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**LEGEND**

	CONSTRUCTION LIMITS		
	PROP. TCE		
	PROP. BARB WIRE FENCE		
	PROP. GUARDRAIL		
	PROP. RIGHT-OF-WAY		
	EXIST. RIGHT-OF-WAY		
	EXIST. PROPERTY LINE		
	EXIST. CHANNEL CENTERLINE		
	EXIST. WROUGHT IRON FENCE		
	EXIST. OVERHEAD ELECTRIC		
	EXIST. FIBER OPTIC		
	EXIST. UNDERGROUND TELEPHONE		
	EXIST. SANITARY SEWER		EXIST. WATER METER
	EXIST. CULVERT PIPE		EXIST. STORM MANHOLE
	EXIST. STORM SEWER		EXIST. POWER POLE
	EXIST. WATER LINE		EXIST. WATER VALVE
	EXIST. ROAD CENTER		EXIST. FIRE HYDRANT
	EXIST. BARB WIRE FENCE		EXIST. TREE
	EXIST. GUARDRAIL		EXIST. GUY WIRE
	EXIST. SITE VEGETATION		EXIST. MAILBOX
	EXIST. CHANNEL BANK		EXIST. GATE
	EXIST. FIBER BOX		EXIST. TELEPHONE BOX
	EXIST. FIBER MARKER		EXIST. FIBER OPTIC BOX
	EXIST. WATER MARKER		EXIST. BOLLARD

# CITY OF LEE'S SUMMIT, MO SAMPSON ROAD BRIDGE REPLACEMENT AND STORM WATER IMPROVEMENTS CITY PROJECT NO. 997



VICINITY MAP  
1" = 3000'

**UTILITIES**

EVERGY	Attn: Alex Gerhart 1300 SE Hamblen Road Lee's Summit, MO 64081 816-652-1928 alex.gerhart@evergy.com
AT&T	Attn: Tim Bushart 2121 E 63rd St. BLDG C Kansas City, MO, 64130 816-803-2608 tb2697@att.com
GOOGLE FIBER	Attn: Lauren Marcucci lmarcucci@google.com (913) 663-1900
LEE'S SUMMIT WATER	1200 SE Hamblen Road Lee's Summit, MO 64081 (816) 969-1900
LITTLE BLUE VALLEY SEWER DISTRICT	John Flathers 21208 E Old Atherton Road Independence, MO 64058 (816) 796-9191
KANSAS FIBER NETWORK	Brian Short brian.short@upnfiber.com (816) 400-9084

**ABBREVIATIONS**

AVE.....	AVENUE
RD.....	ROAD
BK.....	BOOK
ELEC.....	ELECTRIC
ESMT.....	EASEMENT
EXIST.....	EXISTING
LT.....	LEFT
N.....	NORTH
PERM.....	PERMANENT
PG.....	PAGE
PROP.....	PROPOSED
PROPTY.....	PROPERTY
RW.....	RIGHT-OF-WAY
RT.....	RIGHT
SSWR.....	SANITARY SEWER
TEMP.....	TEMPORARY
UE.....	UTILITY EASEMENT
DE.....	DRAINAGE EASEMENT
UTIL.....	UTILITY
CL.....	CENTER LINE
NO.....	NUMBER
SH.....	SHEET
MIN.....	MINIMUM
CONST.....	CONSTRUCTION
TCE.....	TEMPORARY CONSTRUCTION EASEMENT
PED.....	PEDESTAL
DND.....	DO NOT DISTURB
COMM.....	COMMUNICATION
OVHD.....	OVERHEAD
EL/ELEV.....	ELEVATION
OHW.....	ORDINARY HIGH WATER
RT/LT.....	RIGHT/LEFT
STA.....	STATION
SWS.....	STORM WATER SEWER
TEMP.....	TEMPORARY
SY/SF.....	SQUARE YARDS/SQUARE FEET
LF.....	LINEAR FEET

**TRAFFIC INFORMATION**

DESIGN SPEED: 35 MPH  
POSTED SPEED: 35 MPH  
ADT: 1390 VEHICLES  
FUNCTIONAL CLASS: RESIDENTIAL COLLECTOR

PREPARED BY - DATE  
9/20/2024  
CODY PORTER, P.E.  
PROJECT MANAGER  
WILSON & COMPANY, INC.  
ENGINEERS & ARCHITECTS

I CERTIFY THESE PLANS WERE PREPARED BY ME OR UNDER MY IMMEDIATE PERSONAL SUPERVISION.



CONSULTANTS



SEAL

PROJECT NAME  
CITY OF LEE'S SUMMIT, MO  
SAMPSON ROAD BRIDGE  
REPLACEMENT AND STORM  
WATER IMPROVEMENTS  
PROJECT NO. 997

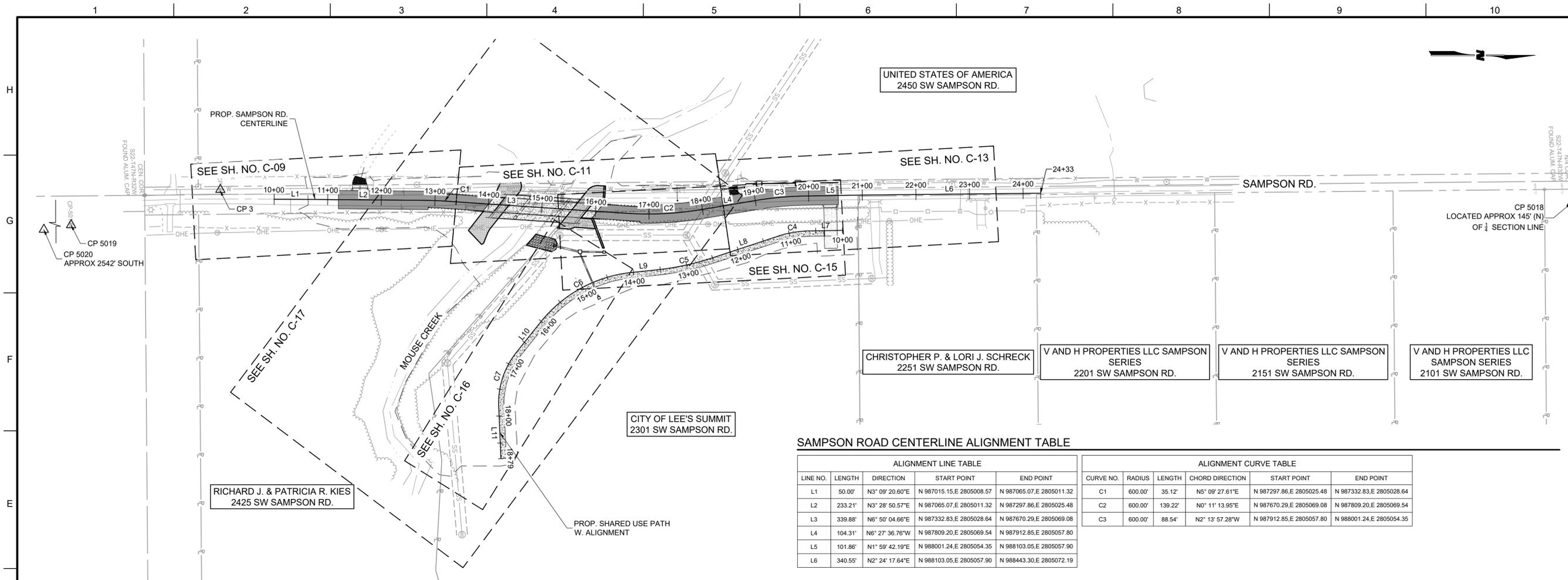
REV.	DATE	DESCRIPTION	BY

PROJECT NO:	23-600-303-00
DESIGNED BY:	AJM
DRAWN BY:	AJM
CHECKED BY:	CDP
DATE:	9/20/2024

SHEET TITLE  
**TITLE SHEET**

SHEET NO:  
**G-01**





**E1** GENERAL LAYOUT SHEET & ALIGNMENT DATA  
SCALE: 1" = 100'

**SAMPSON ROAD CENTERLINE ALIGNMENT TABLE**

ALIGNMENT LINE TABLE					ALIGNMENT CURVE TABLE					
LINE NO.	LENGTH	DIRECTION	START POINT	END POINT	CURVE NO.	RADIUS	LENGTH	CHORD DIRECTION	START POINT	END POINT
L1	50.00'	N3° 09' 20.60"E	N 987015.15,E 2805008.57	N 987065.07,E 2805011.32	C1	600.00'	35.12'	N5° 09' 27.61"E	N 987297.86,E 2805025.48	N 987332.83,E 2805028.64
L2	233.21'	N3° 28' 50.57"E	N 987065.07,E 2805011.32	N 987297.86,E 2805025.48	C2	600.00'	139.22'	N0° 11' 13.95"E	N 987670.29,E 2805069.08	N 987809.20,E 2805069.54
L3	339.88'	N6° 50' 04.66"E	N 987332.83,E 2805028.64	N 987670.29,E 2805069.08	C3	600.00'	88.54'	N2° 13' 57.28"W	N 987912.85,E 2805057.80	N 988001.24,E 2805054.35
L4	104.31'	N6° 27' 36.76"W	N 987809.20,E 2805069.54	N 987912.85,E 2805057.80						
L5	101.86'	N1° 59' 42.19"E	N 988001.24,E 2805054.35	N 988103.05,E 2805057.90						
L6	340.55'	N2° 24' 17.64"E	N 988103.05,E 2805057.90	N 988443.30,E 2805072.19						

**WEST PARK TRAIL ALIGNMENT TABLE**

ALIGNMENT LINE TABLE					ALIGNMENT CURVE TABLE					
LINE NO.	LENGTH	DIRECTION	START POINT	END POINT	CURVE NO.	RADIUS	LENGTH	CHORD DIRECTION	START POINT	END POINT
L7	61.95'	S1° 59' 42.19"W	N 988070.65,E 2805121.81	N 988008.73,E 2805119.65	C4	200.00'	60.13'	S6° 37' 03.30"E	N 988008.73,E 2805119.65	N 987949.23,E 2805126.56
L8	127.51'	S15° 13' 48.79"E	N 987949.23,E 2805126.56	N 987826.20,E 2805160.05	C5	500.00'	106.77'	S9° 06' 46.24"E	N 987826.20,E 2805160.05	N 987720.98,E 2805176.93
L9	48.09'	S2° 59' 43.68"E	N 987720.98,E 2805176.93	N 987672.96,E 2805179.45	C6	250.00'	197.50'	S25° 37' 39.41"E	N 987672.96,E 2805179.45	N 987499.48,E 2805262.66
L10	72.33'	S48° 15' 35.13"E	N 987499.48,E 2805262.66	N 987451.32,E 2805316.64	C7	150.00'	107.75'	S68° 50' 15.47"E	N 987451.32,E 2805316.64	N 987413.26,E 2805414.97
L11	97.24'	S89° 24' 55.81"E	N 987413.26,E 2805414.97	N 987412.27,E 2805512.21						

**NORTH SAMPSON CHANNEL CENTERLINE ALIGNMENT TABLE**

ALIGNMENT LINE TABLE				
LINE NO.	LENGTH	DIRECTION	START POINT	END POINT
L13	38.04'	S0° 00' 00.00"E	N 992092.13,E 2805142.29	N 992054.10,E 2805142.29
L14	51.10'	S27° 40' 17.42"E	N 992054.10,E 2805142.29	N 992008.84,E 2805166.02
L15	14.02'	S64° 03' 53.97"E	N 992008.84,E 2805166.02	N 992002.71,E 2805178.63
L17	13.20'	S51° 57' 44.60"E	N 991988.69,E 2805193.84	N 991980.56,E 2805204.24
L18	66.42'	S50° 30' 56.81"E	N 991980.56,E 2805204.24	N 991938.32,E 2805255.50
L19	12.99'	S51° 59' 11.69"E	N 991938.32,E 2805255.50	N 991930.32,E 2805265.73
L20	20.71'	S49° 27' 57.42"E	N 991930.32,E 2805265.73	N 991916.87,E 2805281.47
L21	22.45'	S50° 09' 58.07"E	N 991916.87,E 2805281.47	N 991902.48,E 2805298.71
L22	44.25'	S43° 23' 26.22"E	N 991902.48,E 2805298.71	N 991870.33,E 2805329.11

**NORTH SAMPSON ROAD CENTERLINE ALIGNMENT TABLE**

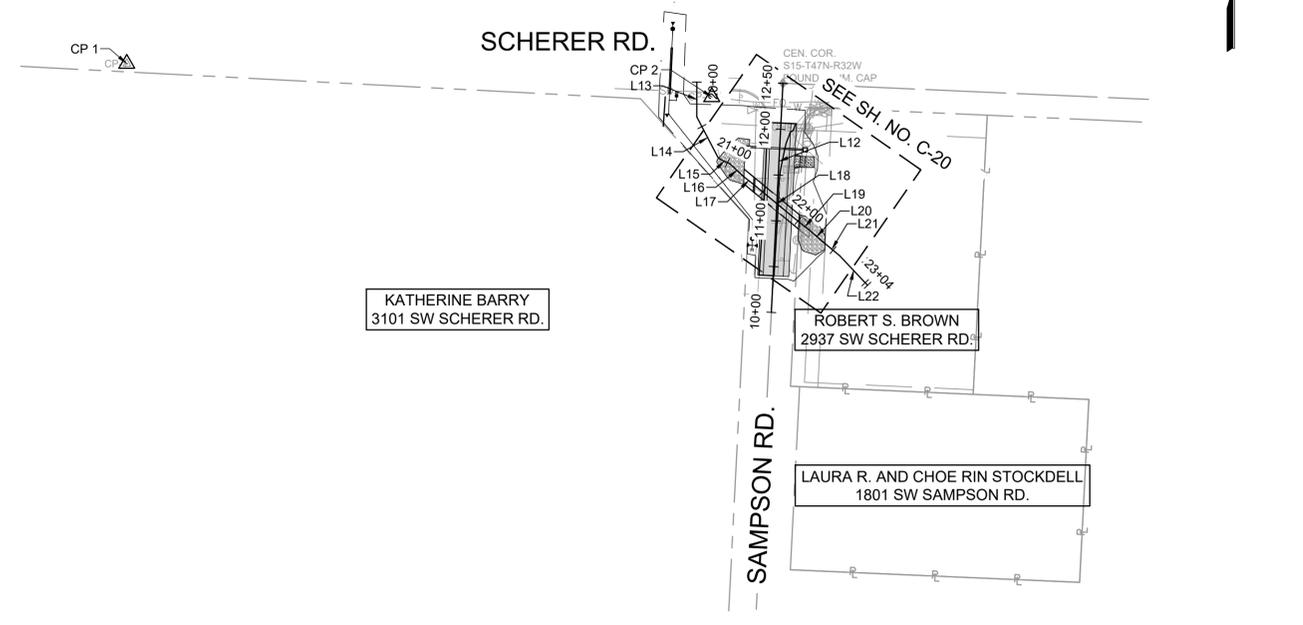
ALIGNMENT LINE TABLE				
LINE NO.	LENGTH	DIRECTION	START POINT	END POINT
L12	250.39'	N2° 54' 26.73"E	N 991840.78,E 2805223.84	N 992090.85,E 2805236.54

**HORIZONTAL DATUM**  
MODIFIED MISSOURI WEST STATE PLANE  
NAD 1983, GEOID 18  
CAF = 1.00009891

**VERTICAL DATUM**  
NAVD88, NORTH AMERICAN VERTICAL DATUM

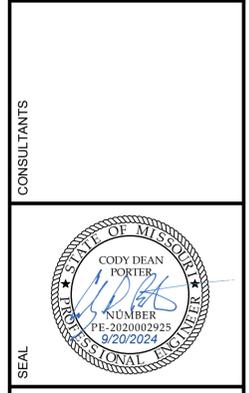
**SET CONTROL POINTS**

CP-5020 FOUND 1/2" IRON BAR N. 984095.087 E. 2804990.234 EL = 1009.72'	CP-5018 FOUND 1/2" IRON BAR N. 989575.949 E. 2805148.320 EL = 939.26'
CP-5019 FOUND 1/2" IRON BAR N. 986634.318 E. 2805035.799 EL = 942.48'	CP-1 SET 5/8" IRON BAR W/ WILSON ALUM. CAP N. 992112.110 E. 2804518.885 EL. 946.31'
CP-3 SET 5/8" IRON BAR W/ WILSON ALUM. CAP N. 986915.854 E. 2804985.955 EL. 931.86'	CP-2 SET 5/8" IRON BAR W/ WILSON ALUM. CAP N. 992075.827 E. 2805158.827 EL. 924.91'



**A1** GENERAL LAYOUT SHEET & ALIGNMENT DATA  
SCALE: 1" = 100'

**WILSON & COMPANY**  
800 EAST 101ST TERRACE, SUITE 200  
KANSAS CITY, MO 64131  
PHONE: 816-701-3100  
FAX: 816-942-3013  
www.wilsonco.com

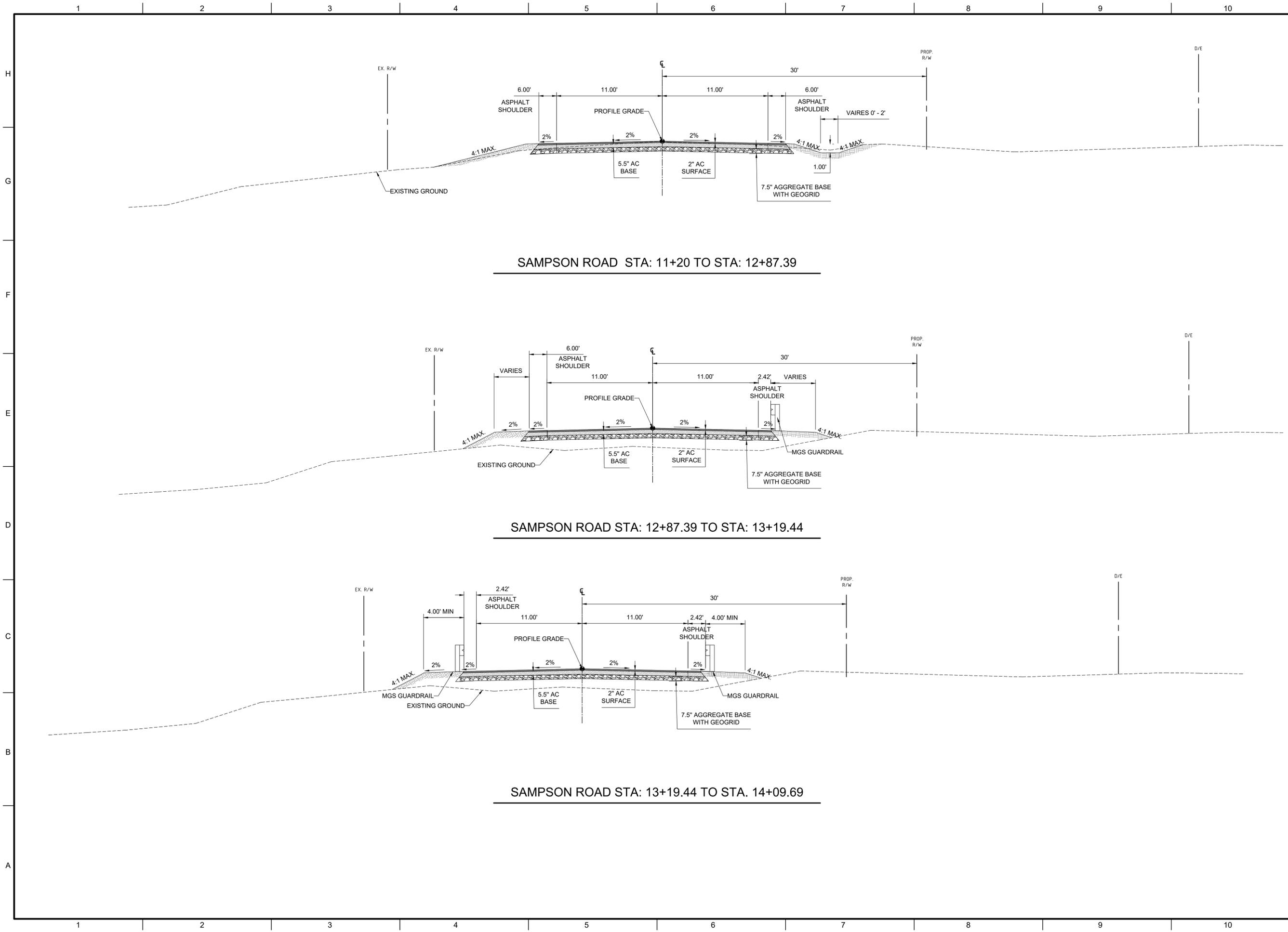


**PROJECT NAME**  
CITY OF LEE'S SUMMIT, MO  
SAMPSON ROAD BRIDGE  
REPLACEMENT AND STORM  
WATER IMPROVEMENTS  
PROJECT NO. 997

REV.	DATE	DESCRIPTION	BY

PROJECT NO: 23-600-303-00  
DESIGNED BY: AJM  
DRAWN BY: AJM  
CHECKED BY: CDP  
DATE: 9/20/2024  
SHEET TITLE  
**GENERAL LAYOUT SHEET & ALIGNMENT DATA**

SHEET NO:  
**G-03**



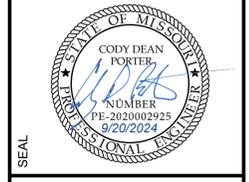
SAMPSON ROAD STA: 11+20 TO STA: 12+87.39

SAMPSON ROAD STA: 12+87.39 TO STA: 13+19.44

SAMPSON ROAD STA: 13+19.44 TO STA: 14+09.69

**WILSON & COMPANY**  
 800 EAST 101ST TERRACE, SUITE 200  
 KANSAS CITY, MO 64131  
 PHONE: 816-701-3100  
 FAX: 816-942-3013  
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CONSULTANTS



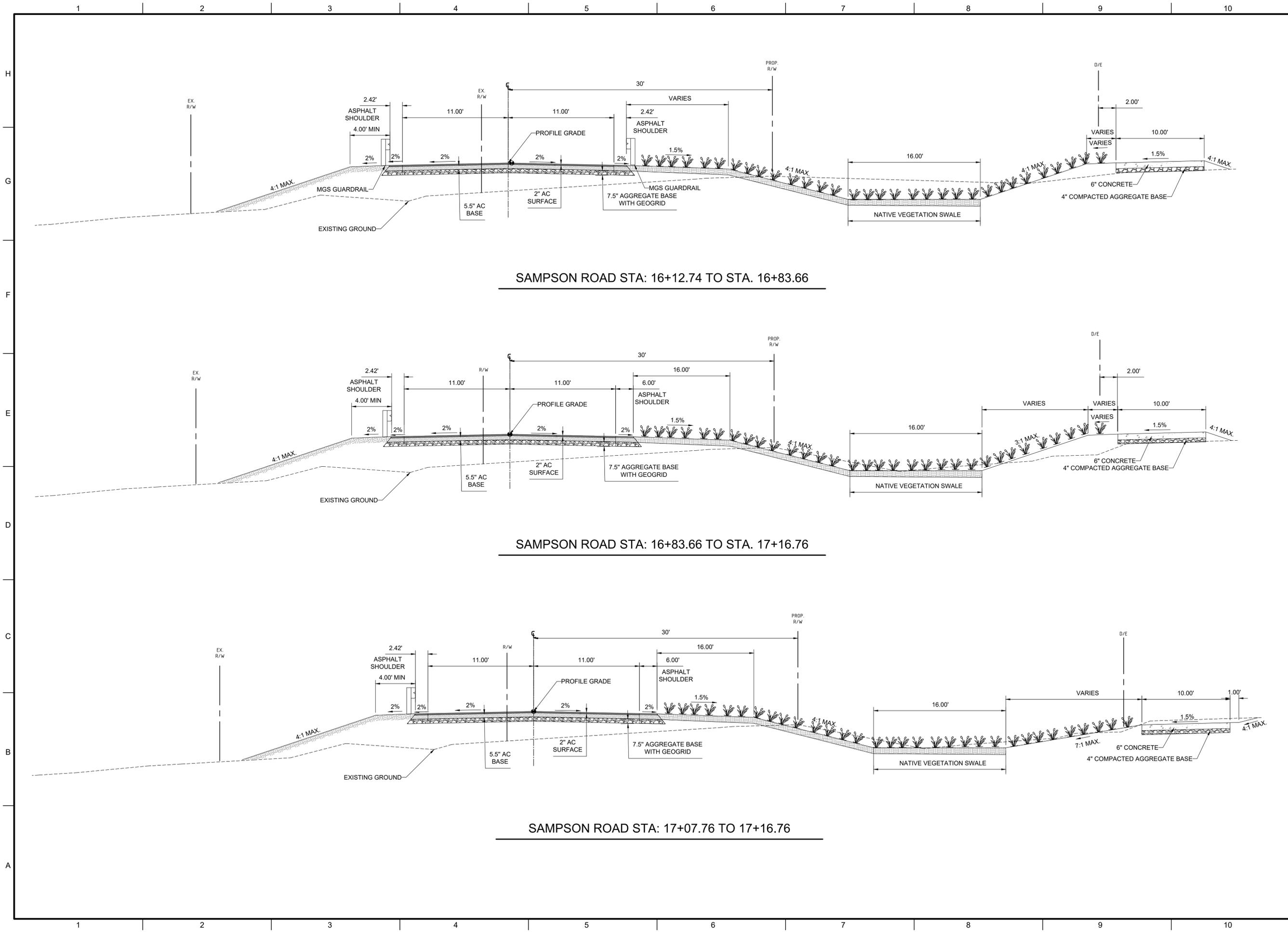
PROJECT NAME  
 CITY OF LEE'S SUMMIT, MO  
 SAMPSON ROAD BRIDGE  
 REPLACEMENT AND STORM  
 WATER IMPROVEMENTS  
 PROJECT NO. 997

REV.	DATE	DESCRIPTION	BY

PROJECT NO: 23-600-303-00  
 DESIGNED BY: AJM  
 DRAWN BY: AJM  
 CHECKED BY: CDP  
 DATE: 9/20/2024

SHEET TITLE  
**TYPICAL SECTIONS**

SHEET NO:  
**C-01**



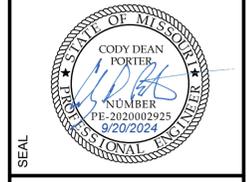
SAMPSON ROAD STA: 16+12.74 TO STA. 16+83.66

SAMPSON ROAD STA: 16+83.66 TO STA. 17+16.76

SAMPSON ROAD STA: 17+07.76 TO 17+16.76

**WILSON & COMPANY**  
 800 EAST 101ST TERRACE, SUITE 200  
 KANSAS CITY, MO 64131  
 PHONE: 816-701-3100  
 FAX: 816-942-3013  
 www.wilsonco.com

CONSULTANTS



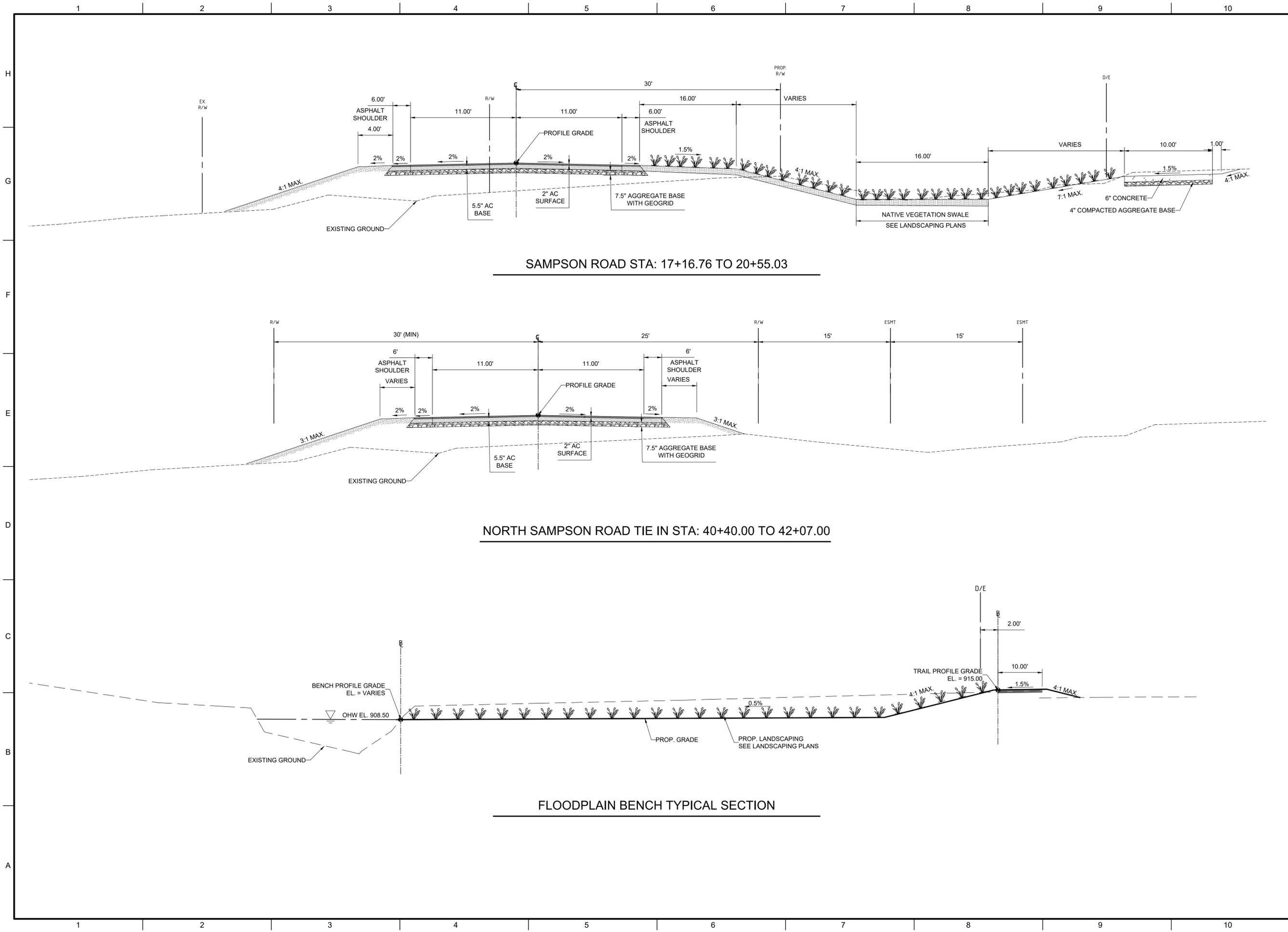
PROJECT NAME  
 CITY OF LEE'S SUMMIT, MO  
 SAMPSON ROAD BRIDGE  
 REPLACEMENT AND STORM  
 WATER IMPROVEMENTS  
 PROJECT NO. 997

REV.	DATE	DESCRIPTION	BY

PROJECT NO: 23-600-303-00  
 DESIGNED BY: AJM  
 DRAWN BY: AJM  
 CHECKED BY: CDP  
 DATE: 9/20/2024

SHEET TITLE  
**TYPICAL SECTIONS**

SHEET NO:  
**C-02**



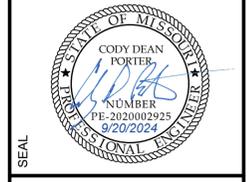
SAMPSON ROAD STA: 17+16.76 TO 20+55.03

NORTH SAMPSON ROAD TIE IN STA: 40+40.00 TO 42+07.00

FLOODPLAIN BENCH TYPICAL SECTION

**WILSON & COMPANY**  
 800 EAST 101ST TERRACE, SUITE 200  
 KANSAS CITY, MO 64131  
 PHONE: 816-701-3100  
 FAX: 816-942-3013  
 www.wilsonco.com

CONSULTANTS



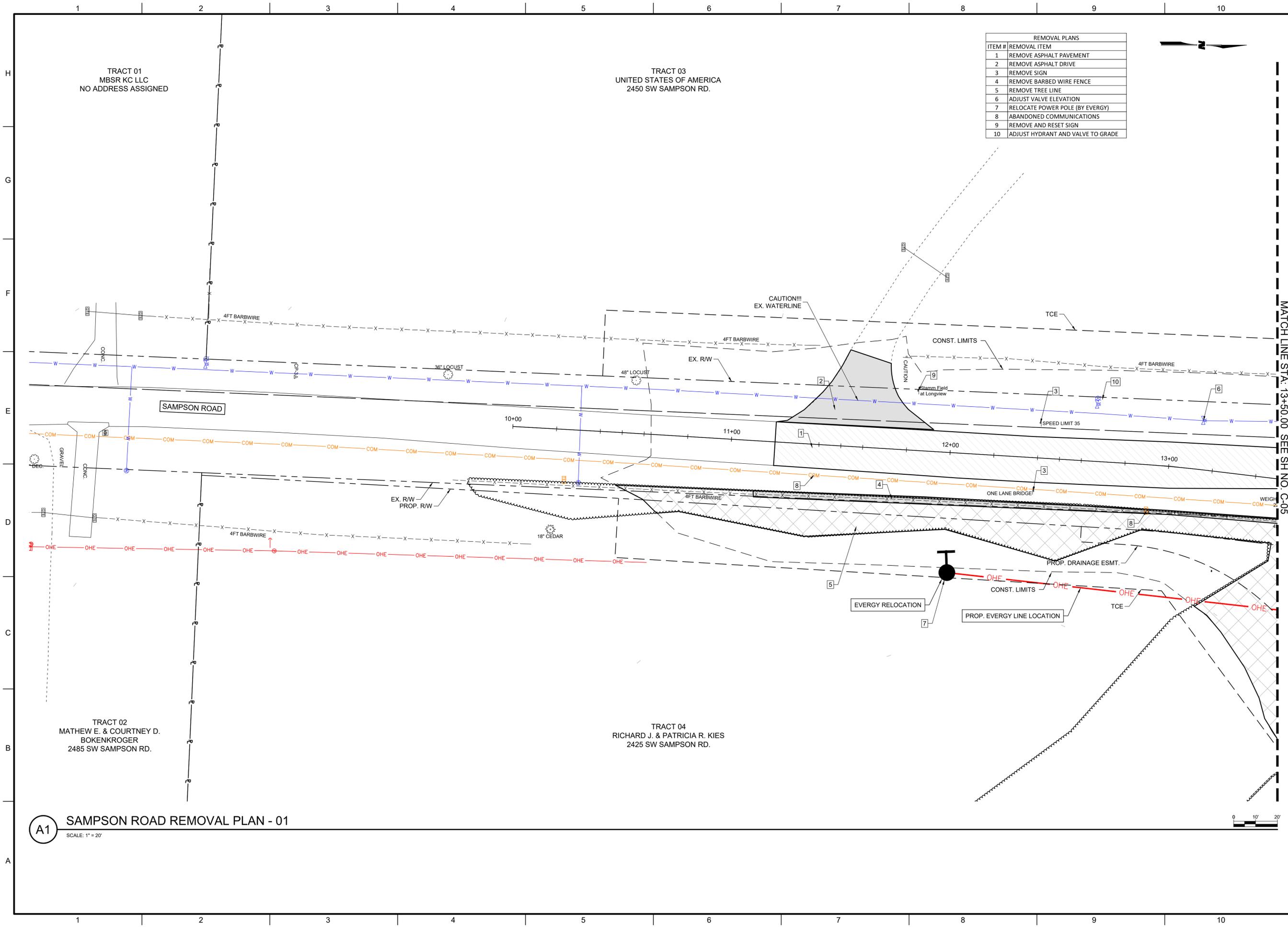
PROJECT NAME  
 CITY OF LEE'S SUMMIT, MO  
 SAMPSON ROAD BRIDGE  
 REPLACEMENT AND STORM  
 WATER IMPROVEMENTS  
 PROJECT NO. 997

REV.	DATE	DESCRIPTION	BY

PROJECT NO: 23-600-303-00  
 DESIGNED BY: AJM  
 DRAWN BY: AJM  
 CHECKED BY: CDP  
 DATE: 9/20/2024

SHEET TITLE  
**TYPICAL SECTIONS**

SHEET NO:  
**C-03**



REMOVAL PLANS	
ITEM #	REMOVAL ITEM
1	REMOVE ASPHALT PAVEMENT
2	REMOVE ASPHALT DRIVE
3	REMOVE SIGN
4	REMOVE BARBED WIRE FENCE
5	REMOVE TREE LINE
6	ADJUST VALVE ELEVATION
7	RELOCATE POWER POLE (BY EVERGY)
8	ABANDONED COMMUNICATIONS
9	REMOVE AND RESET SIGN
10	ADJUST HYDRANT AND VALVE TO GRADE



TRACT 01  
MBSR KC LLC  
NO ADDRESS ASSIGNED

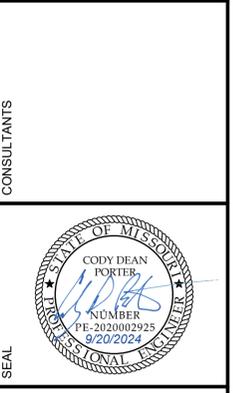
TRACT 03  
UNITED STATES OF AMERICA  
2450 SW SAMPSON RD.

TRACT 02  
MATHEW E. & COURTNEY D.  
BOKENKROGER  
2485 SW SAMPSON RD.

TRACT 04  
RICHARD J. & PATRICIA R. KIES  
2425 SW SAMPSON RD.

MATCH LINE STA: 13+50.00 SEE SH NO. C-05

**WILSON & COMPANY**  
800 EAST 101ST TERRACE, SUITE 200  
KANSAS CITY, MO 64131  
PHONE: 816-701-3100  
FAX: 816-942-3013  
www.wilsonco.com



PROJECT NAME  
CITY OF LEE'S SUMMIT, MO  
SAMPSON ROAD BRIDGE  
REPLACEMENT AND STORM  
WATER IMPROVEMENTS  
PROJECT NO. 997

REV.	DATE	DESCRIPTION	BY

PROJECT NO: 23-600-303-00  
DESIGNED BY: AJM  
DRAWN BY: AJM  
CHECKED BY: CDP  
DATE: 9/20/2024

SHEET TITLE  
**DEMOLITION & REMOVAL PLAN**

SHEET NO:  
**C-04**

**A1** SAMPSON ROAD REMOVAL PLAN - 01  
SCALE: 1" = 20'

REMOVAL PLANS	
ITEM #	REMOVAL ITEM
1	REMOVAL ASPHALT PAVEMENT
2	RELOCATE POWER POLE (BY EVERGY)
3	REMOVE SIGN
4	REMOVE GUARD RAIL
5	ABANDONED COMMUNICATION
6	REMOVE WINGWALL
7	REMOVE STEEL GIRDER AND WOOD DECK BRIDGE
8	REMOVE RIPRAP
9	ADJUST VALVE ELEVATION
10	REMOVE BARBED WIRE FENCE
11	REMOVE TREE LINE
12	RELOCATE HYDRANT
13	REMOVE GATE
14	REMOVE FIELD ENTRANCE
15	REMOVE ENTRANCE PIPE
16	DND MANHOLE

TRACT 03  
UNITED STATES OF AMERICA  
2450 SW SAMPSON RD.

TRACT 05  
CITY OF LEE'S SUMMIT  
2301 SW SAMPSON RD.

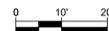
MATCH LINE STA: 13+50.00 SEE SH NO. C-04

MATCH LINE STA: 18+55.00 SEE SH NO. C-06

MATCH LINE STA: SEE SH NO. C-07

**A1** SAMPSON ROAD REMOVAL PLAN - 02

SCALE: 1" = 20'



**WILSON & COMPANY**  
800 EAST 101ST TERRACE, SUITE 200  
KANSAS CITY, MO 64131  
PHONE: 816-701-3100  
FAX: 816-942-3013  
www.wilsonco.com

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CONSULTANTS

SEAL

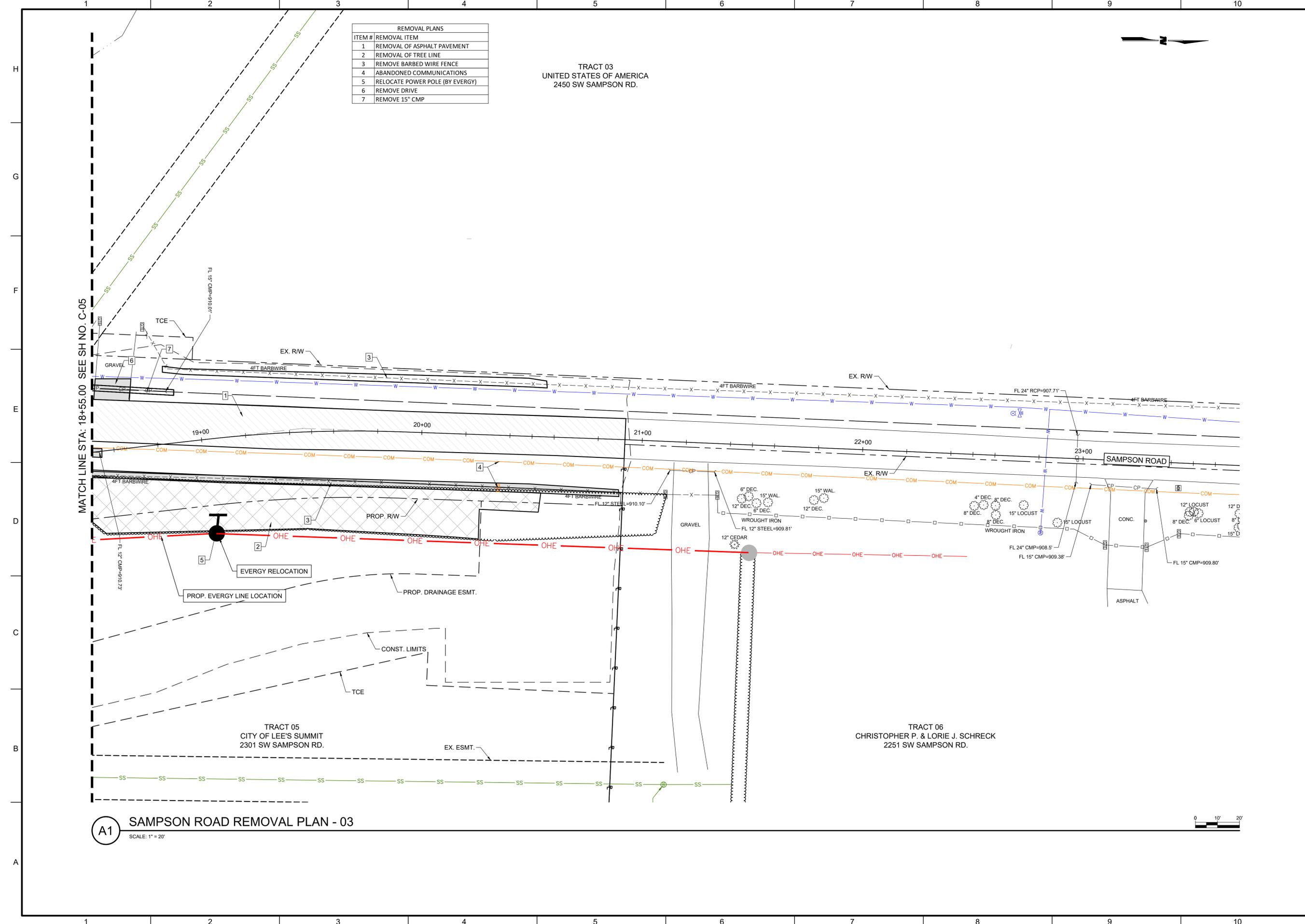
PROJECT NAME  
**CITY OF LEE'S SUMMIT, MO  
SAMPSON ROAD BRIDGE  
REPLACEMENT AND STORM  
WATER IMPROVEMENTS  
PROJECT NO. 997**

REV.	DATE	DESCRIPTION	BY

PROJECT NO: 23-600-303-00  
DESIGNED BY: AJM  
DRAWN BY: AJM  
CHECKED BY: CDP  
DATE: 9/20/2024

SHEET TITLE  
**DEMOLITION & REMOVAL PLAN**

SHEET NO:  
**C-05**



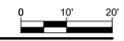
REMOVAL PLANS	
ITEM #	REMOVAL ITEM
1	REMOVAL OF ASPHALT PAVEMENT
2	REMOVAL OF TREE LINE
3	REMOVE BARBED WIRE FENCE
4	ABANDONED COMMUNICATIONS
5	RELOCATE POWER POLE (BY EVERGY)
6	REMOVE DRIVE
7	REMOVE 15' CMP

TRACT 03  
UNITED STATES OF AMERICA  
2450 SW SAMPSON RD.

TRACT 05  
CITY OF LEE'S SUMMIT  
2301 SW SAMPSON RD.

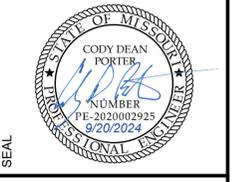
TRACT 06  
CHRISTOPHER P. & LORIE J. SCHRECK  
2251 SW SAMPSON RD.

**A1** SAMPSON ROAD REMOVAL PLAN - 03  
SCALE: 1" = 20'



**WILSON & COMPANY**  
800 EAST 101ST TERRACE, SUITE 200  
KANSAS CITY, MO 64131  
PHONE: 816-701-3100  
FAX: 816-942-3013  
www.wilsonco.com

CONSULTANTS



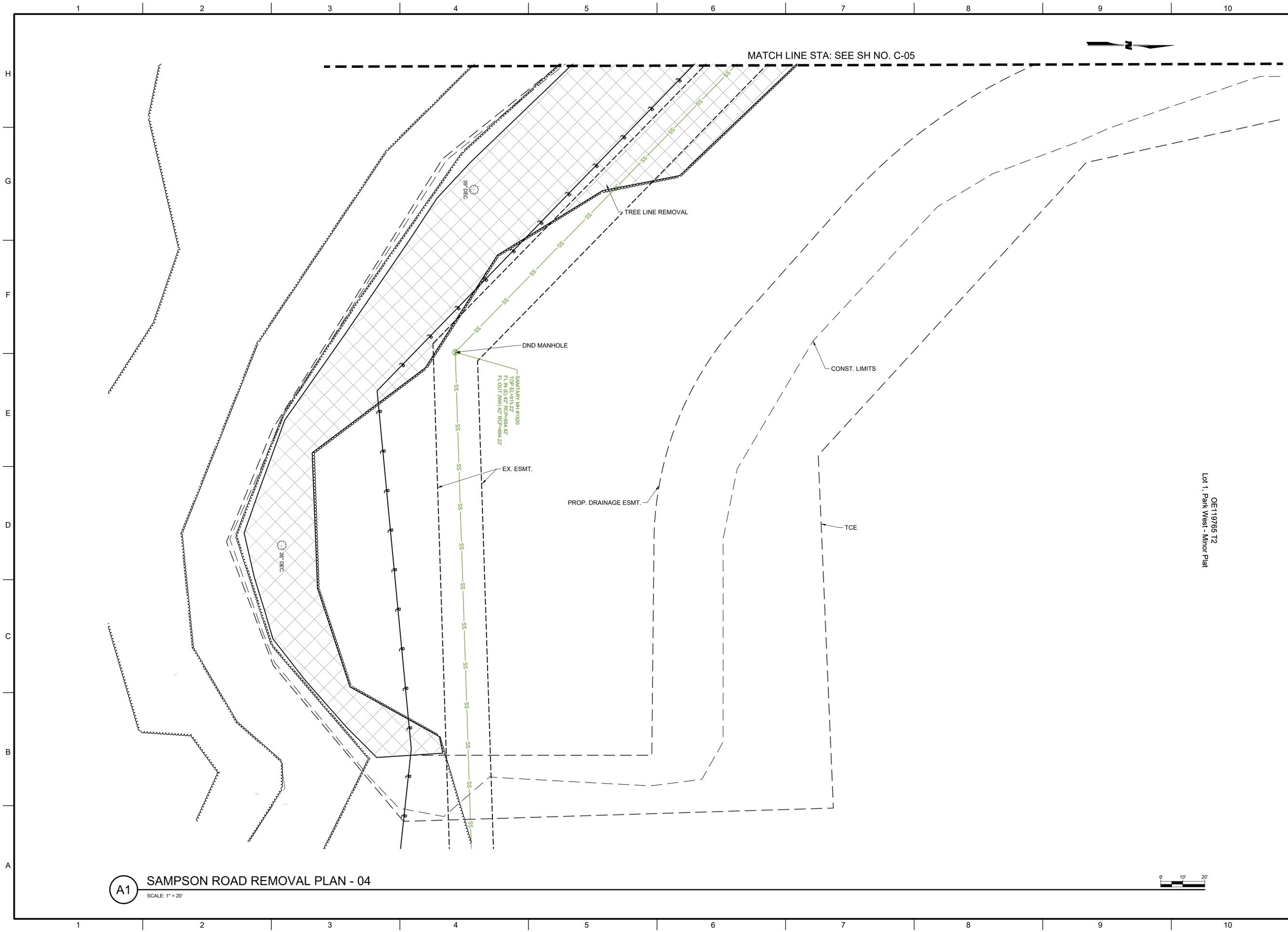
PROJECT NAME  
**CITY OF LEE'S SUMMIT, MO  
SAMPSON ROAD BRIDGE  
REPLACEMENT AND STORM  
WATER IMPROVEMENTS  
PROJECT NO. 997**

REV.	DATE	DESCRIPTION	BY

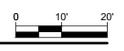
PROJECT NO: 23-600-303-00  
DESIGNED BY: AJM  
DRAWN BY: AJM  
CHECKED BY: CDP  
DATE: 9/20/2024

SHEET TITLE  
**DEMOLITION &  
REMOVAL PLAN**

SHEET NO:  
**C-06**



**A1** SAMPSON ROAD REMOVAL PLAN - 04  
SCALE: 1" = 20'



Lot 1, Park West - Minor Plat  
OE 119765 T2

**WILSON & COMPANY**  
800 EAST 101ST TERRACE, SUITE 200  
KANSAS CITY, MO 64131  
PHONE: 816-701-3100  
FAX: 816-942-3013  
www.wilsonco.com

CONSULTANTS



PROJECT NAME  
**CITY OF LEE'S SUMMIT, MO  
SAMPSON ROAD BRIDGE  
REPLACEMENT AND STORM  
WATER IMPROVEMENTS  
PROJECT NO. 997**

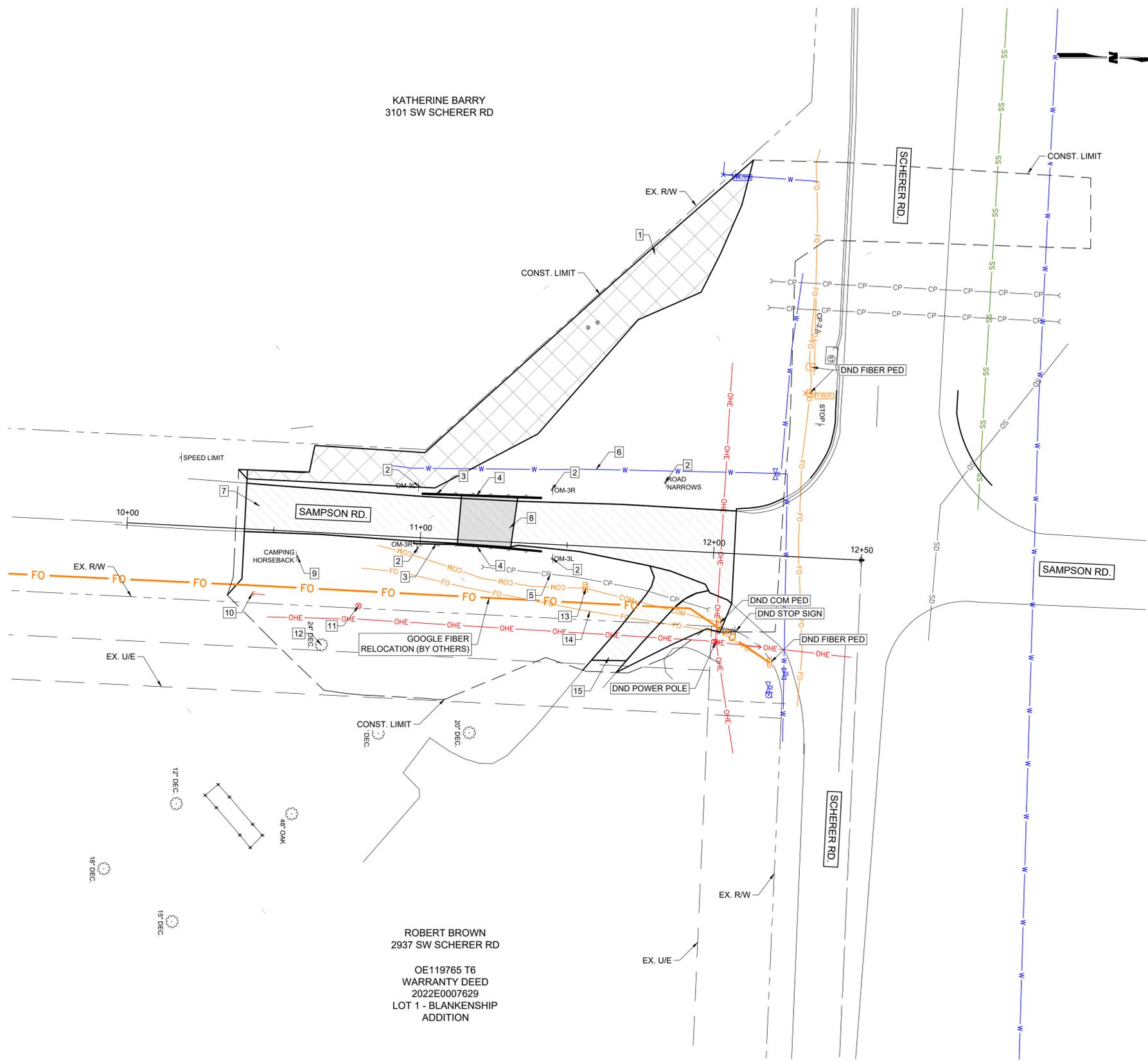
REV.	DATE	DESCRIPTION	BY

PROJECT NO: 23-600-303-00  
DESIGNED BY: AJM  
DRAWN BY: AJM  
CHECKED BY: CDP  
DATE: 9/20/2024

SHEET TITLE  
**DEMOLITION &  
REMOVAL PLAN**

SHEET NO:  
**C-07**

REMOVAL PLANS	
ITEM #	REMOVAL ITEM
1	REMOVE TREE LINE
2	REMOVE SIGN
3	REMOVE GUARD RAIL
4	REMOVE HEADWALL
5	REMOVE 15" CPP
6	REMOVE/ABANDON WATERLINE SEE SH. NO. C-40
7	REMOVE ASPHALT PAVEMENT
8	REMOVE SLAB BRIDGE
9	REMOVE SIGN AND RESET
10	DND GUY WIRE
11	BRACE POWER POLE DURING CONSTRUCTION (BY EVERGY)
12	REMOVE 24" TREE
13	ABANDONED TEL UTILITY (AT&T)
14	RELOCATE FIBER OPTIC (BY GOOGLE)
15	REMOVE ASPHALT DRIVE



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PROJECT NAME  
**CITY OF LEE'S SUMMIT, MO  
 SAMPSON ROAD BRIDGE  
 REPLACEMENT AND STORM  
 WATER IMPROVEMENTS  
 PROJECT NO. 997**

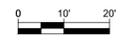
REV.	DATE	DESCRIPTION	BY

PROJECT NO: 23-600-303-00  
 DESIGNED BY: AJM  
 DRAWN BY: AJM  
 CHECKED BY: CDP  
 DATE: 9/20/2024

SHEET TITLE  
**DEMOLITION &  
 REMOVAL PLAN**

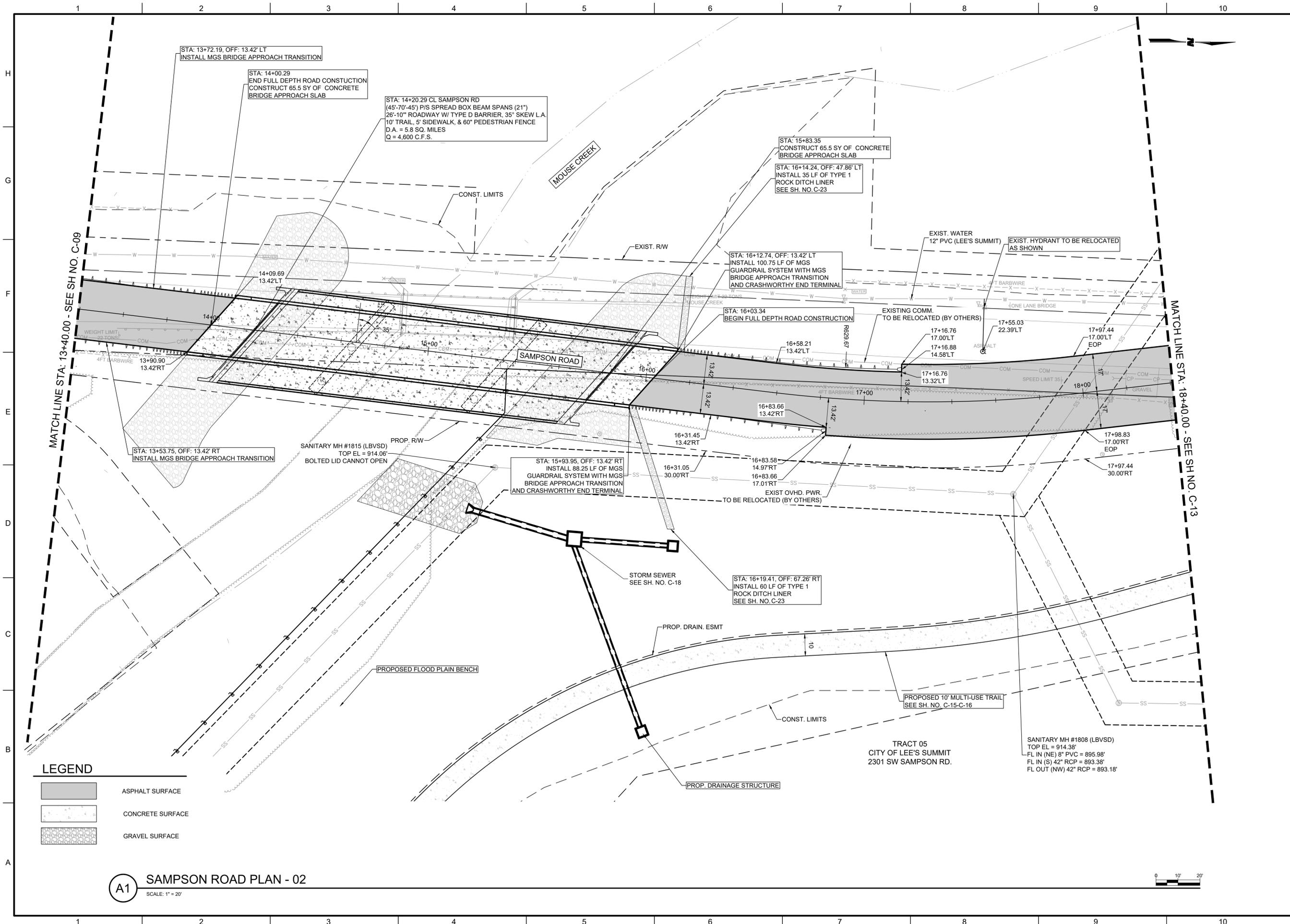
SHEET NO:  
**C-08**

**A2** NORTH SAMPSON ROAD REMOVAL PLAN - 01  
 SCALE: 1" = 20'





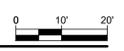




**LEGEND**

- ASPHALT SURFACE
- CONCRETE SURFACE
- GRAVEL SURFACE

**A1** SAMPSON ROAD PLAN - 02  
SCALE: 1" = 20'



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PROJECT NAME  
**CITY OF LEE'S SUMMIT, MO  
SAMPSON ROAD BRIDGE  
REPLACEMENT AND STORM  
WATER IMPROVEMENTS  
PROJECT NO. 997**

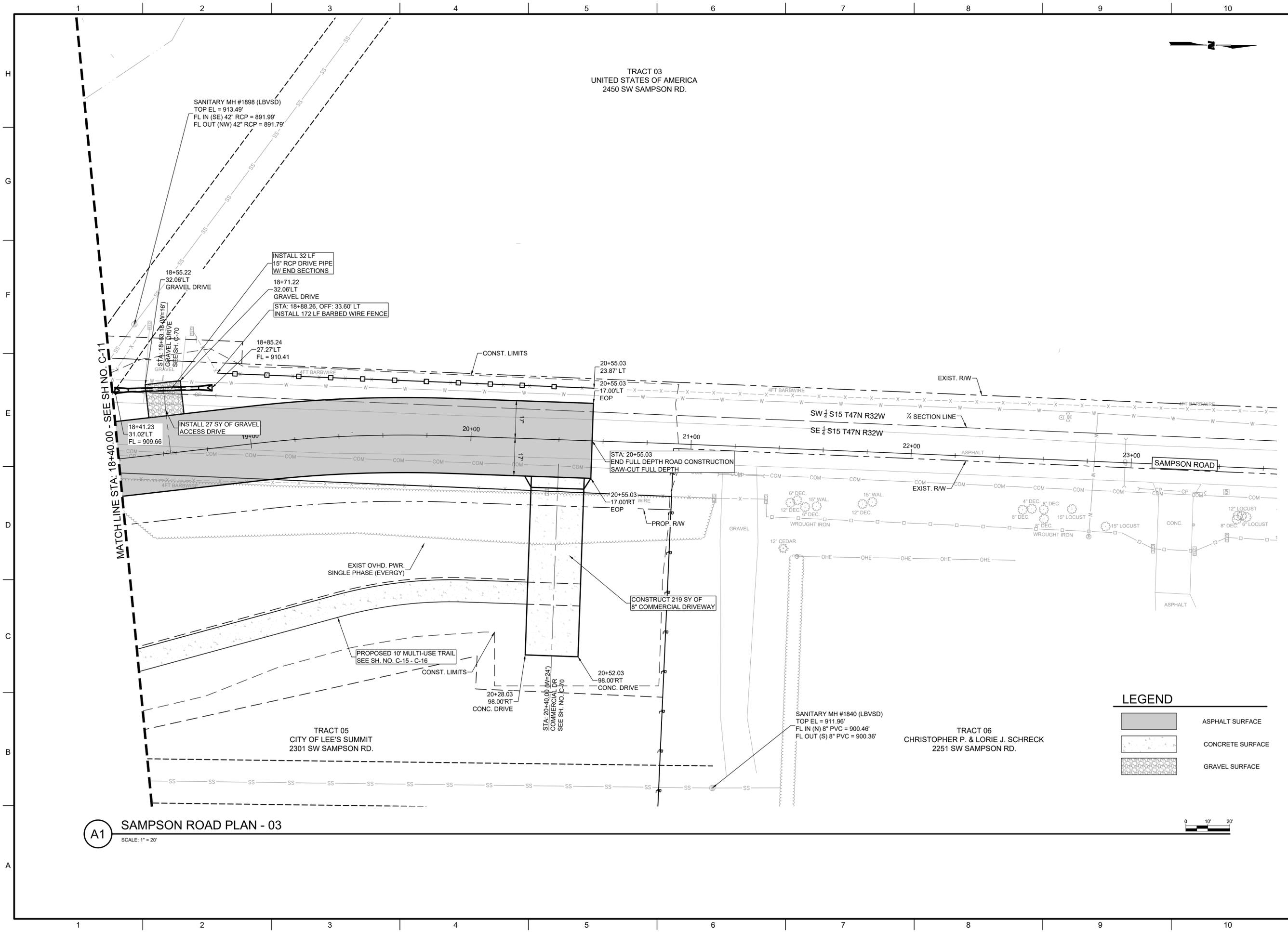
REV.	DATE	DESCRIPTION	BY

PROJECT NO: 23-600-303-00  
DESIGNED BY: AJM  
DRAWN BY: AJM  
CHECKED BY: CDP  
DATE: 9/20/2024

SHEET TITLE  
**SAMPSON ROAD PLAN**

SHEET NO:  
**C-11**





**A1** SAMPSON ROAD PLAN - 03  
SCALE: 1" = 20'

TRACT 03  
UNITED STATES OF AMERICA  
2450 SW SAMPSON RD.

TRACT 05  
CITY OF LEE'S SUMMIT  
2301 SW SAMPSON RD.

TRACT 06  
CHRISTOPHER P. & LORIE J. SCHRECK  
2251 SW SAMPSON RD.

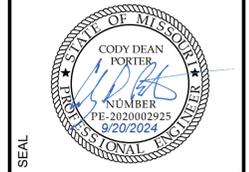
**LEGEND**

- ASPHALT SURFACE
- CONCRETE SURFACE
- GRAVEL SURFACE



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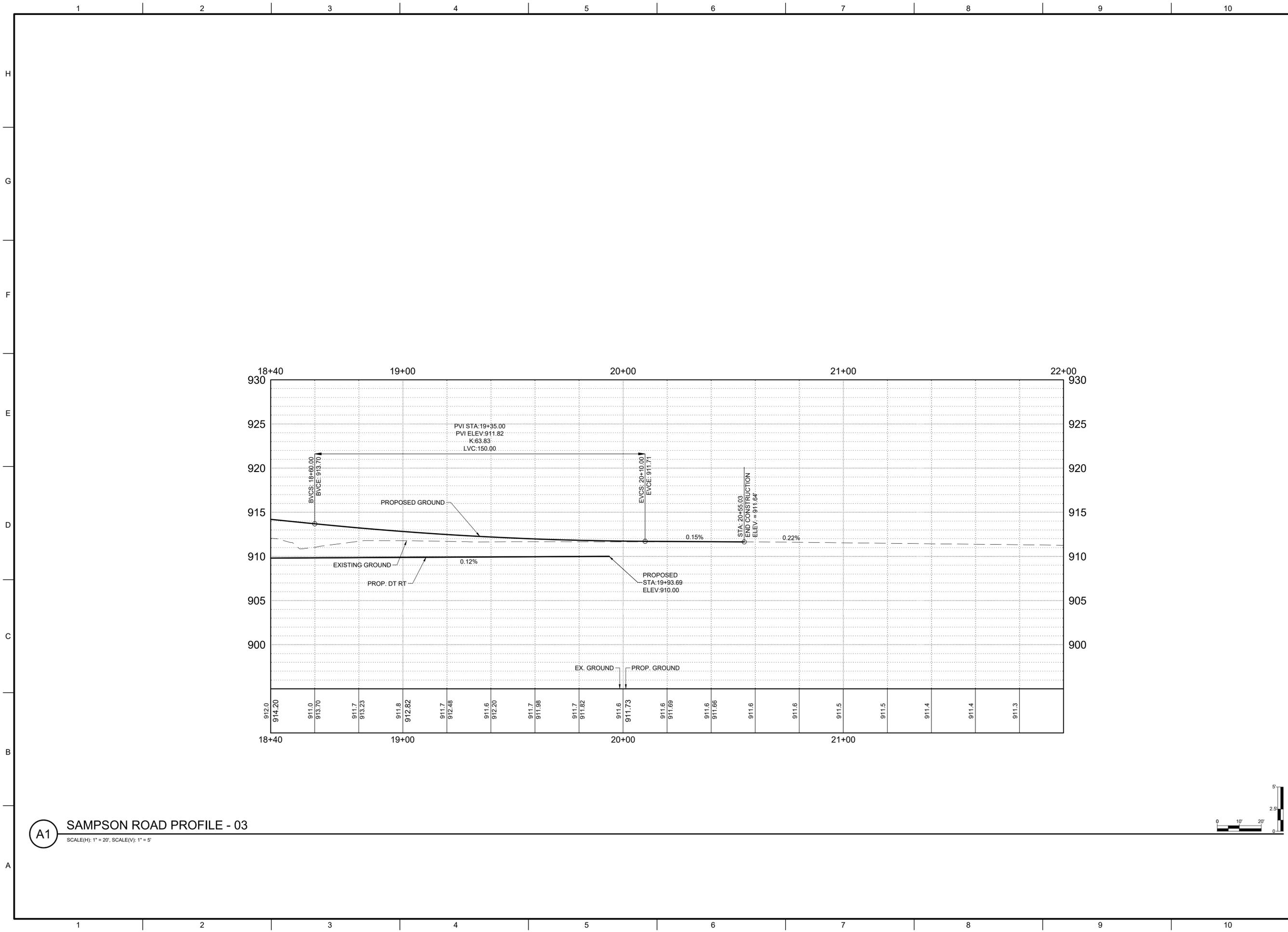
PROJECT NAME  
**CITY OF LEE'S SUMMIT, MO  
SAMPSON ROAD BRIDGE  
REPLACEMENT AND STORM  
WATER IMPROVEMENTS  
PROJECT NO. 997**

REV.	DATE	DESCRIPTION	BY

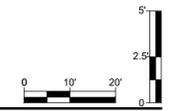
PROJECT NO: 23-600-303-00  
DESIGNED BY: AJM  
DRAWN BY: AJM  
CHECKED BY: CDP  
DATE: 9/20/2024

SHEET TITLE  
**SAMPSON ROAD PLAN**

SHEET NO:  
**C-13**

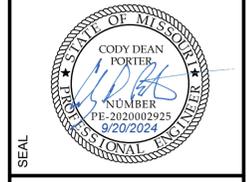


**A1** SAMPSON ROAD PROFILE - 03  
 SCALE(H): 1" = 20', SCALE(V): 1" = 5'



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 KANSAS CITY, MO 64131  
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 FAX: 816-942-3013  
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CONSULTANTS



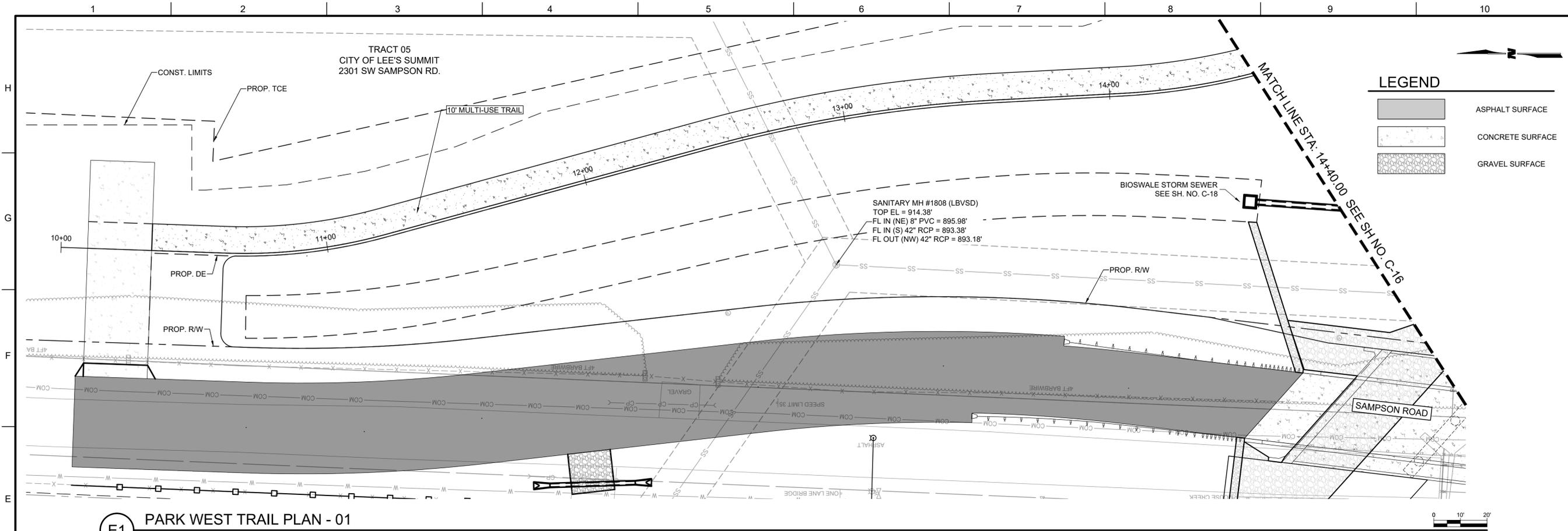
PROJECT NAME  
**CITY OF LEE'S SUMMIT, MO  
 SAMPSON ROAD BRIDGE  
 REPLACEMENT AND STORM  
 WATER IMPROVEMENTS  
 PROJECT NO. 997**

REV.	DATE	DESCRIPTION	BY

PROJECT NO: 23-600-303-00  
 DESIGNED BY: AJM  
 DRAWN BY: AJM  
 CHECKED BY: CDP  
 DATE: 9/20/2024

SHEET TITLE  
**SAMPSON  
 ROAD PROFILE**

SHEET NO:  
**C-14**



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 KANSAS CITY, MO 64131  
 PHONE: 816-701-3100  
 FAX: 816-942-3013  
 www.wilsonco.com

CONSULTANTS



SEAL

PROJECT NAME  
**CITY OF LEE'S SUMMIT, MO  
 SAMPSON ROAD BRIDGE  
 REPLACEMENT AND STORM  
 WATER IMPROVEMENTS  
 PROJECT NO. 997**

REV.	DATE	DESCRIPTION	BY

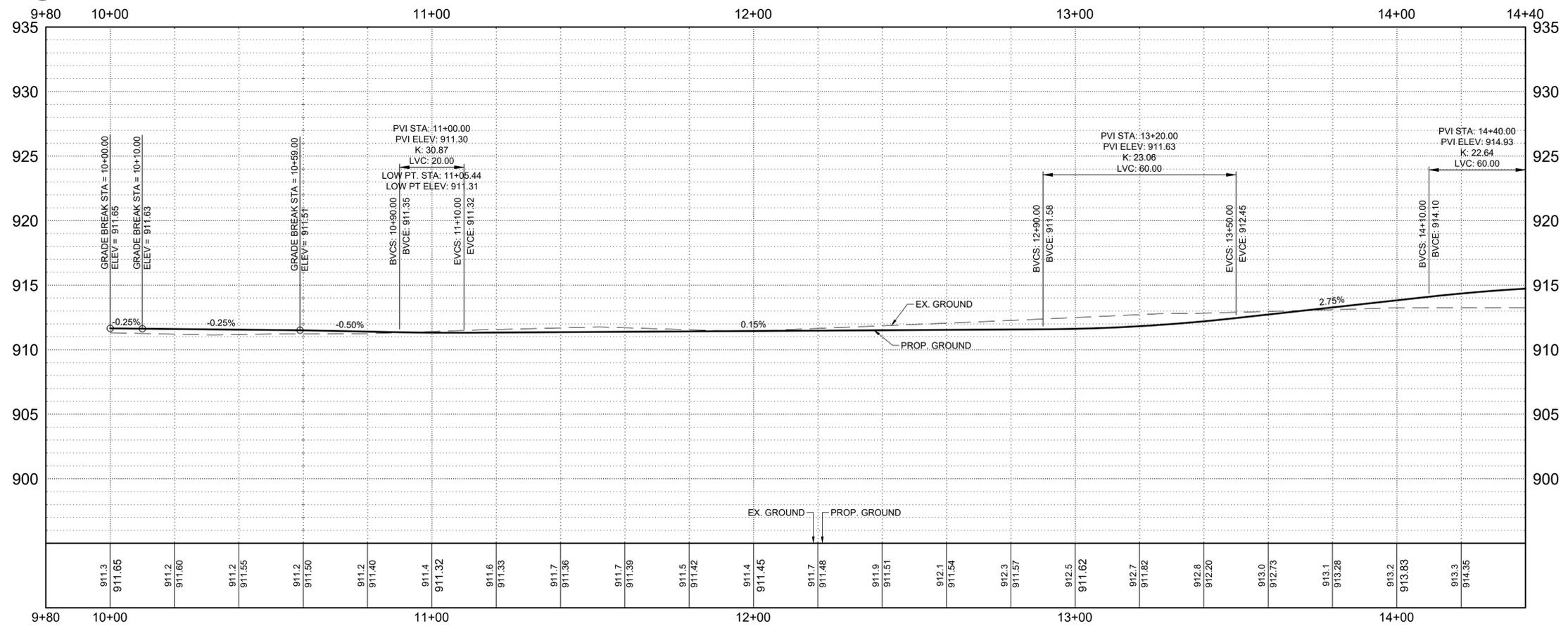
PROJECT NO: 23-600-303-00  
 DESIGNED BY: AJM  
 DRAWN BY: AJM  
 CHECKED BY: CDP  
 DATE: 9/20/2024

SHEET TITLE  
**PARK WEST  
 TRAIL PLAN &  
 PROFILE**

SHEET NO:  
**C-15**

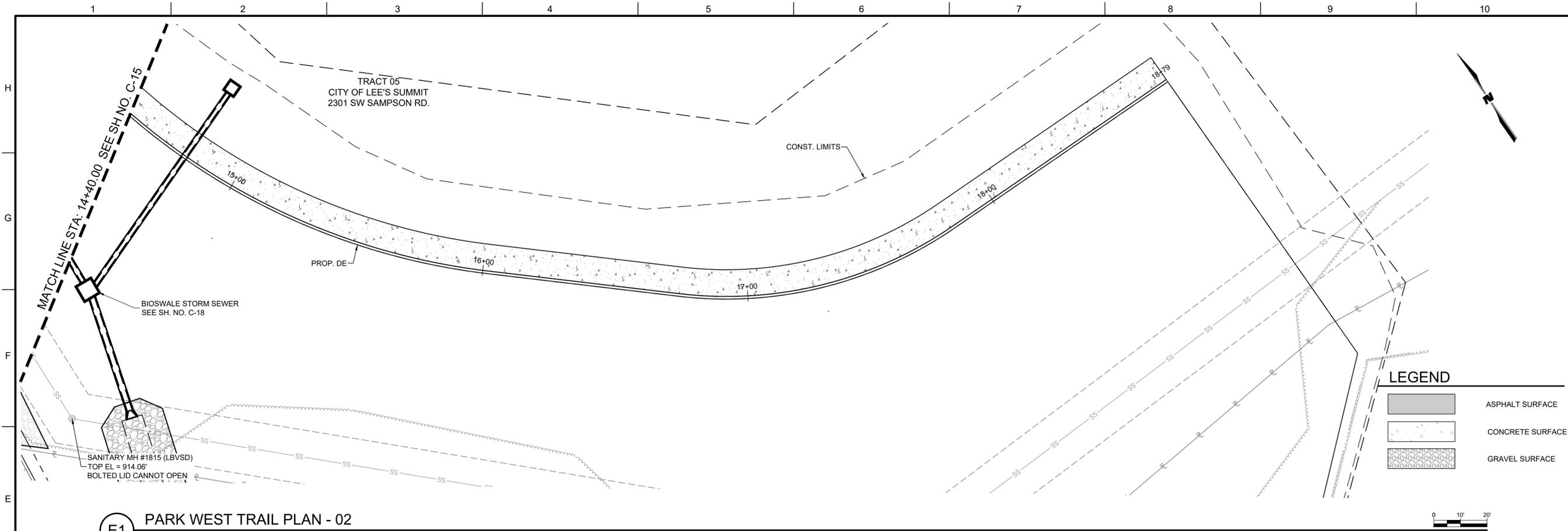
**E1** PARK WEST TRAIL PLAN - 01

SCALE: 1" = 20'



**A1** PARK WEST TRAIL PROFILE- 01

SCALE: 1" = 20'



**WILSON & COMPANY**  
 800 EAST 101ST TERRACE, SUITE 200  
 KANSAS CITY, MO 64131  
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 FAX: 816-942-3013  
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SEAL

PROJECT NAME  
**CITY OF LEE'S SUMMIT, MO  
 SAMPSON ROAD BRIDGE  
 REPLACEMENT AND STORM  
 WATER IMPROVEMENTS  
 PROJECT NO. 997**

REV.	DATE	DESCRIPTION	BY

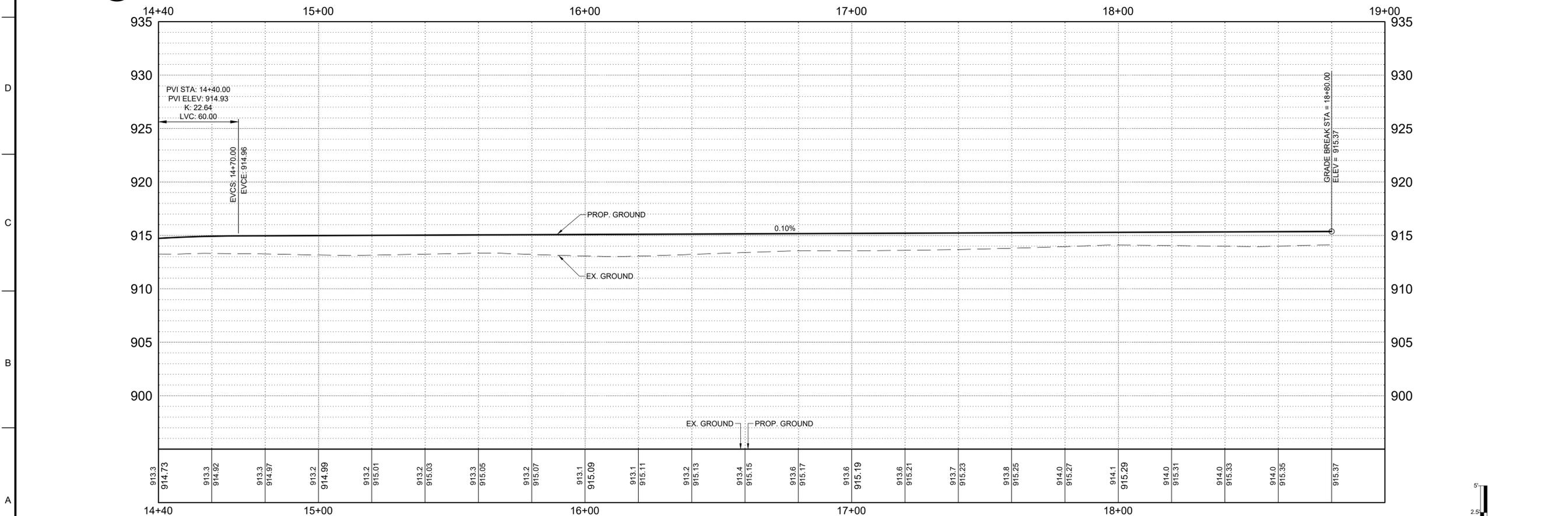
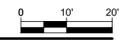
PROJECT NO: 23-600-303-00  
 DESIGNED BY: AJM  
 DRAWN BY: AJM  
 CHECKED BY: CDP  
 DATE: 9/20/2024

SHEET TITLE  
**PARK WEST  
 TRAIL PLAN &  
 PROFILE**

SHEET NO:  
**C-16**

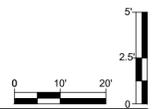
**E1** PARK WEST TRAIL PLAN - 02

SCALE: 1" = 20'



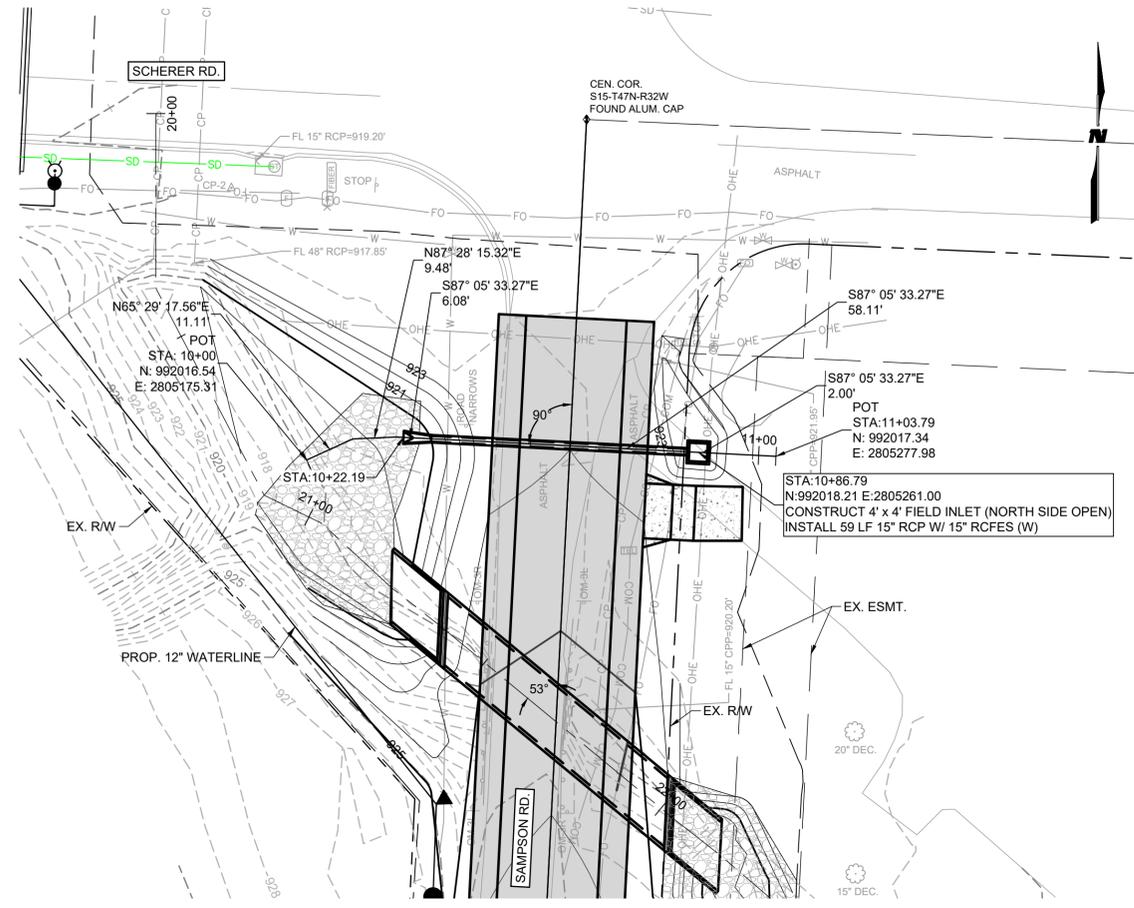
**A1** PARK WEST TRAIL PROFILE- 02

SCALE: 1" = 20'

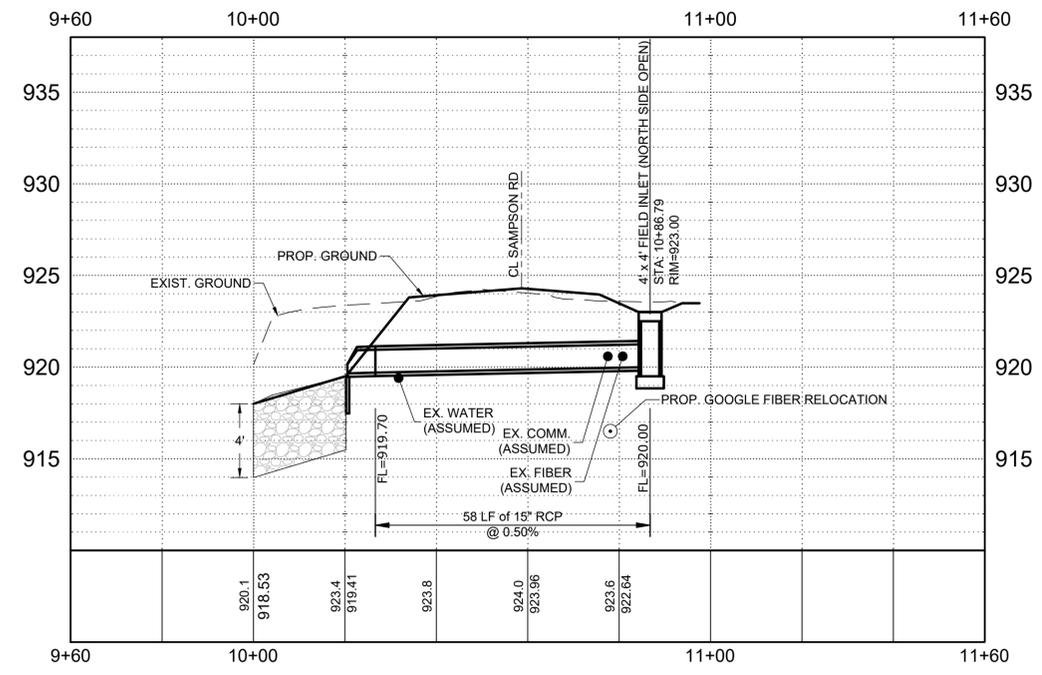








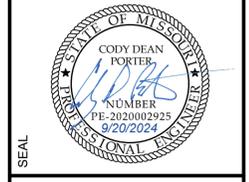
**D6** NORTH SAMPSON ROAD SWS - PLAN  
SCALE: 1" = 20'



**A6** NORTH SAMPSON ROAD SWS - PROFILE  
SCALE: 1" = 20'

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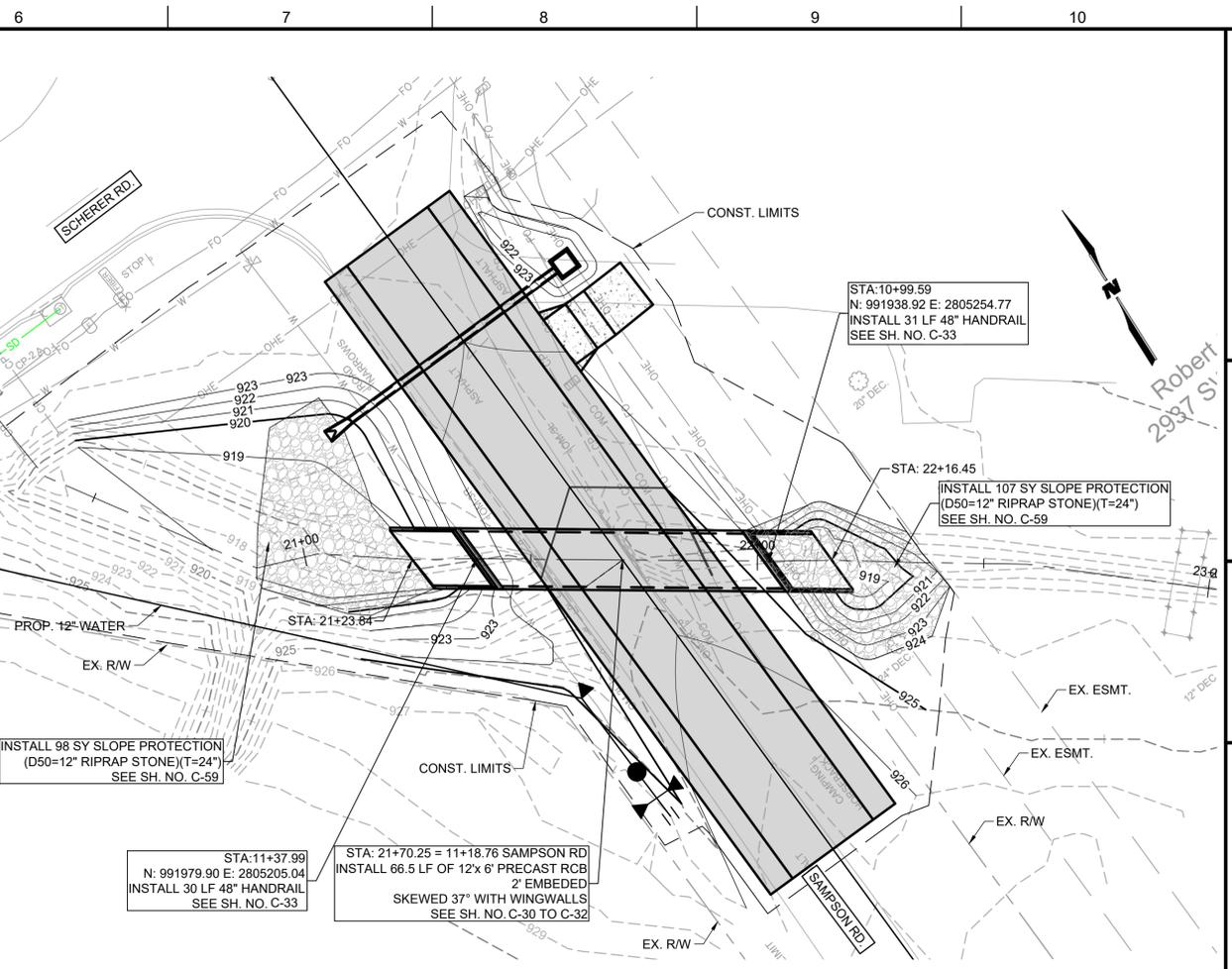
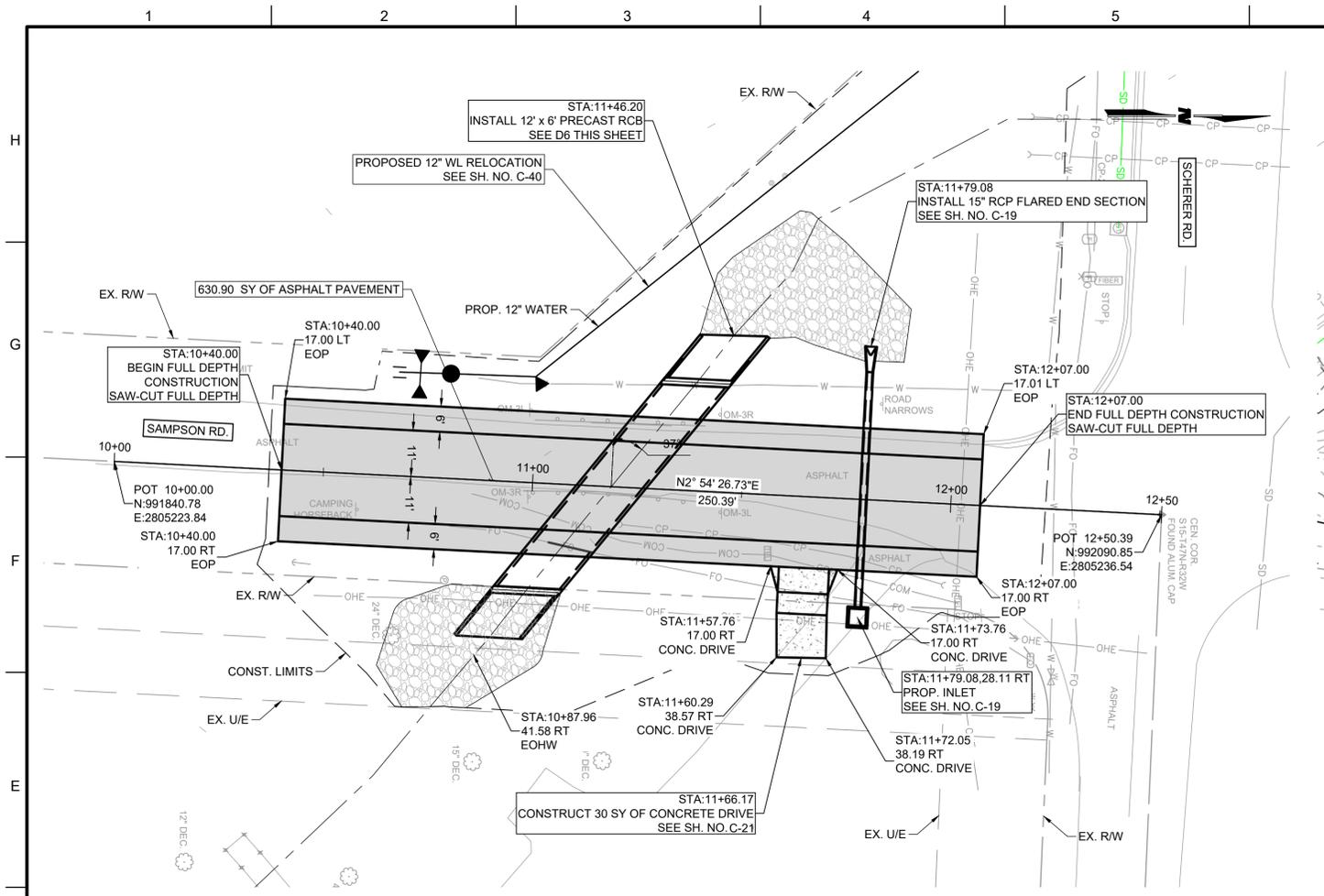
PROJECT NAME  
CITY OF LEE'S SUMMIT, MO  
SAMPSON ROAD BRIDGE  
REPLACEMENT AND STORM  
WATER IMPROVEMENTS  
PROJECT NO. 997

REV.	DATE	DESCRIPTION	BY

PROJECT NO: 23-600-303-00  
DESIGNED BY: AJM  
DRAWN BY: AJM  
CHECKED BY: CDP  
DATE: 9/20/2024

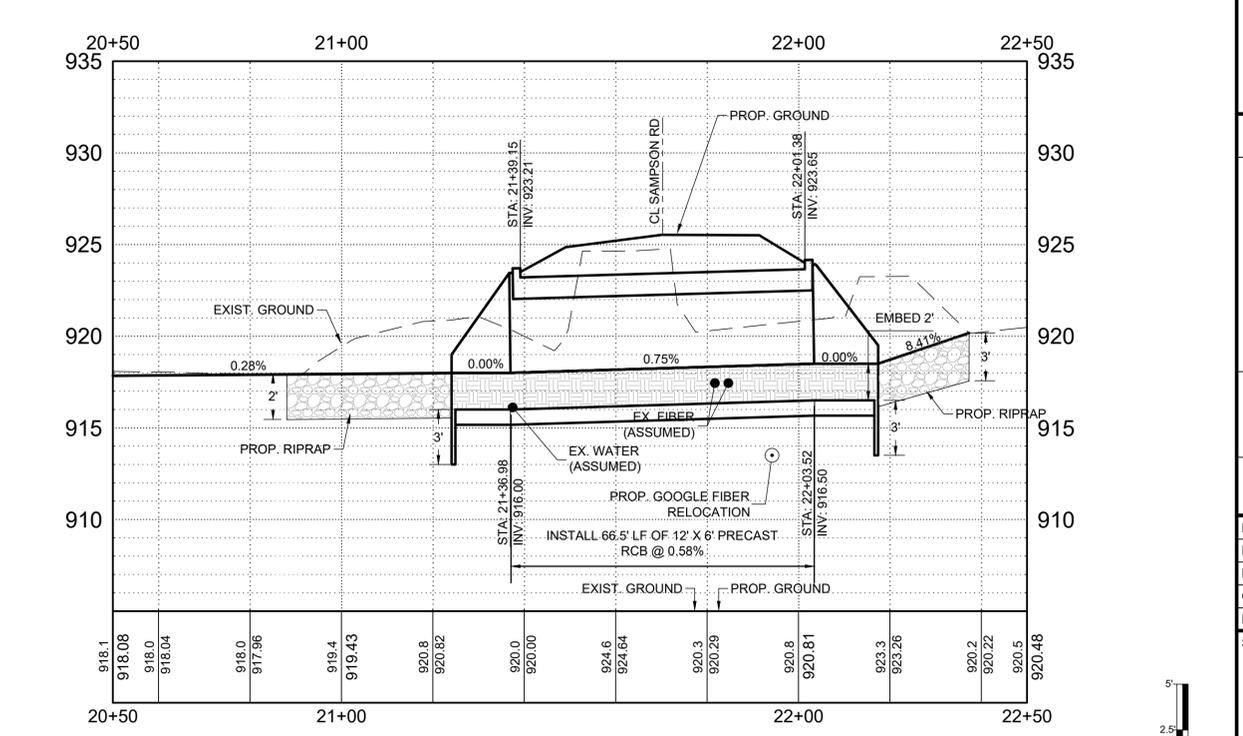
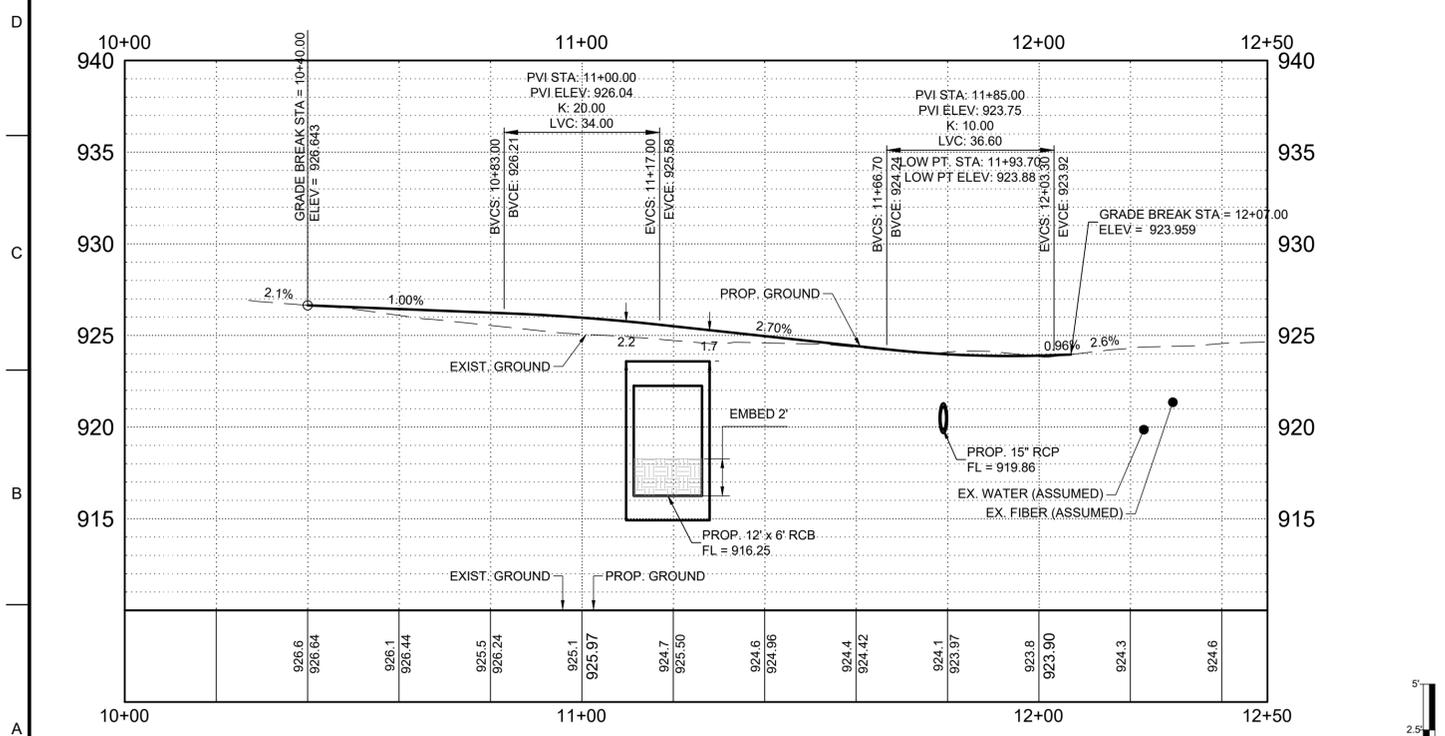
SHEET TITLE  
NORTH SAMPSON  
STORM SEWER  
PLAN & PROFILE

SHEET NO:  
C-19



**D1** NORTH SAMPSON ROAD - PLAN  
SCALE: 1" = 20'

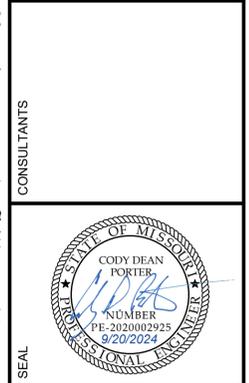
**D6** NORTH SAMPSON ROAD 12' X 5' CULVERT - PLAN  
SCALE: 1" = 20'



**A1** NORTH SAMPSON ROAD - PROFILE  
SCALE: 1" = 20'

**A6** NORTH SAMPSON ROAD 12' X 5' CULVERT - PROFILE  
SCALE: 1" = 20'

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KANSAS CITY, MO 64131  
PHONE: 816-701-3100  
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**CITY OF LEE'S SUMMIT, MO**  
**SAMPSON ROAD BRIDGE**  
**REPLACEMENT AND STORM**  
**WATER IMPROVEMENTS**  
**PROJECT NO. 997**

REV.	DATE	DESCRIPTION	BY

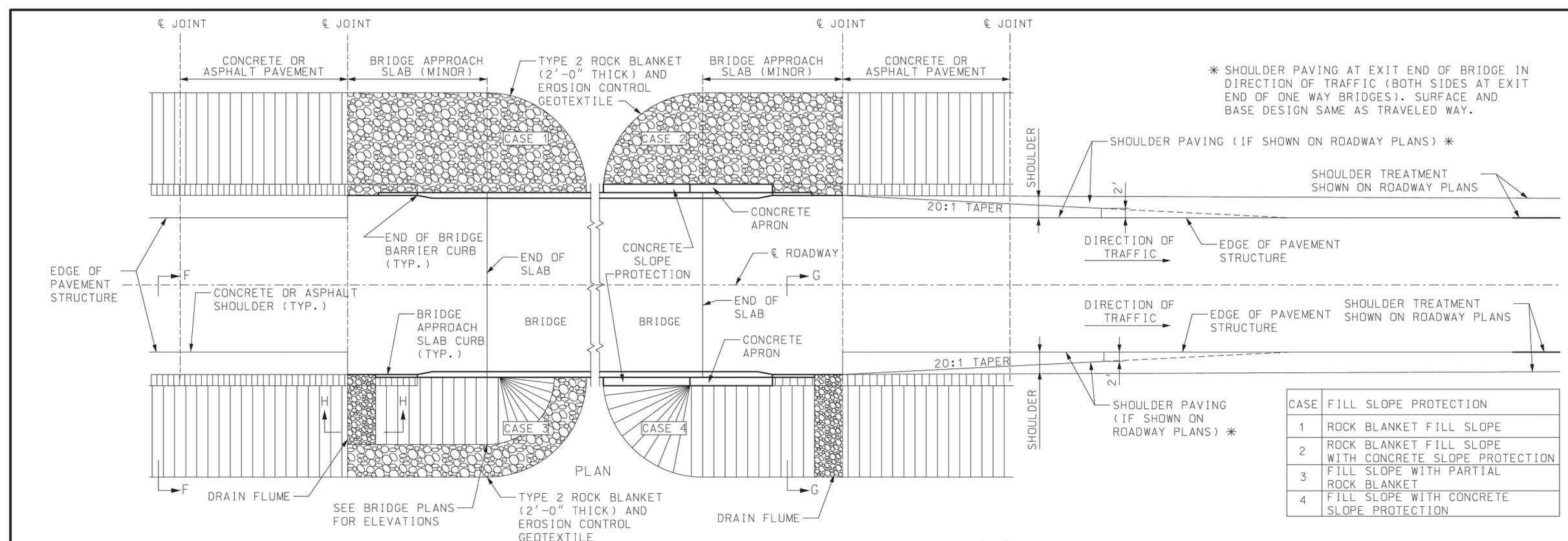
PROJECT NO: 23-600-303-00  
DESIGNED BY: JAR  
DRAWN BY: JAR  
CHECKED BY: CDP  
DATE: 9/20/2024

SHEET TITLE  
**N. SAMPSON**  
**CULVERT PLAN**  
**& PROFILE**

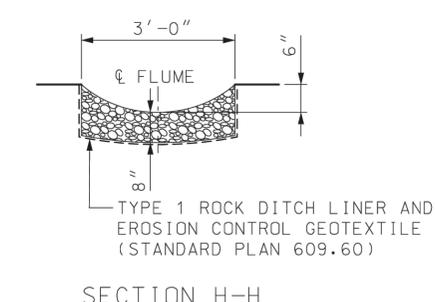
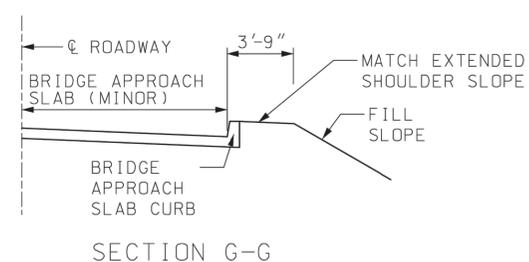
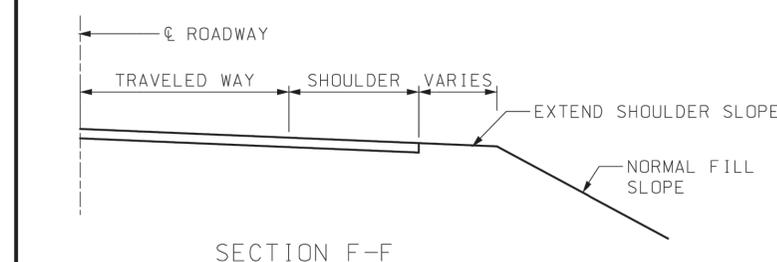
SHEET NO:  
**C-20**







\* SHOULDER PAVING AT EXIT END OF BRIDGE IN DIRECTION OF TRAFFIC (BOTH SIDES AT EXIT END OF ONE WAY BRIDGES). SURFACE AND BASE DESIGN SAME AS TRAVELED WAY.



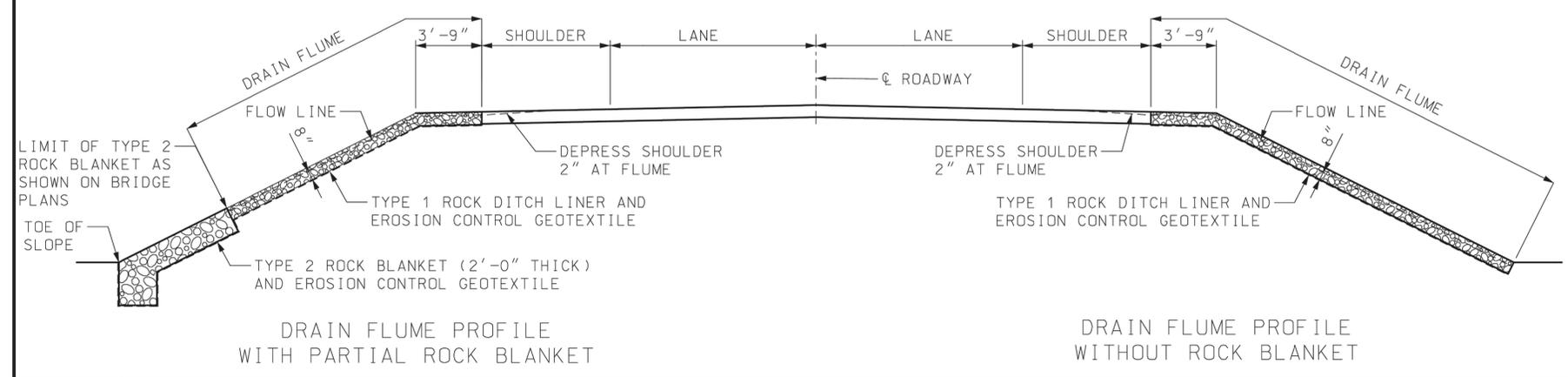
GENERAL NOTES:

SEE STANDARD PLANS 606.00, 606.22, 606.23, 606.30, 606.50, 606.60, 606.70 AND 606.80 FOR DETAILS OF GUARDRAILS AND BRIDGE ANCHOR SECTIONS.

FOR DETAILS OF BRIDGE APPROACH SLAB (MINOR ROAD), SEE BRIDGE PLANS.

CONSTRUCT DRAIN FLUMES AND/OR FILL SLOPE PROTECTION WHEN SHOWN ON ROADWAY PLANS.

PAYMENT FOR DRAIN FLUMES, COMPLETE IN PLACE, INCLUDING EXCAVATION, WILL BE PAID FOR AS TYPE 1 ROCK DITCH LINER. GEOTEXTILE WILL BE PAID SEPARATELY.



**MoDOT** MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

STATE OF MISSOURI  
TRAVIS D. KOESTNER  
NUMBER PE-30042  
PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

**DRAIN FLUME, SHOULDER PAVING AND FILL SLOPE AT BRIDGE ENDS**  
(MINOR AND LOW VOLUME ROUTES)

DATE EFFECTIVE: 10/1/2023	609.40U	SHEET NO. 3 OF 3
DATE PREPARED: 7/6/2023		

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

**WILSON & COMPANY**  
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KANSAS CITY, MO 64131  
PHONE: 816-701-3100  
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CONSULTANTS



PROJECT NAME  
CITY OF LEE'S SUMMIT, MO  
SAMPSON ROAD BRIDGE  
REPLACEMENT AND STORM  
WATER IMPROVEMENTS  
PROJECT NO. 997

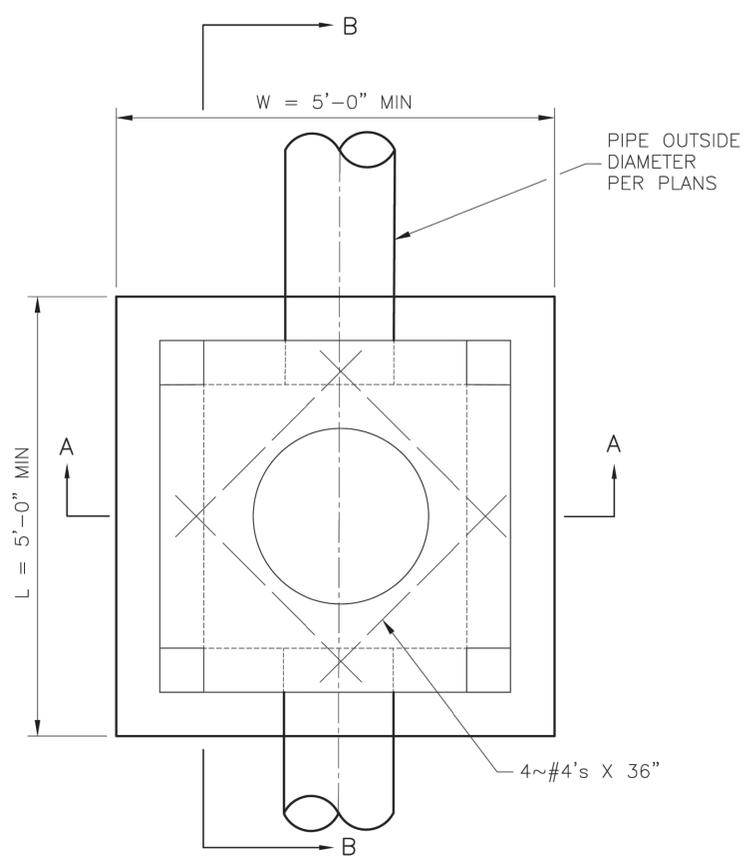
REV.	DATE	DESCRIPTION	BY

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DATE: 9/20/2024

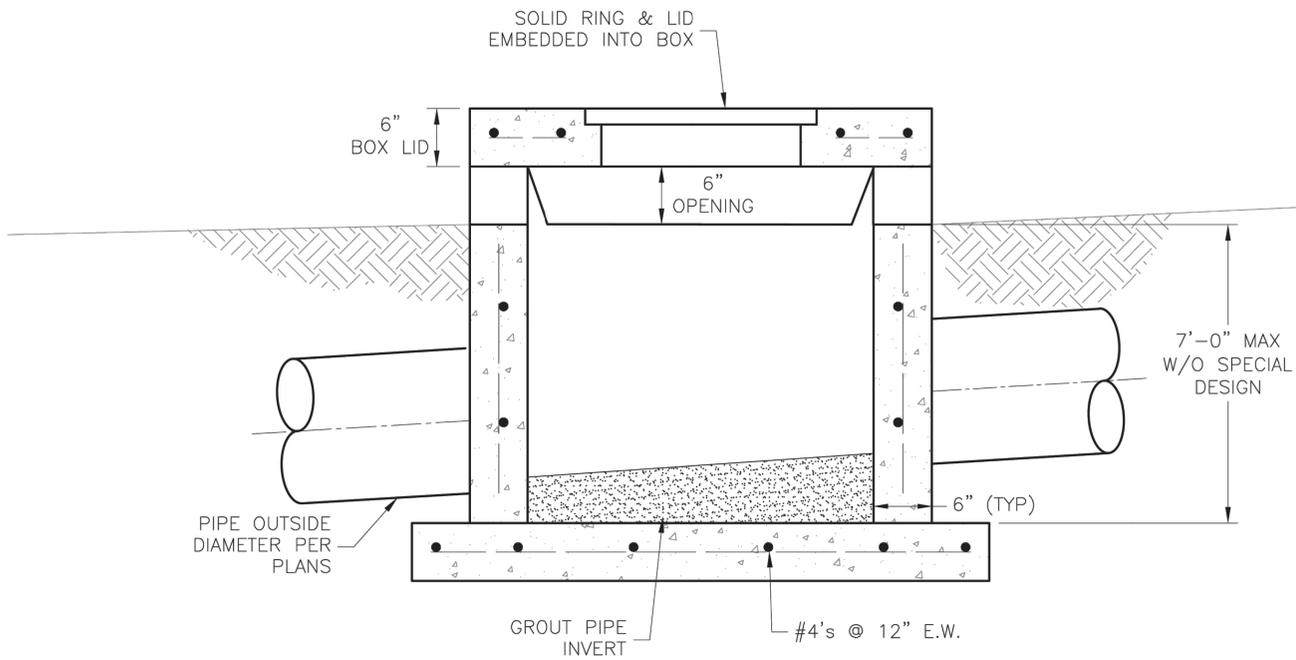
SHEET TITLE  
**ROADWAY DETAILS**

SHEET NO:  
**C-23**

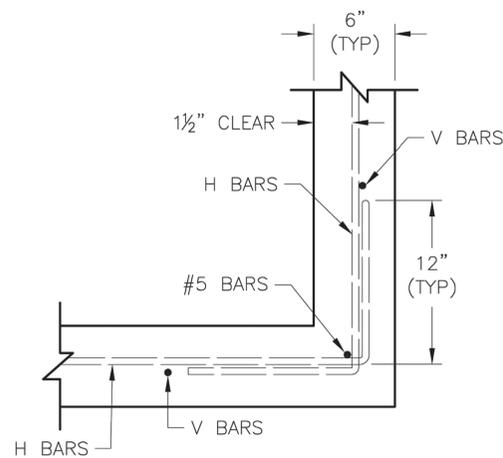




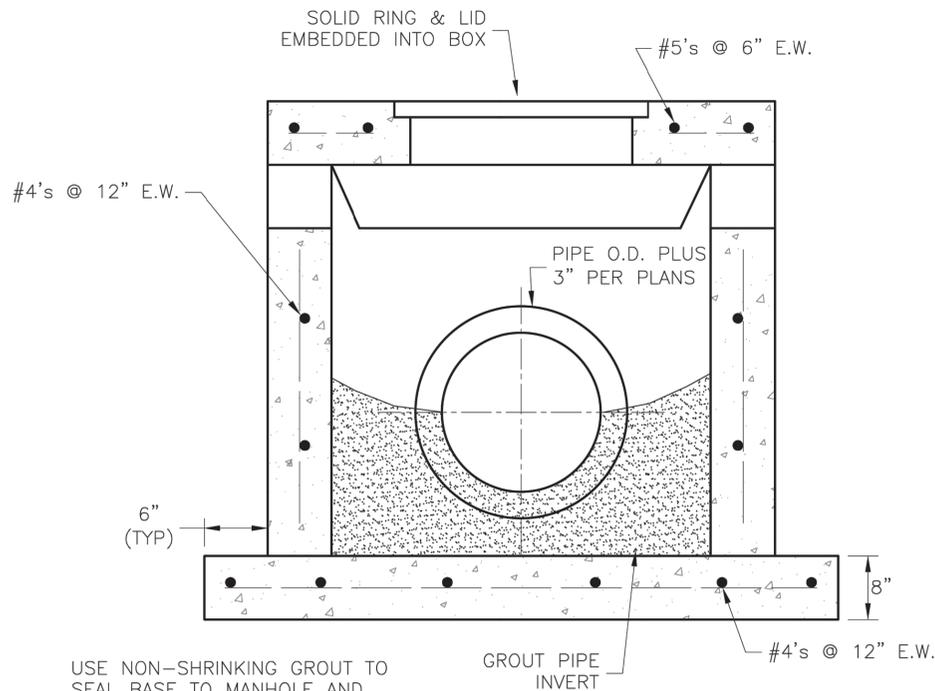
PLAN VIEW



SECTION B-B



WALL CORNER DETAIL



SECTION A-A

GENERAL NOTES:

1. LOCATE RING AND COVER OVER OUTLET ON BLANK WALL.
2. USE 3/4" CHAMFER ON ALL EXPOSED CONCRETE CORNERS.
3. FLOOR OF INLET GROUTED AND SHAPED TO MATCH PIPE INVERT TO PROVIDE SMOOTH FLOW.
4. STEPS REQUIRED AT 16" O.C. WHEN DEPTH FROM TOP OF CASTING TO INVERT EXCEEDS 3' ON BLANK WALL IF POSSIBLE.
5. BOXOUTS WILL NOT BE ALLOWED TO PROJECT THROUGH THE CORNERS OF THE STRUCTURE.
6. THE MINIMUM REINFORCING SHALL BE 1 H-BAR OVER A CAST-IN-PLACE PIPE AND 2 H-BARS OVER A PRECAST BOXOUT.
7. SHOW FIELD INLET ORIENTATION ON PLANS PLUS NUMBER AND SIDE OF OPENINGS.
8. PRECAST LIDS SHALL BE PINNED, SEALED WITH NON-SHRINKABLE GROUT AND REMOVABLE FOR FUTURE MAINTENANCE.
9. FOR RING AND COVER SEE THE STORMWATER APPROVED PRODUCT LIST.

Project: **STANDARD DETAILS**  
 CITY OF LEE'S SUMMIT, MO  
 LEE'S SUMMIT, JACKSON COUNTY, MO  
 Sheet Name: **FIELD INLET DETAIL**

**LEE'S SUMMIT MISSOURI**  
 PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

Drawn By: MJF  
 Checked By: DL  
 Date: 05/2021  
 Proj. #:

**STM-2**

**WILSON & COMPANY**  
 800 EAST 101ST TERRACE, SUITE 200  
 KANSAS CITY, MO 64131  
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 FAX: 816-942-3013  
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CONSULTANTS



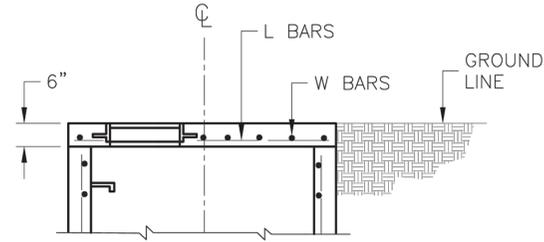
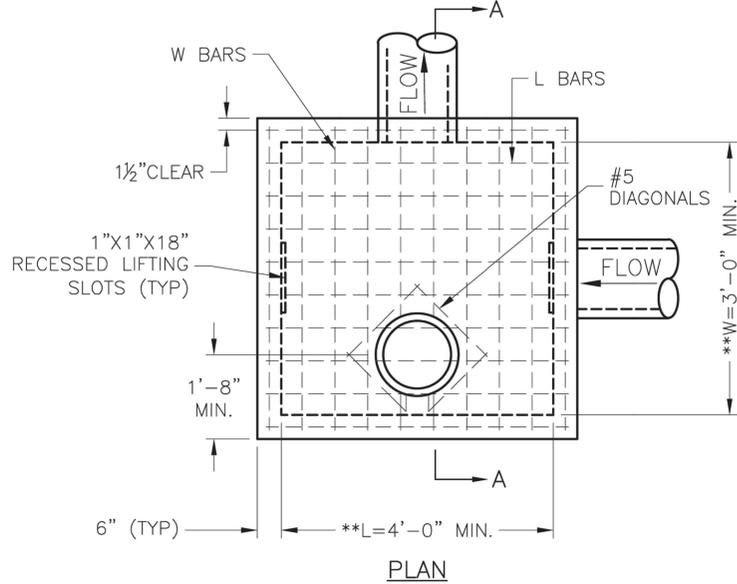
PROJECT NAME  
**CITY OF LEE'S SUMMIT, MO  
 SAMPSON ROAD BRIDGE  
 REPLACEMENT AND STORM  
 WATER IMPROVEMENTS  
 PROJECT NO. 997**

REV.	DATE	DESCRIPTION	BY

PROJECT NO:	23-600-303-00
DESIGNED BY:	AJM
DRAWN BY:	AJM
CHECKED BY:	CDP
DATE:	9/20/2024

SHEET TITLE  
**STORM SEWER  
 DETAILS**

SHEET NO:  
**C-25**

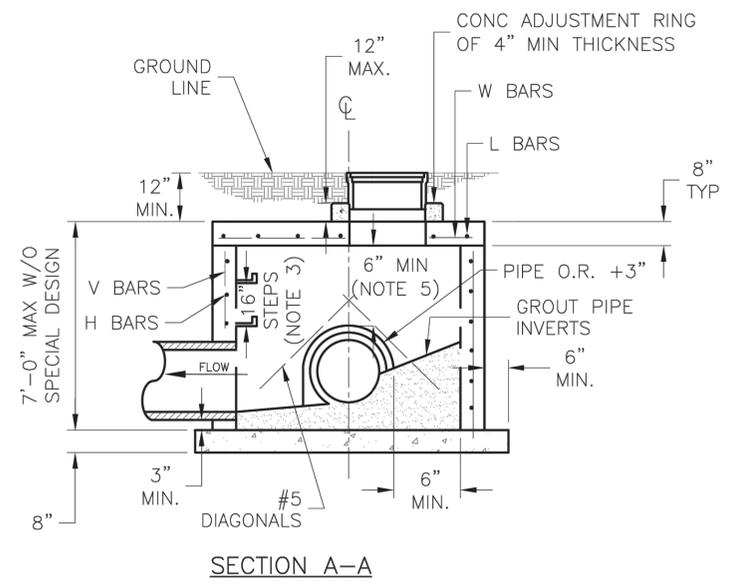


SLAB TOP ALTERNATE FOR JUNCTION BOX (SHALLOW)

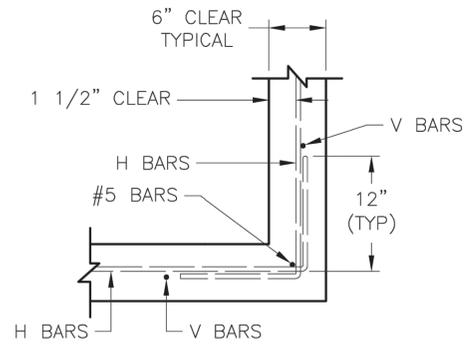
\*\* INCREASE IN MULTIPLES OF 6" (7'-0") MAX WITHOUT SPECIAL DESIGN. (SEE PROJECT PLANS FOR DETAILS)

REINFORCING

BARS	BAR SIZE	SPACING (IN.)
H	4	12
V	4	12
L	5	6
W	5	6



SECTION A-A



WALL CORNER DETAIL

GENERAL NOTES:

- LOCATE RING AND COVER ON BLANK WALL.
- USE 3/4" CHAMFER STRIP OR 1/2" R EDGER TOOL ON ALL EXPOSED CONCRETE CORNERS.
- STEPS REQUIRED AT 16" O.C. WHEN DEPTH FROM TOP OF CASTING TO INVERT EXCEEDS 4' ON BLANK WALL IF POSSIBLE.
- BOXOUTS WILL NOT BE ALLOWED TO PROJECT THROUGH THE CORNERS OF THE STRUCTURE AND THE MINIMUM DISTANCE BETWEEN BOXOUTS IS 6".
- THE MINIMUM REINFORCING SHALL BE 1 H-BAR OVER A CAST-IN-PLACE PIPE AND 2 H-BARS OVER A PRECAST BOXOUT.
- PRECAST LIDS SHALL BE PINNED, SEALED WITH NON-SHRINKABLE GROUT AND REMOVABLE FOR FUTURE MAINTENANCE.
- REINFORCING OF COVERS IN STREETS REQUIRE SPECIAL DESIGN.
- FOR RING AND COVER SEE THE STORMWATER APPROVED PRODUCT LIST.

**LEE'S SUMMIT MISSOURI**  
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

Project: STANDARD DETAILS  
CITY OF LEE'S SUMMIT, MO  
LEE'S SUMMIT, JACKSON COUNTY, MO  
Sheet Name: JUNCTION BOX DETAIL

Drawn By: MJF  
Checked By: DL  
Date: 05/2021  
Proj. #:

STM-3

**WILSON & COMPANY**  
800 EAST 101ST TERRACE, SUITE 200  
KANSAS CITY, MO 64131  
PHONE: 816-701-3100  
FAX: 816-942-3013  
www.wilsonco.com

CONSULTANTS



PROJECT NAME  
CITY OF LEE'S SUMMIT, MO  
SAMPSON ROAD BRIDGE  
REPLACEMENT AND STORM  
WATER IMPROVEMENTS  
PROJECT NO. 997

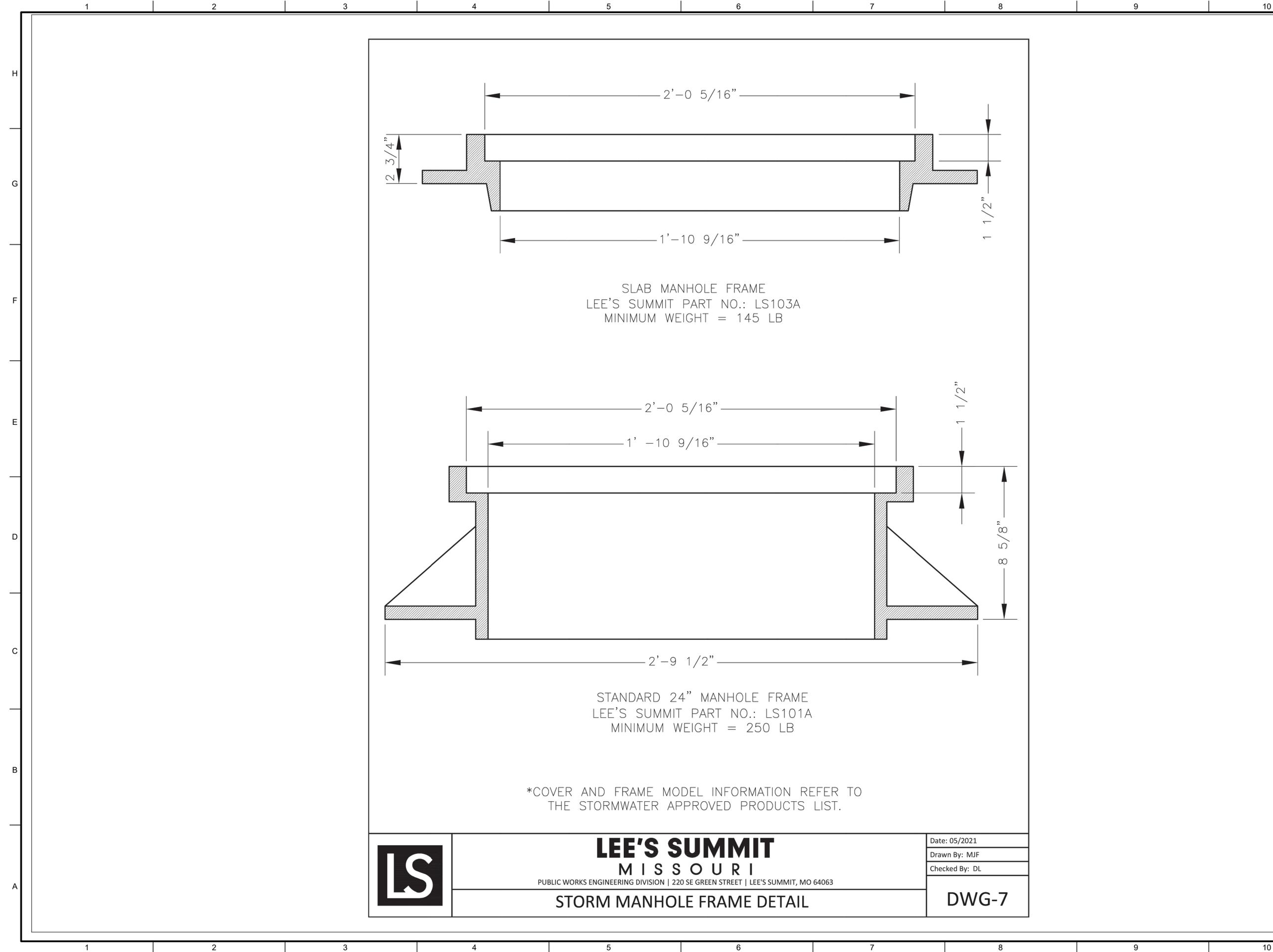
REV.	DATE	DESCRIPTION	BY

PROJECT NO: 23-600-303-00  
DESIGNED BY: AJM  
DRAWN BY: AJM  
CHECKED BY: CDP  
DATE: 9/20/2024

SHEET TITLE  
STORM SEWER  
DETAILS

SHEET NO:  
C-26





SLAB MANHOLE FRAME  
LEE'S SUMMIT PART NO.: LS103A  
MINIMUM WEIGHT = 145 LB

STANDARD 24" MANHOLE FRAME  
LEE'S SUMMIT PART NO.: LS101A  
MINIMUM WEIGHT = 250 LB

\*COVER AND FRAME MODEL INFORMATION REFER TO THE STORMWATER APPROVED PRODUCTS LIST.



**LEE'S SUMMIT MISSOURI**  
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

**STORM MANHOLE FRAME DETAIL**

Date: 05/2021  
Drawn By: MJF  
Checked By: DL

**DWG-7**

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SEAL

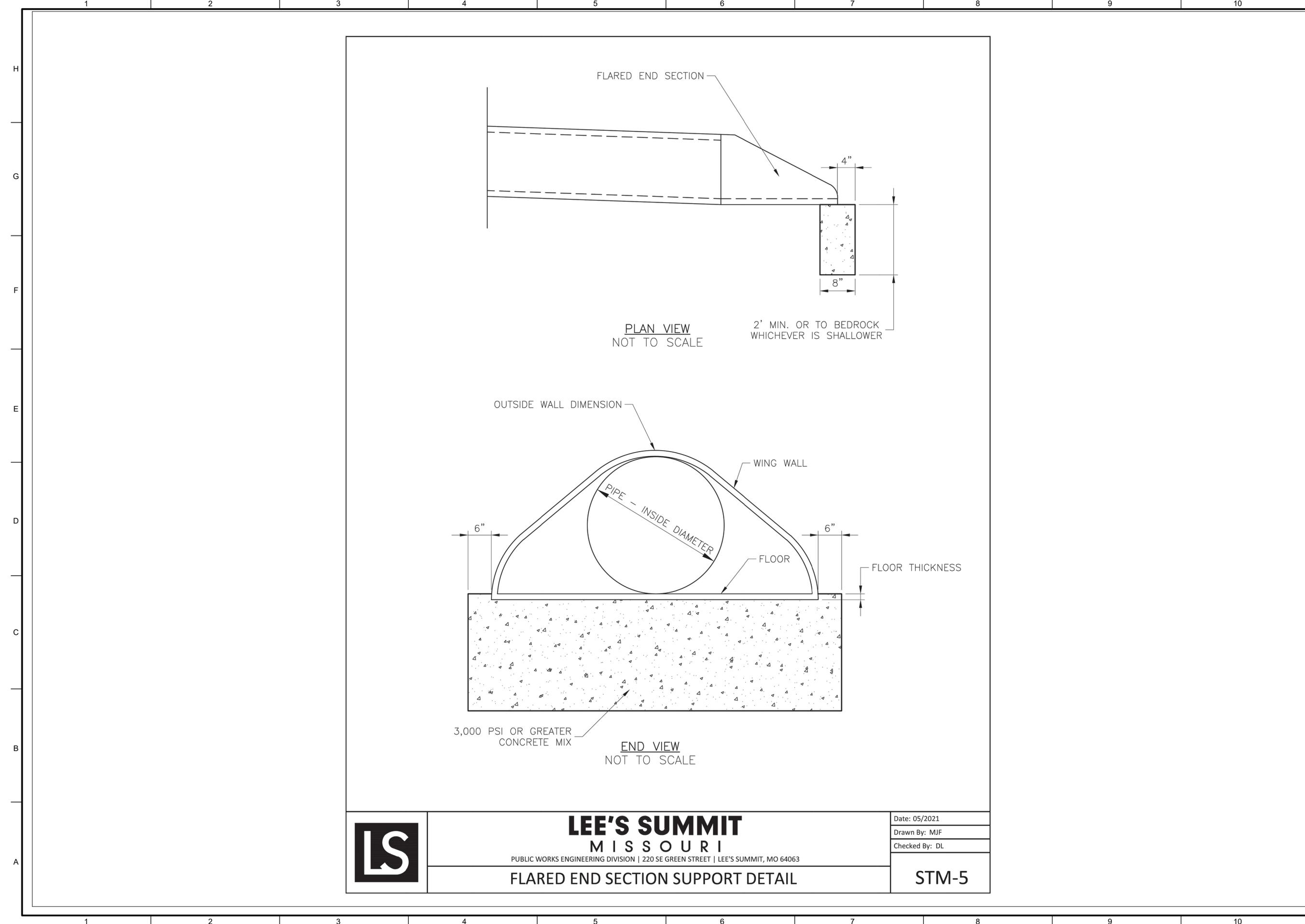
PROJECT NAME  
CITY OF LEE'S SUMMIT, MO  
SAMPSON ROAD BRIDGE  
REPLACEMENT AND STORM  
WATER IMPROVEMENTS  
PROJECT NO. 997

REV.	DATE	DESCRIPTION	BY

PROJECT NO: 23-600-303-00  
DESIGNED BY: AJM  
DRAWN BY: AJM  
CHECKED BY: CDP  
DATE: 9/20/2024

SHEET TITLE  
**STORM SEWER DETAILS**

SHEET NO:  
**C-28**



**LEE'S SUMMIT**  
**MISSOURI**  
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

**FLARED END SECTION SUPPORT DETAIL**

Date: 05/2021  
Drawn By: MJF  
Checked By: DL

**STM-5**

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PROJECT NAME  
**CITY OF LEE'S SUMMIT, MO  
SAMPSON ROAD BRIDGE  
REPLACEMENT AND STORM  
WATER IMPROVEMENTS  
PROJECT NO. 997**

REV.	DATE	DESCRIPTION	BY

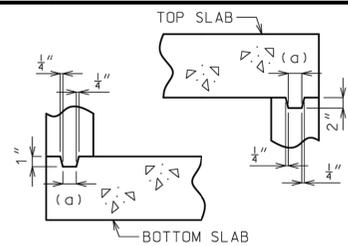
PROJECT NO: 23-600-303-00  
DESIGNED BY: AJM  
DRAWN BY: AJM  
CHECKED BY: CDP  
DATE: 9/20/2024

SHEET TITLE  
**STORM SEWER  
DETAILS**

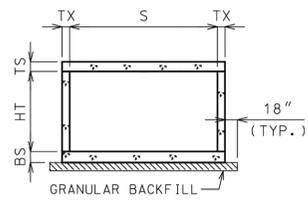
SHEET NO:  
**C-29**



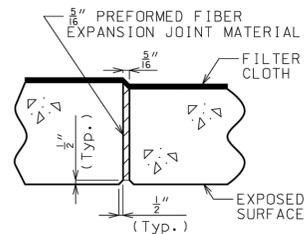




**KEYED CONSTRUCTION JOINT**  
(a) APPROXIMATELY ONE-THIRD OF WALL THICKNESS



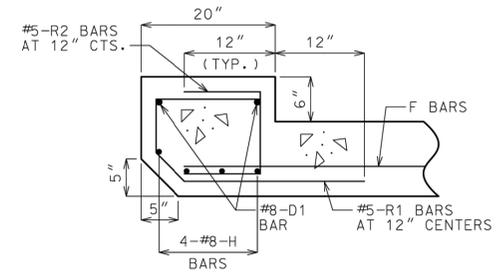
**GRANULAR BACKFILL LIMITS AND MEMBER DIMENSIONS**



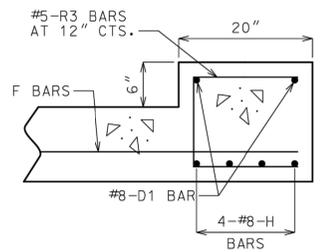
**TRANSVERSE JOINT THRU BARREL**

PREFORMED FIBER EXPANSION JOINT MATERIAL IN ACCORDANCE WITH SEC 1057 SHALL BE SECURELY STITCHED TO ONE FACE OF THE CONCRETE WITH 10 GAGE COPPER WIRE OR 12 GAGE SOFT DRAWN GALVANIZED STEEL WIRE.

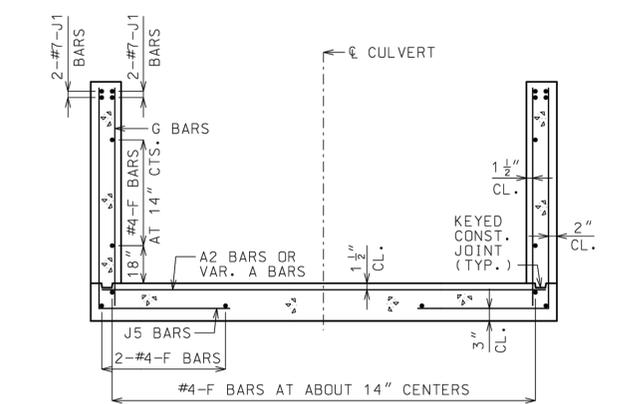
FILTER CLOTH 3 FEET IN WIDTH AND DOUBLE THICKNESS SHALL BE CENTERED ON TRANSVERSE JOINTS IN TOP SLAB AND SIDEWALLS WITH EDGES SEALED WITH MASTIC OR TWO SIDED TAPE. FILTER CLOTH SHALL BE A SEPARATION GEOTEXTILE IN ACCORDANCE WITH SEC 1011. COST OF FURNISHING AND INSTALLING FILTER CLOTH WILL BE CONSIDERED COMPLETELY COVERED BY THE CONTRACT UNIT PRICE FOR OTHER ITEMS.



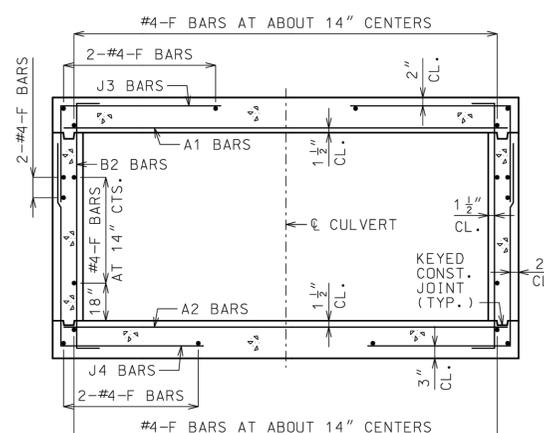
**UPSTREAM HEADWALL REINFORCEMENT**



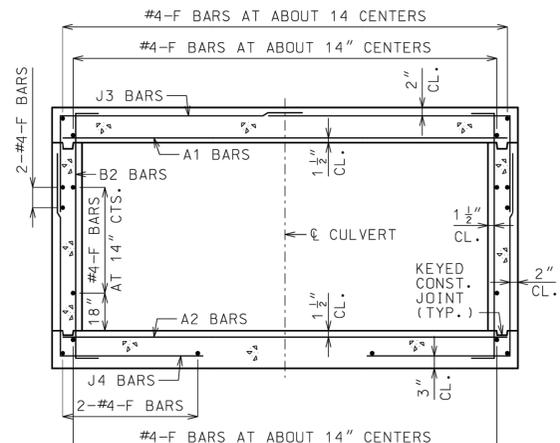
**DOWNSTREAM HEADWALL REINFORCEMENT**



**UPSTREAM AND DOWNSTREAM WINGS REINFORCEMENT**



**BARREL REINFORCEMENT FOR DESIGN FILLS OVER 2'-0"**



**BARREL REINFORCEMENT FOR DESIGN FILLS 2'-0" OR LESS**

**GENERAL NOTES:**  
FOR MEMBER THICKNESS AND FOR BAR SIZES, SPACING AND DIMENSIONS OF ALL REINFORCEMENT EXCEPT J5 BARS, SEE 703.17. FOR J5 BARS, SEE 703.37.

BARREL AND WINGS SECTIONS ARE SYMMETRICAL ABOUT AND NORMAL TO CULVERT. HEADWALL SECTIONS ARE NORMAL TO LONG DIRECTION OF HEADWALL.

DRAWING NOT TO SCALE. FOLLOW DIMENSIONS.

MINIMUM CLEARANCE TO REINFORCING STEEL SHALL BE 1 1/2".

**MoDOT MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION**  
105 WEST CAPITOL JEFFERSON CITY, MO 65102  
1-888-ASK-MODOT (1-888-275-6636)

STATE OF MISSOURI  
DENNIS W. HECKMAN  
NUMBER PE-2741  
PROFESSIONAL ENGINEER

**CONCRETE SINGLE BOX CULVERT**  
SKEW: LEFT ADVANCE  
WINGS: STRAIGHT

DATE EFFECTIVE: 01/01/2021  
DATE PREPARED: 10/14/2020  
**703.12J**  
SHEET NO. 3 OF 3

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

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CONSULTANTS  
SEAL  
STATE OF MISSOURI  
CODY DEAN PORTER  
NUMBER PE-202002925  
9/20/2024

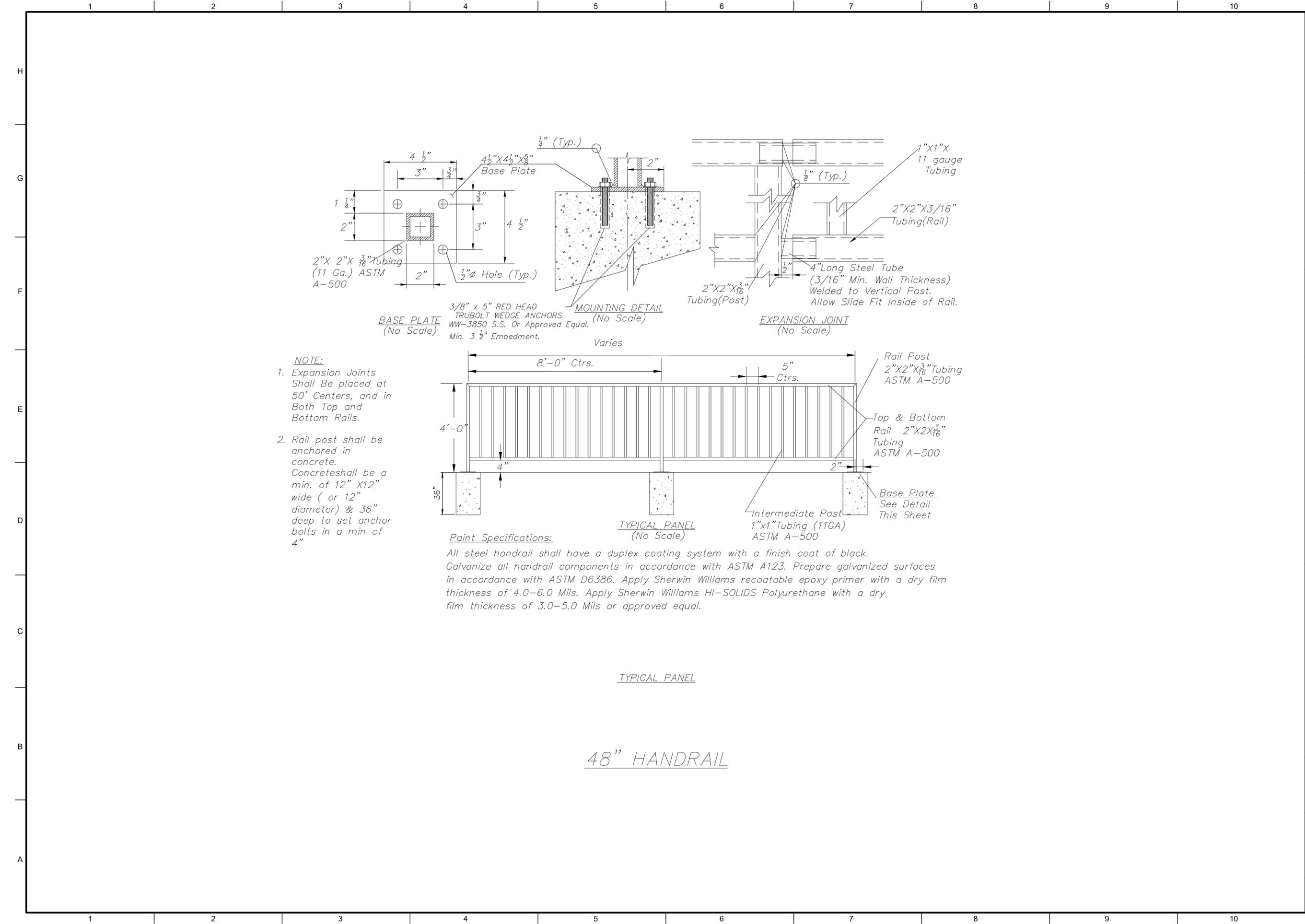
PROJECT NAME  
**CITY OF LEE'S SUMMIT, MO  
SAMPSON ROAD BRIDGE  
REPLACEMENT AND STORM  
WATER IMPROVEMENTS  
PROJECT NO. 997**

REV.	DATE	DESCRIPTION	BY

PROJECT NO:	23-600-303-00
DESIGNED BY:	AJM
DRAWN BY:	AJM
CHECKED BY:	CDP
DATE:	9/20/2024

SHEET TITLE  
**STORM SEWER DETAILS**

SHEET NO:  
**C-32**



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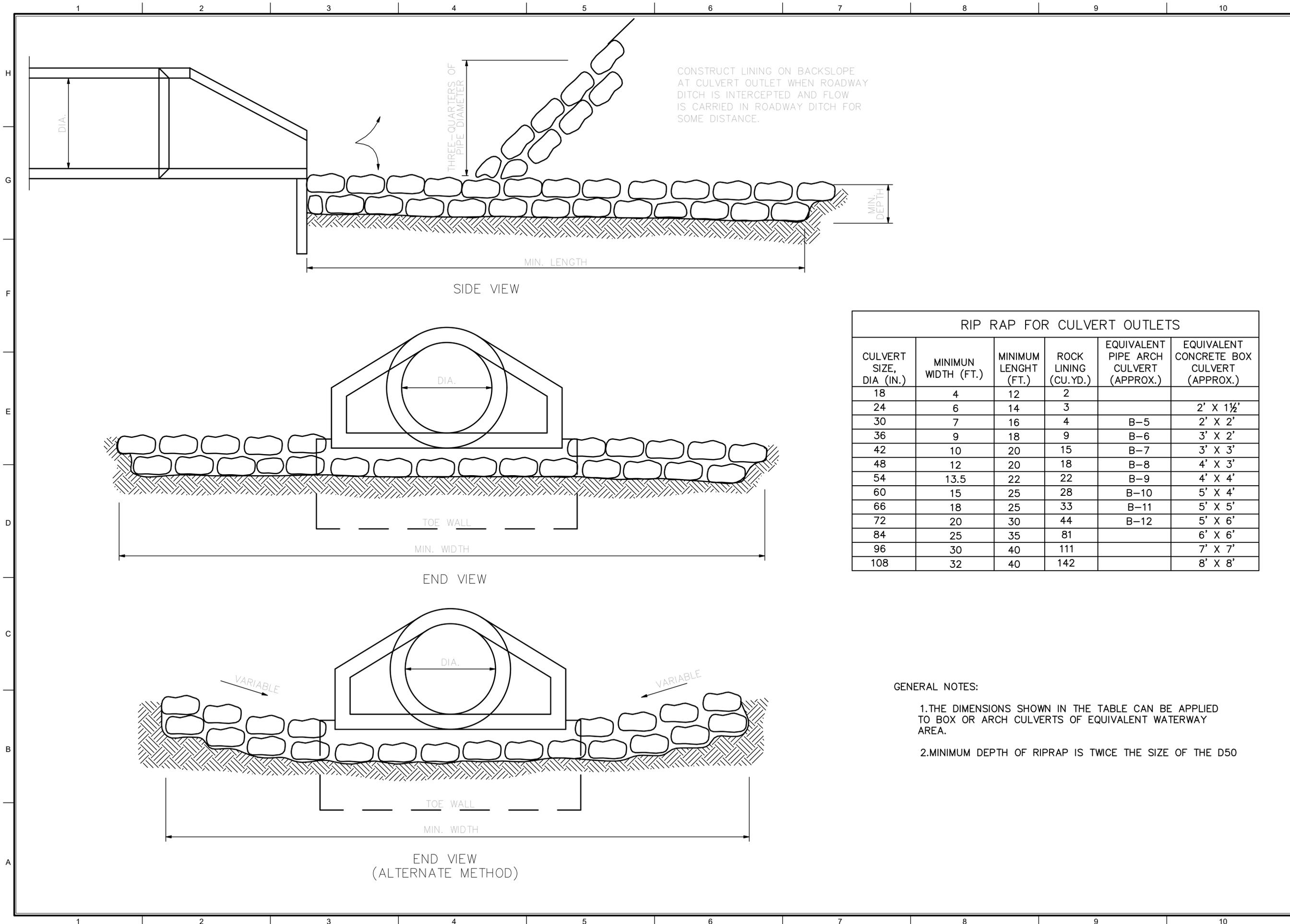
PROJECT NAME  
**CITY OF LEE'S SUMMIT, MO  
 SAMPSON ROAD BRIDGE  
 REPLACEMENT AND STORM  
 WATER IMPROVEMENTS  
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REV.	DATE	DESCRIPTION	BY

PROJECT NO: 23-600-303-00  
 DESIGNED BY: AJM  
 DRAWN BY: AJM  
 CHECKED BY: CDP  
 DATE: 9/20/2024

SHEET TITLE  
**HANDRAIL  
 DETAILS**

SHEET NO:  
**C-33**



**RIP RAP FOR CULVERT OUTLETS**

CULVERT SIZE, DIA (IN.)	MINIMUM WIDTH (FT.)	MINIMUM LENGTH (FT.)	ROCK LINING (CU.YD.)	EQUIVALENT PIPE ARCH CULVERT (APPROX.)	EQUIVALENT CONCRETE BOX CULVERT (APPROX.)
18	4	12	2		
24	6	14	3		2' X 1½'
30	7	16	4	B-5	2' X 2'
36	9	18	9	B-6	3' X 2'
42	10	20	15	B-7	3' X 3'
48	12	20	18	B-8	4' X 3'
54	13.5	22	22	B-9	4' X 4'
60	15	25	28	B-10	5' X 4'
66	18	25	33	B-11	5' X 5'
72	20	30	44	B-12	5' X 6'
84	25	35	81		6' X 6'
96	30	40	111		7' X 7'
108	32	40	142		8' X 8'

**GENERAL NOTES:**

1. THE DIMENSIONS SHOWN IN THE TABLE CAN BE APPLIED TO BOX OR ARCH CULVERTS OF EQUIVALENT WATERWAY AREA.

2. MINIMUM DEPTH OF RIPRAP IS TWICE THE SIZE OF THE D50

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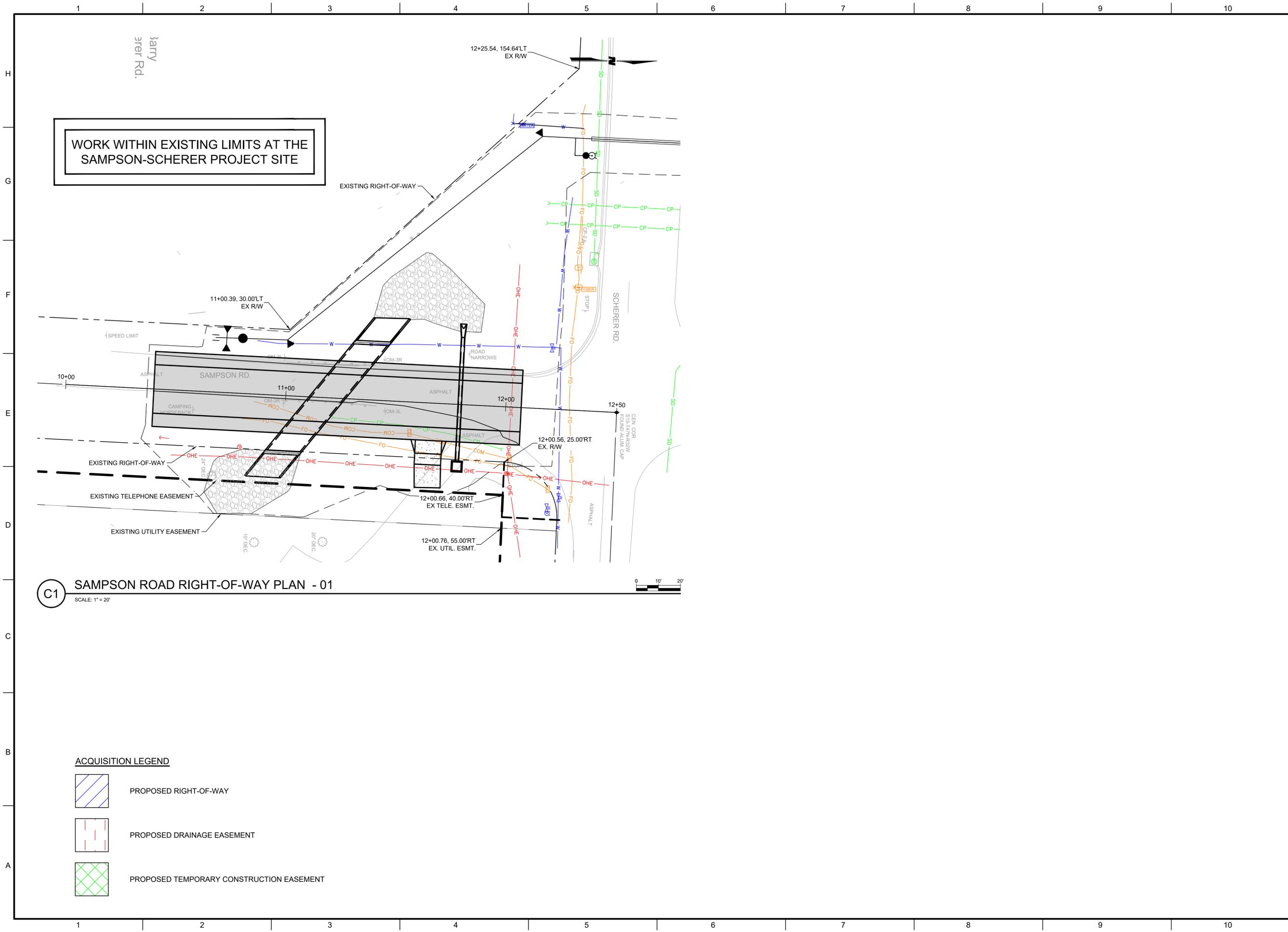
PROJECT NAME  
**CITY OF LEE'S SUMMIT, MO  
 SAMPSON ROAD BRIDGE  
 REPLACEMENT AND STORM  
 WATER IMPROVEMENTS  
 PROJECT NO. 997**

REV.	DATE	DESCRIPTION	BY

PROJECT NO: 23-600-303-00  
 DESIGNED BY: AJM  
 DRAWN BY: AJM  
 CHECKED BY: CDP  
 DATE: 9/20/2024

SHEET TITLE  
**RIP RAP DETAIL**

SHEET NO:  
**C-34**



**C1** SAMPSON ROAD RIGHT-OF-WAY PLAN - 01  
SCALE: 1" = 20'

- ACQUISITION LEGEND**
-  PROPOSED RIGHT-OF-WAY
  -  PROPOSED DRAINAGE EASEMENT
  -  PROPOSED TEMPORARY CONSTRUCTION EASEMENT

WORK WITHIN EXISTING LIMITS AT THE SAMPSON-SCHERER PROJECT SITE

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PROJECT NAME  
**CITY OF LEE'S SUMMIT, MO  
SAMPSON ROAD BRIDGE  
REPLACEMENT AND STORM  
WATER IMPROVEMENTS  
PROJECT NO. 997**

REV.	DATE	DESCRIPTION	BY

PROJECT NO: 23-600-303-00  
DESIGNED BY: AJM  
DRAWN BY: AJM  
CHECKED BY: CDP  
DATE: 9/20/2024

SHEET TITLE  
**RIGHT OF WAY  
PLAN**

SHEET NO:  
**C-35**

PROPERTY ACQUISITION TABLE (ALL SITES)

TRACT NO.	OWNERSHIP	RIGHT-OF-WAY (SF)	TEMPORARY EASEMENT (SF)	PERMANENT DRAINAGE EASEMENT (SF)
TRACT 05	UNITED STATES OF AMERICA	-	25534.8	-
TRACT 01	RICHARD J. & PATRICIA R. KIES	5973.9	11100.0	32700.8
TRACT 02	CITY OF LEE'S SUMMIT	12546.5	53916.81	79186.4

NOTES:

- \* ACQUISITION AREAS TAKEN TO THE NEAREST TENTH (.1).
- \* PERMANENT ELECTRICAL EASEMENT IS PENDING EVERGY DESIGN OF POWER POLE RELOCATION.



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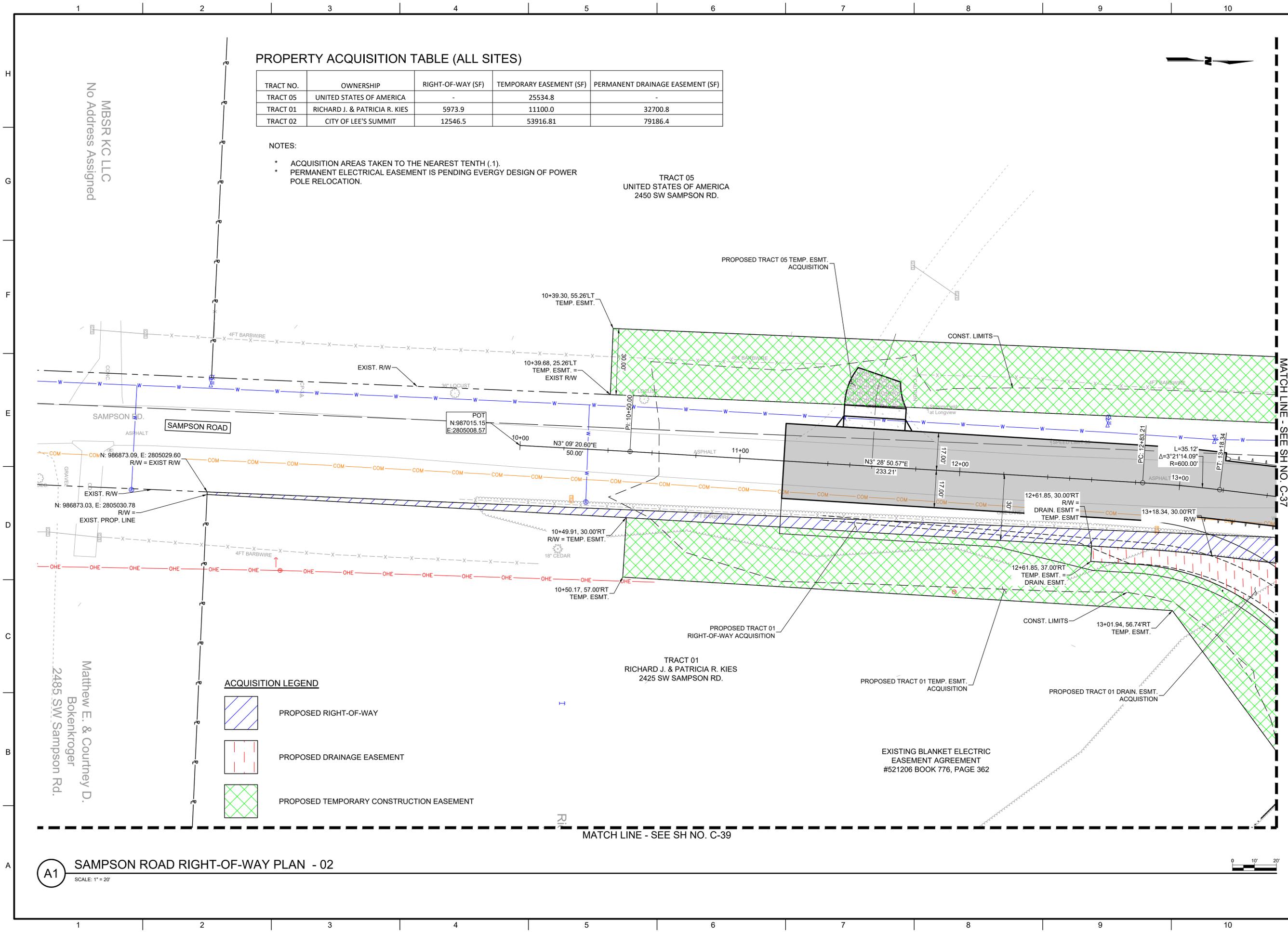
PROJECT NAME  
**CITY OF LEE'S SUMMIT, MO  
 SAMPSON ROAD BRIDGE  
 REPLACEMENT AND STORM  
 WATER IMPROVEMENTS  
 PROJECT NO. 997**

REV.	DATE	DESCRIPTION	BY

PROJECT NO: 23-600-303-00  
 DESIGNED BY: AJM  
 DRAWN BY: AJM  
 CHECKED BY: CDP  
 DATE: 9/20/2024

SHEET TITLE  
**RIGHT OF WAY  
 PLAN**

SHEET NO:  
**C-36**



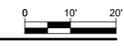
MBSR KC LLC  
 No Address Assigned

Matthew E. & Courtney D.  
 Bokenkroger  
 2485 SW Sampson Rd.

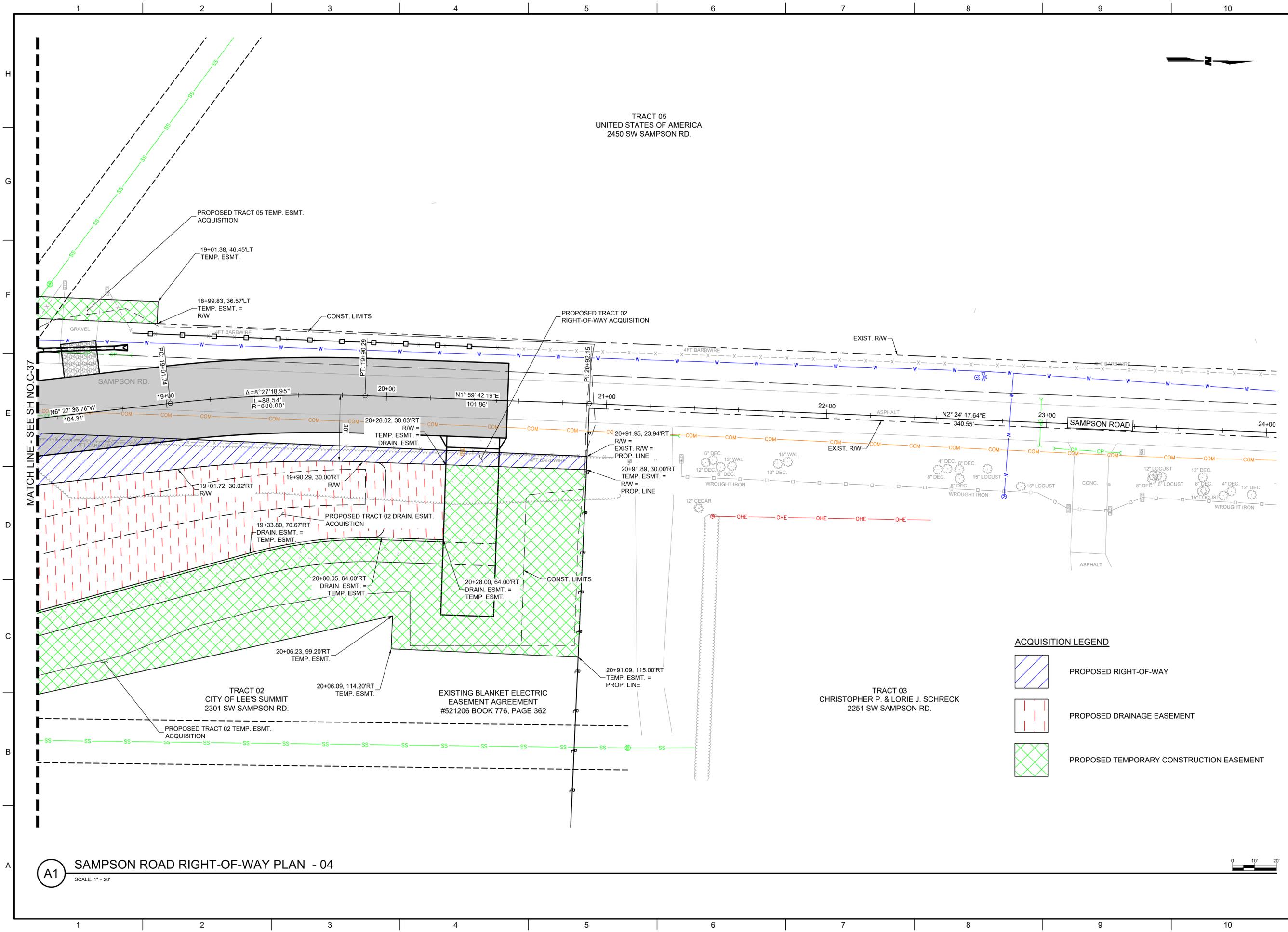
**ACQUISITION LEGEND**

- PROPOSED RIGHT-OF-WAY
- PROPOSED DRAINAGE EASEMENT
- PROPOSED TEMPORARY CONSTRUCTION EASEMENT

**A1 SAMPSON ROAD RIGHT-OF-WAY PLAN - 02**  
 SCALE: 1" = 20'







**A1** SAMPSON ROAD RIGHT-OF-WAY PLAN - 04

SCALE: 1" = 20'



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CONSULTANTS



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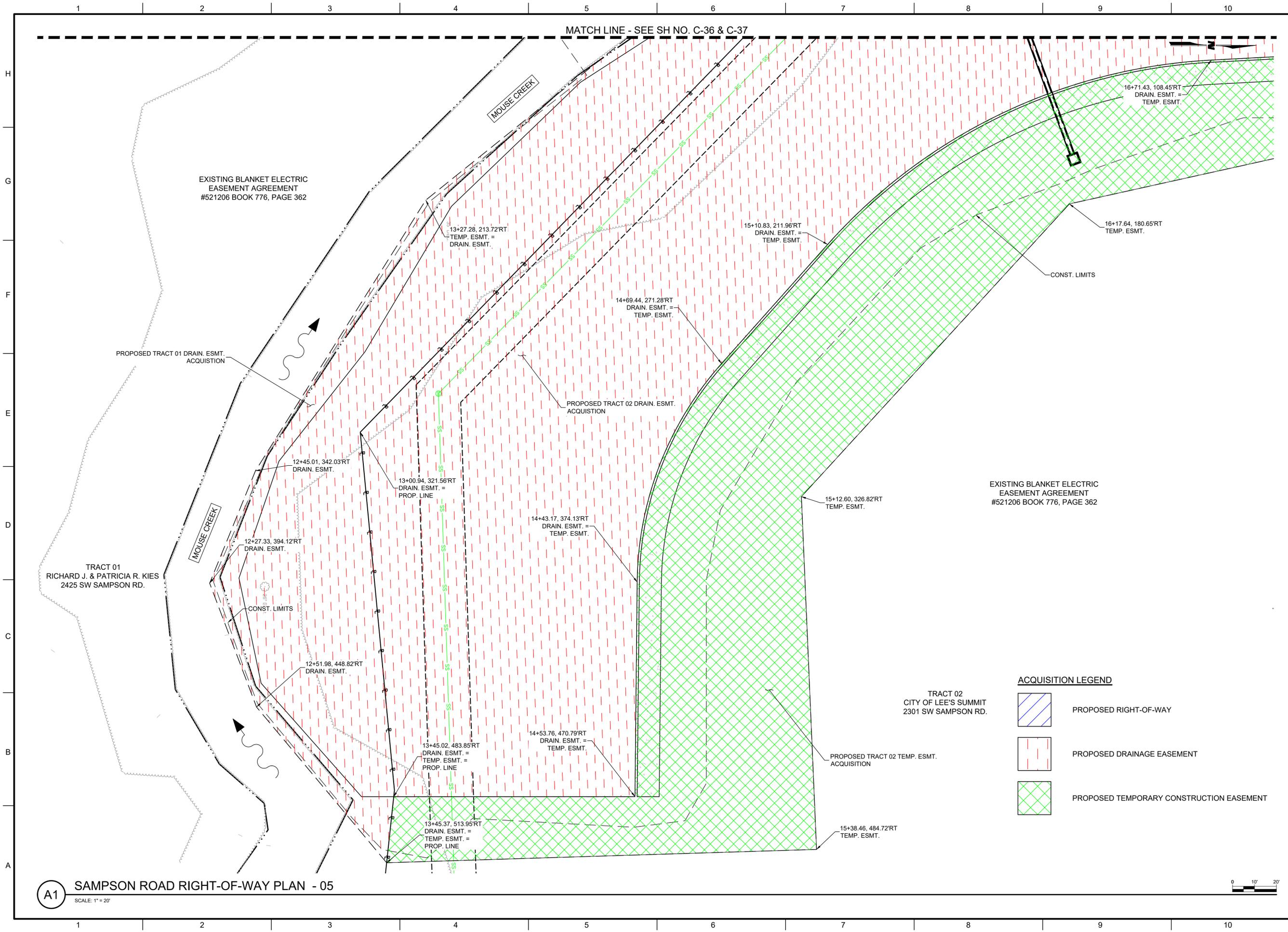
**PROJECT NAME**  
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SAMPSON ROAD BRIDGE  
REPLACEMENT AND STORM  
WATER IMPROVEMENTS  
PROJECT NO. 997

REV.	DATE	DESCRIPTION	BY

PROJECT NO: 23-600-303-00  
DESIGNED BY: AJM  
DRAWN BY: AJM  
CHECKED BY: CDP  
DATE: 9/20/2024

SHEET TITLE  
**RIGHT OF WAY  
PLAN**

SHEET NO:  
**C-38**



**A1** SAMPSON ROAD RIGHT-OF-WAY PLAN - 05  
SCALE: 1" = 20'

**ACQUISITION LEGEND**

	PROPOSED RIGHT-OF-WAY
	PROPOSED DRAINAGE EASEMENT
	PROPOSED TEMPORARY CONSTRUCTION EASEMENT

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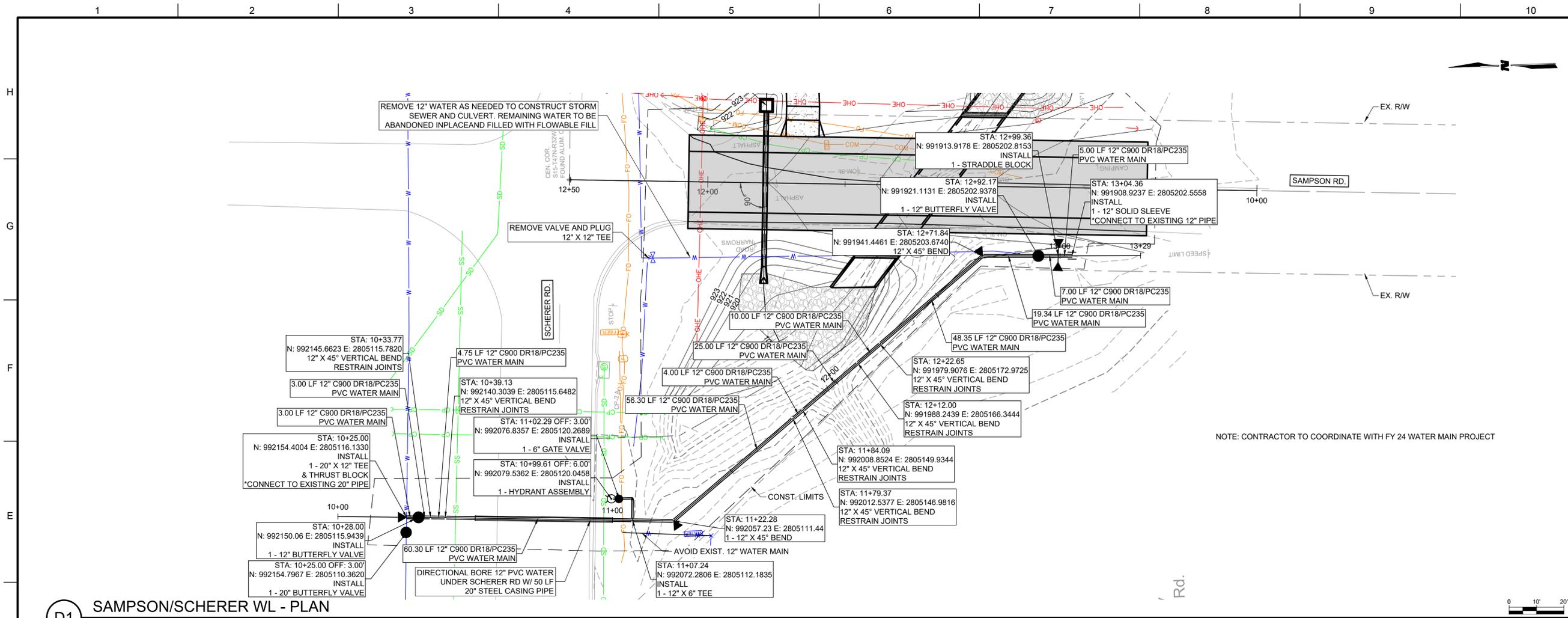
PROJECT NAME  
**CITY OF LEE'S SUMMIT, MO  
 SAMPSON ROAD BRIDGE  
 REPLACEMENT AND STORM  
 WATER IMPROVEMENTS  
 PROJECT NO. 997**

REV.	DATE	DESCRIPTION	BY

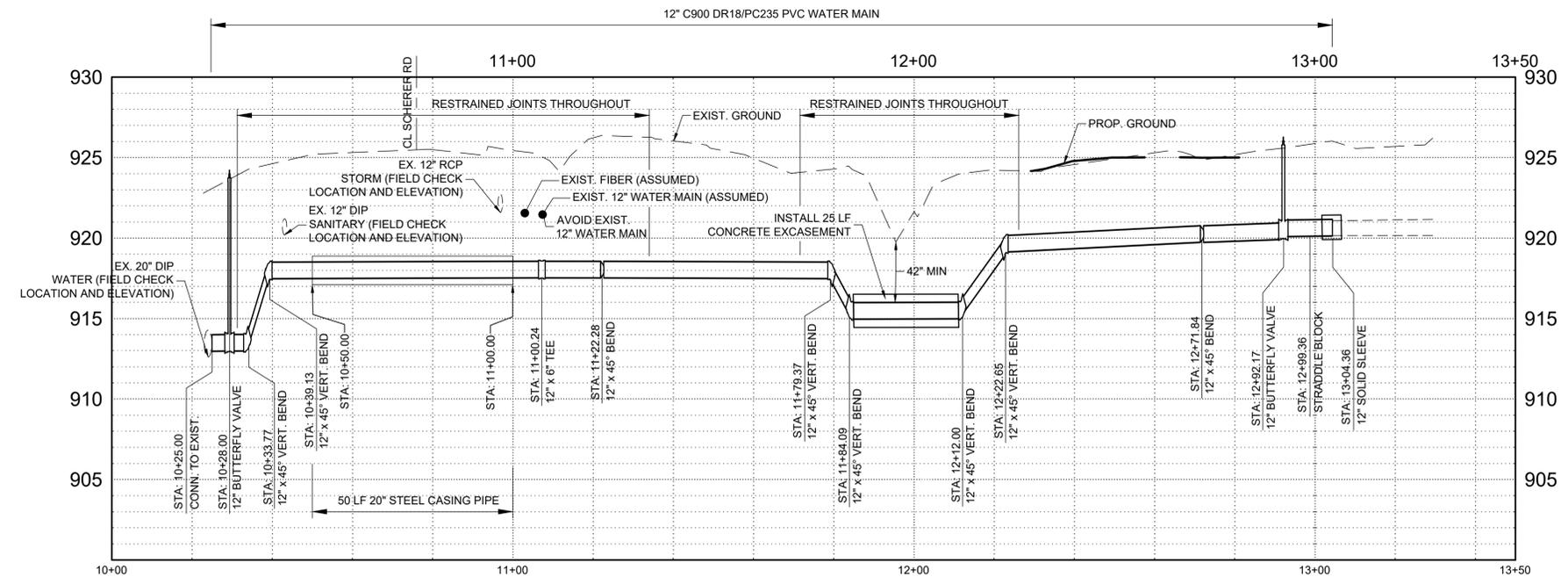
PROJECT NO: 23-600-303-00  
 DESIGNED BY: AJM  
 DRAWN BY: AJM  
 CHECKED BY: CDP  
 DATE: 9/20/2024

SHEET TITLE  
**RIGHT OF WAY  
 PLAN**

SHEET NO:  
**C-39**

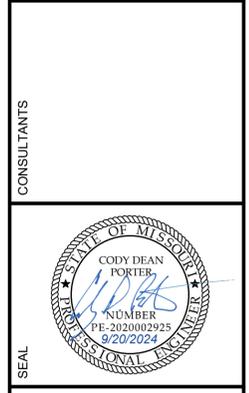


**D1** SAMPSON/SCHERER WL - PLAN  
SCALE: 1" = 20'



**A1** SAMPSON/SCHERER WL - PROFILE  
SCALE: 1" = 20'

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**CITY OF LEE'S SUMMIT, MO**  
**SAMPSON ROAD BRIDGE**  
**REPLACEMENT AND STORM**  
**WATER IMPROVEMENTS**  
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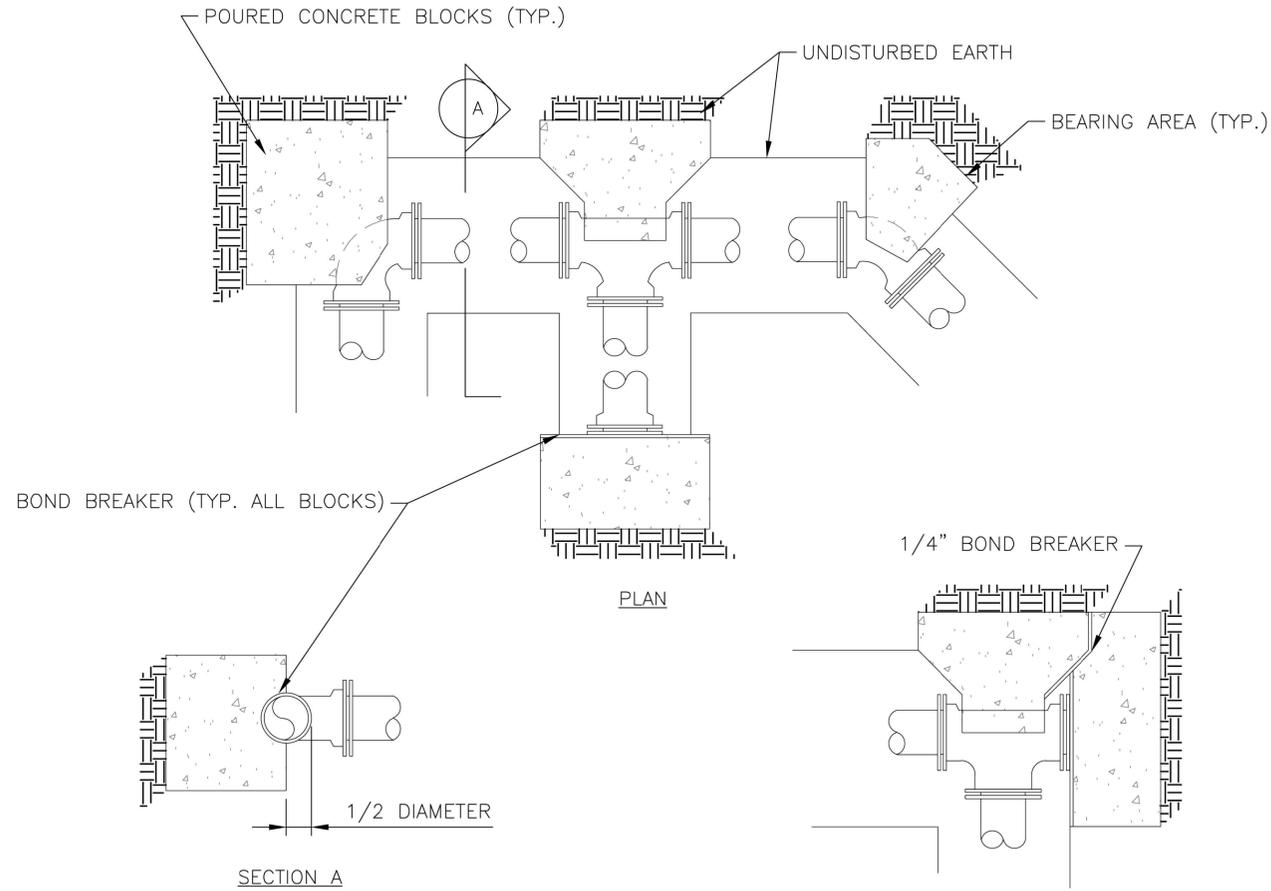
PROJECT NO: 23-600-303-00  
DESIGNED BY: DLH  
DRAWN BY: DLH  
CHECKED BY: CDP  
DATE: 9/20/2024

SHEET TITLE  
**WATER LINE**  
**PLAN &**  
**PROFILE**

SHEET NO:  
**C-40**

REQUIRED CONCRETE BEARING AREA (SQUARE FEET – SF)

NOM. DIA. (INCHES)	180 TEE, PLUG	90 BEND	45 BEND	22.5 BEND	11.25 BEND
6	4.7	6.7	4.0	4.0	4.0
8	8.4	11.8	6.4	4.0	4.0
10	13.1	18.5	10.0	5.1	4.0
12	18.8	26.7	14.4	7.4	4.0
14	25.7	36.3	19.6	10.0	5.0
16	33.5	47.4	25.6	13.1	6.6
18	42.4	REST. JT.	32.5	16.5	8.3
20	REST. JT.	REST. JT.	40.1	20.4	10.3
24	REST. JT.	REST. JT.	REST. JT.	29.4	14.8



- NOTES:
1. ALL BENDS WITHOUT RESTRAINED JOINTS SHALL HAVE CONCRETE THRUST BLOCKS INSTALLED FOR RESTRAINT.
  2. MEGA LUGS MAY BE USED ONLY IN CONJUNCTION WITH CONCRETE THRUST BLOCKING.
  3. BEARING AREA MUST BE AGAINST UNDISTURBED SOIL.
  4. DO NOT COVER JOINTS OR BOLTS (WHERE APPLICABLE) WITH CONCRETE.



**LEE'S SUMMIT MISSOURI**  
 PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

**HORIZONTAL THRUST BLOCK**

Date: 08/2023

Drawn By: MJF

Checked By: KLY

**WAT-1**

**WILSON & COMPANY**  
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 KANSAS CITY, MO 64131  
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CONSULTANTS



SEAL

PROJECT NAME  
**CITY OF LEE'S SUMMIT, MO  
 SAMPSON ROAD BRIDGE  
 REPLACEMENT AND STORM  
 WATER IMPROVEMENTS  
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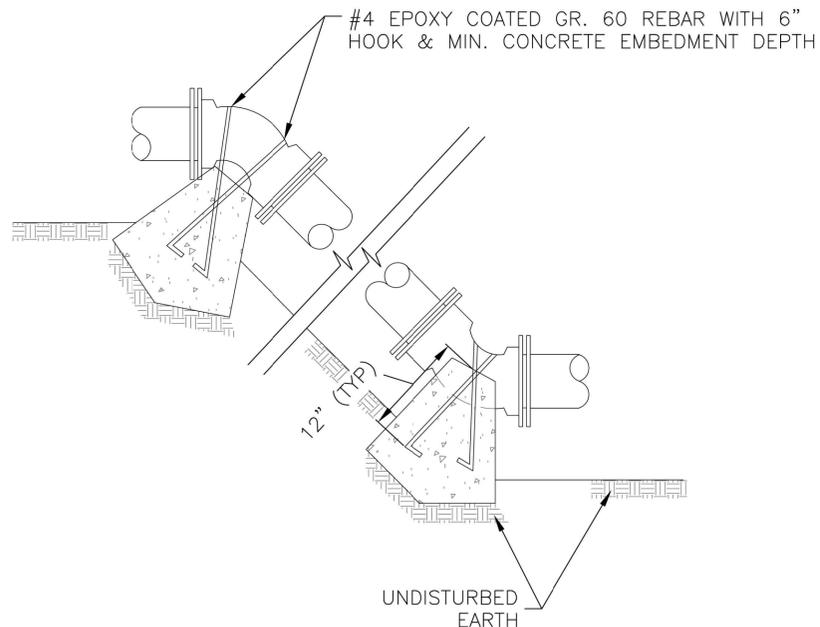
PROJECT NO: 23-600-303-00  
 DESIGNED BY: DLH  
 DRAWN BY: DLH  
 CHECKED BY: CDP  
 DATE: 9/20/2024

SHEET TITLE  
**WATER DETAIL**

SHEET NO:  
**C-41**

REQUIRED CONCRETE VOLUME (CUBIC FEET – CF)

NOM. DIA. (INCHES)	180 TEE, PLUG	90 BEND	45 BEND	22.5 BEND	11.25 BEND
6	50.5	71.4	38.6	19.7	9.9
8	89.8	126.9	68.7	35.0	17.6
10	140.2	198.3	107.3	54.7	27.5
12	202.0	REST. JT.	154.6	78.8	39.6
14	REST. JT.	REST. JT.	210.4	107.3	53.9
16	REST. JT.	REST. JT.	REST. JT.	140.1	70.4
18	REST. JT.	REST. JT.	REST. JT.	177.3	89.1
20	REST. JT.	REST. JT.	REST. JT.	REST. JT.	110.0
24	REST. JT.	REST. JT.	REST. JT.	REST. JT.	158.4



NOTES:

1. ALL BENDS WITHOUT RESTRAINED JOINTS SHALL HAVE CONCRETE THRUST BLOCKS INSTALLED FOR RESTRAINT.
2. MEGA LUGS MAY BE USED ONLY IN CONJUNCTION WITH CONCRETE THRUST BLOCKING.
3. BEARING MUST BE AGAINST UNDISTURBED SOIL.
4. DO NOT COVER JOINTS OR BOLTS (WHERE APPLICABLE) WITH CONCRETE.



**LEE'S SUMMIT MISSOURI**  
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

**VERTICAL THRUST BLOCK**

Date: 08/2023

Drawn By: MF

Checked By: KLY

**WAT-2**

**WILSON & COMPANY**

800 EAST 101ST TERRACE, SUITE 200  
KANSAS CITY, MO 64131  
PHONE: 816-701-3100  
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CONSULTANTS



SEAL

**CITY OF LEE'S SUMMIT, MO  
SAMPSON ROAD BRIDGE  
REPLACEMENT AND STORM  
WATER IMPROVEMENTS  
PROJECT NO. 997**

PROJECT NAME

REV.	DATE	DESCRIPTION	BY

PROJECT NO: 23-600-303-00

DESIGNED BY: DLH

DRAWN BY: DLH

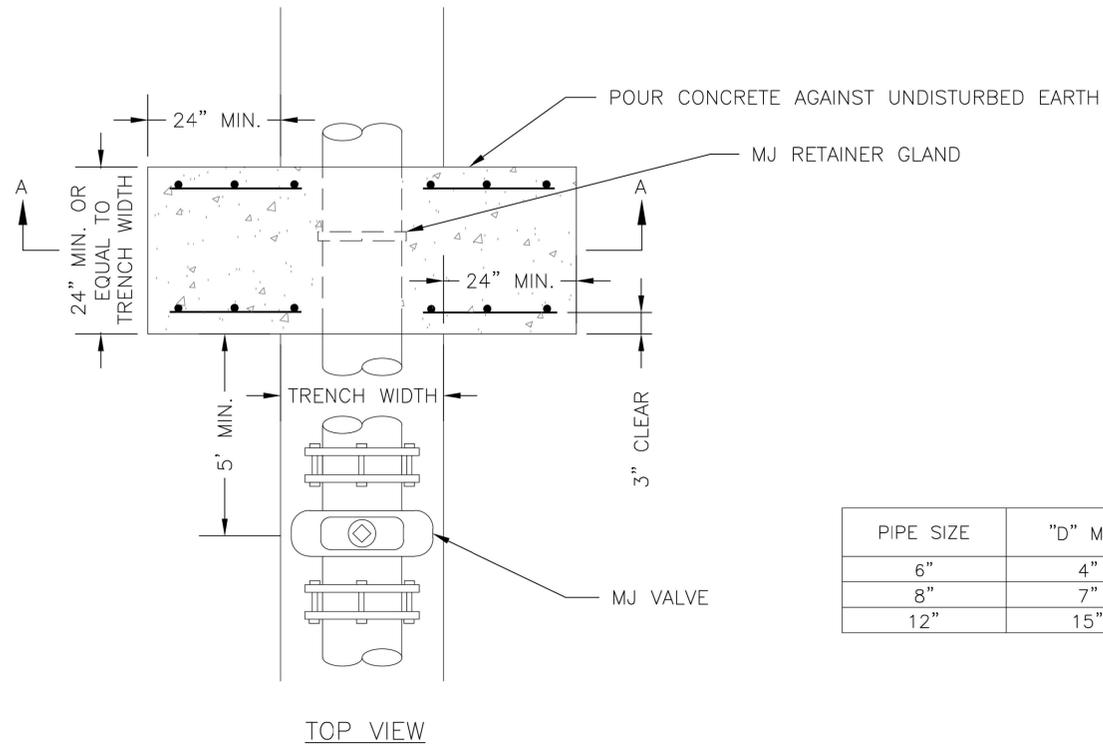
CHECKED BY: CDP

DATE: 9/20/2024

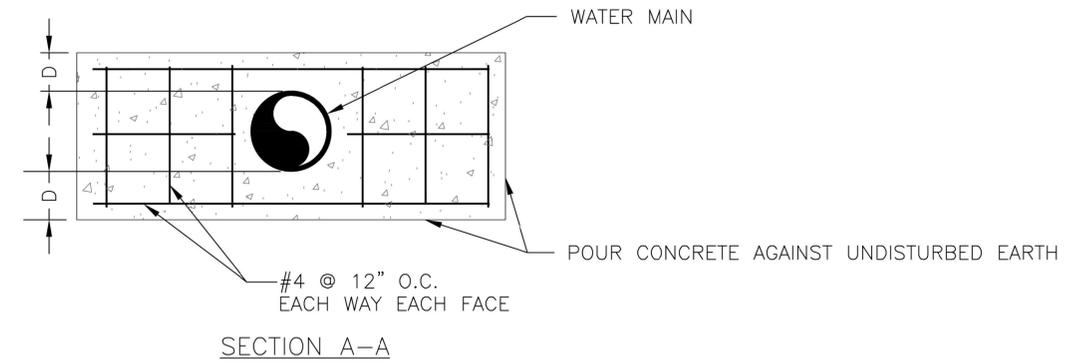
SHEET TITLE

**WATER DETAIL**

SHEET NO:  
**C-42**



PIPE SIZE	"D" MIN.
6"	4"
8"	7"
12"	15"

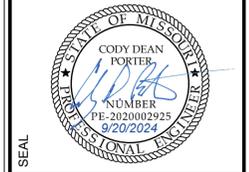


NOTE:  
THIS DETAIL NOT TO BE USED FOR PIPE GREATER THAN 12"

	<b>LEE'S SUMMIT</b> <b>MISSOURI</b> <small>PUBLIC WORKS ENGINEERING DIVISION   220 SE GREEN STREET   LEE'S SUMMIT, MO 64063</small>	Date: 08/2023 Drawn By: MJF Checked By: KLY
	<b>STRADDLE BLOCK</b>	<b>WAT-3</b>

**WILSON & COMPANY**  
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 FAX: 816-942-3013  
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PROJECT NAME  
**CITY OF LEE'S SUMMIT, MO**  
**SAMPSON ROAD BRIDGE**  
**REPLACEMENT AND STORM**  
**WATER IMPROVEMENTS**  
**PROJECT NO. 997**

REV.	DATE	DESCRIPTION	BY

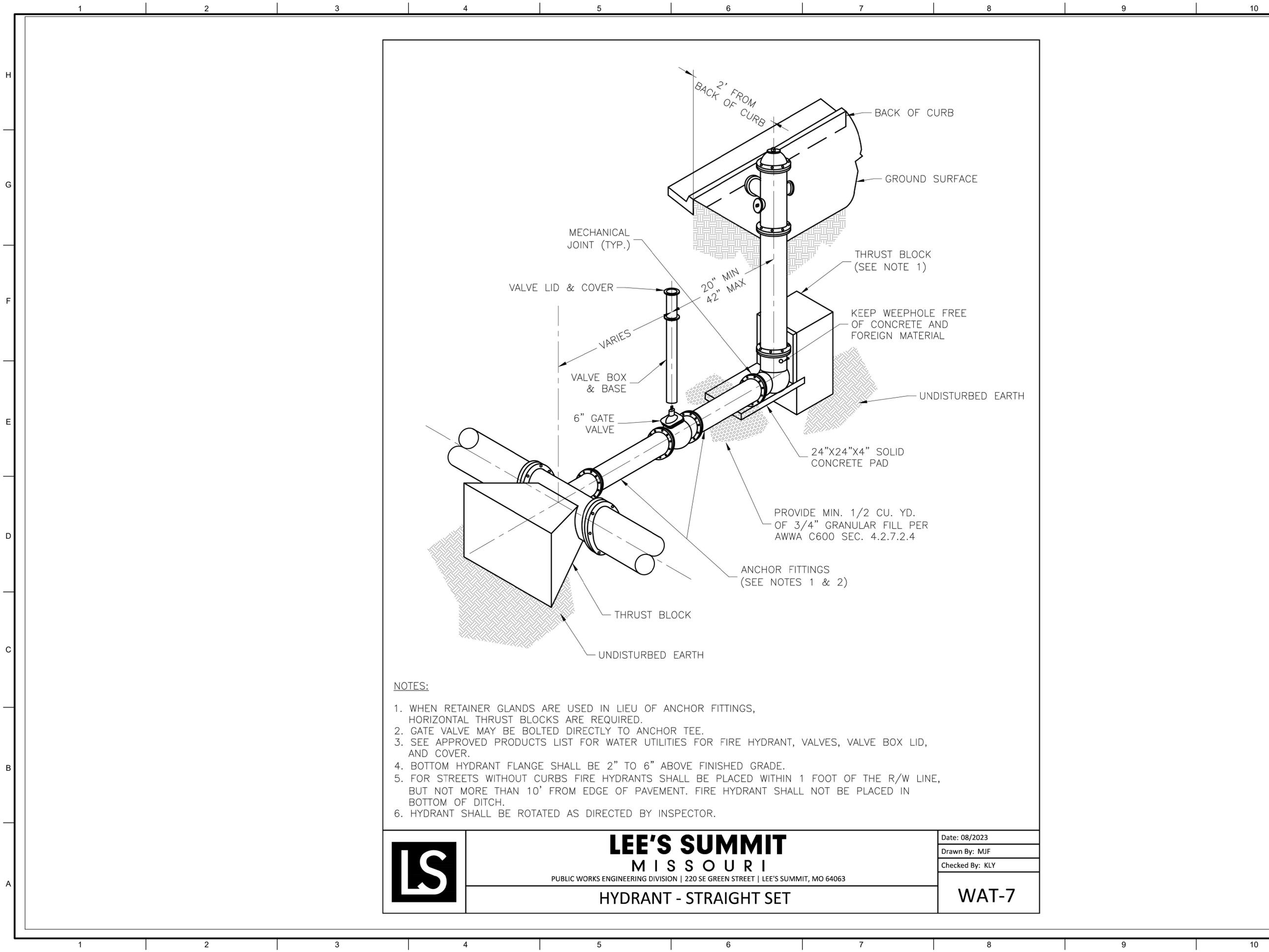
PROJECT NO: 23-600-303-00  
 DESIGNED BY: DLH  
 DRAWN BY: DLH  
 CHECKED BY: CDP  
 DATE: 9/20/2024

SHEET TITLE  
**WATER DETAIL**

SHEET NO:  
**C-43**







**NOTES:**

1. WHEN RETAINER GLANDS ARE USED IN LIEU OF ANCHOR FITTINGS, HORIZONTAL THRUST BLOCKS ARE REQUIRED.
2. GATE VALVE MAY BE BOLTED DIRECTLY TO ANCHOR TEE.
3. SEE APPROVED PRODUCTS LIST FOR WATER UTILITIES FOR FIRE HYDRANT, VALVES, VALVE BOX LID, AND COVER.
4. BOTTOM HYDRANT FLANGE SHALL BE 2" TO 6" ABOVE FINISHED GRADE.
5. FOR STREETS WITHOUT CURBS FIRE HYDRANTS SHALL BE PLACED WITHIN 1 FOOT OF THE R/W LINE, BUT NOT MORE THAN 10' FROM EDGE OF PAVEMENT. FIRE HYDRANT SHALL NOT BE PLACED IN BOTTOM OF DITCH.
6. HYDRANT SHALL BE ROTATED AS DIRECTED BY INSPECTOR.

	<p><b>LEE'S SUMMIT</b> <b>MISSOURI</b></p> <p><small>PUBLIC WORKS ENGINEERING DIVISION   220 SE GREEN STREET   LEE'S SUMMIT, MO 64063</small></p>	<p>Date: 08/2023</p> <p>Drawn By: MJF</p> <p>Checked By: KLY</p>
	<p><b>HYDRANT - STRAIGHT SET</b></p>	<p><b>WAT-7</b></p>

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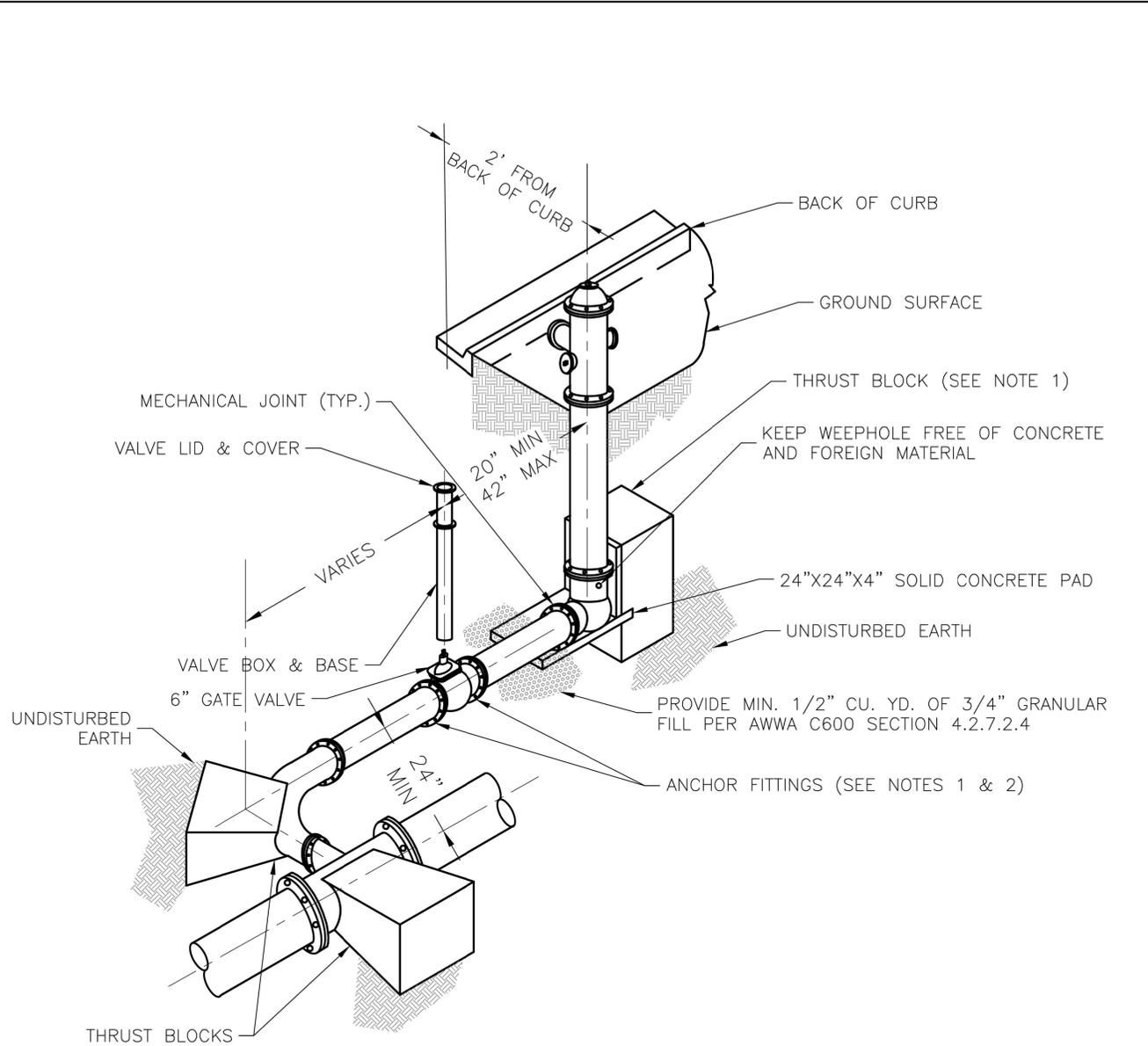
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**CITY OF LEE'S SUMMIT, MO  
 SAMPSON ROAD BRIDGE  
 REPLACEMENT AND STORM  
 WATER IMPROVEMENTS  
 PROJECT NO. 997**

REV.	DATE	DESCRIPTION	BY

PROJECT NO: 23-600-303-00  
 DESIGNED BY: DLH  
 DRAWN BY: DLH  
 CHECKED BY: CDP  
 DATE: 9/20/2024

SHEET TITLE  
**WATER DETAIL**

SHEET NO:  
**C-46**

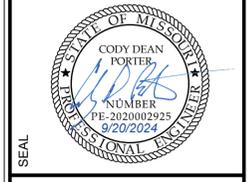


- NOTES:**
1. WHEN RETAINER GLANDS ARE USED IN LIEU OF ANCHOR RESTRAINT FITTINGS, HORIZONTAL THRUST BLOCKS ARE REQUIRED.
  2. GATE VALVE MAY BE BOLTED DIRECTLY TO ANCHOR TEE.
  3. SEE APPROVED PRODUCTS LIST FOR WATER UTILITIES FOR FIRE HYDRANT, VALVES, VALVE BOX LID, AND COVER.
  4. BOTTOM HYDRANT FLANGE SHALL BE 2" TO 6" ABOVE FINISHED GRADE.
  5. FOR STREETS WITHOUT CURBS FIRE HYDRANTS SHALL BE PLACED WITHIN 1 FOOT OF THE R/W LINE, BUT NOT MORE THAN 10' FROM EDGE OF PAVEMENT. FIRE HYDRANT SHALL NOT BE PLACED IN BOTTOM OF DITCH.
  6. HYDRANT SHALL BE ROTATED AS DIRECTED BY INSPECTOR.

	<b>LEE'S SUMMIT</b> <b>MISSOURI</b> <small>PUBLIC WORKS ENGINEERING DIVISION   220 SE GREEN STREET   LEE'S SUMMIT, MO 64063</small>	Date: 08/2023 Drawn By: MJF Checked By: KLY
	HYDRANT WITH 90 DEGREE BEND	WAT-8

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PROJECT NAME

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**SAMPSON ROAD BRIDGE**  
**REPLACEMENT AND STORM**  
**WATER IMPROVEMENTS**  
**PROJECT NO. 997**

REV.	DATE	DESCRIPTION	BY

PROJECT NO: 23-600-303-00  
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 DATE: 9/20/2024

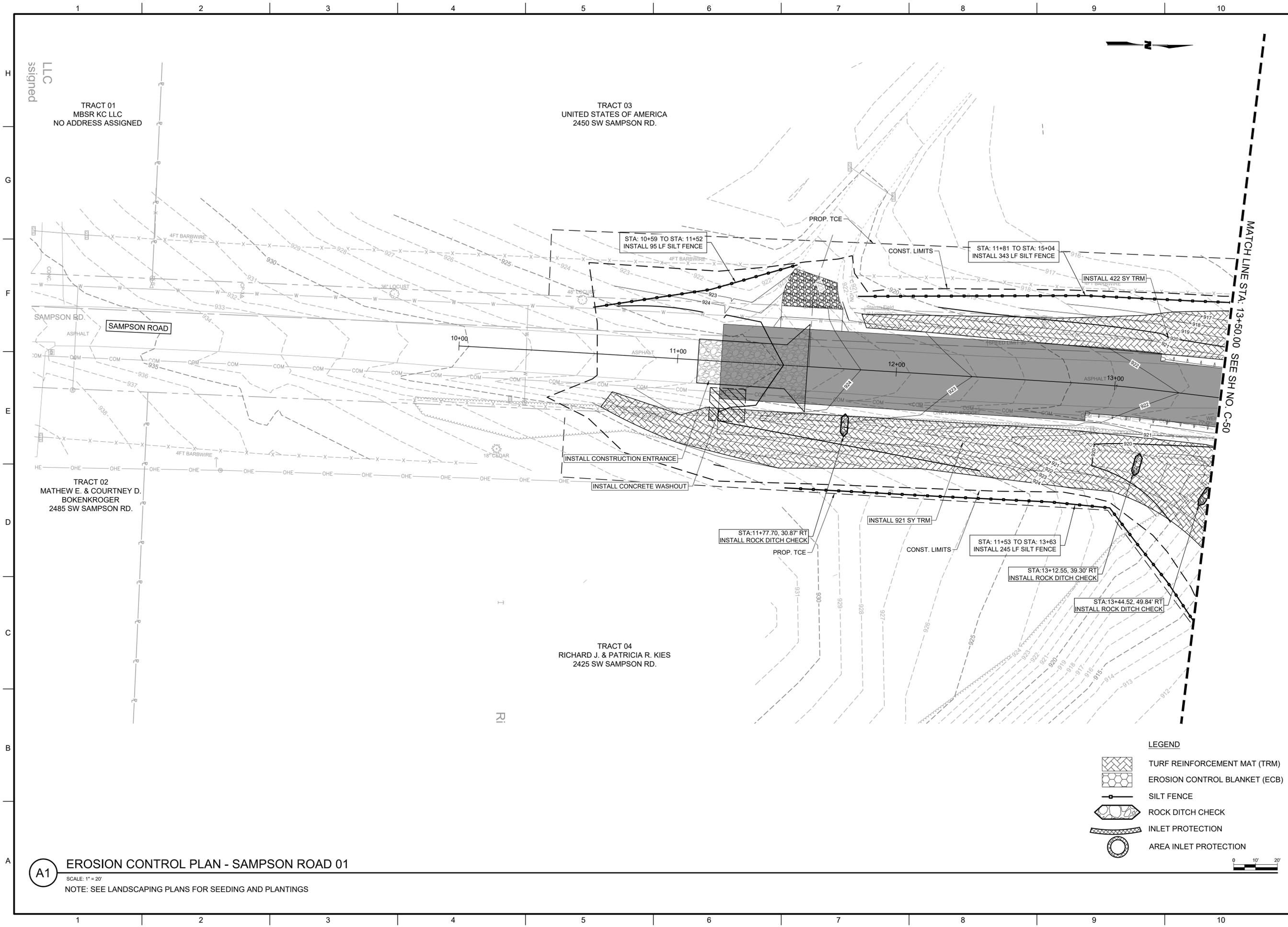
SHEET TITLE

WATER DETAIL

SHEET NO:

C-47





**A1** EROSION CONTROL PLAN - SAMPSON ROAD 01  
 SCALE: 1" = 20'  
 NOTE: SEE LANDSCAPING PLANS FOR SEEDING AND PLANTINGS

- LEGEND**
- TURF REINFORCEMENT MAT (TRM)
  - EROSION CONTROL BLANKET (ECB)
  - SILT FENCE
  - ROCK DITCH CHECK
  - INLET PROTECTION
  - AREA INLET PROTECTION



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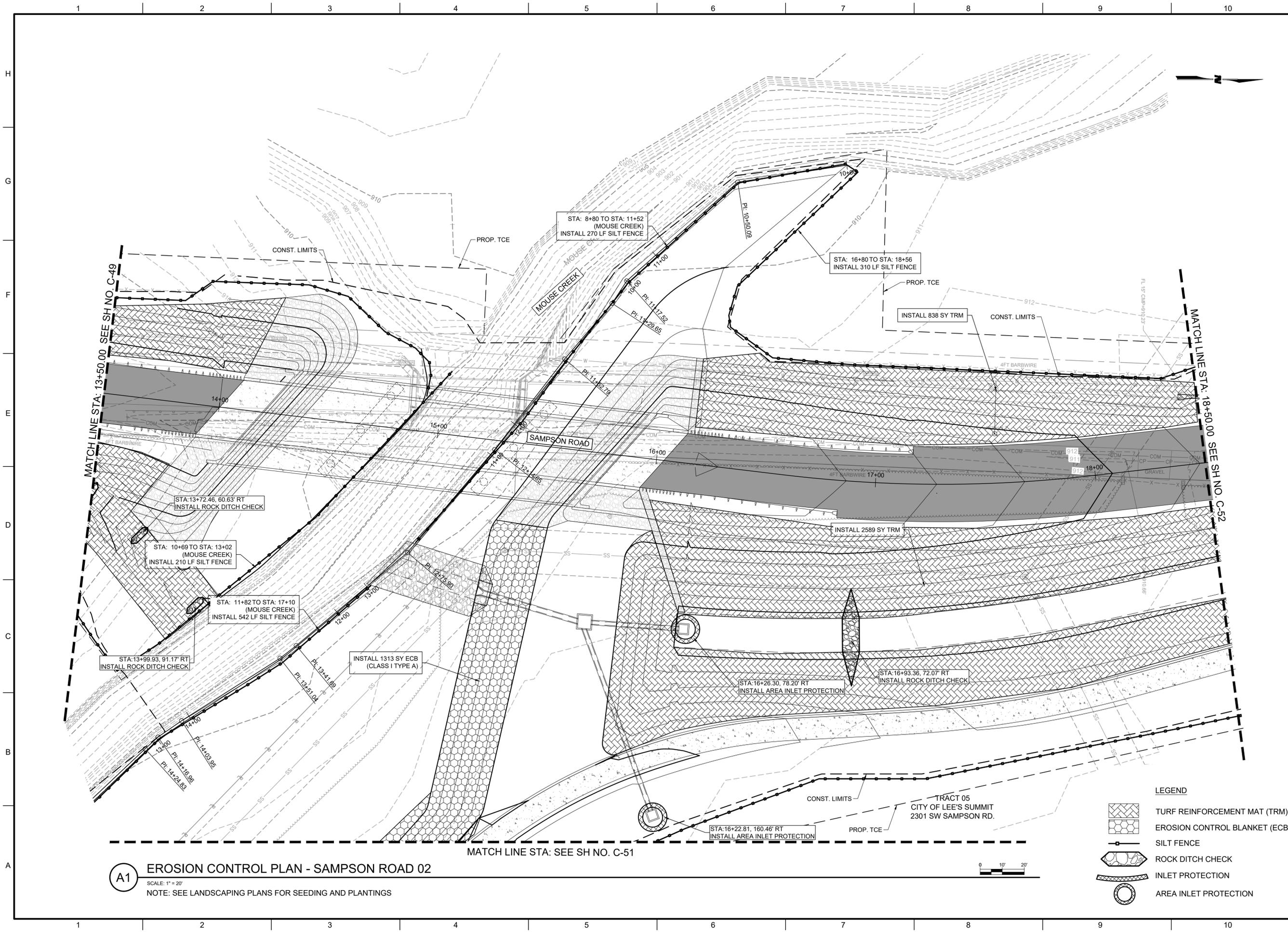
PROJECT NAME  
**CITY OF LEE'S SUMMIT, MO  
 SAMPSON ROAD BRIDGE  
 REPLACEMENT AND STORM  
 WATER IMPROVEMENTS  
 PROJECT NO. 997**

REV.	DATE	DESCRIPTION	BY

PROJECT NO: 23-600-303-00  
 DESIGNED BY: AJM  
 DRAWN BY: AJM  
 CHECKED BY: CDP  
 DATE: 9/20/2024

SHEET TITLE  
**EROSION CONTROL PLANS**

SHEET NO:  
**C-49**



**A1** EROSION CONTROL PLAN - SAMPSON ROAD 02  
 SCALE: 1" = 20'  
 NOTE: SEE LANDSCAPING PLANS FOR SEEDING AND PLANTINGS

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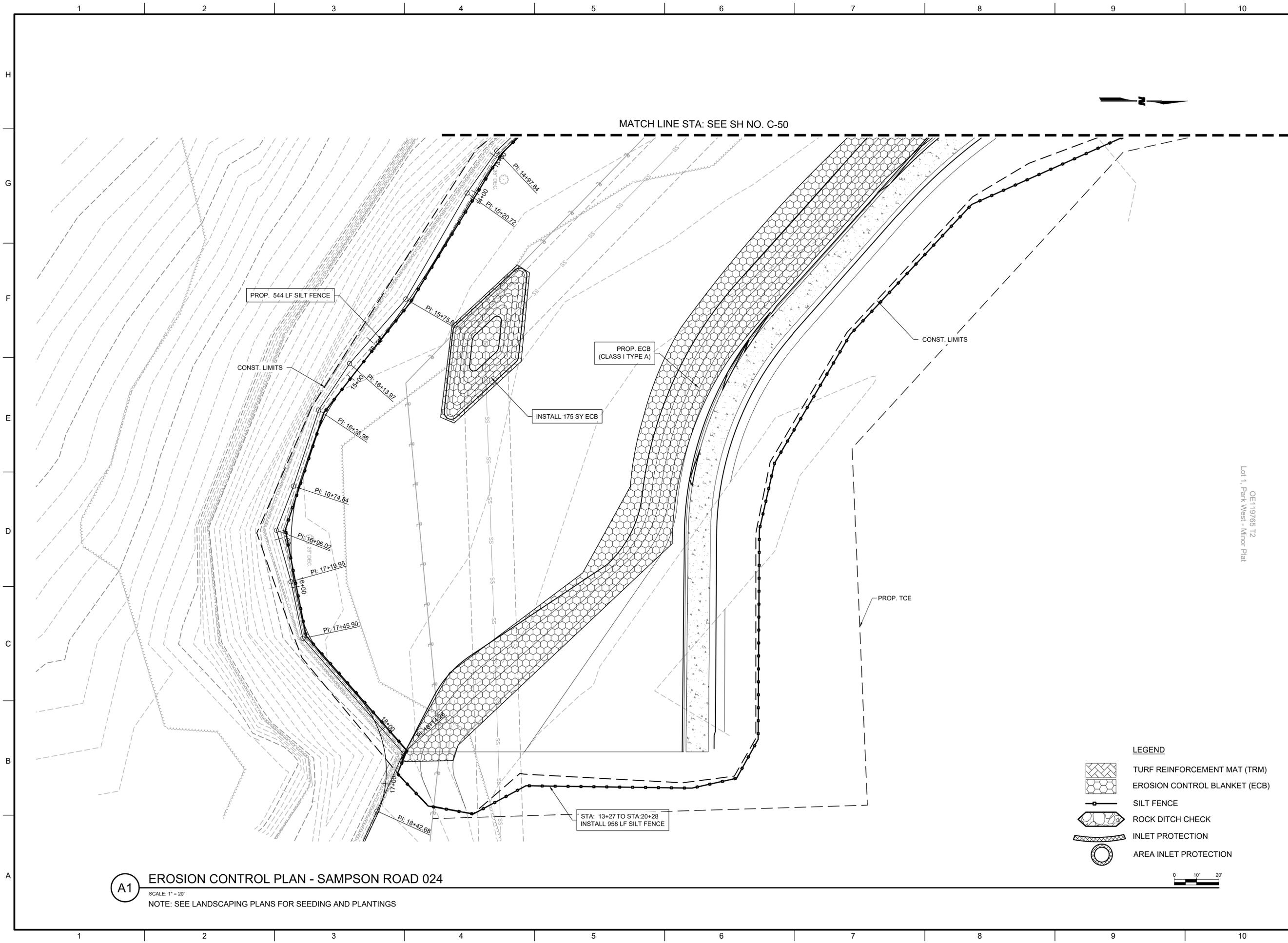
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**CITY OF LEE'S SUMMIT, MO  
 SAMPSON ROAD BRIDGE  
 REPLACEMENT AND STORM  
 WATER IMPROVEMENTS  
 PROJECT NO. 997**

REV.	DATE	DESCRIPTION	BY

PROJECT NO: 23-600-303-00  
 DESIGNED BY: AJM  
 DRAWN BY: AJM  
 CHECKED BY: CDP  
 DATE: 9/20/2024

SHEET TITLE  
**EROSION CONTROL PLANS**

SHEET NO:  
**C-50**



MATCH LINE STA: SEE SH NO. C-50

PROP. 544 LF SILT FENCE

PROP. ECB (CLASS I TYPE A)

INSTALL 175 SY ECB

STA: 13+27 TO STA:20+28  
INSTALL 958 LF SILT FENCE

- LEGEND**
- TURF REINFORCEMENT MAT (TRM)
  - EROSION CONTROL BLANKET (ECB)
  - SILT FENCE
  - ROCK DITCH CHECK
  - INLET PROTECTION
  - AREA INLET PROTECTION



**A1** EROSION CONTROL PLAN - SAMPSON ROAD 024  
SCALE: 1" = 20'  
NOTE: SEE LANDSCAPING PLANS FOR SEEDING AND PLANTINGS

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SAMPSON ROAD BRIDGE  
REPLACEMENT AND STORM  
WATER IMPROVEMENTS  
PROJECT NO. 997**

REV.	DATE	DESCRIPTION	BY

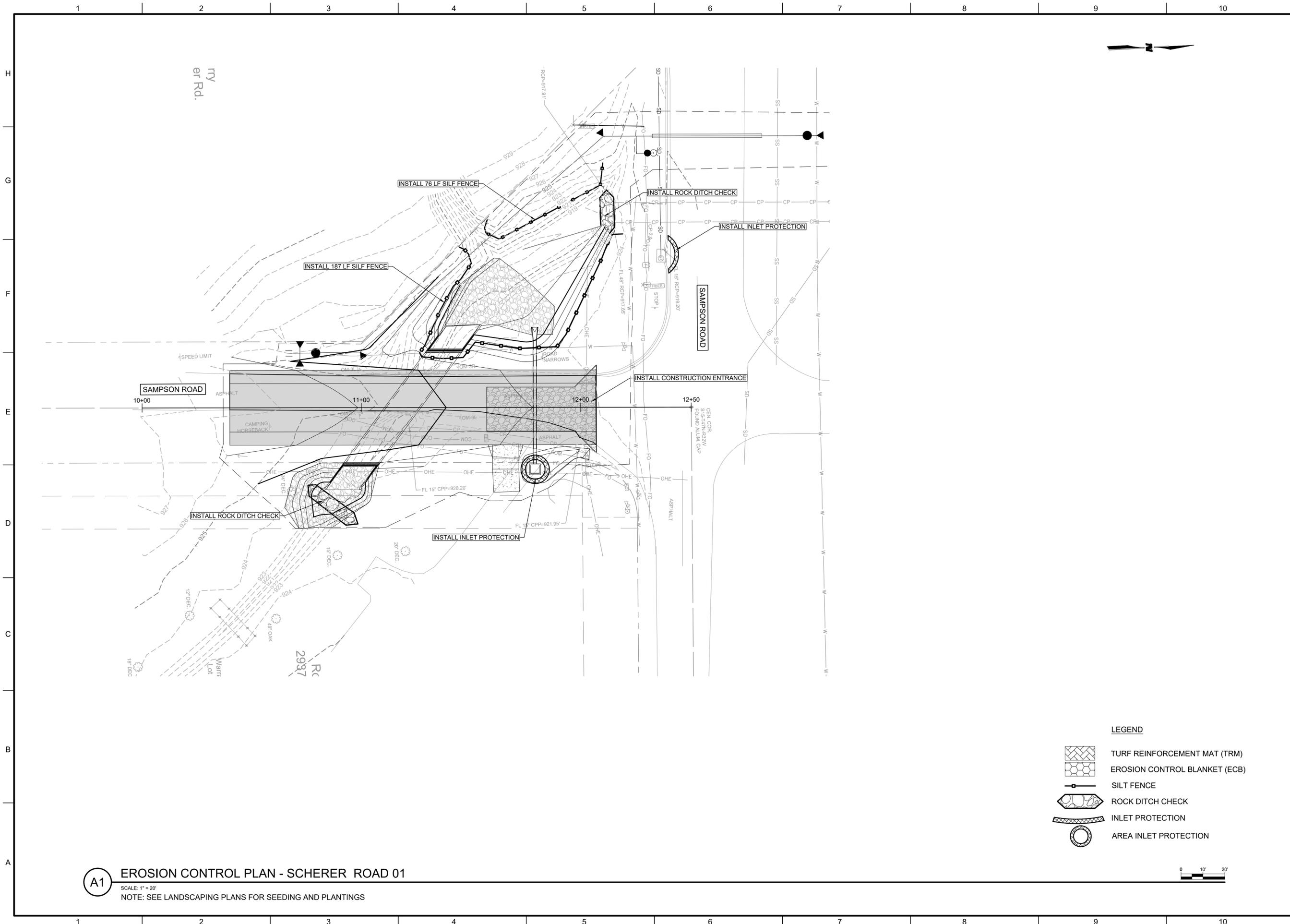
PROJECT NO: 23-600-303-00  
DESIGNED BY: AJM  
DRAWN BY: AJM  
CHECKED BY: CDP  
DATE: 9/20/2024

SHEET TITLE  
**EROSION CONTROL PLANS**

SHEET NO:  
**C-51**

OE119765 T2  
Lot 1, Park West - Minor Plat





**A1** EROSION CONTROL PLAN - SCHERER ROAD 01  
 SCALE: 1" = 20'  
 NOTE: SEE LANDSCAPING PLANS FOR SEEDING AND PLANTINGS

- LEGEND**
-  TURF REINFORCEMENT MAT (TRM)
  -  EROSION CONTROL BLANKET (ECB)
  -  SILT FENCE
  -  ROCK DITCH CHECK
  -  INLET PROTECTION
  -  AREA INLET PROTECTION



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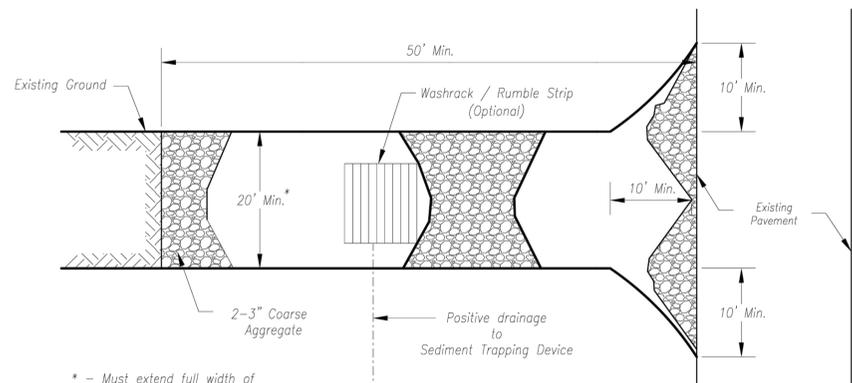
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**CITY OF LEE'S SUMMIT, MO  
 SAMPSON ROAD BRIDGE  
 REPLACEMENT AND STORM  
 WATER IMPROVEMENTS  
 PROJECT NO. 997**

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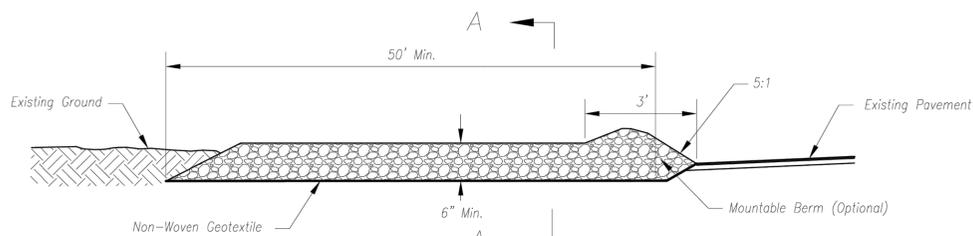
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SHEET TITLE  
**EROSION CONTROL PLANS**

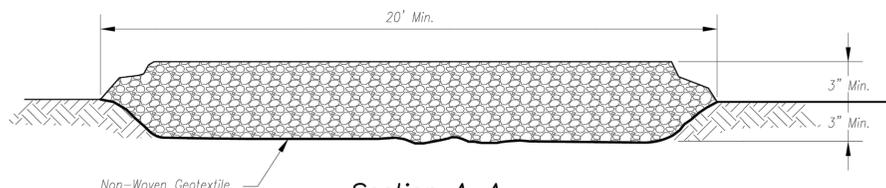
SHEET NO:  
**C-53**



**Plan View**  
Not to Scale



**Side Elevation**  
Not to Scale



**Section A-A**  
Not to Scale

**Notes for Construction Entrance:**

1. Avoid locating on steep slopes, at curves on public roads, or downhill of disturbed area.
2. Remove all vegetation and other unsuitable material from the foundation area, grade, and crown for positive drainage.
3. If slope towards the public road exceeds 2%, construct a 6- to 8-inch high ridge with 3H:1V side slopes across the foundation approximately 15 feet from the edge of the public road to divert runoff from it.
4. Install pipe under the entrance if needed to maintain drainage ditches along public roads.
5. Place stone to dimensions and grade as shown on plans. Leave surface sloped for drainage.
6. Divert all surface runoff and drainage from the entrance to a sediment control device.
7. If conditions warrant, place geotextile fabric on the graded foundation to improve stability.

**Maintenance for Construction Entrance:**

1. Reshape entrance as needed to maintain function and integrity of installation. Top dress with clean aggregate as needed.

**CONSTRUCTION ENTRANCE**

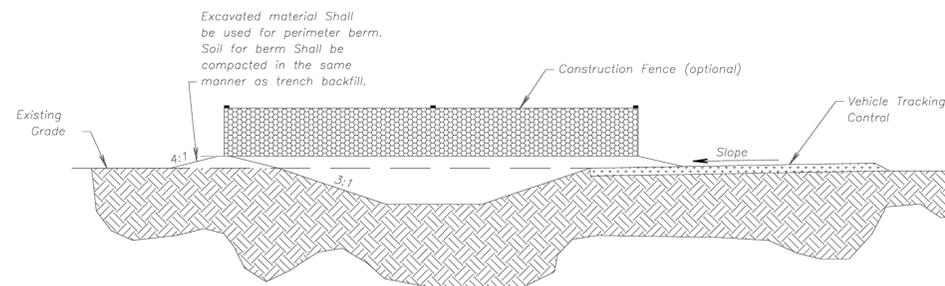
Construction Entrance modified from 2015 Overland Park Standard Details for Erosion and Sediment Control; Concrete Washout modified from 2009 City of Great Bend Standard Drawings.

**Notes for Concrete Washout:**

1. Concrete washout areas shall be installed prior to any concrete placement on site.
2. Concrete washout area shall include a flat subsurface pit sized relative to the amount of concrete to be placed on site. The slopes leading out of the subsurface pit shall be 3:1. The vehicle tracking pad shall be sloped towards the concrete washout area.
3. Vehicle tracking control is required at the access point to all concrete washout areas.
4. Signs shall be placed at the construction site entrance, washout area and elsewhere as necessary to clearly indicate the location(s) of the concrete washout area(s) to operators of concrete truck and pump rigs.
5. A one-piece impervious liner may be required along the bottom and sides of the subsurface pit in sandy or gravelly soils.

**Maintenance for Concrete Washout:**

1. Concrete washout materials shall be removed once the materials have filled the washout to approximately 75% full.
2. Concrete washout areas shall be enlarged as necessary to maintain capacity for wasted concrete.
3. Concrete washout water, wasted pieces of concrete and all other debris in the subsurface pit shall be transported from the job site in a water-tight container and disposed of properly.
4. Concrete washout areas shall remain in place until all concrete for the project is placed.
5. When concrete washout areas are removed, excavations shall be filled with suitable compacted backfill and topsoil, any disturbed areas associated with the installation, maintenance, and/or removal of the concrete washout areas shall be stabilized.



**CONCRETE WASHOUT**

**AMERICAN PUBLIC WORKS ASSOCIATION**



KANSAS CITY  
METRO CHAPTER

CONSTRUCTION ENTRANCE  
AND CONCRETE WASHOUT

STANDARD DRAWING  
NUMBER ESC-01  
ADOPTED:  
10/24/2016

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SAMPSON ROAD BRIDGE  
REPLACEMENT AND STORM  
WATER IMPROVEMENTS  
PROJECT NO. 997**

PROJECT NAME

REV.	DATE	DESCRIPTION	BY

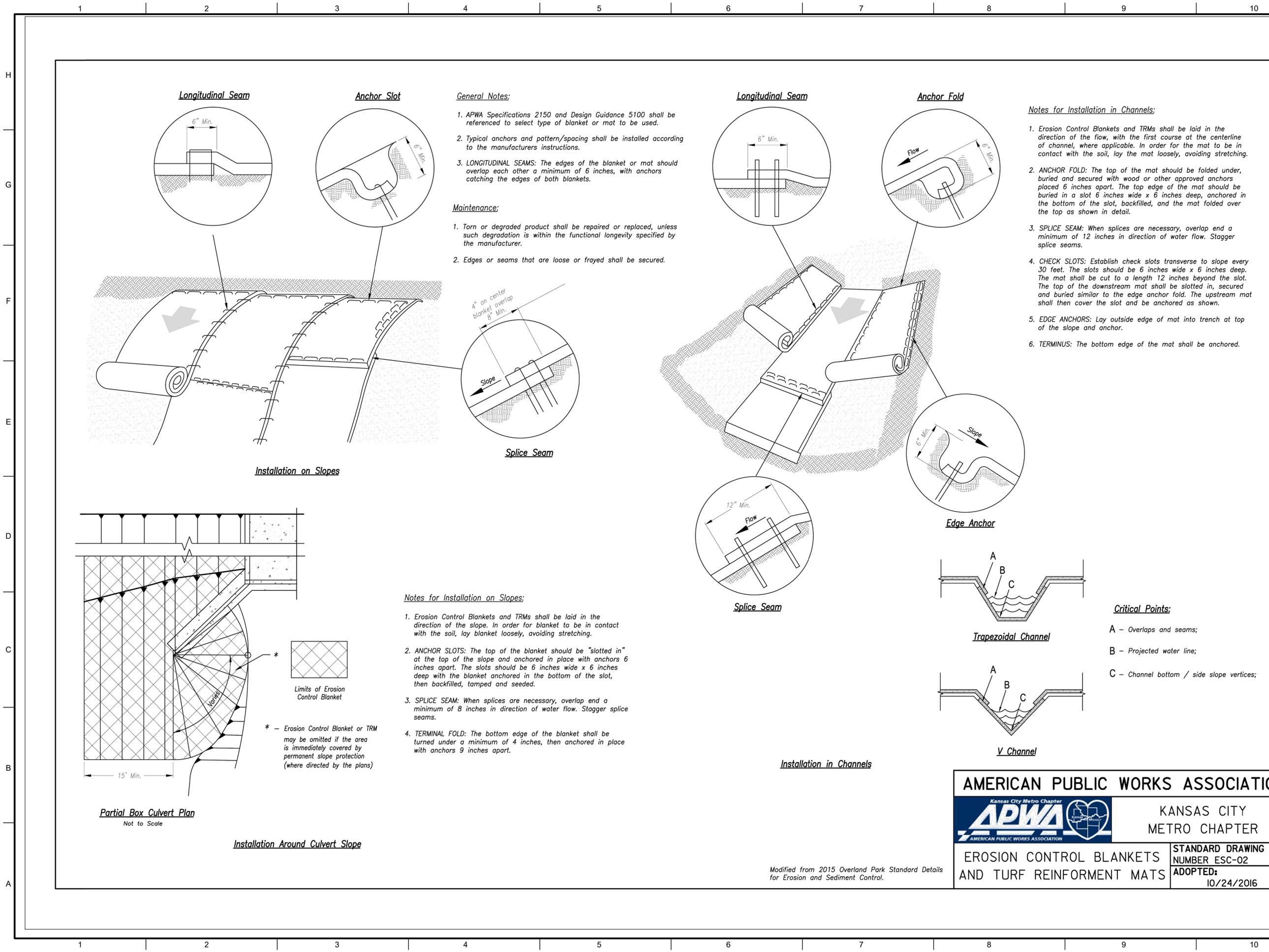
PROJECT NO: 23-600-303-00  
DESIGNED BY: TAW  
DRAWN BY: TAW  
CHECKED BY: CDP  
DATE: 9/20/2024

SHEET TITLE

**EROSION  
CONTROL  
DETAILS**

SHEET NO:

**C-54**



**General Notes:**

1. APWA Specifications 2150 and Design Guidance 5100 shall be referenced to select type of blanket or mat to be used.
2. Typical anchors and pattern/spacing shall be installed according to the manufacturers instructions.
3. LONGITUDINAL SEAMS: The edges of the blanket or mat should overlap each other a minimum of 6 inches, with anchors catching the edges of both blankets.

**Maintenance:**

1. Torn or degraded product shall be repaired or replaced, unless such degradation is within the functional longevity specified by the manufacturer.
2. Edges or seams that are loose or frayed shall be secured.

**Notes for Installation in Channels:**

1. Erosion Control Blankets and TRMs shall be laid in the direction of the flow, with the first course at the centerline of channel, where applicable. In order for the mat to be in contact with the soil, lay the mat loosely, avoiding stretching.
2. ANCHOR FOLD: The top of the mat should be folded under, buried and secured with wood or other approved anchors placed 6 inches apart. The top edge of the mat should be buried in a slot 6 inches wide x 6 inches deep, anchored in the bottom of the slot, backfilled, and the mat folded over the top as shown in detail.
3. SPLICE SEAM: When splices are necessary, overlap end a minimum of 12 inches in direction of water flow. Stagger splice seams.
4. CHECK SLOTS: Establish check slots transverse to slope every 30 feet. The slots should be 6 inches wide x 6 inches deep. The mat shall be cut to a length 12 inches beyond the slot. The top of the downstream mat shall be slotted in, secured and buried similar to the edge anchor fold. The upstream mat shall then cover the slot and be anchored as shown.
5. EDGE ANCHORS: Lay outside edge of mat into trench at top of the slope and anchor.
6. TERMINUS: The bottom edge of the mat shall be anchored.

**Notes for Installation on Slopes:**

1. Erosion Control Blankets and TRMs shall be laid in the direction of the slope. In order for blanket to be in contact with the soil, lay blanket loosely, avoiding stretching.
2. ANCHOR SLOTS: The top of the blanket should be "slotted in" at the top of the slope and anchored in place with anchors 6 inches apart. The slots should be 6 inches wide x 6 inches deep with the blanket anchored in the bottom of the slot, then backfilled, tamped and seeded.
3. SPLICE SEAM: When splices are necessary, overlap end a minimum of 8 inches in direction of water flow. Stagger splice seams.
4. TERMINAL FOLD: The bottom edge of the blanket shall be turned under a minimum of 4 inches, then anchored in place with anchors 9 inches apart.



Limits of Erosion Control Blanket

\* - Erosion Control Blanket or TRM may be omitted if the area is immediately covered by permanent slope protection (where directed by the plans)

**AMERICAN PUBLIC WORKS ASSOCIATION**



KANSAS CITY METRO CHAPTER

EROSION CONTROL BLANKETS AND TURF REINFORCEMENT MATS  
STANDARD DRAWING NUMBER ESC-02  
ADOPTED: 10/24/2016

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

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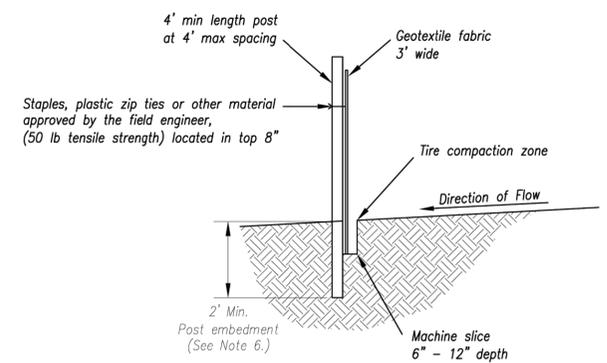
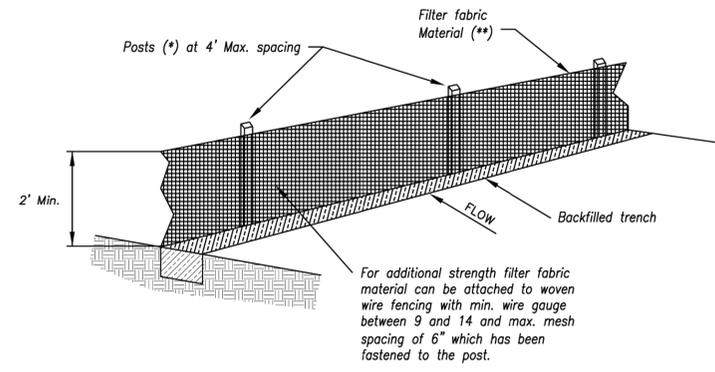
PROJECT NAME  
CITY OF LEE'S SUMMIT, MO  
SAMPSON ROAD BRIDGE  
REPLACEMENT AND STORM  
WATER IMPROVEMENTS  
PROJECT NO. 997

REV.	DATE	DESCRIPTION	BY

PROJECT NO: 23-600-303-00  
DESIGNED BY: TAW  
DRAWN BY: TAW  
CHECKED BY: CDP  
DATE: 9/20/2024

SHEET TITLE  
**EROSION CONTROL DETAILS**

SHEET NO:  
**C-55**



- (\*) POSTS**
- MIN. LENGTH 4'
  - HARDWOOD 1 3/16" x 1 3/16"
  - NO.2 SOUTHERN PINE 2 5/8" x 2 5/8"
  - STEEL 1.33 LB/FT

**(\*\*)** - Geotextile Fabric shall meet the requirements of AASHTO M288

**SILT FENCE DETAILS**  
Not to Scale

- Notes:**
1. In order to contain water, the ends of the silt fence must be turned uphill (Figure A).
  2. Long perimeter runs of silt fence must be limited to 100'. Runs should be broken up into several smaller segments to minimize water concentrations (Figure A).
  3. Long slopes should be broken up with intermediate rows of silt fence to slow runoff velocities.
  4. Attach fabric to upstream side of post.
  5. Install posts a minimum of 2' into the ground.
  6. Trenching will only be allowed for small or difficult installation, where slicing machine cannot be reasonably used.

- Maintenance:**
1. Remove and dispose of sediment deposits when the deposit approaches 1/2 the height of silt fence.
  2. Repair as necessary to maintain function and structure.

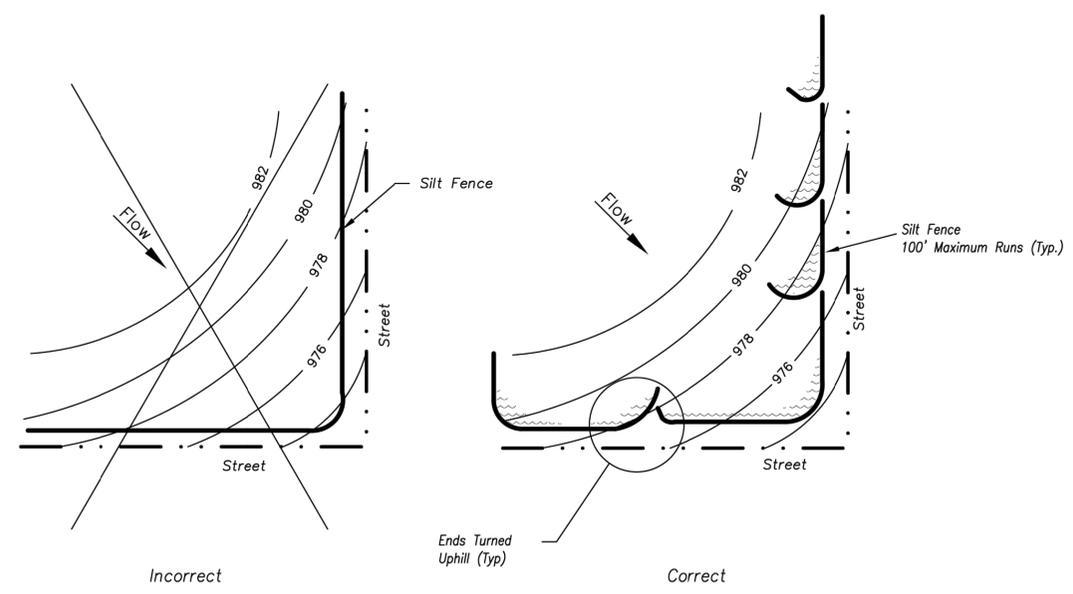
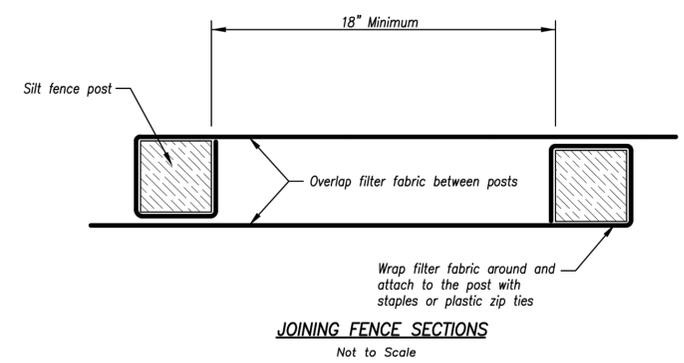
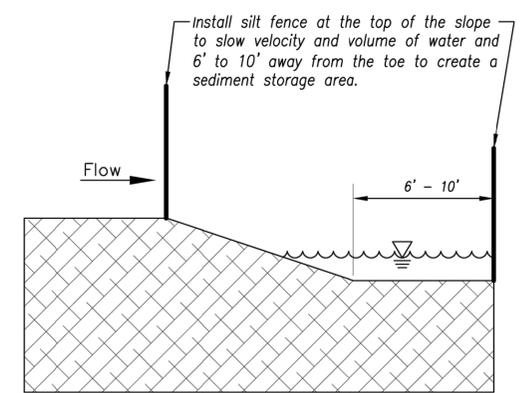


Figure A

**SILT FENCE LAYOUT**  
Not to Scale



**AMERICAN PUBLIC WORKS ASSOCIATION**  
Kansas City Metro Chapter

**KANSAS CITY METRO CHAPTER**

**SILT FENCE**

STANDARD DRAWING NUMBER ESC-03 ADOPTED: 10/24/2016

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

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PROJECT NAME  
**CITY OF LEE'S SUMMIT, MO  
SAMPSON ROAD BRIDGE  
REPLACEMENT AND STORM  
WATER IMPROVEMENTS  
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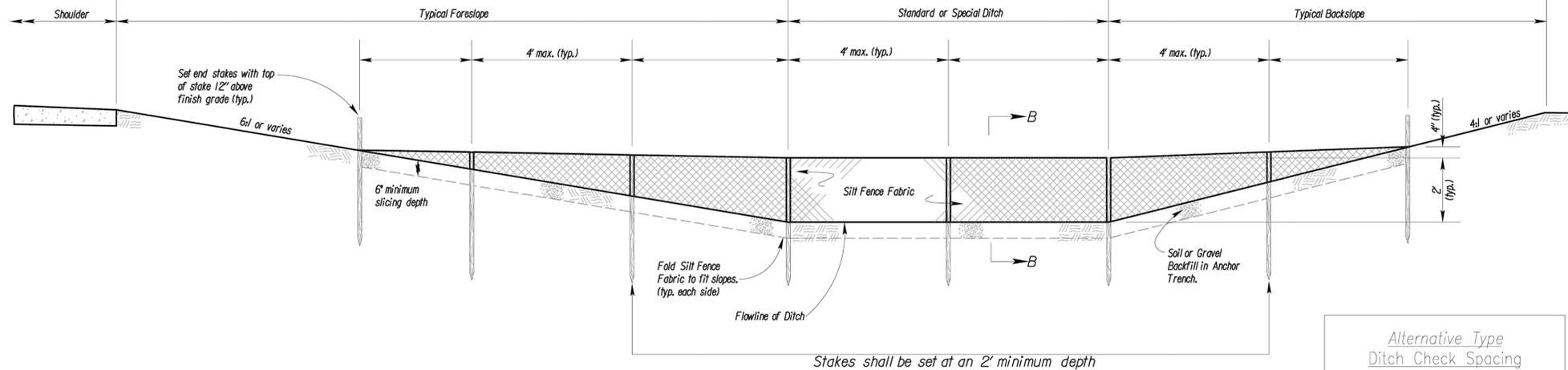
PROJECT NO: 23-600-303-00  
DESIGNED BY: TAW  
DRAWN BY: TAW  
CHECKED BY: CDP  
DATE: 9/20/2024

SHEET TITLE  
**EROSION CONTROL DETAILS**

SHEET NO:  
**C-56**

**Notes for Silt Fence Ditch Check:**

- Stakes shall be 4' (min.) long and one of the following materials:
  - Hardwood - 1 3/8" x 1 3/8";
  - Southern Pine (No. 2) - 2 5/8" x 2 5/8";
  - Steel U, T, L, or C Section - .95 lbs. per 1'-0";
  - Synthetic - same strength as wood stakes.
- Cross pieces shall be of same material as stakes.
- Attach fence fabric securely on 6" centers (max).
- Use of high flow material is acceptable.
- Refer to plan sheets to estimate the length of silt fence required.
- Use support fencing when tributary area is greater than 2.4 acres or when ditch gradient is greater than 2 percent.
- Silt fence sliced in to a 6" minimum depth.
- Elevation at tie in points shall be a minimum of 4" higher than the center.

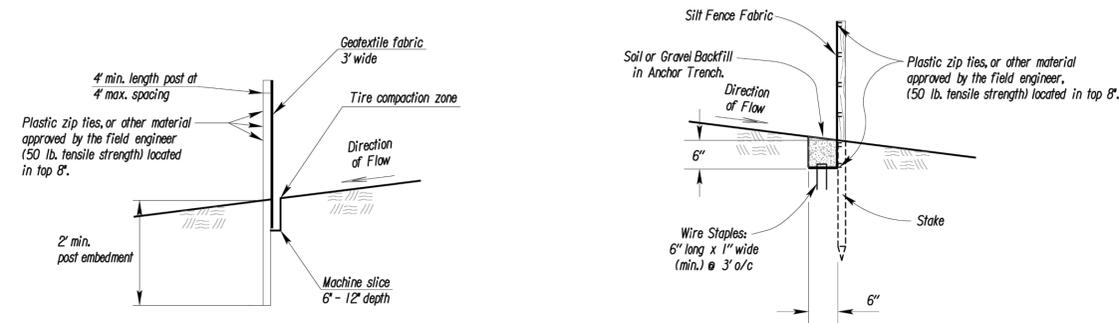


**TYPICAL ELEVATION**

*Alternative Type Ditch Check Spacing*

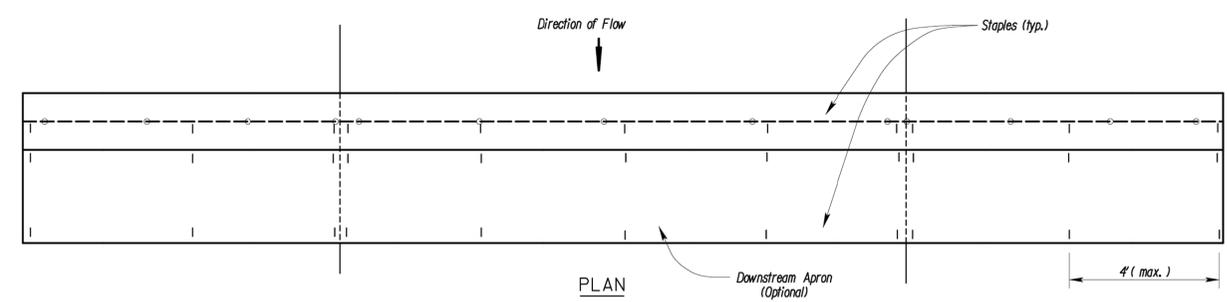
Ditch Centerline Slope (%)	Spacing Interval (Feet)
1.0	200
2.0	100
3.0	65
4.0	50
5.0	40
6.0	33

Note: Use this spacing for all except Rock Ditch Checks.



**SECTION B-B**

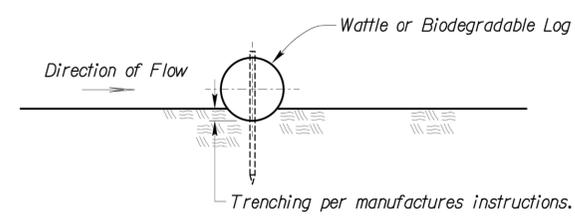
**SILT FENCE DITCH CHECK**  
NO SCALE



**PLAN**

**Notes for Wattles and Biodegradable Log Ditch Check:**

- Use as many biodegradable log sections as necessary to ensure water does not flow around end of ditch check.
- Overlap sections a minimum of 18"
- Stakes shall be per manufacturer's instructions. Length of stakes shall be a minimum of 2 times the diameter of the log or 24" minimum.
- Use Erosion Control (Class 1) (Type C) as the downstream apron when directed by the Engineer.
- Use 9" diameter logs when used with Erosion Control (Class 2) (Any Type) channel lining. Smaller diameter logs may be used with Erosion Control (Class 2) (Any Type) channel lining as directed by the Engineer.



**SECTION B - B**

**WATTLES OR BIODEGRADABLE LOG DITCH CHECKS**

OR Filter Sock Ditch Check  
NO SCALE  
Modified from Kansas Department of Transportation Standard Details for Erosion Control and Sediment Control.

**AMERICAN PUBLIC WORKS ASSOCIATION**  
Kansas City Metro Chapter  
**APWA**  
AMERICAN PUBLIC WORKS ASSOCIATION

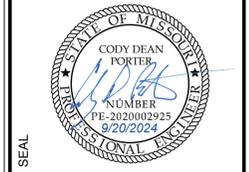
**KANSAS CITY METRO CHAPTER**

**SILT FENCE AND WATTLE/ BIODEGRADABLE LOG DITCH CHECKS**

**STANDARD DRAWING NUMBER ESC-09 ADOPTED: 10/24/2016**

**WILSON & COMPANY**  
800 EAST 101ST TERRACE, SUITE 200  
KANSAS CITY, MO 64131  
PHONE: 816-701-3100  
FAX: 816-942-3013  
www.wilsonco.com

CONSULTANTS



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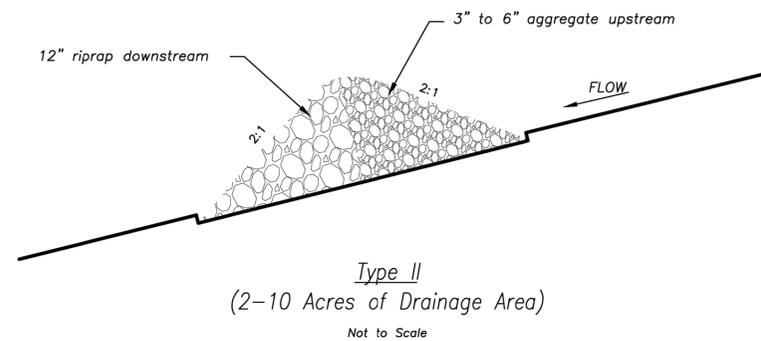
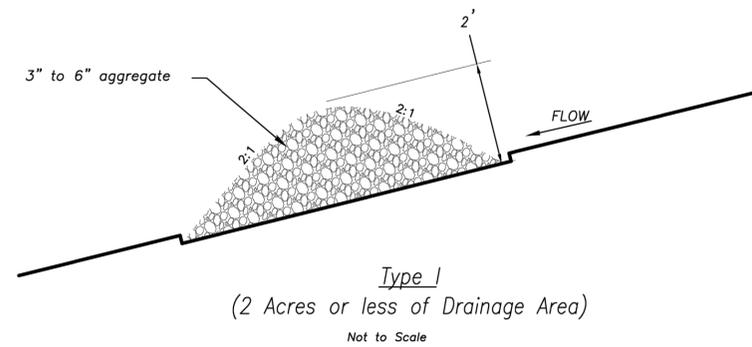
**CITY OF LEE'S SUMMIT, MO**  
**SAMPSON ROAD BRIDGE REPLACEMENT AND STORM WATER IMPROVEMENTS**  
**PROJECT NO. 997**

REV.	DATE	DESCRIPTION	BY

PROJECT NO: 23-600-303-00  
DESIGNED BY: TAW  
DRAWN BY: TAW  
CHECKED BY: CDP  
DATE: 9/20/2024

SHEET TITLE  
**EROSION CONTROL DETAILS**

SHEET NO:  
**C-57**

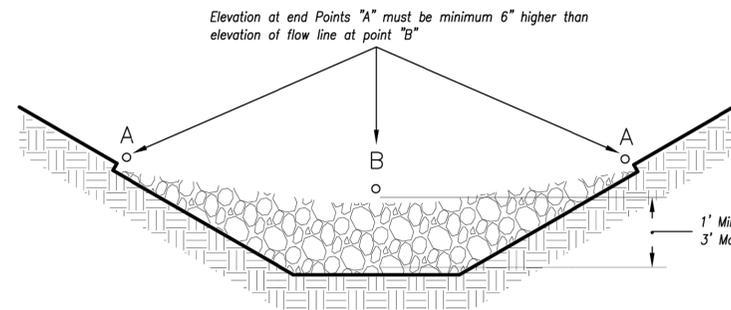


**ROCK DITCH CHECK**

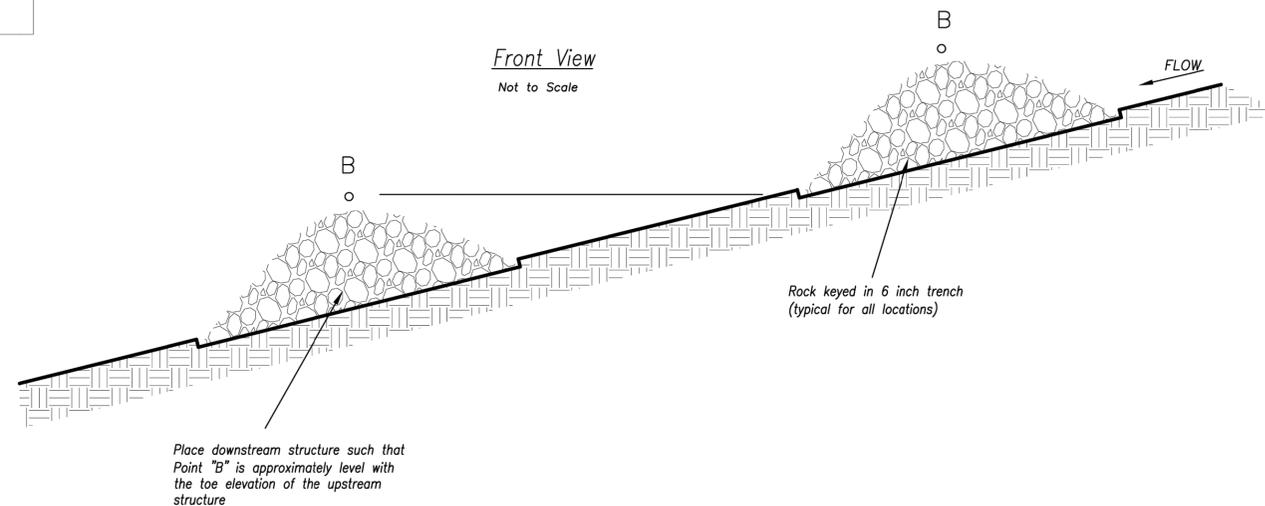
**Temporary Rock Ditch Check Spacing**

Ditch Centerline Slope (%)	Spacing Interval (Feet)
5.0	60
6.0	50
7.0	43
8.0	36
9.0	33
10.0	29

Note: Use this spacing only for Rock Ditch Checks.



**Front View**  
Not to Scale



**Spacing Between Check Dams (all types)**  
Not to Scale

**Notes:**

1. Rock check dams shall be used only for drainage areas less than 10 acres unless approved by the City Engineer.
2. Use rock checks only in situations where the ditch slope exceeds 6%.

**Maintenance:**

1. Remove and dispose of sediment deposits when the deposit approaches 1/2 the height of the ditch check.
2. Replace and reshape as necessary to maintain function and integrity of installation.

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

**AMERICAN PUBLIC WORKS ASSOCIATION**  
Kansas City Metro Chapter



**KANSAS CITY METRO CHAPTER**

**ROCK DITCH CHECKS**

**STANDARD DRAWING NUMBER ESC-10 ADOPTED: 10/24/2016**

**WILSON & COMPANY**  
800 EAST 101ST TERRACE, SUITE 200  
KANSAS CITY, MO 64131  
PHONE: 816-701-3100  
FAX: 816-942-3013  
www.wilsonco.com

CONSULTANTS



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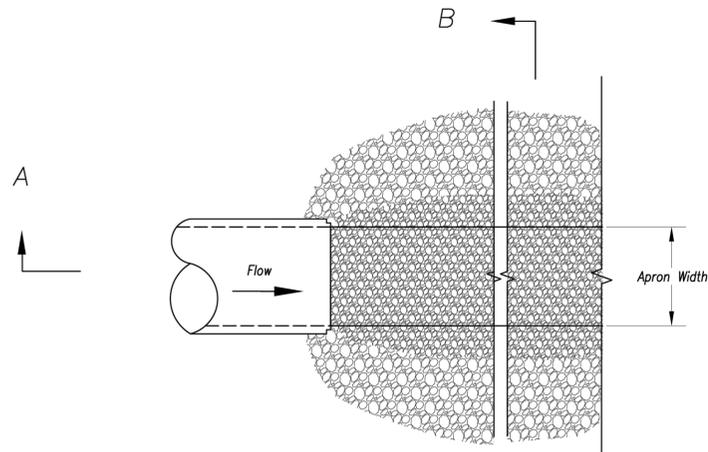
**CITY OF LEE'S SUMMIT, MO  
SAMPSON ROAD BRIDGE  
REPLACEMENT AND STORM  
WATER IMPROVEMENTS  
PROJECT NO. 997**

PROJECT NAME	BY
CITY OF LEE'S SUMMIT, MO SAMPSON ROAD BRIDGE REPLACEMENT AND STORM WATER IMPROVEMENTS PROJECT NO. 997	
DESCRIPTION	DATE
REV.	DATE

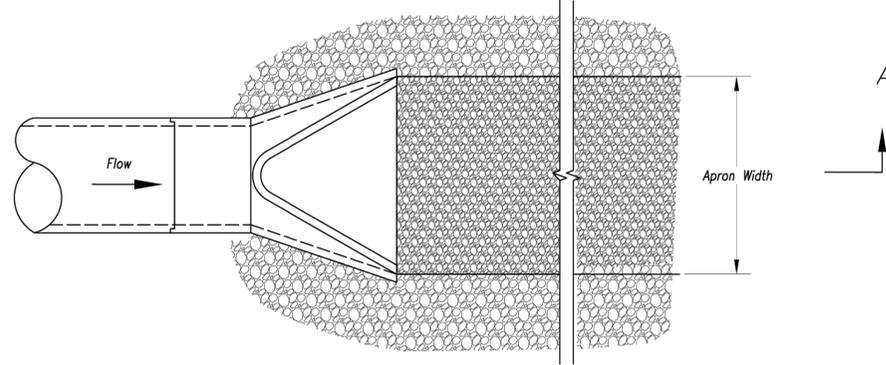
PROJECT NO:	23-600-303-00
DESIGNED BY:	TAW
DRAWN BY:	TAW
CHECKED BY:	CDP
DATE:	9/20/2024

SHEET TITLE  
**EROSION CONTROL DETAILS**

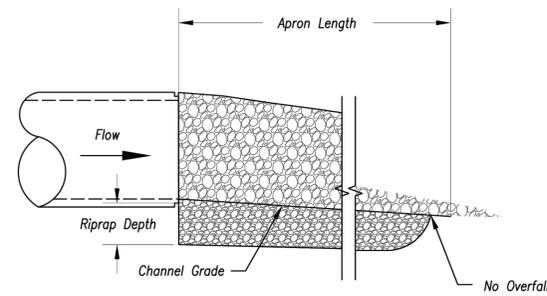
SHEET NO:  
**C-58**



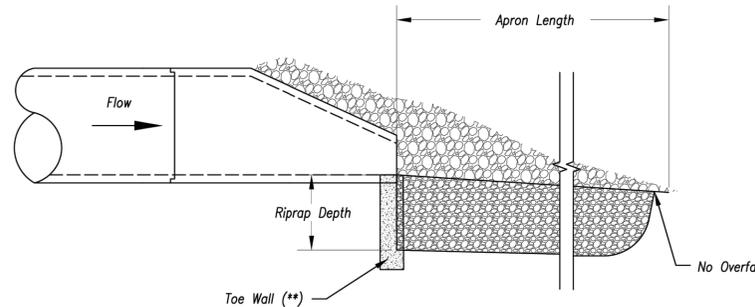
Plan View  
Not to Scale



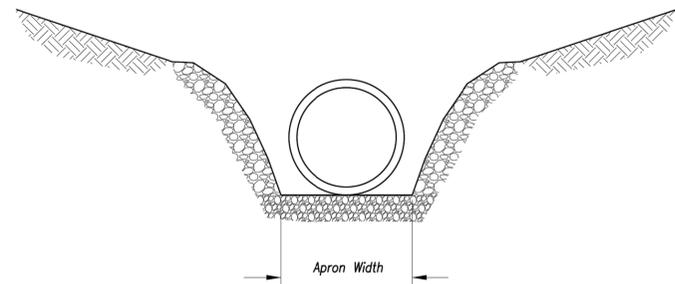
Plan View  
Not to Scale



Section A-A  
Not to Scale



Section A-A  
Not to Scale



Section B-B  
Not to Scale

OUTLET PROTECTION W/O END SECTION

OUTLET PROTECTION WITH END SECTION

Notes:

1. Rock all sides steeper than 3:1.
2. Stabilize all disturbed areas downstream of outlet to the limits of disturbance.
3. Alternative outlet protection and slope stabilization measures may be used with approval by the Engineer.
4. Install riprap apron so that it is no higher than flowline of pipe.
5. Reference APWA Specification 2650 for rock type, size, and placement.

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

AMERICAN PUBLIC WORKS ASSOCIATION



KANSAS CITY  
METRO CHAPTER

OUTLET PROTECTION

STANDARD DRAWING  
NUMBER ESC-14  
ADOPTED:  
10/24/2016

**WILSON & COMPANY**  
800 EAST 101ST TERRACE, SUITE 200  
KANSAS CITY, MO 64131  
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FAX: 816-942-3013  
www.wilsonco.com

CONSULTANTS



SEAL

PROJECT NAME  
CITY OF LEE'S SUMMIT, MO  
SAMPSON ROAD BRIDGE  
REPLACEMENT AND STORM  
WATER IMPROVEMENTS  
PROJECT NO. 997

REV.	DATE	DESCRIPTION	BY

PROJECT NO:	23-600-303-00
DESIGNED BY:	TAW
DRAWN BY:	TAW
CHECKED BY:	CDP
DATE:	9/20/2024

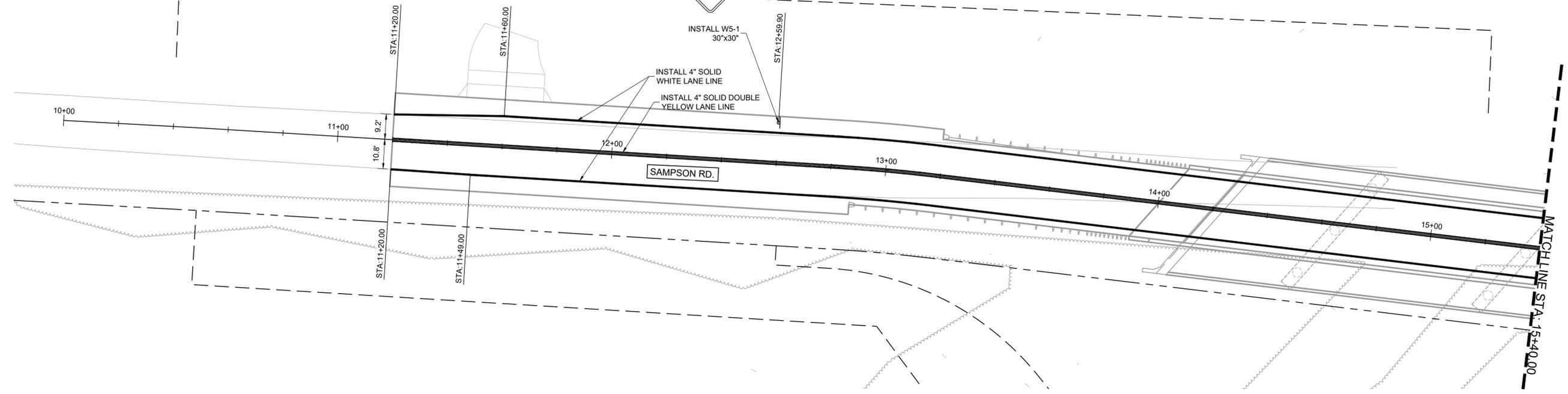
SHEET TITLE  
EROSION  
CONTROL  
DETAILS

SHEET NO:  
C-59

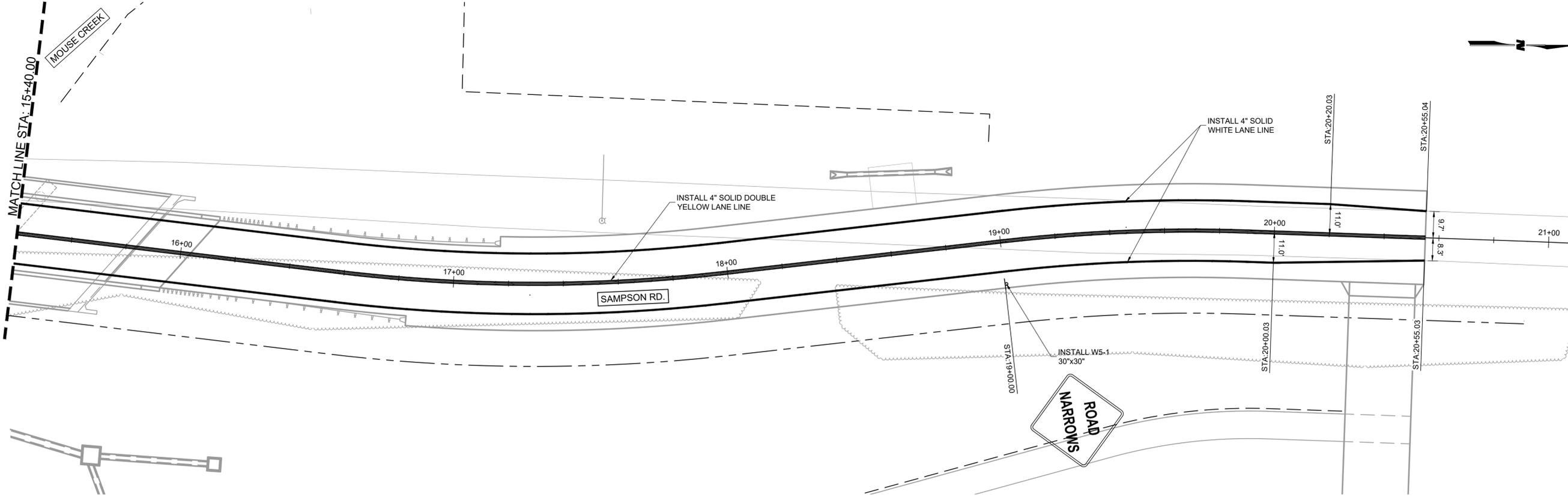
TOTAL AREA (PERMANENT SIGNS)				
QUANTITY	MUTCD SIGN NUMBER	SIZE (INCHES)	AREA (SQ. FT.)	TOTAL AREA EACH SIGN (SQ. FT.)
3	W5-1	30   30	6.25	18.75
TOTAL AREA ITEM NO.				18.75



INSTALL W5-1 30"x30"  
 INSTALL 4" SOLID WHITE LANE LINE  
 INSTALL 4" SOLID DOUBLE YELLOW LANE LINE



**A1** SAMPSON ROAD SIGN & STRIPING PLAN  
 SCALE: 1" = 20'



**A2** SAMPSON ROAD SIGN & STRIPING PLAN  
 SCALE: 1" = 20'

**WILSON & COMPANY**  
 800 EAST 101ST TERRACE, SUITE 200  
 KANSAS CITY, MO 64131  
 PHONE: 816-701-3100  
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PROJECT NAME  
**CITY OF LEE'S SUMMIT, MO  
 SAMPSON ROAD BRIDGE  
 REPLACEMENT AND STORM  
 WATER IMPROVEMENTS  
 PROJECT NO. 997**

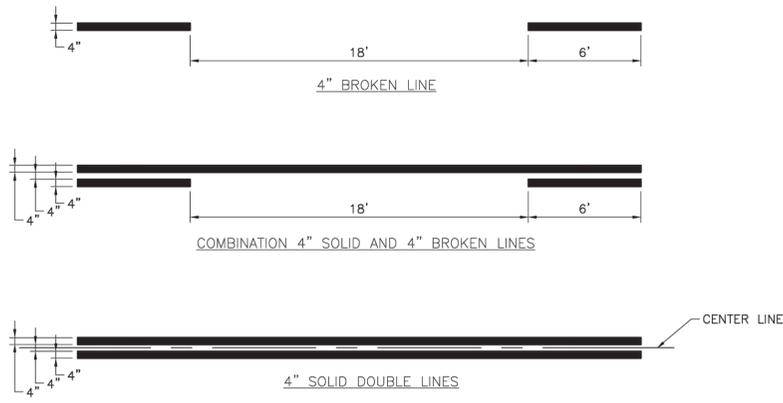
REV.	DATE	DESCRIPTION	BY

PROJECT NO: 23-600-303-00  
 DESIGNED BY: ARW  
 DRAWN BY: ARW  
 CHECKED BY: CDP  
 DATE: 9/20/2024

SHEET TITLE  
**PAVEMENT  
 MARKING &  
 SIGNING PLANS**

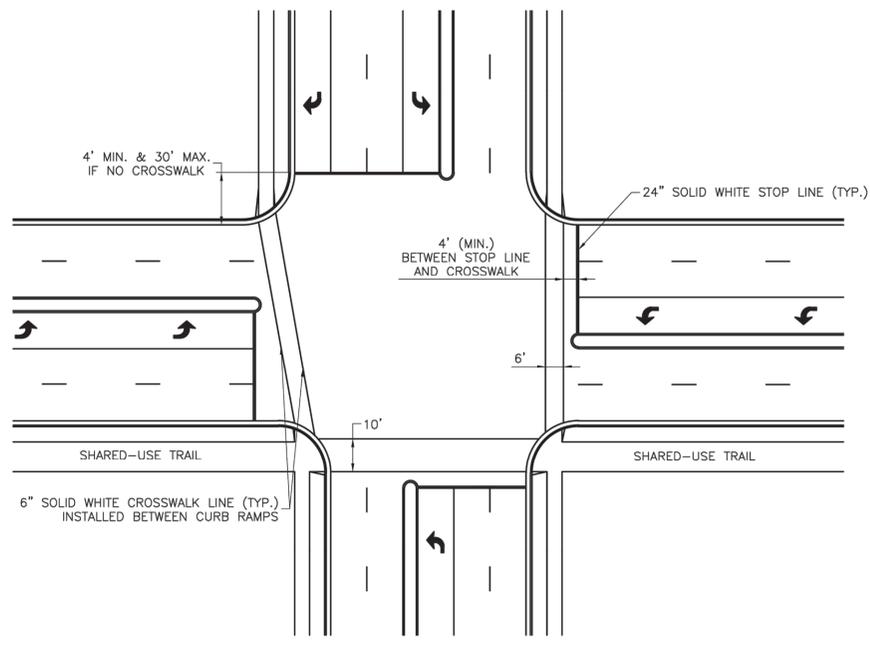
SHEET NO:  
**C-60**





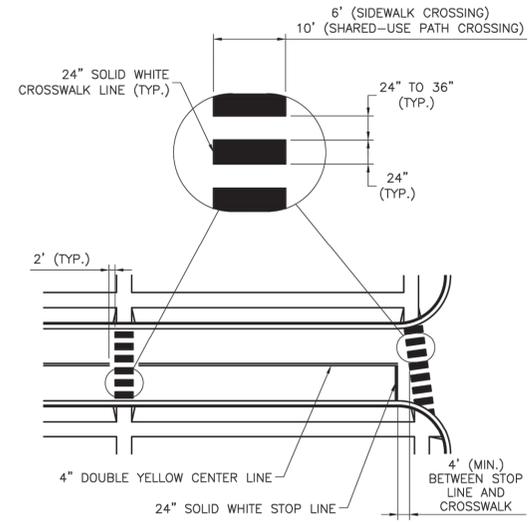
TYPICAL LINE DETAILS

- NOTES:
1. ALL EDGE LINE, CENTER LINE, AND LANE LINE PAVEMENT MARKINGS SHALL BE 4" WIDE UNLESS OTHERWISE NOTED.
  2. EDGE LINES SHALL BE CONTINUOUS SOLID WHITE OR YELLOW LINES. RIGHT SIDE EDGE LINES SHALL BE SOLID WHITE. MEDIAN OR LEFT SIDE EDGE LINES ON DIVIDED ROADWAYS ARE TO BE SOLID YELLOW. EDGE LINES AND CENTER LINES SHALL BE CONTINUOUS ACROSS DRIVEWAYS.

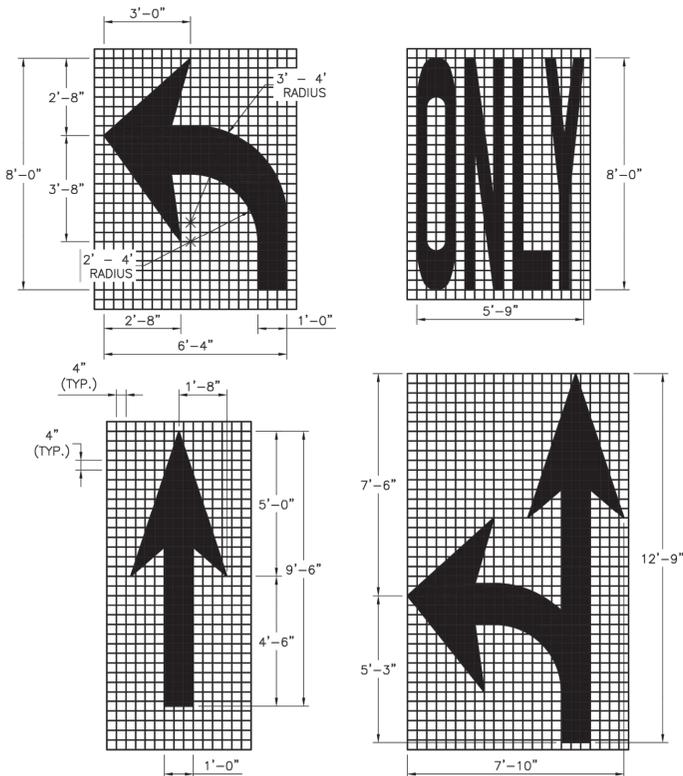


TYPICAL INTERSECTION MARKINGS

- NOTES:
1. TRANSVERSE CROSSWALK LINES SHALL BE INSTALLED SUCH THAT THE DISTANCE BETWEEN LINES IS AT LEAST 6 FEET OR 10 FEET.
  2. STOP LINES ARE REQUIRED AT SIGNALIZED INTERSECTIONS, ON MULTI-LANE STOP CONTROLLED APPROACHES, OR ADVANCE OF CROSSWALKS AT CONTROLLED INTERSECTIONS.

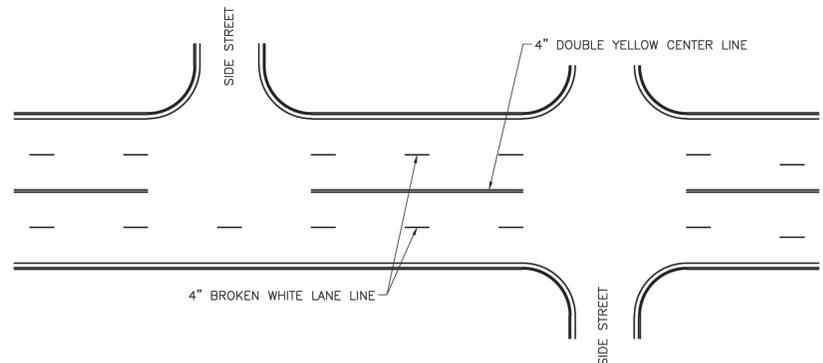


TYPICAL MID-BLOCK OR SCHOOL CROSS WALK



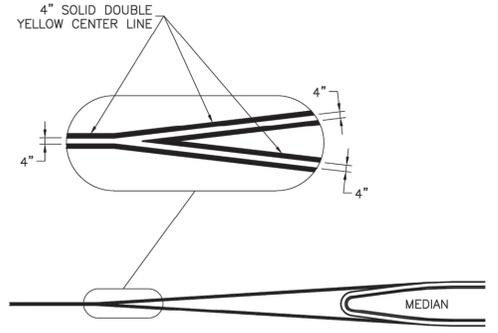
ARROW AND SYMBOL DETAILS

- NOTES:
1. ALL ARROW AND SYMBOL MARKINGS SHALL BE WHITE, AND SHALL BE CENTERED IN THEIR RESPECTIVE TRAFFIC LANES.
  2. RIGHT-TURN AND COMBINATION RIGHT-TURN/STRAIGHT ARROWS ARE REVERSE OF ARROWS SHOWN.



TYPICAL MARKINGS FOR FOUR-LANE UNDIVIDED ROADWAY

- PAVEMENT MARKING GENERAL NOTES:
1. ALL PAVEMENT MARKINGS SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
  2. ALL WORDS AND SYMBOLS SHALL CONFORM TO THE LATEST EDITION OF STANDARD ALPHABETS FOR HIGHWAY SIGNS AND PAVEMENT MARKINGS PRINTED BY THE U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION.
  3. PAVEMENT MARKINGS, EITHER TEMPORARY OR PERMANENT ARE REQUIRED AT ALL TIMES IF THE ROADWAY IS OPEN TO TRAFFIC.
  4. ALL PAVEMENT MARKINGS THAT CONFLICT WITH THE DESIRED MARKINGS SHALL BE COMPLETELY REMOVED. REMOVALS SHALL NOT LEAVE THE ROAD SURFACE SCARRED WITH AN IMAGE THAT MISLEADS TRAFFIC. ANY EXCESS DAMAGE OR SCARRING OF PAVEMENT SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
  5. THE PROPOSED PERMANENT MARKINGS SHALL BE LAID OUT BY THE CONTRACTOR IN ADVANCE OF THE MARKING INSTALLATION. MARKINGS SHALL NOT BE APPLIED UNTIL THE LAYOUT HAS BEEN APPROVED BY THE CITY TRAFFIC ENGINEER.
  6. CENTER LINES SHALL BE MARKED ON ALL UNDIVIDED ARTERIAL STREETS, AND ANY OTHER UNDIVIDED STREET WITH MORE THAN TWO LANES AND/OR A SPEED LIMIT OF 30 MPH OR MORE.
  7. EDGE LINES SHALL BE MARKED ON ALL NON-CURBED STREETS.



TYPICAL MEDIAN NOSE CENTER LINE DETAIL

**LEE'S SUMMIT**  
MISSOURI

PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

Project: **STANDARD DETAILS**  
CITY OF LEE'S SUMMIT, MO  
LEE'S SUMMIT, JACKSON COUNTY, MO  
Sheet Name: **ROADWAY MARKING DETAILS**

REV.	DATE	DESCRIPTION	BY

PROJECT NO: 23-600-303-00  
DESIGNED BY: ARW  
DRAWN BY: ARW  
CHECKED BY: CDP  
DATE: 9/20/2024

PM-1

SHEET TITLE  
**PAVEMENT MARKING & SIGNING DETAILS**

SHEET NO:  
C-62

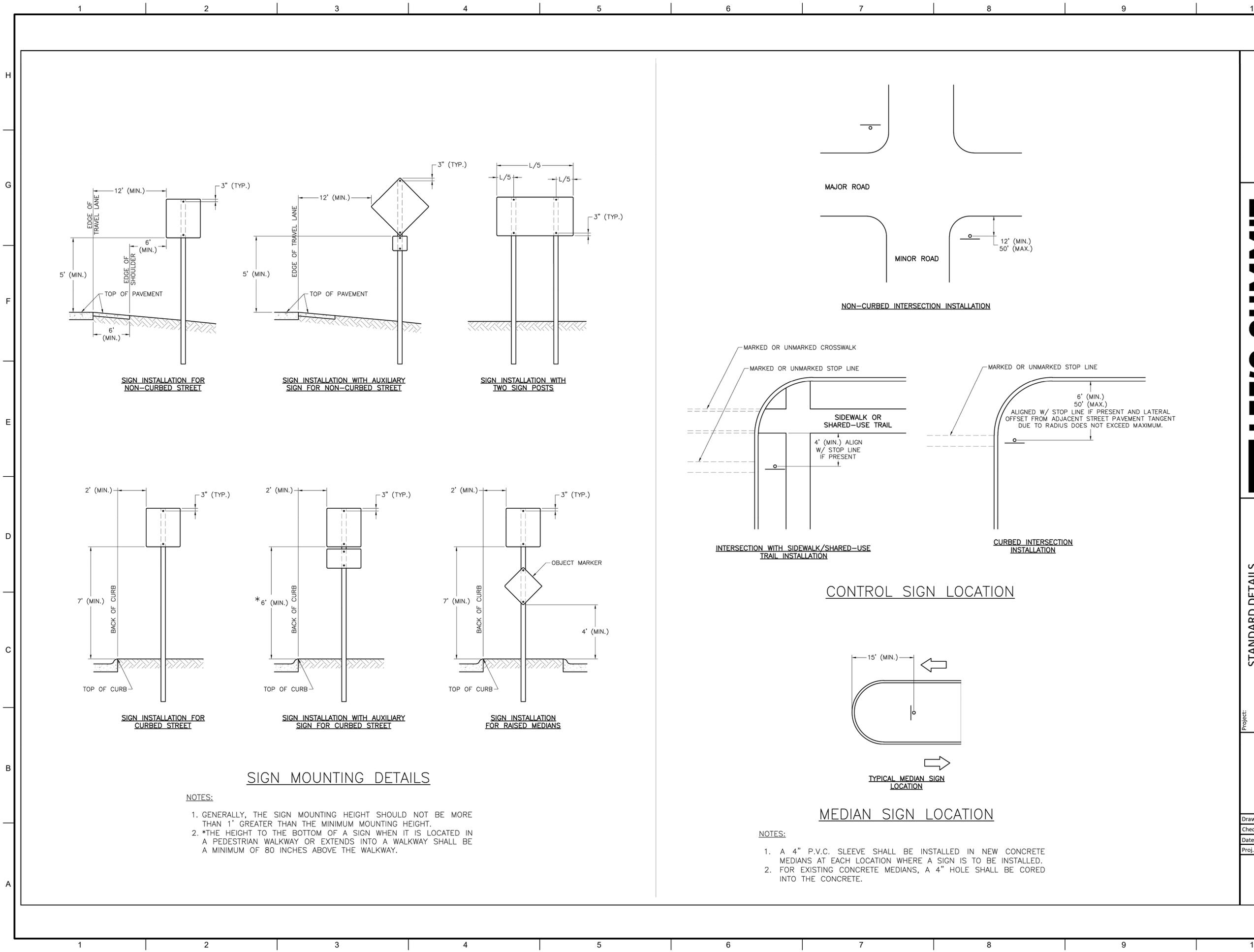
**WILSON & COMPANY**  
800 EAST 101ST TERRACE, SUITE 200  
KANSAS CITY, MO 64131  
PHONE: 816-701-3100  
FAX: 816-942-3013  
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PROJECT NAME  
CITY OF LEE'S SUMMIT, MO  
SAMPSON ROAD BRIDGE  
REPLACEMENT AND STORM  
WATER IMPROVEMENTS  
PROJECT NO. 997

CONSULTANTS

SEAL

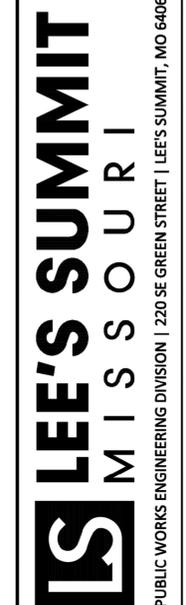


**NOTES:**

1. GENERALLY, THE SIGN MOUNTING HEIGHT SHOULD NOT BE MORE THAN 1" GREATER THAN THE MINIMUM MOUNTING HEIGHT.
2. \*THE HEIGHT TO THE BOTTOM OF A SIGN WHEN IT IS LOCATED IN A PEDESTRIAN WALKWAY OR EXTENDS INTO A WALKWAY SHALL BE A MINIMUM OF 80 INCHES ABOVE THE WALKWAY.

**NOTES:**

1. A 4" P.V.C. SLEEVE SHALL BE INSTALLED IN NEW CONCRETE MEDIANS AT EACH LOCATION WHERE A SIGN IS TO BE INSTALLED.
2. FOR EXISTING CONCRETE MEDIANS, A 4" HOLE SHALL BE CORED INTO THE CONCRETE.



CONSULTANTS



PROJECT NAME  
**CITY OF LEE'S SUMMIT, MO  
 SAMPSON ROAD BRIDGE  
 REPLACEMENT AND STORM  
 WATER IMPROVEMENTS  
 PROJECT NO. 997**

STANDARD DETAILS  
 CITY OF LEE'S SUMMIT, MO  
 LEE'S SUMMIT, JACKSON COUNTY, MO  
 SIGN MOUNTING DETAILS

REV.	DATE	DESCRIPTION	BY

Drawn By: BWC  
 Checked By: IMP  
 Date: 01/2020  
 Proj. #:

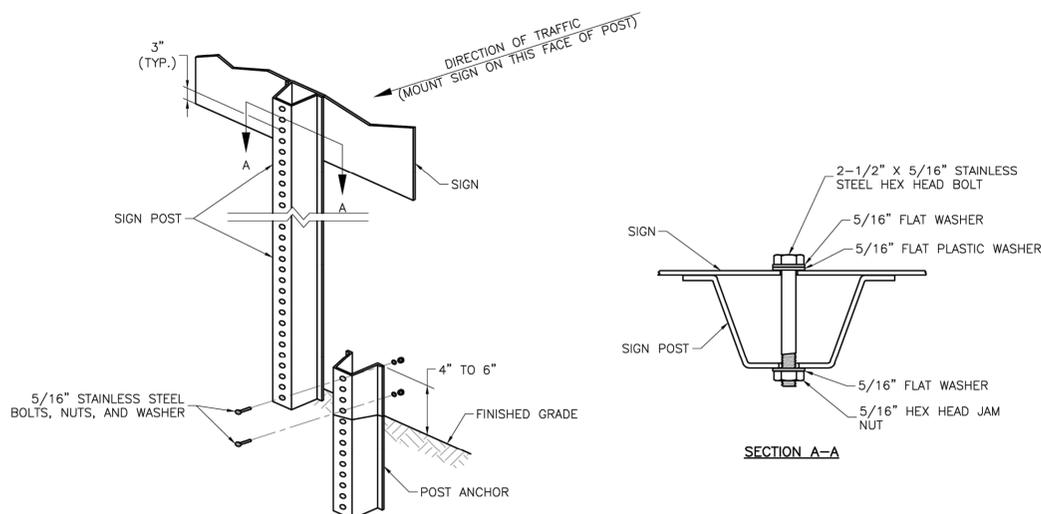
PROJECT NO: 23-600-303-00  
 DESIGNED BY: ARW  
 DRAWN BY: ARW  
 CHECKED BY: CDP  
 DATE: 9/20/2024

**SN-1**

SHEET TITLE  
**PAVEMENT  
 MARKING &  
 SIGNING DETAILS**

SHEET NO:  
**C-63**

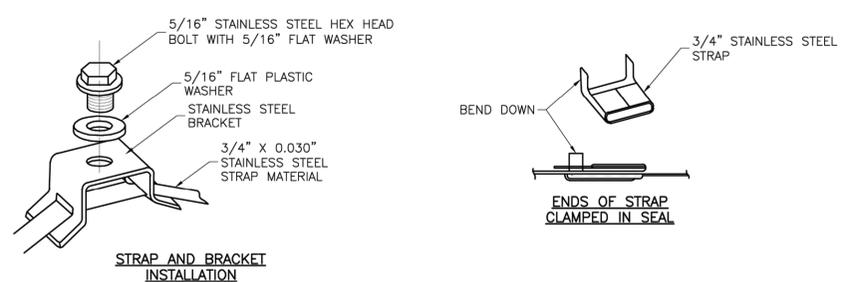
H  
G  
F  
E  
D  
C  
B  
A



**U-STEEL POST DETAILS**

**NOTES:**

1. SPLICE SHALL BE POSITIONED ENTIRELY BETWEEN FINISHED GRADE LINE AND 18" ABOVE FINISHED GRADE LINE. ONLY ONE SPLICE WILL BE ALLOWED PER POST.
2. U-STEEL POST SHALL BE 3 LB./FT., GALVANIZED ACCORDING TO ASTM A123.
3. U-STEEL POST CAN BE USED FOR INSTALLATION OF SIGNS WITH AN AREA OF LESS THAN 2.5 SQUARE FEET.
4. ALL POSTS SHALL BE EMBEDDED A MINIMUM OF 3 FEET.



**STRAP TYPE SIGN SUPPORT DETAILS**

**NOTES:**

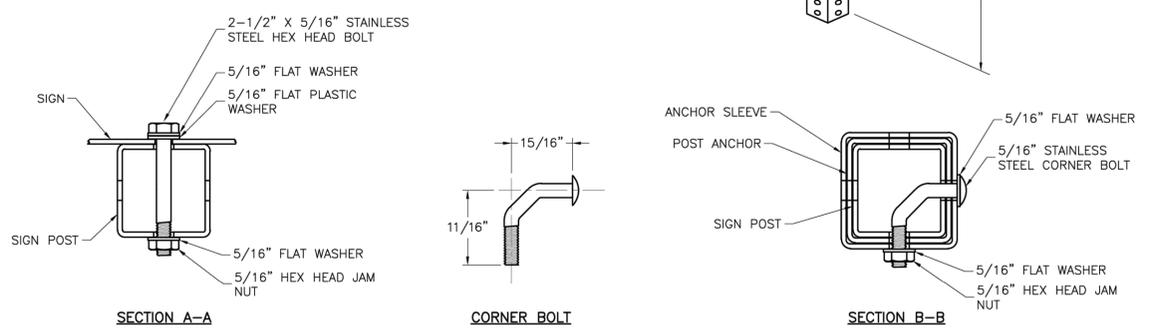
1. SIGNS ON METAL POLES SHALL BE ATTACHED WITH TWO BRACKETS AND STAINLESS STEEL BANDS.
2. HOLES IN SIGN FOR ATTACHMENT TO THE MOUNTING BRACKETS SHALL BE OFFSET A MINIMUM OF 2 INCHES FROM THE EDGE OF THE SIGN.
3. HOLES IN SIGN SHALL BE LOCATED SUCH THAT THE SIGN IS LEVEL.
4. ALL STRAP, BRACKET, AND SEAL MATERIALS SHOULD BE TYPE 201 STAINLESS STEEL.

**PERMANENT SIGNING GENERAL NOTES:**

1. ALL SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
2. THE CONTRACTOR IS RESPONSIBLE FOR AVOIDING ANY AND ALL UTILITIES WHEN INSTALLING SIGN POSTS, WHETHER THE UTILITY IS INDICATED ON THE PLANS OR NOT.
3. ALL WORKMANSHIP AND MATERIALS SHALL BE SUBJECT TO THE INSPECTION AND APPROVAL OF THE PUBLIC WORKS DEPARTMENT OF THE CITY OF LEE'S SUMMIT.
4. THE CONTRACTOR SHALL STAKE THE LOCATION OF ALL SIGN POSTS TO BE INSTALLED. THE CITY INSPECTOR SHALL INSPECT THE STAKING PRIOR TO INSTALLATION. MINOR RELOCATION TO AVOID CONFLICTS MAY BE ALLOWED WITH THE APPROVAL OF THE CITY TRAFFIC ENGINEER.
5. SIGNS SHOWN TO BE INSTALLED ON THE SIDE OF METAL POLES SHALL BE MOUNTED WITH STAINLESS STEEL STRAPS OR WING BRACKETS AS DETAILED. NO SIGNS ARE TO BE INSTALLED ON WOOD POLES. SEE TRAFFIC SIGNAL STANDARD DRAWINGS FOR THE INSTALLATION OF SIGNS ON MAST ARMS.
6. ALL POST MOUNTED SIGNS SHALL BE INSTALLED WITH BREAKAWAY ANCHORS ACCORDING TO THE STANDARD DRAWINGS.
7. ALL EXISTING SIGNS WILL BE USED IN PLACE DURING CONSTRUCTION AND PROTECTED FROM DAMAGE UNLESS OTHERWISE INDICATED IN THE PLANS. IF THE CONTRACTOR DAMAGES ANY EXISTING SIGN OR POSTS DURING CONSTRUCTION, THE CONTRACTOR WILL BE REQUIRED TO REPLACE THE DAMAGED MATERIALS WITH NEW SIGNS OR POSTS AT THE CONTRACTOR'S EXPENSE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND STORING ANY SIGNS THAT ARE TO BE REINSTALLED ON THE PROJECT. ALL EQUIPMENT SHALL BE REINSTALLED IN GOOD CONDITION.
8. EXISTING PERMANENT SIGNS AND POSTS REMOVED BY THE CONTRACTOR FOR CONSTRUCTION PURPOSES WHICH ARE NOT TO BE REINSTALLED SHALL BE DELIVERED TO THE CITY'S PUBLIC WORKS MAINTENANCE FACILITY (1971 SE HAMBLEN ROAD). THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING AND STORING EQUIPMENT IN GOOD CONDITION AND IS FULLY RESPONSIBLE FOR THE EQUIPMENT UNTIL IT IS DELIVERED.
9. ALL STOP, YIELD, OR STREET NAME SIGNS SHALL BE MAINTAINED IN A CONSPICUOUS LOCATION FOR THE DRIVING PUBLIC. ALL STOP AND YIELD SIGNS REMOVED FOR CONSTRUCTION PURPOSES CAN BE TEMPORARILY ERECTED IN REFLECTORIZED DRUMS (NO LESS THAN 7 FEET ABOVE THE PAVEMENT SURFACE) UNTIL THEY CAN BE REINSTALLED. ANY TEMPORARY STOP OR YIELD SIGN INSTALLATION TO BE LEFT IN PLACE OVERNIGHT WILL REQUIRE PRIOR APPROVAL FROM THE CITY INSPECTOR.

**SQUARE STEEL POST INSTALLATION SEQUENCE:**

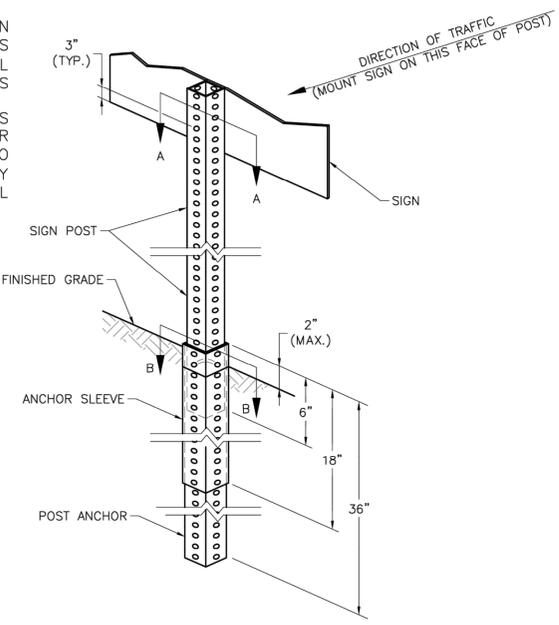
1. SIGN POST ANCHOR DRIVEN PARTIALLY INTO THE GROUND USING A DRIVE CAP WITH A SLEDGE OR POWER EQUIPMENT.
2. ANCHOR SLEEVE SLIPPED OVER ANCHOR AND DRIVE INTO THE GROUND TOGETHER WITH THE SIGN POST ANCHOR.
3. INSERT SIGN POST INTO THE POST ANCHOR AND BOLT IN PLACE.



**SQUARE STEEL POST DETAILS**

**NOTES:**

1. SQUARE STEEL SIGN POSTS AND BREAK-AWAY ANCHOR SHALL CONSIST OF THE FOLLOWING MATERIALS:  
SIGN POST - 14 GA. 2" X 2" SQUARE STEEL POST  
POST ANCHOR - 12 GA. 2 1/4" X 2 1/4" X 36" SQUARE STEEL POST  
ANCHOR SLEEVE - 12 GA. 2 1/2" X 2 1/2" X 18" SQUARE STEEL POST
2. 14 GA. POSTS MUST MEET A CERTIFIED MINIMUM YIELD STRENGTH OF 60,000 PSI.
3. IN ALL INSTALLATIONS THE FIRST HOLE ABOVE THE FINISHED GRADE LINE ON THE SIGN POST, ANCHOR, AND ANCHOR SLEEVE MUST BE IN LINE FOR THE INSERTION OF THE CORNER BOLT.
4. THE MAXIMUM AREA FOR ONE SIGN POST IS 9.0 SQUARE FEET. A SIGN OR COMBINATION OF SIGNS WITH AN AREA GREATER THAN 9.0 SQUARE FEET WILL REQUIRE TWO POSTS. ALSO, SIGNS WITH A WIDTH GREATER THAN OR EQUAL TO 48" (NOT INCLUDING 36" X 36" DIAMOND SHAPED SIGNS) WILL REQUIRE TWO POSTS.



**LEE'S SUMMIT MISSOURI**  
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

**STANDARD DETAILS**  
CITY OF LEE'S SUMMIT, MO  
LEE'S SUMMIT, JACKSON COUNTY, MO  
Sheet Name: POST DETAILS



**CITY OF LEE'S SUMMIT, MO  
SAMPSON ROAD BRIDGE  
REPLACEMENT AND STORM  
WATER IMPROVEMENTS  
PROJECT NO. 997**

REV.	DATE	DESCRIPTION	BY

PROJECT NO:	23-600-303-00
DESIGNED BY:	ARW
DRAWN BY:	ARW
CHECKED BY:	CDP
DATE:	9/20/2024

SHEET TITLE  
**PAVEMENT MARKING & SIGNING DETAILS**

SHEET NO:  
**C-64**

**WILSON & COMPANY**  
800 EAST 101ST TERRACE, SUITE 200  
KANSAS CITY, MO 64131  
PHONE: 816-701-3100  
FAX: 816-942-3013  
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CONSULTANTS

SEAL

PROJECT NAME

Project: CDP  
Date: 01/2020  
Proj. #:

**SN-2**

TRAFFIC CONTROL GENERAL NOTES:

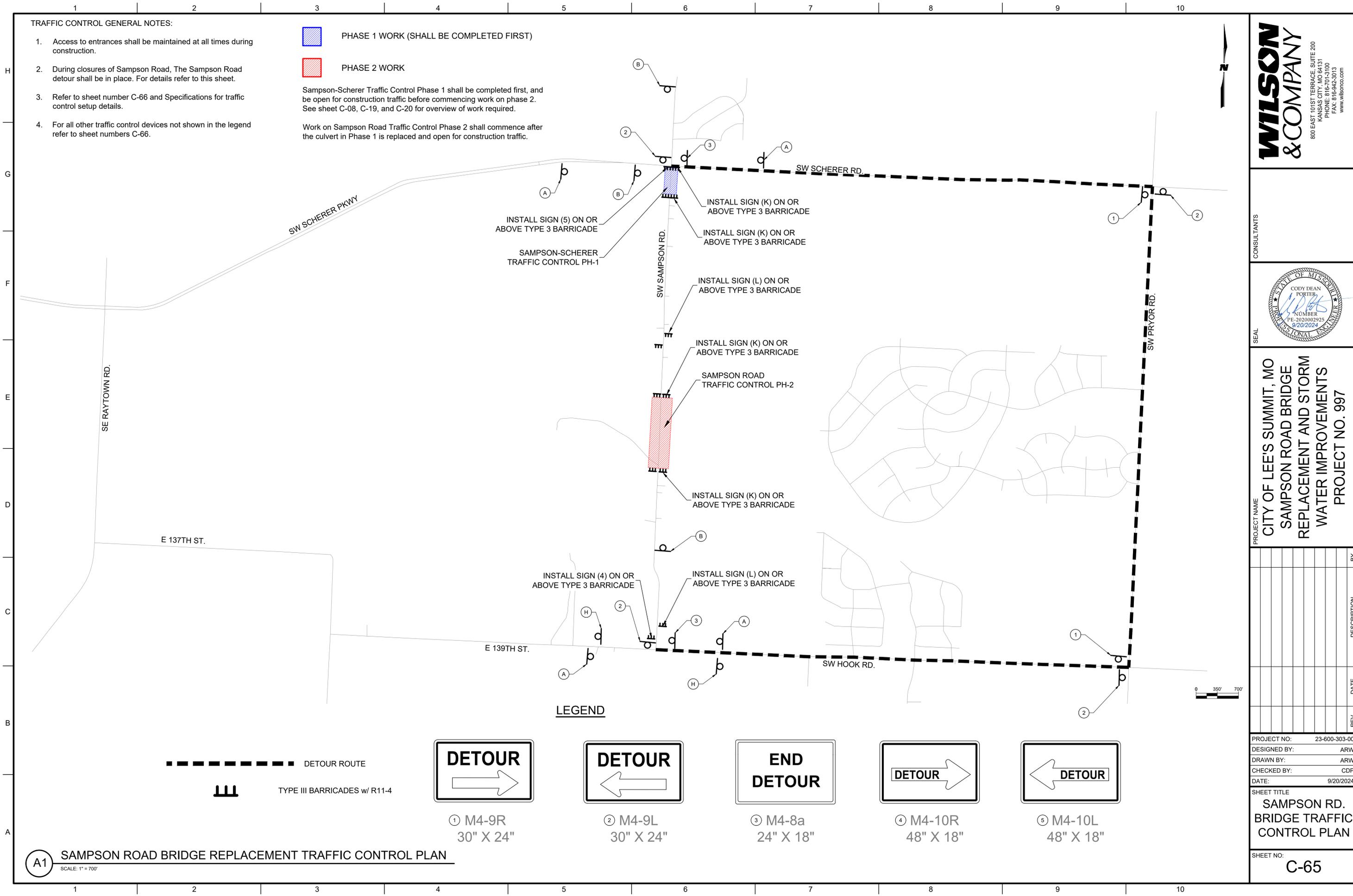
1. Access to entrances shall be maintained at all times during construction.
2. During closures of Sampson Road, The Sampson Road detour shall be in place. For details refer to this sheet.
3. Refer to sheet number C-66 and Specifications for traffic control setup details.
4. For all other traffic control devices not shown in the legend refer to sheet numbers C-66.

 PHASE 1 WORK (SHALL BE COMPLETED FIRST)

 PHASE 2 WORK

Sampson-Scherer Traffic Control Phase 1 shall be completed first, and be open for construction traffic before commencing work on phase 2. See sheet C-08, C-19, and C-20 for overview of work required.

Work on Sampson Road Traffic Control Phase 2 shall commence after the culvert in Phase 1 is replaced and open for construction traffic.



LEGEND

 DETOUR ROUTE

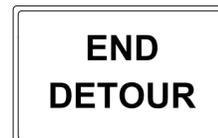
 TYPE III BARRICADES w/ R11-4



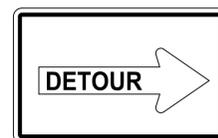
① M4-9R  
30" X 24"



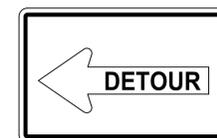
② M4-9L  
30" X 24"



③ M4-8a  
24" X 18"



④ M4-10R  
48" X 18"



⑤ M4-10L  
48" X 18"

A1 SAMPSON ROAD BRIDGE REPLACEMENT TRAFFIC CONTROL PLAN

SCALE: 1" = 700'

**WILSON & COMPANY**  
800 EAST 101ST TERRACE, SUITE 200  
KANSAS CITY, MO 64131  
PHONE: 816-701-3100  
FAX: 816-942-3013  
www.wilsonco.com

CONSULTANTS



PROJECT NAME  
CITY OF LEE'S SUMMIT, MO  
SAMPSON ROAD BRIDGE  
REPLACEMENT AND STORM  
WATER IMPROVEMENTS  
PROJECT NO. 997

REV.	DATE	DESCRIPTION	BY

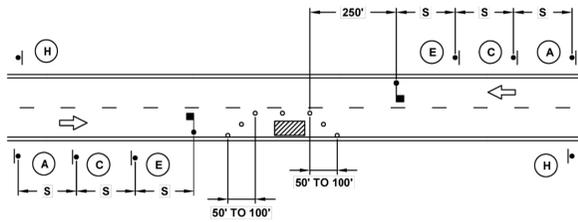
PROJECT NO: 23-600-303-00  
DESIGNED BY: ARW  
DRAWN BY: ARW  
CHECKED BY: CDP  
DATE: 9/20/2024

SHEET TITLE  
SAMPSON RD.  
BRIDGE TRAFFIC  
CONTROL PLAN

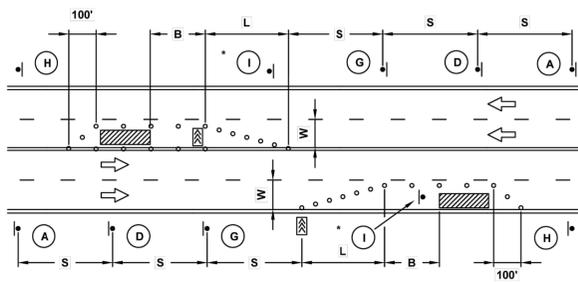
SHEET NO:  
C-65

**SYMBOL LEGEND**

- WORK AREA
- CHANNELIZER
- SIGN
- ARROW PANEL
- BARRICADE
- FLAGGER
- DIRECTION OF TRAVEL

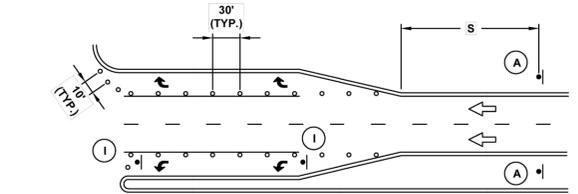


**LANE CLOSURE - TWO LANE STREET**

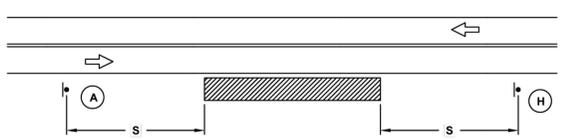


**LANE CLOSURE - FOUR LANE STREET**

\*INSTALL SIGNS EVERY 200 FEET THROUGHOUT THE CLOSED LANE OR AS NEEDED



**TURN LANE CLOSURE**



**TYPICAL SIGNING FOR WORK ADJACENT TO THE STREET**

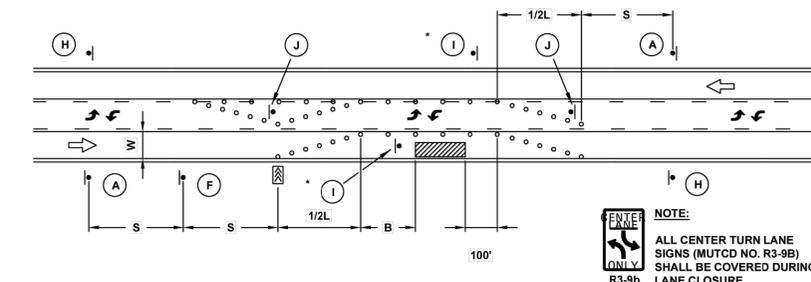
GUIDELINES FOR LENGTH OF LONGITUDINAL BUFFER SPACE "B"		MAXIMUM CHANNELIZER SPACING		
SPEED LIMIT (MPH)	LENGTH (FEET)	SPEED LIMIT (MPH)	WITHIN TAPER (FEET)	OUTSIDE TAPER (FEET)
25	35	25	25	50
30	55	30	30	60
35	85	35	35	70
40	120	40	40	80
45	170	45	45	90

TAPER DIMENSIONS (FEET)				SIGN SPACING "S"	
SPEED LIMIT (MPH)	MINIMUM TAPER LENGTH "L", PER LANE WIDTH "W"			SPEED LIMIT (MPH)	SPACING (FEET)
	10	11	12		
25	105	115	125	6	100
30	150	165	180	7	250
35	205	225	245	8	320
40	270	295	320	9	350
45	450	495	540	13	

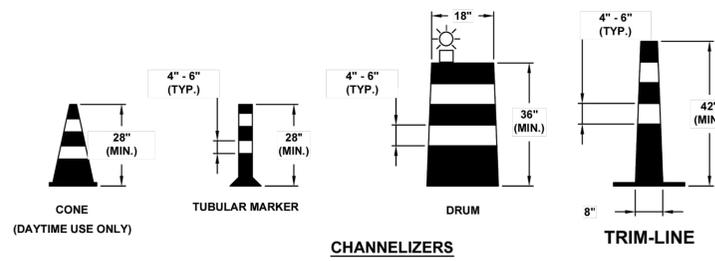
**SIGN LEGEND**

- ROAD WORK AHEAD
- ROAD CLOSED AHEAD
- ONE LANE ROAD AHEAD
- RIGHT LANE CLOSED AHEAD
- PEDESTRIAN
- ROAD CLOSED TO TRAFFIC
- END ROAD WORK
- USE ONLY AS APPROVED BY CITY TRAFFIC ENGINEER
- KEEP RIGHT
- ROAD CLOSED
- ROAD CLOSED TO TRAFFIC
- END ROAD WORK
- USE ONLY AS APPROVED BY CITY TRAFFIC ENGINEER
- KEEP RIGHT
- ROAD CLOSED
- ROAD CLOSED TO TRAFFIC
- ROAD CLOSED TO TRAFFIC

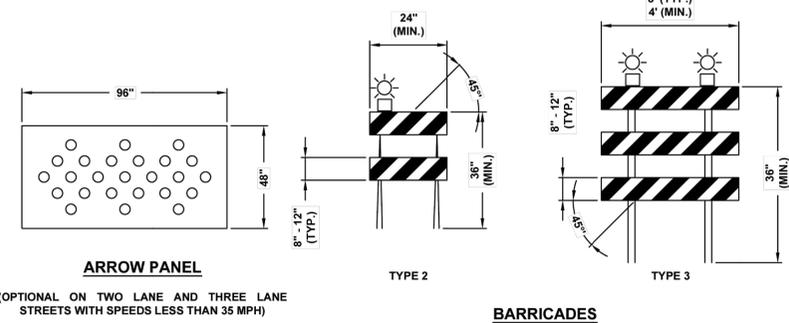


**LANE CLOSURE - THREE LANE STREET**

\*INSTALL SIGNS EVERY 200 FEET THROUGHOUT THE CLOSED LANE OR AS NEEDED



**NOTE:**  
WHITE BANDS ON BARRICADES AND CHANNELIZERS SHALL BE MADE FROM HIGH INTENSITY SHEETING MATERIAL.

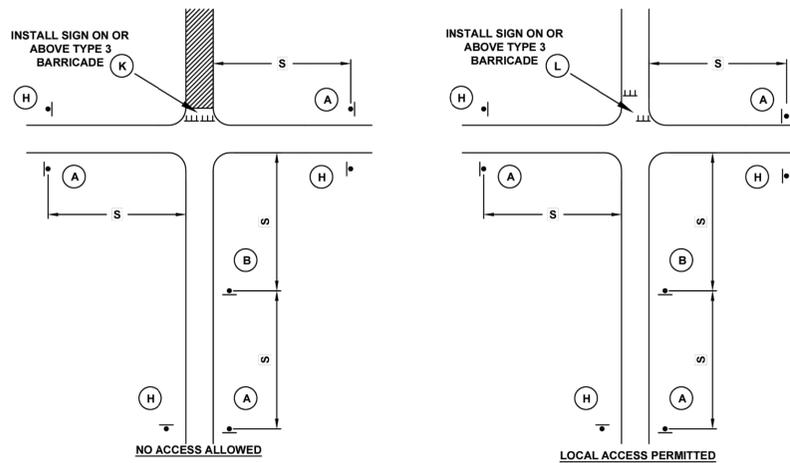


**ARROW PANEL**  
(OPTIONAL ON TWO LANE AND THREE LANE STREETS WITH SPEEDS LESS THAN 35 MPH)

**BARRICADES**

**GENERAL NOTES:**

- ALL SIGNS, BARRICADES, CHANNELIZERS, MARKINGS AND OTHER TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
- ALL TRAFFIC CONTROL DEVICES SHALL BE STANDARD IN SIZE, SHAPE, COLOR, AND MESSAGE, IN GOOD CONDITION, AND RETRO-REFLECTORIZED. ALL SIGNS SHALL BE SECURELY MOUNTED WITH HEIGHT AND LATERAL LOCATION AS DESCRIBED IN THE MUTCD.
- WARNING LIGHTS SHALL BE USED ON BARRICADES IN PLACE AT NIGHT AND ON WARNING SIGNS WHICH ALERT DRIVERS ABOUT A CHANGE IN ALIGNMENT, TRAFFIC CONTROL, LANE CLOSURE, OR ROAD CLOSURE.
- FLAGGERS SHALL BE USED WHERE INDICATED ON THE PLANS, WHERE CONSTRUCTION VEHICLES INTERACT WITH NORMAL TRAFFIC, OR WHERE CONSTRUCTION ACTIVITIES IMPOSE A RESTRICTION ON TRAFFIC, AS DIRECTED BY THE CITY TRAFFIC ENGINEER. WHERE FLAGGERS ARE USED, ADVANCE SIGNING SHALL BE ERCTED AS SHOWN IN THE DETAILS OR AS SPECIFIED IN THE MUTCD. FLAGGERS SHALL MEET THE REQUIREMENTS IN THE MUTCD IN REGARD TO CHARACTER, TRAINING, ATTIRE, AND BEHAVIOR.
- TRIM-LINES ARE THE CITY'S PREFERRED CHANNELIZING DEVICE. CONES MAY NOT BE USED AT NIGHTTIME.
- TRAFFIC CONTROL DEVICES NOT IN USE OR NOT APPLICABLE SHALL BE EITHER COVERED OR REMOVED FROM THE WORK AREA.
- THE CONTRACTOR SHALL USE BARRICADES, STREET PLATES, OR FENCING AS NEEDED TO EFFECTIVELY SHIELD PEDESTRIAN AND VEHICULAR TRAFFIC FROM EXPOSED OBJECTS, EXCAVATIONS, AND CONSTRUCTION ACTIVITIES.
- ACCESS SHALL BE MAINTAINED TO ALL DRIVEWAYS AND SIDE STREETS UNLESS NOTED OTHERWISE ON THE PLANS.
- NO STREET SHALL BE CLOSED WITHOUT THE APPROVAL OF THE CITY TRAFFIC ENGINEER. THE CONTRACTOR SHALL NOTIFY THE CITY TRAFFIC ENGINEER AT LEAST 7 DAYS IN ADVANCE OF ANY STREET CLOSURE. IF A DETOUR ROUTE AROUND THE CLOSURE IS TO BE PROVIDED, ALL DETOUR SIGNING SHALL BE AS SHOWN ON A PLAN APPROVED BY THE CITY TRAFFIC ENGINEER.
- CONSTRUCTION VEHICLES PARKED ALONG STREETS SHALL BE LOCATED WITHIN THE WORK AREA (TRAFFIC CONTROL) OR WHERE OTHERWISE NORMALLY PERMITTED. CONSTRUCTION MATERIALS, INCLUDING TRAFFIC CONTROL AND VEHICLES SHALL NOT RESTRICT SIGHT DISTANCE FOR VEHICLES EXITING AT STREETS OR DRIVES.
- CONSTRUCTION MATERIALS SHALL BE KEPT OFF OF SIDEWALKS, CONSOLIDATED IN ONE LOCATION WITHIN CITY RIGHT-OF-WAY, AND REMOVED DAILY UNLESS OTHERWISE APPROVED BY THE INSPECTOR. DIRT, MUD, AND OTHER CONSTRUCTION DEBRIS ON STREETS AND SIDEWALKS SHALL BE REMOVED IMMEDIATELY.
- THE CONTRACTOR SHALL NOT PERFORM ANY WORK THAT WILL RESTRICT VEHICULAR TRAFFIC IN ANY WAY BETWEEN THE HOURS OF 7:00 A.M. AND 9:00 A.M. OR 4:00 P.M. AND 6:00 P.M. MONDAY THROUGH FRIDAY UNLESS OTHERWISE INDICATED IN THE SPECIFICATIONS.
- ALL TRAVEL LANES SHOULD BE AT LEAST 11 FEET WIDE UNLESS OTHERWISE AUTHORIZED BY THE CITY TRAFFIC ENGINEER. A "NARROW LANES" SIGN SHALL BE INSTALLED IN ADVANCE OF A LANE WIDTH REDUCTION TO LESS THAN 11 FEET.
- ALL EDGE DROP-OFFS OF MORE THAN 2 INCHES AND LESS THAN 4 INCHES SHOULD BE PROTECTED BY A WEDGE OR BARRIER AND ALL EDGE DROP-OFFS GREATER THAN 4 INCHES SHALL HAVE EDGE PROTECTION (SEE TRAFFIC CONTROL SPECIFICATIONS FOR EDGE TREATMENT REQUIREMENTS).
- THE "WORKERS" SYMBOLIC SIGN (MUTCD NO. W21-1A) MAY BE USED INSTEAD OF THE "ROAD WORK AHEAD" SIGN FOR WORK WITH A DURATION OF 12 HOURS OR LESS. THE "END ROAD WORK" SIGN IS NOT REQUIRED TO BE INSTALLED AFTER THE "WORKERS" SIGN.
- NO TRAFFIC SIGNAL SHALL BE ALTERED OR MODIFIED IN ANY WAY WITHOUT A PLAN APPROVED BY THE CITY TRAFFIC ENGINEER.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL TRAFFIC CONTROL DEVICES ON AN AROUND-THE-CLOCK BASIS, WHETHER OR NOT WORK IS ACTIVELY BEING PURSUED AND ANY DEFICIENCIES NOTED SHALL BE CORRECTED IMMEDIATELY.
- THE TRAFFIC CONTROL REQUIREMENTS SHOWN ON THESE PLANS ARE MINIMUM REQUIREMENTS ONLY AND DO NOT ATTEMPT TO ADDRESS IN DEPTH THE VARIETY OF SITUATIONS THAT MAY OCCUR ONCE CONSTRUCTION HAS STARTED. IN NO WAY DO THE REQUIREMENTS SHOWN ON THESE PLANS RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY FOR SELECTING THE PROPER TRAFFIC CONTROL DEVICES AND IMPLEMENTATION PROCEDURES THAT WILL ASSURE THE SAFETY OF DRIVERS, PEDESTRIANS, AND WORKERS AT ALL TIMES.
- SHOULD THE CONTRACTOR FAIL TO ENFORCE THE TRAFFIC CONTROL PLAN OR FAIL TO CLEAN, REPLACE OR OTHERWISE MAINTAIN THE TRAFFIC CONTROL DEVICES WHEN DIRECTED TO DO SO BY THE CITY TRAFFIC ENGINEER OR REPRESENTATIVE, THE CITY MAY TAKE ONE OR MORE OF THE FOLLOWING ACTIONS:
  - EMPLOY ANOTHER AGENCY TO CORRECT DEFICIENCIES IN TRAFFIC CONTROL DEVICES AND DEDUCT THE COST FROM THE CONTRACTOR'S PAY ESTIMATE.
  - STOP THE WORK UNTIL DEFICIENCIES ARE CORRECTED.
  - SUSPEND ALL PAY ESTIMATES UNTIL DEFICIENCIES ARE CORRECTED, OR
  - PLACE THE CONTRACTOR IN DEFAULT.



**TYPICAL STREET CLOSURE**

REV.	DESCRIPTION	DATE

**LEE'S SUMMIT MISSOURI**

PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

**STANDARD DETAILS**

PUBLIC WORKS ENGINEERING

LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

**TRAFFIC CONTROL DETAILS**

**TC-1**

DRAWN BY: CNS  
CHECKED BY: MJF  
DATE: 05/13/2024  
PROJECT #:

**WILSON & COMPANY**

800 EAST 101ST TERRACE, SUITE 200  
KANSAS CITY, MO 64131  
PHONE: 816-942-3100  
FAX: 816-942-3013  
www.wilsonco.com

CONSULTANTS

SEAL

CODY DEAN PORTER  
NUMBER PE-2020002925  
9/20/2024

PROJECT NAME

CITY OF LEE'S SUMMIT, MO  
SAMPSON ROAD BRIDGE  
REPLACEMENT AND STORM  
WATER IMPROVEMENTS  
PROJECT NO. 997

REV.	DATE	DESCRIPTION	BY

PROJECT NO: 23-600-303-00  
DESIGNED BY: ARW  
DRAWN BY: ARW  
CHECKED BY: CDP  
DATE: 9/20/2024

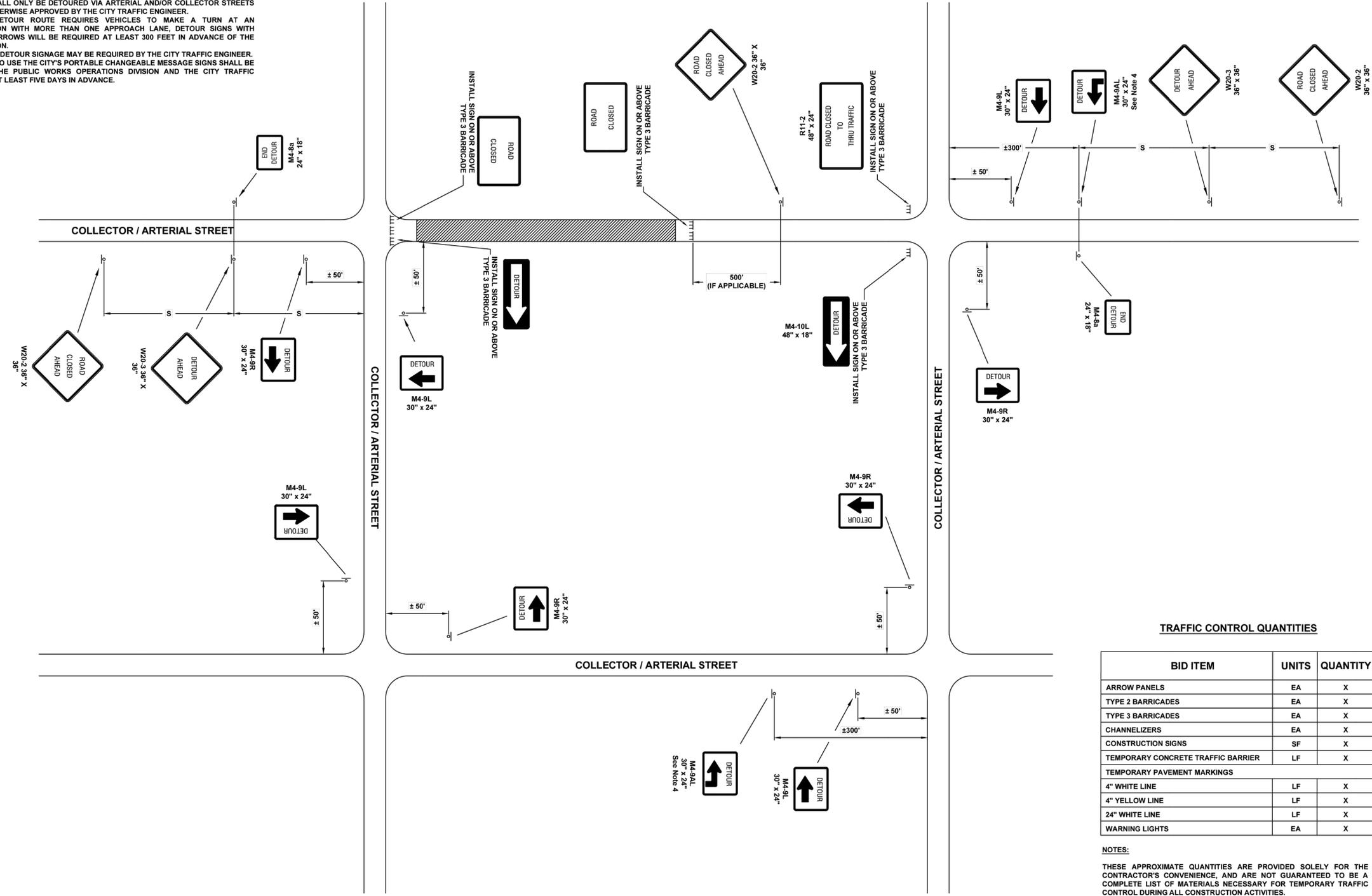
SHEET TITLE

**TRAFFIC CONTROL DETAILS**

SHEET NO:

**C-66**

- NOTES:**
1. ALL SIGNS, BARRICADES, CHANNELIZERS, MARKINGS AND OTHER TRAFFIC CONTROL DEVICES SHALL CONFORM TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
  2. DETOUR ROUTES ARE NOT REQUIRED TO BE POSTED FOR THE CLOSURE OF A LOCAL STREET.
  3. TRAFFIC SHALL ONLY BE DETOURED VIA ARTERIAL AND/OR COLLECTOR STREETS UNLESS OTHERWISE APPROVED BY THE CITY TRAFFIC ENGINEER.
  4. WHEN A DETOUR ROUTE REQUIRES VEHICLES TO MAKE A TURN AT AN INTERSECTION WITH MORE THAN ONE APPROACH LANE, DETOUR SIGNS WITH ADVANCE ARROWS WILL BE REQUIRED AT LEAST 300 FEET IN ADVANCE OF THE INTERSECTION.
  5. ADDITIONAL DETOUR SIGNAGE MAY BE REQUIRED BY THE CITY TRAFFIC ENGINEER.
  6. REQUESTS TO USE THE CITY'S PORTABLE CHANGEABLE MESSAGE SIGNS SHALL BE MADE TO THE PUBLIC WORKS OPERATIONS DIVISION AND THE CITY TRAFFIC ENGINEER AT LEAST FIVE DAYS IN ADVANCE.



**TRAFFIC CONTROL QUANTITIES**

BID ITEM	UNITS	QUANTITY
ARROW PANELS	EA	X
TYPE 2 BARRICADES	EA	X
TYPE 3 BARRICADES	EA	X
CHANNELIZERS	EA	X
CONSTRUCTION SIGNS	SF	X
TEMPORARY CONCRETE TRAFFIC BARRIER	LF	X
TEMPORARY PAVEMENT MARKINGS		
4" WHITE LINE	LF	X
4" YELLOW LINE	LF	X
24" WHITE LINE	LF	X
WARNING LIGHTS	EA	X

**NOTES:**  
 THESE APPROXIMATE QUANTITIES ARE PROVIDED SOLELY FOR THE CONTRACTOR'S CONVENIENCE, AND ARE NOT GUARANTEED TO BE A COMPLETE LIST OF MATERIALS NECESSARY FOR TEMPORARY TRAFFIC CONTROL DURING ALL CONSTRUCTION ACTIVITIES.

REV	DESCRIPTION	DATE

**LEE'S SUMMIT MISSOURI**

PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

PROJECT: **STANDARD DETAILS**  
 PUBLIC WORKS ENGINEERING  
 LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

SHEET NAME: **TRAFFIC CONTROL DETAILS**

DRAWN BY: CNS  
 CHECKED BY: MJF  
 DATE: 05/13/2024  
 PROJECT #: ---

**TC-2**



CONSULTANTS



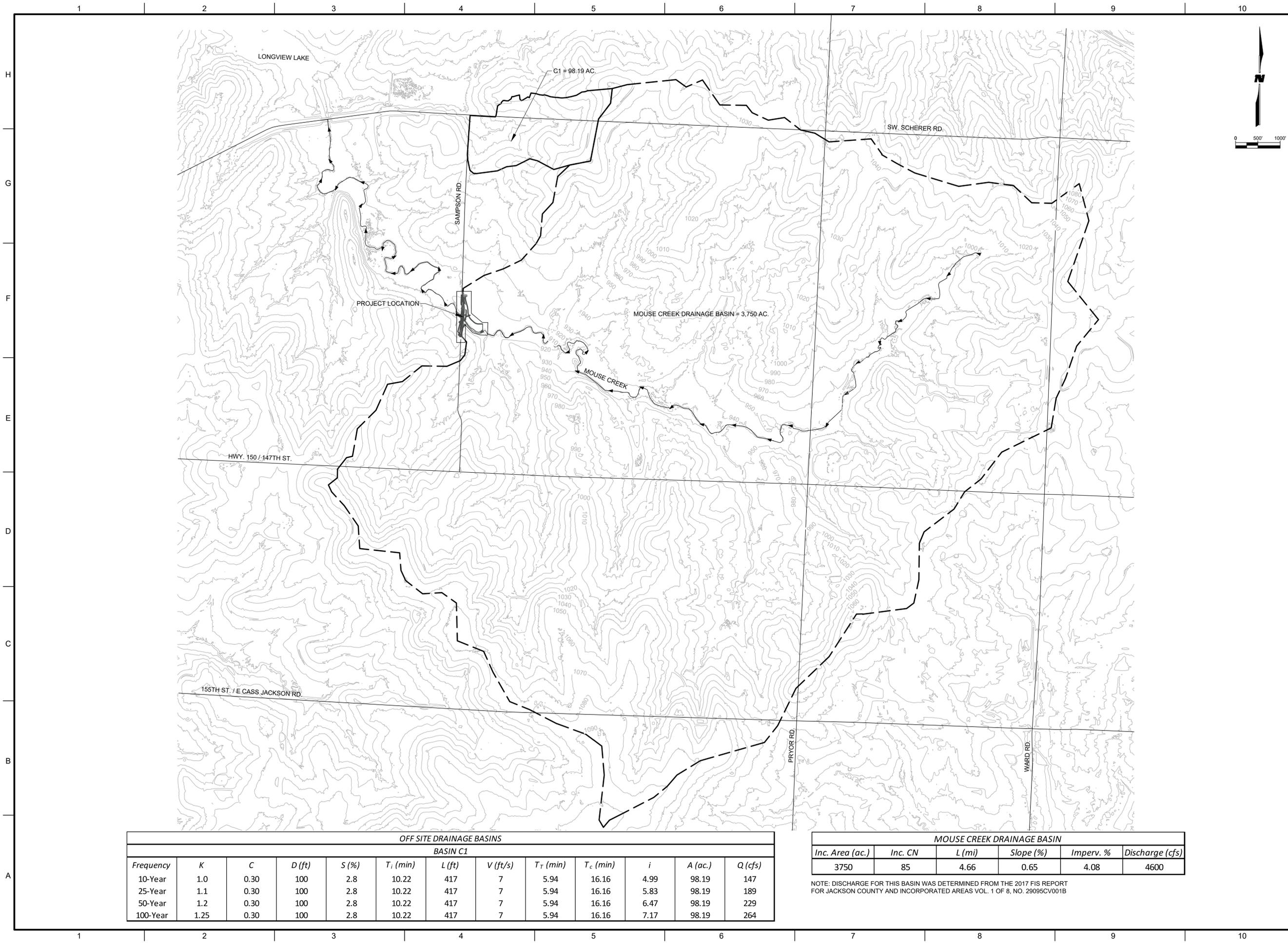
PROJECT NAME  
**CITY OF LEE'S SUMMIT, MO  
 SAMPSON ROAD BRIDGE  
 REPLACEMENT AND STORM  
 WATER IMPROVEMENTS  
 PROJECT NO. 997**

REV.	DATE	DESCRIPTION	BY

PROJECT NO: 23-600-303-00  
 DESIGNED BY: ARW  
 DRAWN BY: ARW  
 CHECKED BY: CDP  
 DATE: 9/20/2024

SHEET TITLE  
**TRAFFIC CONTROL DETAILS**

SHEET NO:  
**C-67**



**WILSON & COMPANY**  
 800 EAST 101ST TERRACE, SUITE 200  
 KANSAS CITY, MO 64131  
 PHONE: 816-701-3100  
 FAX: 816-942-3013  
 www.wilsonco.com

CONSULTANTS



PROJECT NAME  
**CITY OF LEE'S SUMMIT, MO  
 SAMPSON ROAD BRIDGE  
 REPLACEMENT AND STORM  
 WATER IMPROVEMENTS  
 PROJECT NO. 997**

REV.	DATE	DESCRIPTION	BY

PROJECT NO: 23-600-303-00  
 DESIGNED BY: ABM  
 DRAWN BY: ABM  
 CHECKED BY: CDP  
 DATE: 9/20/2024

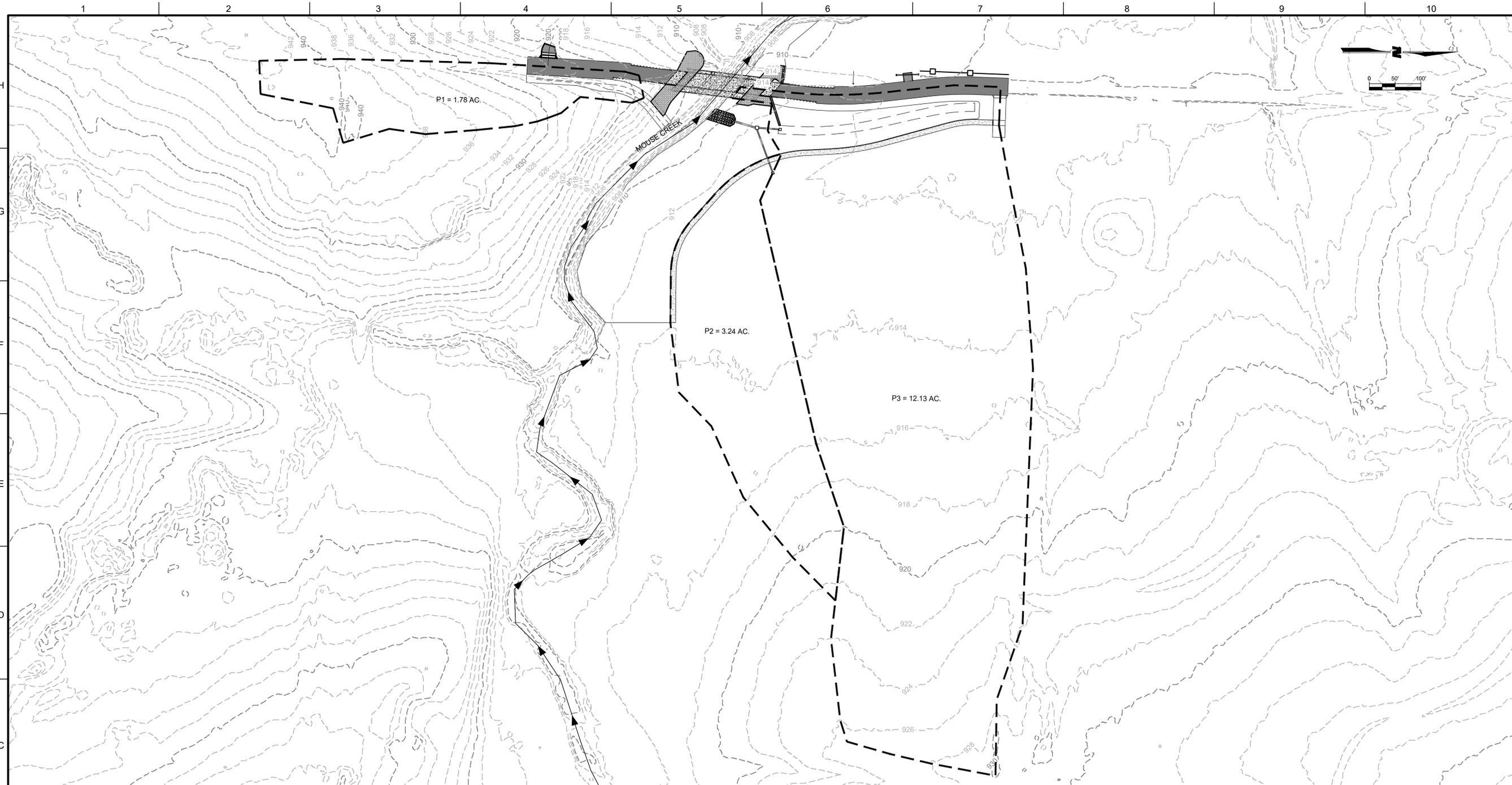
SHEET TITLE  
**OFF SITE  
 DRAINAGE MAP**

SHEET NO:  
**C-68**

OFF SITE DRAINAGE BASINS												
BASIN C1												
Frequency	K	C	D (ft)	S (%)	T <sub>r</sub> (min)	L (ft)	V (ft/s)	T <sub>T</sub> (min)	T <sub>c</sub> (min)	i	A (ac.)	Q (cfs)
10-Year	1.0	0.30	100	2.8	10.22	417	7	5.94	16.16	4.99	98.19	147
25-Year	1.1	0.30	100	2.8	10.22	417	7	5.94	16.16	5.83	98.19	189
50-Year	1.2	0.30	100	2.8	10.22	417	7	5.94	16.16	6.47	98.19	229
100-Year	1.25	0.30	100	2.8	10.22	417	7	5.94	16.16	7.17	98.19	264

MOUSE CREEK DRAINAGE BASIN					
Inc. Area (ac.)	Inc. CN	L (mi)	Slope (%)	Imperv. %	Discharge (cfs)
3750	85	4.66	0.65	4.08	4600

NOTE: DISCHARGE FOR THIS BASIN WAS DETERMINED FROM THE 2017 FIS REPORT FOR JACKSON COUNTY AND INCORPORATED AREAS VOL. 1 OF 8, NO. 29095CV001B



ON SITE DRAINAGE BASINS													
BASIN P1													
Frequency	K	Imperv %	C	D (ft)	S (%)	T <sub>r</sub> (min)	L (ft)	V (ft/s)	T <sub>r</sub> (min)	T <sub>c</sub> (min)	i	A (ac.)	Q (cfs)
10-Year	1.0	52.4%	0.61	12	2.5	5.00	296	7	0.95	5.95	7.07	1.78	7.73
25-Year	1.1	52.4%	0.61	12	2.5	5.00	296	7	0.95	5.95	8.20	1.78	9.87
50-Year	1.2	52.4%	0.61	12	2.5	5.00	296	7	0.95	5.95	9.05	1.78	11.87
100-Year	1.25	52.4%	0.61	12	2.5	5.00	296	7	0.95	5.95	9.94	1.78	13.59
BASIN P2													
Frequency	K	Imperv %	C	D (ft)	S (%)	T <sub>r</sub> (min)	L (ft)	V (ft/s)	T <sub>r</sub> (min)	T <sub>c</sub> (min)	i	A (ac.)	Q (cfs)
10-Year	1.0	3.1%	0.32	100	1.28	12.96	975	7	1.9	14.86	5.20	3.24	5.37
25-Year	1.1	3.1%	0.32	100	1.28	12.96	975	7	1.9	14.86	6.03	3.24	6.85
50-Year	1.2	3.1%	0.32	100	1.28	12.96	975	7	1.9	14.86	6.72	3.24	8.32
100-Year	1.25	3.1%	0.32	100	1.28	12.96	975	7	1.9	14.86	7.39	3.24	9.53
BASIN P3													
Frequency	K	Imperv %	C	D (ft)	S (%)	T <sub>r</sub> (min)	L (ft)	V (ft/s)	T <sub>r</sub> (min)	T <sub>c</sub> (min)	i	A (ac.)	Q (cfs)
10-Year	1.0	2.0%	0.31	100	1.5	12.39	1313	7	2.2	14.59	5.24	12.13	19.82
25-Year	1.1	2.0%	0.31	100	1.5	12.39	1313	7	2.2	14.59	6.08	12.13	25.29
50-Year	1.2	2.0%	0.31	100	1.5	12.39	1313	7	2.2	14.59	6.77	12.13	30.75
100-Year	1.25	2.0%	0.31	100	1.5	12.39	1313	7	2.2	14.59	7.44	12.13	35.19

NOTE: DISCHARGES CALCULATED USING THE RATIONAL METHOD

**WILSON & COMPANY**  
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 FAX: 816-942-3013  
 www.wilsonco.com

CONSULTANTS



SEAL

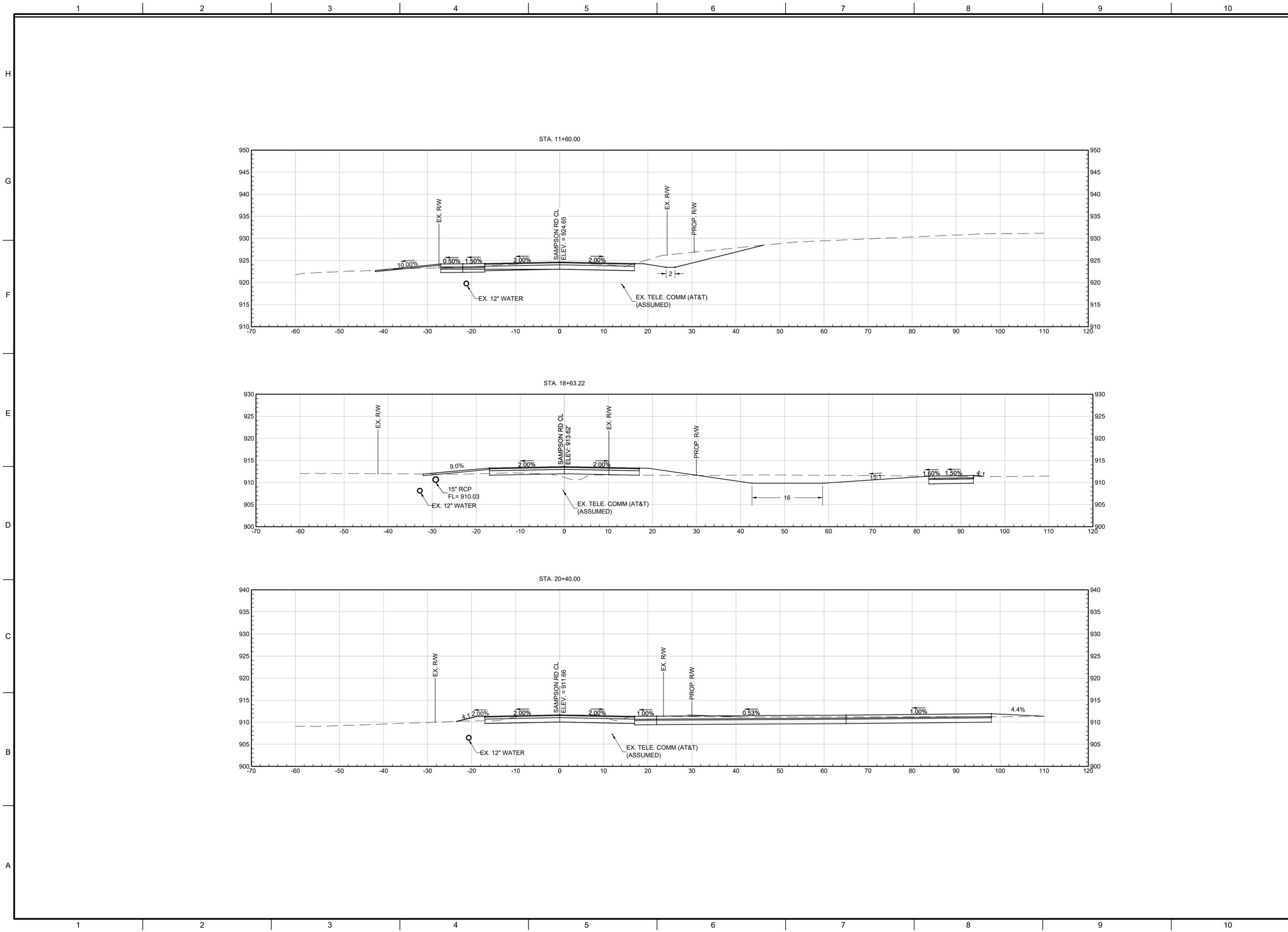
**PROJECT NAME**  
 CITY OF LEE'S SUMMIT, MO  
 SAMPSON ROAD BRIDGE  
 REPLACEMENT AND STORM  
 WATER IMPROVEMENTS  
 PROJECT NO. 997

REV.	DATE	DESCRIPTION	BY

PROJECT NO: 23-600-303-00  
 DESIGNED BY: ABM  
 DRAWN BY: ABM  
 CHECKED BY: CDP  
 DATE: 9/20/2024

SHEET TITLE  
**ON SITE DRAINAGE MAP**

SHEET NO:  
**C-69**



**WILSON & COMPANY**  
 800 EAST 101ST TERRACE, SUITE 200  
 KANSAS CITY, MO 64131  
 PHONE: 816-701-3100  
 FAX: 816-942-3013  
 www.wilsonco.com

CONSULTANTS



PROJECT NAME  
**CITY OF LEE'S SUMMIT, MO  
 SAMPSON ROAD BRIDGE  
 REPLACEMENT AND STORM  
 WATER IMPROVEMENTS  
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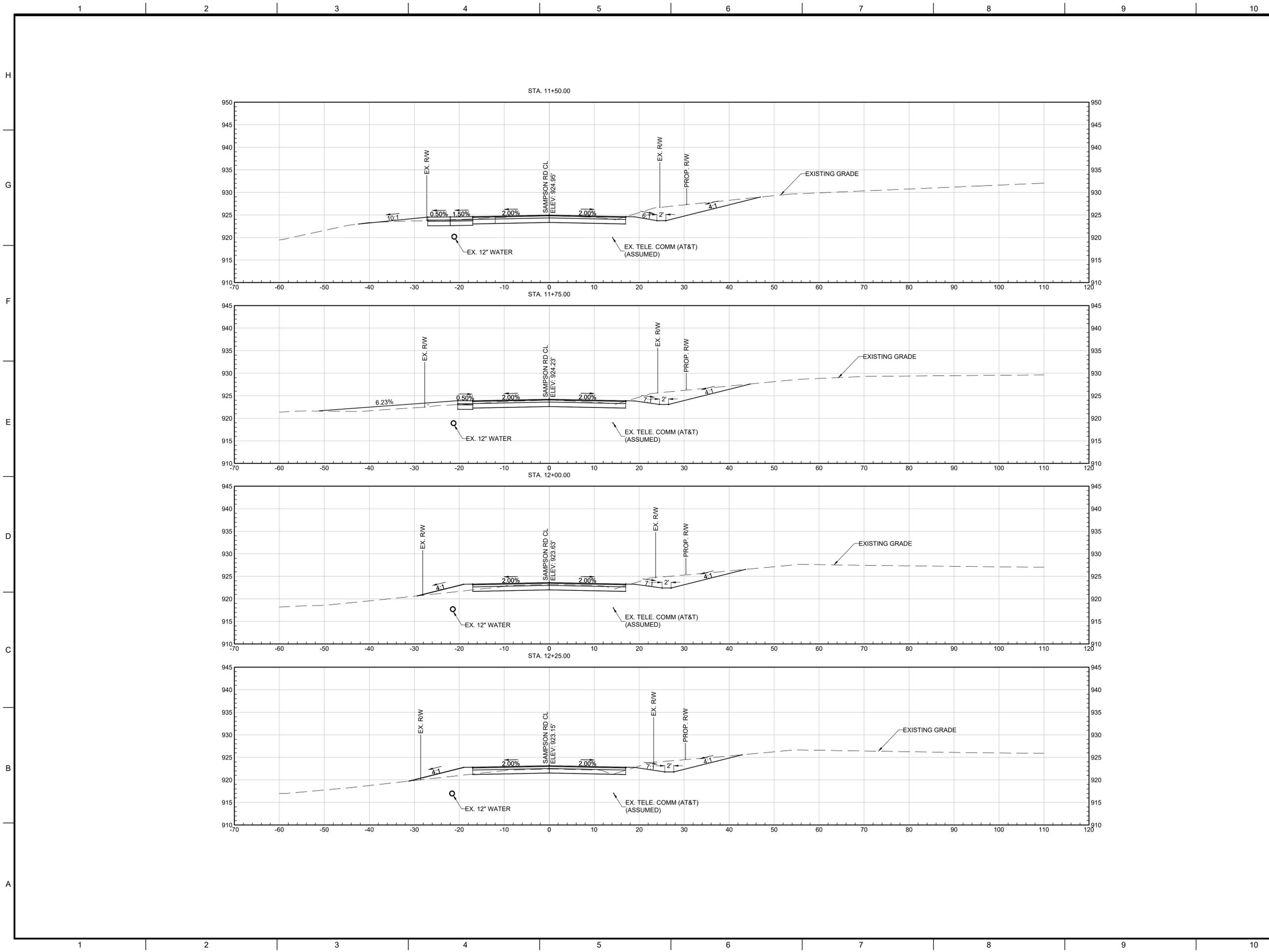
REV.	DATE	DESCRIPTION	BY

PROJECT NO: 23-600-303-00  
 DESIGNED BY: AJM  
 DRAWN BY: AJM  
 CHECKED BY: CDP  
 DATE: 9/20/2024

SHEET TITLE  
**DRIVEWAY  
 CROSS  
 SECTIONS**

SHEET NO:  
**C-70**





**WILSON & COMPANY**  
 800 EAST 101ST TERRACE, SUITE 200  
 KANSAS CITY, MO 64131  
 PHONE: 816-701-3100  
 FAX: 816-942-3013  
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CONSULTANTS



SEAL

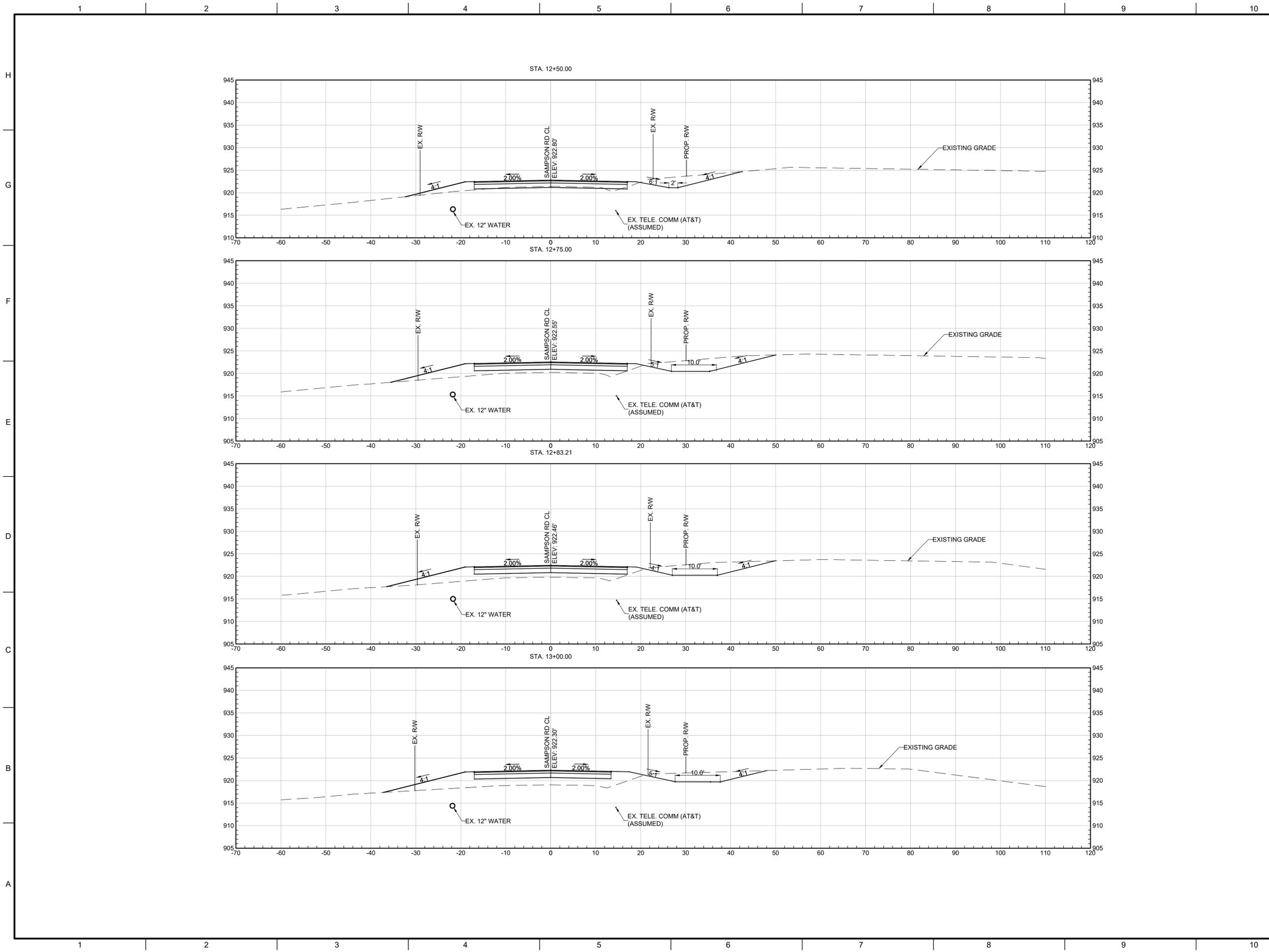
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 SAMPSON ROAD BRIDGE  
 REPLACEMENT AND STORM  
 WATER IMPROVEMENTS  
 PROJECT NO. 997**

REV.	DATE	DESCRIPTION	BY

PROJECT NO: 23-600-303-00  
 DESIGNED BY: AJM  
 DRAWN BY: AJM  
 CHECKED BY: CDP  
 DATE: 9/20/2024

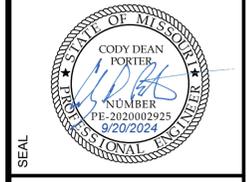
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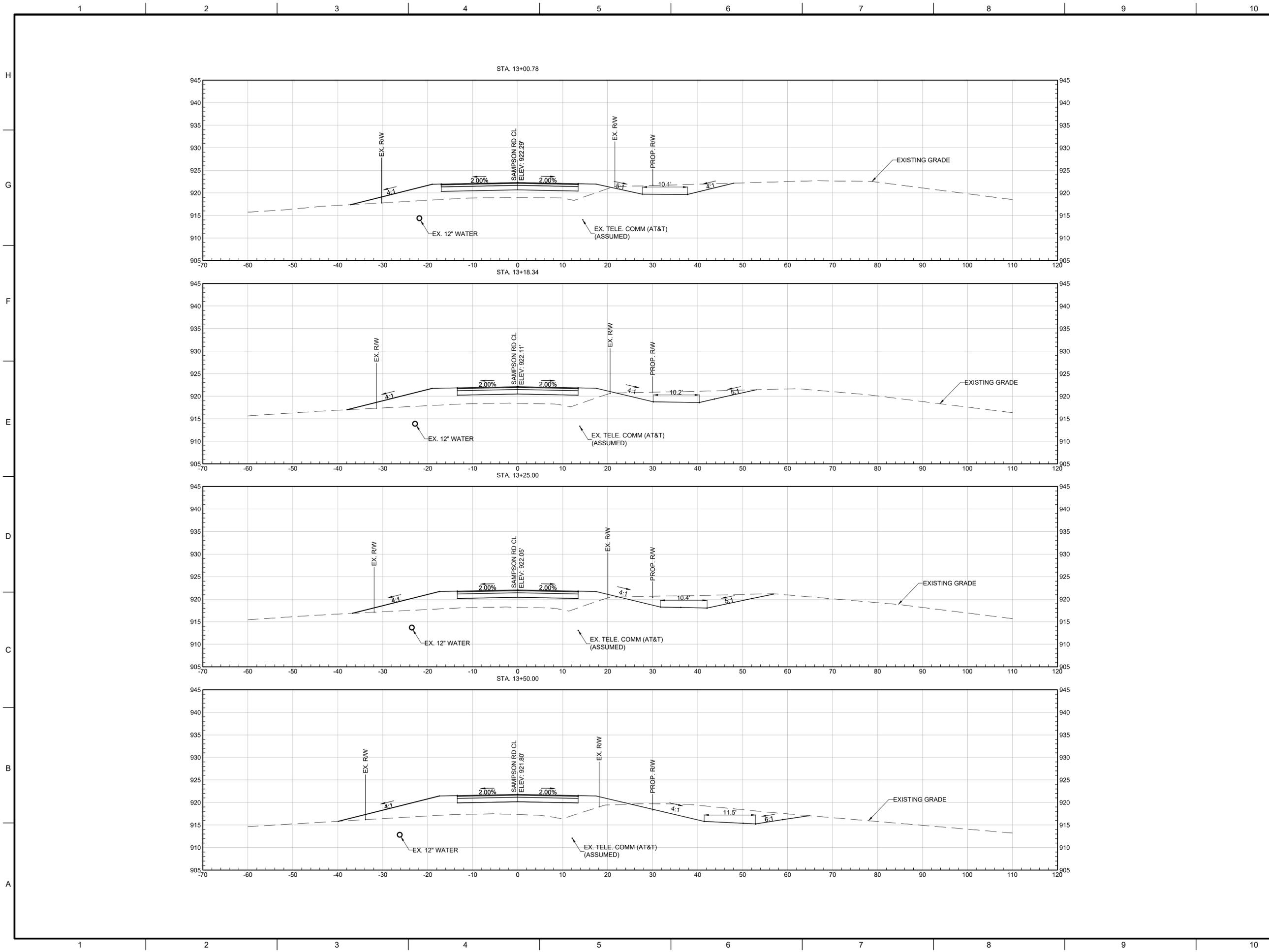
PROJECT NAME  
**CITY OF LEE'S SUMMIT, MO  
 SAMPSON ROAD BRIDGE  
 REPLACEMENT AND STORM  
 WATER IMPROVEMENTS  
 PROJECT NO. 997**

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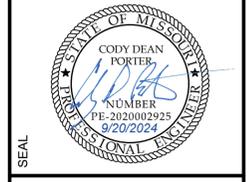
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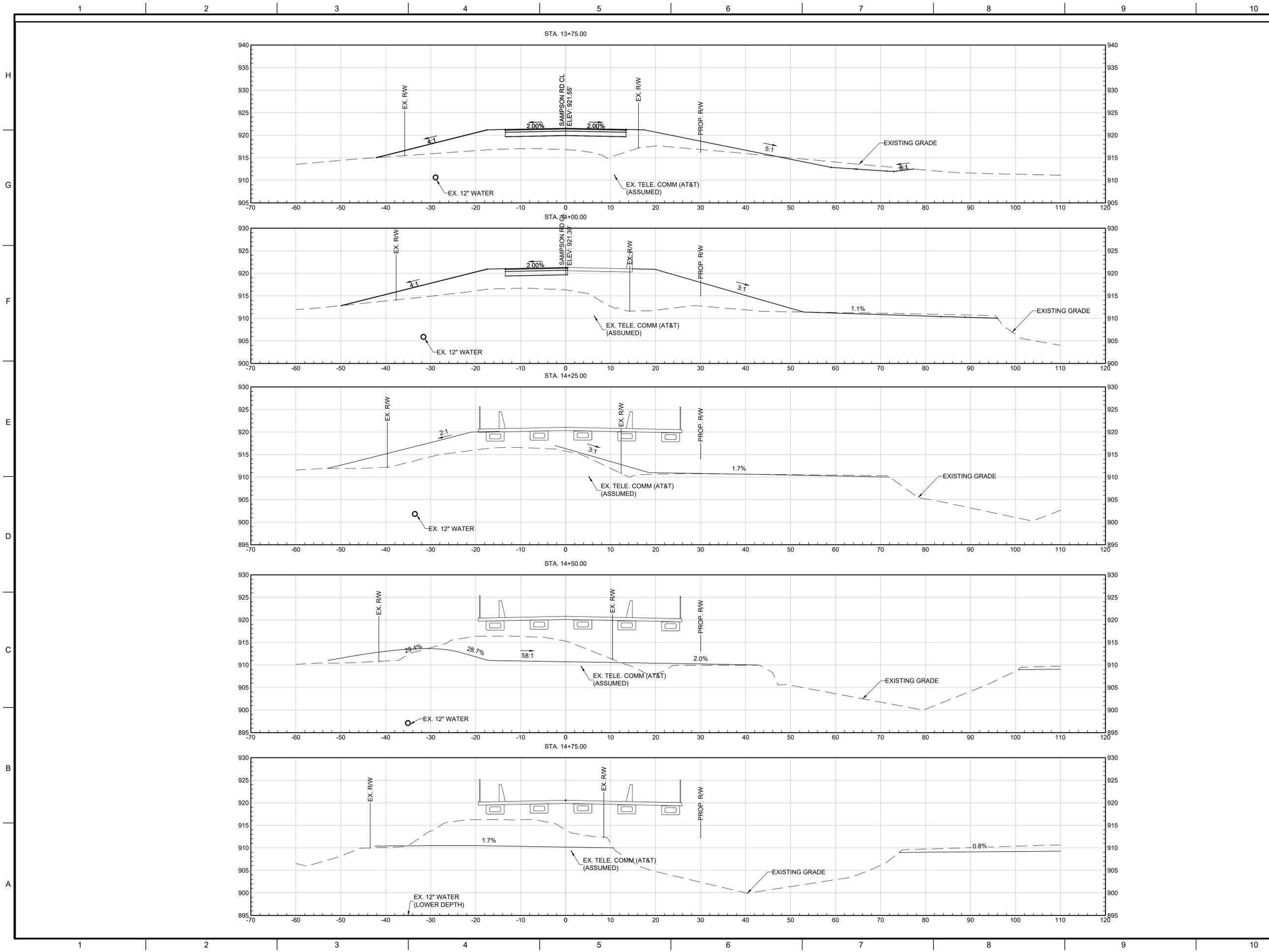
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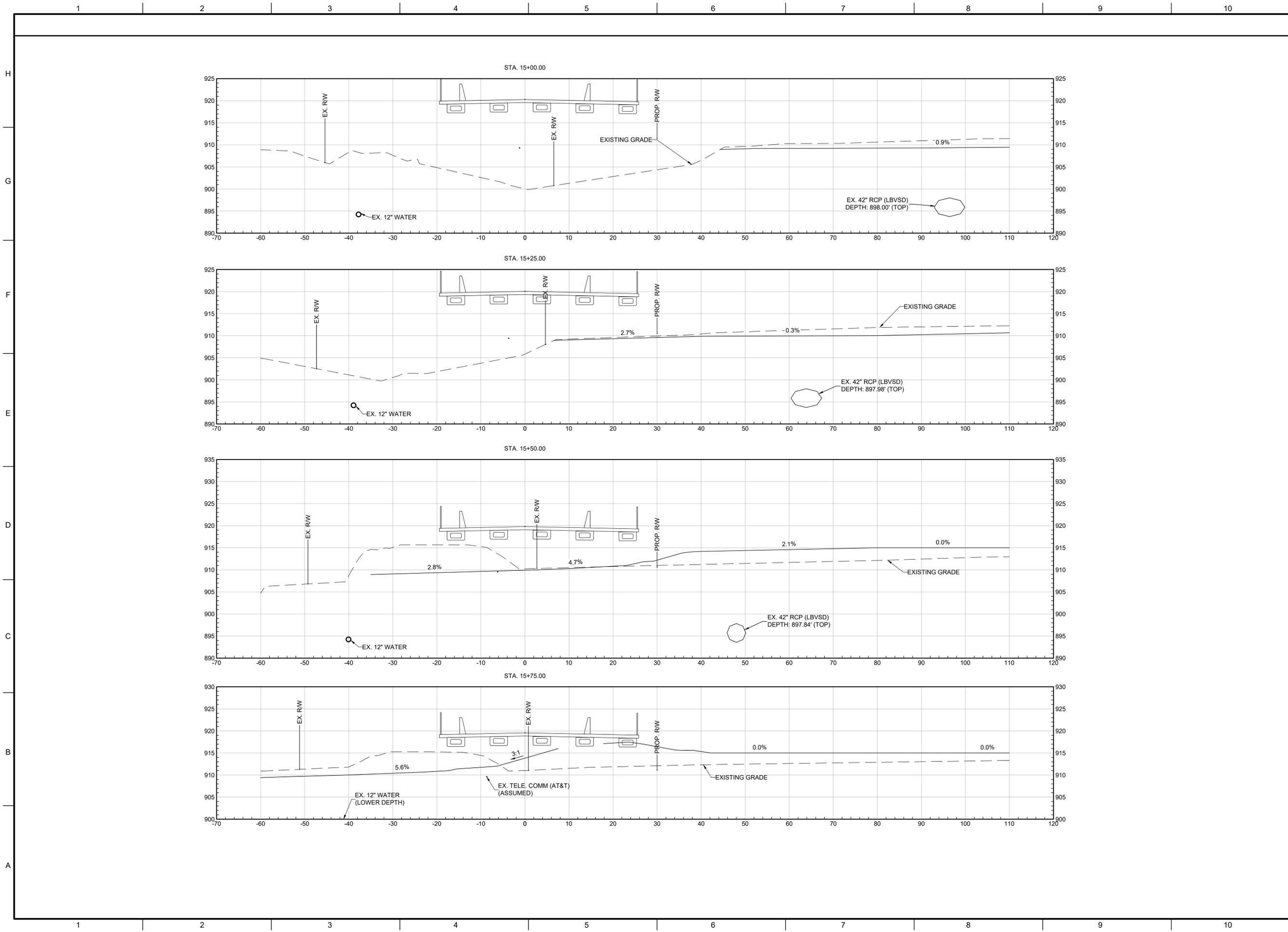
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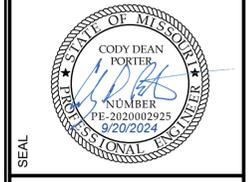
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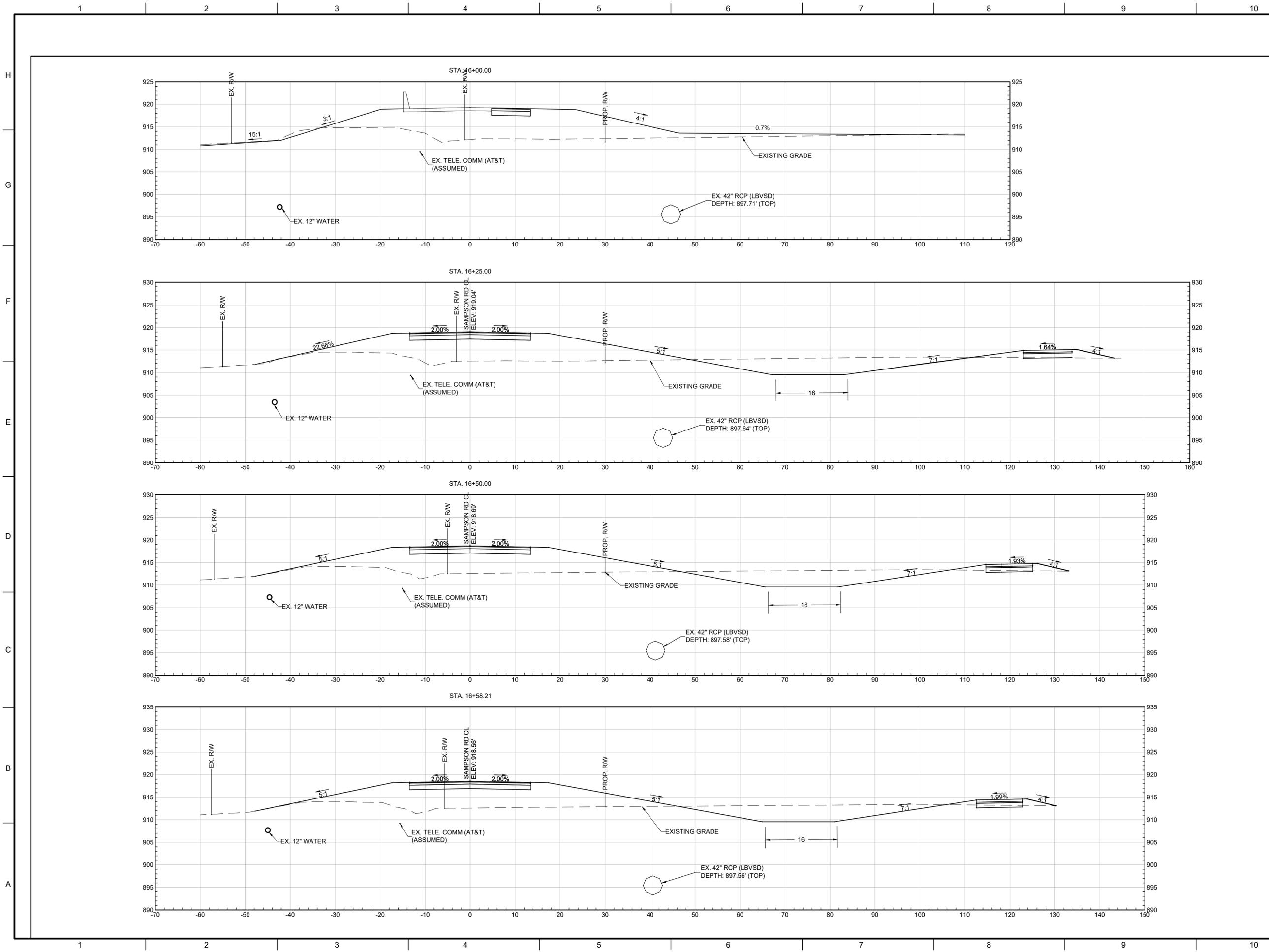
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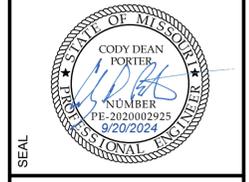
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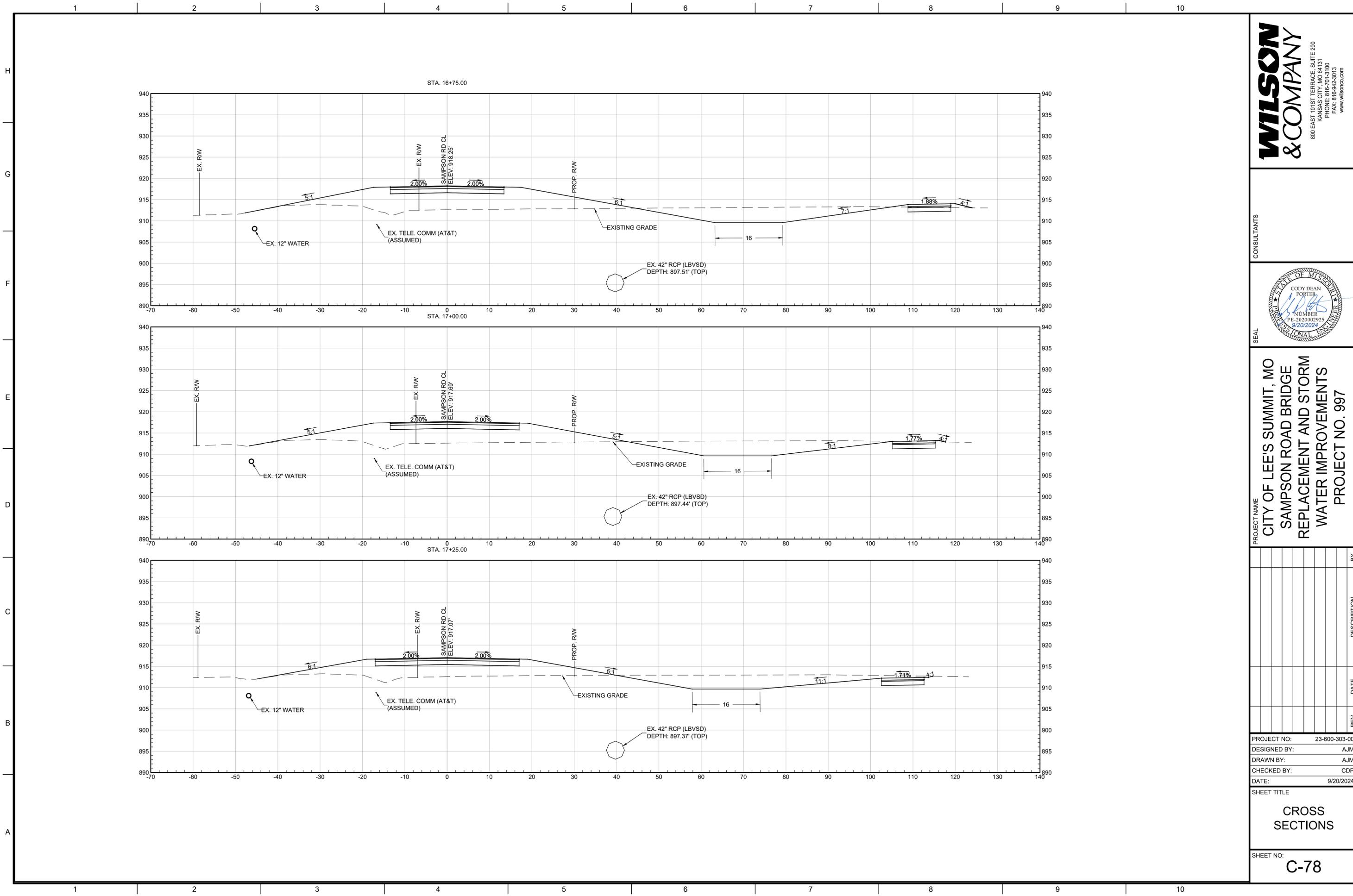
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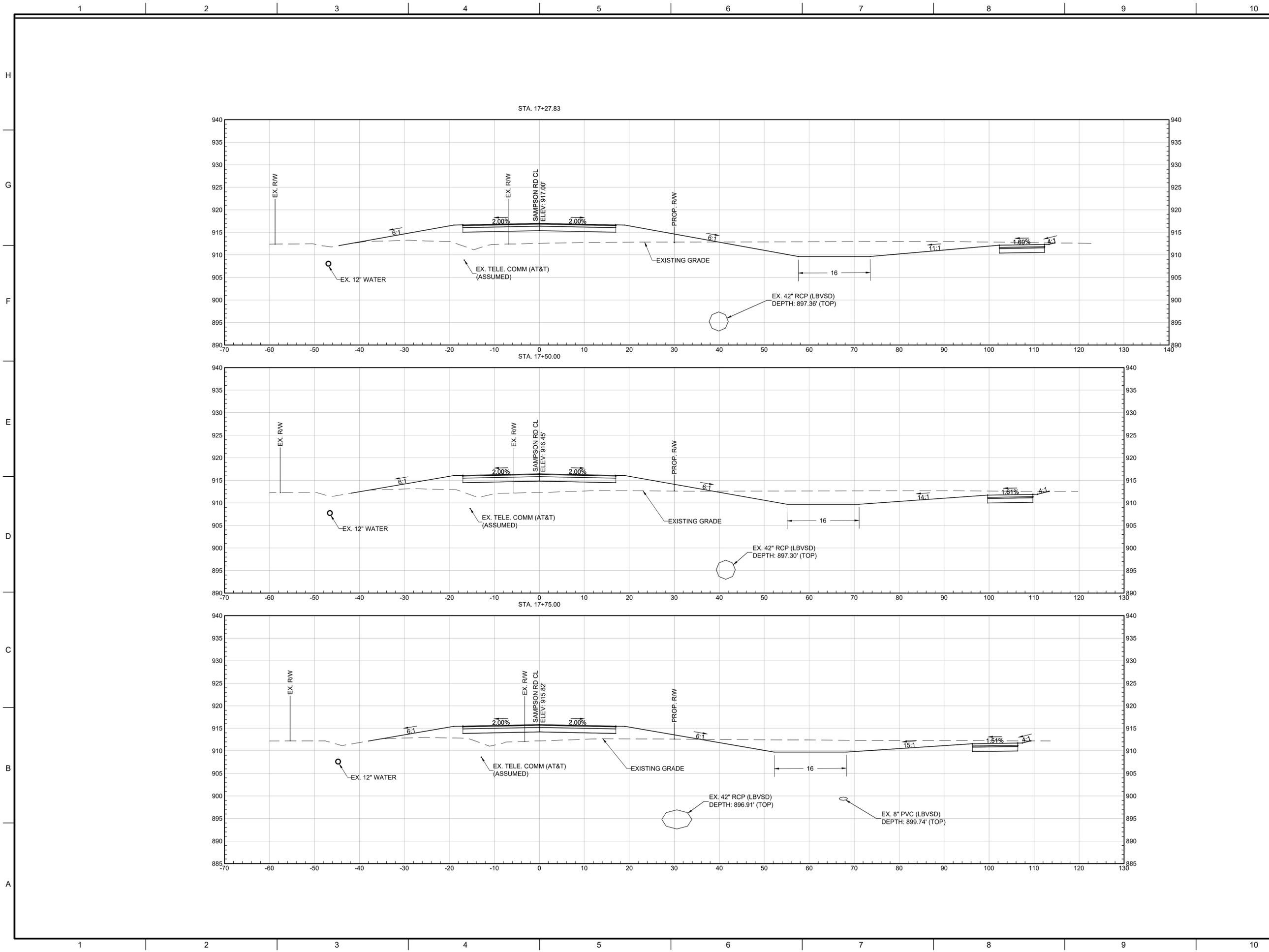
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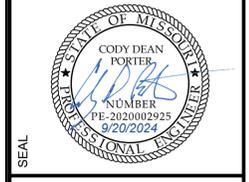
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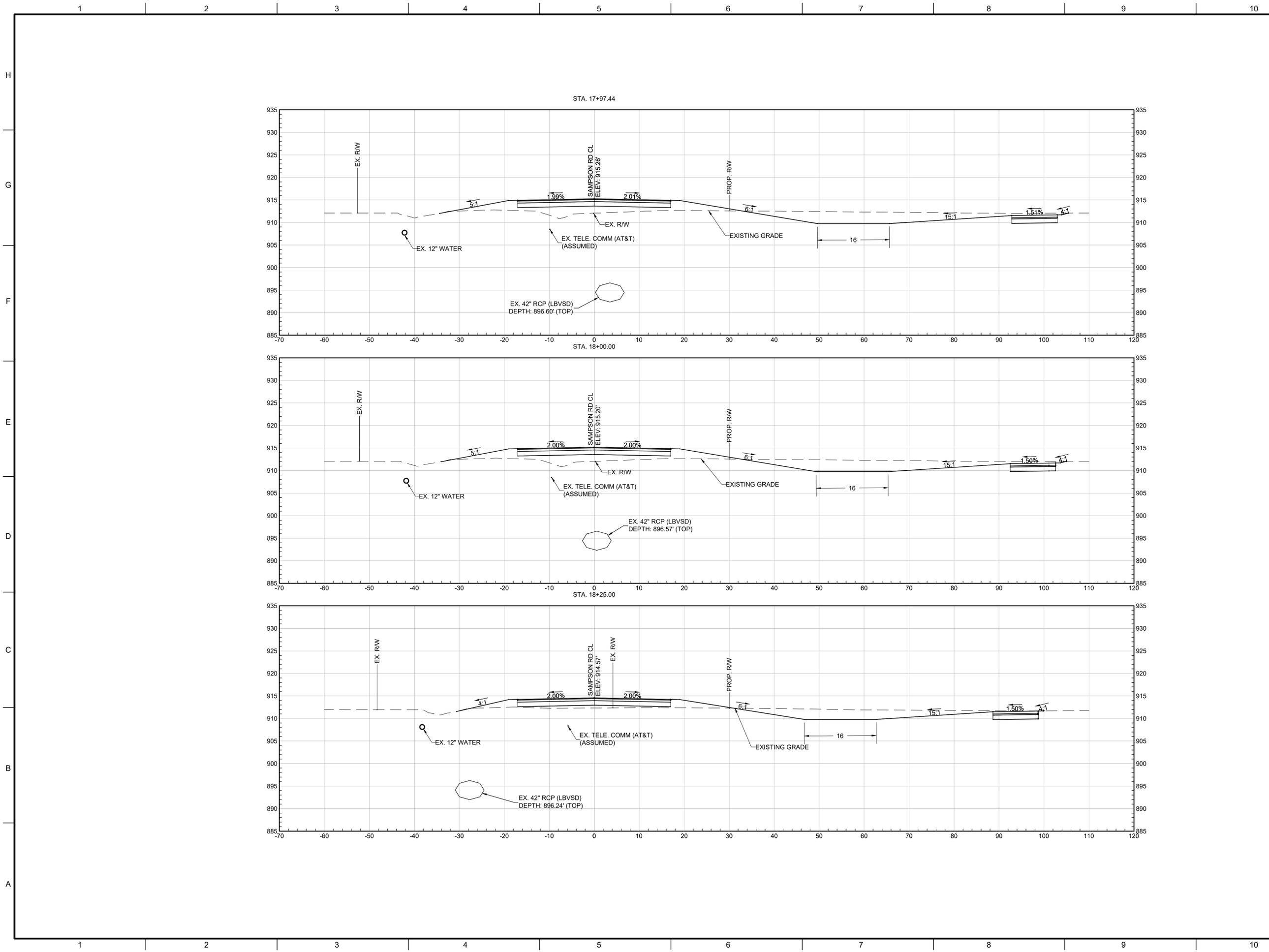
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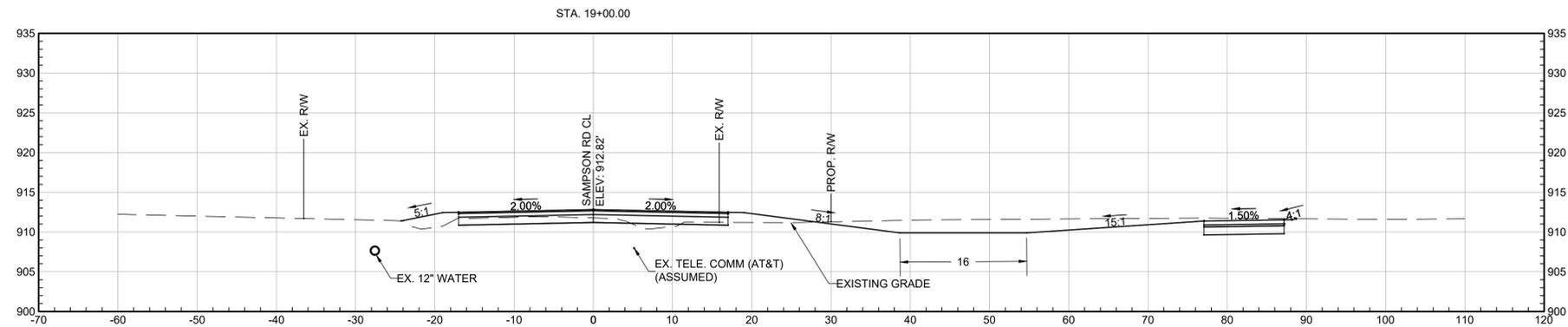
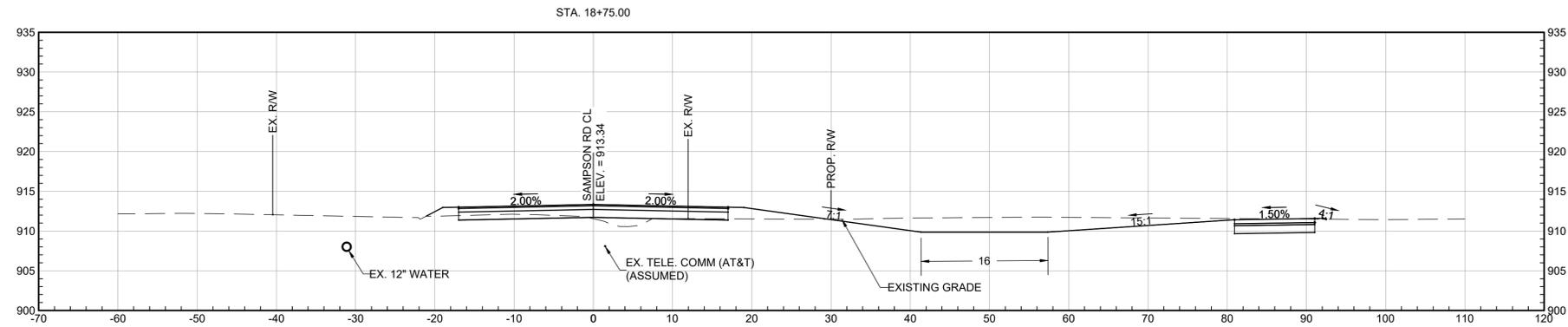
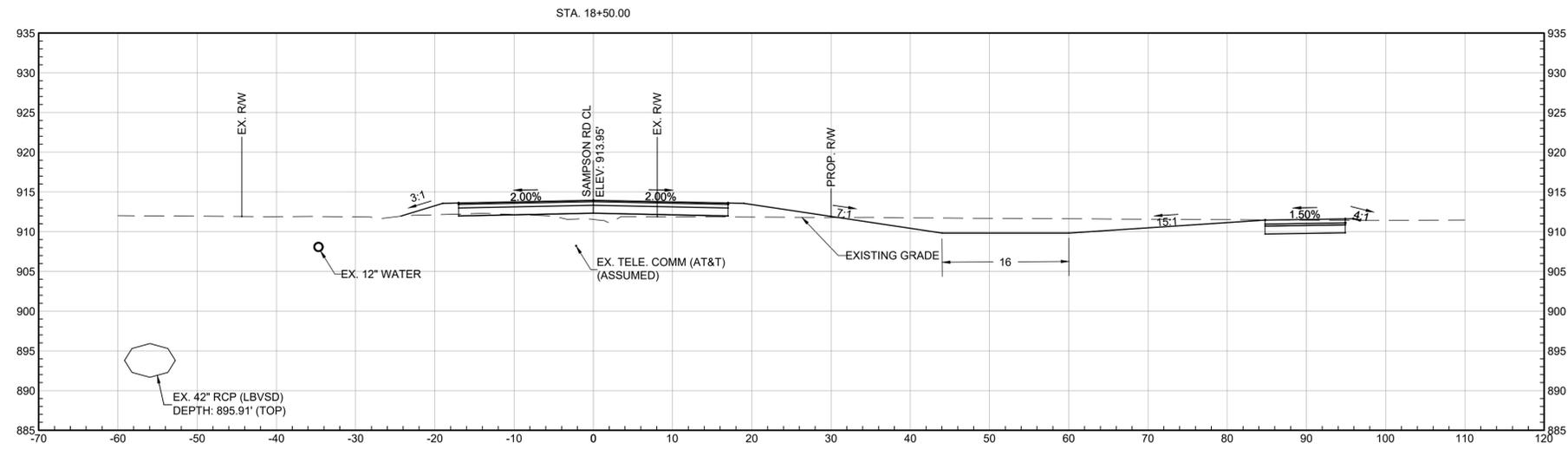
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SHEET TITLE  
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SHEET NO:  
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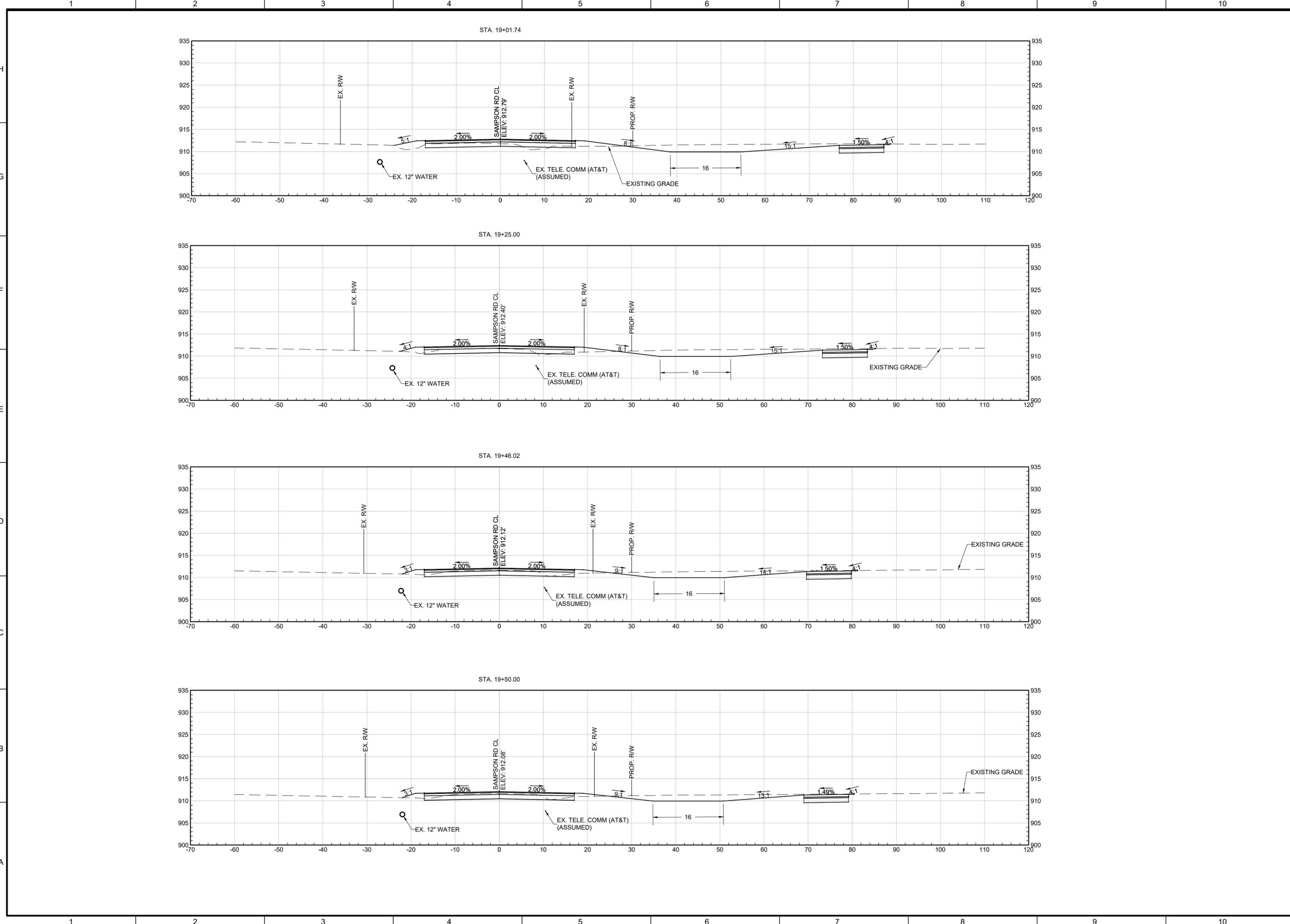
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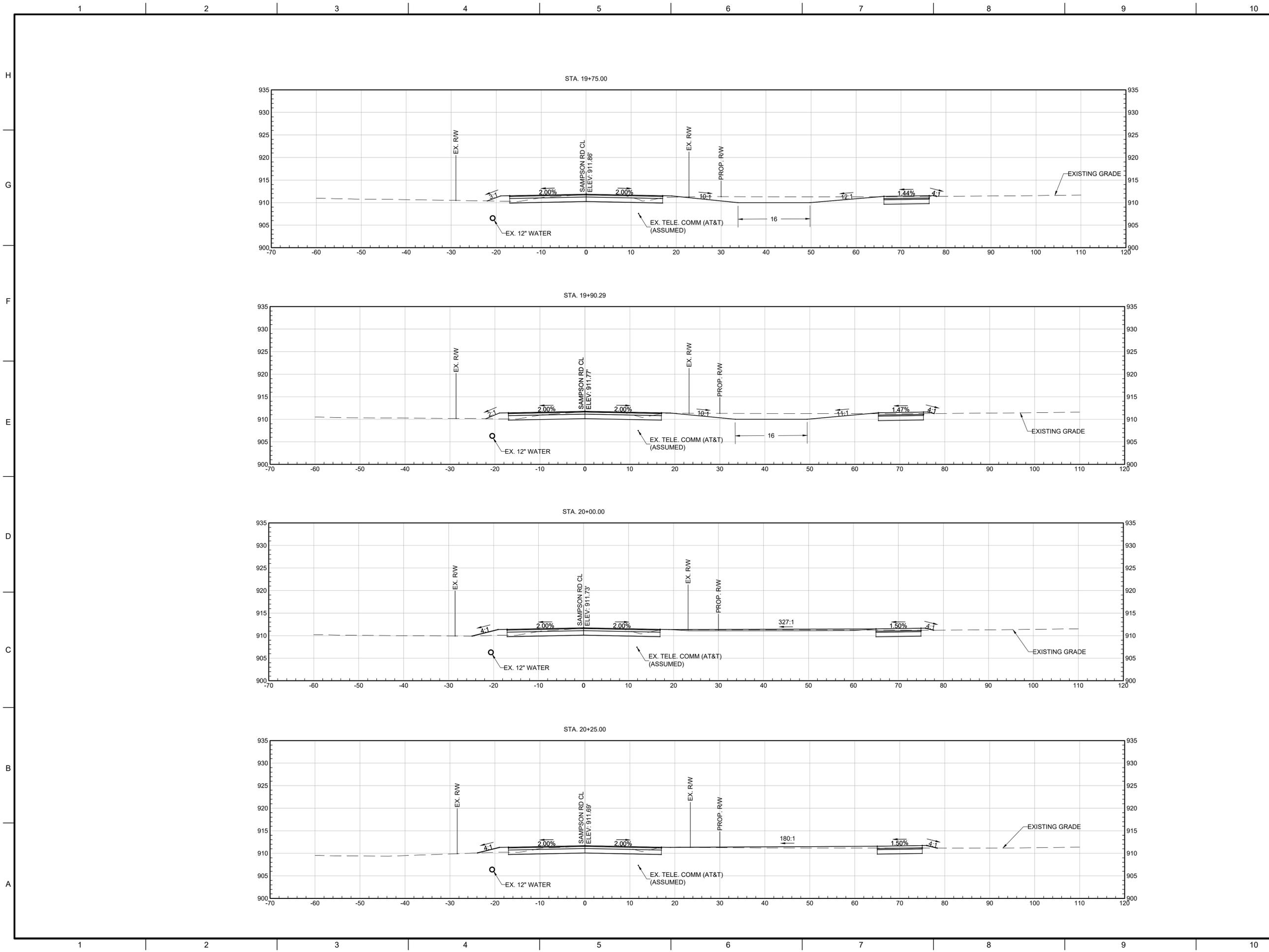
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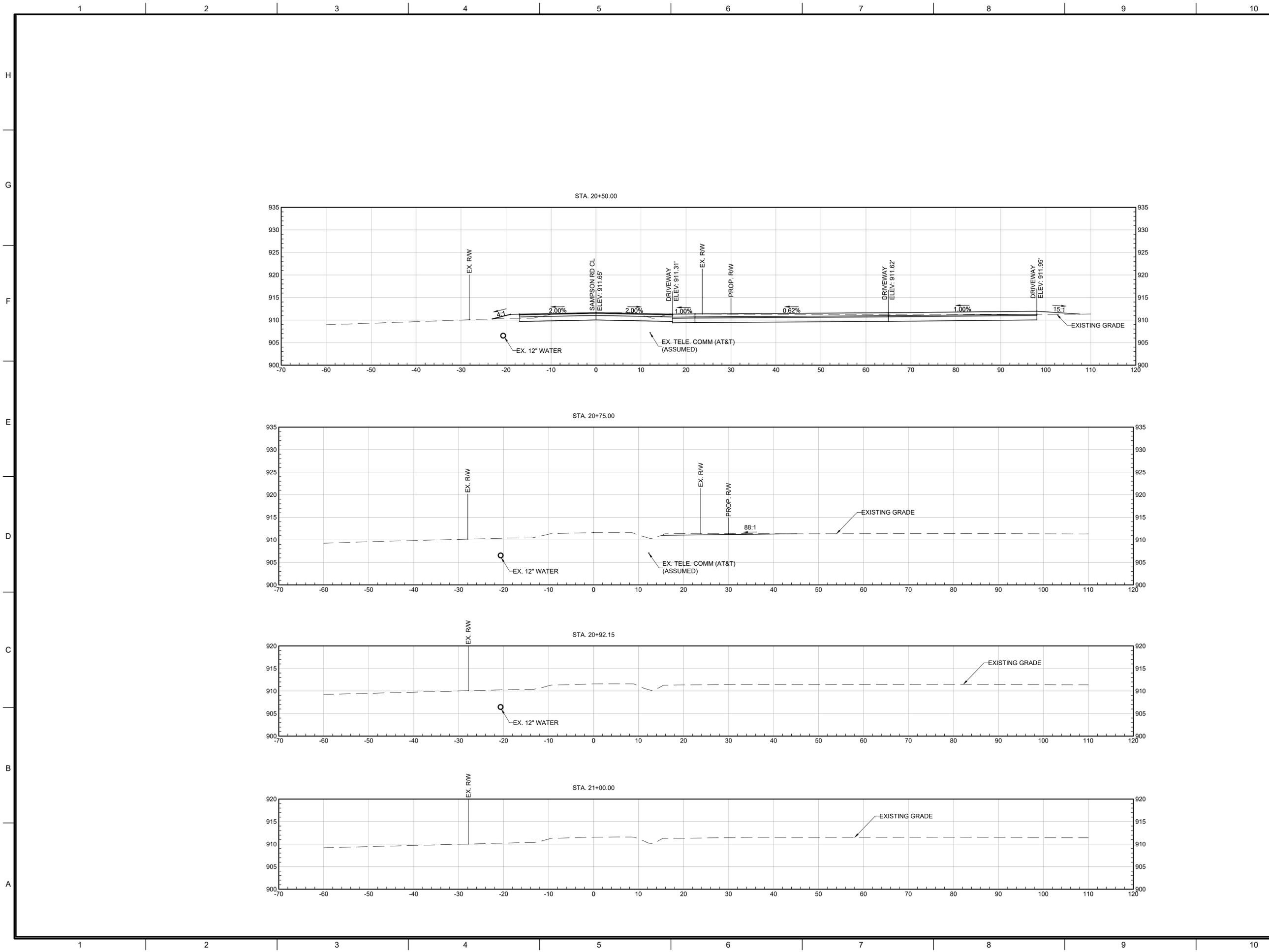
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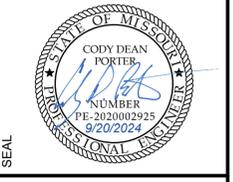
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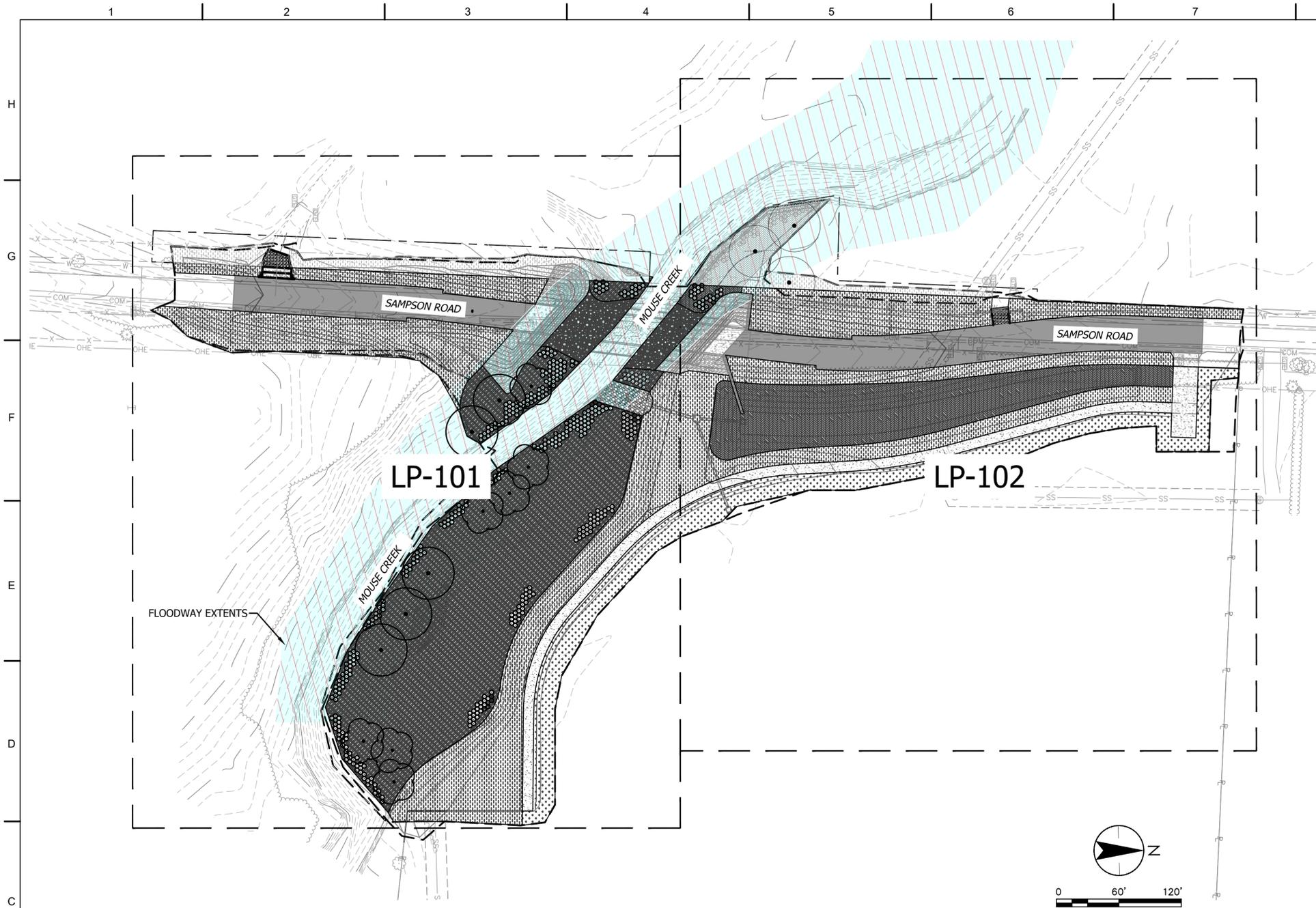
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SHEET TITLE  
**CROSS SECTIONS**

SHEET NO:  
**C-84**



**PLANT SCHEDULE**

SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME	CONT
<b>TREES</b>				
	CC	7	CARYA CORDIFORMIS BITTERNUT HICKORY	B&B
	PO	5	PLATANUS OCCIDENTALIS AMERICAN SYCAMORE	B&B

SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME	CONT
<b>SHRUBS</b>				
	SI	466	SALIX INTERIOR SANDBAR WILLOW	24" LIVE STAKE RE: 02/LP-500

SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME	CONT
<b>GROUND COVERS</b>				
	SEED	17,953 SF	TURF HYDROSEED DROUGHT TOLERANT FESCUE BLEND	SEED
	SEED	75,199 SF	MIX 1 - BANKFULL/FLOODPLAIN BENCH - UPLAND SPECIES	SEED
	AT		ASCLEPIAS TUBEROSA	SEED
	BC		BUTTERFLY MILKWEED	SEED
	EV		BOUTELOUA CURTIPENDULA	SEED
	RH		SIDE OATS GRAMA	SEED
	SL		ELYMUS VIRGINICUS	SEED
	SG		VIRGINIA WILD RYE	SEED
	AG		RUDBECKIA HIRTA	SEED
	AI		BLACK-EYED SUSAN	SEED
	PV		SCHIZACHYRIUM SCOPARIUM	SEED
	SN		LITTLE BLUESTEM	SEED
	SP		SOLIDAGO CANADENSIS	SEED
	SA		GOLDENROD	SEED
	TB		MIX 2 - BANKFULL/FLOODPLAIN BENCH - LOWLAND SPECIES	SEED
	CV	54,160 SF	ANDROPOGON GERARDII	SEED
	EV		BIG BLUESTEM	SEED
	PS		ASCLEPIAS INCARNATA	SEED
			SWAMP MILKWEED	SEED
			PANICUM VIRGATUM	SEED
			SWITCH GRASS	SEED
			SORGHASTRUM NUTANS	SEED
			INDIAN GRASS	SEED
			SPARTINA PECTINATA	SEED
			PRAIRIE CORDGRASS	SEED
			SYMPHYOTRICHUM NOVAE-ANGLIAE	SEED
			NEW ENGLAND ASTER	SEED
			TRADESCANTIA BRACTEATA	SEED
			PRAIRIE SPIDERWORT	SEED
		22,263 SF	MIX 3 - DETENTION BASIN/FORRESTED EDGE	SEED
			CAREX VULPINOIDEA	SEED
			FOX SEDGE	SEED
			ELYMUS VIRGINICUS	SEED
			VIRGINIA WILD RYE	SEED
			PASCOPYRUM SMITHII	SEED
			WESTERN WHEATGRASS	SEED

**NOTE:**  
 PLANT MIXES 1 - 3 TO BE SEED DRILLED INTO SOIL.  
 REFER TO CIVIL PLANS FOR AREAS TO RECEIVE BIODEGRADABLE TURF REINFORCEMENT MATS  
 OR EROSION CONTROL BLANKETS.

**REFERENCE NOTES SCHEDULE**

SYMBOL	DESCRIPTION	QTY	DETAIL
	RIP RAP STREAM BANK ARMORING REFER TO CIVIL DETAILS	4,759 SF	

**01 OVERALL LANDSCAPE PLAN**

**PLANTING NOTES**

- LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COORDINATION WITH SUBCONTRACTORS AND OTHER TRADES AS REQUIRED TO ACCOMPLISH PLANTING OPERATIONS.
- ALL PLANT MATERIAL SHALL CONFORM TO THE GUIDELINES ESTABLISHED BY THE "AMERICAN STANDARDS FOR NURSERY STOCK" (ANSI Z60.1-2014) PUBLISHED BY THE AMERICAN HORTICULTURE INDUSTRY ASSOCIATION.
- ALL TREES WILL BE BALLED AND BURLAPPED. ALL ROOT WRAPPING MADE OF SYNTHETIC OR PLASTIC MATERIAL SHALL BE REMOVED AT TIME OF PLANTING.
- ALL PLANT MATERIAL FURNISHED SHALL BE HEALTHY SPECIMENS FREE FROM PESTS, PLANT DISEASE OR DAMAGE. PRE-SELECTED, OR "TAGGED" MATERIAL MUST BE INSPECTED BY THE CONTRACTOR AND CERTIFIED PEST AND DISEASE FREE. IT IS THE CONTRACTOR'S OBLIGATION TO WARRANT ALL PLANT MATERIALS PER THE SPECIFICATIONS.
- SUPPLY ALL PLANT MATERIAL IN QUANTITIES SUFFICIENT TO COMPLETE THE PLANTING BED AS SHOWN ON THE DRAWINGS. IF CONFLICTS ARISE BETWEEN SIZE OF AREAS AND PLANS, CONTRACTOR SHALL CONTACT LANDSCAPE ARCHITECT FOR IMMEDIATE RESOLUTION. FAILURE TO MAKE SUCH CONFLICTS KNOWN TO THE LANDSCAPE ARCHITECT WILL RESULT IN CONTRACTOR'S LIABILITY TO RELOCATE THE MATERIALS.
- ALL PLANT MATERIAL SHALL BE INSPECTED AND APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO DELIVERY TO THE SITE.
- NO SUBSTITUTIONS OF PLANT MATERIAL SHALL BE MADE WITHOUT THE WRITTEN CONSENT OF THE LANDSCAPE ARCHITECT PRIOR TO DELIVERY TO THE SITE.
- ALL TREE AND SHRUB TAGS SHALL REMAIN ON THE PLANTS UNTIL THE TIME OF FINAL ACCEPTANCE.
- ALL TREES OF THE SAME SPECIES AND SIZE SHALL HAVE MATCHING HEIGHT AND FORM UNLESS OTHERWISE NOTED ON THE PLANS.
- ALL TREES AND STAKES SHALL BE SET PLUMB UNLESS OTHERWISE NOTED.
- ALL DECIDUOUS TREES SHALL BE WRAPPED. REFER TO SPECIFICATIONS FOR WRAP TYPE AND TIMING.
- ALL SHRUB PLANTING AREAS ARE TO BE PREPARED FOR LIVE STAKE PLANTINGS PER DETAILS. ALL SEEDING SHOULD BE SEED DRILLED INTO THE SOIL.
- ALL PROPOSED LANDSCAPING LOCATED IN THE RIGHT-OF-WAY SHALL COMPLY WITH LOCAL JURISDICTIONAL REQUIREMENTS FOR HEIGHT CLEARANCE, SPACING AND RELATIONSHIP TO OTHER IMPROVEMENTS TO PROVIDE ADEQUATE SIGHT DISTANCES AT ALL INTERSECTIONS AND ROADWAY CURVES.
- NO TREES SHALL BE PLANTED WITHIN 10' MIN. OF ANY WATER OR SEWER MAINS, WITHIN 6' MIN. OF WATER OR SEWER SERVICE LINES, AND WITHIN 4' MIN. OF GAS LINES. STREET TREES PLANTED WITHIN THE UTILITY EASEMENT MAY

- CONFLICT WITH UTILITIES. ADDITIONAL CONDUIT MAY BE REQUIRED TO PROTECT UNDERGROUND ELECTRIC LINES. FOR WATER VALVES LOCATED WITHIN PLANTING AREAS, KEEP A 2' RADIUS CLEAR OF SURFACE VEGETATION AROUND THE VALVE BOX. LOCAL JURISDICTIONAL REQUIREMENTS TAKE PRECEDENT.
- ALL PLANT MATERIAL AND FINAL LOCATIONS OF ALL PLANT MATERIALS SHALL BE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION. THE LANDSCAPE ARCHITECT RESERVES THE RIGHT TO ADJUST THE LOCATION OF PLANT MATERIAL DURING INSTALLATION AS APPROPRIATE TO THE PROJECT.
- MINOR ADJUSTMENTS IN PLANT PLACEMENT AND SPECIES MAY BE PROPOSED BY THE CONTRACTOR FOR CONSIDERATION AND APPROVAL BY THE LANDSCAPE ARCHITECT AT THE CONSTRUCTION STAGE TO RESPOND TO FIELD CONDITIONS AND PLANT AVAILABILITY. THERE SHALL BE NO REDUCTION IN PLANT MATERIAL. FOR TREES IN THE RIGHT-OF-WAY, ADJUSTMENTS MUST HAVE PRIOR AUTHORIZATION OF LANDSCAPE ARCHITECT AND/OR CITY FORESTER AS APPLICABLE.
- CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACEMENT OF ANY EXISTING PLANT MATERIAL DAMAGED DURING PLANTING OPERATIONS AND PRIOR TO FINAL ACCEPTANCE.
- CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT 48 HOURS PRIOR TO COMMENCEMENT OF WORK TO COORDINATE PROJECT INSPECTION SCHEDULES.
- OBTAIN LANDSCAPE ARCHITECT'S APPROVAL OF FINISH GRADING PRIOR TO THE COMMENCEMENT OF PLANTING OPERATIONS.
- LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING POSITIVE DRAINAGE THROUGHOUT THE SITE WITH ACCURATELY SET FLOW LINES. NO LOW SPOTS OR PONDING OF SURFACE WATER WILL BE ACCEPTED IN TEMPORARY OR FINAL WORK.
- PERFORM PERCOLATION TEST ON ALL TREE HOLES AND PLANTING BEDS PRIOR TO PLANTING. INFORM LANDSCAPE ARCHITECT OF RESULTS. REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.
- SEE SPECIFICATIONS FOR PLANTING REQUIREMENTS, SOIL PREPARATION TESTING, MATERIALS AND EXECUTION. ARRANGE FOR VISIT OF LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL A MINIMUM OF 48 HOURS PRIOR TO INSTALLATION.
- CONTRACTOR IS TO FAMILIARIZE HIMSELF WITH THE LAYOUT, GRADING AND CIVIL ENGINEERING DOCUMENTS TO COORDINATE ACTUAL LOCATION OF TREES AND SHRUBS.
- REFER TO LAYOUT DRAWINGS FOR LANDSCAPE EDGING LAYOUT. FIELD STAKE AND REVIEW LAYOUT WITH LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
- FIELD STAKE AND REVIEW LOCATIONS OF ALL PROPOSED TREES WITH LANDSCAPE ARCHITECT PRIOR TO THE COMMENCEMENT OF PLANTING OPERATIONS.
- SEE DETAILS AND SPECIFICATIONS FOR STAKING METHOD, PLANT PIT DIMENSIONS AND BACKFILL REQUIREMENTS.
- LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ADEQUATE WATER TO NEWLY INSTALLED MATERIALS TO MAINTAIN PLANT HEALTH FOR THE DURATION OF THE CONSTRUCTION PERIOD UNTIL FINAL ACCEPTANCE IS GRANTED AND THE REQUIRED MAINTENANCE PERIOD TAKES EFFECT.
- PLANT MATERIAL QUANTITIES ARE PROVIDED FOR THE CONTRACTOR'S CONVENIENCE ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF QUANTITY TAKEOFFS FOR ALL PLANT MATERIAL AS SHOWN ON PLANS.
- COORDINATE INSTALLATION OF LARGE PLANT MATERIAL WITH INSTALLATION OF WALL FOOTINGS AND ADJACENT PAVEMENTS. ANY DAMAGE TO IMPROVEMENTS IS THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR.

**PLANTING MAINTENANCE NOTES**

- ALL TREES, SHRUBS, GRASSES, PERENNIALS, SOD, AND/OR SEEDED AREAS SHALL BE MAINTAINED AND WATERED BY THE CONTRACTOR IN A NEAT AND ADEQUATE MANNER FOR THE DURATION OF THE CONSTRUCTION PERIOD UNTIL FINAL ACCEPTANCE IS GRANTED AND THE REQUIRED MAINTENANCE PERIOD TAKES EFFECT.
- REQUIRED MAINTENANCE ACTIVITIES SHALL INCLUDE, BUT NOT LIMITED TO, MOWING OF LAWNS, TRIMMING OF HEDGES, ADEQUATE IRRIGATION OR HAND-WATERING, REPLACEMENT OF DEAD, DISEASED OR UNSIGHTLY LANDSCAPING, REMOVAL OF WEEDS FROM PLANTED AREAS, AND APPROPRIATE PRUNING OF PLANT MATERIALS. ALL INSTALLED LANDSCAPE MATERIALS SHALL BE ADEQUATELY WATERED BY THE CONTRACTOR REGARDLESS IF THE IRRIGATION SYSTEM IS OPERATIONAL. ANY DAMAGE TO PLANT MATERIAL DUE TO NEGLIGENCE BY THE CONTRACTOR SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.

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**SEAL**  
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 KELLY VANDELDER  
 LANDSCAPE ARCHITECT  
 No. 000000000  
 LA-2008010666  
 10-20-2024

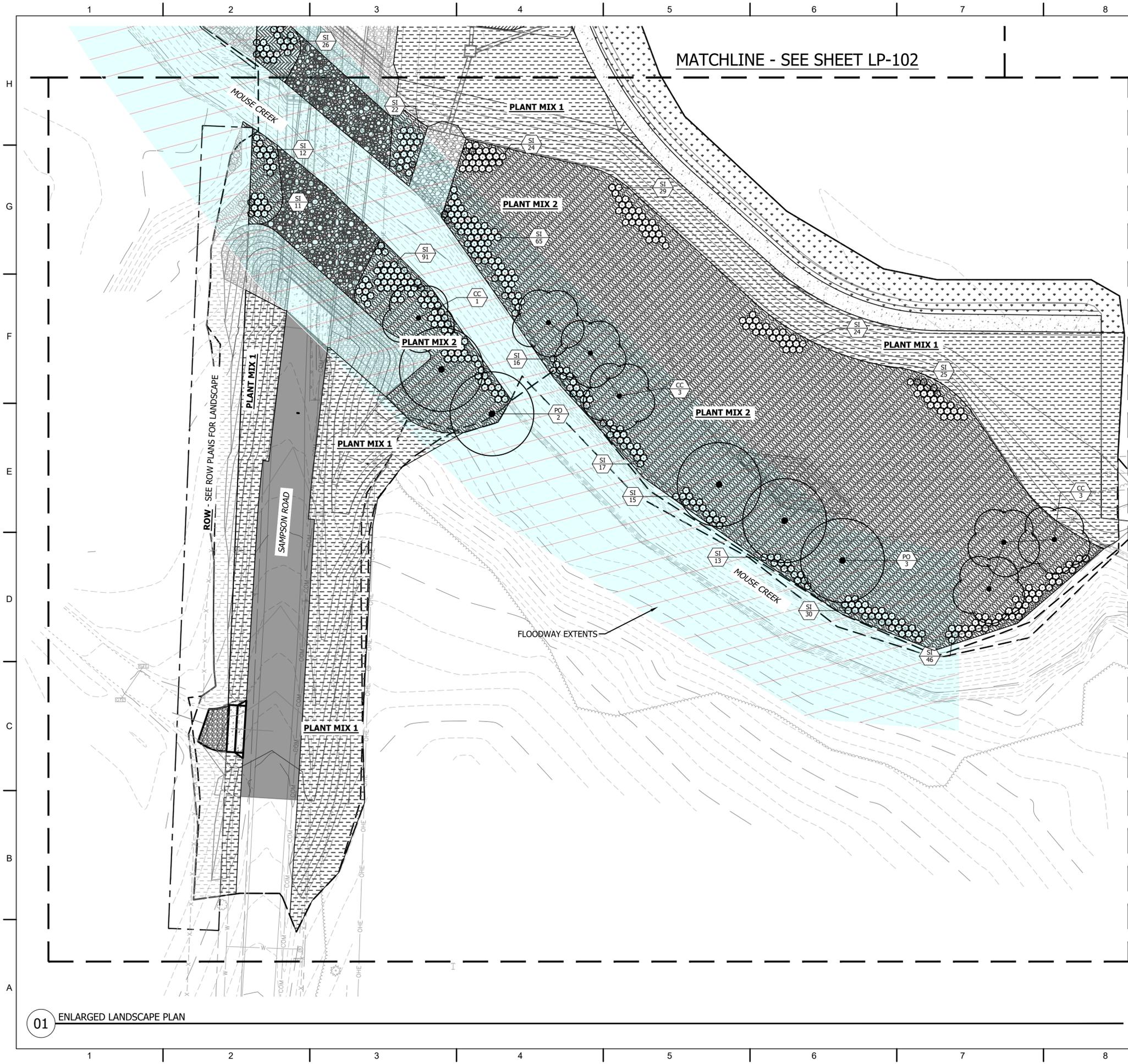
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REV.	DATE	DESCRIPTION	BY
	09.20.2024	BID PLAN SET	JS

PROJECT NO:  
 DESIGNED BY: TK  
 DRAWN BY: JS  
 CHECKED BY: TK  
 DATE: 09.20.2024

SHEET TITLE  
**OVERALL LANDSCAPE PLAN**

SHEET NO:  
**LP-100**



MATCHLINE - SEE SHEET LP-102

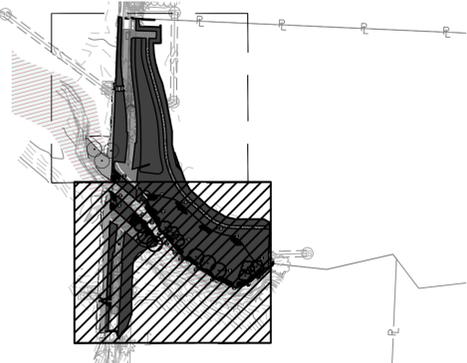
**PLANT SCHEDULE**

SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME
<b>TREES</b>			
	CC	7	CARYA CORDIFORMIS BITTERNUT HICKORY
	PO	5	PLATANUS OCCIDENTALIS AMERICAN SYCAMORE
<b>SHRUBS</b>			
	SI	466	SALIX INTERIOR SANDBAR WILLOW
<b>GROUND COVERS</b>			
	SEED	17,953 SF	TURF HYDROSEED DROUGHT TOLERANT FESCUE BLEND
	AT	75,199 SF	MIX 1 - BANKFULL/FLOODPLAIN BENCH - UPLAND SPECIES
	BC		ASCLEPIAS TUBEROSA BUTTERFLY MILKWEED
	EV		BOUTELOUA CURTIPENDULA SIDE OATS GRAMA
	RH		ELYMUS VIRGINICUS VIRGINIA WILD RYE
	SL		RUDBECKIA HIRTA BLACK-EYED SUSAN
	SG		SCHIZACHYRIUM SCOPARIUM LITTLE BLUESTEM
	AG	54,160 SF	SOLIDAGO CANADENSIS GOLDENROD
	AI		MIX 2 - BANKFULL/FLOODPLAIN BENCH - LOWLAND SPECIES
	PV		ANDROPOGON GERARDII BIG BLUESTEM
	SN		ASCLEPIAS INCARNATA SWAMP MILKWEED
	SP		PANICUM VIRGATUM SWITCH GRASS
	SA		SORGHASTRUM NUTANS INDIAN GRASS
	TB		SPARTINA PECTINATA PRAIRIE CORDGRASS
	CV	22,263 SF	SYMPHYOTRICHUM NOVAE-ANGLIAE NEW ENGLAND ASTER
	EV		TRADESCANTIA BRacteata PRAIRIE SPIDERWORT
	PS		MIX 3 - DETENTION BASIN/FORRESTED EDGE
	EV		CAREX VULPINOIDEA FOX SEDGE
	PS		ELYMUS VIRGINICUS VIRGINIA WILD RYE
			PASCOPYRUM SMITHII WESTERN WHEATGRASS

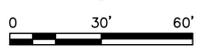
**NOTE:**  
PLANT MIXES 1 - 3 TO BE SEED DRILLED INTO SOIL.  
REFER TO CIVIL PLANS FOR AREAS TO RECEIVE BIODEGRADABLE TURF REINFORCEMENT MATS OR EROSION CONTROL BLANKETS.

**REFERENCE NOTES SCHEDULE**

SYMBOL	DESCRIPTION	QTY	DET
	RIP RAP STREAM BANK ARMORING REFER TO CIVIL DETAILS	4,759 SF	



**KEY PLAN**



**WILSON & COMPANY**  
800 EAST 101ST TERRACE, SUITE 200  
KANSAS CITY, MO 64131  
PHONE: 816-701-3100  
FAX: 816-942-3013  
www.wilsonco.com

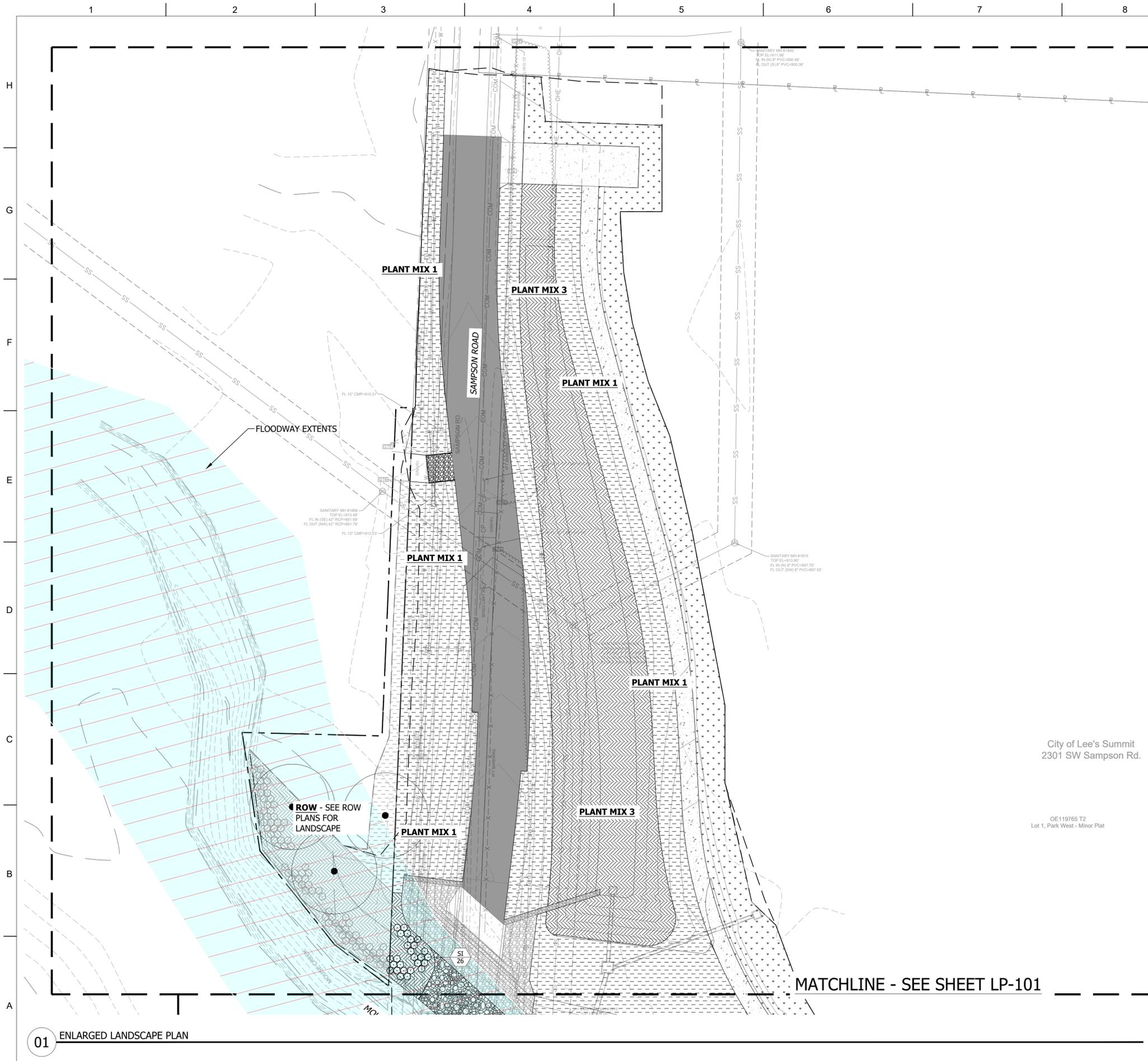
**Stantec**  
CONSULTANTS  
Stantec  
7208 West 80th Street, Suite 201  
Overland Park, KS 66204  
Tel: 913-905-3415  
www.stantec.com



PROJECT NAME  
**CITY OF LEE'S SUMMIT, MO  
SAMPSON ROAD BRIDGE  
REPLACEMENT  
PROJECT NO. 997**

REV.	DATE	DESCRIPTION	BY
	09.20.2024	BID PLAN SET	JS

PROJECT NO:	
DESIGNED BY:	TK
DRAWN BY:	JS
CHECKED BY:	TK
DATE:	09.20.2024
SHEET TITLE	
ENLARGED LANDSCAPE PLAN	
SHEET NO:	
LP-101	



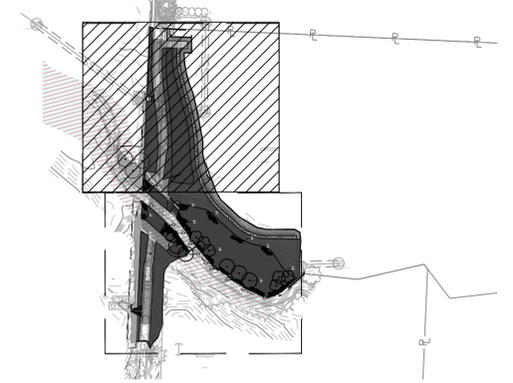
**PLANT SCHEDULE**

SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME
<b>TREES</b>			
	CC	7	CARYA CORDIFORMIS BITTERNUT HICKORY
	PO	5	PLATANUS OCCIDENTALIS AMERICAN SYCAMORE
<b>SHRUBS</b>			
	SI	466	SALIX INTERIOR SANDBAR WILLOW
<b>GROUND COVERS</b>			
	SEED	17,953 SF	TURF HYDROSEED DROUGHT TOLERANT FESCUE BLEND
	AT	75,199 SF	MIX 1 - BANKFULL/FLOODPLAIN BENCH - UPLAND SPECIES
	BC		ASCLEPIAS TUBEROSA BUTTERFLY MILKWEED BOUPELLOUA CURTIPENDULA SIDE OATS GRAMA ELYMUS VIRGINICUS VIRGINIA WILD RYE RUDBECKIA HIRTA BLACK-EYED SUSAN SCHIZACHYRIUM SCOPARIUM LITTLE BLUESTEM SOLIDAGO CANADENSIS GOLDENROD
	EV	54,160 SF	MIX 2 - BANKFULL/FLOODPLAIN BENCH - LOWLAND SPECIES
	RH		ANDROPOGON GERARDII BIG BLUESTEM ASCLEPIAS INCARNATA SWAMP MILKWEED PANICUM VIRGATUM SWITCH GRASS SORGHASTRUM NUTANS INDIAN GRASS SPARTINA PECTINATA PRAIRIE CORDGRASS SYMPHYOTRICHUM NOVAE-ANGLIAE NEW ENGLAND ASTER TRADESCANTIA BRACATEATA PRAIRIE SPIDERWORT
	SL	22,263 SF	MIX 3 - DETENTION BASIN/FORRESTED EDGE
	SG		CAREX VULPINOIDEA FOX SEDGE ELYMUS VIRGINICUS VIRGINIA WILD RYE PASCOPYRUM SMITHII WESTERN WHEATGRASS

**NOTE:**  
PLANT MIXES 1 - 3 TO BE SEED DRILLED INTO SOIL.  
REFER TO CIVIL PLANS FOR AREAS TO RECEIVE BIODEGRADABLE TURF REINFORCEMENT MATS OR EROSION CONTROL BLANKETS.

**REFERENCE NOTES SCHEDULE**

SYMBOL	DESCRIPTION	QTY	DET
	RIP RAP STREAM BANK ARMORING REFER TO CIVIL DETAILS	4,759 SF	



**KEY PLAN**



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**CITY OF LEE'S SUMMIT, MO**  
**SAMPSON ROAD BRIDGE**  
**REPLACEMENT**  
**PROJECT NO. 997**

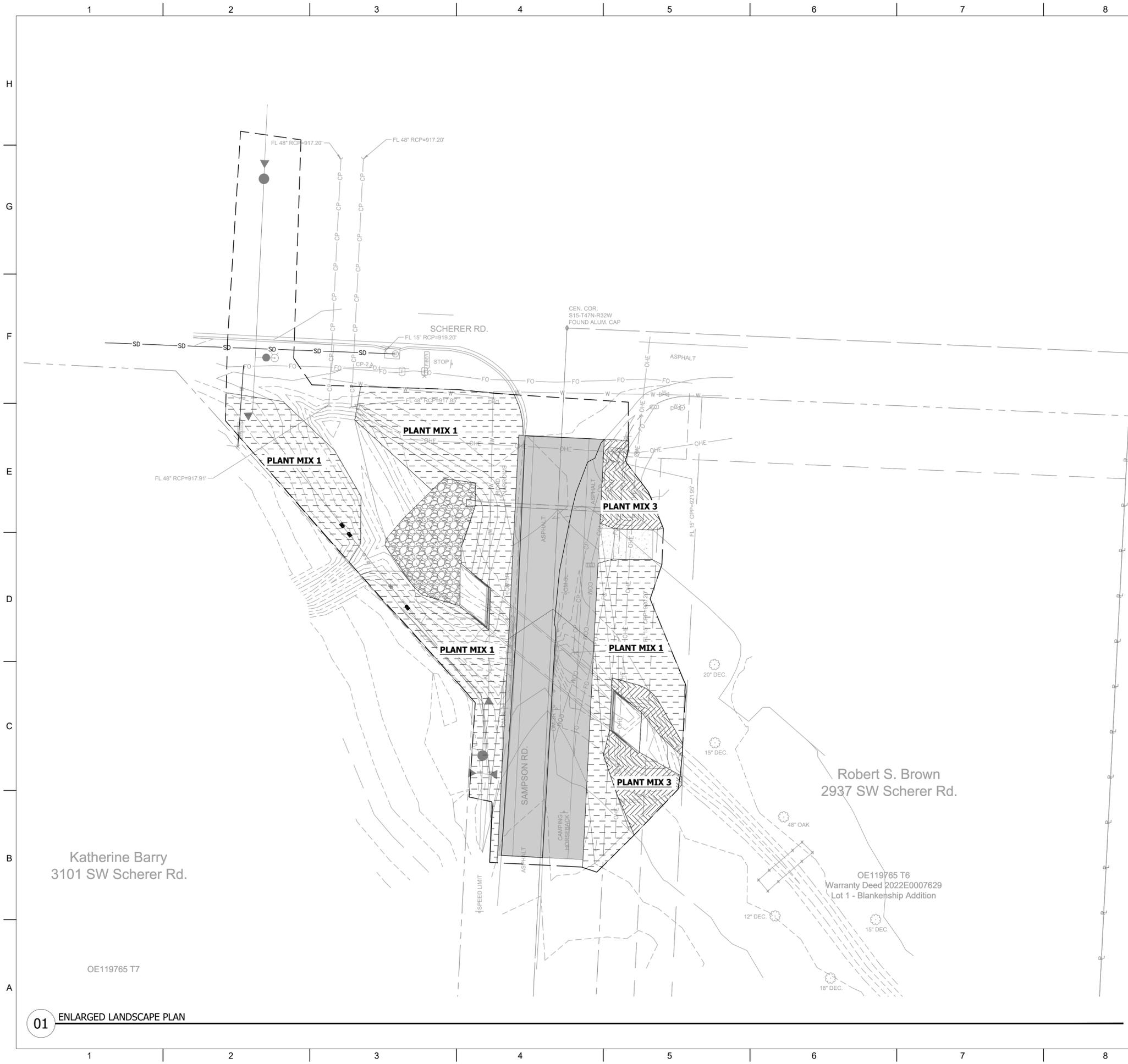
REV.	DATE	DESCRIPTION	BY
	09.20.2024	BID PLAN SET	JS

PROJECT NO:  
DESIGNED BY: TK  
DRAWN BY: JS  
CHECKED BY: TK  
DATE: 09.20.2024

SHEET TITLE  
**ENLARGED LANDSCAPE PLAN**

SHEET NO:  
**LP-102**

MATCHLINE - SEE SHEET LP-101



**PLANT SCHEDULE**

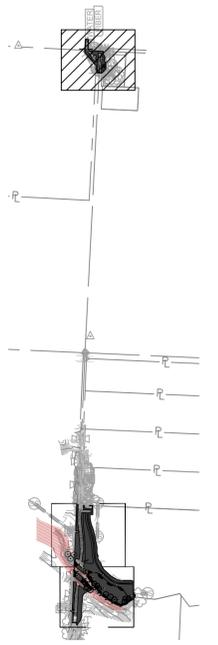
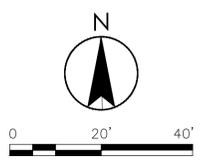
SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME
<b>TREES</b>			
	CC	7	CARYA CORDIFORMIS BITTERNUT HICKORY
	PO	5	PLATANUS OCCIDENTALIS AMERICAN SYCAMORE
<b>SHRUBS</b>			
	SI	466	SALIX INTERIOR SANDBAR WILLOW
<b>GROUND COVERS</b>			
	SEED	17,953 SF	TURF HYDROSEED DROUGHT TOLERANT FESCUE BLEND
	AT	75,199 SF	MIX 1 - BANKFULL/FLOODPLAIN BENCH - UPLAND SPECIES
	BC		ASCLEPIAS TUBEROSA BUTTERFLY MILKWEED BOULETELOUA CURTIPENDULA SIDE OATS GRAMA ELYMUS VIRGINICUS VIRGINIA WILD RYE RUDBECKIA HIRTA BLACK-EYED SUSAN SCHIZACHYRIUM SCOPARIUM LITTLE BLUESTEM SOLIDAGO CANADENSIS GOLDENROD
	EV	54,160 SF	MIX 2 - BANKFULL/FLOODPLAIN BENCH - LOWLAND SPECIES
	AG		ANDROPOGON GERARDII BIG BLUESTEM ASCLEPIAS INCARNATA SWAMP MILKWEED PANICUM VIRGATUM SWITCH GRASS SORGHASTRUM NUTANS INDIAN GRASS SPARTINA PECTINATA PRAIRIE CORN GRASS SYMPHYOTRICHUM NOVAE-ANGLIAE NEW ENGLAND ASTER TRADESCANTIA BRACTEATA PRAIRIE SPIDERWORT
	AI		
	PV		
	SN		
	SP		
	SA		
	TB		
	CV	22,263 SF	MIX 3 - DETENTION BASIN/FORESTED EDGE
	EV		CAREX VULPINOIDEA FOX SEDGE ELYMUS VIRGINICUS VIRGINIA WILD RYE PASCOPYRUM SMITHII WESTERN WHEATGRASS
	PS		

**NOTE:**  
PLANT MIXES 1 - 3 TO BE SEED DRILLED INTO SOIL.  
REFER TO CIVIL PLANS FOR AREAS TO RECEIVE BIODEGRADABLE TURF REINFORCEMENT MATS OR EROSION CONTROL BLANKETS.

**REFERENCE NOTES SCHEDULE**

SYMBOL	DESCRIPTION	QTY	DET
	RIP RAP STREAM BANK ARMORING REFER TO CIVIL DETAILS	4,759 SF	

**KEY PLAN**



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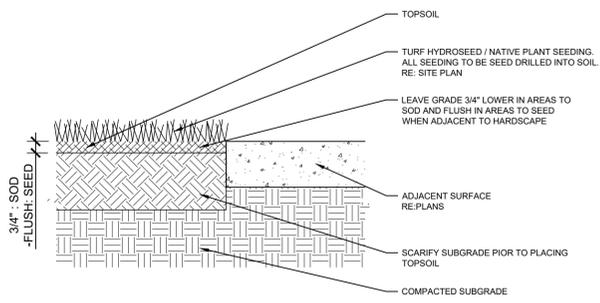


**PROJECT NAME**  
CITY OF LEE'S SUMMIT, MO  
SAMPSON ROAD BRIDGE  
REPLACEMENT  
PROJECT NO. 997

REV.	DATE	DESCRIPTION	BY
	09.20.2024	BID PLAN SET	JS

PROJECT NO:  
DESIGNED BY: TK  
DRAWN BY: JS  
CHECKED BY: TK  
DATE: 09.20.2024  
SHEET TITLE  
ENLARGED  
LANDSCAPE PLAN

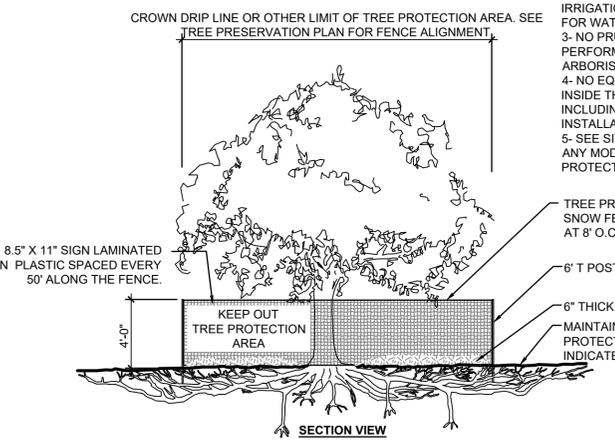
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LP-103



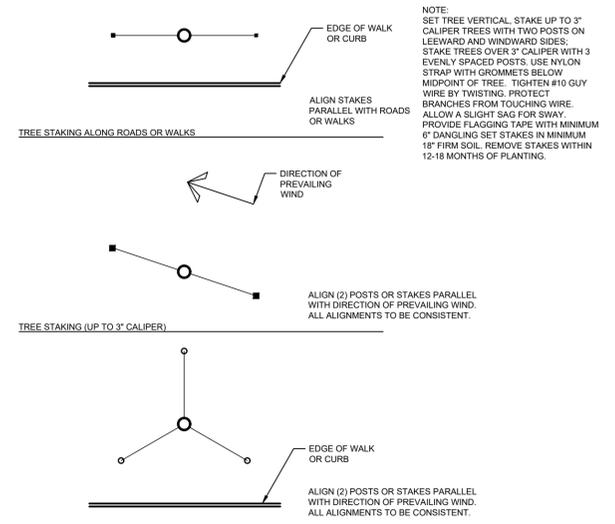
**01 TURF HYDROSEED AND NATIVE PLANT SEEDING**  
SCALE: 1" = 1'-0"

SEE CIVIL DISTURBANCE PLANS FOR AREAS ADJACENT TO EXISTING TREES THAT NEED TREE PROTECTION. CONTRACTOR TO FIELD VERIFY AND NOTIFY LANDSCAPE ARCHITECT WHEN PROTECTION IS SET.

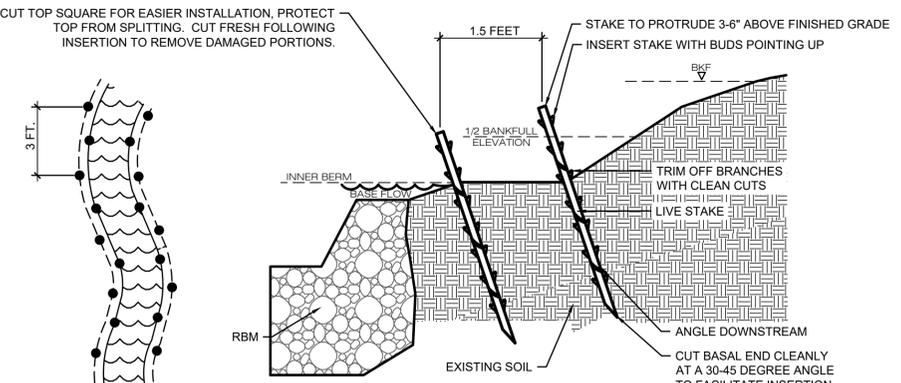
- NOTES:
- 1- SEE SPECIFICATIONS FOR ADDITIONAL TREE PROTECTION REQUIREMENTS.
  - 2- IF THERE IS NO EXISTING IRRIGATION, SEE SPECIFICATIONS FOR WATERING REQUIREMENTS.
  - 3- NO PRUNING SHALL BE PERFORMED EXCEPT BY APPROVED ARBORIST.
  - 4- NO EQUIPMENT SHALL OPERATE INSIDE THE PROTECTIVE FENCING INCLUDING DURING FENCE INSTALLATION AND REMOVAL.
  - 5- SEE SITE PREPARATION PLAN FOR ANY MODIFICATIONS WITH THE TREE PROTECTION AREA.



**04 TREE PROTECTION DETAIL**  
SCALE: 3/16" = 1'-0"

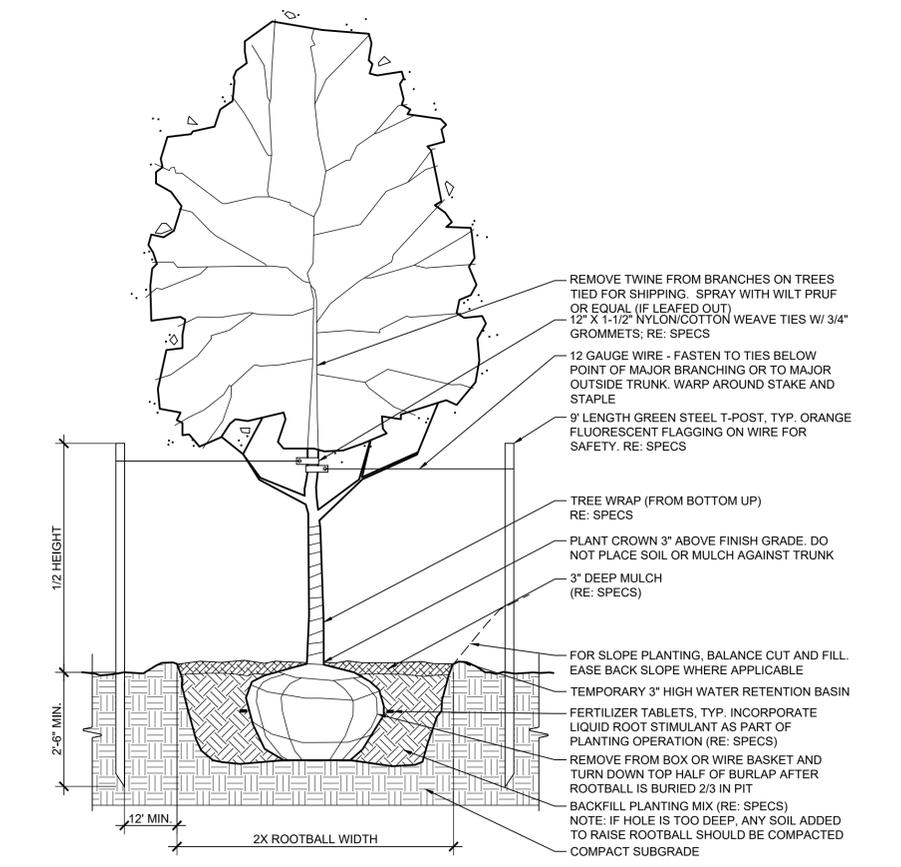


**05 STAKING AND GUYING**  
SCALE: 1/2" = 1'-0" DETAIL-FILE

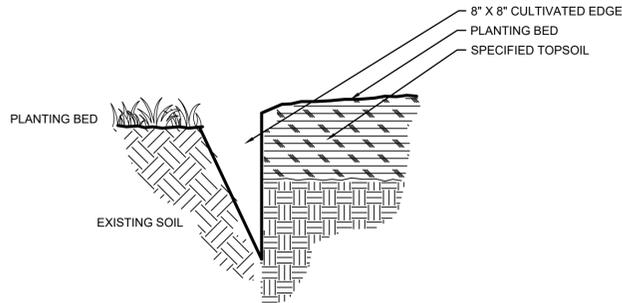


**02 LIVE STAKE INSTALLATION**  
SCALE: 1" = 1'-0"

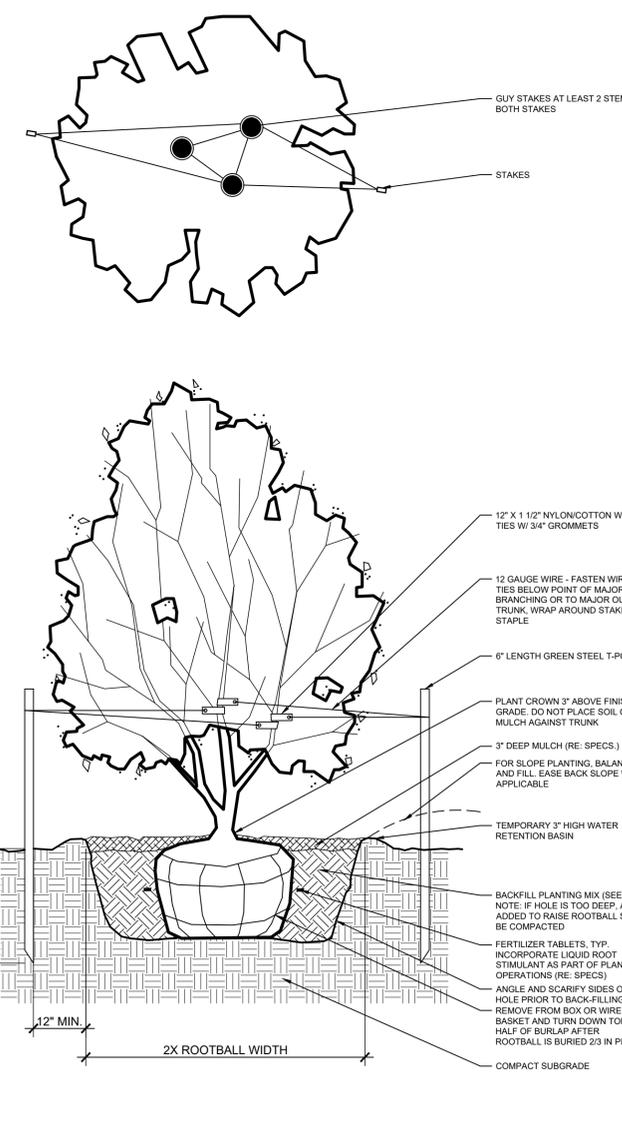
- NOTES:
1. CITY OF LEE'S SUMMIT MAY ADJUST LOCATIONS AND/OR SPACING OF LIVE STAKES PRIOR TO INSTALLATION.
  2. CONTRACTOR TO REVIEW LOCATIONS OF LIVE STAKES WITH CITY OF LEE'S SUMMIT PRIOR TO INSTALLATION.
  3. CLIENT MAY REJECT LIVE STAKE PLANT MATERIAL IF THEY DO NOT MEET THE SPECIFICATIONS.
  4. INSTALLATION OF SOME LIVE STAKES MAY BE THROUGH THE REINFORCED BED MIX AND THE CONTRACTOR MUST INSTALL THE LIVE STAKES WITHOUT DAMAGING THE MATERIALS.
  5. ROOT GROWTH HORMONE SHALL BE APPLIED TO LIVE STAKES PRIOR TO INSTALLATION.



**06 DECIDUOUS TREE**  
SCALE: 1/2" = 1'-0" DETAIL-FILE



**03 CULTIVATED EDGING**  
SCALE: 1/2" = 1'-0"



**07 MULTI-TRUNKED TREE PLANTING**  
SCALE: 1/2" = 1'-0" DETAIL-FILE

**WILSON & COMPANY**  
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PROJECT NAME  
**CITY OF LEE'S SUMMIT, MO  
SAMPSON ROAD BRIDGE  
REPLACEMENT  
PROJECT NO. 997**

REV.	DATE	DESCRIPTION	BY
	09.20.2024	BID PLAN SET	JS

PROJECT NO:  
DESIGNED BY: TK  
DRAWN BY: JS  
CHECKED BY: TK  
DATE: 09.20.2024

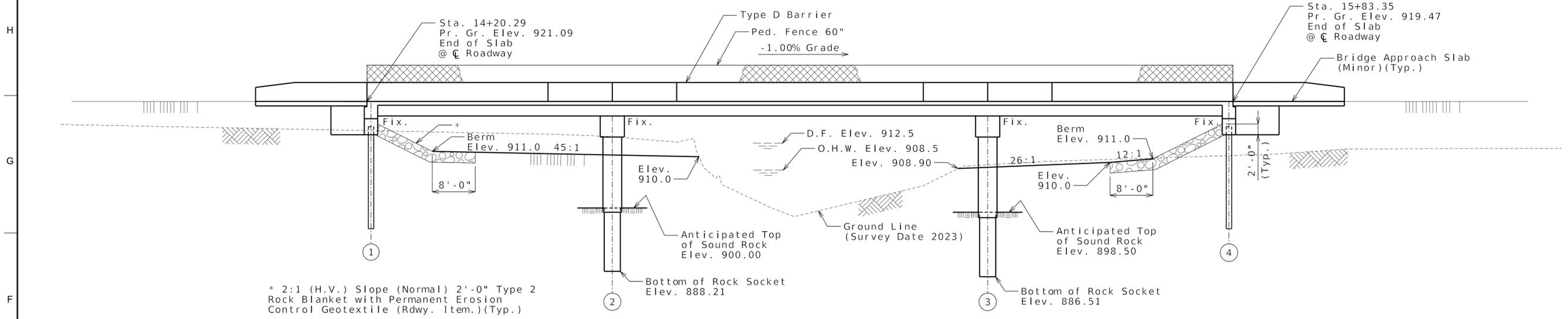
SHEET TITLE  
**PLANTING  
DETAILS**

SHEET NO:  
**LP-500**

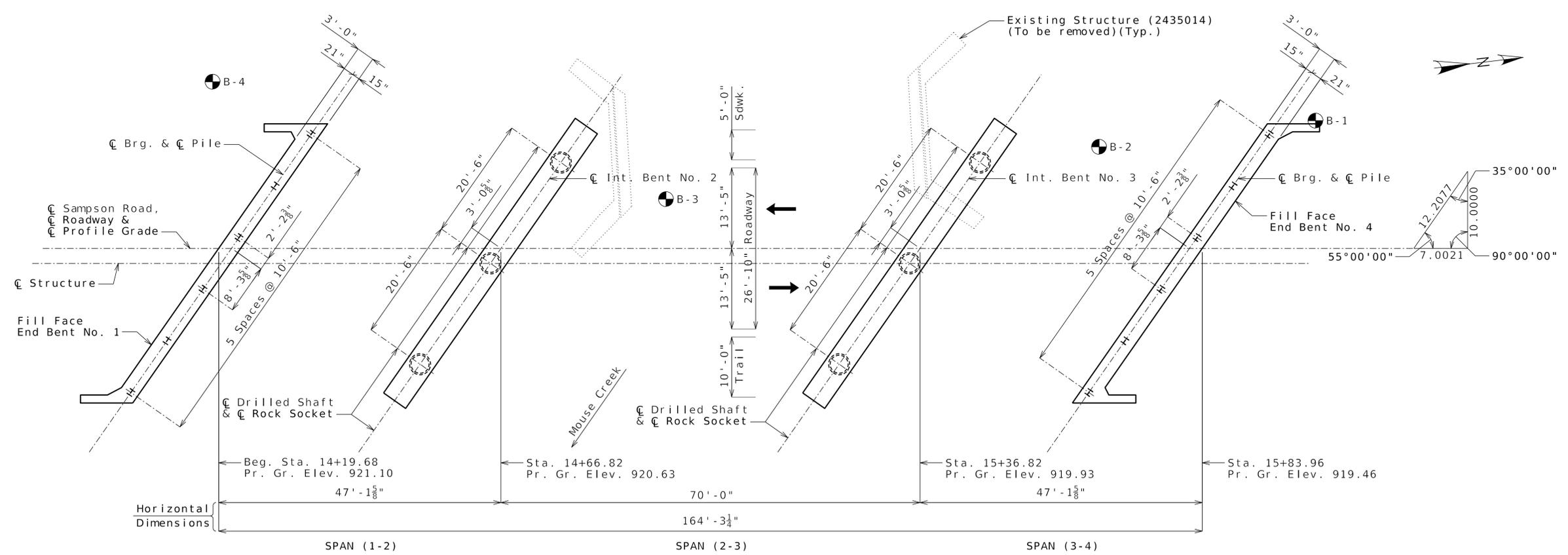
(45' - 70' - 45') PRESTRESSED CONCRETE SPREAD BOX BEAM SPANS  
SKEW: 35° L.A.

SEC/SUR 22 TWP 47N RGE 32W

**WILSON & COMPANY**  
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GENERAL ELEVATION



PLAN

Indicates location of borings.  
Notice and Disclaimer Regarding Boring Log Data

The locations of all subsurface borings for this structure are shown on the plan sheet(s) for this structure. The boring data for all locations indicated, as well as any other boring logs or other factual records of subsurface data and investigations performed by Terracon for the design of the project, may be requested from the Project Contact upon written request. No greater significance or weight should be given to the boring data depicted on the plan sheets than is given to the subsurface data available from the district or elsewhere.

C.P. #3 - SET Bar W/ WCI ALUM CAP  
N. 986915.854, E. 2804985.955 ELEV. 931.86

C.P. #5019 - FOUND BAR  
N. 986634.318, E. 2805035.799, ELEV. 942.48

C.P. #5018 - FOUND BAR  
N. 989575.949, E. 2805148.320, ELEV. 939.26

**BRIDGE: SAMPSON ROAD  
OVER MOUSE CREEK**  
SAMPSON ROAD FROM E. 139TH ST. TO SW SCHERER ROAD  
ABOUT 0.6 MILES NORTH OF E. 139TH ST.  
BEGINNING STA. 14+19.68

Designed July 2024  
Detailed Aug. 2024  
Checked Aug. 2024

Note: This drawing is not to scale. Follow dimensions.

CONSULTANTS

SEAL

**CITY OF LEE'S SUMMIT, MO  
SAMPSON ROAD BRIDGE  
REPLACEMENT  
PROJECT NO. 997**

REV.	DATE	DESCRIPTION	BY

PROJECT NO: 23-600-303-00  
DESIGNED BY: WGF  
DRAWN BY: GAC  
CHECKED BY: JMK  
DATE: 09/04/2024

SHEET TITLE  
**PLAN AND ELEVATION**

SHEET NO:  
**STR-01**

Estimated Quantities				
Item	Substr.	Superstr.	Total	
Class 1 Excavation	cu. yard	90		90
Removal of Bridge (2435014)	lump sum			1
Bridge Approach Slab (Minor Road)	sq. yard		131	131
Drilled Shafts (3 ft. 6 in. Dia.)	linear foot	81.6		81.6
Rock Sockets (3 ft. 0 in. Dia.)	linear foot	70.8		70.8
Video Camera Inspection	each	6		6
Foundation Inspection Holes	linear foot	130.8		130.8
Sonic Logging Testing	each	18		18
Galvanized Structural Steel Pile (12 in.)	linear foot	228		228
Pre-Bore for Piling	linear foot	72		72
Pile Point Reinforcement	each	12		12
Class B Concrete (Substructure)	cu. yard	118.6		118.6
Type D Barrier	linear foot		404	404
Slab on Concrete Beam	sq. yard		842	842
24 in. Prestressed Concrete Spread Box Beam	linear foot		798	798
Reinforcing Steel (Bridges)	pound	23,410		23,410
Vertical Drain at End Bents	each			2
Plain Neoprene Bearing Pad	each		10	10
Laminated Neoprene Bearing Pad	each		20	20

All concrete above the construction joint in the end bents is included in the Estimated Quantities for Slab on Concrete Beam.

All reinforcement in the end bents is included in the Estimated Quantities for Slab on Concrete Beam.

All reinforcement in the intermediate bent concrete diaphragms except reinforcement embedded in the beam cap is included in the Estimated Quantities for Slab on Concrete Beam.

All concrete above the intermediate beam cap is included in the Estimated Quantities for Slab on Concrete Beam.

Foundation Data					
Type	Design Data	Bent Number			
		1	2	3	4
Load Bearing Pile	Pile Type and Size	HP12x53	-	-	HP12x53
	Number	ea	6	-	6
	Approximate Length Per Each	ft	19	-	19
	Pile Point Reinforcement	ea	All	-	All
	Min. Galvanized Penetration (Elev.)	ft	Full Length	-	Full Length
	Pile Driving Verification Method		DF	-	DF
	Resistance Factor		0.4	-	0.4
Rock Socket	Minimum Nominal Axial Compressive Resistance	kip	563	-	563
	Number	ea	-	3	3
	Foundation Material		-	Rock	Rock
		Elevation Range	ft	-	900-889
	Minimum Nominal Axial Compressive Resistance (Side Resistance)	ksf	-	19.6	19.6
				-	-

DF = FHWA-modified Gates Dynamic Pile Formula

Load Bearing Pile:  
 $\text{Minimum Nominal Axial Compressive Resistance} = \frac{\text{Maximum Factored Loads}}{\text{Resistance Factor}}$

Rock Socket (Drilled Shafts):  
 $\text{Minimum Nominal Axial Compressive Resistance} = \frac{\text{Maximum Factored Loads}}{\text{Resistance Factor}}$  (Side Resistance)

All piles shall be galvanized down to the minimum galvanized penetration (elevation).

Pile point reinforcement need not be galvanized. Shop drawings will not be required for pile point reinforcement.

HP piles are anticipated to be driven to refusal on rock. Review all borings for depth of rock and restrict driving as appropriate to comply with hard rock driving criteria in accordance with Sec 702.

Pre-bore for piles at Bent No. 1 to elevation 899.79.

### General Notes:

Design Specifications:  
 2020 AASHTO LRFD Bridge Design Specifications (9th Ed.)

Seismic Design Category = A

Design Loading:  
 Vehicular = HL-93

Future Wearing Surface = 35 lb/sf

Earth 120 lb/cf, Equivalent Fluid Pressure = 45 lb/cf (Min.)  
 Superstructure: Simply-supported, Non-composite for dead load.  
 Continuous composite for live load.

Design Unit Stresses:  
 Class B Concrete (Substructure) f'c = 3,000 psi

Class B-2 Concrete (Superstructure, except Prestressed Beams, and Barrier) f'c = 4,000 psi

Class B-1 Concrete (Barrier) f'c = 4,000 psi

Class B-2 Concrete (Drilled Shafts & Rock Sockets) f'c = 4,000 psi

Reinforcing Steel (Grade 60) f'c = 60,000 psi

Structural Steel HP Pile (ASTM A709 Grade 50S) fy = 50,000 psi

For prestressed box beam stresses, see Sheets No. STR-9 & STR-10.

Neoprene Pads:  
 Plain and Laminated Neoprene bearing pads shall be 60 durometer and shall be in accordance with Sec 716.

Joint Filler:  
 All joint filler shall be in accordance with Sec 1057 for preformed sponge rubber expansion and partition joint filler, except as noted.

Reinforcing Steel:  
 Minimum clearance to reinforcing steel shall be 1 1/2", unless otherwise shown.

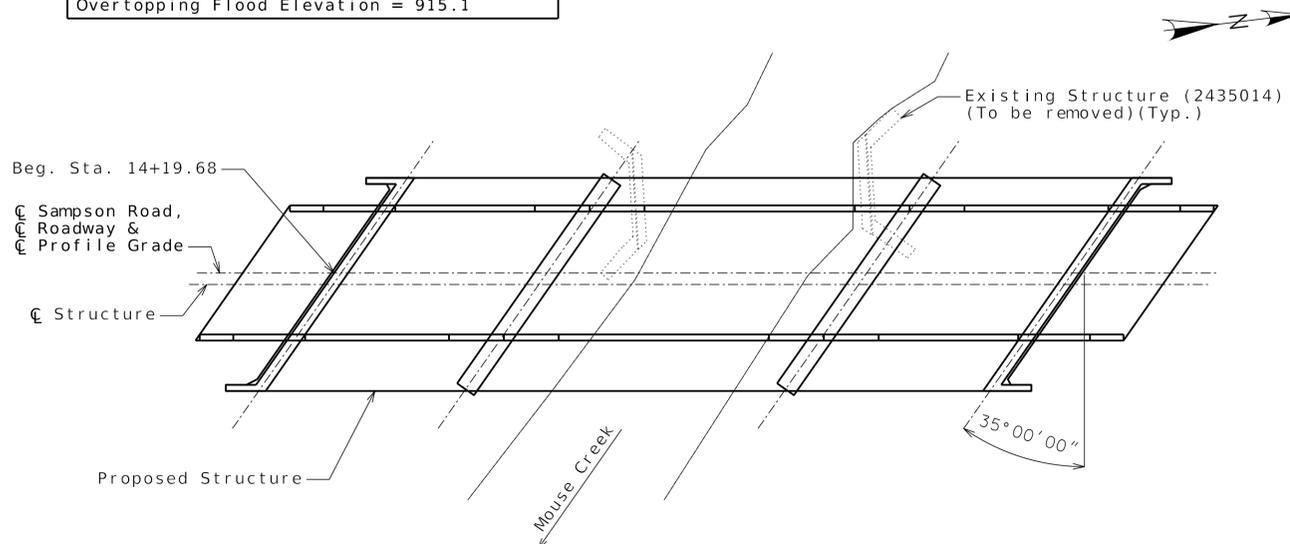
Traffic Handling:  
 Structure to be closed during construction. Traffic to be maintained on other routes during construction. See roadway plans for traffic control details.

Hydrologic Data	
Drainage Area	= 5.8 mi <sup>2</sup>
Design Flood Frequency	= 100 years
Design Flood Discharge	= 4,600 cfs
Design Flood (D.F.) Elevation	= 912.5
Estimated Backwater	= 3.30 ft
Average Velocity thru Opening	= 8.8 ft/s
Freeboard (50-year)	
Freeboard	= 4.8 ft
Roadway Overtopping	
Overtopping Flood Discharge	= 6,700 cfs
Overtopping Flood Frequency	= 400 years
Overtopping Flood Elevation	= 915.1

Estimated Quantities for Slab on Concrete Beam		
Item		Total
Class B-2 Concrete	cu. yard	272
Reinforcing Steel (Epoxy Coated)	pound	69,827

The table of Estimated Quantities for Slab on Concrete Beam represents the quantities used by the State in preparing the cost estimate for concrete slabs. The area of the concrete slab will be measured to the nearest square yard longitudinally from end of slab to end of slab and transversely from out to out of bridge slab (or with the horizontal dimensions as shown on the plan of slab). Payment for stay-in-place corrugated steel forms, conventional forms, all concrete and epoxy coated reinforcing steel will be considered completely covered by the contract unit price for the slab. Variations may be encountered in the estimated quantities but the variations cannot be used for an adjustment in the contract unit price.

Method of forming the slab shall be as shown on the plans and in accordance with Sec 703. All hardware for forming the slab to be left in place as a permanent part of the structure shall be coated in accordance with ASTM A123 or ASTM B633 with a thickness class SC 4 and a finish type I, II or III.



LOCATION SKETCH

Detailed Aug. 2024  
 Checked Aug. 2024

Note: This drawing is not to scale. Follow dimensions.

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CONSULTANTS

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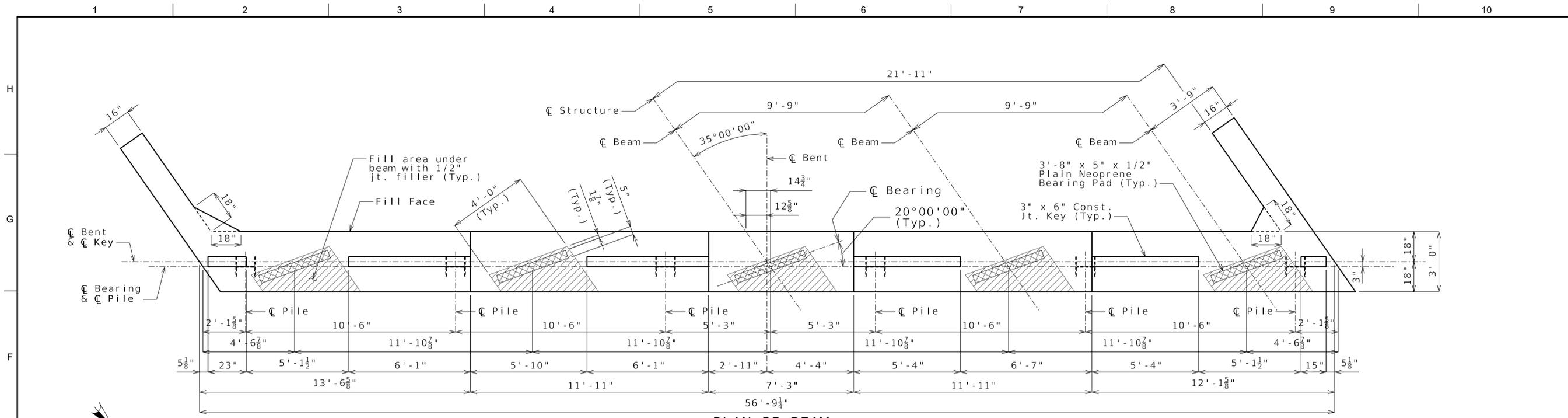
PROJECT NAME  
**CITY OF LEE'S SUMMIT, MO  
 SAMPSON ROAD BRIDGE  
 REPLACEMENT  
 PROJECT NO. 997**

REV.	DATE	DESCRIPTION

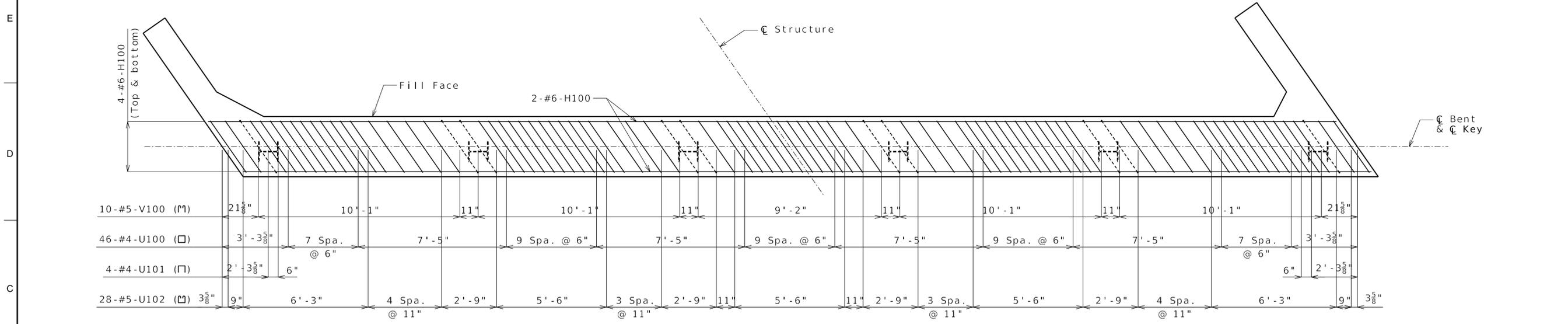
PROJECT NO: 23-600-303-00  
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SHEET TITLE  
**GENERAL NOTES AND QUANTITIES**

SHEET NO:  
**STR-02**



PLAN OF BEAM



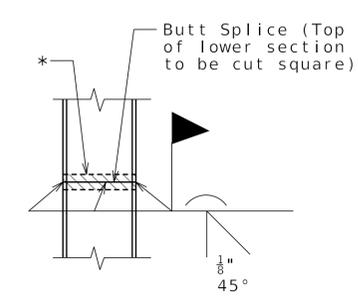
PLAN OF BEAM SHOWING REINFORCEMENT  
Keys not shown for clarity.

**General Notes:**  
 Work this sheet with Sheets No. STR-04 & STR-05.  
 For details of Vertical Drain at End Bents, see Sheet No. STR-06.  
 Reinforcing steel shall be shifted to clear piles. U-bars shall clear piles by at least 1 1/2".  
 All concrete in the end bent above top of beam and below top of slab shall be Class B-2.  
 The U bars and Pairs of V bars shall be placed parallel to centerline roadway.  
 Bar Marks for End Bent No. 1 shown (100 series), End Bent No. 4 similar (400 series).

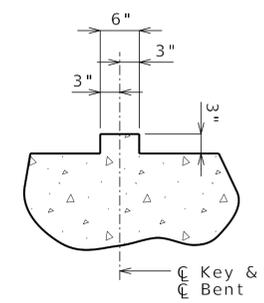
Substructure Quantity Table for Bents			
Item		EB1	EB4
Class 1 Excavation	cu. yard	45	45
Galvanized Structural Steel Piles (12 in.)	linear foot	114	114
Class B Concrete (Substructure)	cu. yard	22.4	22.4
Pre-Bore for Piling	linear foot	72	-
Pile Point Reinforcement	each	6	6

These quantities are included in the Estimated Quantities table on Sheet No. STR-02.

**DETAILS OF END BENT NO. 1 & 4**  
(End Bent No. 1 shown, End Bent No. 4 opposite hand)



STEEL PILE SPLICE  
(If required)



SECTION THRU KEY

\* Galvanizing material shall be omitted or removed one inch clear of weld locations in accordance with Sec 702.

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PROJECT NAME  
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 SAMPSON ROAD BRIDGE  
 REPLACEMENT  
 PROJECT NO. 997**

REV.	DATE	DESCRIPTION	BY

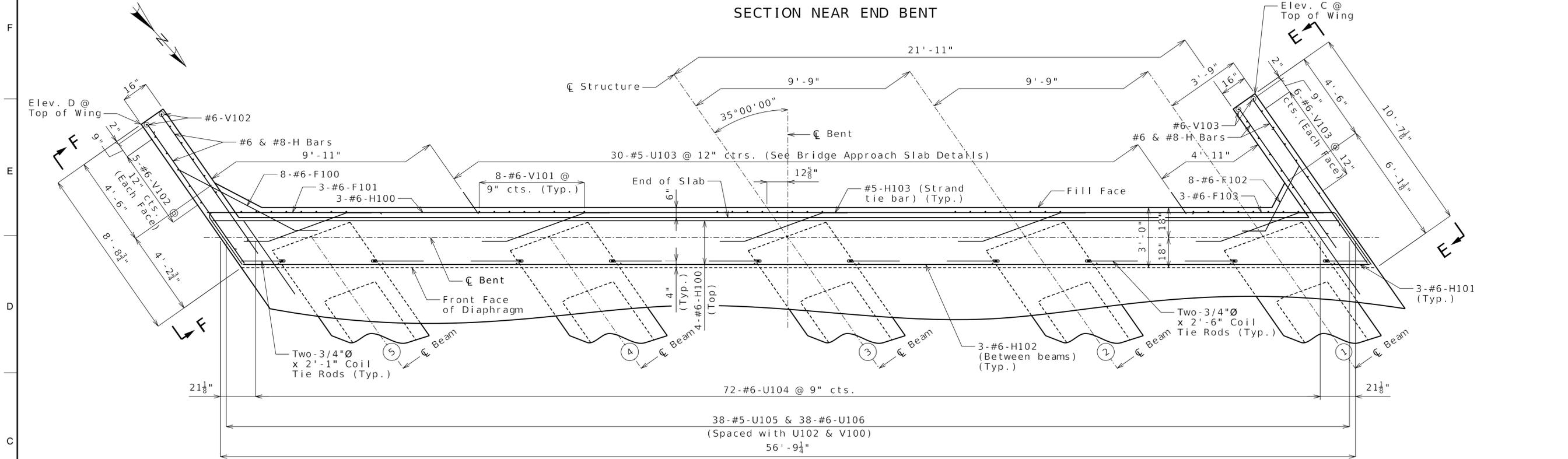
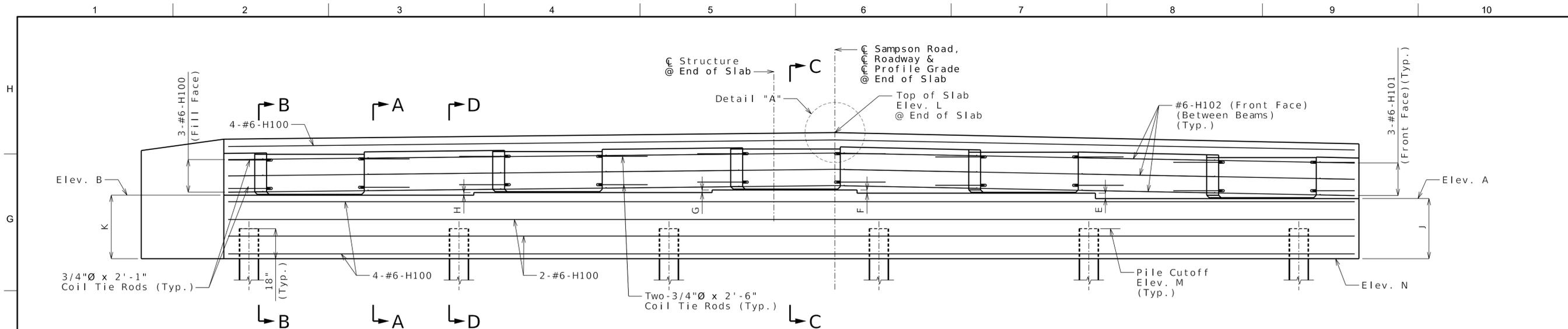
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SHEET TITLE  
**DETAILS OF END BENT  
 NO. 1 & 4**

SHEET NO:  
**STR-03**

Note: This drawing is not to scale. Follow dimensions.

Detailed Aug. 2024  
 Checked Aug. 2024



**General Notes:**  
 Work this sheet with Sheets No. STR-03 & STR-05.

For Sections A-A, B-B, C-C & D-D and Elevations E-E & F-F, see Sheet No. STR-05.

The #6-F100 and #6-F102 bars shall be bent in the field to clear beams.

The U bars and pairs of V bars shall be placed parallel to centerline of roadway.

All concrete in the end bent above top of beam and below top of slab shall be Class B-2.

Strands at end of the beams shall be field bent or, if necessary, cut in field to maintain 1 1/2-inch minimum clearance to fill face of end bent.

For location of coil tie rods and #5-H103 (strand tie bar), see Sheet No. STR-9.

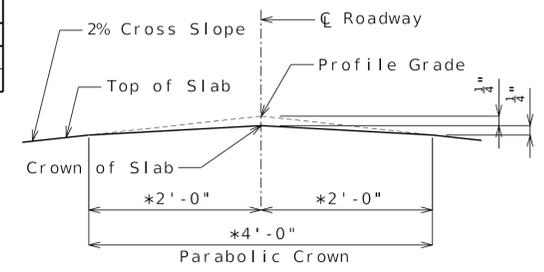
For details of vertical drain at end bent, see Sheet No. STR-06.

For details of bridge approach slab, see Sheet No. STR-18.

Bar Marks for End Bent No. 1 shown (100 series), End Bent No. 4 similar (400 series).

END BENT DATA													
	A	B	C	D	E	F	G	H	J	K	L	M	N
EB1	917.79	917.96	920.61	920.82	3 1/4"	1 3/8"	1 1/2"	1 5/8"	3'-0"	3'-2"	921.09	916.29	914.79
EB4	916.37	916.19	919.06	918.85	1 1/2"	1 1/2"	1 1/2"	3 1/4"	3'-2 1/8"	3'-0"	919.47	914.69	913.19

**DETAILS OF END BENT NO. 1 & 4**  
 (End Bent No. 1 shown, End Bent No. 4 opposite hand)



\* Dimension measured perpendicular to centerline of roadway.

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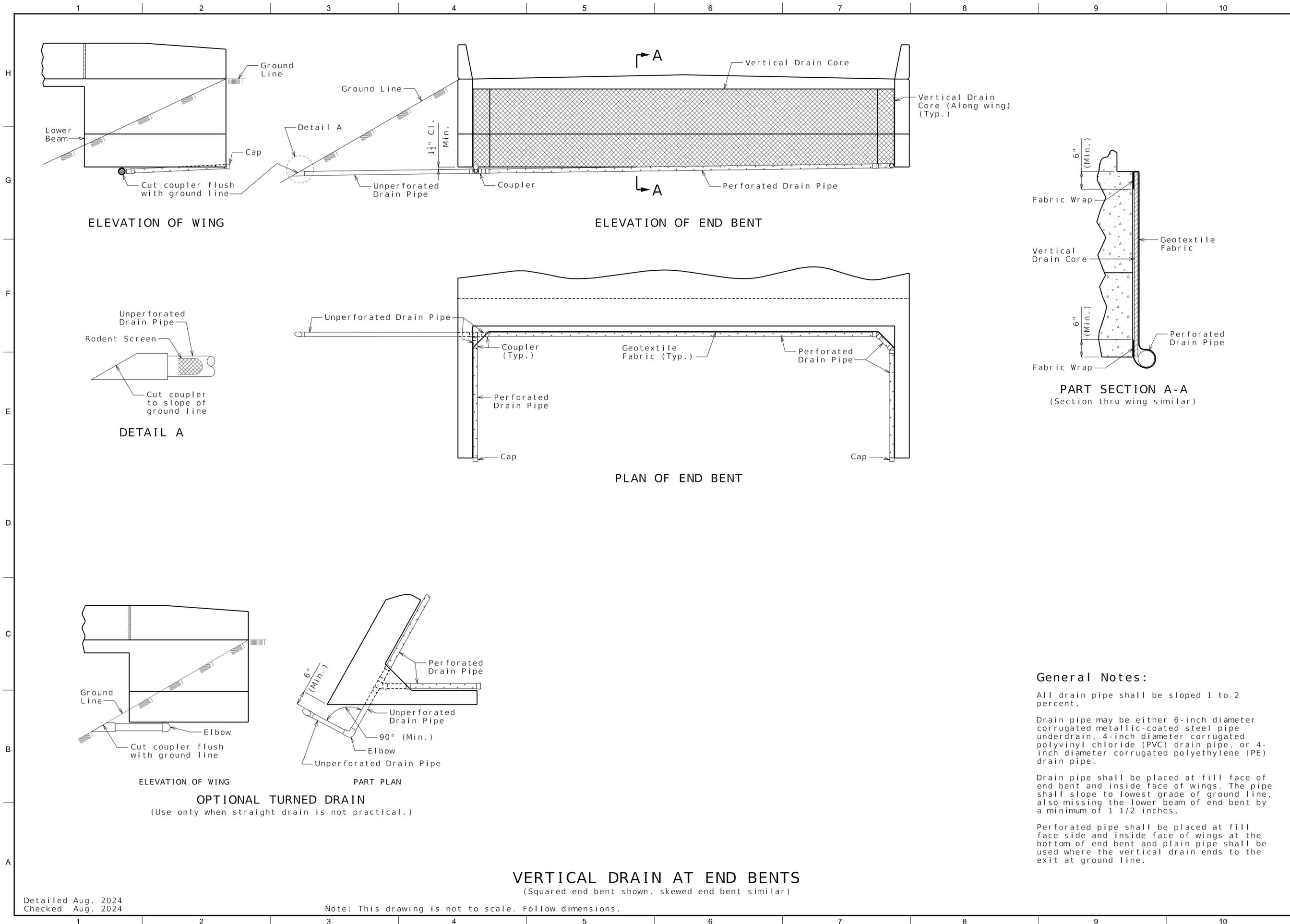
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SHEET TITLE  
**DETAILS OF END BENT  
 NO. 1 & 4**

SHEET NO:  
**STR-04**

Note: This drawing is not to scale. Follow dimensions.





**VERTICAL DRAIN AT END BENTS**  
(Squared end bent shown, skewed end bent similar)

**General Notes:**

All drain pipe shall be sloped 1 to 2 percent.

Drain pipe may be either 6-inch diameter corrugated metallic-coated steel pipe underdrain, 4-inch diameter corrugated polyvinyl chloride (PVC) drain pipe, or 4-inch diameter corrugated polyethylene (PE) drain pipe.

Drain pipe shall be placed at fill face of end bent and inside face of wings. The pipe shall slope to lowest grade of ground line, also missing the lower beam of end bent by a minimum of 1 1/2 inches.

Perforated pipe shall be placed at fill face side and inside face of wings at the bottom of end bent and plain pipe shall be used where the vertical drain ends to the exit at ground line.

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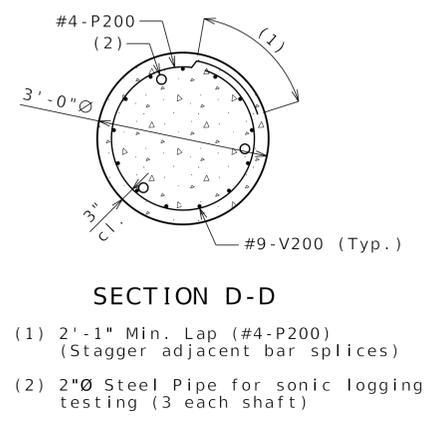
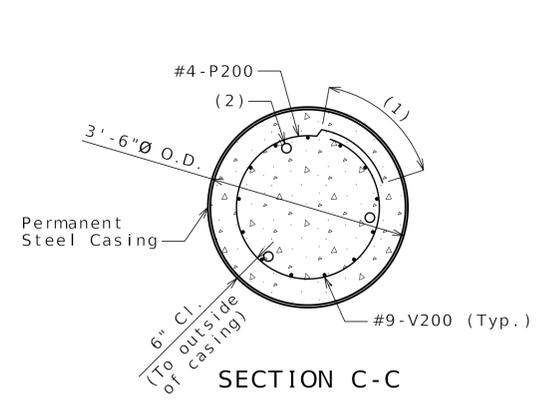
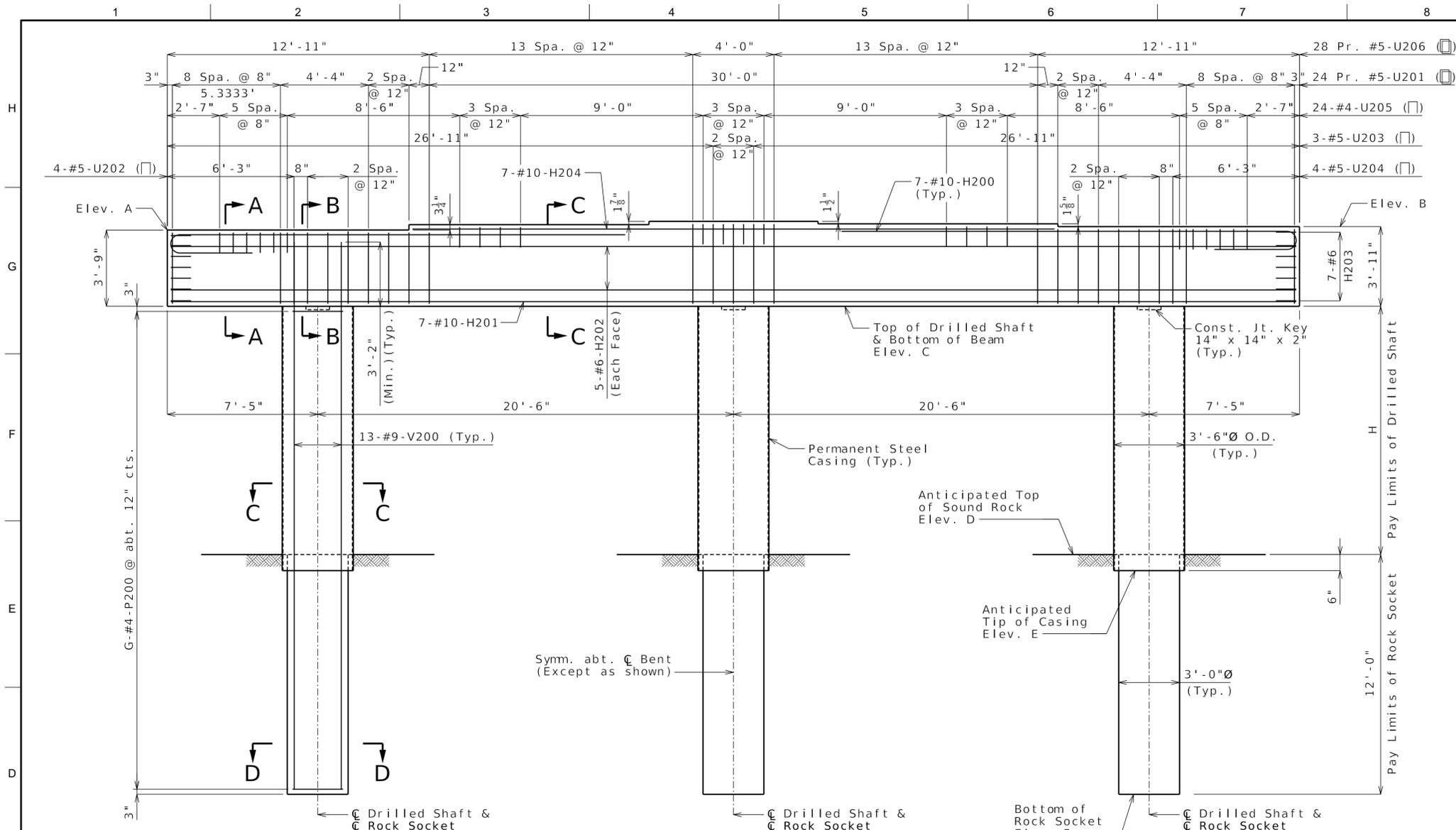
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REPLACEMENT  
PROJECT NO. 997**

REV.	DATE	DESCRIPTION	BY

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SHEET TITLE  
**VERTICAL DRAIN AT  
END BENTS**

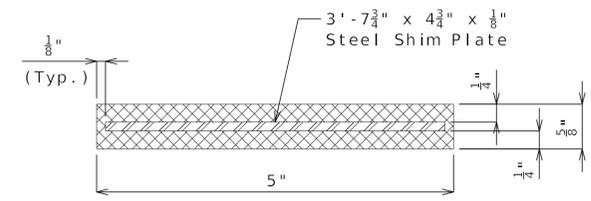
SHEET NO:  
**STR-06**



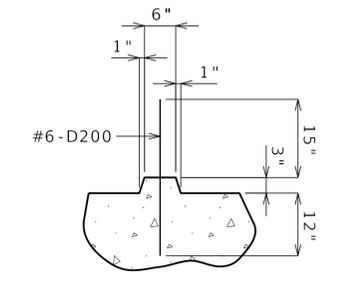
ELEVATION

Item	IB2	IB3
Drilled Shafts (3 ft. 6 In. Dia.)	linear foot 39.6	42.0
Rock Sockets (3 ft. 0 In. Dia.)	linear foot 35.4	35.4
Video Camera Inspection	each 3	3
Foundation Inspection Holes	linear foot 65.4	65.4
Sonic Logging Testing	each 3	3
Class B Concrete (Substructure)	cu. yard 36.9	36.9
Reinforcing Steel (Bridges)	pound 11,830	11,970

	A	B	C	D	E	F	G	H
IB2	916.96	917.13	913.21	900.21	899.71	888.21	26	13'-0"
IB3	916.26	916.43	912.51	898.51	898.01	886.51	27	14'-0"



TYPICAL SECTION THRU LAMINATED NEOPRENE BEARING PAD



SECTION THRU KEY

DETAILS OF INTERMEDIATE BENT NO. 2 & 3

These quantities are included in the Estimated Quantities table on Sheet No. STR-02.

All reinforcement in drilled shafts and rock sockets is included in the substructure quantities.

General Notes:  
Work this sheet with Sheet No. STR-08.

Thickness of permanent steel casing shall be in accordance with Sec 701.

An additional 4 feet has been added to V-bar lengths and additional 12-#4-P200 bars have been added for possible change in drilled shaft rock socket length. The additional V-bar length shall be cut off or included in the reinforcement lap if not required. The P bars shall be spaced similarly to that shown in Elevation, if required, or lesser spacing if not required but not less than 6-inch centers.

Sonic logging testing shall be performed on all drilled shafts and rock sockets.

Bar Marks for Intermediate Bent No. 2 shown (200 series), Intermediate Bent No. 3 similar (300 series).

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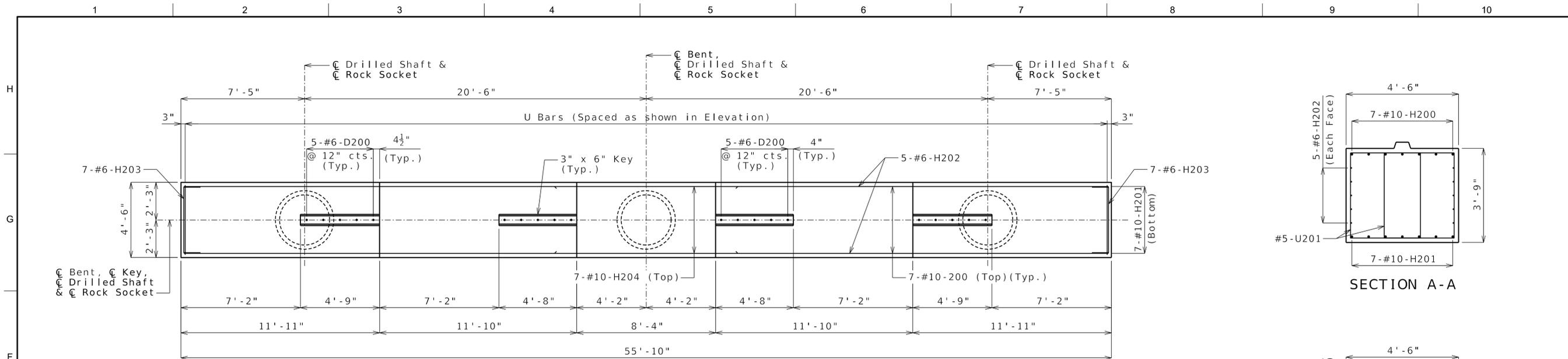
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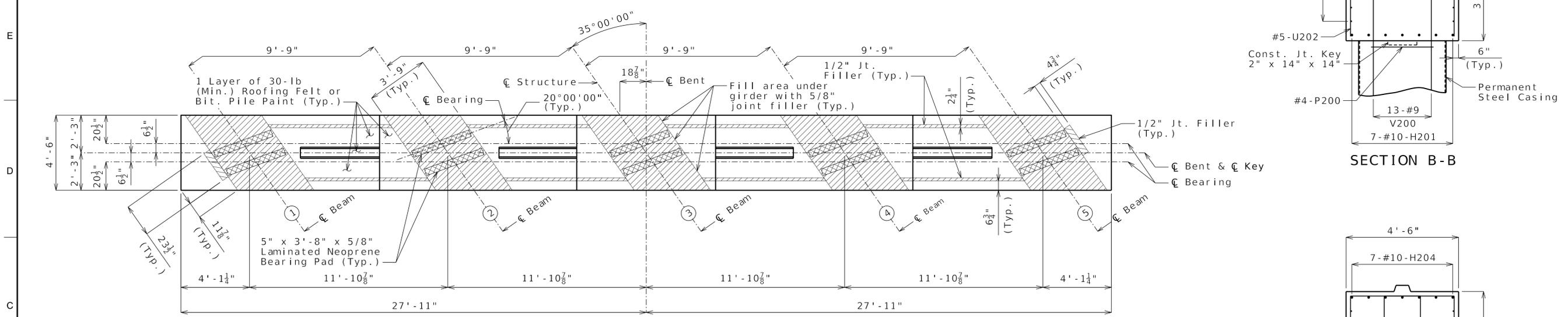
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SHEET TITLE  
**DETAILS OF  
INTERMEDIATE BENT  
NO. 2 & 3**

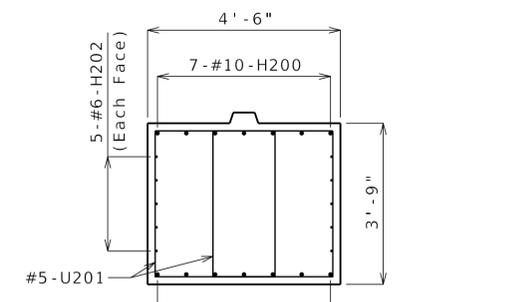
SHEET NO:  
**STR-07**



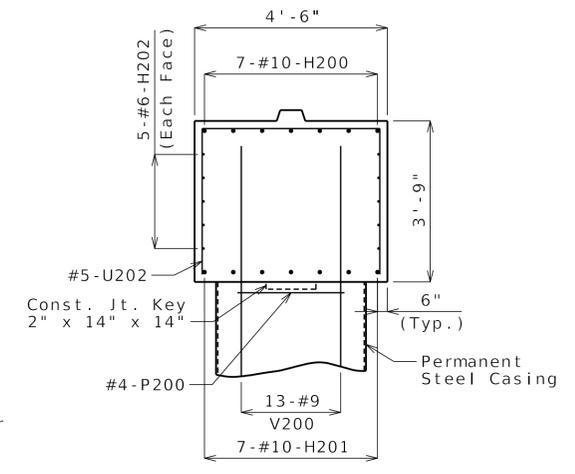
PLAN SHOWING REINFORCEMENT



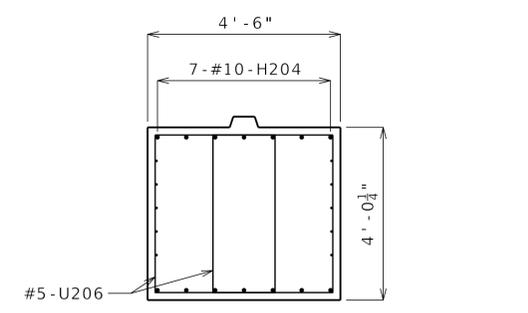
PLAN OF BEAM



SECTION A-A



SECTION B-B



SECTION C-C

General Notes:  
 Work this sheet with Sheet No. STR-07.  
 For steps 2 inches or more, use 2 1/4 x 1/2 - inch joint filler up vertical face.  
 Bar Marks for Intermediate Bent No. 2 shown (200 series), Intermediate Bent No. 3 similar (300 series).

DETAILS OF INTERMEDIATE BENT NO. 2 & 3

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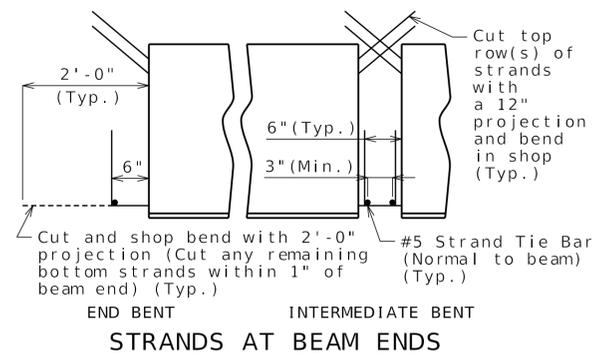
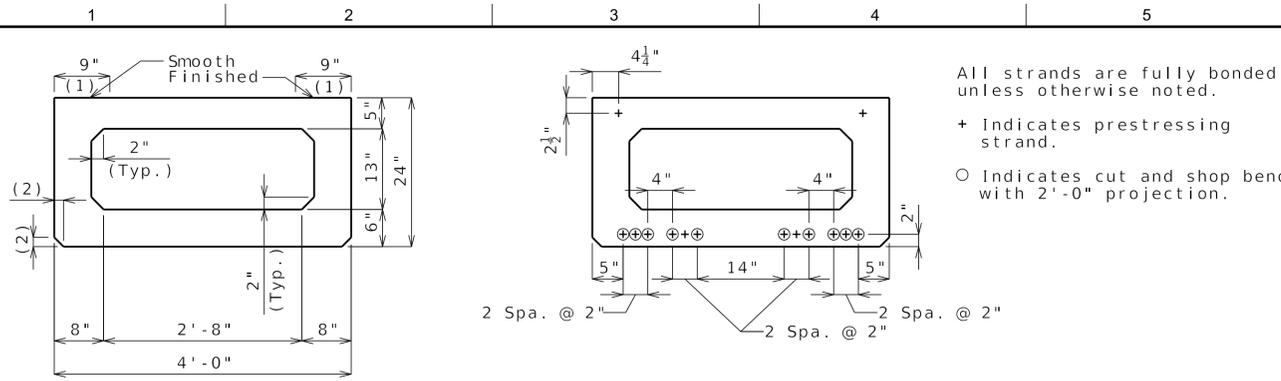
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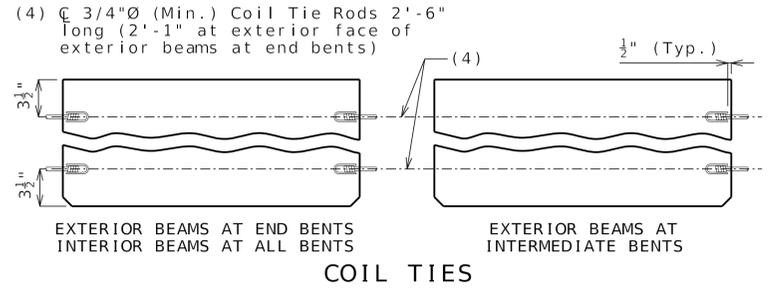
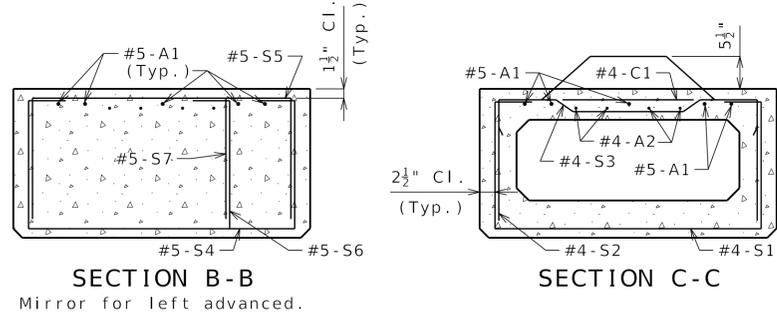
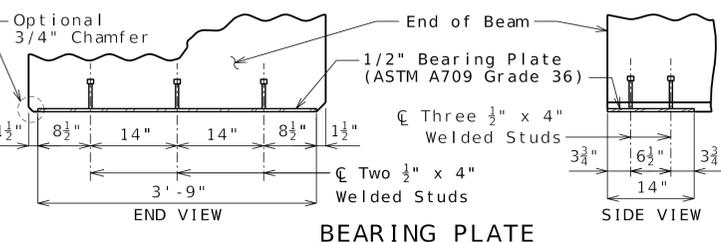
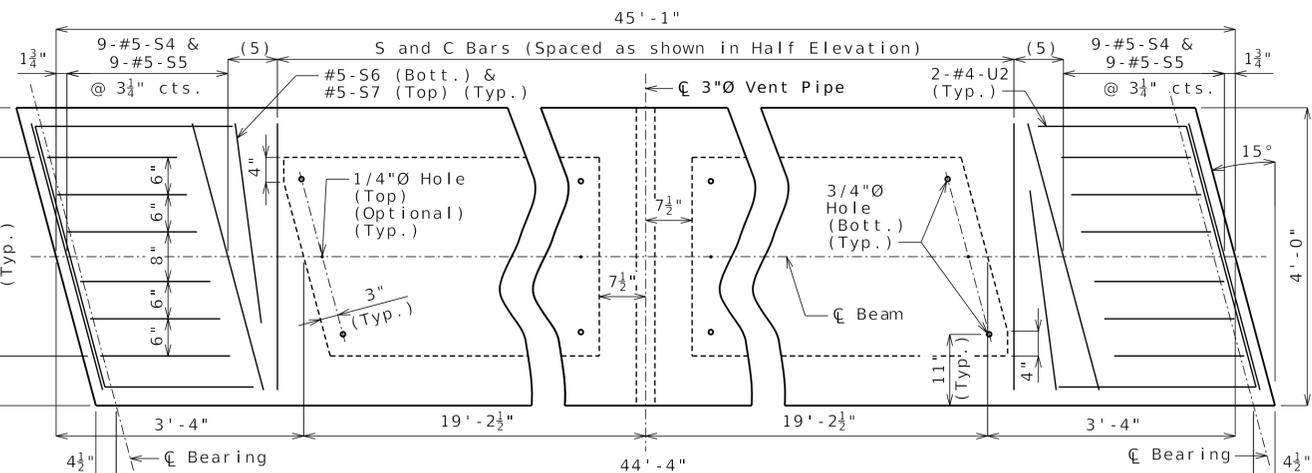
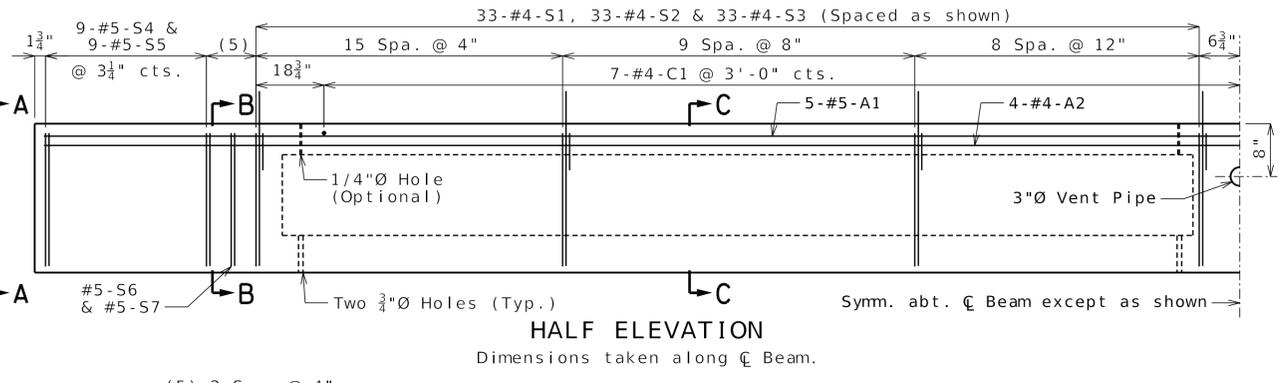
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SHEET TITLE  
**DETAILS OF  
 INTERMEDIATE BENT  
 NO. 2 & 3**

SHEET NO:  
**STR-08**



BILL OF REINFORCING STEEL - EACH BEAM				BENDING DIAGRAM	
NO.	SIZE & MARK	ACTUAL LENGTH	SHAPE		
5	5 A1	44'-10"	20	(S1) 3'-7"	(S5) 3'-8 1/4"
4	4 A2	44'-10"	20	(S4) 3'-8 1/4"	(S7) 2'-8 1/2"
13	4 C1	3'-7"	20	(#4) 4 1/2"	(#5) 6"
				(S1, S4, S6)	(S5, S7)
66	4 S1	7'-6"	10S	SHAPE 10S	
66	4 S2	7'-4"	51S	SHAPE 20	
66	4 S3	4'-6"	50S	SHAPE 50S	
18	5 S4	7'-10"	10S	SHAPE 10S	
18	5 S5	7'-0"	10S	SHAPE 21S	
2	5 S6	6'-10"	10S	SHAPE 20	
2	5 S7	6'-0"	10S	SHAPE 20	
12	6 U1	4'-10"	10S	SHAPE 50S	
4	4 U2	8'-4"	21S	SHAPE 51S	



All dimensions are out to out. Use symmetry for dimensions not shown.

Hooks and bends shall be in accordance with the CRSI Manual of Standard Practice for Detailing Reinforced Concrete Structures, Stirrup and Tie Dimensions.

Actual lengths are measured along centerline of bar to the nearest inch.

Minimum clearance to reinforcing shall be one inch, unless otherwise shown.

All reinforcement shall be Grade 60.

All S2 bars shall be epoxy coated.

**General Notes:**

Concrete for prestressed beams shall be Class A-1 with  $f'c = 8000$  psi and  $f'ci = 6500$  psi.

Use 14 strands, 0.6"Ø Grade 270, with an initial prestress force of 44 kips.

Pretensioned members shall be in accordance with Sec 1029.

Fabricator shall be responsible for location and design of lifting devices.

Exterior and interior beams are the same except: coil ties & application of bond breaker.

For Beam Camber Diagram, see Sheet No. STR-12.

For location of coil ties at concrete bent diaphragms, see Sheets No. STR-3 & STR-11.

**SPREAD BOX BEAMS - SPANS (1-2) AND (3-4)**

Detailed Aug. 2024  
Checked Aug. 2024

Note: This drawing is not to scale. Follow dimensions.

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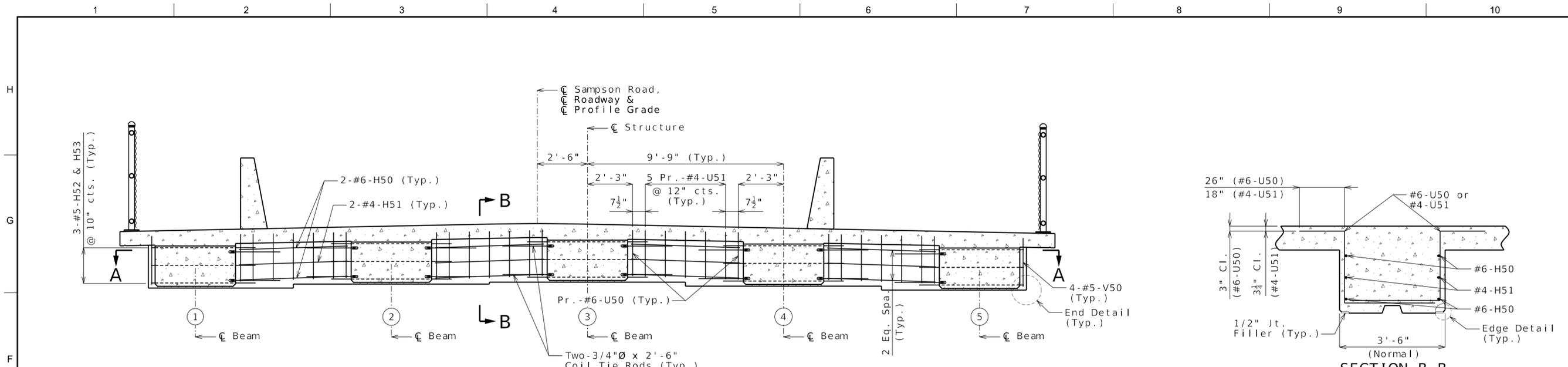
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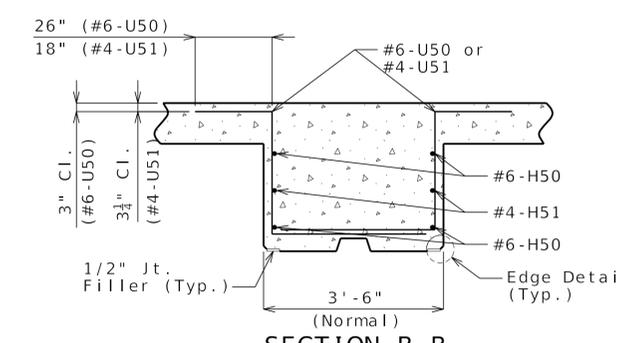
**SPREAD BOX BEAM  
SPANS (1-2) & (3-4)**

SHEET NO:  
**STR-09**

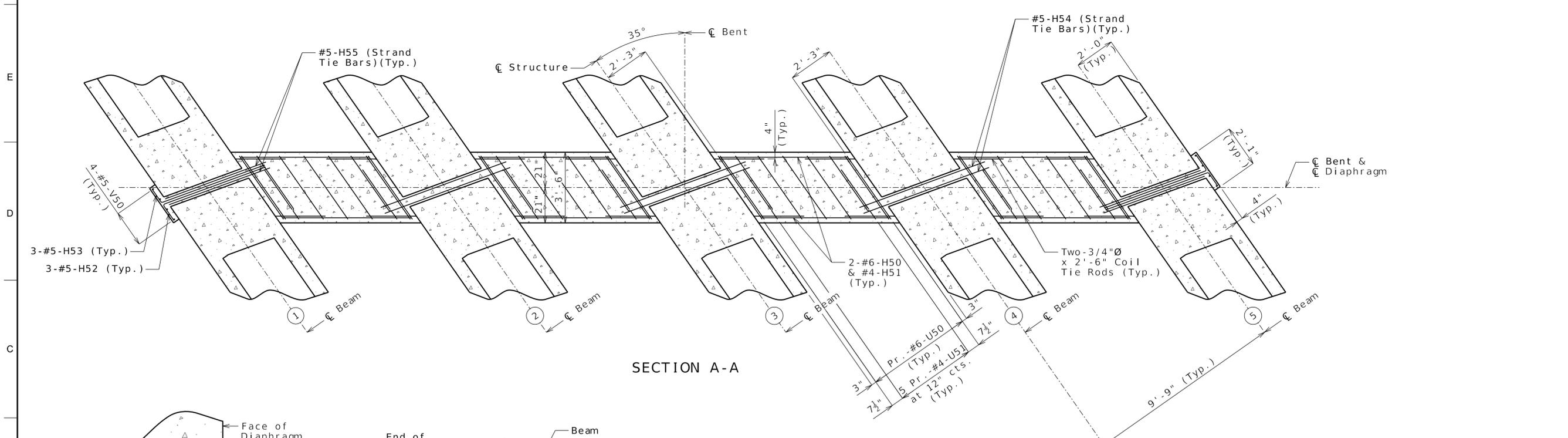




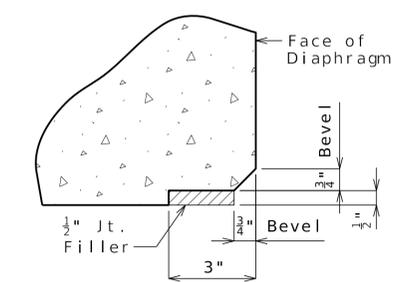
SECTION NEAR INTERMEDIATE BENT  
Normal to C Structure



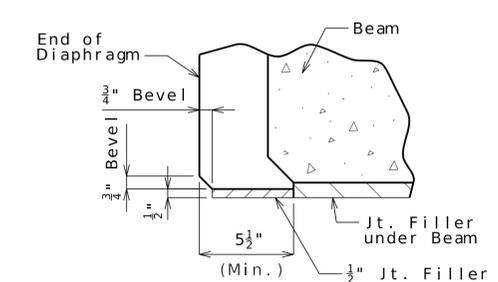
SECTION B-B



SECTION A-A



EDGE DETAIL



END DETAIL

Notes:  
 For location of Strand Tie Bars, see Sheets No. STR-09 & STR-10.  
 For location and details of Coil Tie Rods, see Sheets No. STR-09 & STR-10.  
 Diaphragms at intermediate bents shall be built vertical.  
 All U-bars in diaphragms are to be placed parallel to C Roadway.

CONCRETE DIAPHRAGMS AT INTERMEDIATE BENT NO. 2 & 3

Note: This drawing is not to scale. Follow dimensions.

Detailed Aug. 2024  
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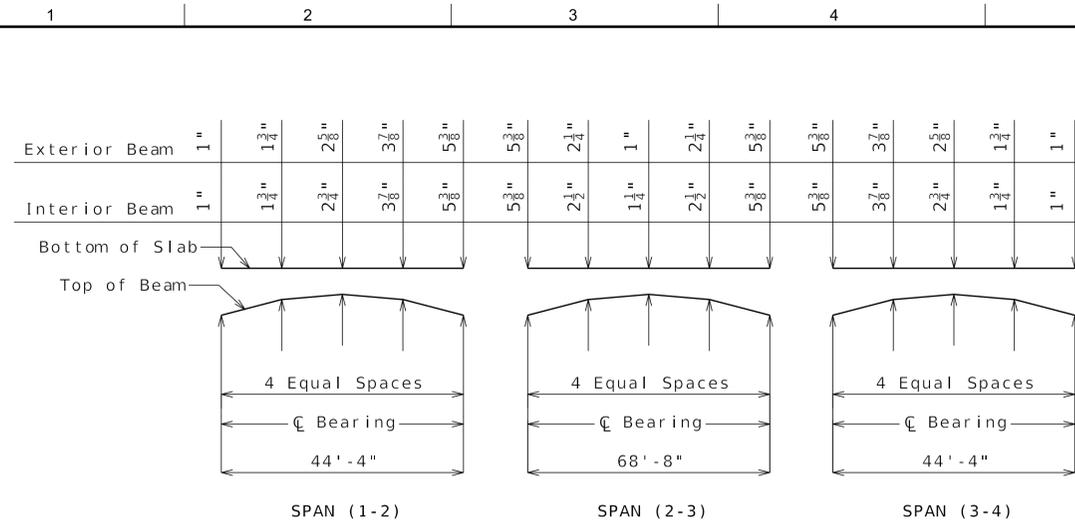
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SHEET TITLE  
**DIAPHRAGMS AT  
 INTERMEDIATE BENTS**

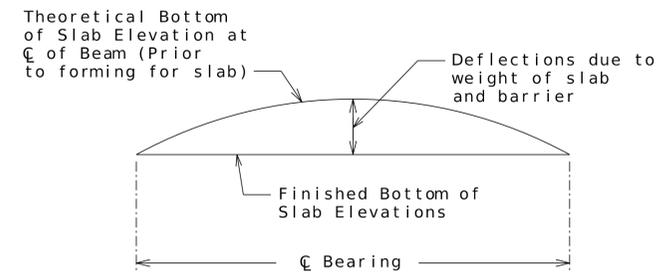
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**STR-11**



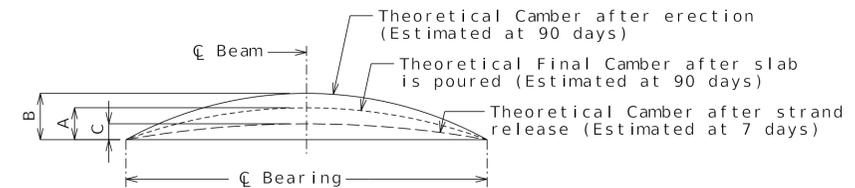
**THEORETICAL SLAB HAUNCHING DIAGRAM (ESTIMATED AT 90 DAYS)**

If beam camber is different from that shown in the camber diagram, in order to maintain minimum slab thickness, an adjustment of the slab haunches, an increase in slab thickness or a raise in grade uniformly throughout the structure shall be necessary. No payment will be made for additional labor or materials required for variation in haunching, slab thickness or grade adjustment.

Concrete in the slab haunches is included in the Estimated Quantities for Slab on Concrete Beam.



**TYPICAL SLAB ELEVATIONS DIAGRAM**



Beam	Span (1-2)			Span (2-3)			Span (3-4)		
	A	B	C	A	B	C	A	B	C
Exterior	1/2"	7/8"	1/2"	4 3/8"	6 3/8"	3 7/8"	1/2"	7/8"	1/2"
Interior	1/2"			4 1/8"			1/2"		

**BEAM CAMBER DIAGRAM**

Conversion Factors for Beam Camber (Estimated at 90 days):

0.25 pt. = 0.7125 x 0.5 pt.

Notes:

If beam camber is different from that shown in the camber diagram, in order to maintain minimum slab thickness, an adjustment of the slab haunches, an increase in slab thickness or a raise in grade uniformly throughout the structure shall be necessary. No payment will be made for additional labor or materials required for variation in haunching, slab thickness or grade adjustment.

Concrete in the slab haunches is included in the Estimate Quantities for Slab on Concrete Beam.

Girder Number	Span (1-2) (44'-4" C Brg. - C Brg.)					Span (2-3) (68'-8" C Brg. - C Brg.)					Span (3-4) (44'-4" C Brg. - C Brg.)				
	C Brg.	.25	.50	.75	C Brg.	C Brg.	.25	.50	.75	C Brg.	C Brg.	.25	.50	.75	C Brg.
1	919.91	919.80	919.69	919.57	919.46	919.46	919.29	919.11	918.94	918.76	918.76	918.65	918.54	918.43	918.31
2	920.18	920.06	919.95	919.84	919.73	919.73	919.55	919.38	919.20	919.03	919.03	918.91	918.80	918.69	918.58
3	920.34	920.23	920.11	920.00	919.89	919.89	919.71	919.54	919.36	919.19	919.19	919.08	918.97	918.85	918.74
4	920.21	920.10	919.99	919.87	919.76	919.76	919.59	919.41	919.24	919.06	919.06	918.95	918.84	918.73	918.61
5	920.08	919.97	919.86	919.75	919.64	919.64	919.46	919.29	919.11	918.94	918.94	918.82	918.71	918.60	918.49

Elevations are based on a constant slab thickness of 8 1/2" and include allowance for theoretical dead load deflections due to weight of slab (including precast panel) and barrier.

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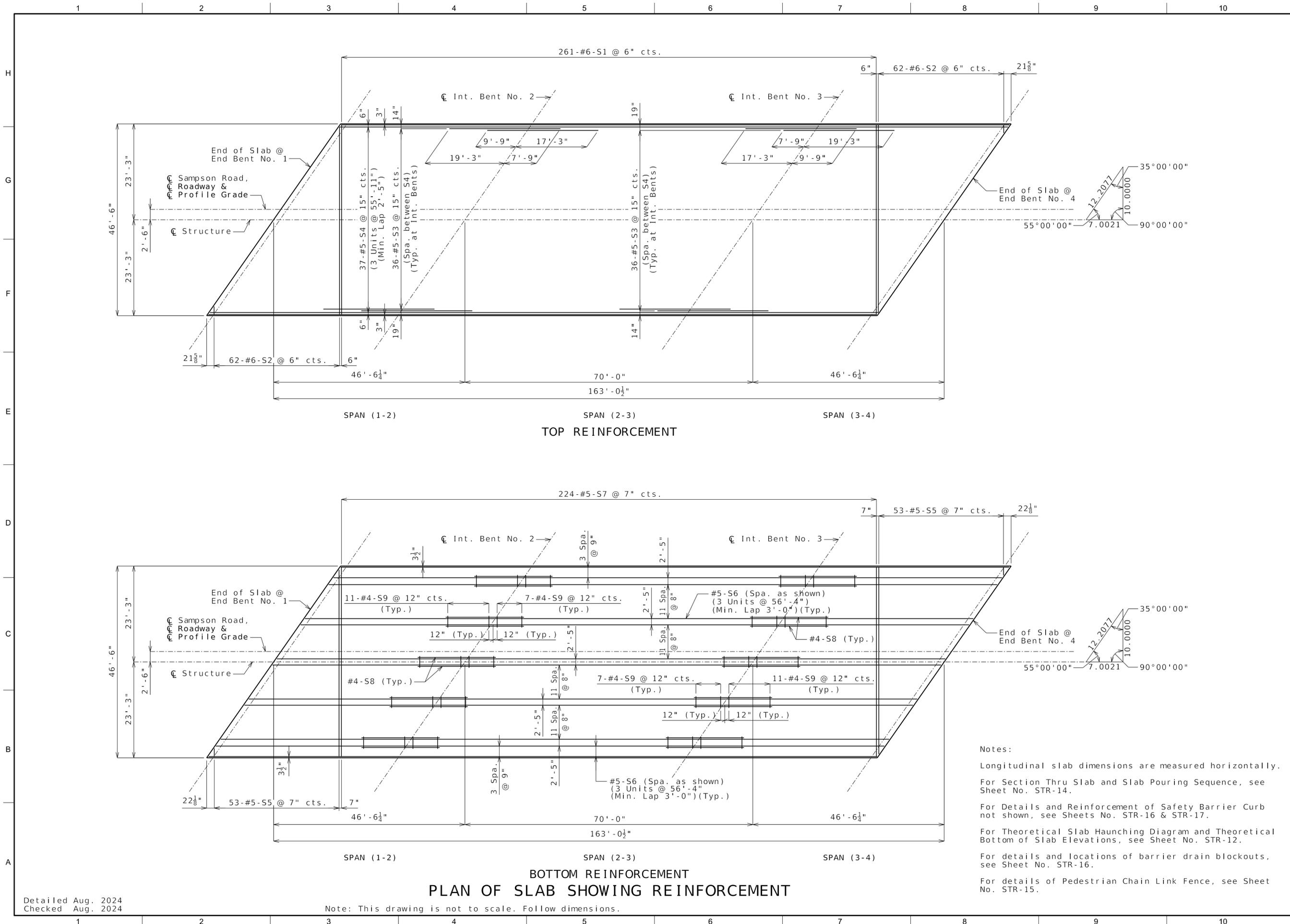
PROJECT NAME  
 CITY OF LEE'S SUMMIT, MO  
 SAMPSON ROAD BRIDGE  
 REPLACEMENT  
 PROJECT NO. 997

BY	DATE	REV.	DESCRIPTION

PROJECT NO: 23-600-303-00  
 DESIGNED BY: WGF  
 DRAWN BY: GAC  
 CHECKED BY: JMK  
 DATE: 09/04/2024

SHEET TITLE  
**CAMBER AND HAUNCHING DIAGRAM AND SLAB ELEVATIONS**

SHEET NO:  
**STR-12**



**PLAN OF SLAB SHOWING REINFORCEMENT**

Note: This drawing is not to scale. Follow dimensions.

Notes:  
 Longitudinal slab dimensions are measured horizontally.  
 For Section Thru Slab and Slab Pouring Sequence, see Sheet No. STR-14.  
 For Details and Reinforcement of Safety Barrier Curb not shown, see Sheets No. STR-16 & STR-17.  
 For Theoretical Slab Haunching Diagram and Theoretical Bottom of Slab Elevations, see Sheet No. STR-12.  
 For details and locations of barrier drain blockouts, see Sheet No. STR-16.  
 For details of Pedestrian Chain Link Fence, see Sheet No. STR-15.

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 Checked Aug. 2024

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CHECKED BY: JMK

DATE: 09/04/2024

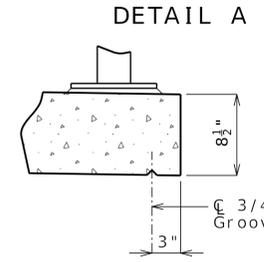
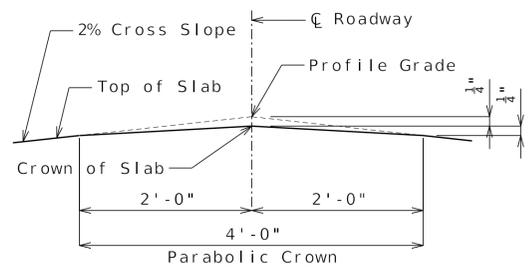
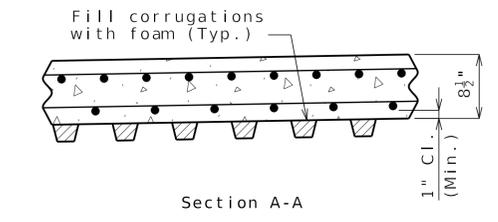
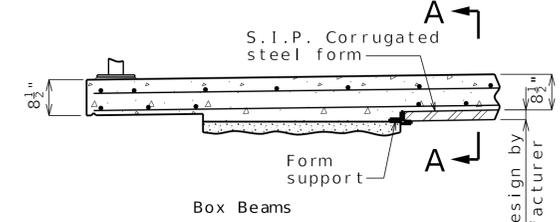
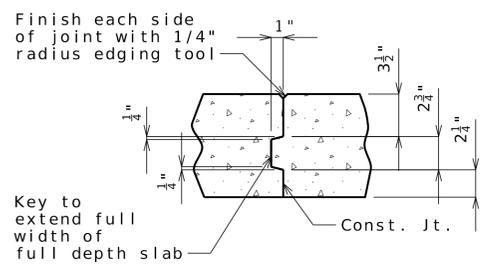
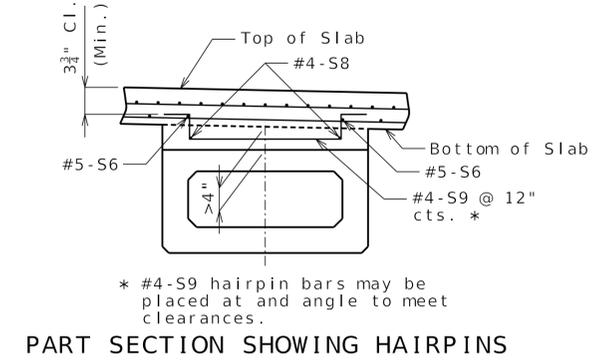
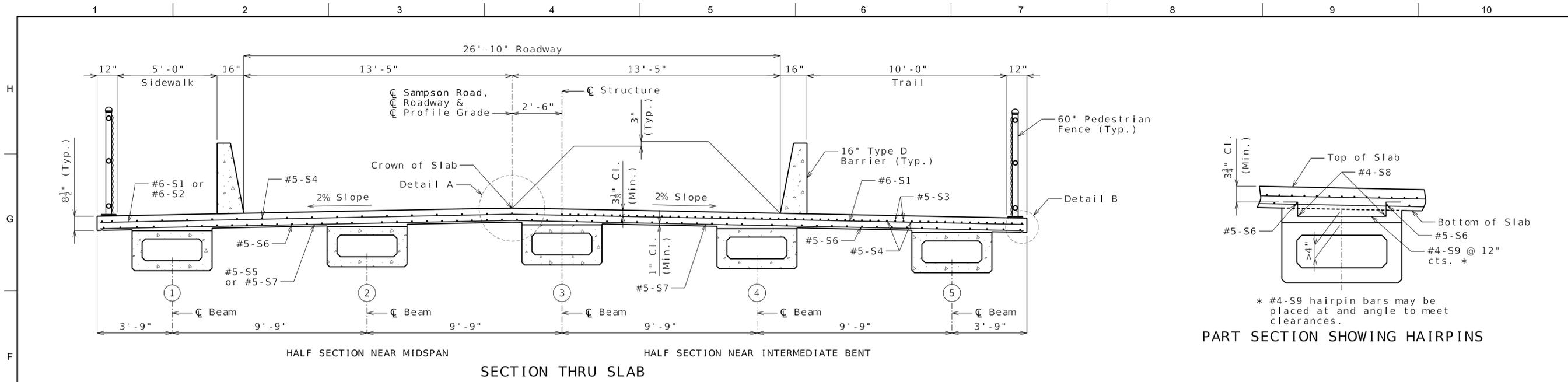
SHEET TITLE

SHEET NO:

PLAN OF SLAB  
SHOWING  
REINFORCING

STR-13

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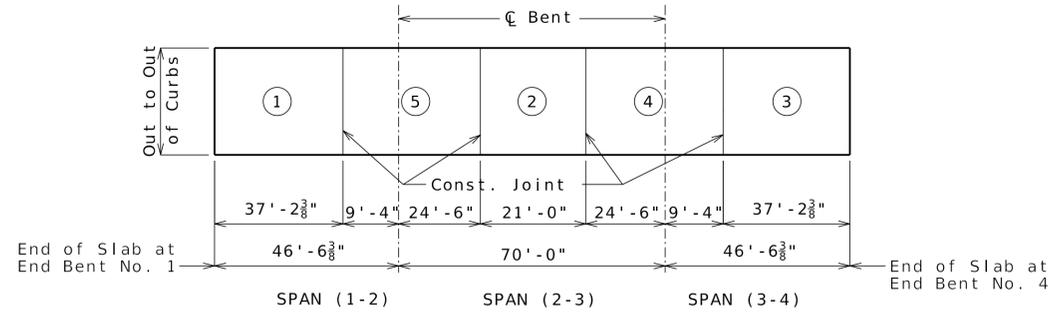


OPTIONAL STAY-IN-PLACE CORRUGATED STEEL FORM DETAILS

Stay-In-Place Corrugated Steel Forms:  
 Corrugated steel forms, supports, closure elements and accessories shall be in accordance with grade requirement and coating designation G165 of ASTM A653. Complete shop drawings of the permanent steel deck forms shall be required in accordance with Sec 1080.  
 Corrugations of stay-in-place forms shall be filled with an expanded polystyrene material. The polystyrene material shall be placed in the forms with an adhesive in accordance with the manufacturer's recommendations.

Form sheets shall not rest directly on the top of beam. Sheets shall be securely fastened to form supports with a minimum bearing length of one inch on each end. Form supports shall be placed in direct contact with the top of beam. Drilling holes in the beam will not be permitted. All steel fabrication and construction shall be in accordance with Sec 1080 and 712. Certified field welders will not be required for welding of the form supports.  
 The design of stay-in-place corrugated steel forms is per manufacturer which shall be in accordance with Sec 703 for false work and forms. Maximum actual weight of corrugated steel forms allowed shall be 4 psf assumed for beam loading.

Notes:  
 For reinforcement of barrier not shown, see Sheet No. STR-16.  
 For Theoretical Bottom of Slab Elevations, Girder Camber Diagram and Theoretical Slab Haunching Diagram, see Sheet No. STR-12.  
 For Plan of Slab Showing Reinforcement, see Sheet No. STR-13.  
 For Box Beam Camber and Dead Load Deflection, see Sheet No. STR-12.  
 For 60" Pedestrian Fence details, see Sheet No. STR-15.



	Sequence of Pours					Min. Rate of Pour Cu. Yds./Hr. With Retarder
	Direction					
Basic Sequence	1	2	3	4	5	25
	Either Direction					
Alternate A Pours	1	5 + 2	4 + 3		26	
	End to 5	1 to 4	2 to End			
Alternate B Pours	1 + 5 + 2		4 + 3		26	
	End to 4		2 to End			
Alternate C Pours	1 + 5 + 2 + 4 + 3					26
	End to End					

The contractor shall pour and satisfactorily finish the slab pours at the rate given. Retarder, if used, shall be an approved type and retard the set of concrete to 2.5 hours.

SLAB POURING SEQUENCE

SLAB DETAILS

Note: This drawing is not to scale. Follow dimensions.

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 PROJECT NO. 997**

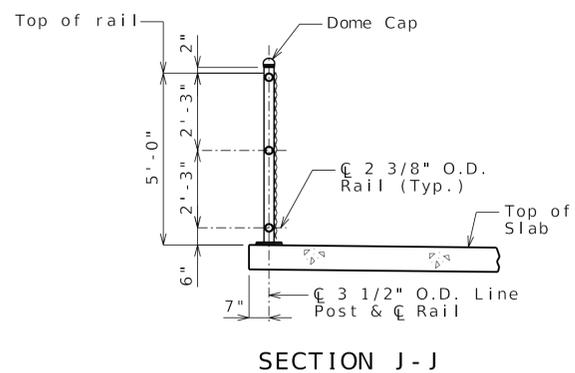
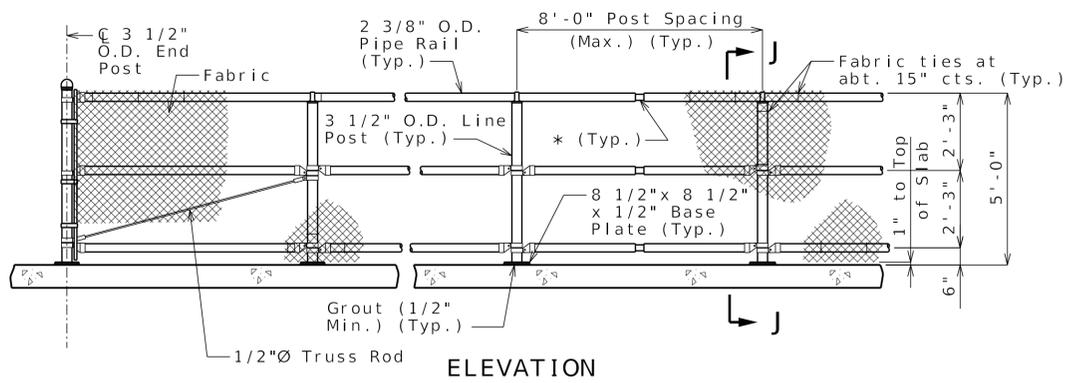
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PROJECT NO: 23-600-303-00  
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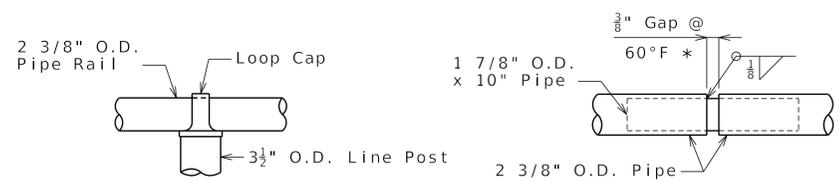
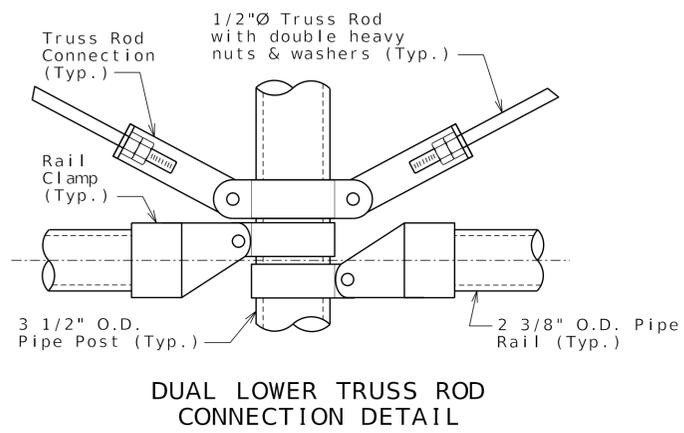
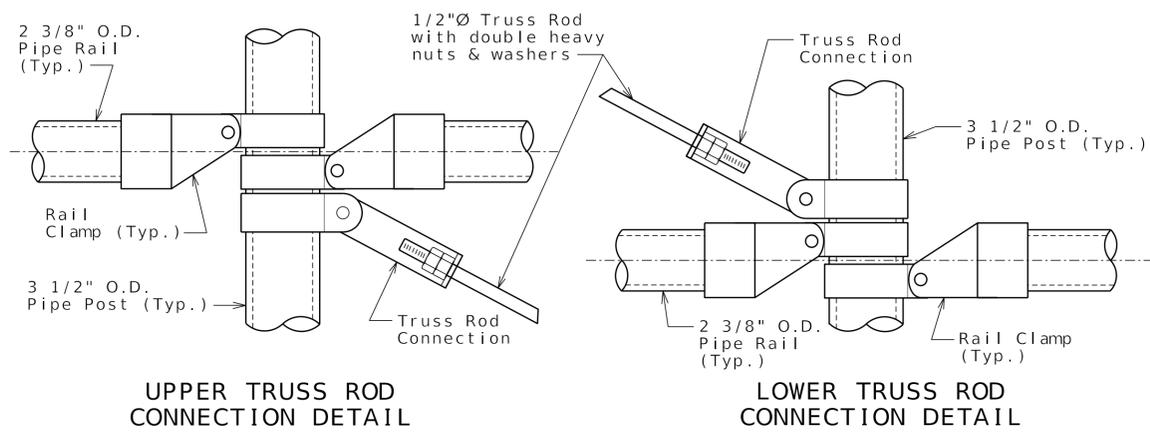
SHEET TITLE  
**SLAB DETAILS**

SHEET NO:  
**STR-14**

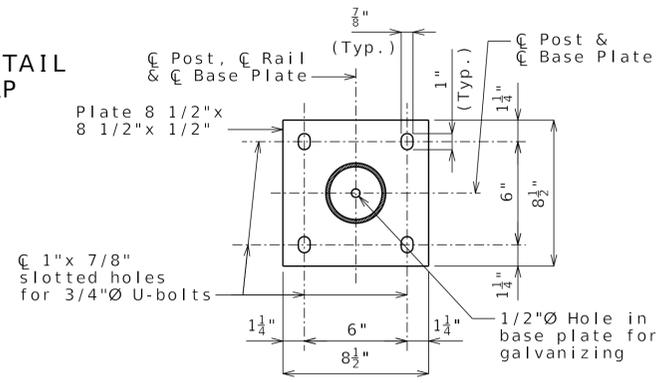
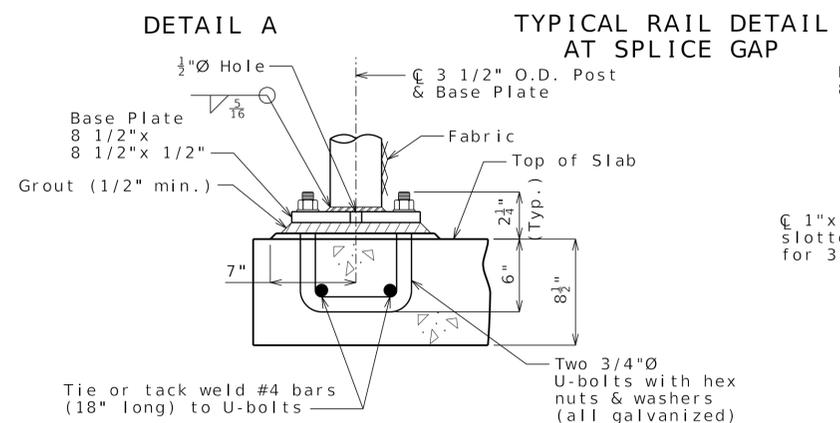
H  
G  
F  
E  
D  
C  
B  
A



\* 3/8" Gap for splice at about 30'-0" centers with at least one splice gap between pull or end posts.



Note: At the contractor's option, manufacturer-approved expansion coupling may be used in lieu of detail shown. No additional payment will be made for this substitution.



**GENERAL NOTES:**

Pedestrian chain link fence shall be in accordance with Sec 1043 except all fabric shall have the top and bottom edges knuckled and pipe members shall be in accordance with ASTM F1043, high strength grade (minimum yield = 50 ksi) heavy industrial steel pipe Group 1A.

Expansion joints shall be placed in the horizontal pieces at not more than 30-foot centers.

Steel for truss rods shall be ASTM A709 Grade 36. Steel for base plates shall be ASTM A709 Grade 50.

(60 in.) Pedestrian Fence (Structures) will be measured to the nearest linear foot for each structure, measured along the centerline fence from end of fence to end of fence.

Contractor shall submit complete detailed shop drawings in accordance with Sec 1080.

All base plates, U bolts, hex nuts and washers shall be galvanized in accordance with ASTM A123 and Sec 1081.

U bolts shall be ASTM F1554 Grade 36.

Chain link wire fabric shall be 9 gage minimum, 2-inch diamond mesh.

The chain link fence shall be built in accordance with Sec 607 & Sec 1043.

All posts shall be vertical. Grout shall be placed under the post base plates in accordance with Sec 1066.

Payment for furnishing, galvanizing and erecting the fence and frame complete in place will be considered completely covered by the contract unit price for (60 in.) Pedestrian Fence (Structures) per linear foot.

Dimensions of pedestrian chain link fence are measured horizontally.

The maximum spacing allowed between pull posts and end posts is 100 feet. Post brace and 1/2-inch diameter truss rod are required for panels adjacent to pull post and end posts only. Connect the lower end of truss rod to bottom of pull posts and end posts to which the stretcher bar is attached.

Rail clamps, dome cap, bands, tie wires, stretcher bars and truss rod connections shall be in accordance with the manufacturer's recommendations. The truss rod and truss rod connections shall have a minimum capacity of 2000 pounds. Dome cap shall fit tightly.

Note: Base plate shall be welded to the post prior to galvanizing the post with base plate.

**PEDESTRIAN CHAIN LINK FENCE**

Note: This drawing is not to scale. Follow dimensions.

Detailed Aug. 2024  
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REPLACEMENT  
PROJECT NO. 997

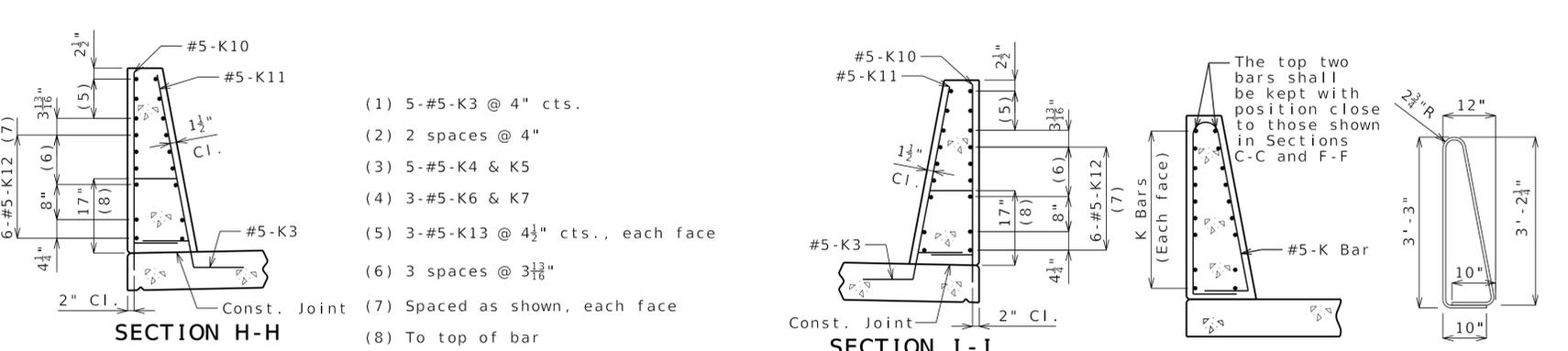
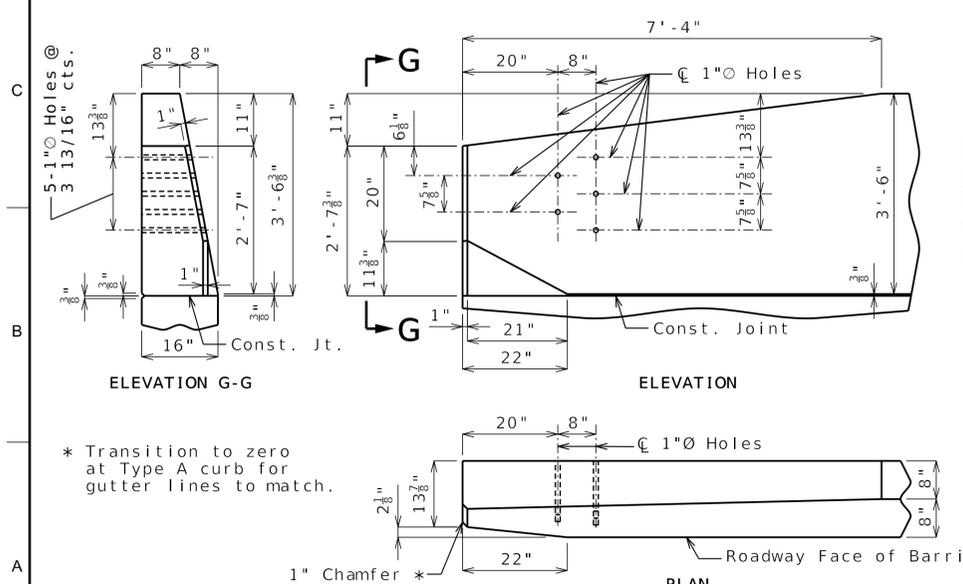
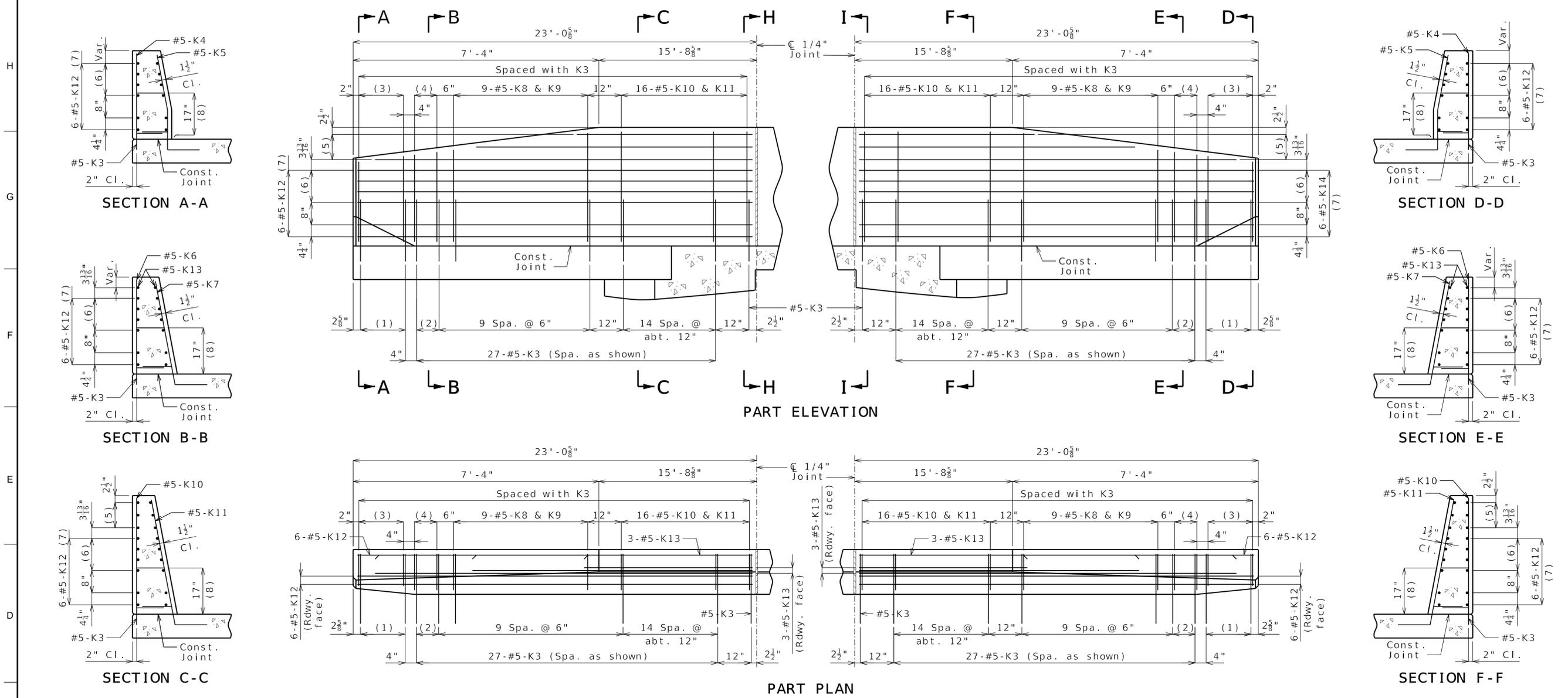
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CHECKED BY: JMK  
DATE: 09/04/2024  
SHEET TITLE

**PEDESTRIAN CHAIN LINK FENCE**

SHEET NO:  
**STR-15**





**General Notes:**  
 Concrete traffic barrier delineators shall be placed on top of the barrier as shown on Missouri Standard Plan 617.10 and in accordance with Sec 617. Delineators on bridges with two-lane, two-way traffic shall have retroreflective sheeting on both sides. Concrete traffic barrier delineators will be considered completely covered by the contract unit price for Type D Barrier.

**Reinforcing Steel:**  
 Minimum clearance to reinforcing steel shall be 1 1/2" except as shown for bars embedded into end bent.

**K10-K11 BAR PERMISSIBLE ALTERNATE SHAPE**  
 (Other K bars not shown for clarity)

The K10-K11 bar combination may be furnished as one bar as shown, at the contractor's option.  
 All dimensions are out to out.

**TYPE D BARRIER AT END BENTS**  
 (Left barrier shown, right barrier similar)

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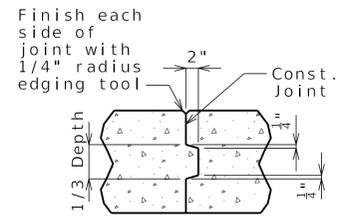
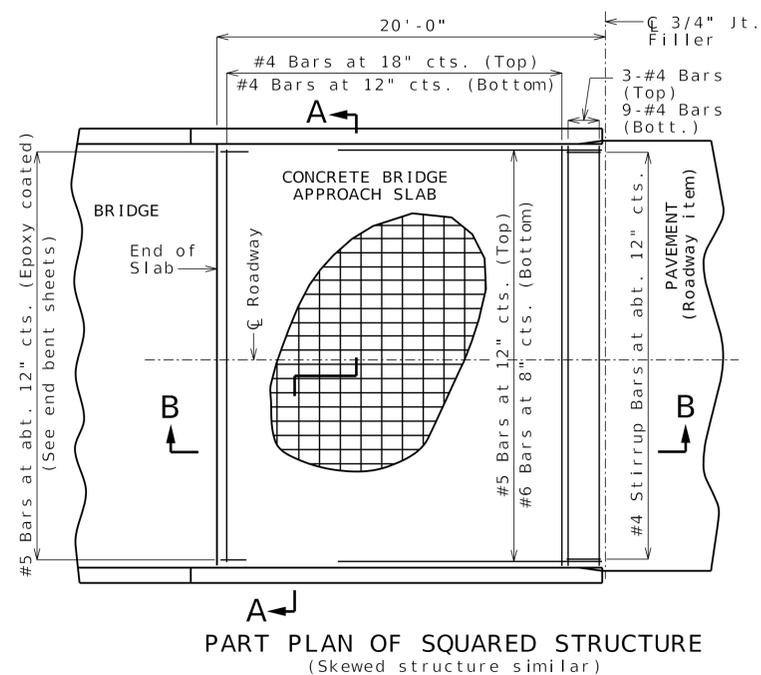
PROJECT NAME  
**CITY OF LEE'S SUMMIT, MO  
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 REPLACEMENT  
 PROJECT NO. 997**

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SHEET TITLE  
**TYPE D BARRIER AT  
 END BENTS**

SHEET NO:  
**STR-17**



CONSTRUCTION JOINT DETAIL

**General Notes:**

All concrete for the bridge approach slab shall be in accordance with Sec 503 (f'c = 4,000 psi).

The reinforcing steel in the bridge approach slab shall be epoxy coated Grade 60 with fy = 60,000 psi.

Longitudinal construction joints in bridge approach slab shall be aligned with longitudinal construction joints in bridge slab.

Minimum clearance to reinforcing steel shall be 1 1/2", unless otherwise shown.

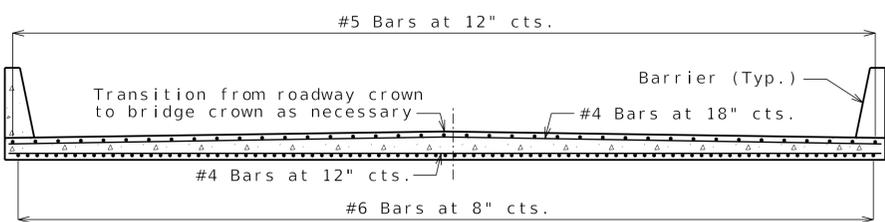
The reinforcing steel in the bridge approach slab shall be continuous. The transverse reinforcing steel may be made continuous by providing a minimum lap splice of 23 inches for #4 bars, or by mechanical bar splice.

All joint filler shall be in accordance with Sec 1057 for preformed fiber expansion joint filler except as noted.

Payment for furnishing all materials, labor and excavation necessary to construct the concrete bridge approach slab, including the timber header, underdrain, Type 5 aggregate base, joint filler, and all other appurtenances and incidental work as shown on this sheet, complete in place, will be considered completely covered by the contract unit price for Bridge Approach Slab (Minor) per square yard.

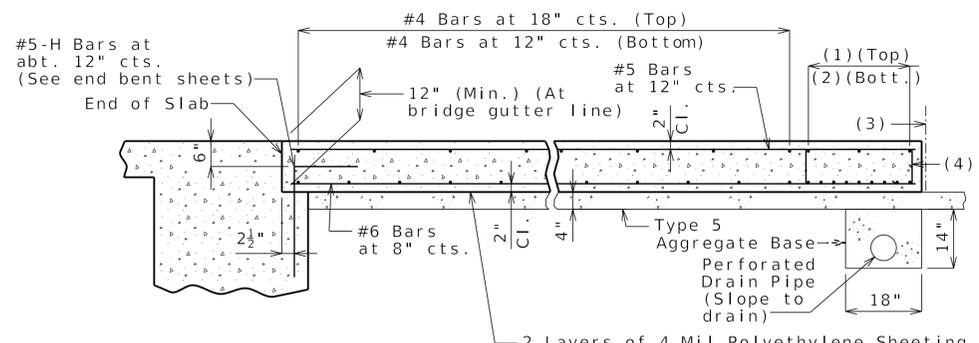
Drain pipe may be either 6" diameter corrugated metallic-coated pipe underdrain, 4" diameter corrugated polyvinyl chloride (PVC) drain pipe, or 4" diameter corrugated polyethylene (PE) drain pipe.

The contractor shall pour and satisfactorily finish the bridge slab before placing the bridge approach slab.



SECTION A-A

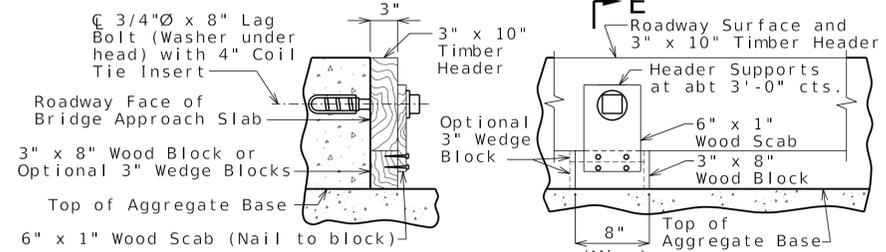
With the approval of the engineer, the contractor may crown the bottom of the approach slab to match the crown of the roadway surface.



SECTION B-B (Integral end bent)

- (1) 3-#4 Bars
- (2) 9-#4 Bars
- (3) 3/4" Jt. Filler
- (4) #4 Stirrup Bars at abt. 12" cts.; 2'-0" x 8" (Min.) out to out; Actual length = 5'-10" (Min.); 90° stirrup hook at bottom; Stirrup height (8") and actual length vary due to crown.

2 Layers of 4 Mil Polyethylene Sheeting between bridge approach slab and granular base in accordance with ASTM E 1745 Performance Class A



SECTION E-E

DETAILS OF TIMBER HEADER

Remove timber header when concrete pavement is placed.

BRIDGE APPROACH SLAB (MINOR)

CONCRETE SLAB

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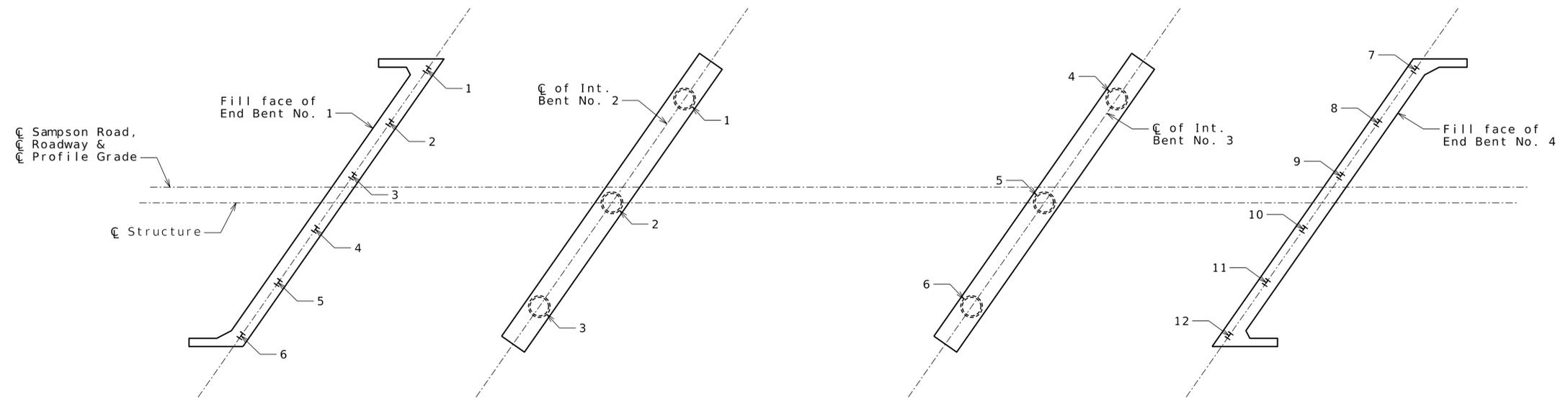
PROJECT NO:	23-600-303-00
DESIGNED BY:	WGF
DRAWN BY:	GAC
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SHEET TITLE  
**APPROACH SLAB  
 (MINOR ROAD)**

SHEET NO:  
**STR-18**







PART PLAN SHOWING PILE & DRILLED SHAFT NUMBERING FOR RECORDING AS-BUILT PILE DATA & AS-BUILT DRILLED SHAFT DATA

As-Built Pile Data			
Pile No.	Length in Place (ft)	Computed Nominal Axial Compressive Resistance (kips)	Remarks
			End Bent No. 1
1			
2			
3			
4			
5			
6			
			End Bent No. 4
7			
8			
9			
10			
11			
12			

As-Built Drilled Shaft Data				
Shaft No.	Top of Sound Rock (Elev.)	Tip of Casing (Elev.)	Bottom of Rock Socket (Elev.)	Remarks
				Int. Bent No. 2
1				
2				
3				
				Int. Bent No. 3
4				
5				
6				

Note:  
This sheet to be completed by construction personnel.

AS-BUILT PILE & DRILLED SHAFT DATA

Detailed Aug. 2024  
Checked Aug. 2024

Note: This drawing is not to scale. Follow dimensions.

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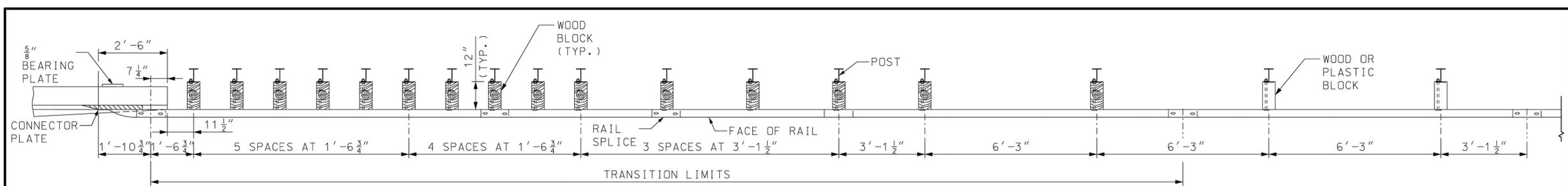
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PROJECT NO. 997

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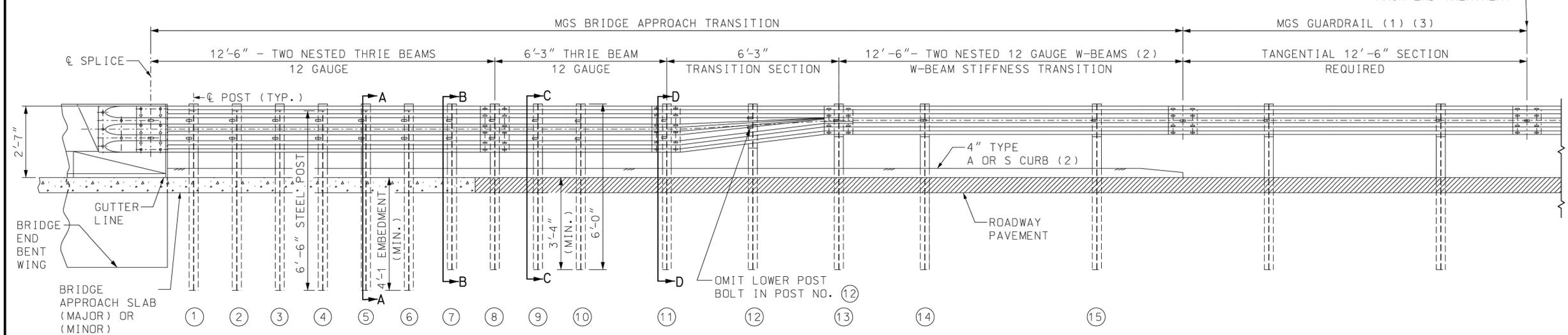
PROJECT NO: 23-600-303-00  
DESIGNED BY: WGF  
DRAWN BY: GAC  
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SHEET TITLE  
AS-BUILT PILE & DRILLED SHAFT DATA

SHEET NO:  
STR-21



PLAN VIEW



BRIDGE APPROACH TRANSITION (EXTENDED CURB)(2)

GENERAL NOTES:

MGS GUARDRAIL SHALL BE TANGENTIAL WITH BRIDGE APPROACH TRANSITION FOR 12'-6" BEYOND THE TWO NESTED W-BEAM STIFFNESS TRANSITION AND 25'-0" BEYOND THRIE BEAM TRANSITION SECTION.

AT THE CONTRACTORS OPTION, A SINGLE 18'-9" PIECE OF THRIE BEAM MAY BE SUBSTITUTED FOR ONE OF THE 12'-6" PANELS AND THE 6'-3" SECTION AS SHOWN.

FOR PROTECTIVE COATING AND MATERIAL REQUIREMENTS, SEE SEC 1040 OF THE STANDARD SPECIFICATIONS.

RAIL POSTS SHALL BE SET PERPENDICULAR TO THE ROADWAY PROFILE GRADE AND VERTICALLY IN CROSS SECTION.

USE 5/8" BUTTON-HEAD OVAL SHOULDER BOLTS WITH HEX NUTS AT ALL SLOTS (THICKNESS OF HEX NUTS = 3/8" MIN.).

THE BEARING PLATE SHALL BE FABRICATED FROM GRADE A36 STEEL AND GALVANIZED.

ALL LAP SPLICES, INCLUDING END SHOES, SHALL BE MADE IN THE DIRECTION OF TRAFFIC.

THE COST OF FURNISHING, FABRICATING AND INSTALLING BRIDGE APPROACH TRANSITION (EXTENDED CURB), COMPLETE IN PLACE, WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER EACH.

THE CONTRACTOR MAY, AT THEIR OPTION, FURNISH EQUIVALENT SECTIONS FABRICATED FROM MATERIAL MEETING AND IN ACCORDANCE WITH THE REQUIREMENTS OF ASTM A769 GRADE 36 OR 40. THE SECTIONS SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH REQUIREMENTS OF AASHTO M 111.

(1) PLACE THE FIRST POST OF THE MGS 6'-3" PAST THE LAST POST OF THE BRIDGE APPROACH TRANSITION TO KEEP POSTS OFFSET FROM THE RAIL SPLICES.

(2) WHERE CURB EXTENDS UPSTREAM OF POST NO. (1) FOR DRAINAGE PURPOSES, A STIFFNESS TRANSITION CONSISTING OF AN EXTRA 12'-6" BEAM OF 12 GAUGE W-BEAM MUST BE NESTED PRIOR TO THE TRANSITION SECTION (UPSTREAM OF POST NO. (3)). THE CURB SHALL BE EXTENDED TO THE END OF THE 12'-6" 12 GAUGE W-BEAM STIFFNESS TRANSITION SEE STD. PLAN 609.40 FOR DETAILS. WHEN CURBS DO NOT EXTEND UPSTREAM OF POST NO. (1), PAY FOR A BRIDGE APPROACH TRANSITION (REGULAR CURB/NO CURB). FOR DETAILS OF BRIDGE APPROACH TRANSITION (REGULAR CURB/NO CURB), SEE SHEET 2 OF 6.

(3) THE ADDITIONAL REQUIRED MGS GUARDRAIL IS INCLUDED IN THE TOTAL LENGTH OF NEED AND SHALL BE PAID FOR AS A GUARDRAIL PAY ITEM.

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

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PROJECT NAME  
**CITY OF LEE'S SUMMIT, MO  
 SAMPSON ROAD BRIDGE  
 REPLACEMENT AND STORM  
 WATER IMPROVEMENTS  
 PROJECT NO. 997**

NO.	DATE	DESCRIPTION	BY

**MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION**  
 105 WEST CAPITOL  
 JEFFERSON CITY, MO 65102  
 1-888-ASK-MODOT (1-888-275-6636)

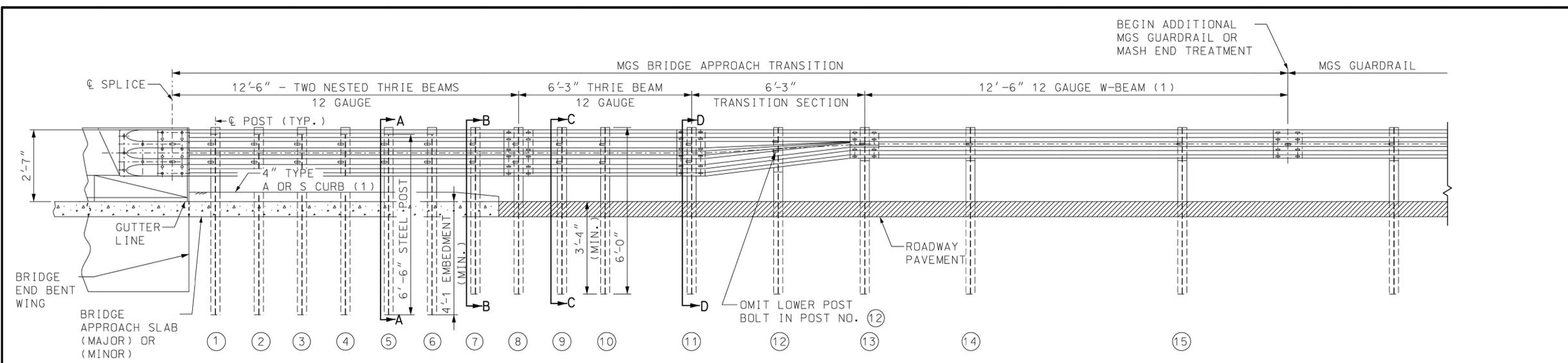
**MIDWEST GUARDRAIL SYSTEM (MGS) VERTICAL BARRIER TRANSITIONS**

DATE EFFECTIVE: 07/01/2021  
 DATE PREPARED: 4/29/2021  
 SHEET NO. 1 OF 6  
 606.60B

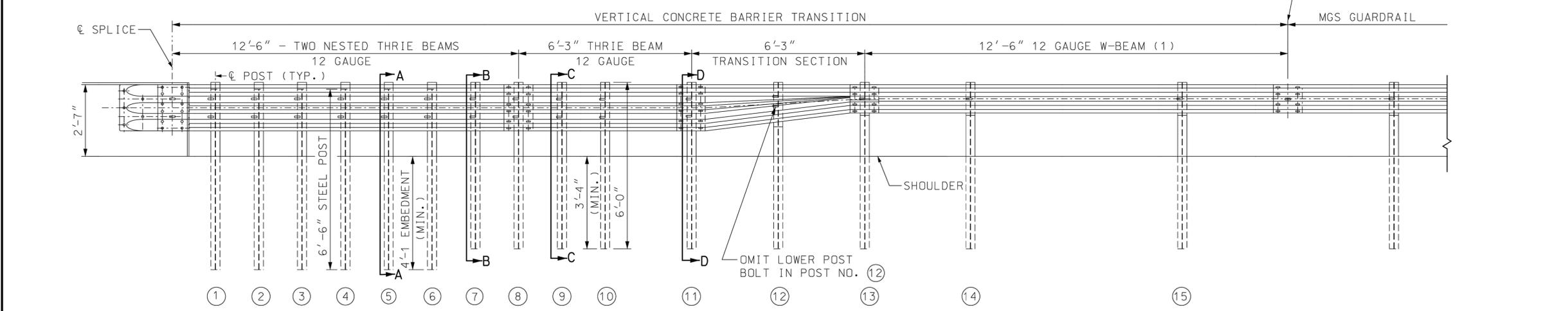
PROJECT NO:	23-600-303-00
DESIGNED BY:	AJM
DRAWN BY:	AJM
CHECKED BY:	CDP
DATE:	9/20/2024

SHEET TITLE  
**GUARD RAIL DETAILS**

SHEET NO:  
**C-85**



BRIDGE APPROACH TRANSITION (WITH REGULAR LENGTH CURB OR NO CURB)(1)



VERTICAL CONCRETE BARRIER TRANSITION (REGULAR LENGTH CURB OR NO CURB)(1)  
(VIEW SHOWN WITHOUT CURB)

GENERAL NOTES:  
SEE SHEET 1 FOR ADDITIONAL NOTES NOT INCLUDED ON THIS SHEET.

THE COST OF FURNISHING, FABRICATING AND INSTALLING BRIDGE APPROACH TRANSITION (REGULAR/NO CURB), COMPLETE IN PLACE, WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER EACH.

(1) WHERE CURB EXTENDS UPSTREAM OF POST NO. (11) FOR DRAINAGE PURPOSES, A STIFFNESS TRANSITION CONSISTING OF AN EXTRA 12'-6" BEAM OF 12 GAUGE W-BEAM MUST BE NESTED PRIOR TO THE TRANSITION SECTION (UPSTREAM OF POST NO. (13)). THE CURB SHALL BE EXTENDED TO THE END OF THE 12'-6" 12 GAUGE W-BEAM STIFFNESS TRANSITION SEE STD. PLAN 609.40 FOR DETAILS. IF CURB EXTENDS BEYOND POST NO. (11), PAY FOR A BRIDGE APPROACH TRANSITION (EXTENDED CURB).

BEGIN ADDITIONAL MGS GUARDRAIL OR MASH END TREATMENT

MGS GUARDRAIL

BEGIN ADDITIONAL MGS GUARDRAIL OR MASH END TREATMENT

MGS GUARDRAIL

OMIT LOWER POST BOLT IN POST NO. (12)

SHOULDER

**MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION**  
 105 WEST CAPITOL  
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STATE OF MISSOURI  
 TRAVIS D. KOESTNER  
 NUMBER PE-30042  
 PROFESSIONAL ENGINEER  
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

**MIDWEST GUARDRAIL SYSTEM (MGS) VERTICAL BARRIER TRANSITIONS**

DATE EFFECTIVE:	07/01/2021	606.60B	SHEET NO. 2 OF 6
DATE PREPARED:	5/5/2021		

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 PHONE: 816-701-3100  
 FAX: 816-942-3013  
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SEAL  
 STATE OF MISSOURI  
 CODY DEAN PORTER  
 NUMBER PE-202002925  
 9/20/2024  
 PROFESSIONAL ENGINEER

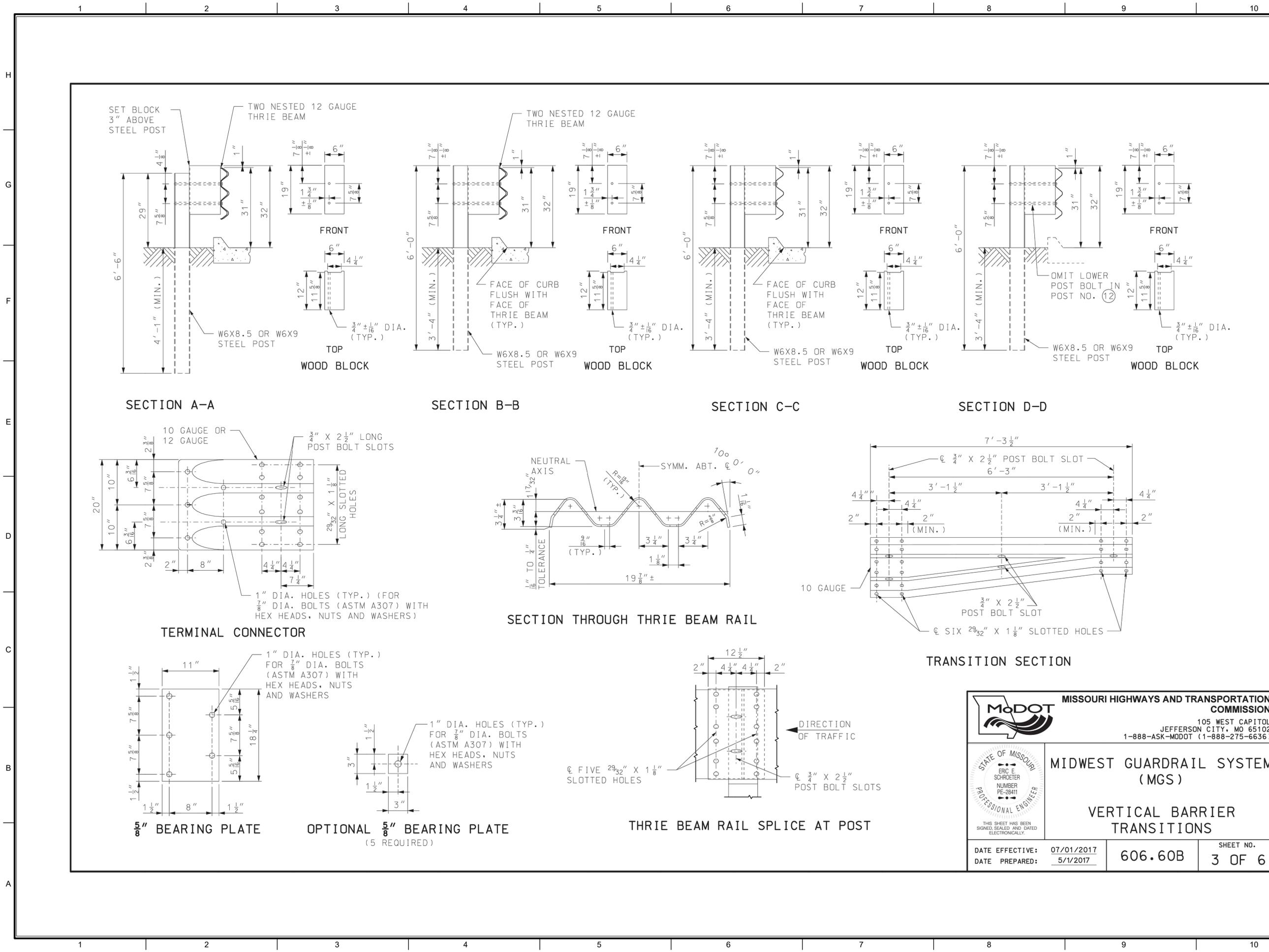
PROJECT NAME  
**CITY OF LEE'S SUMMIT, MO  
 SAMPSON ROAD BRIDGE  
 REPLACEMENT AND STORM  
 WATER IMPROVEMENTS  
 PROJECT NO. 997**

REV.	DATE	DESCRIPTION	BY

PROJECT NO: 23-600-303-00  
 DESIGNED BY: AJM  
 DRAWN BY: AJM  
 CHECKED BY: CDP  
 DATE: 9/20/2024

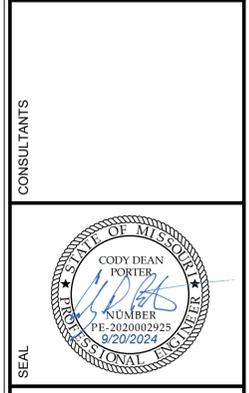
SHEET TITLE  
**GUARD RAIL DETAILS**

SHEET NO:  
**C-86**



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**PROJECT NAME**  
 CITY OF LEE'S SUMMIT, MO  
 SAMPSON ROAD BRIDGE  
 REPLACEMENT AND STORM  
 WATER IMPROVEMENTS  
 PROJECT NO. 997

REV.	DATE	DESCRIPTION	BY

**MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION**  
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 JEFFERSON CITY, MO 65102  
 1-888-ASK-MODOT (1-888-275-6636)

**STATE OF MISSOURI**  
 ERIC E. SCHROETER  
 NUMBER PE-28411  
 PROFESSIONAL ENGINEER

**MIDWEST GUARDRAIL SYSTEM (MGS)**  
 VERTICAL BARRIER TRANSITIONS

DATE EFFECTIVE: 07/01/2017  
 DATE PREPARED: 5/1/2017

606.60B

SHEET NO. 3 OF 6

PROJECT NO: 23-600-303-00  
 DESIGNED BY: AJM  
 DRAWN BY: AJM  
 CHECKED BY: CDP  
 DATE: 9/20/2024

SHEET TITLE  
**GUARD RAIL DETAILS**

SHEET NO:  
**C-87**

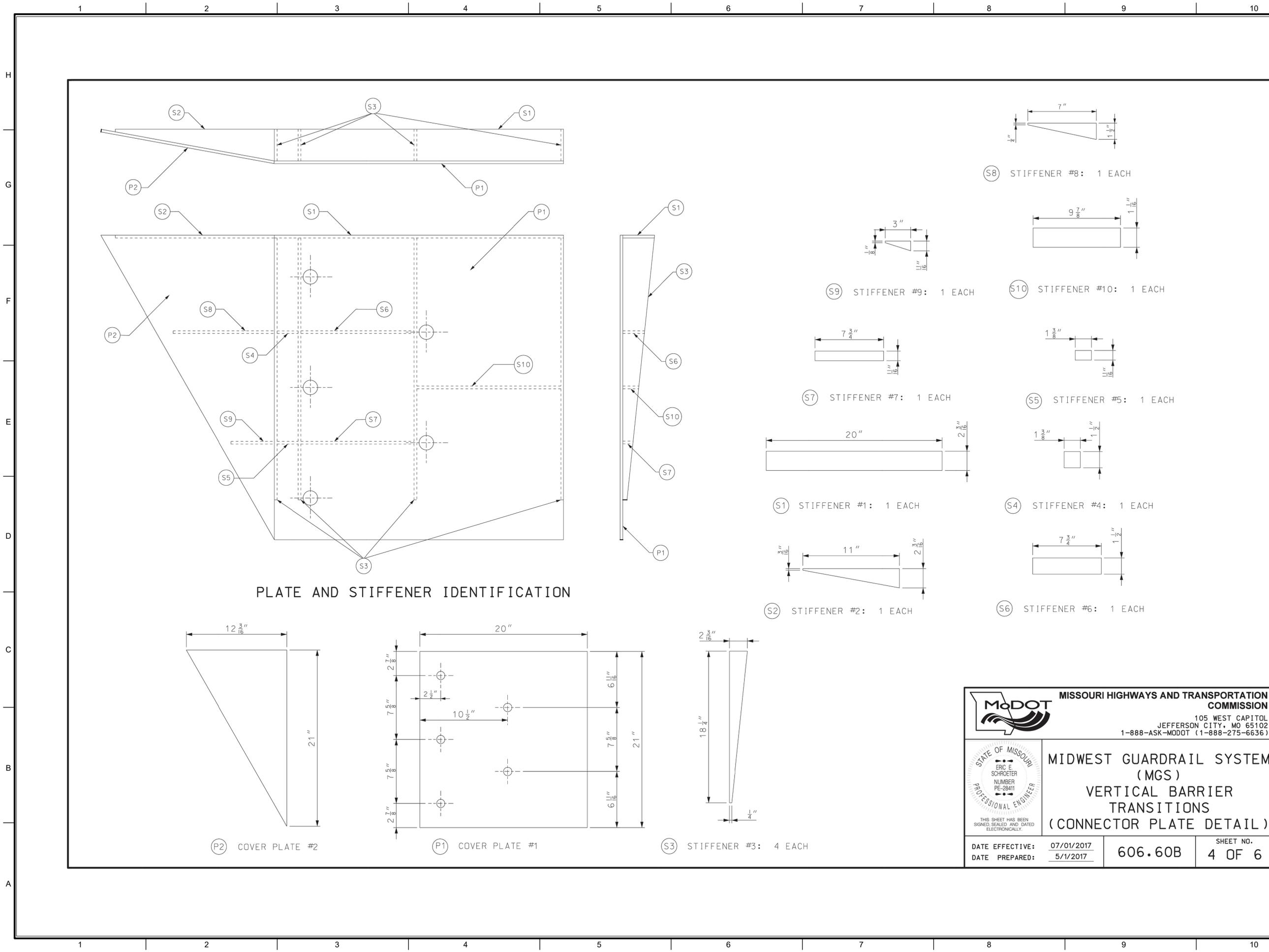
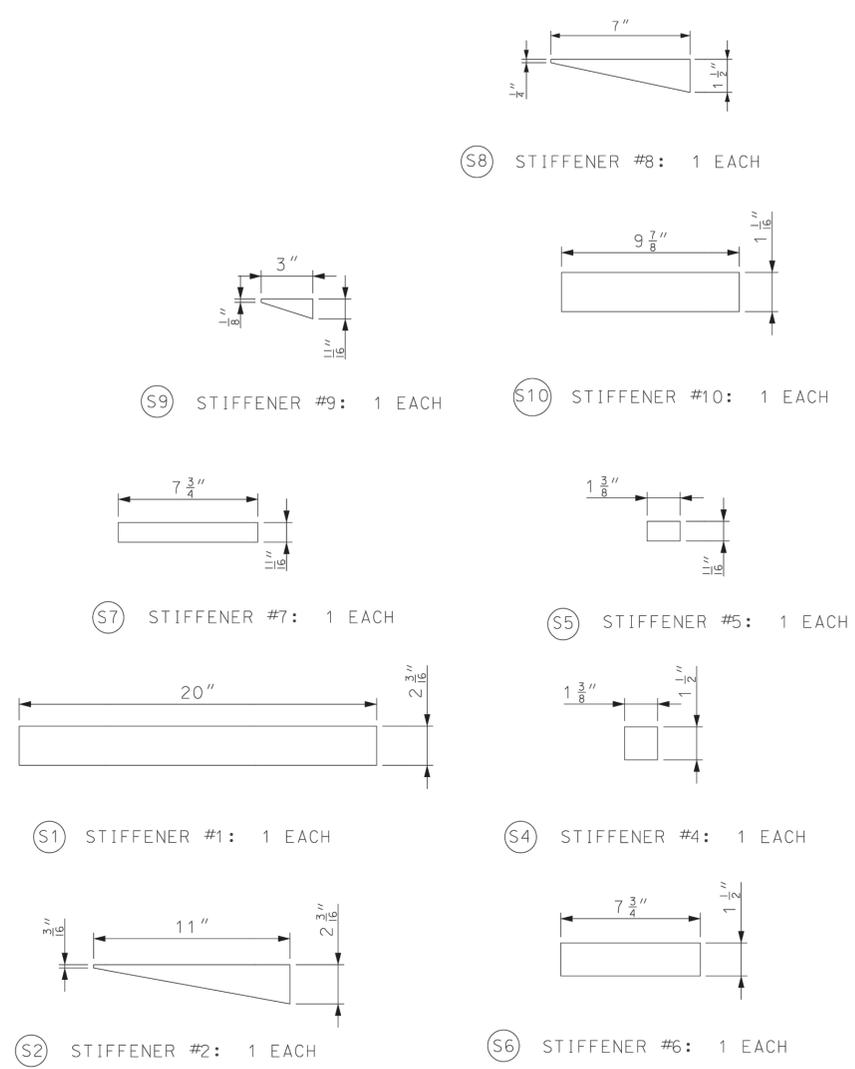
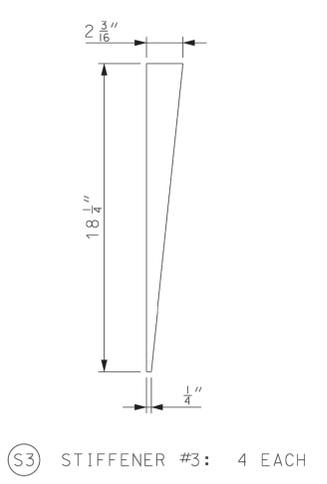
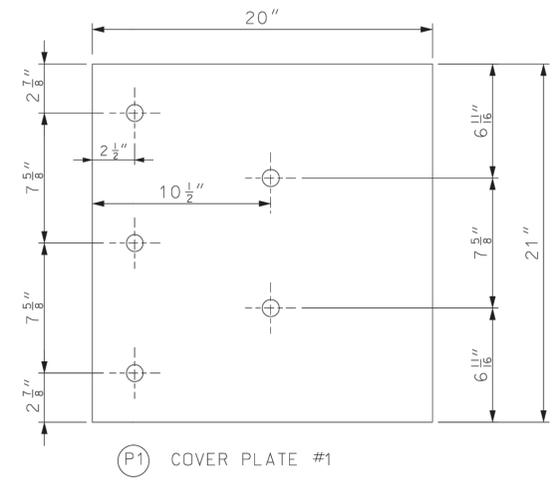
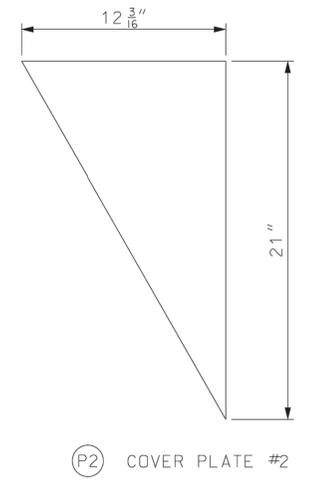


PLATE AND STIFFENER IDENTIFICATION



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**MIDWEST GUARDRAIL SYSTEM (MGS)**

**VERTICAL BARRIER TRANSITIONS**

**(CONNECTOR PLATE DETAIL)**

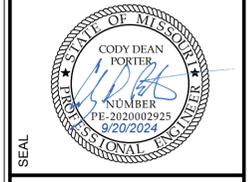
DATE EFFECTIVE: 07/01/2017  
DATE PREPARED: 5/1/2017

**606.60B**

SHEET NO.  
**4 OF 6**

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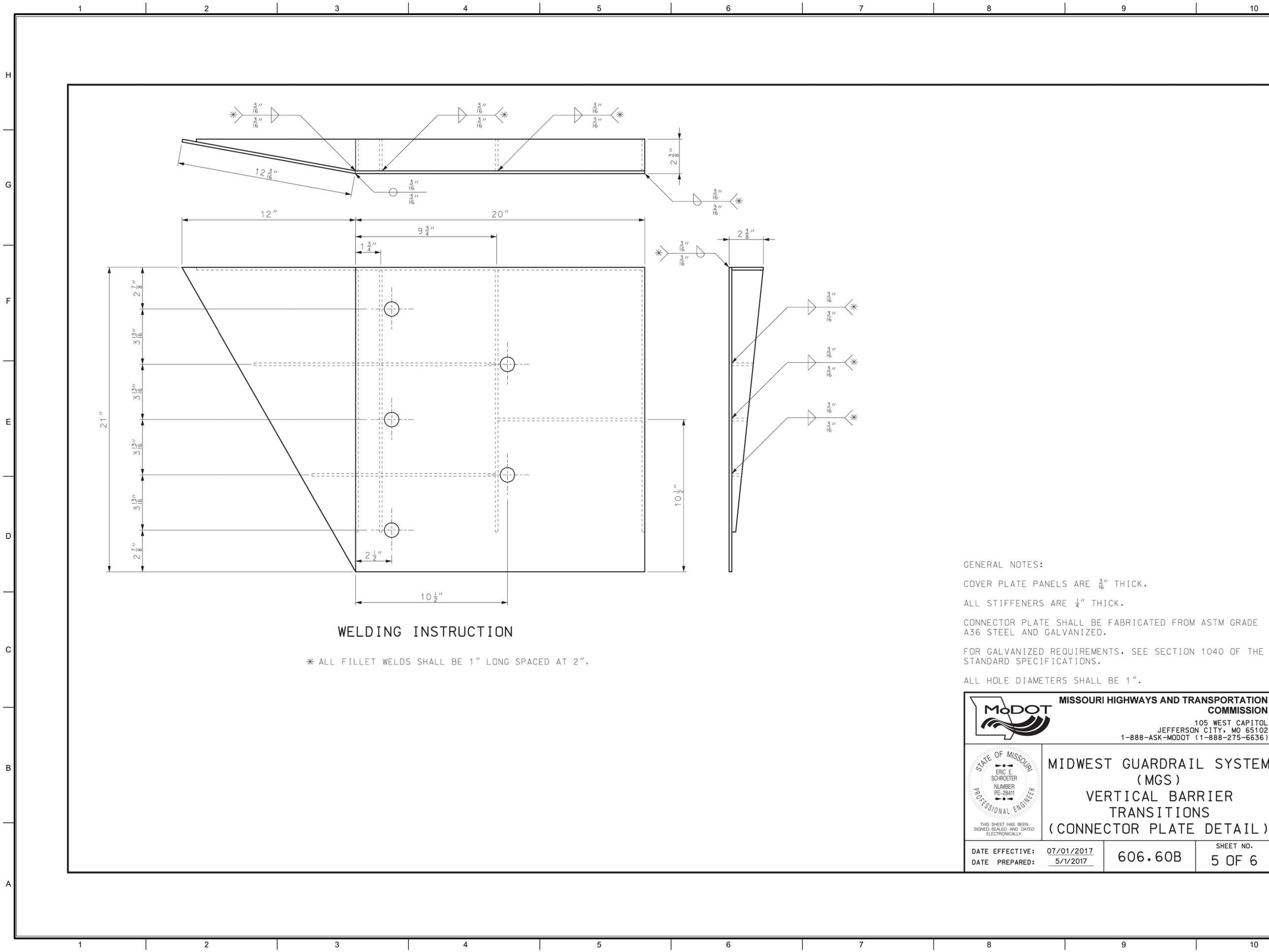
PROJECT NAME  
**CITY OF LEE'S SUMMIT, MO  
 SAMPSON ROAD BRIDGE  
 REPLACEMENT AND STORM  
 WATER IMPROVEMENTS  
 PROJECT NO. 997**

REV.	DATE	DESCRIPTION	BY

PROJECT NO: 23-600-303-00  
 DESIGNED BY: AJM  
 DRAWN BY: AJM  
 CHECKED BY: CDP  
 DATE: 9/20/2024

SHEET TITLE  
**GUARD RAIL  
 DETAILS**

SHEET NO:  
**C-88**



**WELDING INSTRUCTION**

\* ALL FILLET WELDS SHALL BE 1" LONG SPACED AT 2".

**GENERAL NOTES:**

COVER PLATE PANELS ARE  $\frac{3}{16}$ " THICK.

ALL STIFFENERS ARE  $\frac{1}{4}$ " THICK.

CONNECTOR PLATE SHALL BE FABRICATED FROM ASTM GRADE A36 STEEL AND GALVANIZED.

FOR GALVANIZED REQUIREMENTS, SEE SECTION 1040 OF THE STANDARD SPECIFICATIONS.

ALL HOLE DIAMETERS SHALL BE 1".

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	<b>MIDWEST GUARDRAIL SYSTEM (MGS)</b> <b>VERTICAL BARRIER TRANSITIONS</b> <b>(CONNECTOR PLATE DETAIL)</b>	
	DATE EFFECTIVE: 07/01/2017 DATE PREPARED: 5/1/2017	606.60B

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SEAL

PROJECT NAME  
**CITY OF LEE'S SUMMIT, MO**  
**SAMPSON ROAD BRIDGE**  
**REPLACEMENT AND STORM**  
**WATER IMPROVEMENTS**  
**PROJECT NO. 997**

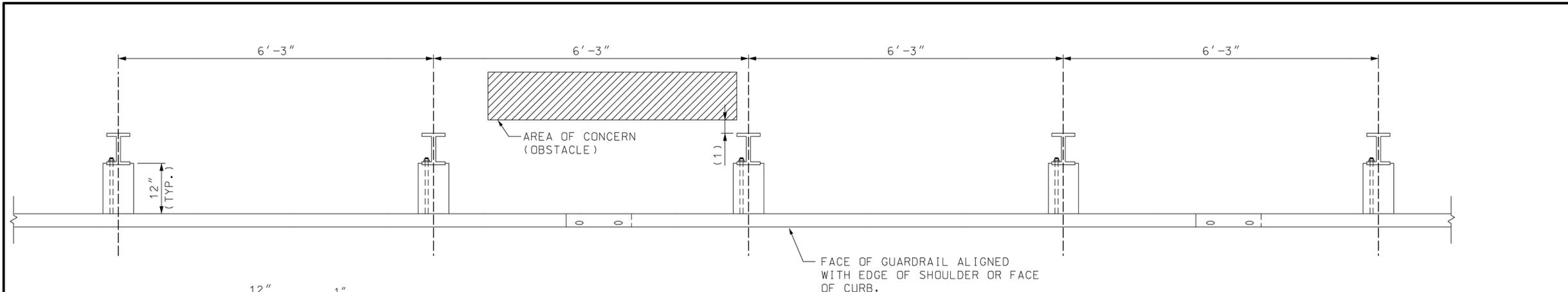
REV.	DATE	DESCRIPTION	BY

PROJECT NO: 23-600-303-00  
 DESIGNED BY: AJM  
 DRAWN BY: AJM  
 CHECKED BY: CDP  
 DATE: 9/20/2024

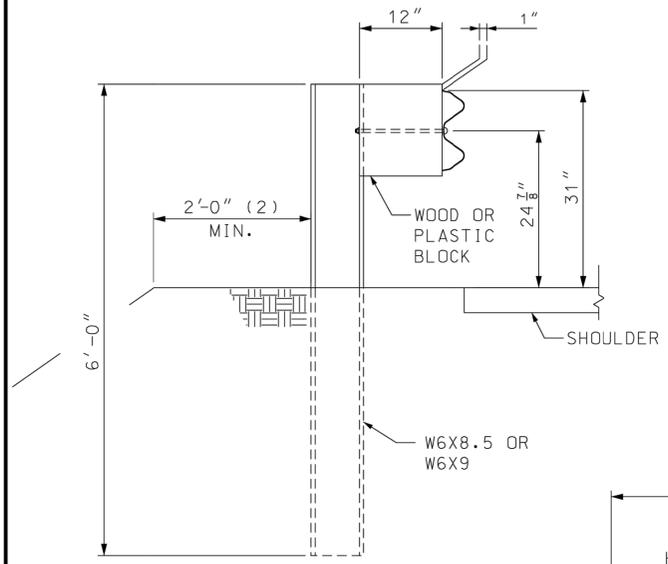
SHEET TITLE  
**GUARD RAIL**  
**DETAILS**

SHEET NO:  
**C-89**

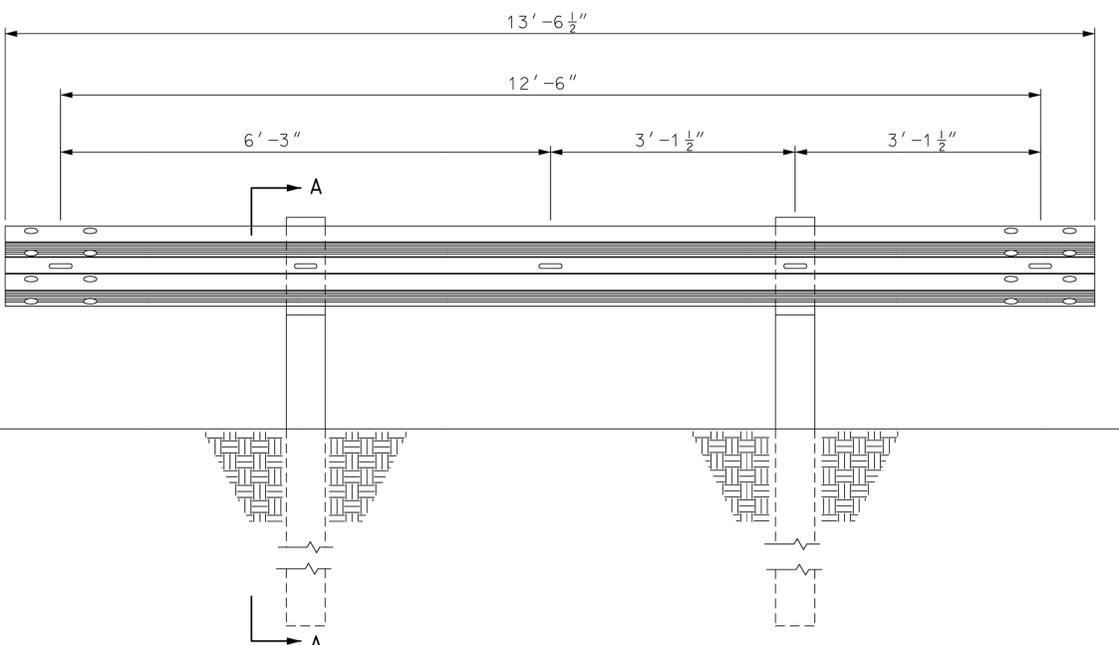




PLAN VIEW



SECTION A-A



ELEVATION VIEW

- (1) 2'-6" MINIMUM CLEARANCE TO THE FACE OF OBSTACLE WITH 6'-3" POST SPACINGS,  
2'-0" MINIMUM CLEARANCE TO THE FACE OF OBSTACLE WITH 3'-1 1/2" POST SPACINGS,  
1'-6" MINIMUM CLEARANCE TO THE FACE OF OBSTACLE WITH 1'-6 3/4" POST SPACINGS.  
SEE SHEET 4 FOR POST SPACING DETAILS.
- (2) WHEN SITE CONSTRAINTS PROHIBIT OR EMBANKMENT CANNOT BE CONSTRUCTED TO PROVIDE  
A MINIMUM OF 2 FEET BETWEEN THE BACK OF THE GUARDRAIL POST AND SLOPE BREAK POINT,  
8-FOOT POSTS SHALL BE USED (SEE SHEET 6).

GENERAL NOTES:

FOR INITIAL INSTALLATION, CONSTRUCT THE GUARDRAIL WITHIN 1" OF THE STANDARD 31" HEIGHT TO THE TOP OF W-BEAM RAIL. WHEN SUBSEQUENT PROJECTS, SUCH AS RESURFACINGS, AFFECT THE HEIGHT OF EXISTING GUARDRAIL, ADJUSTMENT IS NOT REQUIRED IF THE FINISHED HEIGHT IS WITHIN 3" OF THE STANDARD HEIGHT.

THE STANDARD POST LENGTH IS 6'-0" (+3", -0" TOLERANCE).

THE SUBSTITUTION OF 8-FOOT POSTS IN LIEU OF REQUIRED GRADING, TO CONSTRUCT LESS THAN THE DESIGNED TYPICAL SECTION, SHALL NOT BE ALLOWED.

REFER TO AASHTO M 180 FOR DIMENSIONAL DETAILS OF W-BEAM, RELATED BUFFER AND END SECTIONS, BEAM SPLICES, POST AND SPLICE BOLTS, NUTS, AND TYPE 1 W-BEAM TO THRIE BEAM TRANSITION SECTIONS.

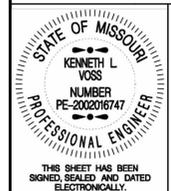
BEAM WASHERS ARE NOT TO BE USED. BOLT SHALL BE ASTM A307.

UNLESS OTHERWISE SPECIFIED, W-BEAM RAIL IS 12 GAUGE STEEL WITH AN EFFECTIVE LENGTH OF 12'-6" OR 25'-0", WITH 29 3/32" X 1 1/8" SPLICE BOLT SLOTS, AND 3/4" X 1/2" POST BOLT SLOTS ON 3'-1 1/2" CENTERS REGARDLESS OF POST SPACING.

FOR PROTECTIVE COATING AND MATERIAL REQUIREMENTS, SEE SEC 1040 OF THE STANDARD SPECIFICATIONS.

LAP SPLICES BETWEEN TWO RAILS OR BETWEEN A RAIL AND TERMINAL CONNECTOR IN THE DIRECTION OF TRAFFIC. LAP THE FLARED END SECTIONS IN THE DIRECTION OF TRAFFIC.

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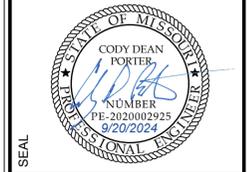


**MIDWEST GUARDRAIL SYSTEM (MGS)**

DATE EFFECTIVE: 7/1/2024	606.50F	SHEET NO. 1 OF 9
DATE PREPARED: 4/10/2024		

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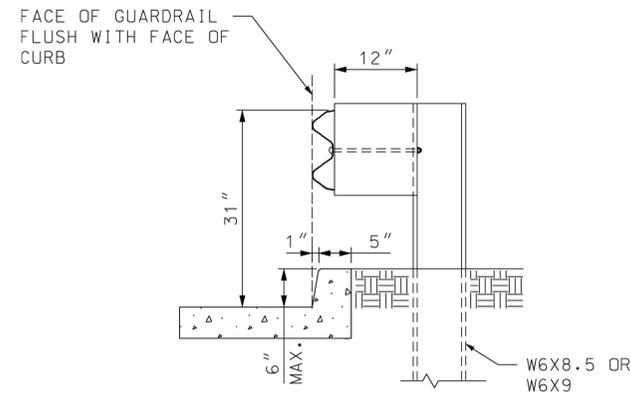
PROJECT NAME  
**CITY OF LEE'S SUMMIT, MO  
 SAMPSON ROAD BRIDGE  
 REPLACEMENT AND STORM  
 WATER IMPROVEMENTS  
 PROJECT NO. 997**

REV.	DATE	DESCRIPTION	BY

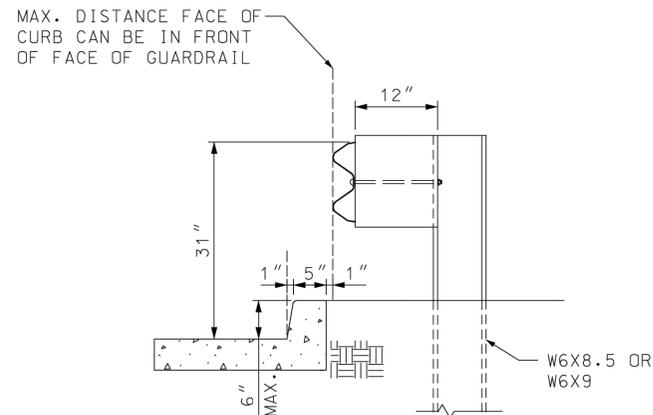
PROJECT NO:	23-600-303-00
DESIGNED BY:	AJM
DRAWN BY:	AJM
CHECKED BY:	CDP
DATE:	9/20/2024

SHEET TITLE  
**GUARD RAIL  
 DETAILS**

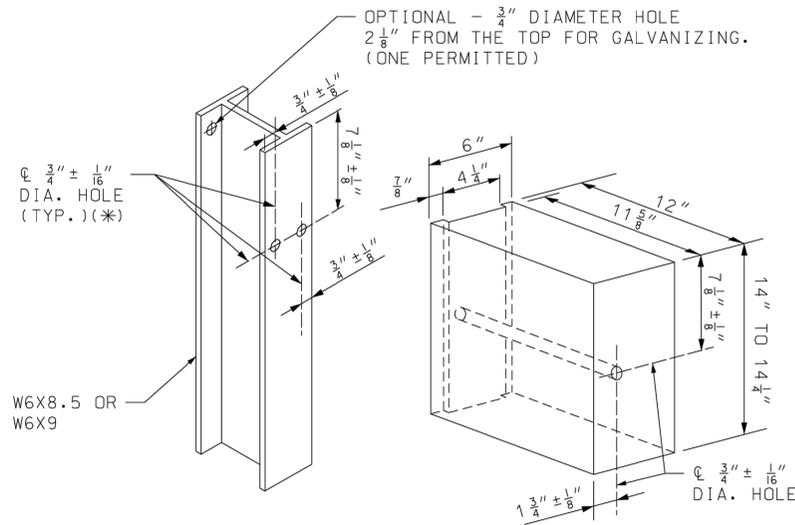
SHEET NO:  
**C-91**



MGS GUARDRAIL AT CURB



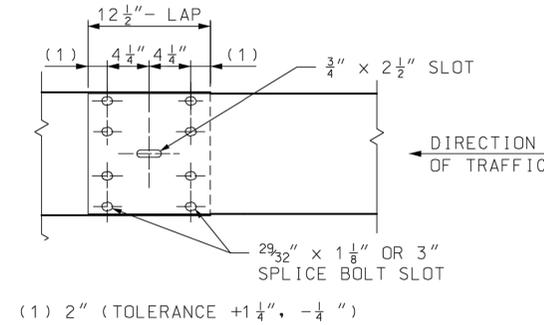
ALTERNATE MGS AT CURB



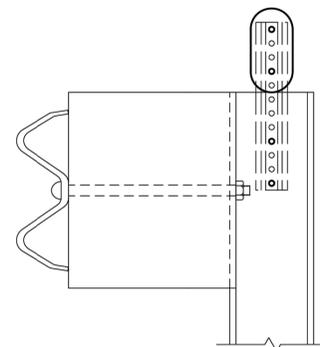
FOR STEEL POST AND NOTCHED WOOD OR PLASTIC BLOCK

HOLE PUNCHING DETAIL

(\*) TWO HOLES CAN BE PROVIDED ON EACH FLANGE OF POST, ONLY ONE IS REQUIRED FOR FLANGE OF POST THAT HAS A BLOCK ATTACHMENT.



RAIL ELEMENT SPLICE DETAIL



DELINEATORS ON GUARDRAIL

GENERAL NOTES:

FOR GUARDRAIL DELINEATION DETAILS SEE STD PLAN 903.03.

	<b>MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION</b> 105 WEST CAPITOL JEFFERSON CITY, MO 65102 1-888-ASK-MODOT (1-888-275-6636)	
		<b>MIDWEST GUARDRAIL SYSTEM (MGS) POST AND BLOCK</b>
DATE EFFECTIVE: 7/1/2024 DATE PREPARED: 4/10/2024	<b>606.50F</b>	SHEET NO. <b>3 OF 9</b>

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PROJECT NAME  
**CITY OF LEE'S SUMMIT, MO  
 SAMPSON ROAD BRIDGE  
 REPLACEMENT AND STORM  
 WATER IMPROVEMENTS  
 PROJECT NO. 997**

REV.	DATE	DESCRIPTION	BY

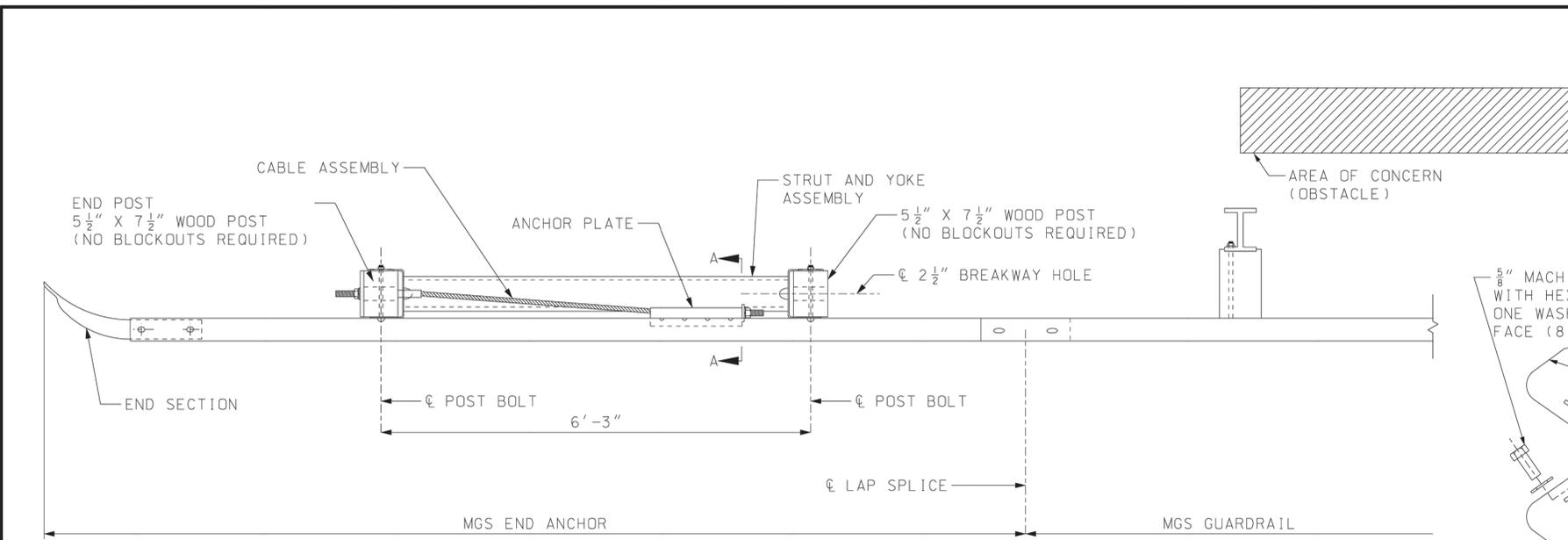
PROJECT NO: 23-600-303-00  
 DESIGNED BY: AJM  
 DRAWN BY: AJM  
 CHECKED BY: CDP  
 DATE: 9/20/2024

SHEET TITLE  
**GUARD RAIL DETAILS**

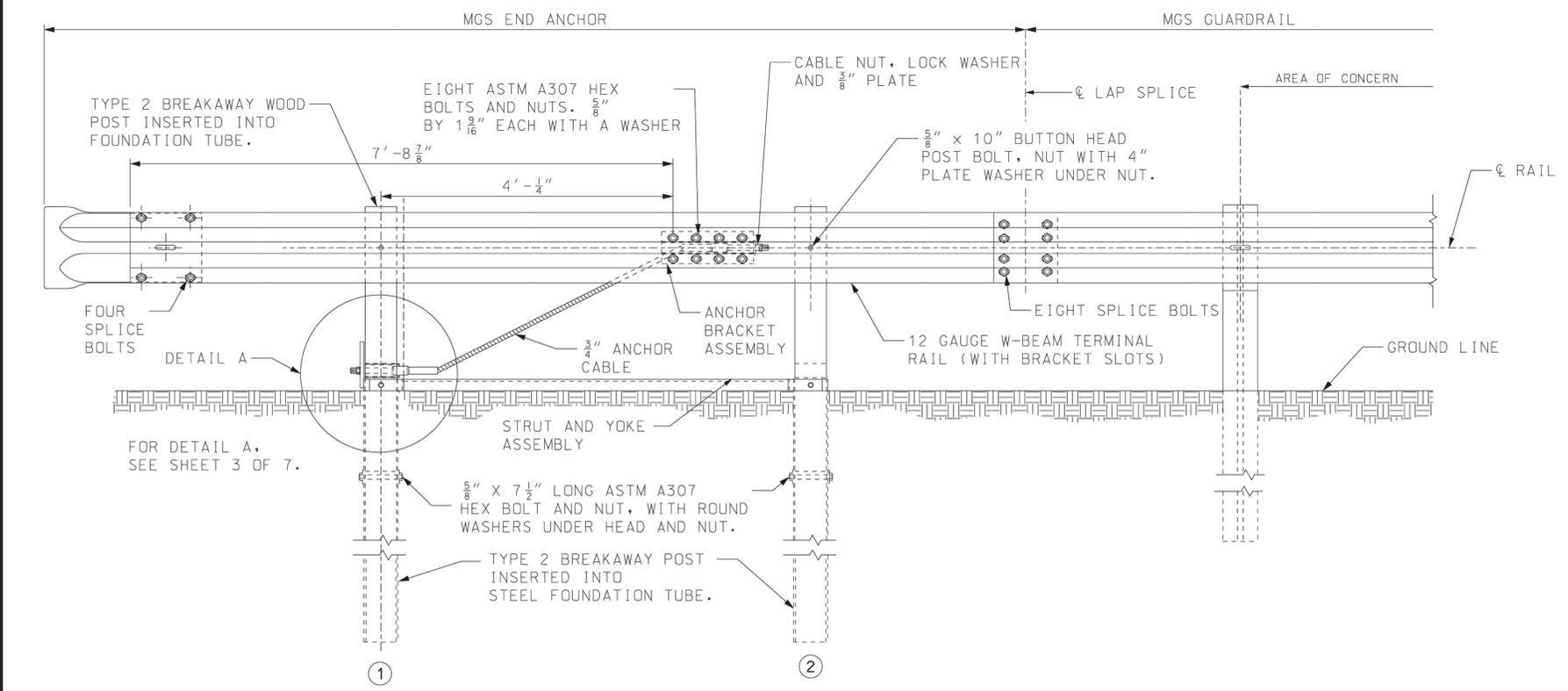
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**C-92**

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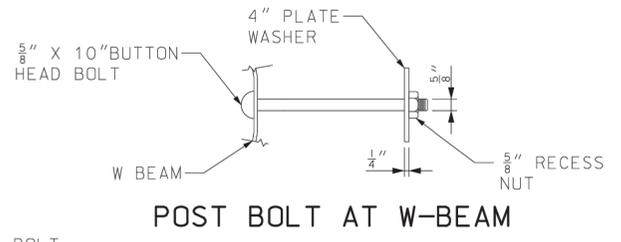
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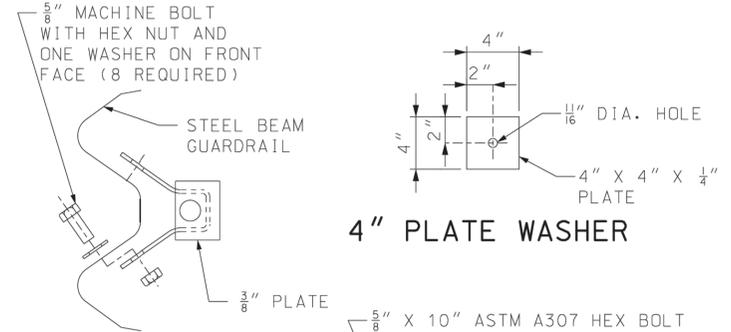
PLAN VIEW



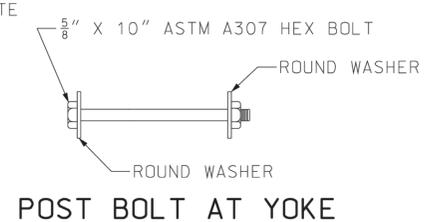
ELEVATION VIEW



POST BOLT AT W-BEAM



SECTION A-A



POST BOLT AT YOKE

GENERAL NOTES:  
 END ANCHOR DETAILS SHOWN SHALL BE USED ONLY ON DOWNSTREAM ENDS OF GUARDRAIL WHEN AN END ANCHOR IS REQUIRED.  
 THE DETAILS SHOWN ARE FOR AN END ANCHORAGE SYSTEM FOR GUARDRAIL.  
 CABLE ASSEMBLY AND ANCHOR PLATE SHALL HAVE A MINIMUM BREAKING STRENGTH OF 20 TONS.  
 ALL FITTINGS AND HARDWARE REQUIRED SHALL BE GALVANIZED IN ACCORDANCE WITH SECTION 1040.  
 WOOD POSTS ① AND ② SHALL BE 5 1/2" X 7 1/2".  
 SEE SHEET NO. 2 OF 7 FOR WOOD POST DETAILS.

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**STATE OF MISSOURI**  
 ERIC E. SCHROETER  
 NUMBER PE-28411  
 PROFESSIONAL ENGINEER

**MIDWEST GUARDRAIL SYSTEM (MGS) TERMINAL ANCHOR ENDS**

DATE EFFECTIVE: 07/01/2017  
 DATE PREPARED: 5/1/2017

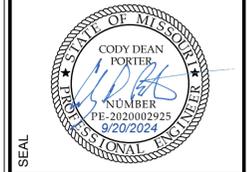
606.80C

SHEET NO. 1 OF 7

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PROJECT NAME  
**CITY OF LEE'S SUMMIT, MO  
 SAMPSON ROAD BRIDGE  
 REPLACEMENT AND STORM  
 WATER IMPROVEMENTS  
 PROJECT NO. 997**

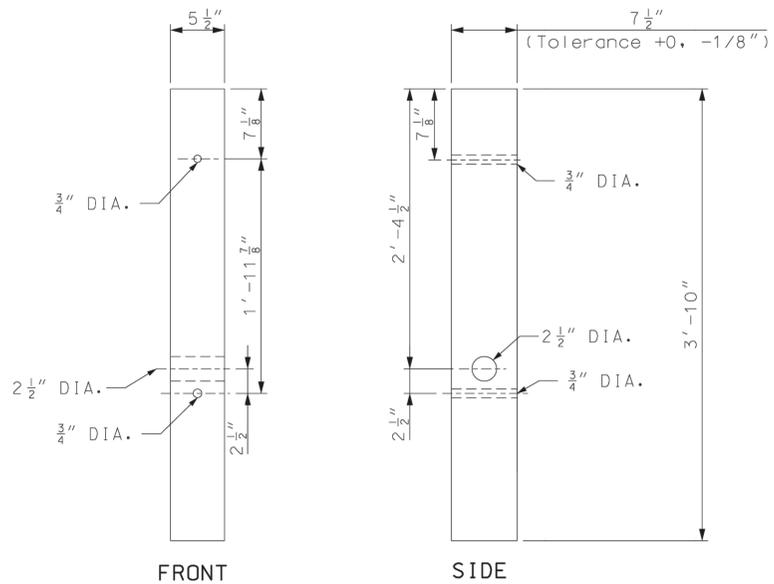
REV.	DATE	DESCRIPTION	BY

PROJECT NO: 23-600-303-00  
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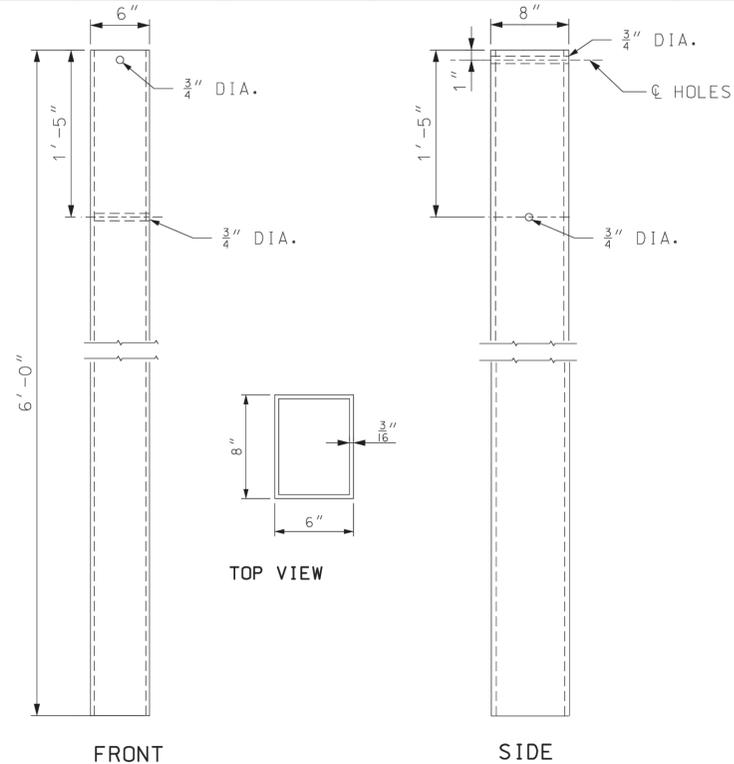
SHEET TITLE  
**GUARD RAIL DETAILS**

SHEET NO:  
**C-93**

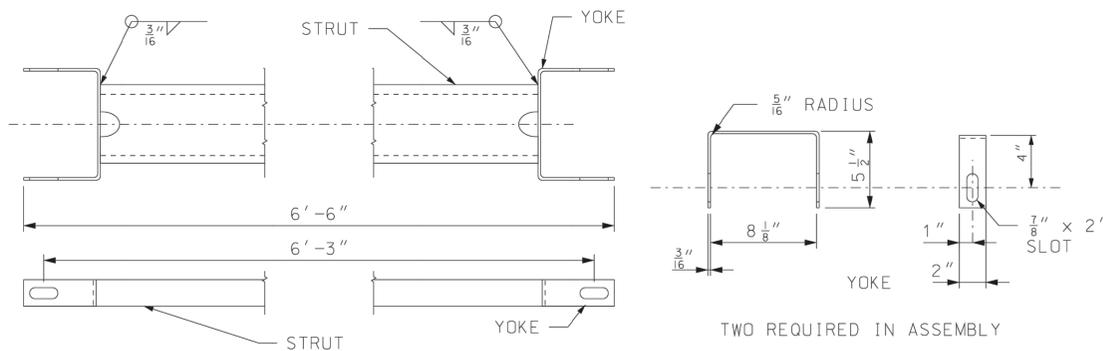
1 2 3 4 5 6 7 8 9 10



TYPE 2 BREAKAWAY  
WOOD POST



STEEL GROUND  
FOUNDATION TUBE



STRUT AND YOKE ASSEMBLY

\* A 6" X 3" 10 GAUGE BENT PLATE STRUT  
MAY BE SUBSTITUTED FOR THE C-CHANNEL



MISSOURI HIGHWAYS AND TRANSPORTATION  
COMMISSION

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MIDWEST GUARDRAIL SYSTEM  
(MGS)  
TERMINAL ANCHOR ENDS

DATE EFFECTIVE: 07/01/2017  
DATE PREPARED: 5/1/2017

606.80C

SHEET NO.  
2 OF 7

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CITY OF LEE'S SUMMIT, MO  
SAMPSON ROAD BRIDGE  
REPLACEMENT AND STORM  
WATER IMPROVEMENTS  
PROJECT NO. 997

REV.	DATE	DESCRIPTION	BY

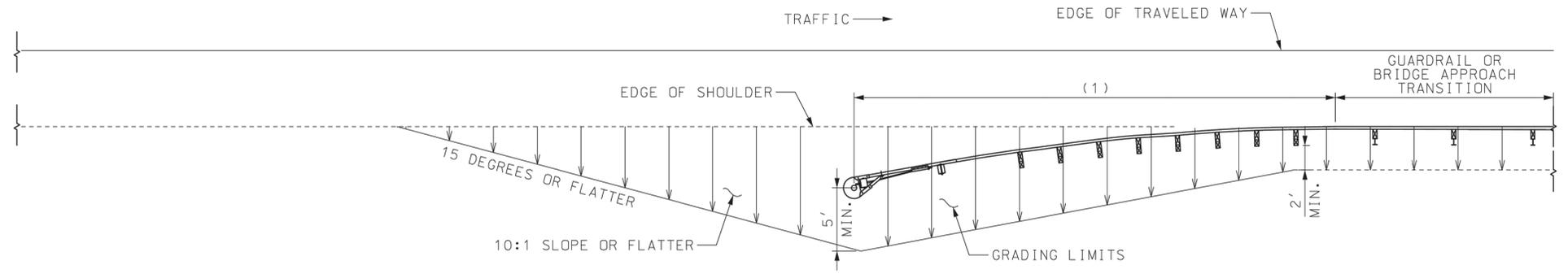
PROJECT NO: 23-600-303-00  
DESIGNED BY: AJM  
DRAWN BY: AJM  
CHECKED BY: CDP  
DATE: 9/20/2024

SHEET TITLE  
GUARD RAIL  
DETAILS

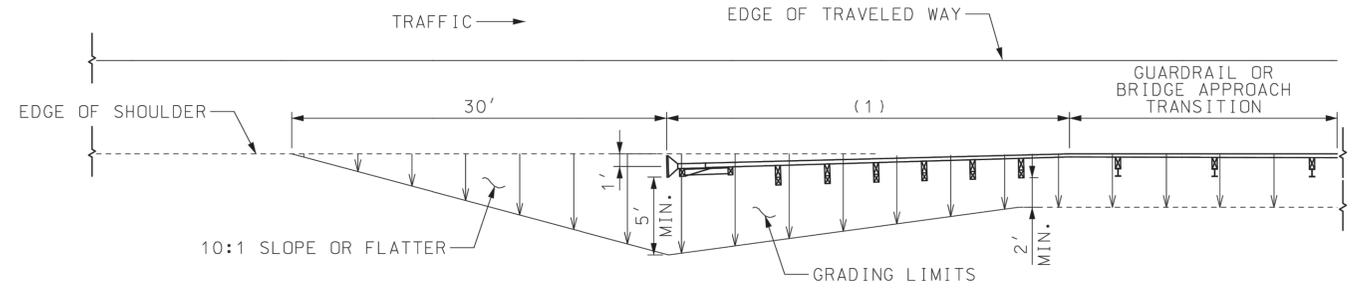
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C-94

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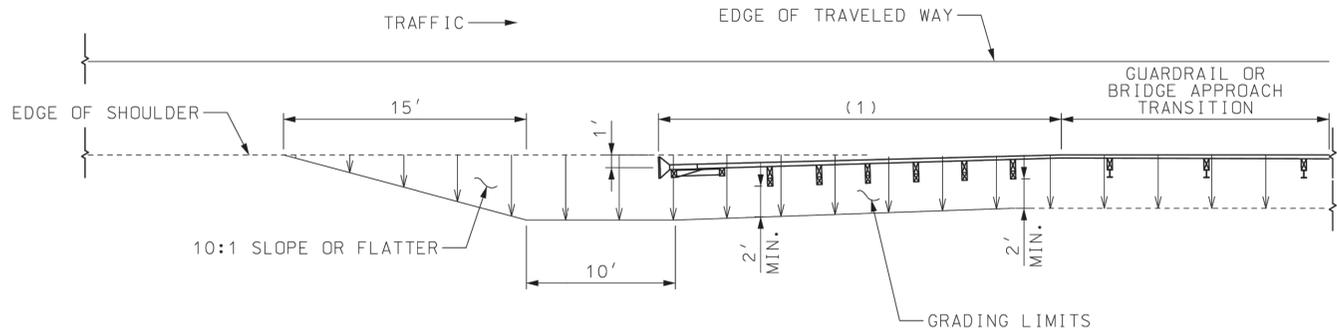




GRADING LIMITS FOR FLARED CRASHWORTHY END TERMINALS



STANDARD GRADING LIMITS FOR CRASHWORTHY END TERMINALS



ALTERNATE GRADING LIMITS FOR CRASHWORTHY END TERMINALS

(1) APPROVED CRASHWORTHY END TERMINAL

GENERAL NOTES:

STANDARD GRADING LIMITS SHALL BE USED WHEN CONSTRUCTING A NEW ROADBED. ALTERNATE GRADING LIMITS ARE ALLOWABLE ON EXISTING ROADBEDS EXCEPT WHEN STANDARD GRADING IS INDICATED ON THE PLANS.

THE CONTRACTOR SHALL PROVIDE THE ENGINEER WITH APPROVED SHOP DRAWINGS OF THE MASH APPROVED CRASHWORTHY END TERMINAL.

END ANCHORS SHALL BE INSTALLED ON ENDS OF GUARDRAIL RUNS WHERE CRASHWORTHY END TERMINALS ARE NOT REQUIRED.

**MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION**

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

**MASH CRASHWORTHY END TERMINALS TYPE A GRADING LIMITS**

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE EFFECTIVE: 10/01/2019  
DATE PREPARED: 7/18/2019

606.81B

SHEET NO. 1 OF 1

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

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KANSAS CITY, MO 64131  
PHONE: 816-701-3100  
FAX: 816-942-3013  
www.wilsonco.com

CONSULTANTS

PROJECT NAME  
**CITY OF LEE'S SUMMIT, MO  
SAMPSON ROAD BRIDGE  
REPLACEMENT AND STORM  
WATER IMPROVEMENTS  
PROJECT NO. 997**

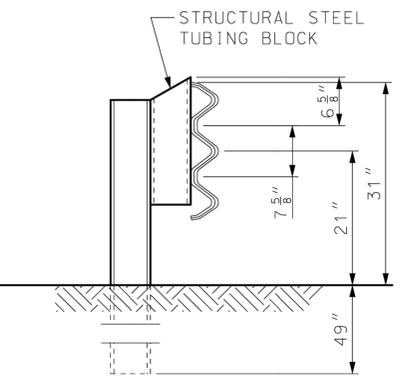
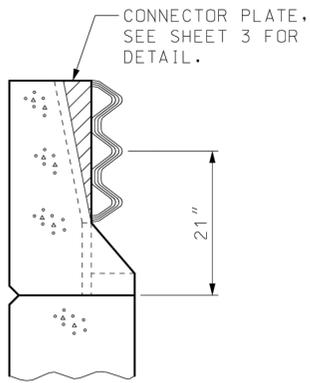
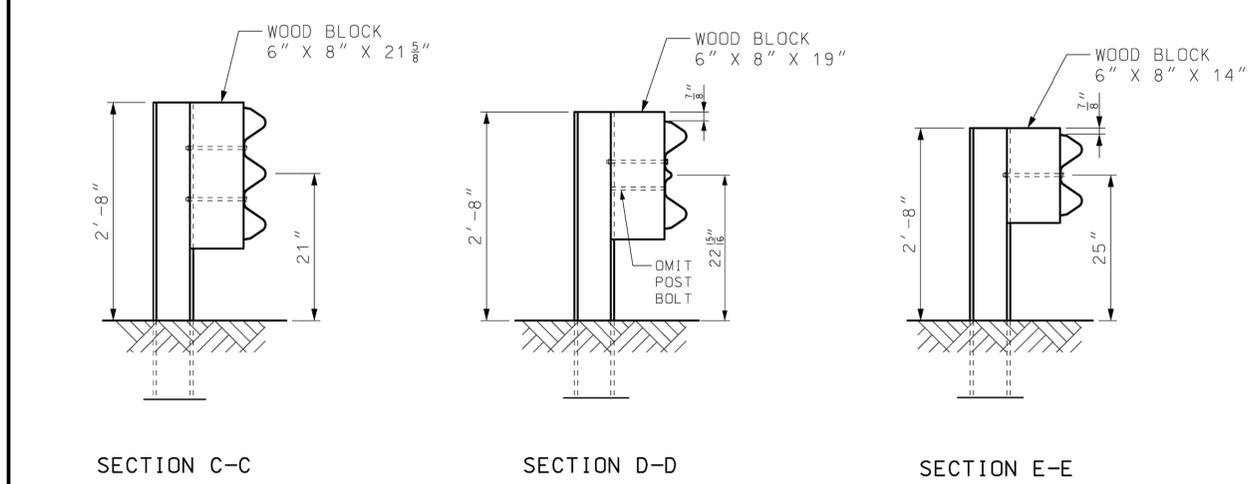
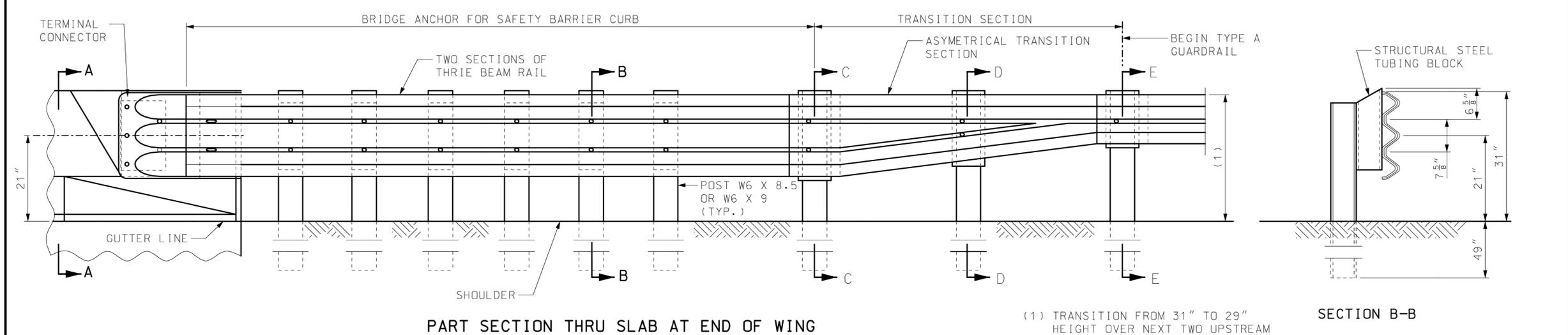
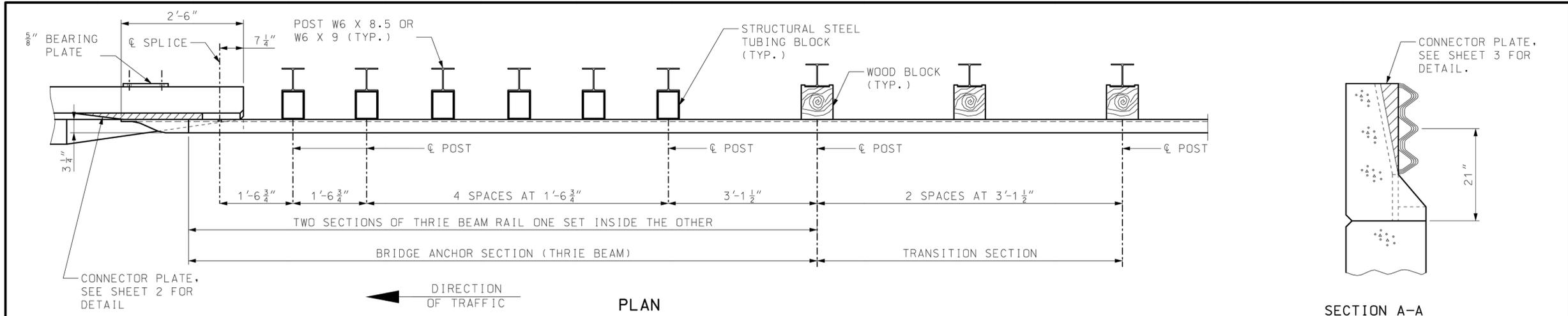
REV.	DATE	DESCRIPTION	BY

PROJECT NO: 23-600-303-00  
DESIGNED BY: AJM  
DRAWN BY: AJM  
CHECKED BY: CDP  
DATE: 9/20/2024

SHEET TITLE  
**GUARD RAIL  
DETAILS**

SHEET NO:  
**C-96**

1 2 3 4 5 6 7 8 9 10



NOTES:  
 FOR GENERAL NOTES, SEE SHEET 3 OF 6  
 FOR DETAILS OF BLOCK ON STEEL POSTS, SEE SHEET 2 OF 6.

**MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION**  
 105 WEST CAPITOL  
 JEFFERSON CITY, MO 65102  
 1-888-ASK-MODOT (1-888-275-6636)

**BRIDGE ANCHOR SECTION**  
**SAFETY BARRIER CURB ON BRIDGE**

DATE EFFECTIVE: 07/01/2016  
 DATE PREPARED: 5/13/2016

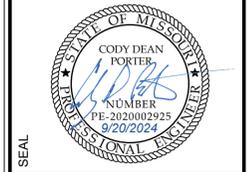
606.22U

SHEET NO. 1 OF 6

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

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CONSULTANTS



PROJECT NAME  
 CITY OF LEE'S SUMMIT, MO  
 SAMPSON ROAD BRIDGE  
 REPLACEMENT AND STORM  
 WATER IMPROVEMENTS  
 PROJECT NO. 997

REV.	DATE	DESCRIPTION	BY

PROJECT NO: 23-600-303-00  
 DESIGNED BY: AJM  
 DRAWN BY: AJM  
 CHECKED BY: CDP  
 DATE: 9/20/2024

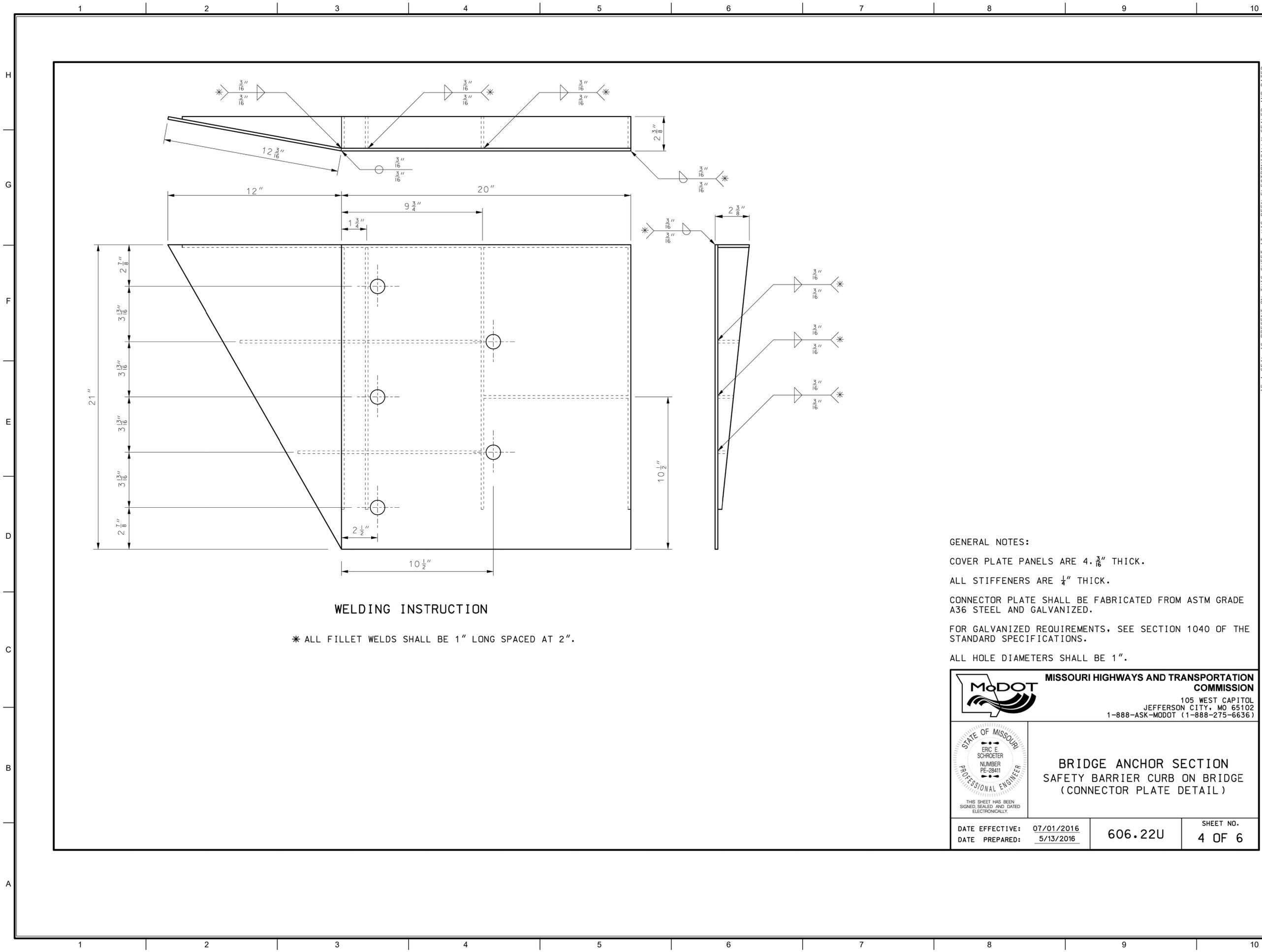
SHEET TITLE  
**GUARD RAIL DETAILS**

SHEET NO:  
**C-97**

1 2 3 4 5 6 7 8 9 10







**WELDING INSTRUCTION**

\* ALL FILLET WELDS SHALL BE 1" LONG SPACED AT 2".

**GENERAL NOTES:**

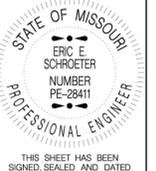
COVER PLATE PANELS ARE 4. 3/16" THICK.

ALL STIFFENERS ARE 1/4" THICK.

CONNECTOR PLATE SHALL BE FABRICATED FROM ASTM GRADE A36 STEEL AND GALVANIZED.

FOR GALVANIZED REQUIREMENTS, SEE SECTION 1040 OF THE STANDARD SPECIFICATIONS.

ALL HOLE DIAMETERS SHALL BE 1".

 <b>MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION</b> 105 WEST CAPITOL JEFFERSON CITY, MO 65102 1-888-ASK-MODOT (1-888-275-6636)	
	<p align="center"><b>BRIDGE ANCHOR SECTION</b>  <b>SAFETY BARRIER CURB ON BRIDGE</b>  <b>(CONNECTOR PLATE DETAIL)</b></p>
DATE EFFECTIVE: 07/01/2016 DATE PREPARED: 5/13/2016	<p align="center"><b>606.22U</b></p>
SHEET NO. <b>4 OF 6</b>	

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PROJECT NAME  
**CITY OF LEE'S SUMMIT, MO  
 SAMPSON ROAD BRIDGE  
 REPLACEMENT AND STORM  
 WATER IMPROVEMENTS  
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REV.	DATE	DESCRIPTION	BY

PROJECT NO: 23-600-303-00  
 DESIGNED BY: AJM  
 DRAWN BY: AJM  
 CHECKED BY: CDP  
 DATE: 9/20/2024

SHEET TITLE  
**GUARD RAIL  
 DETAILS**

SHEET NO:  
**C-100**

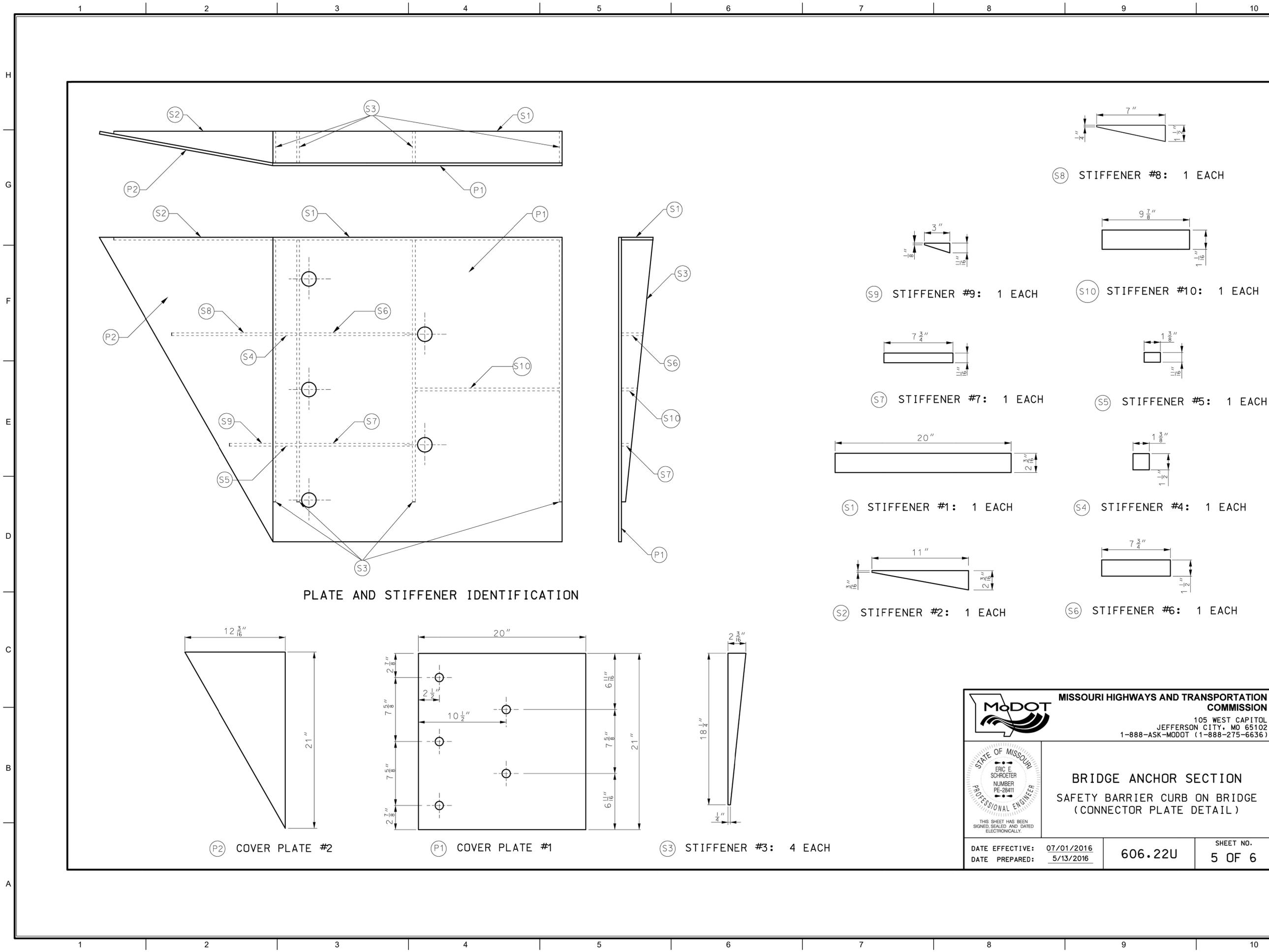
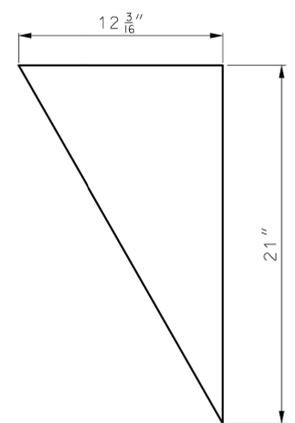
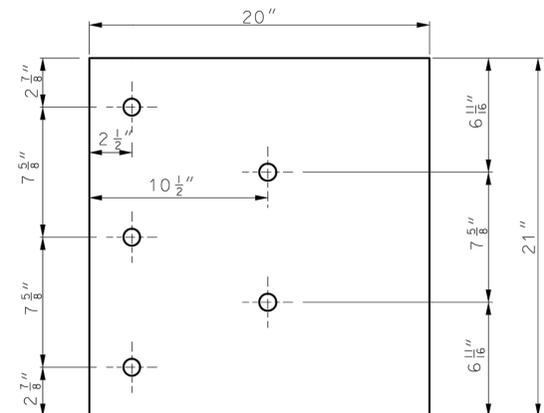


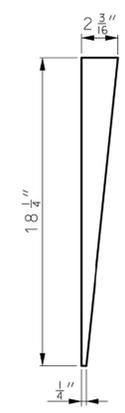
PLATE AND STIFFENER IDENTIFICATION



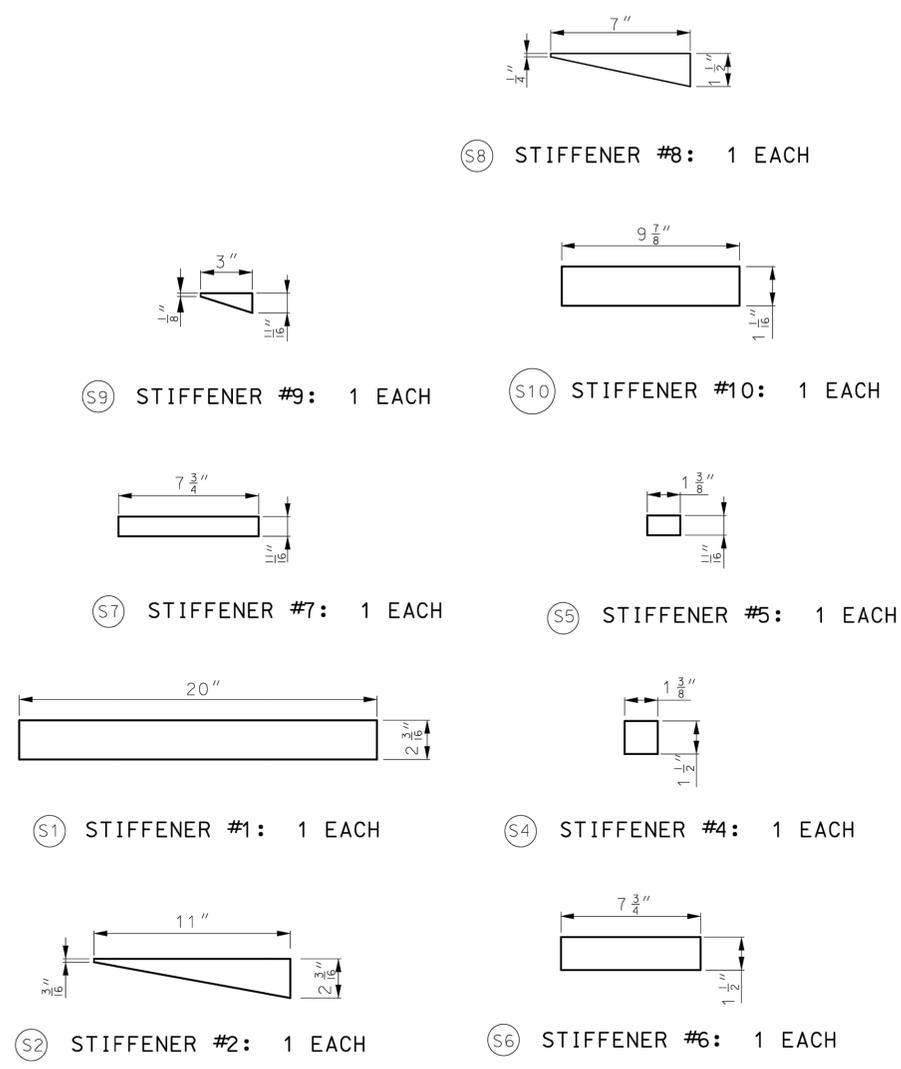
(P2) COVER PLATE #2



(P1) COVER PLATE #1



(S3) STIFFENER #3: 4 EACH



(S1) STIFFENER #1: 1 EACH

(S2) STIFFENER #2: 1 EACH

(S7) STIFFENER #7: 1 EACH

(S9) STIFFENER #9: 1 EACH

(S8) STIFFENER #8: 1 EACH

(S4) STIFFENER #4: 1 EACH

(S6) STIFFENER #6: 1 EACH

(S5) STIFFENER #5: 1 EACH

(S10) STIFFENER #10: 1 EACH

**MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION**  
 105 WEST CAPITOL  
 JEFFERSON CITY, MO 65102  
 1-888-ASK-MODOT (1-888-275-6636)

**BRIDGE ANCHOR SECTION**  
**SAFETY BARRIER CURB ON BRIDGE**  
**(CONNECTOR PLATE DETAIL)**

DATE EFFECTIVE: 07/01/2016  
 DATE PREPARED: 5/13/2016

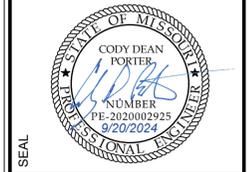
606.22U

SHEET NO. 5 OF 6

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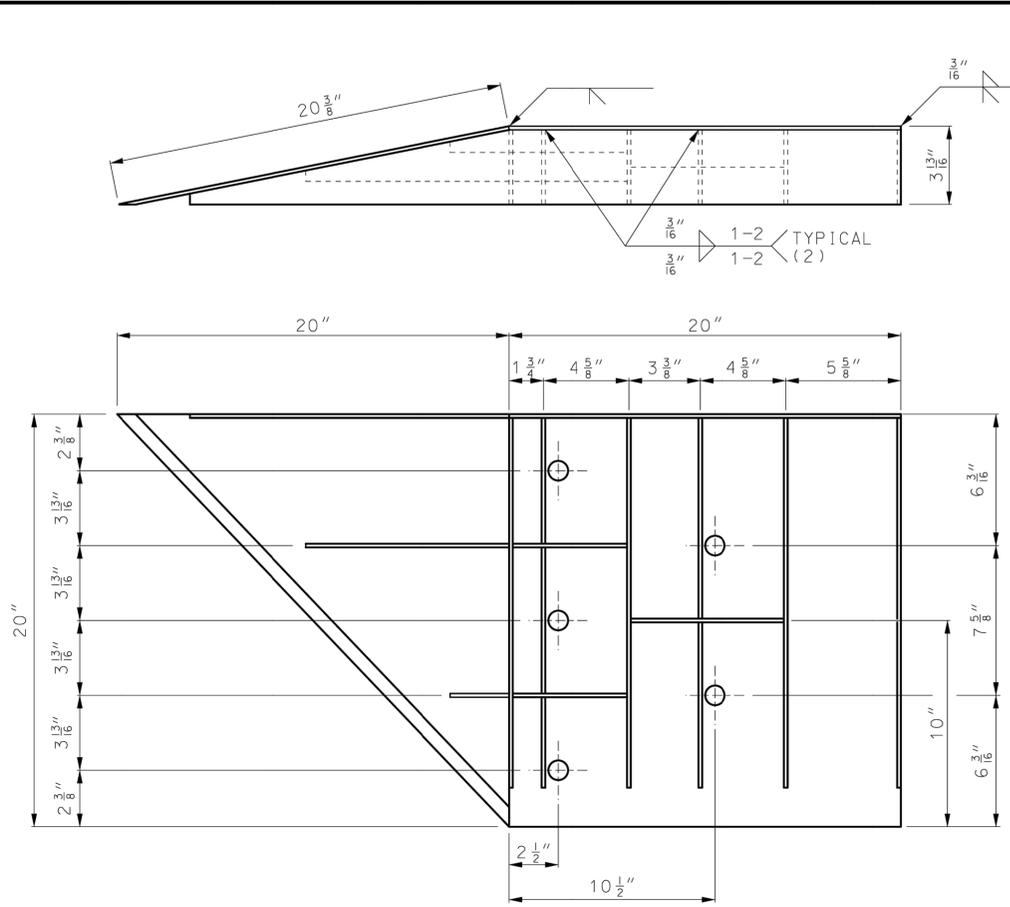
PROJECT NAME  
**CITY OF LEE'S SUMMIT, MO**  
**SAMPSON ROAD BRIDGE**  
**REPLACEMENT AND STORM**  
**WATER IMPROVEMENTS**  
**PROJECT NO. 997**

REV.	DATE	DESCRIPTION	BY

PROJECT NO: 23-600-303-00  
 DESIGNED BY: AJM  
 DRAWN BY: AJM  
 CHECKED BY: CDP  
 DATE: 9/20/2024

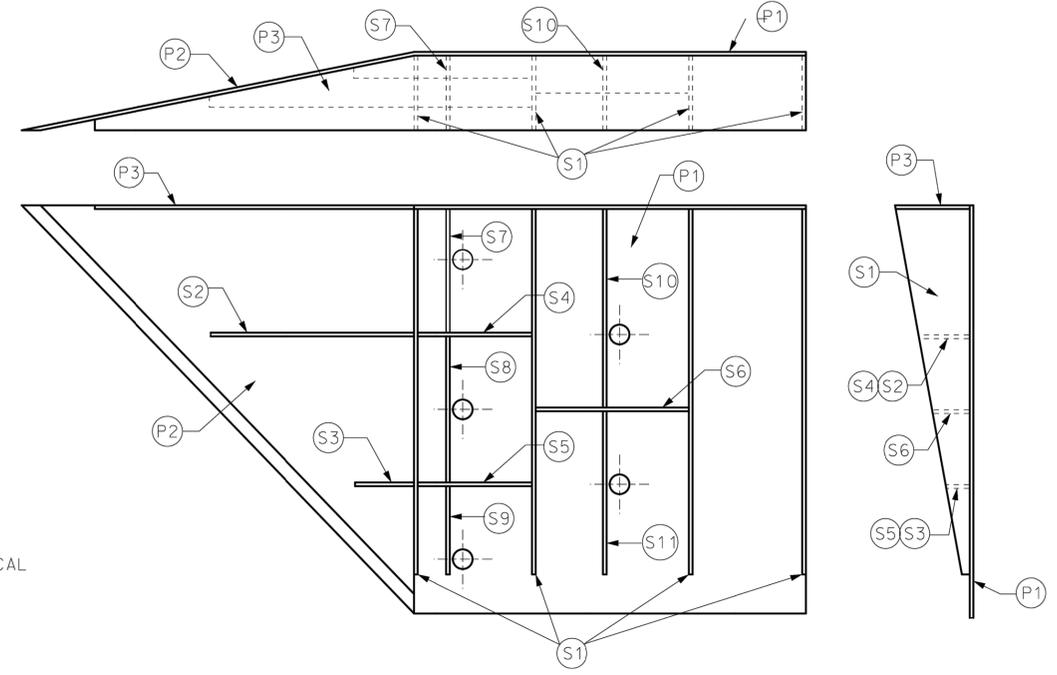
SHEET TITLE  
**GUARD RAIL**  
**DETAILS**

SHEET NO:  
**C-101**



**WELDING INSTRUCTION**

- (1) STIFFENERS LOCATED AT THE OUTSIDE EDGES OF THE COVER PLATES SHALL BE WELDED AS FOLLOWS:  
SINGLE BEVEL GROOVE WELD ON EXTERNAL SIDES AND  $\frac{3}{16}$ " FILLET WELD BY 1" LONG SPACED AT 2" ON INTERNAL SIDES.
- (2) STEFFENERS LOCATED ON THE INSIDE OF THE COVER PLATE SHALL BE WELDED AS FOLLOWS:  
 $\frac{3}{16}$ " FILLET WELD BY 1" LONG SPACED AT 2".



**PLATE AND STIFFENER IDENTIFICATION**

CONNECTOR PLATE DIMENSION (PER ASSEMBLY)				
PLATE	QUANTITY	SHAPE	SIZE (A x B x C x D)	THICKNESS
P1	1		20" x 20"	$\frac{3}{16}$ "
P2	1		20" x 20" x 28 $\frac{9}{16}$ "	$\frac{3}{16}$ "
P3	1		39" x 3 $\frac{5}{8}$ " x 20" x 19 $\frac{5}{16}$ "	$\frac{3}{16}$ "
S1	4		18 $\frac{7}{16}$ " x 3 $\frac{5}{8}$ " x 18 $\frac{3}{4}$ "	$\frac{1}{4}$ "
S2	1		10 $\frac{1}{4}$ " x 2 $\frac{7}{16}$ " x 10 $\frac{3}{8}$ " x $\frac{1}{2}$ "	$\frac{1}{4}$ "
S3	1		3" x 1 $\frac{1}{16}$ " x 3 $\frac{1}{8}$ " x $\frac{1}{2}$ "	$\frac{1}{4}$ "
S4	1		6 $\frac{1}{8}$ " x 2 $\frac{7}{16}$ "	$\frac{1}{4}$ "
S5	1		6 $\frac{1}{8}$ " x 1 $\frac{1}{16}$ "	$\frac{1}{4}$ "
S6	1		7 $\frac{3}{4}$ " x 1 $\frac{3}{4}$ "	$\frac{1}{4}$ "
S7	1		2 $\frac{3}{16}$ " x 6" x 3 $\frac{5}{8}$ " x 5 $\frac{7}{8}$ "	$\frac{1}{4}$ "
S8	1		1 $\frac{5}{32}$ " x 7 $\frac{1}{2}$ " x 2 $\frac{1}{2}$ " x 7 $\frac{3}{8}$ "	$\frac{1}{4}$ "
S9	1		6 $\frac{1}{16}$ " x 6 $\frac{3}{16}$ " x 1 $\frac{3}{32}$ "	$\frac{1}{4}$ "
S10	1		1 $\frac{7}{8}$ " x 9 $\frac{7}{8}$ " x 3 $\frac{5}{8}$ " x 9 $\frac{1}{16}$ "	$\frac{1}{4}$ "
S11	1		8 $\frac{1}{2}$ " x 8 $\frac{3}{4}$ " x 1 $\frac{13}{16}$ "	$\frac{1}{4}$ "

**GENERAL NOTES:**

- COVER PLATE PANELS ARE  $\frac{3}{16}$ " THICK.
- ALL STIFFENERS ARE  $\frac{1}{4}$ " THICK.
- CONNECTOR PLATE SHALL BE FABRICATED FROM ASTM GRADE A36 STEEL AND GALVANIZED.
- FOR GALVANIZED REQUIREMENTS, SEE SEC 1040 OF THE STANDARD SPECIFICATIONS.
- ALL HOLE DIAMETERS SHALL BE 1".

**MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION**

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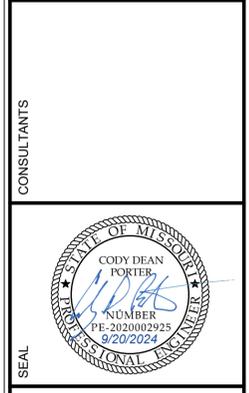
**BRIDGE ANCHOR SECTION**  
SAFETY BARRIER CURB ON BRIDGE  
(CONNECTOR PLATE DETAIL)  
SINGLE SLOPE BARRIERS

DATE EFFECTIVE: 07/01/2016  
DATE PREPARED: 5/13/2016

**606.22U**

SHEET NO.  
**6 OF 6**

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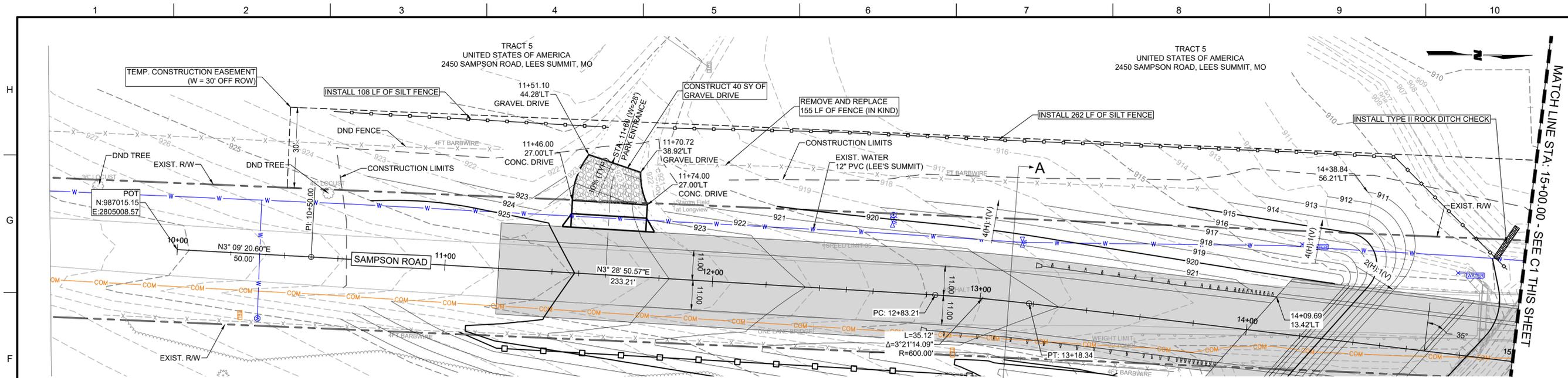
**PROJECT NAME**  
CITY OF LEE'S SUMMIT, MO  
SAMPSON ROAD BRIDGE  
REPLACEMENT AND STORM  
WATER IMPROVEMENTS  
PROJECT NO. 997

REV.	DATE	DESCRIPTION	BY

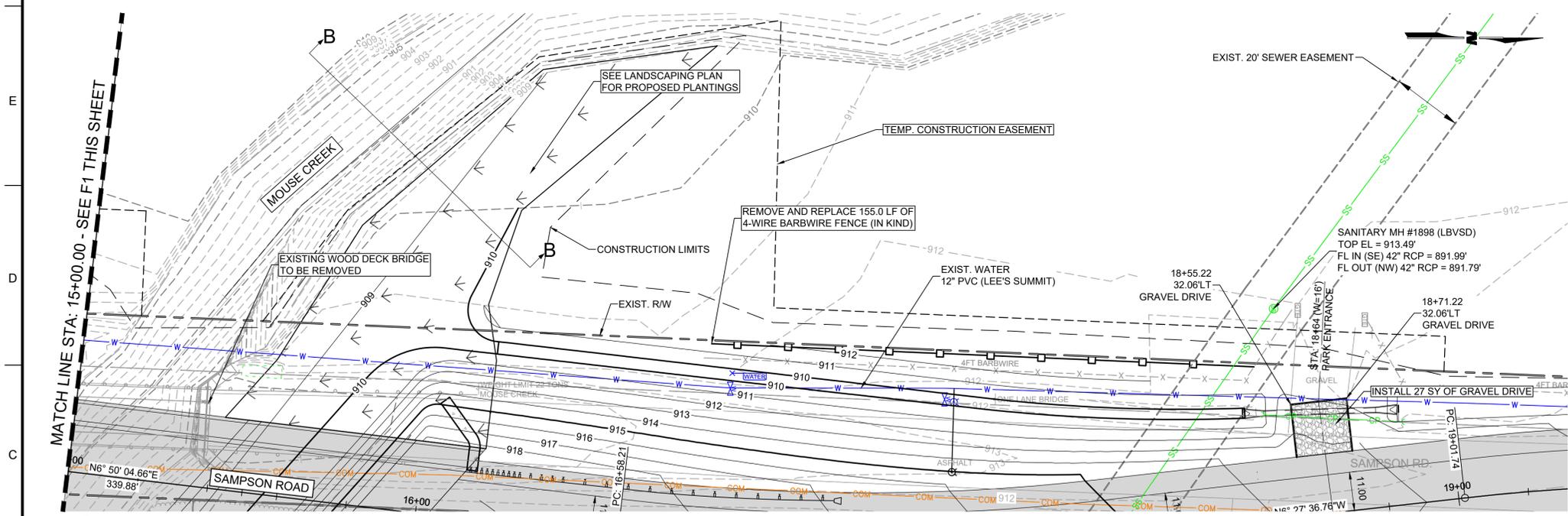
PROJECT NO: 23-600-303-00  
DESIGNED BY: AJM  
DRAWN BY: AJM  
CHECKED BY: CDP  
DATE: 9/20/2024

SHEET TITLE  
**GUARD RAIL DETAILS**  
SHEET NO:  
**C-102**

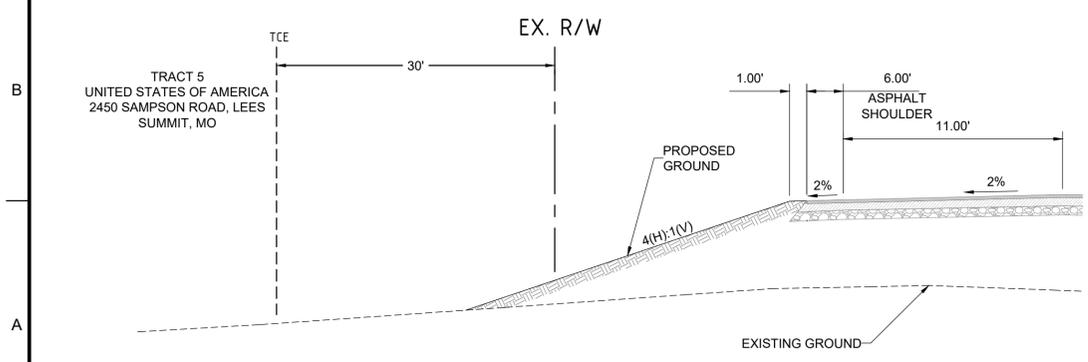
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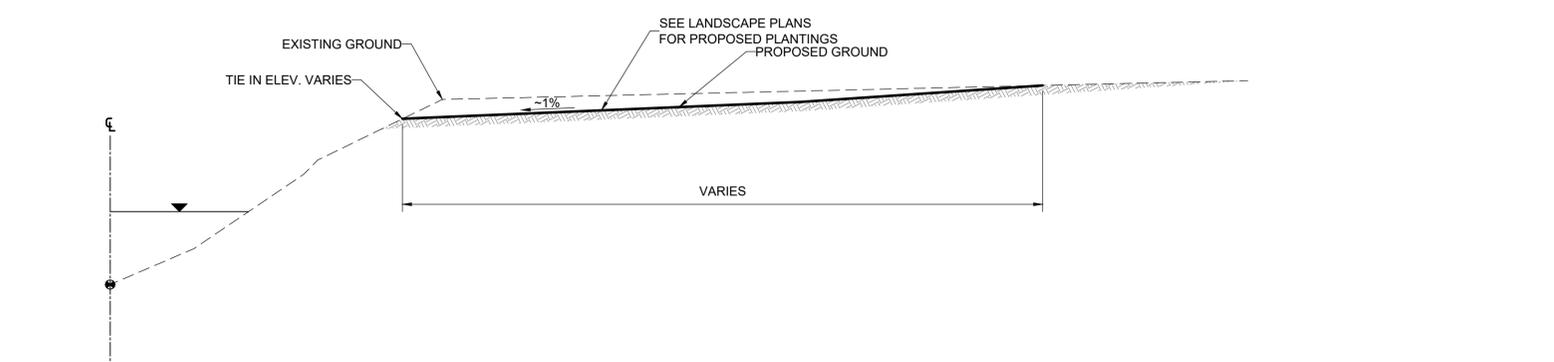
**F1** TRACT 5 SITE PLAN-01  
SCALE: 1" = 20'



**C1** TRACT 5 SITE PLAN-02  
SCALE: 1" = 20'



**A1** TYPICAL SECTION A-A  
SCALE: NTS



**A5** TYPICAL SECTION B-B  
SCALE: NTS

**GENERAL NOTES**

1. ALL MATERIALS AND WORKMANSHIP SHALL BE IN ACCORDANCE TO THE STANDARD SPECIFICATIONS AND DETAILS ISSUED BY THE CITY OF LEE'S SUMMIT, AMERICAN PUBLIC WORKS ASSOCIATION KANSAS CITY CHAPTER, AND THE MISSOURI DEPARTMENT OF TRANSPORTATION (MoDOT) UNLESS OTHERWISE NOTED IN THE DRAWINGS.

**ENVIRONMENTAL & SAFETY**

1. CONTRACTOR SHALL USE ADEQUATE DUST CONTROL MEASURES DURING ALL PHASES OF THE WORK. CONSULT SECTION 1145 IN DIVISION 1.
2. SILTATION AND EROSION CONTROL SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING EROSION CONTROL SYSTEMS, REPLACING DAMAGED OR FAILED EROSION CONTROL DEVICES AND INSPECTING THE SITE IN ORDER TO REPAIR THE EROSION CONTROL SYSTEMS WITHIN 24 HOURS AFTER A SIGNIFICANT RAIN EVENT. EROSION AND SEDIMENT CONTROL MUST BE IN PLACE PRIOR TO THE DISTURBANCE OF THE GROUND. FIELD ADJUSTMENTS TO EROSION AND SEDIMENT CONTROL MAY BE REQUIRED DEPENDING ON SITE CONDITIONS.
3. UNLESS WAIVED IN SECTION 1010, CONTRACTOR SHALL MAINTAIN THE STORM WATER POLLUTION PREVENTION PLAN (SWPPP) ON SITE IN ACCORDANCE WITH DNR REGULATIONS.

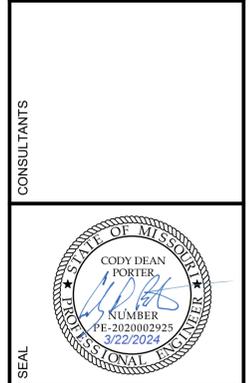
**GRADING, REMOVALS & DAMAGED ITEMS**

1. UNLESS ALLOWED IN THE CONTRACT DOCUMENTS NO BURNING IS ALLOWED ON THE SITE.
2. DRIVEWAYS, FENCES, AND IRRIGATIONS SYSTEMS AND OTHER ITEMS DISTURBED OR DAMAGED BY THE CONTRACTOR SHALL BE RESTORED AT THE CONTRACTOR'S EXPENSE TO A CONDITION EQUAL TO OR BETTER THAN EXISTING BEFORE DAMAGE OCCURRED. UNLESS WAIVED BY OWNER, ALL ITEMS REQUIRING REPLACEMENT SHALL BE REPLACED WITH NEW MATERIALS, AND ALL MATERIALS ARE SUBJECT TO OWNER'S APPROVAL. NO DIRECT PAYMENT WILL BE MADE FOR THIS WORK, UNLESS LISTED IN THE BID TAB.
3. ALL FENCE REPLACEMENT SHOULD BE RELOCATED TO THE PROPERTY LINES, UNLESS THE EXISTING FENCE WAS LOCATED INSIDE OF THE PROPERTY LINES. FENCE INSIDE OF PROPERTY LINES SHOULD BE PLACED IN ITS ORIGINAL LOCATION. GATES AND FENCE CORNERS SHALL BE RE-ESTABLISHED AT THE ORIGINAL LOCATIONS, UNLESS INDICATED BY THE DRAWINGS. REMOVALS NOT APPROVED BY OWNER WILL BE REPLACED AT THE CONTRACTOR'S EXPENSE.

**GRAVEL DRIVEWAY**

1. ALL MATERIALS FOR GRAVEL DRIVEWAY SURFACE SHALL CONFORM TO THE REQUIREMENTS OF APWA SECTION 2203-AGGREGATE BASE COURSE.

**WILSON & COMPANY**  
800 EAST 101ST TERRACE, SUITE 200  
KANSAS CITY, MO 64131  
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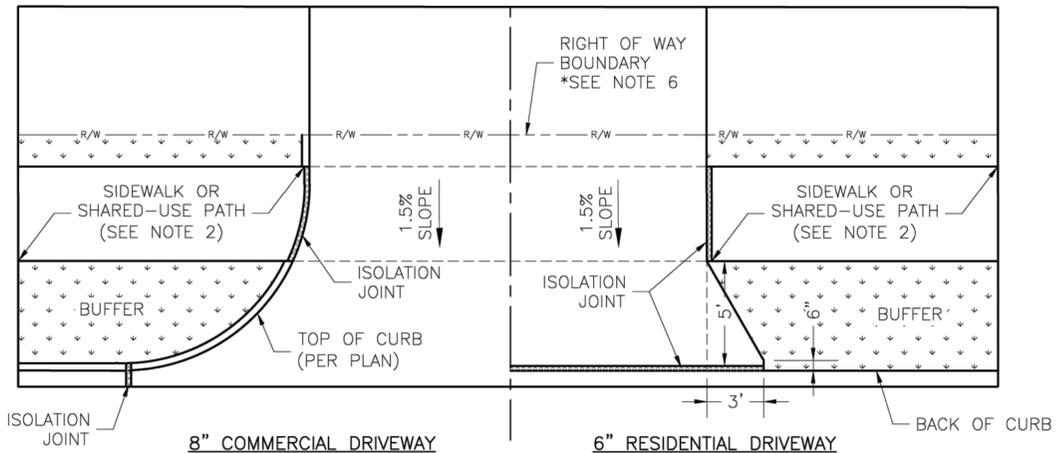
**CITY OF LEE'S SUMMIT, MO**  
**SAMPSON ROAD BRIDGE**  
**REPLACEMENT**  
**PROJECT NO. 997**

REV.	DATE	DESCRIPTION	BY

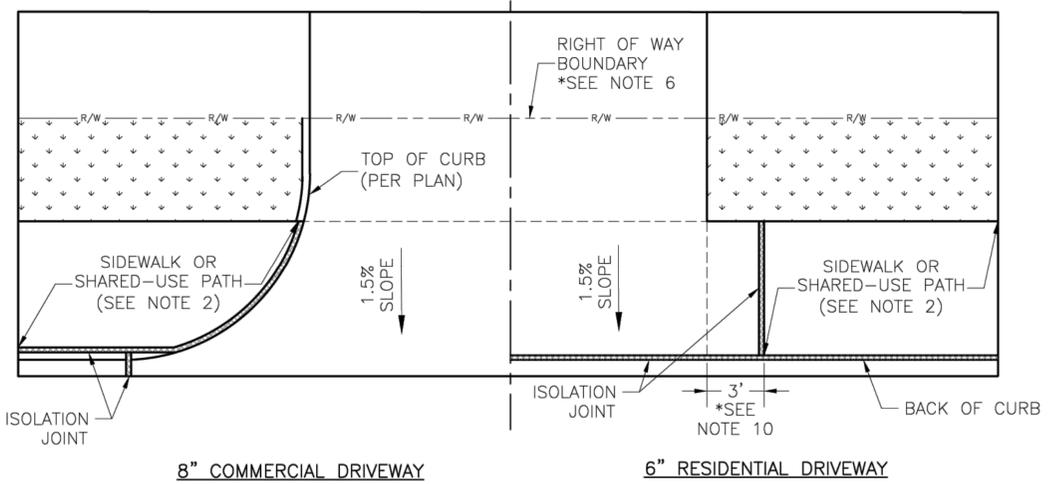
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DESIGNED BY: AJM  
DRAWN BY: AJM  
CHECKED BY: CDP/WO  
DATE: 3/21/2024

SHEET TITLE  
**SPECIAL SITE PLAN - 01**

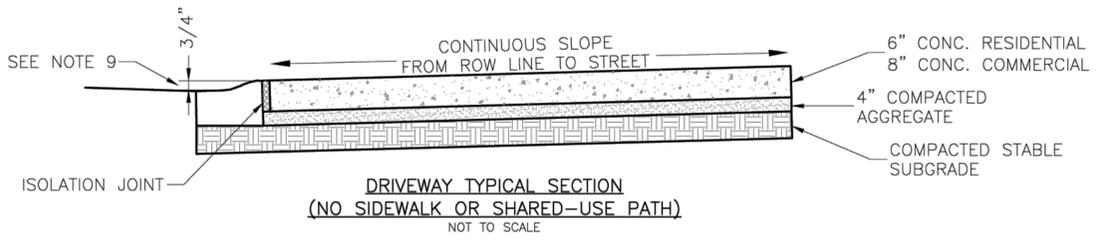
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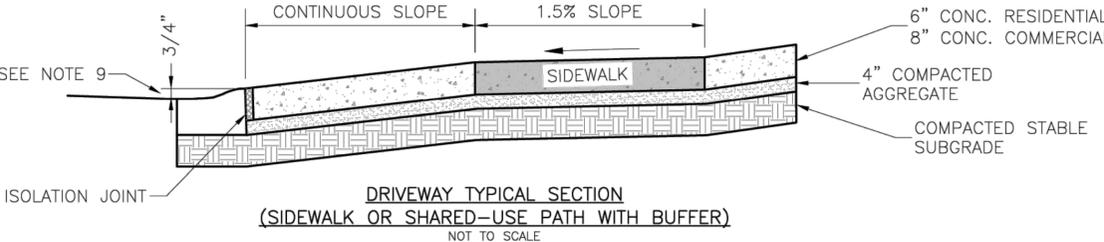
**DRIVEWAY WITH BUFFER**  
NOT TO SCALE



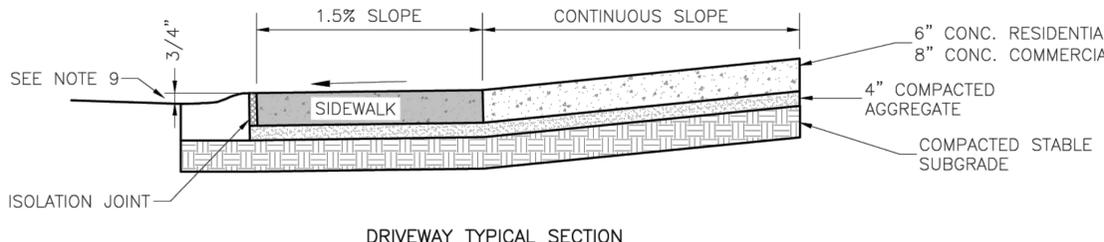
**DRIVEWAY WITHOUT BUFFER**  
NOT TO SCALE



**DRIVEWAY TYPICAL SECTION**  
(NO SIDEWALK OR SHARED-USE PATH)  
NOT TO SCALE



**DRIVEWAY TYPICAL SECTION**  
(SIDEWALK OR SHARED-USE PATH WITH BUFFER)  
NOT TO SCALE



**DRIVEWAY TYPICAL SECTION**  
(SIDEWALK OR SHARED-USE PATH WITHOUT BUFFER)  
NOT TO SCALE

**GENERAL NOTES**

1. SUBGRADE SHALL BE STABLE, COMPACTED EARTH AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE.
2. ALL DRIVE APPROACHES SHALL MEET CURRENT PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG) FOR SLOPE REQUIREMENTS WHEN SIDEWALK IS REQUIRED (SEE ADA RAMP RETROFIT DETAIL GEN-3B, SIDEWALK/SHARED USE PATH RAMP AT DRIVEWAY DETAIL).
3. JOINT AT BACK OF CURB LINE SHALL BE AN ISOLATION JOINT FOR RESIDENTIAL DRIVEWAYS.
4. KCMMB 4K CONCRETE MIX IS REQUIRED FOR ALL CURBS.
5. COMMERCIAL DRIVEWAYS, IN THE PUBLIC RIGHT OF WAY, SHALL BE KCMMB 4K CONCRETE MIX.
6. RESIDENTIAL DRIVEWAYS, IN THE PUBLIC RIGHT OF WAY, KCMMB 4K CONCRETE MIX IS RECOMMENDED. OTHER CONCRETE MIXES NEED TO BE APPROVED BY CITY INSPECTOR.
7. A JOINT MUST BE INSTALLED AT THE RIGHT OF WAY BOUNDARY FOR PROPERTY DELINEATION.
8. WHITE CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.
9. 3/4" FROM TOP OF CURB TO FLOWLINE AT DRIVEWAY (TYPE CG-1 CURB ONLY). MUST MAINTAIN ORIGINAL FLOWLINE OF CURB.
10. SIDEWALK ADJOINING CURB SHALL BE 6" THICK, EXTENDING 3' FROM THE DRIVEWAY.
11. THE MAXIMUM WIDTH OF A RESIDENTIAL DRIVEWAY IS 36 FEET WITHIN THE RIGHT OF WAY.

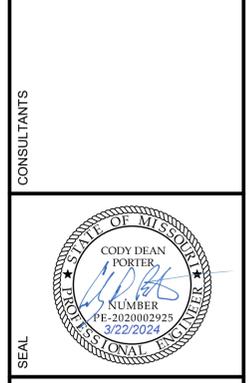
**LEE'S SUMMIT**  
MISSOURI  
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

Project: **STANDARD DETAILS**  
CITY OF LEE'S SUMMIT, MO  
LEE'S SUMMIT, JACKSON COUNTY, MO  
Sheet Name: **DRIVEWAY DETAIL**

Drawn By: MJF  
Checked By: DL  
Date: 08/2023  
Proj. #:

**GEN-1**

**WILSON & COMPANY**  
800 EAST 101ST TERRACE, SUITE 200  
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**SAMPSON ROAD BRIDGE**  
**REPLACEMENT**  
**PROJECT NO. 997**

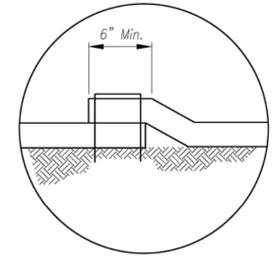
REV.	DATE	DESCRIPTION	BY

PROJECT NO: 23-600-303-00  
DESIGNED BY: AJM  
DRAWN BY: AJM  
CHECKED BY: CDP/WO  
DATE: 3/21/2024

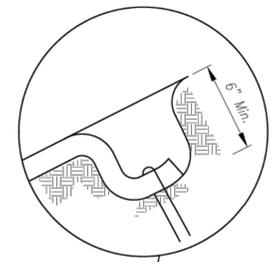
SHEET TITLE  
**DRIVEWAY DETAIL**

SHEET NO:  
**SS-02 OF 09**

**Longitudinal Seam**



**Anchor Slot**

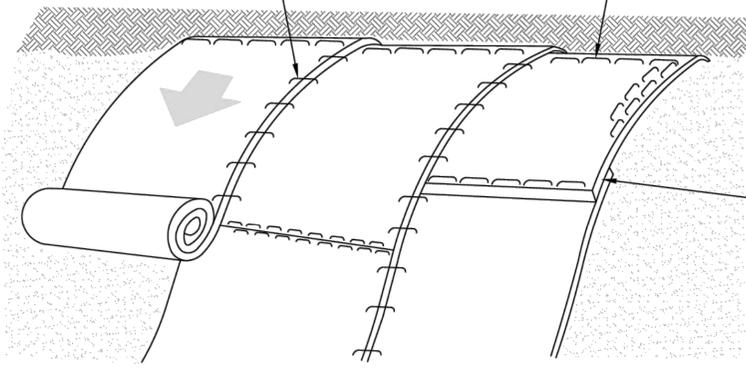


**General Notes:**

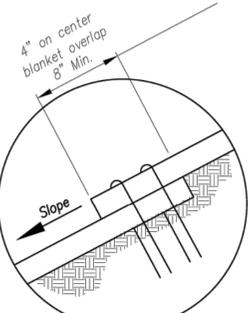
1. APWA Specifications 2150 and Design Guidance 5100 shall be referenced to select type of blanket or mat to be used.
2. Typical anchors and pattern/spacing shall be installed according to the manufacturers instructions.
3. **LONGITUDINAL SEAMS:** The edges of the blanket or mat should overlap each other a minimum of 6 inches, with anchors catching the edges of both blankets.

**Maintenance:**

1. Torn or degraded product shall be repaired or replaced, unless such degradation is within the functional longevity specified by the manufacturer.
2. Edges or seams that are loose or frayed shall be secured.

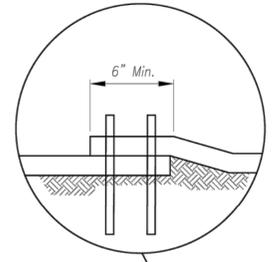


**Installation on Slopes**

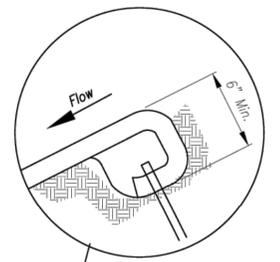


**Splice Seam**

**Longitudinal Seam**

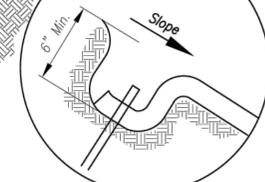
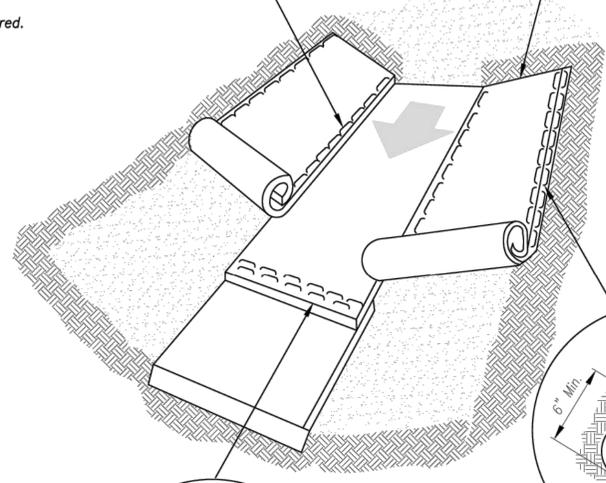


**Anchor Fold**

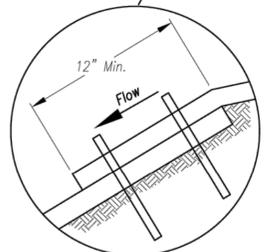


**Notes for Installation in Channels:**

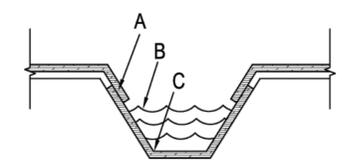
1. Erosion Control Blankets and TRMs shall be laid in the direction of the flow, with the first course at the centerline of channel, where applicable. In order for the mat to be in contact with the soil, lay the mat loosely, avoiding stretching.
2. **ANCHOR FOLD:** The top of the mat should be folded under, buried and secured with wood or other approved anchors placed 6 inches apart. The top edge of the mat should be buried in a slot 6 inches wide x 6 inches deep, anchored in the bottom of the slot, backfilled, and the mat folded over the top as shown in detail.
3. **SPLICE SEAM:** When splices are necessary, overlap end a minimum of 12 inches in direction of water flow. Stagger splice seams.
4. **CHECK SLOTS:** Establish check slots transverse to slope every 30 feet. The slots should be 6 inches wide x 6 inches deep. The mat shall be cut to a length 12 inches beyond the slot. The top of the downstream mat shall be slotted in, secured and buried similar to the edge anchor fold. The upstream mat shall then cover the slot and be anchored as shown.
5. **EDGE ANCHORS:** Lay outside edge of mat into trench at top of the slope and anchor.
6. **TERMINUS:** The bottom edge of the mat shall be anchored.



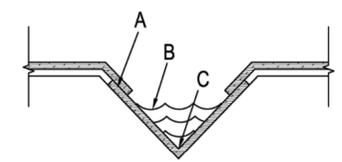
**Edge Anchor**



**Splice Seam**



**Trapezoidal Channel**

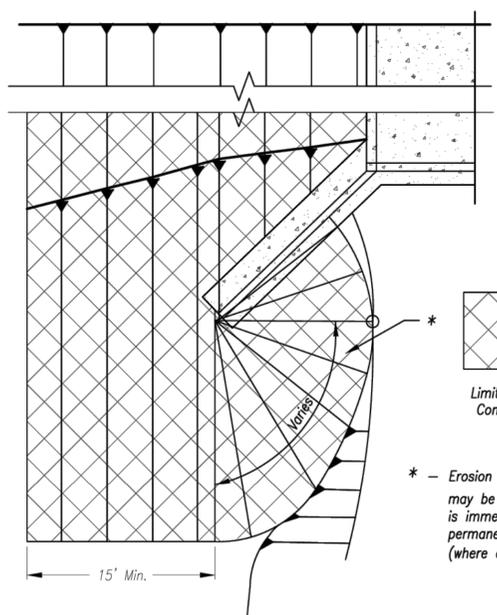


**V Channel**

**Critical Points:**

- A - Overlaps and seams;
- B - Projected water line;
- C - Channel bottom / side slope vertices;

**Installation in Channels**

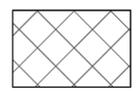


**Partial Box Culvert Plan**  
Not to Scale

**Installation Around Culvert Slope**

**Notes for Installation on Slopes:**

1. Erosion Control Blankets and TRMs shall be laid in the direction of the slope. In order for blanket to be in contact with the soil, lay blanket loosely, avoiding stretching.
2. **ANCHOR SLOTS:** The top of the blanket should be "slotted in" at the top of the slope and anchored in place with anchors 6 inches apart. The slots should be 6 inches wide x 6 inches deep with the blanket anchored in the bottom of the slot, then backfilled, tamped and seeded.
3. **SPLICE SEAM:** When splices are necessary, overlap end a minimum of 8 inches in direction of water flow. Stagger splice seams.
4. **TERMINAL FOLD:** The bottom edge of the blanket shall be turned under a minimum of 4 inches, then anchored in place with anchors 9 inches apart.



Limits of Erosion Control Blanket

\* - Erosion Control Blanket or TRM may be omitted if the area is immediately covered by permanent slope protection (where directed by the plans)

**AMERICAN PUBLIC WORKS ASSOCIATION**



**KANSAS CITY METRO CHAPTER**

**EROSION CONTROL BLANKETS AND TURF REINFORCEMENT MATS**

**STANDARD DRAWING NUMBER ESC-02 ADOPTED: 10/24/2016**

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

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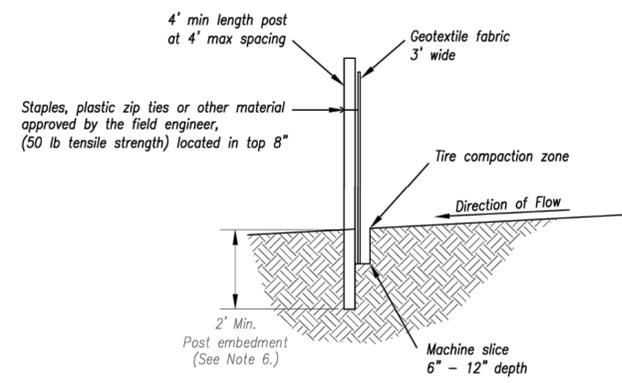
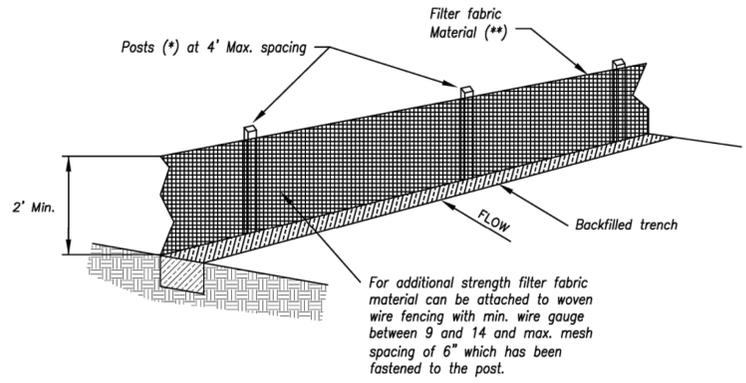
PROJECT NAME  
**CITY OF LEE'S SUMMIT, MO  
SAMPSON ROAD BRIDGE  
REPLACEMENT  
PROJECT NO. 997**

REV.	DATE	DESCRIPTION	BY

PROJECT NO:	23-600-303-00
DESIGNED BY:	AJM
DRAWN BY:	AJM
CHECKED BY:	CDP/WO
DATE:	3/21/2024

SHEET TITLE  
**ECB & TRM  
DETAIL**

SHEET NO:  
**SS-03 OF 09**



- (\*) POSTS**
- MIN. LENGTH 4'
  - HARDWOOD 1 3/8" x 1 3/8"
  - NO.2 SOUTHERN PINE 2 5/8" x 2 5/8"
  - STEEL 1.33 LB/FT

**(\*\*)** - Geotextile Fabric shall meet the requirements of AASHTO M288

**SILT FENCE DETAILS**  
Not to Scale

**Notes:**

1. In order to contain water, the ends of the silt fence must be turned uphill (Figure A).
2. Long perimeter runs of silt fence must be limited to 100'. Runs should be broken up into several smaller segments to minimize water concentrations (Figure A).
3. Long slopes should be broken up with intermediate rows of silt fence to slow runoff velocities.
4. Attach fabric to upstream side of post.
5. Install posts a minimum of 2' into the ground.
6. Trenching will only be allowed for small or difficult installation, where slicing machine cannot be reasonably used.

**Maintenance:**

1. Remove and dispose of sediment deposits when the deposit approaches 1/3 the height of silt fence.
2. Repair as necessary to maintain function and structure.

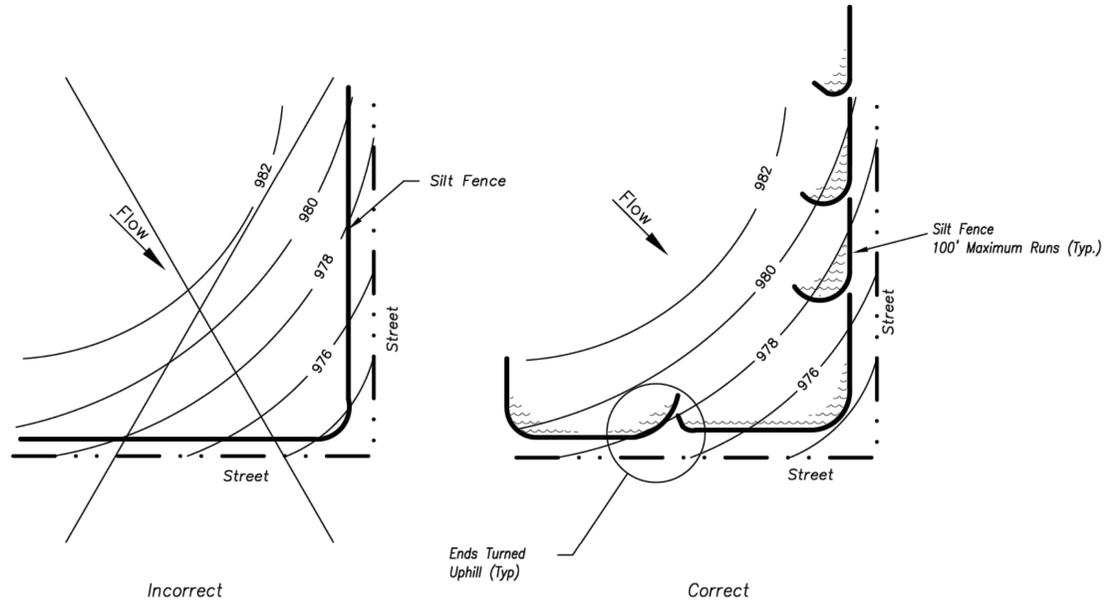
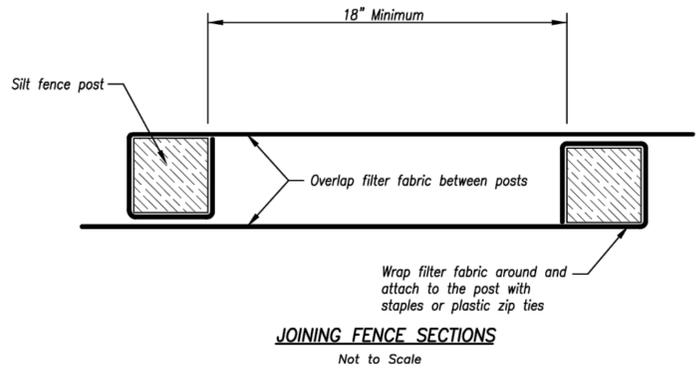
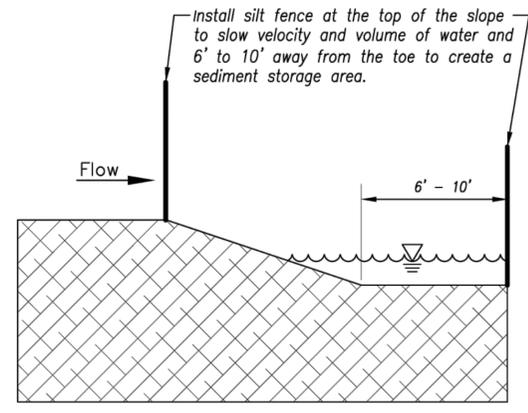


Figure A

**SILT FENCE LAYOUT**  
Not to Scale



**AMERICAN PUBLIC WORKS ASSOCIATION**  
Kansas City Metro Chapter  
**APWA**  
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**KANSAS CITY METRO CHAPTER**

**SILT FENCE**

**STANDARD DRAWING NUMBER ESC-03 ADOPTED: 10/24/2016**

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

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PROJECT NAME  
**CITY OF LEE'S SUMMIT, MO  
SAMPSON ROAD BRIDGE  
REPLACEMENT  
PROJECT NO. 997**

REV.	DATE	DESCRIPTION	BY

PROJECT NO: 23-600-303-00  
DESIGNED BY: AJM  
DRAWN BY: AJM  
CHECKED BY: CDP/WO  
DATE: 3/21/2024

SHEET TITLE  
**SILT FENCE  
DETAIL**

SHEET NO:  
**SS-04 OF 09**

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SEAL

**CITY OF LEE'S SUMMIT, MO**  
**SAMPSON ROAD BRIDGE**  
**REPLACEMENT**  
**PROJECT NO. 997**

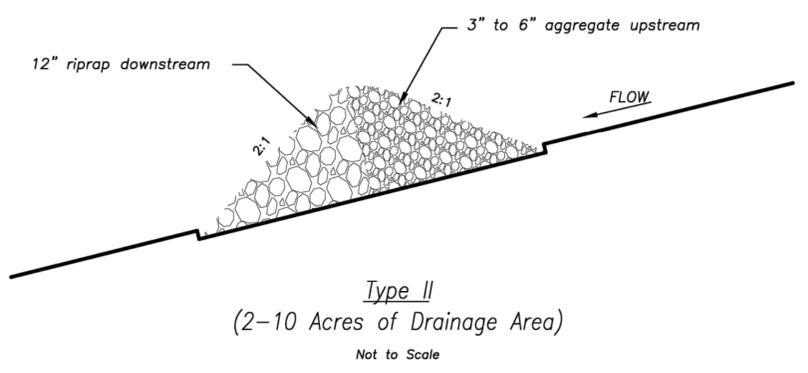
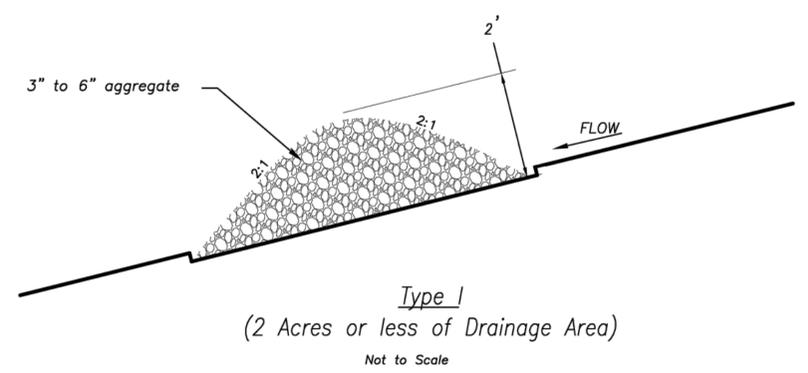
PROJECT NAME

REV.	DATE	DESCRIPTION	BY

PROJECT NO: 23-600-303-00  
 DESIGNED BY: AJM  
 DRAWN BY: AJM  
 CHECKED BY: CDP/WO  
 DATE: 3/21/2024

SHEET TITLE  
**ROCK DITCH CHECK DETAIL**

SHEET NO:  
**SS-05 OF 09**

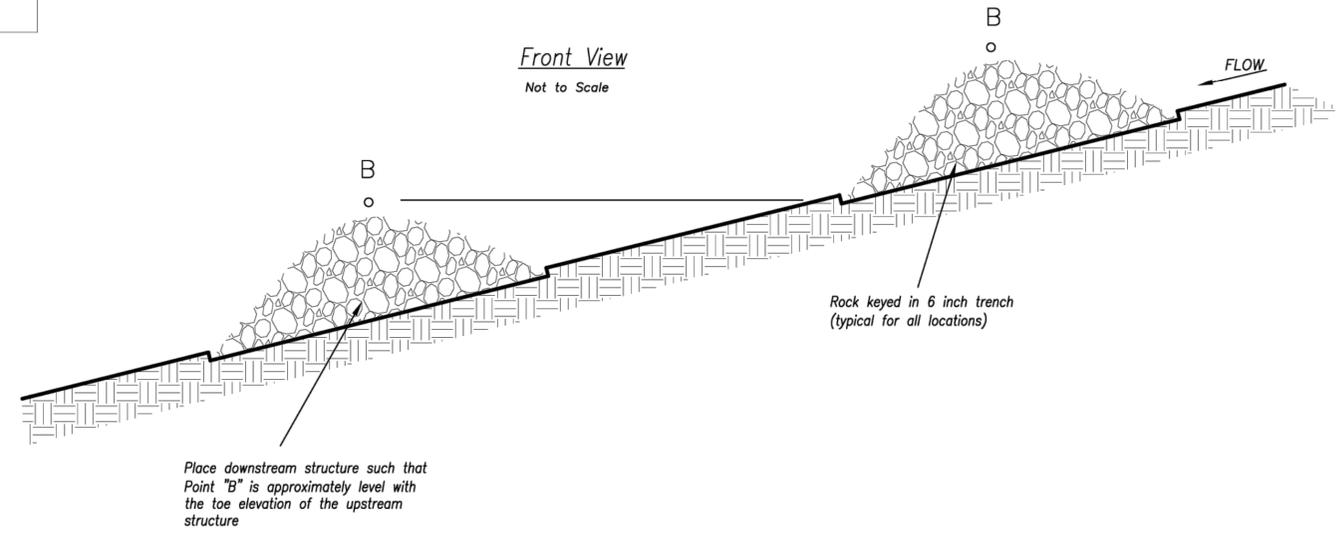
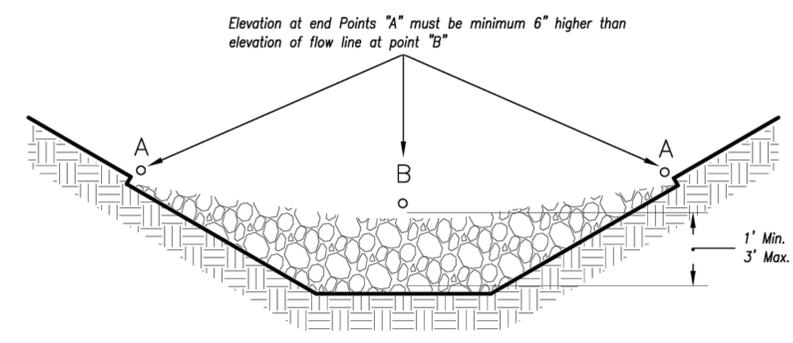


**ROCK DITCH CHECK**

**Temporary Rock Ditch Check Spacing**

Ditch Centerline Slope ( % )	Spacing Interval (Feet)
5.0	60
6.0	50
7.0	43
8.0	36
9.0	33
10.0	29

Note: Use this spacing only for Rock Ditch Checks.



- Notes:**
1. Rock check dams shall be used only for drainage areas less than 10 acres unless approved by the City Engineer.
  2. Use rock checks only in situations where the ditch slope exceeds 6%.

- Maintenance:**
1. Remove and dispose of sediment deposits when the deposit approaches 1/2 the height of the ditch check.
  2. Replace and reshape as necessary to maintain function and integrity of installation.

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

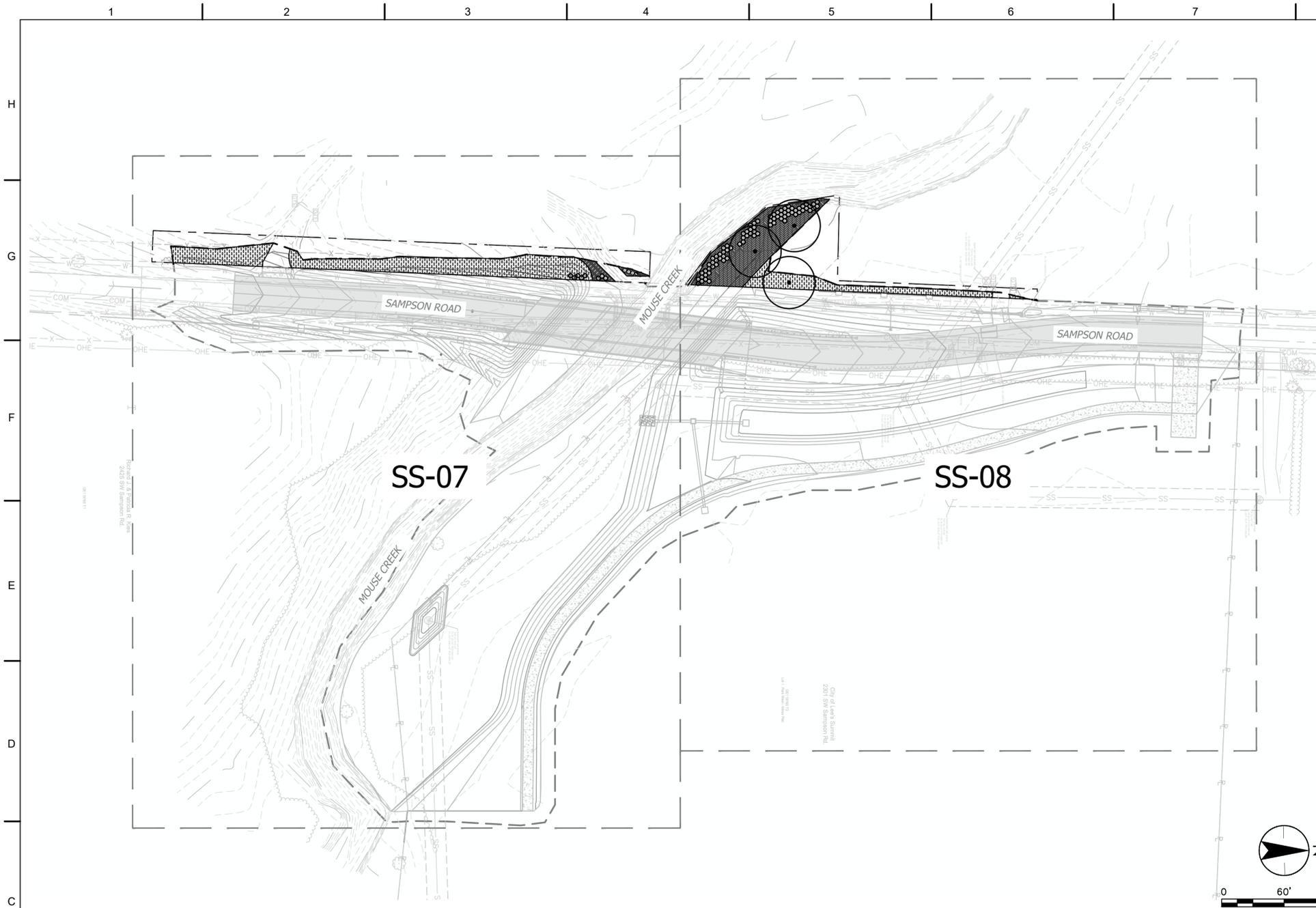
**AMERICAN PUBLIC WORKS ASSOCIATION**



KANSAS CITY METRO CHAPTER

ROCK DITCH CHECKS

STANDARD DRAWING  
 NUMBER ESC-10  
 ADOPTED:  
 10/24/2016



**PLANT SCHEDULE**

SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME	CONT	CAL
<b>TREES</b>					
	PO	3	PLATANUS OCCIDENTALIS AMERICAN SYCAMORE	B&B	2.5"
<b>SHRUBS</b>					
	SI	90	SALIX INTERIOR SANDBAR WILLOW	24" LIVE STAKE RE: 02/SS-09	
<b>GROUND COVERS</b>					
	AT	8,265 SF	MIX 1 - BANKFULL/FLOODPLAIN BENCH - UPLAND SPECIES		
	BC		ASCLEPIAS TUBEROSA BUTTERFLY MILKWEED	SEED	
	EV		BOUTELOUA CURTIPENDULA SIDE OATS GRAMA	SEED	
	RH		ELYMUS VIRGINICUS VIRGINIA WILD RYE	SEED	
	SL		RUDBECKIA HIRTA BLACK-EYED SUSAN	SEED	
	SG		SCHIZACHYRIUM SCOPARIUM LITTLE BLUESTEM	SEED	
			SOLIDAGO CANADENSIS GOLDENROD	SEED	
		341 SF	MIX 2 - BANKFULL/FLOODPLAIN BENCH - LOWLAND SPECIES		
	AG		ANDROPOGON GERARDII BIG BLUESTEM	SEED	
	AI		ASCLEPIAS INCARNATA SWAMP MILKWEED	SEED	
	PV		PANICUM VIRGATUM SWITCH GRASS	SEED	
	SN		SORGHASTRUM NUTANS INDIAN GRASS	SEED	
	SP		SPARTINA PECTINATA PRAIRIE CORDGRASS	SEED	
	SA		SYMPHYOTRICHUM NOVAE-ANGLIAE NEW ENGLAND ASTER	SEED	
	TB		TRADESCANTIA BRACATEATA PRAIRIE SPIDERWORT	SEED	
		3,507 SF	MIX 3 - DETENTION BASIN/FORESTED EDGE		
	CV		CAREX VULPINOIDEA FOX SEDGE	SEED	
	EV		ELYMUS VIRGINICUS VIRGINIA WILD RYE	SEED	
	PS		PASCOPYRUM SMITHII WESTERN WHEATGRASS	SEED	

**01 OVERALL LANDSCAPE PLAN**

**PLANTING NOTES**

- LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COORDINATION WITH SUBCONTRACTORS AND OTHER TRADES AS REQUIRED TO ACCOMPLISH PLANTING OPERATIONS.
- ALL PLANT MATERIAL SHALL CONFORM TO THE GUIDELINES ESTABLISHED BY THE "AMERICAN STANDARDS FOR NURSERY STOCK" (ANSI Z60.1-2014) PUBLISHED BY THE AMERICAN HORTICULTURE INDUSTRY ASSOCIATION.
- ALL TREES WILL BE BALLED AND BURLAPPED. ALL ROOT WRAPPING MADE OF SYNTHETIC OR PLASTIC MATERIAL SHALL BE REMOVED AT TIME OF PLANTING.
- ALL PLANT MATERIAL FURNISHED SHALL BE HEALTHY SPECIMENS FREE FROM PESTS, PLANT DISEASE OR DAMAGE. PRE-SELECTED, OR "TAGGED" MATERIAL MUST BE INSPECTED BY THE CONTRACTOR AND CERTIFIED PEST AND DISEASE FREE. IT IS THE CONTRACTOR'S OBLIGATION TO WARRANT ALL PLANT MATERIALS PER THE SPECIFICATIONS.
- SUPPLY ALL PLANT MATERIAL IN QUANTITIES SUFFICIENT TO COMPLETE THE PLANTING BED AS SHOWN ON THE DRAWINGS. IF CONFLICTS ARISE BETWEEN SIZE OF AREAS AND PLANS, CONTRACTOR SHALL CONTACT LANDSCAPE ARCHITECT FOR IMMEDIATE RESOLUTION. FAILURE TO MAKE SUCH CONFLICTS KNOWN TO THE LANDSCAPE ARCHITECT WILL RESULT IN CONTRACTOR'S LIABILITY TO RELOCATE THE MATERIALS.
- ALL PLANT MATERIAL SHALL BE INSPECTED AND APPROVED BY THE LANDSCAPE ARCHITECT PRIOR TO DELIVERY TO THE SITE.
- NO SUBSTITUTIONS OF PLANT MATERIAL SHALL BE MADE WITHOUT THE WRITTEN CONSENT OF THE LANDSCAPE ARCHITECT PRIOR TO DELIVERY TO THE SITE.
- ALL TREE AND SHRUB TAGS SHALL REMAIN ON THE PLANTS UNTIL THE TIME OF FINAL ACCEPTANCE.
- ALL TREES OF THE SAME SPECIES AND SIZE SHALL HAVE MATCHING HEIGHT AND FORM UNLESS OTHERWISE NOTED ON THE PLANS.
- ALL TREES AND STAKES SHALL BE SET PLUMB UNLESS OTHERWISE NOTED.
- ALL DECIDUOUS TREES SHALL BE WRAPPED. REFER TO SPECIFICATIONS FOR WRAP TYPE AND TIMING.
- ALL SHRUB PLANTING AREAS ARE TO BE PREPARED FOR LIVE STAKE PLANTINGS PER DETAILS. ALL SEEDING SHOULD BE SEED DRILLED INTO THE SOIL.
- ALL PROPOSED LANDSCAPING LOCATED IN THE RIGHT-OF-WAY SHALL COMPLY WITH LOCAL JURISDICTIONAL REQUIREMENTS FOR HEIGHT CLEARANCE, SPACING AND RELATIONSHIP TO OTHER IMPROVEMENTS TO PROVIDE ADEQUATE SIGHT DISTANCES AT ALL INTERSECTIONS AND ROADWAY CURVES.
- NO TREES SHALL BE PLANTED WITHIN 10' MIN. OF ANY WATER OR SEWER MAINS, WITHIN 6' MIN. OF WATER OR SEWER SERVICE LINES, AND WITHIN 4' MIN. OF GAS LINES. STREET TREES PLANTED WITHIN THE UTILITY EASEMENT MAY

- CONFLICT WITH UTILITIES. ADDITIONAL CONDUIT MAY BE REQUIRED TO PROTECT UNDERGROUND ELECTRIC LINES. FOR WATER VALVES LOCATED WITHIN PLANTING AREAS, KEEP A 2' RADIUS CLEAR OF SURFACE VEGETATION AROUND THE VALVE BOX. LOCAL JURISDICTIONAL REQUIREMENTS TAKE PRECEDENT.
- ALL PLANT MATERIAL AND FINAL LOCATIONS OF ALL PLANT MATERIALS SHALL BE SUBJECT TO THE APPROVAL OF THE LANDSCAPE ARCHITECT PRIOR TO INSTALLATION. THE LANDSCAPE ARCHITECT RESERVES THE RIGHT TO ADJUST THE LOCATION OF PLANT MATERIAL DURING INSTALLATION AS APPROPRIATE TO THE PROJECT.
- MINOR ADJUSTMENTS IN PLANT PLACEMENT AND SPECIES MAY BE PROPOSED BY THE CONTRACTOR FOR CONSIDERATION AND APPROVAL BY THE LANDSCAPE ARCHITECT AT THE CONSTRUCTION STAGE TO RESPOND TO FIELD CONDITIONS AND PLANT AVAILABILITY. THERE SHALL BE NO REDUCTION IN PLANT MATERIAL. FOR TREES IN THE RIGHT-OF-WAY, ADJUSTMENTS MUST HAVE PRIOR AUTHORIZATION OF LANDSCAPE ARCHITECT AND/OR CITY FORESTER AS APPLICABLE.
- CONTRACTOR SHALL BE RESPONSIBLE FOR REPLACEMENT OF ANY EXISTING PLANT MATERIAL DAMAGED DURING PLANTING OPERATIONS AND PRIOR TO FINAL ACCEPTANCE.
- CONTRACTOR SHALL NOTIFY LANDSCAPE ARCHITECT 48 HOURS PRIOR TO COMMENCEMENT OF WORK TO COORDINATE PROJECT INSPECTION SCHEDULES.
- OBTAIN LANDSCAPE ARCHITECT'S APPROVAL OF FINISH GRADING PRIOR TO THE COMMENCEMENT OF PLANTING OPERATIONS.
- LANDSCAPE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING POSITIVE DRAINAGE THROUGHOUT THE SITE WITH ACCURATELY SET FLOW LINES. NO LOW SPOTS OR PONDING OF SURFACE WATER WILL BE ACCEPTED IN TEMPORARY OR FINAL WORK.
- PERFORM PERCOLATION TEST ON ALL TREE HOLES AND PLANTING BEDS PRIOR TO PLANTING. INFORM LANDSCAPE ARCHITECT OF RESULTS. REFER TO SPECIFICATIONS FOR FURTHER INFORMATION.
- SEE SPECIFICATIONS FOR PLANTING REQUIREMENTS, SOIL PREPARATION TESTING, MATERIALS AND EXECUTION. ARRANGE FOR VISIT OF LANDSCAPE ARCHITECT FOR REVIEW AND APPROVAL A MINIMUM OF 48 HOURS PRIOR TO INSTALLATION.
- CONTRACTOR IS TO FAMILIARIZE HIMSELF WITH THE LAYOUT, GRADING AND CIVIL ENGINEERING DOCUMENTS TO COORDINATE ACTUAL LOCATION OF TREES AND SHRUBS.
- REFER TO LAYOUT DRAWINGS FOR LANDSCAPE EDGING LAYOUT. FIELD STAKE AND REVIEW LAYOUT WITH LANDSCAPE ARCHITECT PRIOR TO INSTALLATION.
- FIELD STAKE AND REVIEW LOCATIONS OF ALL PROPOSED TREES WITH LANDSCAPE ARCHITECT PRIOR TO THE COMMENCEMENT OF PLANTING OPERATIONS.
- SEE DETAILS AND SPECIFICATIONS FOR STAKING METHOD, PLANT PIT DIMENSIONS AND BACKFILL REQUIREMENTS.
- LANDSCAPE CONTRACTOR IS RESPONSIBLE FOR PROVIDING ADEQUATE WATER TO NEWLY INSTALLED MATERIALS TO MAINTAIN PLANT HEALTH FOR THE DURATION OF THE CONSTRUCTION PERIOD UNTIL FINAL ACCEPTANCE IS GRANTED AND THE REQUIRED MAINTENANCE PERIOD TAKES EFFECT.
- PLANT MATERIAL QUANTITIES ARE PROVIDED FOR THE CONTRACTOR'S CONVENIENCE ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR VERIFICATION OF QUANTITY TAKEOFFS FOR ALL PLANT MATERIAL AS SHOWN ON PLANS.
- COORDINATE INSTALLATION OF LARGE PLANT MATERIAL WITH INSTALLATION OF WALL FOOTINGS AND ADJACENT PAVEMENTS. ANY DAMAGE TO IMPROVEMENTS IS THE RESPONSIBILITY OF THE LANDSCAPE CONTRACTOR.

**PLANTING MAINTENANCE NOTES**

- ALL TREES, SHRUBS, GRASSES, PERENNIALS, SOD, AND/OR SEEDED AREAS SHALL BE MAINTAINED AND WATERED BY THE CONTRACTOR IN A NEAT AND ADEQUATE MANNER FOR THE DURATION OF THE CONSTRUCTION PERIOD UNTIL FINAL ACCEPTANCE IS GRANTED AND THE REQUIRED MAINTENANCE PERIOD TAKES EFFECT.
- REQUIRED MAINTENANCE ACTIVITIES SHALL INCLUDE, BUT NOT LIMITED TO, MOWING OF LAWNS, TRIMMING OF HEDGES, ADEQUATE IRRIGATION OR HAND-WATERING, REPLACEMENT OF DEAD, DISEASED OR UNSIGHTLY LANDSCAPING, REMOVAL OF WEEDS FROM PLANTED AREAS, AND APPROPRIATE PRUNING OF PLANT MATERIALS. ALL INSTALLED LANDSCAPE MATERIALS SHALL BE ADEQUATELY WATERED BY THE CONTRACTOR REGARDLESS IF THE IRRIGATION SYSTEM IS OPERATIONAL. ANY DAMAGE TO PLANT MATERIAL DUE TO NEGLECT BY THE CONTRACTOR SHALL BE REPAIRED OR REPLACED AT THE CONTRACTOR'S EXPENSE.

**CITY OF LEE'S SUMMIT, MO**  
**SAMPSON ROAD BRIDGE**  
**REPLACEMENT**  
**PROJECT NO. 997**

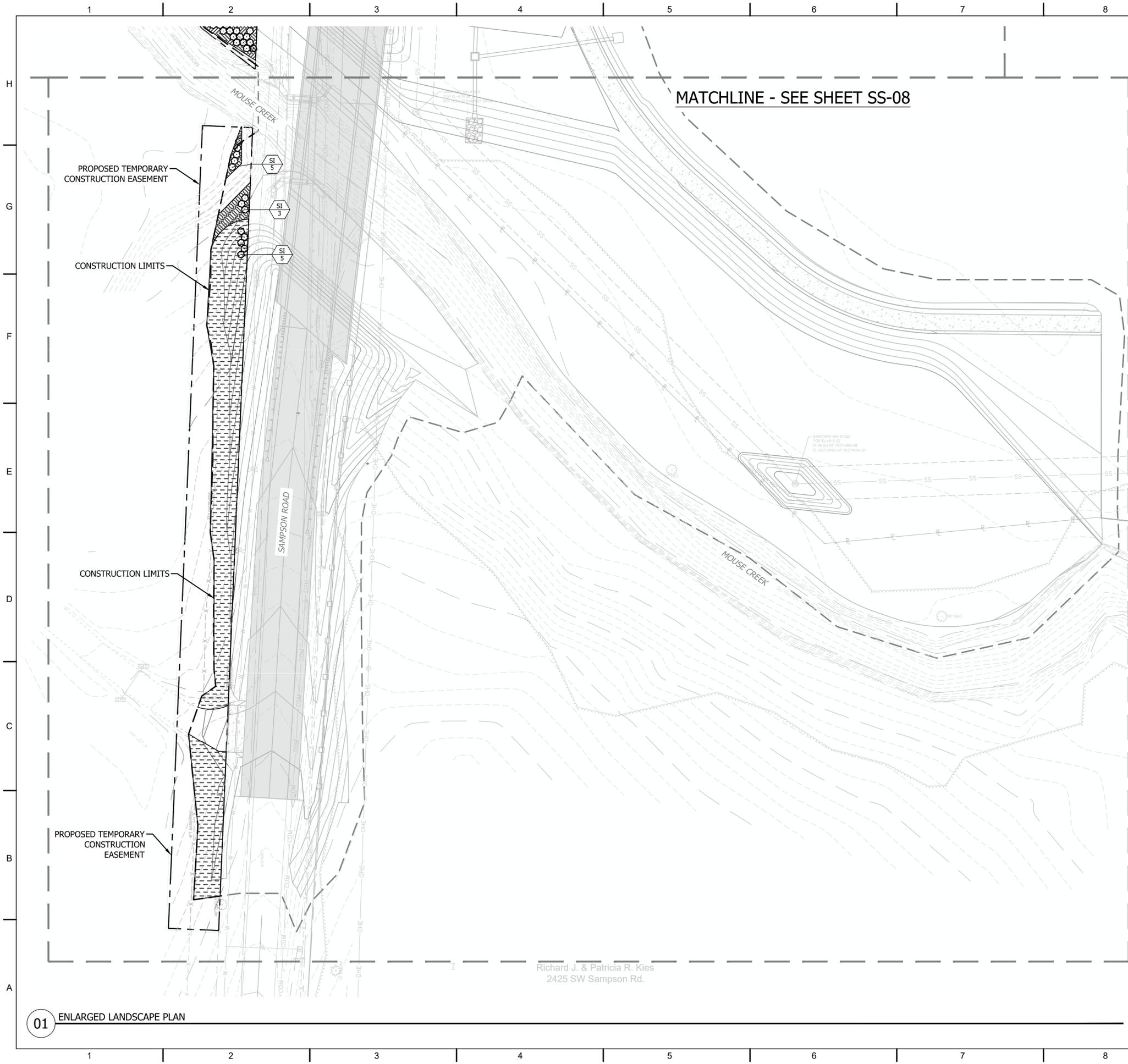
**WILSON & COMPANY**  
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 www.stantec.com



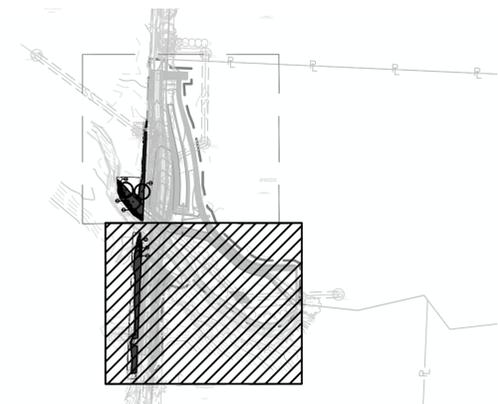
PROJECT NAME	DESCRIPTION	DATE	REV.	BY

PROJECT NO:  
 DESIGNED BY: TK  
 DRAWN BY: JS  
 CHECKED BY: TK  
 DATE: 03.13.2024  
 SHEET TITLE  
**OVERALL LANDSCAPE PLAN**  
 SHEET NO:  
**SS-06 OF 09**

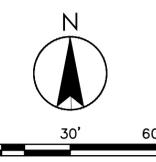


**PLANT SCHEDULE**

SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME
<b>TREES</b>			
	PO	3	PLATANUS OCCIDENTALIS AMERICAN SYCAMORE
<b>SHRUBS</b>			
	SI	90	SALIX INTERIOR SANDBAR WILLOW
<b>GROUND COVERS</b>			
	AT	8,265 SF	MIX 1 - BANKFULL/FLOODPLAIN BENCH - UPLAND SPECIES
	BC		ASCLEPIAS TUBEROSA BUTTERFLY MILKWEED BOUTELOUA CURTIPENDULA SIDE OATS GRAMA ELYMUS VIRGINICUS VIRGINIA WILD RYE RUDBECKIA HIRTA BLACK-EYED SUSAN SCHIZACHYRIUM SCOPARIUM LITTLE BLUESTEM SOLIDAGO CANADENSIS GOLDENROD
	AG	341 SF	MIX 2 - BANKFULL/FLOODPLAIN BENCH - LOWLAND SPECIES
	AI		ANDROPOGON GERARDII BIG BLUESTEM ASCLEPIAS INCARNATA SWAMP MILKWEED PANICUM VIRGATUM SWITCH GRASS SORGHASTRUM NUTANS INDIAN GRASS SPARTINA PECTINATA PRAIRIE CORDGRASS SYMPHYOTRICHUM NOVAE-ANGLIAE NEW ENGLAND ASTER TRADESCANTIA BRACTEATA PRAIRIE SPIDERWORT
	CV	3,507 SF	MIX 3 - DETENTION BASIN/FORESTED EDGE
	EV		CAREX VULPINOIDEA FOX SEDGE ELYMUS VIRGINICUS VIRGINIA WILD RYE PASCOPYRUM SMITHII WESTERN WHEATGRASS
	PS		



**KEY PLAN**



**WILSON & COMPANY**  
800 EAST 101ST TERRACE, SUITE 200  
KANSAS CITY, MO 64131  
PHONE: 816-701-3100  
FAX: 816-942-3013  
www.wilsonco.com

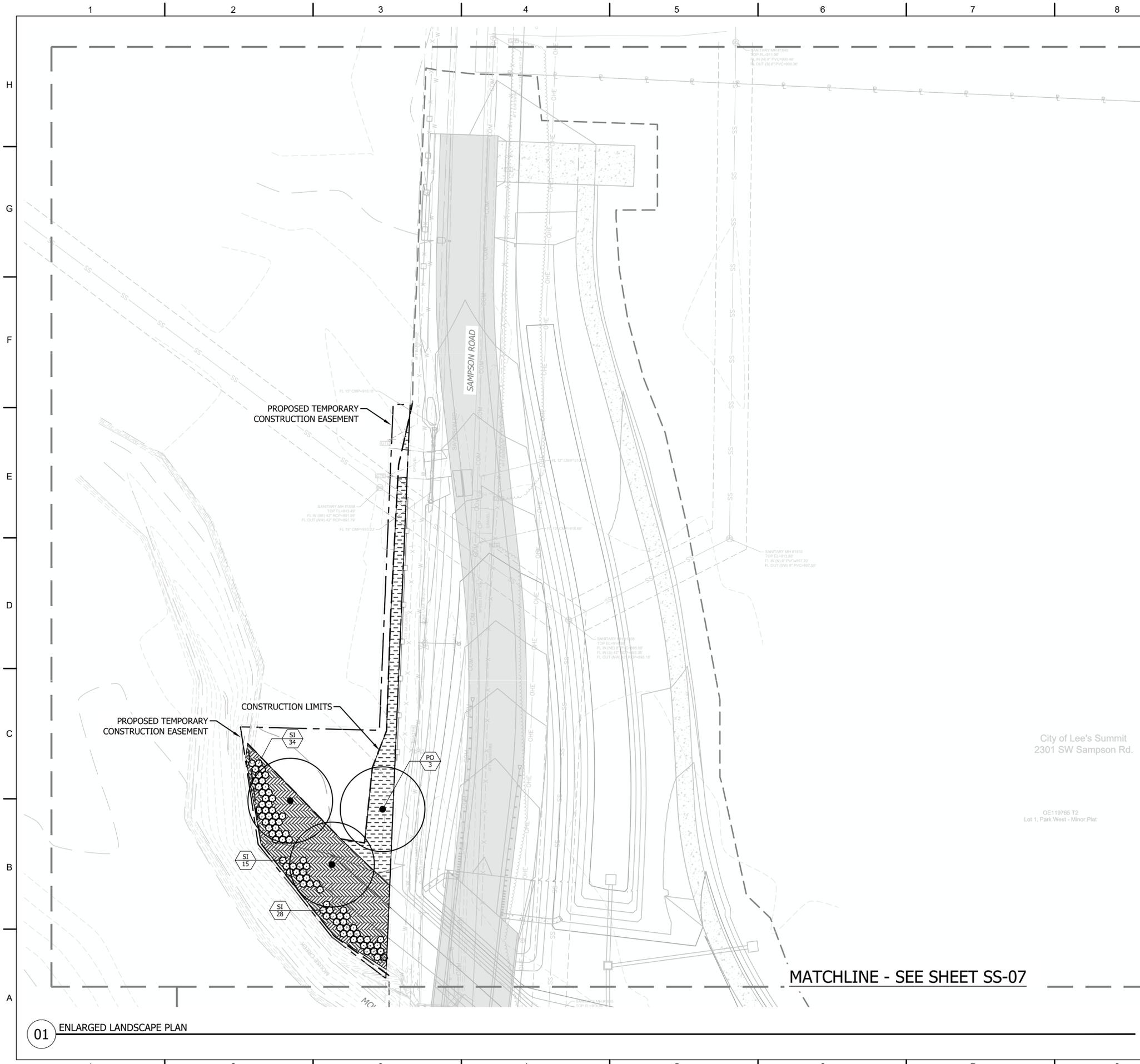
**Stantec**  
7208 West 80th Street, Suite 201  
Overland Park, KS 66204  
Tel. 913-905-3415  
www.stantec.com



**PROJECT NAME**  
CITY OF LEE'S SUMMIT, MO  
SAMPSON ROAD BRIDGE  
REPLACEMENT  
PROJECT NO. 997

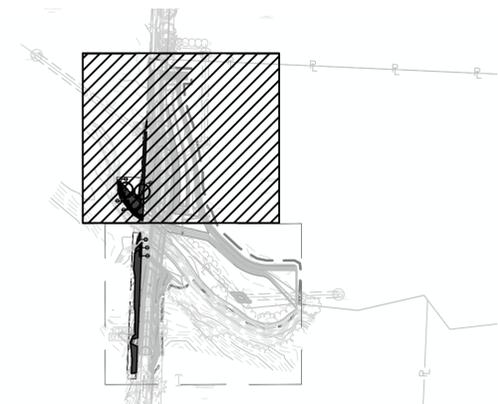
REV.	DATE	DESCRIPTION	BY

PROJECT NO:  
DESIGNED BY: TK  
DRAWN BY: JS  
CHECKED BY: TK  
DATE: 03.13.2024  
SHEET TITLE  
ENLARGED  
LANDSCAPE PLAN  
SHEET NO:  
SS-07 OF 09

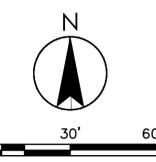


**PLANT SCHEDULE**

SYMBOL	CODE	QTY	BOTANICAL / COMMON NAME
<b>TREES</b>			
PO		3	PLATANUS OCCIDENTALIS AMERICAN SYCAMORE
<b>SHRUBS</b>			
SI		90	SALIX INTERIOR SANDBAR WILLOW
<b>GROUND COVERS</b>			
AT		8,265 SF	MIX 1 - BANKFULL/FLOODPLAIN BENCH - UPLAND SPECIES
BC			ASCLEPIAS TUBEROSA
EV			BUTTERFLY MILKWEED
RH			BOUTELOUA CURTIPENDULA
SL			SIDE OATS GRAMA
SG			ELYMUS VIRGINICUS
			VIRGINIA WILD RYE
			RUDBECKIA HIRTA
			BLACK-EYED SUSAN
			SCHIZACHYRIUM SCOPARIUM
			LITTLE BLUESTEM
			SOLIDAGO CANADENSIS
			GOLDENROD
		341 SF	MIX 2 - BANKFULL/FLOODPLAIN BENCH - LOWLAND SPECIES
AG			ANDROPOGON GERARDII
AI			BIG BLUESTEM
PV			ASCLEPIAS INCARNATA
SN			SWAMP MILKWEED
SP			PANICUM VIRGATUM
SA			SWITCH GRASS
TB			SORGHASTRUM NUTANS
			INDIAN GRASS
			SPARTINA PECTINATA
			PRAIRIE CORDGRASS
			SYMPHYOTRICHUM NOVAE-ANGLIAE
			NEW ENGLAND ASTER
			TRADESCANTIA BRACTEATA
			PRAIRIE SPIDERWORT
		3,507 SF	MIX 3 - DETENTION BASIN/FORESTED EDGE
CV			CAREX VULPINOIDEA
EV			FOX SEDGE
PS			ELYMUS VIRGINICUS
			VIRGINIA WILD RYE
			PASCOPYRUM SMITHII
			WESTERN WHEATGRASS



**KEY PLAN**



01 ENLARGED LANDSCAPE PLAN

MATCHLINE - SEE SHEET SS-07

City of Lee's Summit  
2301 SW Sampson Rd.

OE119785 T2  
Lot 1, Park West - Minor Plat

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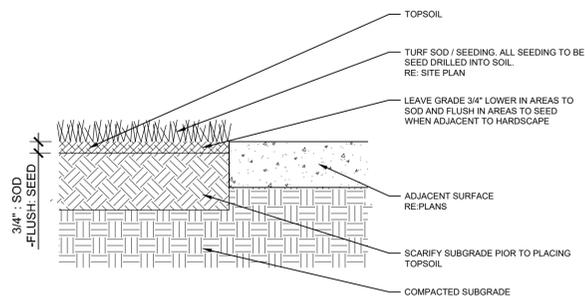
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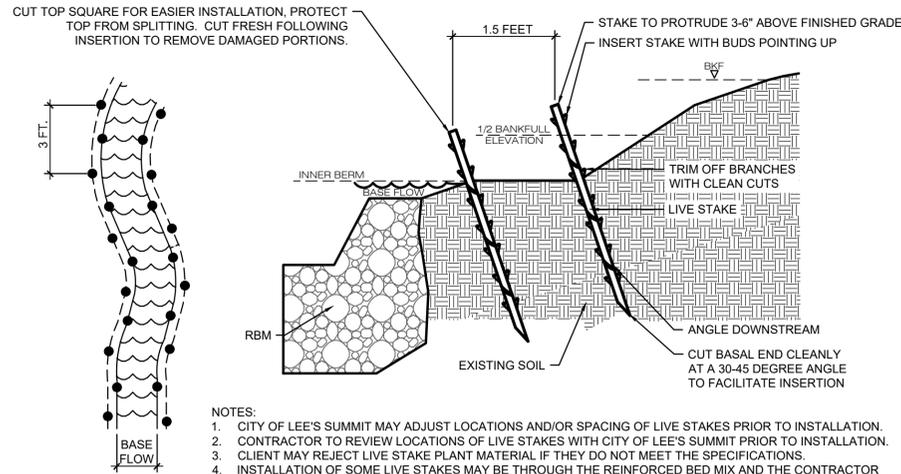
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PROJECT NO:  
DESIGNED BY: TK  
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SHEET TITLE  
ENLARGED  
LANDSCAPE PLAN  
SHEET NO:  
SS-08 OF 09



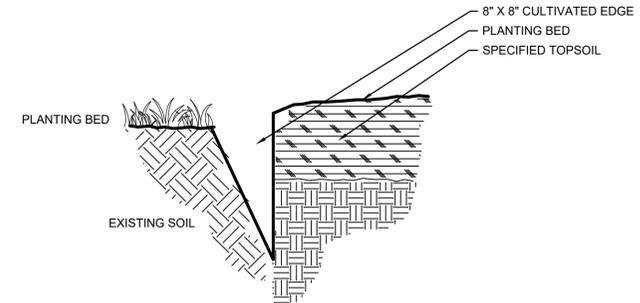
**01 TURF AND SEEDING**

1" = 1'-0"



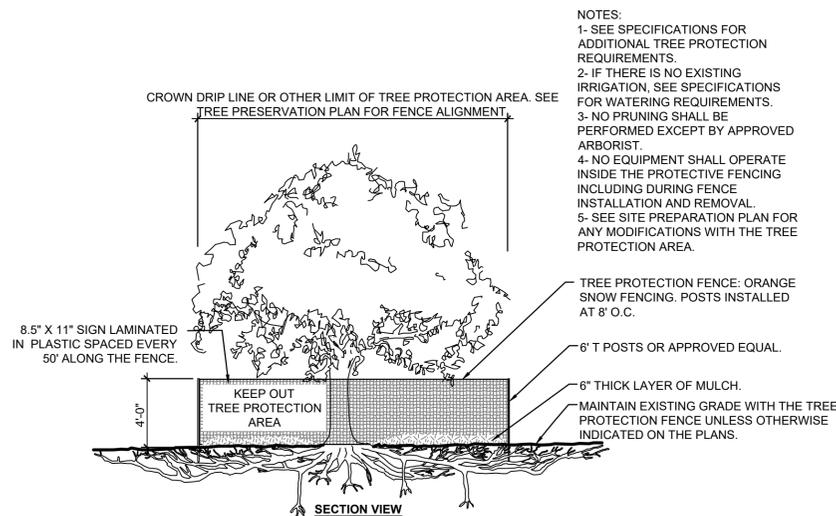
**02 LIVE STAKE INSTALLATION**

SCALE: 1" = 1'-0"



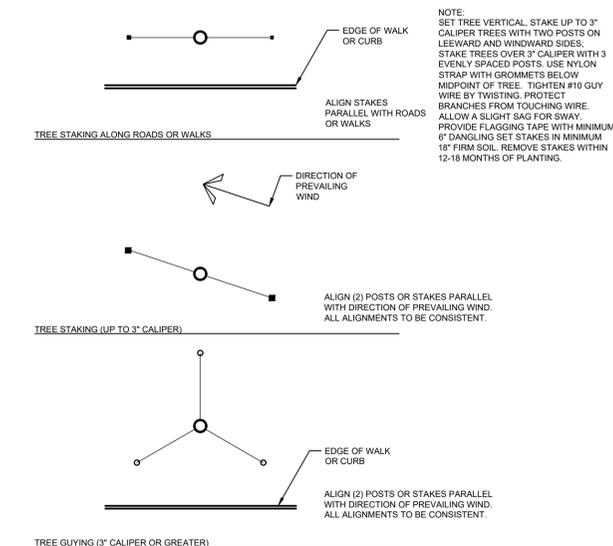
**03 CULTIVATED EDGING**

SCALE: 1/2" = 1'-0"



**04 TREE PROTECTION DETAIL**

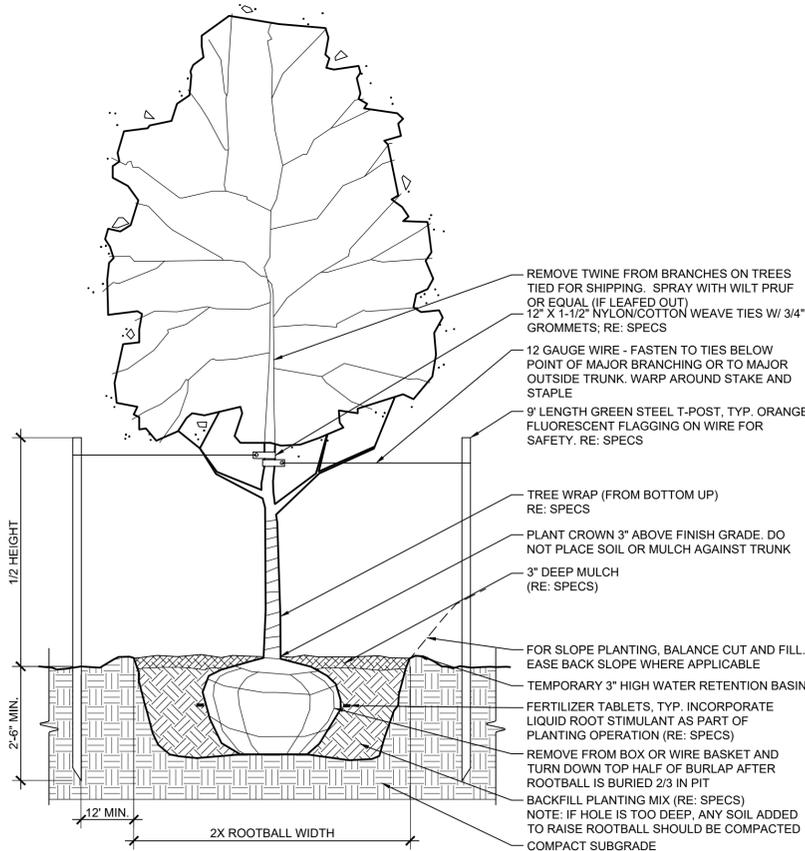
SCALE: 3/16" = 1'-0"



**05 STAKING AND GUYING**

1/2" = 1'-0"

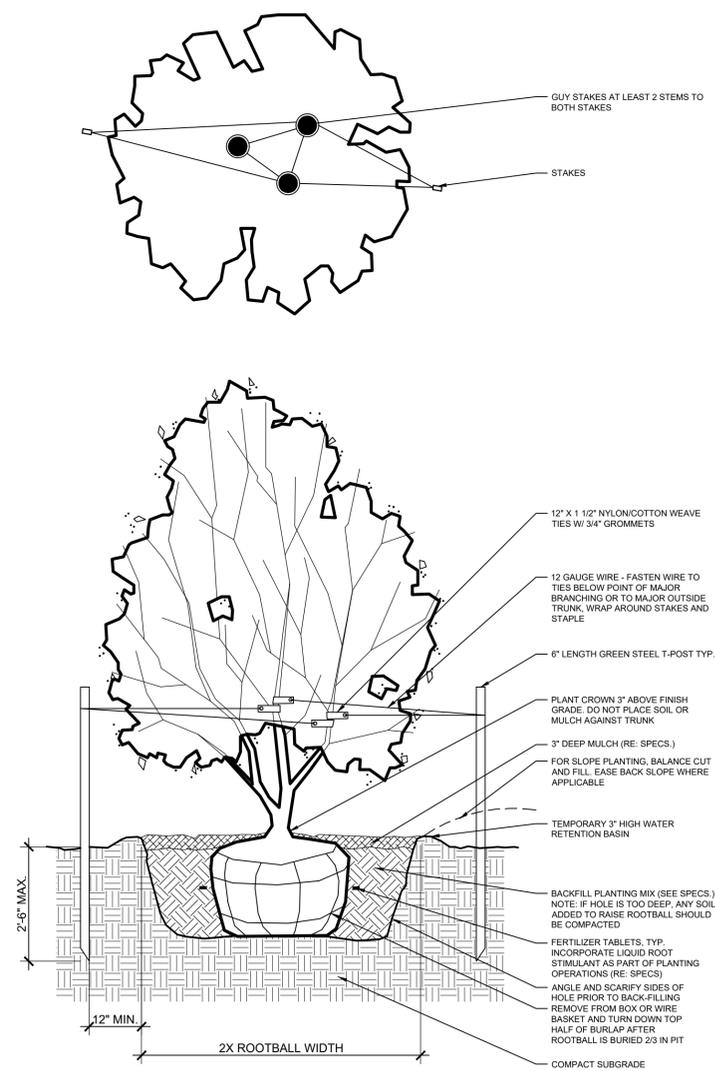
DETAIL-FILE



**06 DECIDUOUS TREE**

1/2" = 1'-0"

DETAIL-FILE



**07 MULTI-TRUNKED TREE PLANTING**

1/2" = 1'-0"

DETAIL-FILE

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SHEET TITLE  
**PLANTING**  
**DETAILS**

SHEET NO:  
**SS-09 OF 09**