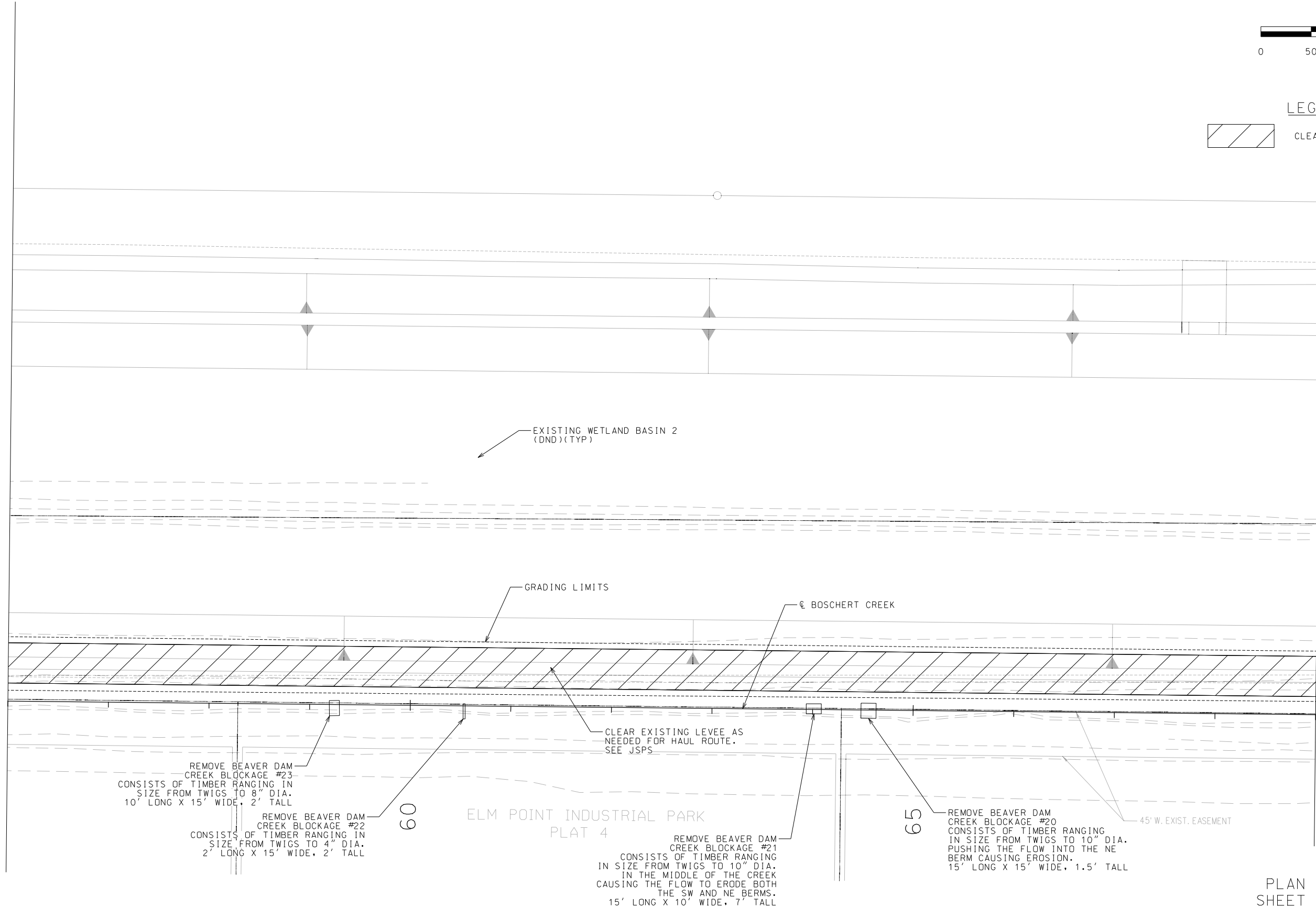
No. : 000165
BMCD Project No. 142536

**BURNS
MCDONNELL**

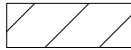
REV.	MSD BASE MAPS:	MSD PERMIT NUMBER:
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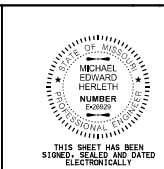
MATCHLINE STA. 56+00



PLAN SHEET
SHEET 2 OF 6



LEGEND
CLEARING AND GRUBBING



DATE
05/04/2023

DATE PREPARED
5/22/2023

ROUTE
370

STATE
MO

DISTRICT
SL

SHEET NO.
5

COUNTY
ST. CHARLES

JOB NO.
J6M3422

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DATE	DESCRIPTION
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MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

Burns & McDonnell Engineering Co., Inc.
425 South Woods Mill Road
Chesterfield, Missouri 63017
314-682-1500
Certificate of Authority
No. : 000165
BMD Project No. 142536



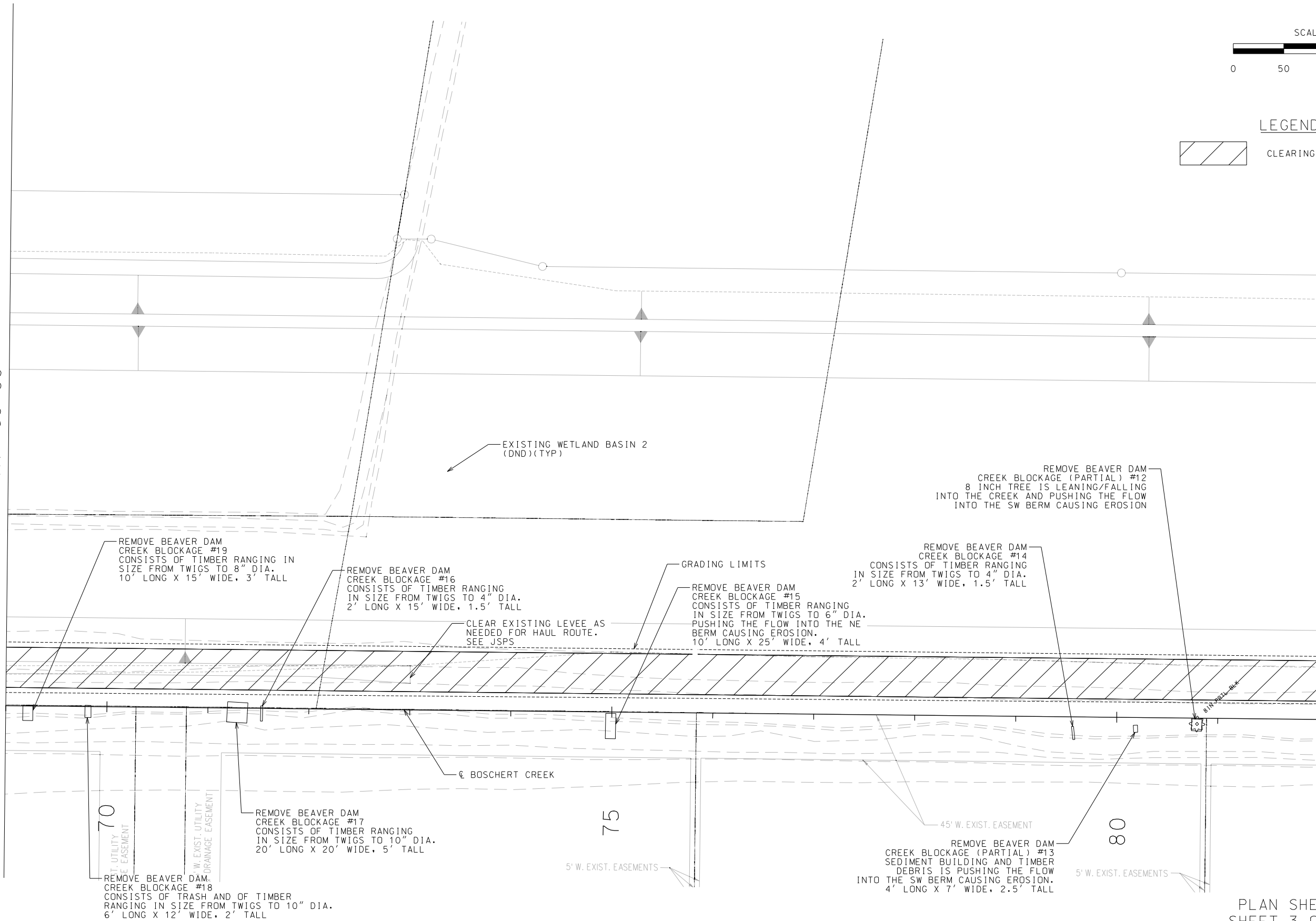
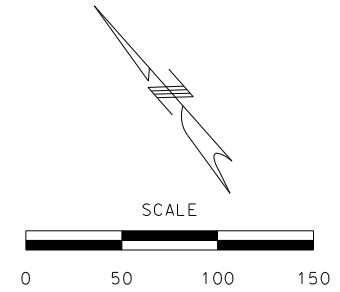
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

REV.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

MATCHLINE STA. 69+00

MATCHLINE STA. 82+00



PLAN SHEET
SHEET 3 OF 6



DATE
05/04/2023

DATE PREPARED
5/22/2023

ROUTE
370

STATE
MO

DISTRICT
SL

SHEET NO.
6

COUNTY
ST. CHARLES

JOB NO.
J6M3422

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION

DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

COMMISSION

105 WEST CAPITOL

JEFFERSON CITY, MO 65102

1-888-ASK-MODOT (1-888-278-6636)

MoDOT

425 South Woods Mill Road

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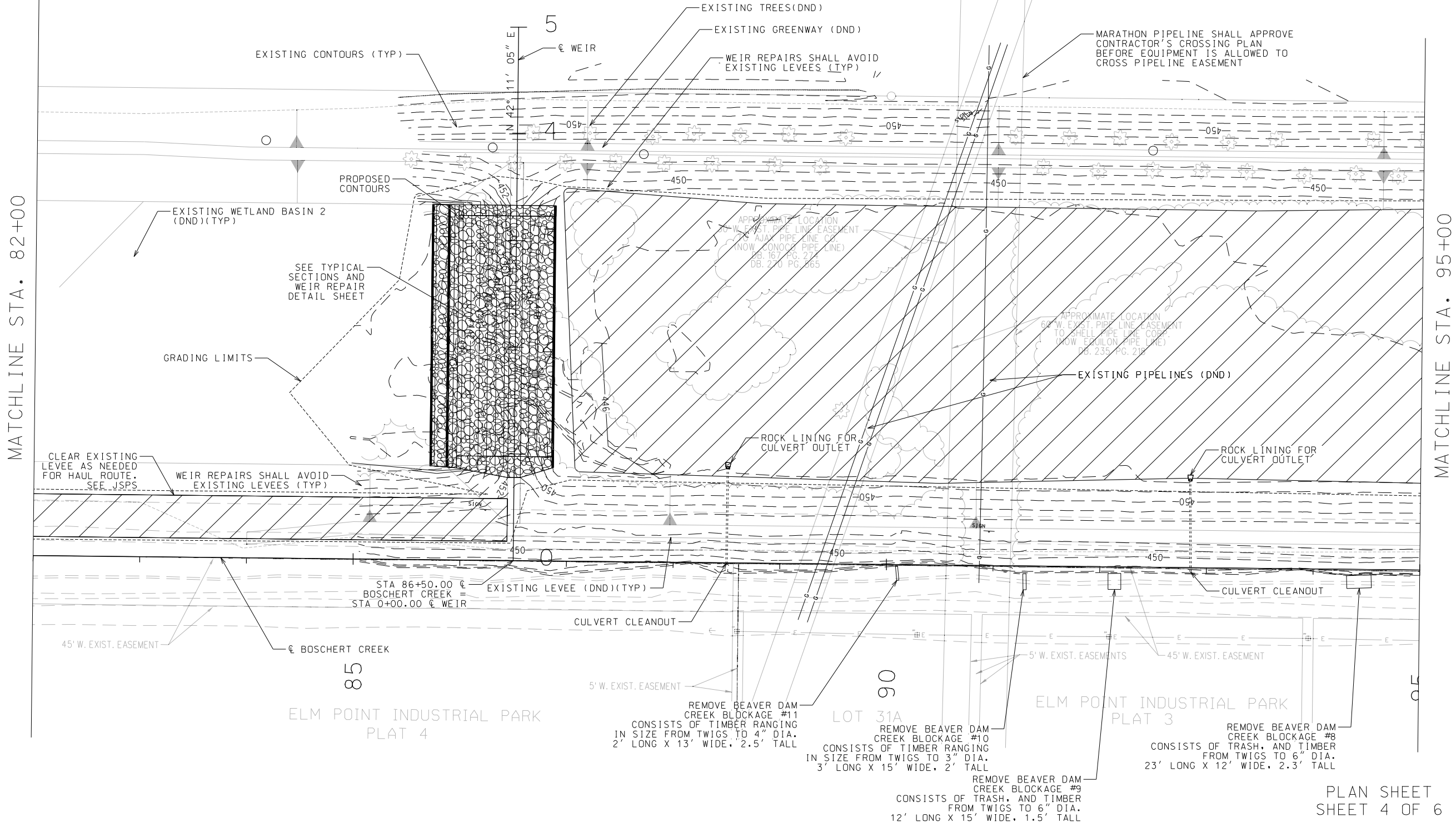
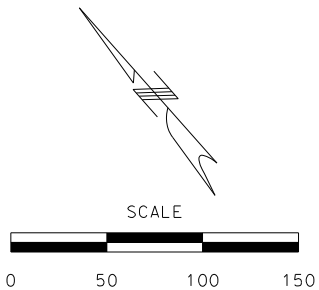
BMd Project No. 142536

MSD BASE MAPS: MSD PERMIT NUMBER:

REV.

IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

- LEGEND
- CLEARING AND GRUBBING
 - OPTIONAL WEIR TREATMENT
 - TYPE 2 ROCK BLANKET TOE WALL OR ANCHOR TRENCH



DATE
05/04/2023

DATE PREPARED
5/22/2023

ROUTE 370	STATE MO
DISTRICT SL	SHEET NO. 7

COUNTY
ST. CHARLES

JOB NO.
J6M3422

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

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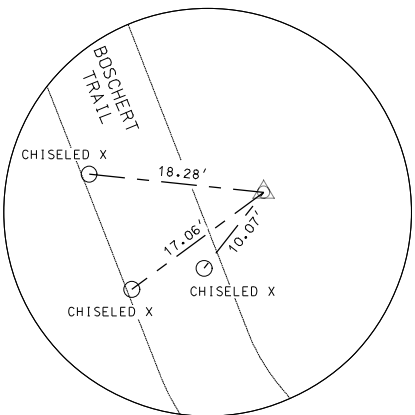
REV.

MSD BASE MAPS:

MSD PERMIT NUMBER:

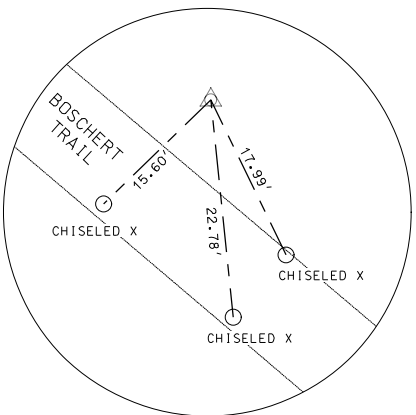
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

REFERENCE TIES



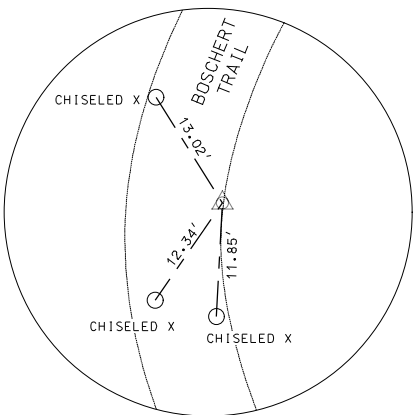
IRON PIN WITH CAP

QE1#1
EASTING = 822285.985
NORTHING = 1088234.442
ELEVATION = 459.774



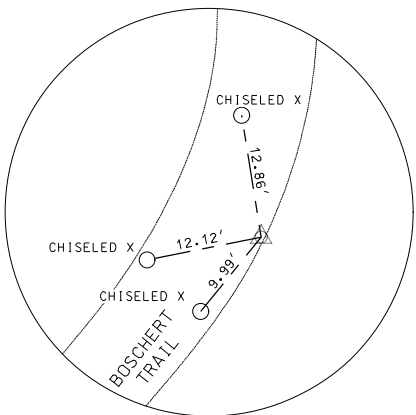
IRON PIN WITH CAP

QE1#2
EASTING = 821975.450
NORTHING = 1088599.405
ELEVATION = 459.050



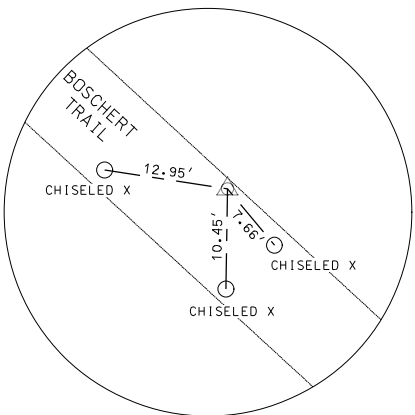
MAG NAIL IN PATH

QE1#3
EASTING = 821836.663
NORTHING = 1088736.286
ELEVATION = 459.419



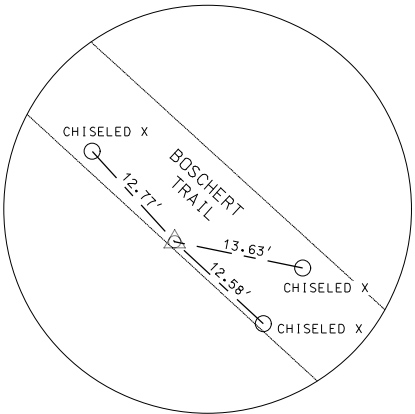
MAG NAIL IN PATH

QE1#4
EASTING = 821993.627
NORTHING = 1088931.907
ELEVATION = 455.516



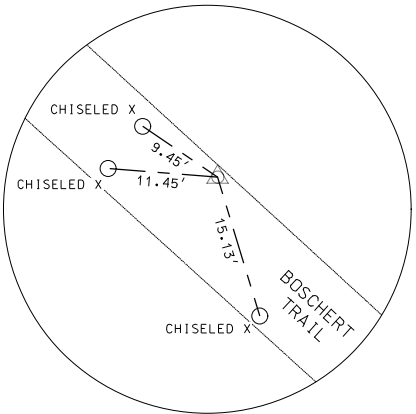
MAG NAIL IN PATH

QE1#5
EASTING = 821847.479
NORTHING = 1089117.266
ELEVATION = 455.118



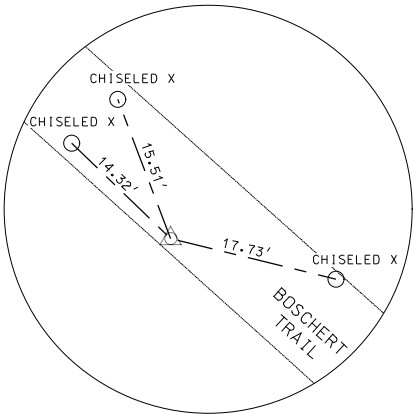
MAG NAIL IN PATH

QE1#6
EASTING = 821503.620
NORTHING = 1089420.338
ELEVATION = 455.189



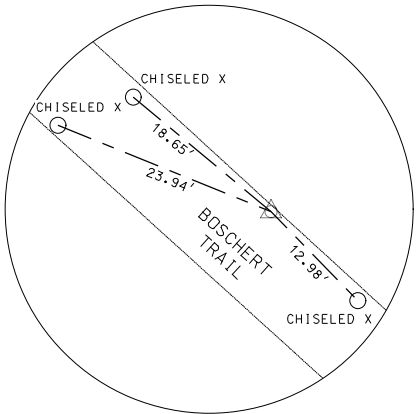
MAG NAIL IN PATH

QE1#7
EASTING = 821087.770
NORTHING = 1089810.017
ELEVATION = 455.176



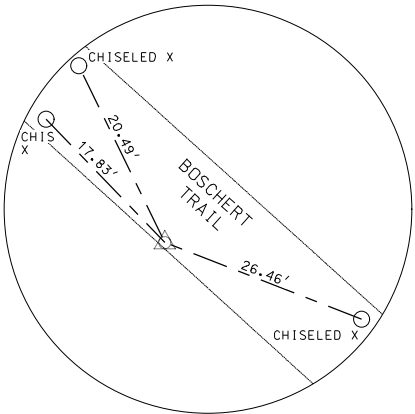
MAG NAIL IN PATH

QE1#8
EASTING = 820661.722
NORTHING = 1090186.070
ELEVATION = 455.078



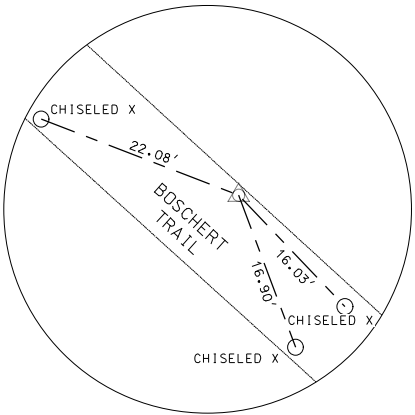
MAG NAIL IN PATH

QE1#9
EASTING = 820231.902
NORTHING = 1090586.234
ELEVATION = 455.128



MAG NAIL IN PATH

QE1#10
EASTING = 819872.571
NORTHING = 1090900.674
ELEVATION = 455.270



MAG NAIL IN PATH

QE1#11
EASTING = 819616.404
NORTHING = 1091145.503
ELEVATION = 451.674

COORDINATE POINT LISTING							
SHEET NO	STATION	LOCATION	OFFSET (USFT)	MODIFIED STATE PLANE (GROUND)			DESCRIPTION
				NORTHING (US SURVEY FT)	EASTING (US SURVEY FT)	ELEVATION (US SURVEY FT)	
PROJECT CONTROL POINTS							
7	86+26.93	BOSCHERT CRK	386.90' LT	1090999.425	819770.793	459.955	BM#1 CHIS. X IN W. CURB OF BOSCHERTOWN RD
OFF PLANS	123+39.16	BOSCHERT CRK	143.91' LT	1088168.833	822345.995	454.975	BM#2 COTTON PICKER SPINDLE IN PATH NEAR WEIR
ALIGNMENT – BOSCHERT CREEK							
4	46+86.81	BOSCHERT CRK	℄	1093358.610	816591.410	-	POB
OFF PLANS	121+95.30	BOSCHERT CRK	℄	1088316.501	822155.089	-	PC
OFF PLANS	123+94.29	BOSCHERT CRK	99.19' LT	1088182.875	822302.538	-	PI
OFF PLANS	124+72.76	BOSCHERT CRK	℄	1088077.916	822133.479	-	PT
ALIGNMENT – WEIR							
7	0+00.00	WEIR	℄	1090697.244	819528.076	-	POB
7	5+07.69	WEIR	℄	1091073.438	819869.003	-	POE

COORDINATE SYSTEM

THE COORDINATE SYSTEM USED IS MISSOURI STATE PLANE COORDINATE SYSTEM, EAST ZONE, NAD 83, NAVD 88, U.S. SURVEY FEET.

COORDINATES WERE MODIFIED WITH A GRID TO GROUND DISTANCE PROJECTION FACTOR (RECIPROCAL COMBINED GRID FACTOR) OF 1.0000878, SCALED ABOUT POINT (NO.00, EO.00) TO ESTABLISH GROUND DISTANCES.

REFERENCE AND
COORDINATE POINTS SHEET
SHEET 1 OF 1



DATE
05/04/2023

DATE PREPARED
5/22/2023

ROUTE
370

DISTRICT
SL

STATE
MO

SHEET NO.
10

COUNTY
ST. CHARLES

JOB NO.
J6M3422

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION

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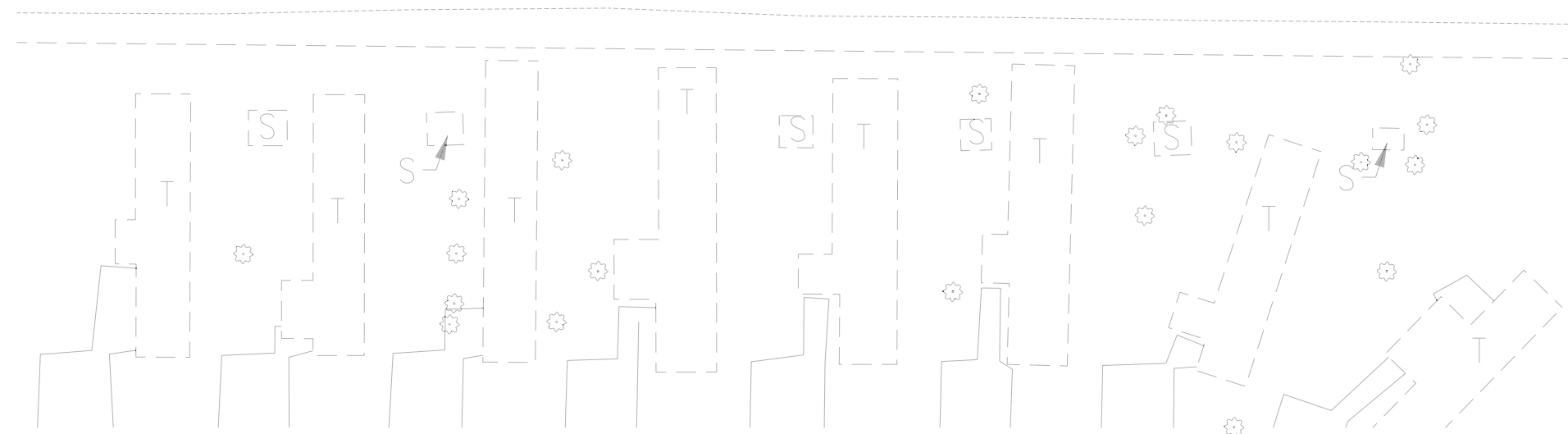
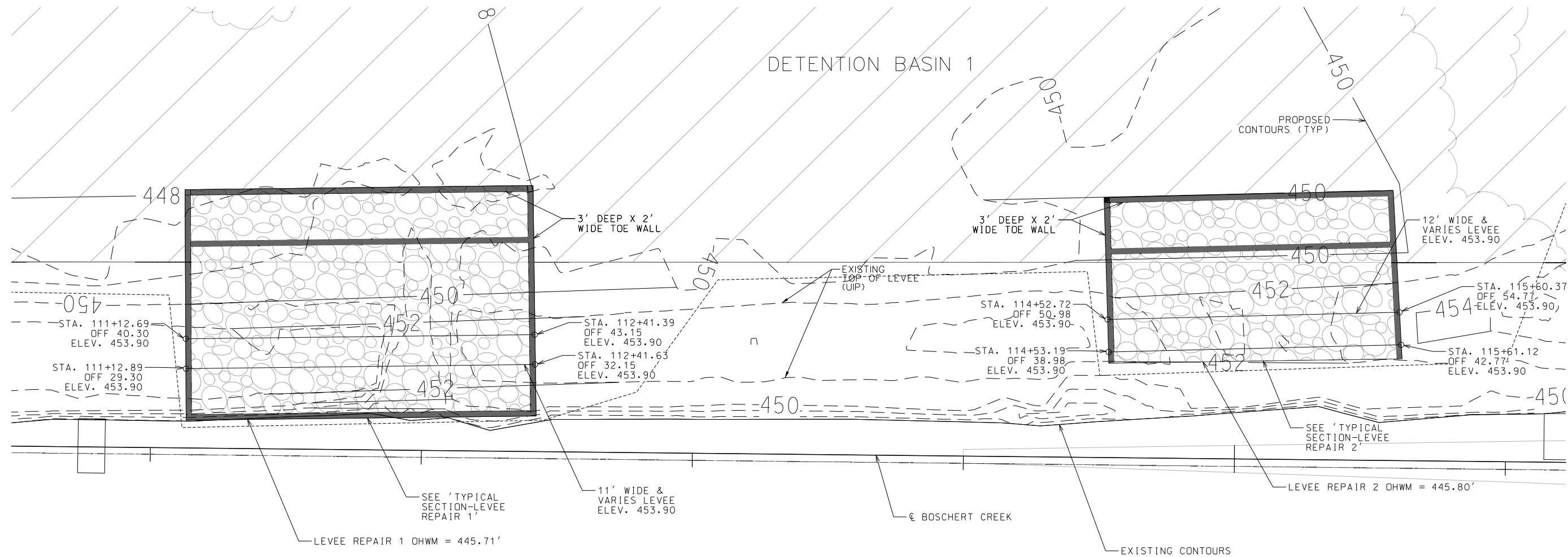
DATE

DATE

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Certificate of Authority
No. : 000165
BMD Project No. 142536
MSD PERMIT NUMBER:

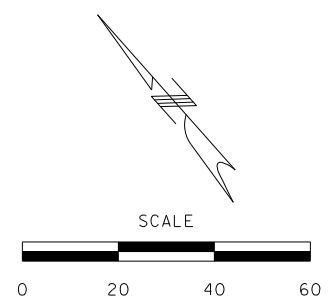




LEGEND

- CLEARING AND GRUBBING
- TYPE 2 ROCK BLANKET WITH GEOTEXTILE
- TYPE 2 ROCK BLANKET TOE WALL

115



DETAIL SHEET
BOSCHERT CREEK LEVEE
REPAIR
SHEET 2 OF 3

DATE
05/04/2023

DATE PREPARED
5/22/2023

ROUTE 370	STATE MO
DISTRICT SL	SHEET NO. 12

COUNTY
ST. CHARLES

JOB NO.
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CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-278-6636)

Burns & McDonnell Engineering Co., Inc.

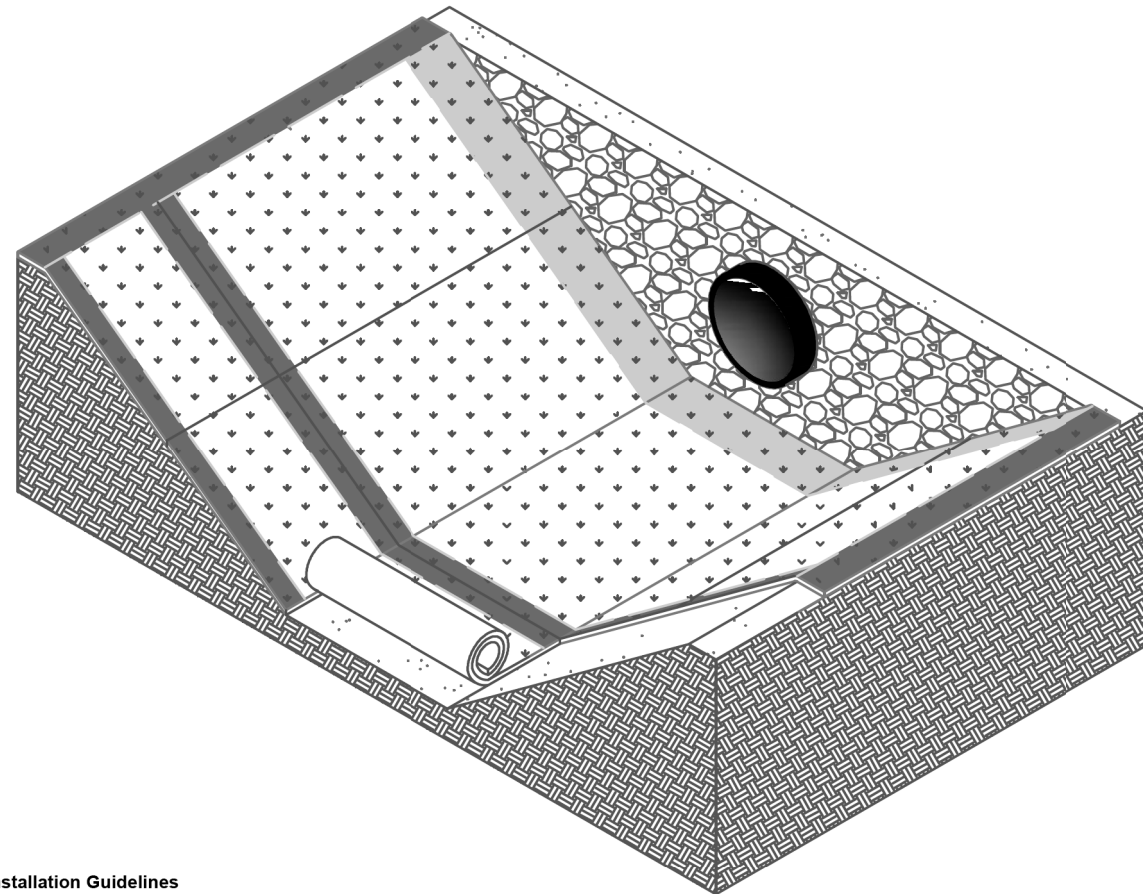
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314-682-1500

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No. : 000165

BMd Project No. 142536

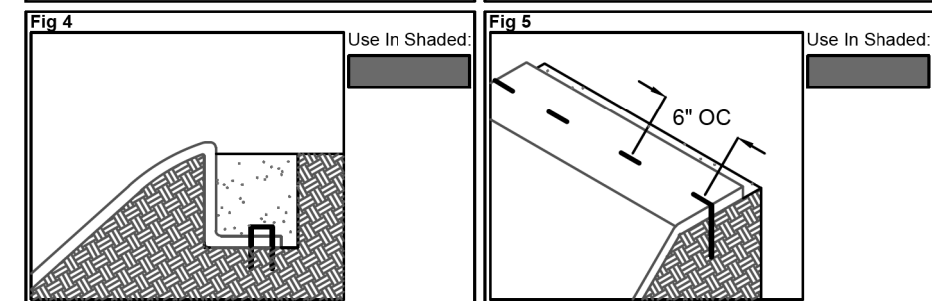
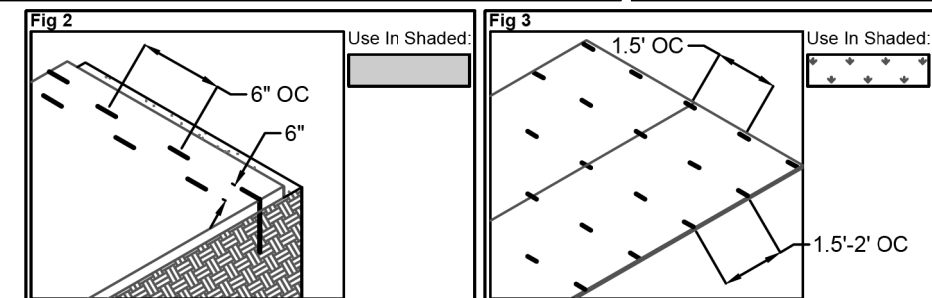
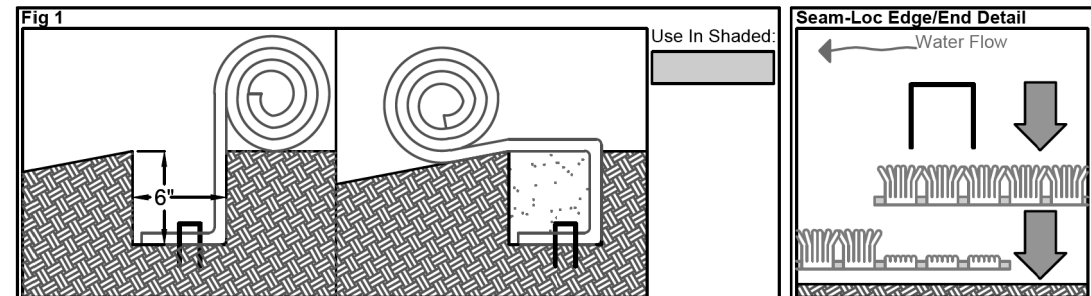
MSD BASE MAPS: MSD PERMIT NUMBER:

ShearForce10 Hybrid Turf Instant Armor Mat Installation Guide for Channels, Downchutes, and Spillways (Not To Scale)



ShearForce10 Recommended Anchors		
Soil Type	*Minimum Anchor	Alternate Anchors
Cohesive, well compacted or undisturbed	8"x2"x8" wire U-staple	12" Fabric Pin, 8" Plastic Stake
Cohesive, loose	12"x2"x12" wire U-staple	18" Fabric Pin, 12" Plastic Stake
Non-Cohesive, well compacted or undisturbed	12"x2"x12", $\frac{3}{8}$ " Rebar U-staple	24" Fabric Pin, 18" Earth Anchor
Non-Cohesive, loose	18"x2"x18", $\frac{3}{8}$ " Rebar U-staple	36" Percussion Earth Anchor

*U-shaped anchors are recommended as they can be shared between adjacent rows when seaming, reducing total anchors needed during installation.



Installation Guidelines

1. **Select appropriate anchors for matting based on soil type and consistency (See Recommended Anchors Table).**
2. **Prepare seedbed,** create a smooth soil surface and eliminate any existing rills, soil clods, sticks or rocks larger than 2-inches in diameter. Any soil used to fill rills or low spots must be adequately compacted before seedbed preparation.
3. **Apply seed, fertilizer,** and other amendments at the specified rates, either by broadcasting, drilling, or hydro-seeding.
4. **Position and anchor leading edge of mats at in-flow end of channel** with one of the following acceptable methods:
 - 4.1. **6-inch Covered Anchor Trench (Figure 1)**

Construct a 6-inch wide by 6-inch deep anchor trench across the top width of the channel. Position the leading edge of the mats in the bottom of the trench, with the topside (simulated turf surface) facing down. Make sure mat rolls are properly aligned with channel direction. Position any adjacent rolls according to Step 5 (to ensure proper overlap), and anchor leading edges of all mats into bottom of trench on 1-foot centers. Backfill trench, compact soil and apply additional seed to compacted soil surface. Unroll material over compacted anchor trench (Fig 1).
 - 4.2. **Double Row Anchor Check (Figure 2)**

Where trenching is not practical or desired, an anchor check may be used to secure the leading edges of the mats. Position the leading edges of the mats with the topside (simulated turf surface) facing up, ensuring that the mat rolls are properly aligned with channel direction. Position adjacent rolls according to Step 5 (to ensure proper overlap). Secure leading edges of mats with a row of anchors spaced 6-inches apart, with a second staggered row of anchors spaced 6-inches apart, approximately 6-inches behind the first row. (Fig 2).
5. **Seam adjacent rolls. (Seam-Loc Edge Detail)** Unroll material down channel grade, slightly stretch and relax each mat to remove any wrinkles. Let unrolled mats rest in sunlight for a minimum of 15 minutes to normalize surface temperature before anchoring. Overlap roll edges by placing full-turf roll edges on top of nubbed Seam-Loc edges (2-inch inset) of adjacent rolls. If necessary, simply step on overlaps to flatten and snap Seam-Loc edges together.
6. **Anchor mats to soil. (Figure 3).** Starting at the in-flow end of channel and working down the channel gradient, fasten mats with a row of anchors spaced 1.5-feet apart across the mat width, and anchor rows spaced 1.5-2.0-feet apart down the mat length, making sure all overlaps and factory pre-fabricated seams (6-ft wide rolls only) are secured, according to Fig. 3. Installation on non-cohesive sandy soils and/or in channels where immediate flow velocities are expected to exceed 12 ft/sec, should use the 1.5-foot row spacing along mat length. Use additional anchors as necessary to smooth any remaining wrinkles and ensure that mats are in intimate contact with the underlying soil surface.
7. **Anchor mat edges at top of side-slopes** with one of two acceptable methods:
 - 7.1. **6-inch Anchor Trench (Figure 4)**

Construct a 6-inch wide by 6-inch deep anchor trench at the top or over the crest of each side-slope and fasten the full length edge of mats into the bottom, with anchors spaced 1.5-feet apart. Backfill trench, compact soil and apply additional seed to compacted soil surface (Fig 4).
 - 7.2. **Single Row Anchor Check (Figure 5)**

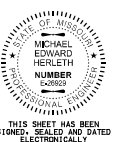
Where trenching is not practical or desired, an anchor check may be used alternatively to secure the side-slope mat edges. Anchor side-slope edges of mats with a single row of anchors spaced 6-inches apart (Fig 5).
8. **Seaming consecutive roll ends. (Seam-Loc End Detail),** Overlap roll ends "shingle-style" by placing full-turf roll ends (tail of upslope rolls) on top of nubbed Seam-Loc roll ends (3-inch turf inset at head of downslope rolls). Secure with a row of anchors spaced 6-in apart (see Figure 5).
9. **Terminal channel roll ends.** Anchor roll ends at the terminal outfall of channel by constructing a 6-inch Anchor Trench (Fig 4) or with a Single Row Anchor Check (Fig 5)- **NOTE:** Single Row Anchor Checks are acceptable only if channel terminates into a non-erodible area.

Additional Tips for Fast & Effective Installation

- Install mat with simulated turf on top and fabric backing against soil surface.
- For best vegetative results, do not install on top of any additional erosion control blanket, TRM, or fabric.
- Overlap adjacent rolls by placing full-turf roll edges on top of nubbed Seam-Loc roll edges (2-inch turf inset). Ensure that all overlaps and seams are properly anchored and secure. If necessary, simply step on overlaps to flatten and snap Seam-Loc edges together.
- Continuous fabric contact with the underlying soil surface is very important for effective product performance. Unroll mat and let rest in sunlight for a minimum of 15 minutes to normalize surface temperature before anchoring the mat body. Work out any wrinkles in the material before anchoring. If wrinkles remain, additional anchors may be necessary to ensure good fabric-to-soil contact.
- In channel bends or reaches that are not straight, miter cut roll joints to prevent wrinkles in material.
- Use a heavy-duty utility knife or commercial-grade shears to cut material as necessary.
- When seaming cut roll ends or edges, DO NOT OVERLAP. Simply butt together cut ends or edges and seam together with a single row of anchors, spaced 6-inches apart.

Effective Date: SEP 2020

DETAIL SHEET
INSTA-TURF INSTALLATION
INSTRUCTIONS
SHEET 3 OF 3



DATE
05/04/2023

DATE PREPARED
5/22/2023

ROUTE	STATE
370	MO

DISTRICT	SHEET NO.
SI	13

COUNTY
T. CHARLES

JOB NO.
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CONTRACT ID.

PROJECT NO.

BRIDGE NO.

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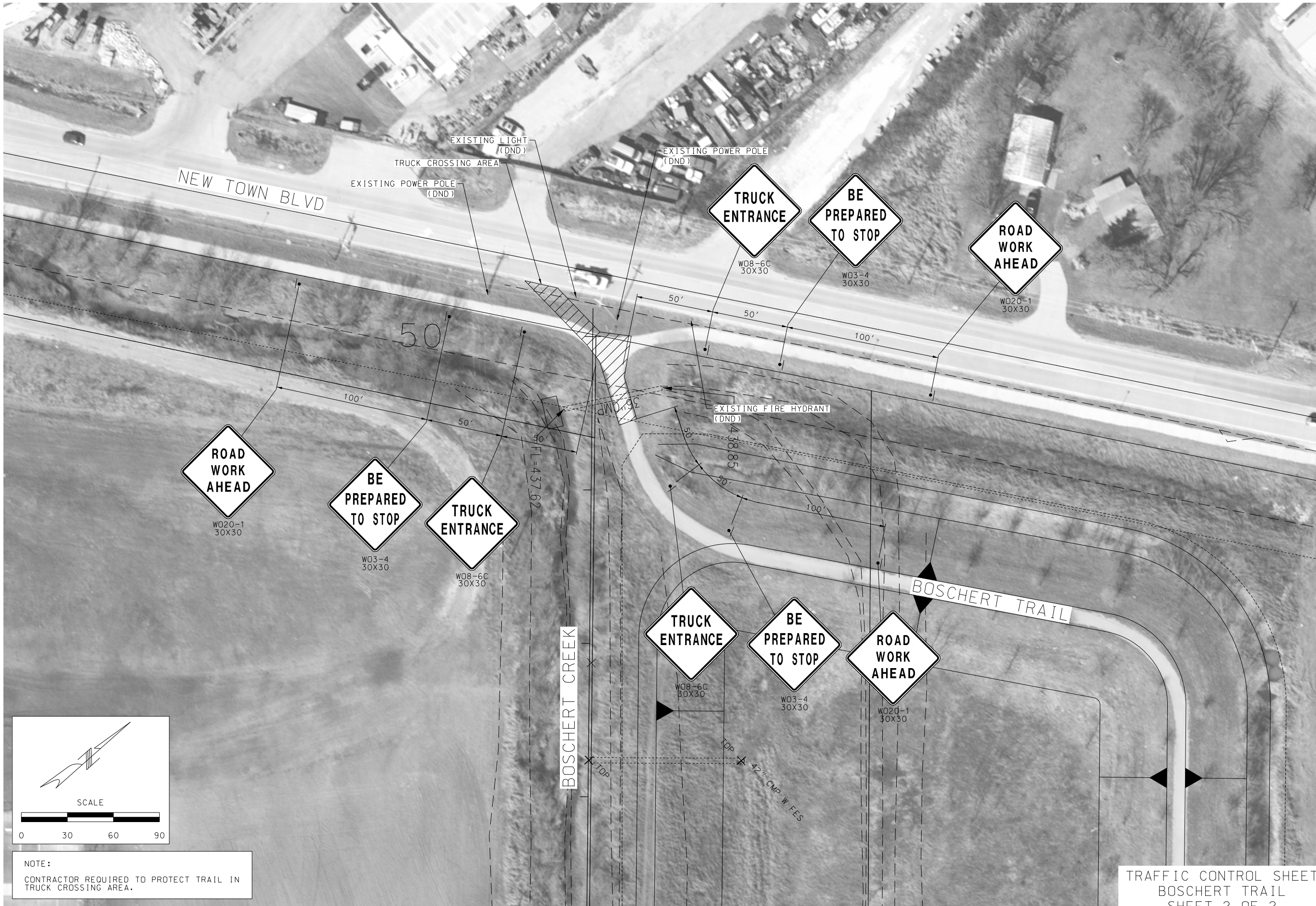
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BMCD Project No. 142536

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THIS SEAL HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY

DATE
05/04/2023

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ROUTE 370	STATE MO
DISTRICT SL	SHEET NO. 14

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ST. CHARLES

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MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

105 WEST CAPITOL
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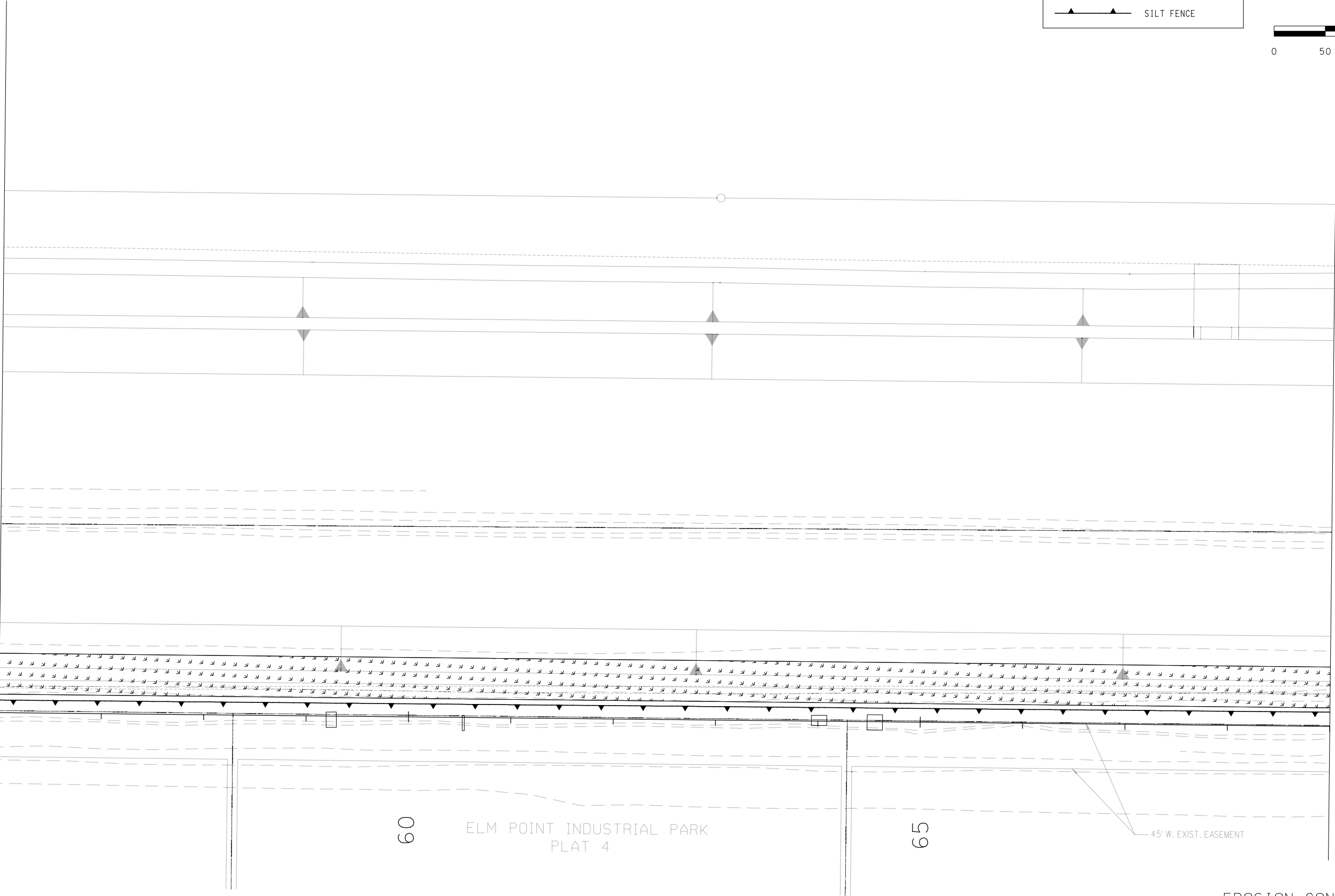
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MATCHLINE STA. 56+00



LEGEND

SEEDING AREA

ROCK DITCH CHECK

SILT FENCE

SCALE

050100150

THIS SHEET HAS BEEN
SIGNED, SEALED AND DATED
ELECTRONICALLY

DATE
05/04/2023

DATE PREPARED
5/22/2023

ROUTE
370

STATE
MO

DISTRICT
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SHEET NO.
16

COUNTY
ST. CHARLES

JOB NO.
J6M3422

CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DATE	DESCRIPTION
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MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

105 WEST CAPITOL
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EROSION CONTROL SHEET
SHEET 2 OF 6

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MATCHLINE STA. 69+00

MATCHLINE STA. 82+00

LEGEND

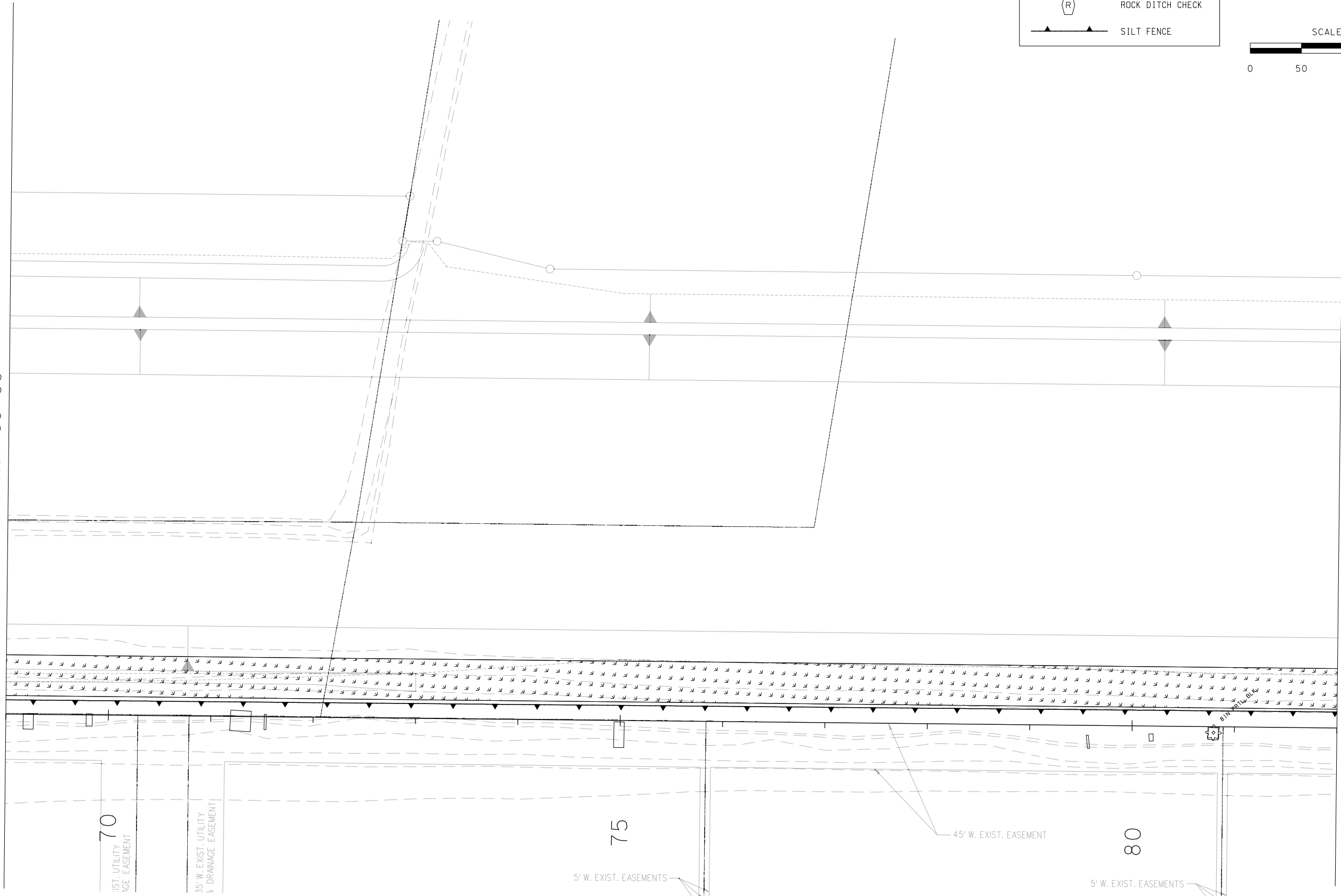
SEEDING AREA

ROCK DITCH CHECK

SILT FENCE

SCALE

050100150



EROSION CONTROL SHEET
SHEET 3 OF 6

DATE
05/04/2023

DATE PREPARED
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ROUTE
370

STATE
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SHEET NO.
17

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JOB NO.
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CONTRACT ID.

PROJECT NO.

BRIDGE NO.

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION
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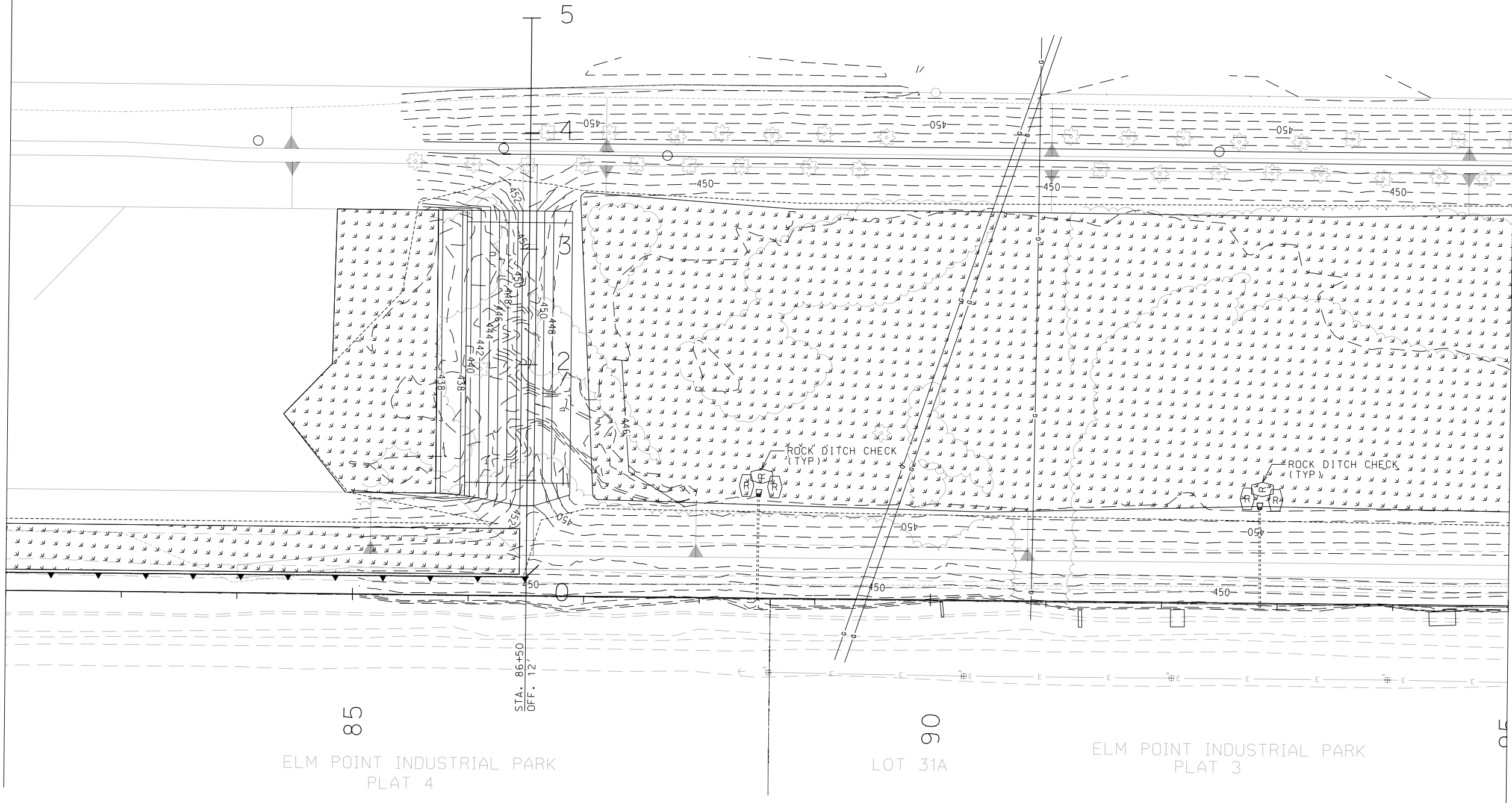
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MATCHLINE STA. 82+00



ELM POINT INDUSTRIAL PARK
PLAT 4

LOT 31A

ELM POINT INDUSTRIAL PARK
PLAT 3

EROSION CONTROL SHEET
SHEET 4 OF 6

LEGEND



SEEDING AREA



ROCK DITCH CHECK



SILT FENCE

SCALE

0 50 100 150



DATE
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5/22/2023

ROUTE
370

STATE
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SHEET NO.
18

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BRIDGE NO.

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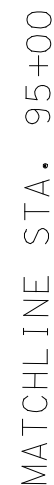
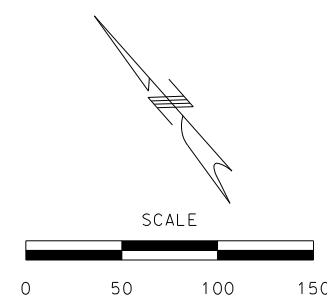
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MATCHLINE STA. 108+00

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MCDONNELL**

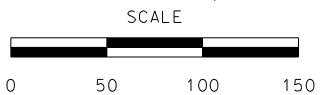
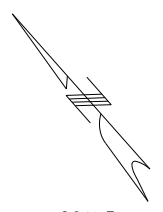
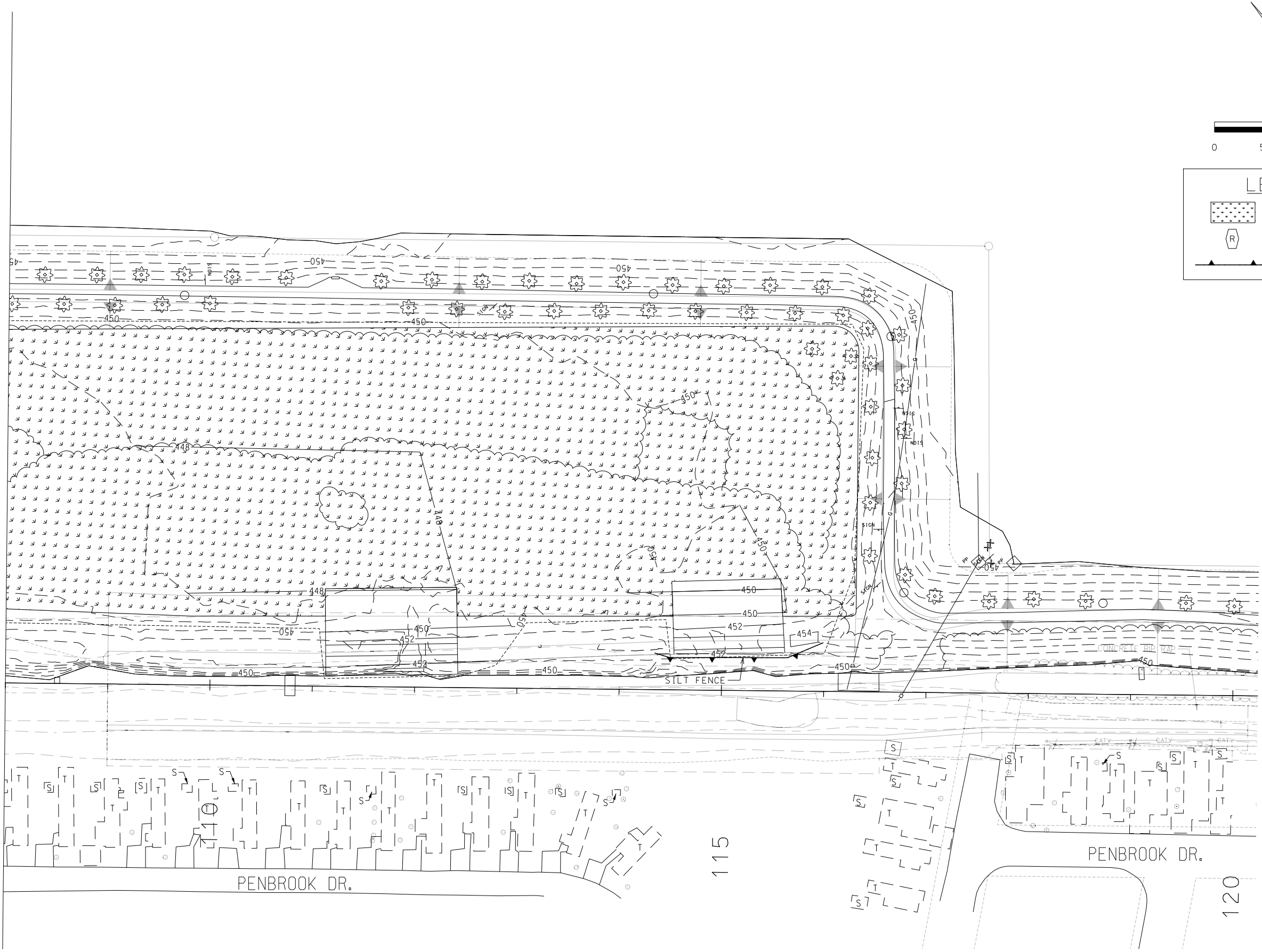
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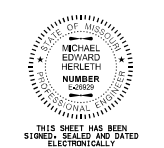
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MATCHLINE STA. 108+00



LEGEND

- SEEDING AREA
- ROCK DITCH CHECK
- SILT FENCE



DATE 05/04/2023	
DATE PREPARED 5/22/2023	
ROUTE 370	STATE MO
DISTRICT SL	SHEET NO. 20
COUNTY ST. CHARLES	
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MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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EROSION CONTROL SHEET
SHEET 6 OF 6