

CONTACT INFORMATION

OWNER FRANKLIN COUNTY HIGHWAY DEPT. REPRESENTATIVE: RON WILLIAMS, P.E. ADDRESS: 400 EAST LOCUST ROOM 003A UNION, MISSOURI 63084 PHONE: (636) 583-6361	CONSULTANT COCHRAN REPRESENTATIVE: TARY TODD, P.E. ADDRESS: 737 RUDDER ROAD FENTON, MISSOURI 63026 PHONE: (314) 842-4033
CABLE CHARTER REPRESENTATIVE: CARL HILL ADDRESS: 1015 C WASHINGTON SQUARE WASHINGTON, MISSOURI 63090 PHONE: (636) 667-6936	TELEPHONE AT&T REPRESENTATIVE: JEREMIAH KINEALY ADDRESS: 507 E. MAIN STREET UNION, MISSOURI 63084 PHONE: (636) 425-3511
ELECTRIC AMEREN U.E. REPRESENTATIVE: CHRIS SANZOTERRA ADDRESS: 500 EAST INDEPENDENCE DRIVE UNION, MISSOURI 63084 PHONE: (636) 583-7156	MoDOT REPRESENTATIVE: ADDRESS: PHONE:
GAS REPRESENTATIVE: ADDRESS: PHONE:	REPRESENTATIVE: ADDRESS: PHONE:

PROJECT INFORMATION

FRANKLIN COUNTY, MO
 START OF PROJECT: STA 1+00.00
 END OF PROJECT: STA 5+13.00
 PROJECT LENGTH: 413 FEET
 FUNCTIONAL CLASSIFICATION: URBAN COLLECTOR



VICINITY MAP
NOT TO SCALE

OLD HIGHWAY 100 HYDRAULIC STUDY

IN
FRANKLIN CO., MISSOURI



400 EAST LOCUST STREET
 UNION, MISSOURI 63084
 TELEPHONE (636) 583-6362
 FAX (636) 584-0902



- CIVIL ENGINEERING
- LAND SURVEYING
- ARCHITECTURE
- SITE DEVELOPMENT
- MASTER PLANNING
- GENERAL CONSULTING

737 RUDDER ROAD
 FENTON, MISSOURI 63026
 TELEPHONE (314) 842-4033
 FAX (314) 842-5957
 www.cochraneng.com

COCHRAN PROJECT NO. SC17-768
DECEMBER 2017

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WHERE THE TERM "STANDARD SPECIFICATIONS" IS USED, SUCH REFERENCE SHALL MEAN THE 2011 EDITION OF THE MISSOURI STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, EXCEPT AS OTHERWISE PROVIDED IN THE PROJECT MANUAL. IN CASE OF CONFLICT IN THE REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE REQUIREMENTS STATED IN THE PROJECT MANUAL, THE REQUIREMENTS IN THE PROJECT MANUAL SHALL PREVAIL.

TWO WORKING DAYS PRIOR TO THE START OF ANY EXCAVATION ON THIS SITE, CONTRACTOR SHALL CALL 1-800-DIG-RITE FOR UTILITY LOCATION INFORMATION.

ALL OSHA RULES & REGULATIONS ESTABLISHED FOR THE TYPE OF CONSTRUCTION REQUIRED BY THESE PLANS SHALL BE STRICTLY FOLLOWED (IE TRENCHING, BLASTING, ETC.)



12/29/17
DATE

Tary Todd No. E-24182
 Registered Professional Engineer
 State of Missouri for Cochran

FRANKLIN COUNTY, MISSOURI

ACCEPTED BY:

RON WILLIAMS
 COUNTY ENGINEER

QUANTITIES

Bid No.	Spec. No.	Description	Unit	From STA.	To STA.	Quantity
ROADWAY ITEMS						
1	1500	Mobilization	LS	1+00.00	5+13.00	1
2	1500	Channelizers (Trimline)	EA	1+00.00	5+13.00	30
3	2300	Earthwork	LS	18+97.09	27+49.60	1
4	2300	Type I Rock Blanket	CY	3+26.30	3+42.63	12
5	2350	Silt Fence	LF	2+90.16	3+60.93	63
6	3000	Utility Cut Road Repair	LF	3+29.27	3+38.13	36
7	3000	Concrete Seep Collar	EA	3+32.45	3+38.07	2
8	3000	Storm Sewer (12" RCP)	LF	3+33.06	3+37.70	96
9	3000	Storm Sewer Structure (Area Inlet)	EA	3+31.13	3+36.00	1
10	3000	Storm Sewer Structure (Junction Box)	EA	3+31.50	3+39.92	2
11	4000	Asphalt Pavement (BP-1) (Surface Course) (2")	LS	3+29.27	3+38.13	1
SIGNING/STRIPING/SIGNAL ITEMS						
12	1500	Construction Signs	SF	1+00.00	5+13.00	100
13	3200	Sign Relocation	EA	3+31.46	3+36.33	1
LANDSCAPING/STREETSCAPING ITEMS						
14	9000	Seed, Mulch and Fertilize	SY	18+97.09	27+49.60	337



Three working days prior to the start of construction on this site, contractor shall call 1-800-DIG-RIE for utility location information.

All OSHA rules & regulations established for the construction of these jobs shall be strictly followed (ie. Trenching, Blasting, etc)

OLD HIGHWAY 100
HYDRAULIC STUDY
FRANKLIN COUNTY, MO

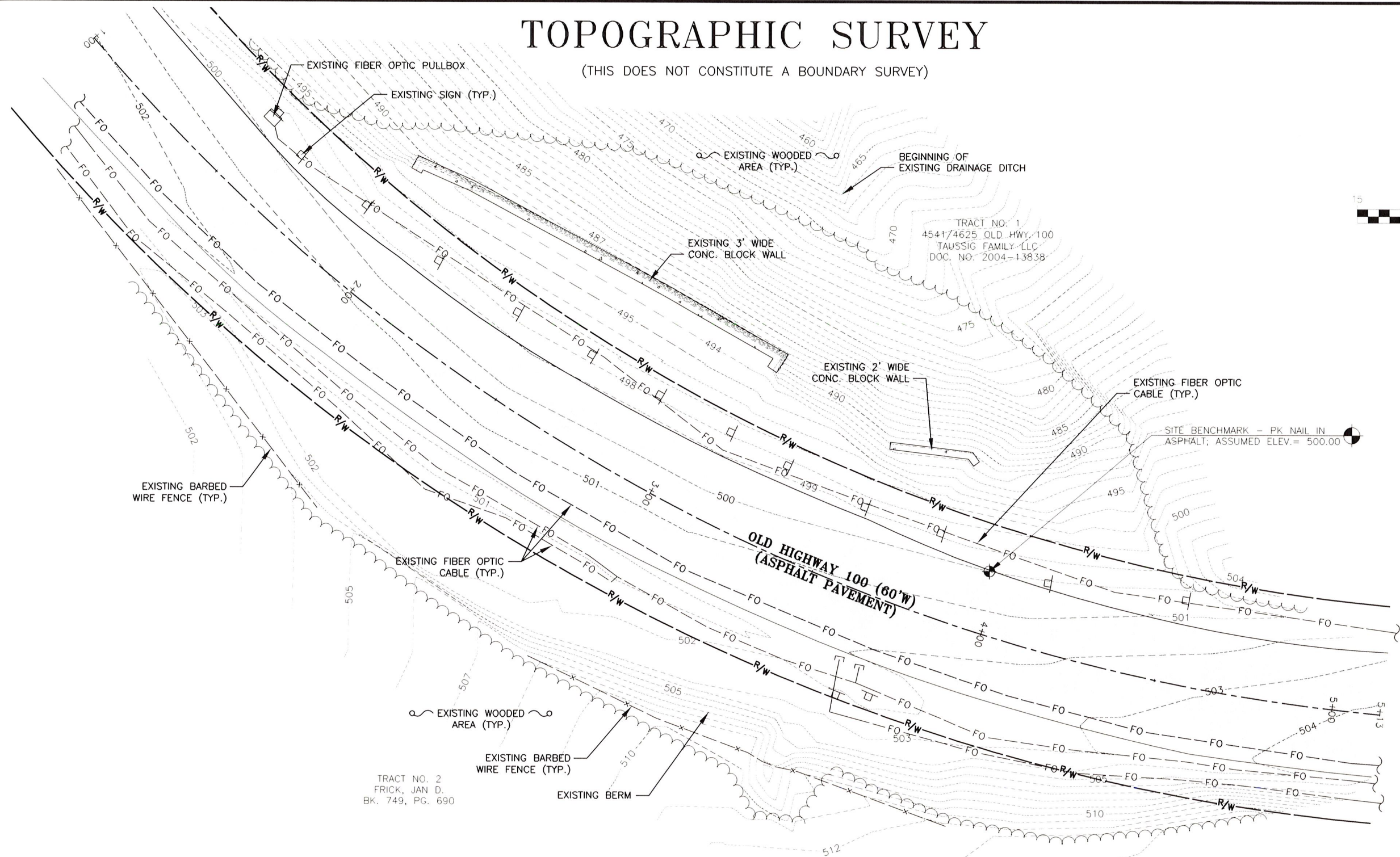
DATE	REVISION	DWN BY	APPD BY

DWN BY: A.J.M. APPD BY: T.D.T.
 DATE: DEC. 2017
 SCALE: NOT TO SCALE
 PROJ NO: SC17-768
 DWG NO: Q-1



TOPOGRAPHIC SURVEY

(THIS DOES NOT CONSTITUTE A BOUNDARY SURVEY)



TRACT NO. 1
4541/4625 OLD HWY. 100
TAUSSIG FAMILY LLC
DOC. NO. 2004-13838

TRACT NO. 2
FRICK, JAN D.
BK. 749, PG. 690

- NOTES:
1. UNDERGROUND STRUCTURES, FACILITIES, AND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS AND RECORDS. THEREFORE, THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. THERE MAY BE OTHERS, THE EXISTENCE OF WHICH IS PRESENTLY NOT KNOWN.
 2. SITE BENCHMARK IS PK NAIL IN ASPHALT ON THE NORTH SIDE OF OLD HIGHWAY 100, ASSUMED ELEV. = 500.00.
 3. THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. LOCATION, RELOCATION AND CONNECTION OF THE UTILITIES SHALL BE COORDINATED WITH THE UTILITY COMPANIES.
 4. TOPOGRAPHIC INFORMATION AS SHOWN HEREON PER FIELD WORK PERFORMED BY K.M.W. OF COCHRAN, DATED DECEMBER 2017.
 5. THIS DRAWING DOES NOT CONSTITUTE A BOUNDARY SURVEY.
 6. BASIS OF BEARING PER LA CHARRETTE SUBDIVISION AS RECORDED IN PLAT BOOK "P", PAGE 1397 OF THE FRANKLIN COUNTY RECORDS.
 7. THIS SITE LIES WITHIN "ZONE X", AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN PER FEMA FLOOD INSURANCE RATE MAP NUMBER 29071C0165D, EFFECTIVE DATE OCTOBER 18, 2011.

LEGEND	
RIGHT-OF-WAY	— R/W —
EXISTING MAJOR CONTOUR	---970---
EXISTING MINOR CONTOUR	-----
EXISTING CONCRETE PAVEMENT	[Pattern]
EXISTING ASPHALT PAVEMENT	[Pattern]
EXISTING FIBER OPTIC CABLE	— FO —
EXISTING MAILBOX	[Symbol]
EXISTING SIGN	[Symbol]
EXISTING FENCE	— X —
EXISTING TREE	[Symbol]
EXISTING TREELINE	[Symbol]
EXISTING UTILITY (TERMINUS UNKNOWN)	[Symbol]



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CERTIFICATE OF AUTHORITY NUMBER - 006937

The engineer, by signing these plans, certifies that he or she is a duly licensed professional engineer on this site, contractor shall call 1-800-DIG-RIE for information on location.

All OSHA rules & regulations established for excavation shall be strictly followed (i.e. Trenching, Blasting).

OLD HIGHWAY 100
HYDRAULIC STUDY
FRANKLIN COUNTY, MO

DATE	REVISION	DWN BY	APPD BY
DEC. 2017		K.M.W.	T.J.V.

DATE: DEC. 2017
SCALE: 1" = 30'
PROJ NO: SC17-768
DWG NO: TS-1

LEGEND AND GENERAL NOTES

LEGEND, GENERAL NOTES AND ABBREVIATIONS SHALL APPLY TO ALL SHEETS UNLESS OTHERWISE NOTED ON INDIVIDUAL SHEET

LEGEND

EXISTING		NEW		EXISTING		NEW	
	INDEX CONTOUR		500		TREE		TREE
	INTERMEDIATE CONTOUR		498		TREELINE		TREELINE
	RIGHT-OF-WAY		R/W		LIGHT		LIGHT
	LOT LINE		PE		COBRAHEAD LIGHT		COBRAHEAD LIGHT
	PERMANENT EASEMENT		AE		LOAD CENTER		LOAD CENTER
	AERIAL ELECTRIC		AE		HAND HOLE		HAND HOLE
	UTILITY POLE		UGT		MAILBOX		MAILBOX
	GUY WIRE		FO		SIGN		SIGN
	UNDERGROUND ELECTRIC		UGE		CONCRETE PAVEMENT		CONCRETE PAVEMENT
	UNDERGROUND CABLE TV		CATV		ASPHALT PAVEMENT		ASPHALT PAVEMENT
	UNDERGROUND TELEPHONE		UGT		GRAVEL SURFACE		GRAVEL SURFACE
	UNDERGROUND FIBER OPTIC		FO		ROCK BLANKET/DITCH LINER		ROCK BLANKET/DITCH LINER
	SANITARY SEWER LINE		SAN		CONCRETE APPROACH		CONCRETE APPROACH
	SANITARY FORCEMAIN		FM		CONCRETE SIDEWALK		CONCRETE SIDEWALK
	SANITARY SEWER MANHOLE		●		CURB RAMP		CURB RAMP
	STORM SEWER LINE		SS		ASPHALT DRIVEWAY		ASPHALT DRIVEWAY
	STORM SEWER MANHOLE		●		AGGREGATE DRIVEWAY		AGGREGATE DRIVEWAY
	CURB/AREA INLET		■		SODDING		SODDING
	GRATED INLET		■		FULL DEPTH PAVEMENT (REPAIR)		FULL DEPTH PAVEMENT (REPAIR)
	GRATED INLET W/ SIDE INTAKE		■		PAVEMENT MILLING		PAVEMENT MILLING
	FLARED END SECTION		▲		RETAINING WALL		RETAINING WALL
	SWALE		→		CONCRETE VERTICAL CURB		CONCRETE VERTICAL CURB
	GAS LINE		G		CONCRETE CURB AND GUTTER		CONCRETE CURB AND GUTTER
	GAS VALVE		⊙		CONSTRUCTION LIMITS		CONSTRUCTION LIMITS
	GAS METER		■		SILT FENCE		SILT FENCE
	WATER LINE		W		INLET CHECK		INLET CHECK
	FIRE HYDRANT		⊙		DITCH CHECK		DITCH CHECK
	WATER VALVE		⊙		PROJECT BASELINE		PROJECT BASELINE
	WATER METER		■		TEMPORARY CONSTRUCTION EASEMENT		TEMPORARY CONSTRUCTION EASEMENT
	GUARDRAIL		G/W		T.C.E.		T.C.E.
	FENCE		X				

ABBREVIATIONS

AI - AREA INLET	MIN - MINIMUM	∅ - DIAMETER
ARC - ARC LENGTH	NO - NUMBER	CL - CENTERLINE
ATG - ADJUST TO GRADE	O/S - OFFSET	
BF - BOTTOM OF FOOTING	OC - ON CENTER	
BOP - BEGINNING OF PAVEMENT	PC - POINT OF CURVATURE	
BW - BOTTOM OF WALL	PCC - POINT OF COMPOUND CURVATURE	
CB - CHORD BEARING	PE - PERMANENT EASEMENT	
CHD - CHORD LENGTH	PI - POINT OF INTERSECTION	
CI - CURB INLET	PRC - POINT OF REVERSE CURVATURE	
CMP - CORRUGATED METAL PIPE	PT - POINT OF TANGENCY	
DCI - DOUBLE CURB INLET	R/W - RIGHT-OF-WAY	
DGI - DOUBLE GRATED INLET	RAD - RADIUS	
ELEV - ELEVATION	RCP - RE-INFORCED CONCRETE PIPE	
EOP - END OF PAVEMENT	RT - RIGHT	
FES - FLARED END SECTION	SSD - STOPPING SIGHT DISTANCE	
FL - FLOW LINE	STA - STATION	
GI - GRATED INLET	TBR - TO BE REMOVED	
GIS - GRATED INLET WITH SIDE INTAKE	TBR&R - TO BE REMOVED AND REPLACED	
HDPE - HIGH-DENSITY POLYETHYLENE	TCE - TEMPORARY CONSTRUCTION EASEMENT	
JB - JUNCTION BOX	TW - TOP OF WALL	
LF - LINEAR FEET	TYP - TYPICAL	
LT - LEFT	VPC - VERTICAL POINT OF CURVATURE	
MAX - MAXIMUM	VPI - VERTICAL POINT OF INTERSECTION	
MH - MANHOLE	VPT - VERTICAL POINT OF TANGENCY	

GENERAL NOTES

TOPOGRAPHIC NOTES:

- UNDERGROUND STRUCTURES, FACILITIES, AND UTILITIES HAVE BEEN PLOTTED FROM AVAILABLE SURVEYS AND RECORDS. THEREFORE, THEIR LOCATIONS MUST BE CONSIDERED APPROXIMATE ONLY. THERE MAY BE OTHERS, THE EXISTENCE OF WHICH IS PRESENTLY NOT KNOWN.
- SITE BENCHMARK IS PK NAIL IN ASPHALT ON THE NORTH SIDE OF OLD HIGHWAY 100, ASSUMED ELEV. = 500.00.
- THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. LOCATION, RELOCATION AND CONNECTION OF THE UTILITIES SHALL BE COORDINATED WITH THE UTILITY COMPANIES.
- TOPOGRAPHIC INFORMATION AS SHOWN HEREON PER FIELD WORK PERFORMED BY K.M.W. OF COCHRAN, DATED DECEMBER 2017.
- THIS DRAWING DOES NOT CONSTITUTE A BOUNDARY SURVEY.
- BASIS OF BEARING PER LA CHARRETTE SUBDIVISION AS RECORDED IN PLAT BOOK "P", PAGE 1397 OF THE FRANKLIN COUNTY RECORDS.
- THIS SITE LIES WITHIN "ZONE X", AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN PER FEMA FLOOD INSURANCE RATE MAP NUMBER 29071C0165D, EFFECTIVE DATE OCTOBER 18, 2011.

DESIGN NOTES:

- CONTRACTOR SHALL RELOCATE ALL EXISTING SIGNS, PLANTERS, MAILBOXES, AND PRIVATE LIGHTS AS NECESSARY FOR THE CONSTRUCTION OF THE IMPROVEMENTS. NEW LOCATIONS SHALL BE AS DIRECTED BY THE ENGINEER. SEE THE REMOVAL OF IMPROVEMENTS SECTION IN THE SPECIFICATIONS.
- CONTRACTOR SHALL ADJUST TO GRADE ALL UTILITIES NECESSARY TO BRING THE UTILITY TO THE GRADE OF THE NEW CONSTRUCTION. SEE THE UTILITY ADJUSTMENT SECTION OF THE SPECIFICATIONS.
- CONTRACTOR SHALL FIELD VERIFY THE LOCATION AND ELEVATION OF ALL POTENTIAL UTILITY CONFLICTS PRIOR TO ORDERING STORM SEWER PIPE AND STRUCTURES.
- EXISTING CULVERT PIPES, WHICH ARE UNDER DRIVEWAYS BEING REPLACED BY THE CONSTRUCTION OF IMPROVEMENTS, SHALL BE REMOVED. SEE THE REMOVAL OF IMPROVEMENTS SECTION IN THE SPECIFICATIONS.
- ALL AREAS OF CLEARING, GRUBBING AND STRIPPING NOT SHOWN IN PLANS, CONTRACTOR SHALL CONDUCT CLEARING, GRUBBING AND STRIPPING AS NECESSARY UNLESS OTHERWISE NOTED IN PLANS.

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317 RIDGER ROAD
FENTON, MISSOURI 63026

CERTIFICATE OF AUTHORITY NUMBER - 006937

The working days prior to the start of construction on this site, contractor shall call 1-800-DIG-RTT for utility location information.

All OSHA rules & regulations established for safety shall be strictly followed (i.e. trenching, blasting, etc)

OLD HIGHWAY 100
HYDRAULIC STUDY
FRANKLIN COUNTY, MO

DATE	REVISION	DWN. BY:	APPD. BY:
		A.J.M.	T.D.T.
DATE:			
SCALE:			
PROJ. NO.:			
DWG. NO.:			

LEGEND AND GENERAL NOTES

REGISTERED PROFESSIONAL ENGINEER

STATE OF MISSOURI

TARY TODD

NUMBER E-24182

DEC. 2017

NOT TO SCALE

SC17-768

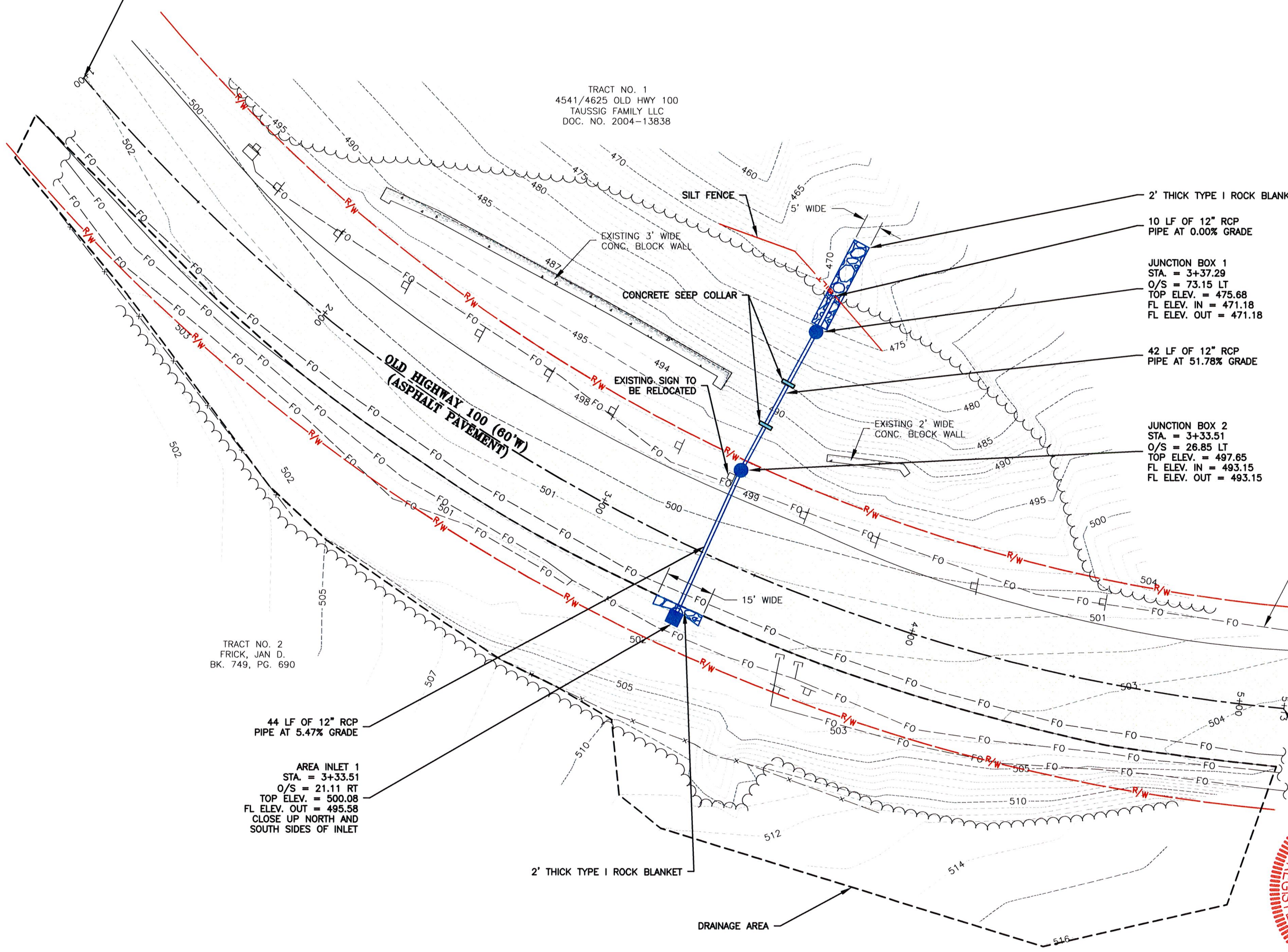
LG-1

SITE PLAN

START OF PROJECT
STA. 1+00

TRACT NO. 1
4541/4625 OLD HWY 100
TAUSSIG FAMILY LLC
DOC. NO. 2004-13838

TRACT NO. 2
FRICK, JAN D.
BK. 749, PG. 690



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Mechanical Engineering
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ENGINEERING CERTIFICATE OF AUTHORITY NUMBER - 2007006837
LAND SURVEYING CERTIFICATE OF AUTHORITY NUMBER - 2007004529

Three working days prior to construction on this site, contractor shall call 1-800-DIG-RITE for utility location information.

All OSHA rules & regulations established for trenching and shoring shall be strictly followed (i.e. Trenching, Blasting, etc.)

**OLD HIGHWAY 100
HYDRAULIC STUDY
FRANKLIN COUNTY, MO**

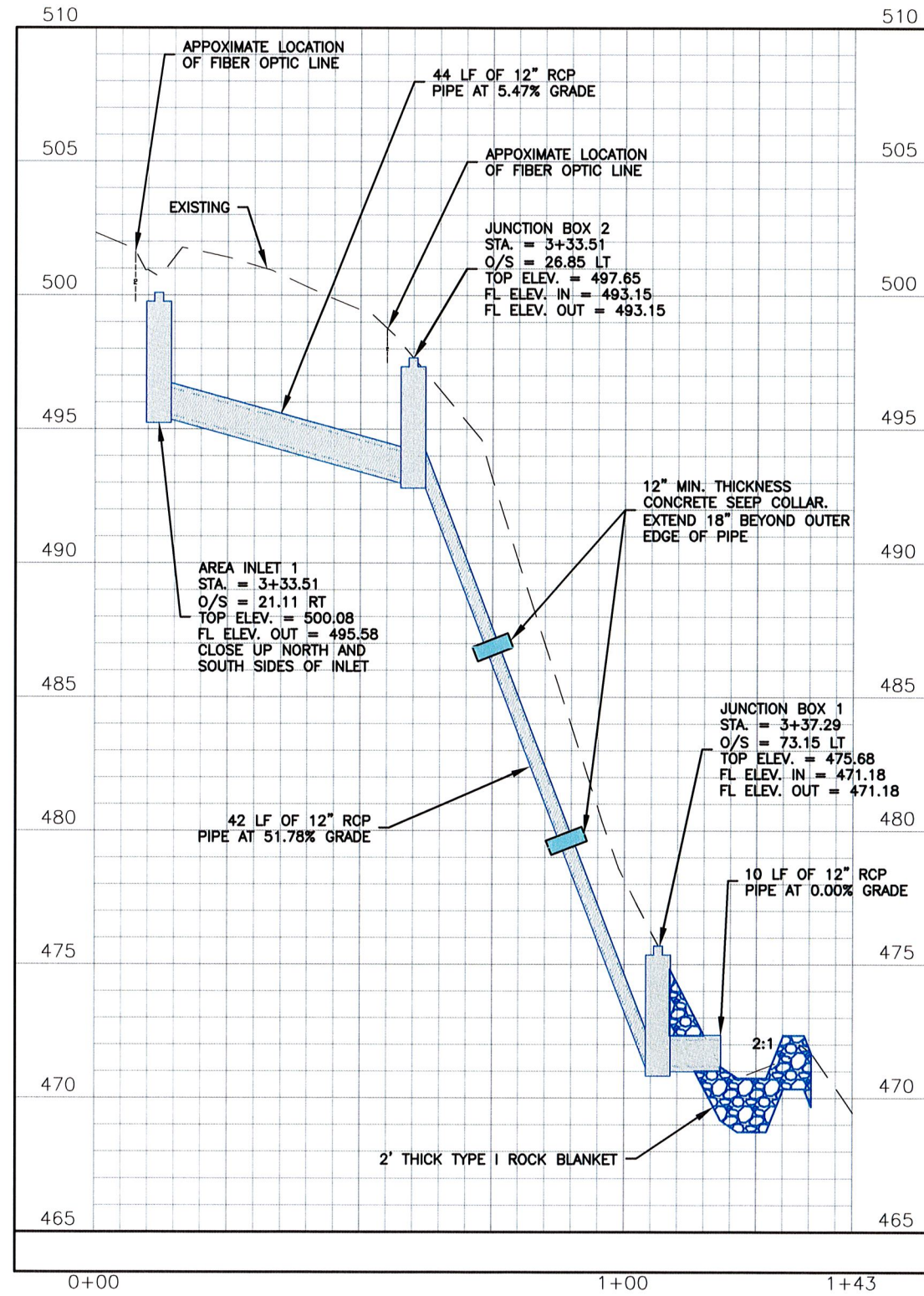
DATE	REVISION	DWN. BY	APPD. BY

DWN. BY: A.J.M. APPD. BY: T.D.T.
DATE: DEC. 2017
SCALE: 1" = 30'
PROJ. NO.: SC17-768
DWG. NO.: S-1

STATE OF MISSOURI
REGISTERED PROFESSIONAL ENGINEER
TARY TODD
NUMBER E-24182
12/29/17

Drawing name: u:\sc17-768 old highway 100 drainage, franklin county\AUTOCAD DRAWINGS\SITE PLAN.dwg Tab. S-1 Plotted on: Dec 29, 2017 - 1:53pm Plotted by: amuelier

STORM SEWER PROFILE



Drawing name: J:\sc17-768 old highway 100 drainage, franklin county\AUTOCAD DRAWINGS\STORM AND DRAINAGE DITCH PROFILES.dwg Tab: SP-1 Plotted on: Dec 28, 2017 - 1:54pm Plotted by: amueller

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 314-842-5857 (fax)
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 FENTON, MISSOURI 63026

Civil Engineering
 Land Surveying
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 Site Development
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 General Consulting
 Engineering Certificate of Authority Number - 0207004529
 Land Surveying Certificate of Authority Number - 2007004529

Three working days prior to the start of any excavation or trenching, the contractor shall call 1-800-DIG-RITE for utility location information.

All OSHA rules & regulations established for the type of construction shall be strictly followed (i.e. Trenching, Blasting, etc)

**OLD HIGHWAY 100
 HYDRAULIC STUDY
 FRANKLIN COUNTY, MO**

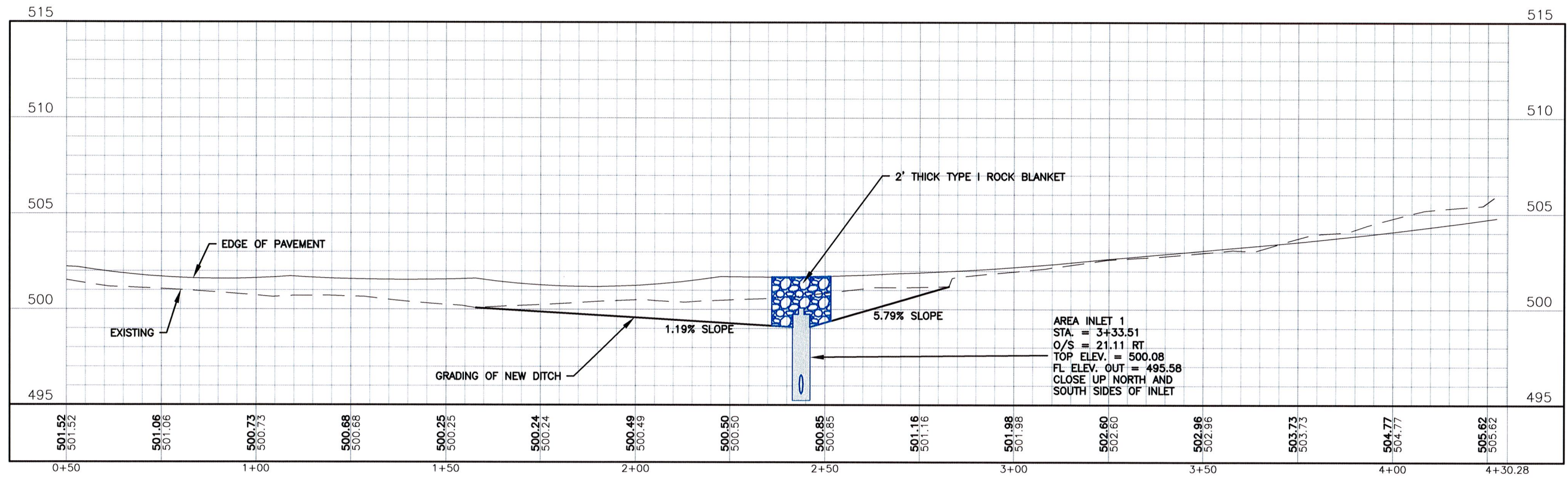
STATE OF MISSOURI
 REGISTERED PROFESSIONAL ENGINEER
TARY TODD
 NUMBER E-24182
 12/29/17

STORM SEWER PROFILE

DATE	REVISION	DWN. BY	APP'D. BY
		A.J.M.	T.D.T.

DATE: DEC. 2017
 SCALE: 1" = 30H 6V
 PROJ. NO: SC17-768
 DWG. NO: SP-1

DRAINAGE DITCH PROFILE



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ENGINEERING CERTIFICATE OF AUTHORITY NUMBER - 2007069937
 LAND SURVEYING CERTIFICATE OF AUTHORITY NUMBER - 2007004529

Three working days prior to the start of construction on this site, contractor shall call 1-800-DIG-RITE for utility location information.

All OSHA rules & regulations established for trenching shall be followed. All trenching shall be strictly followed (i.e. Trenching, Blasting, etc)

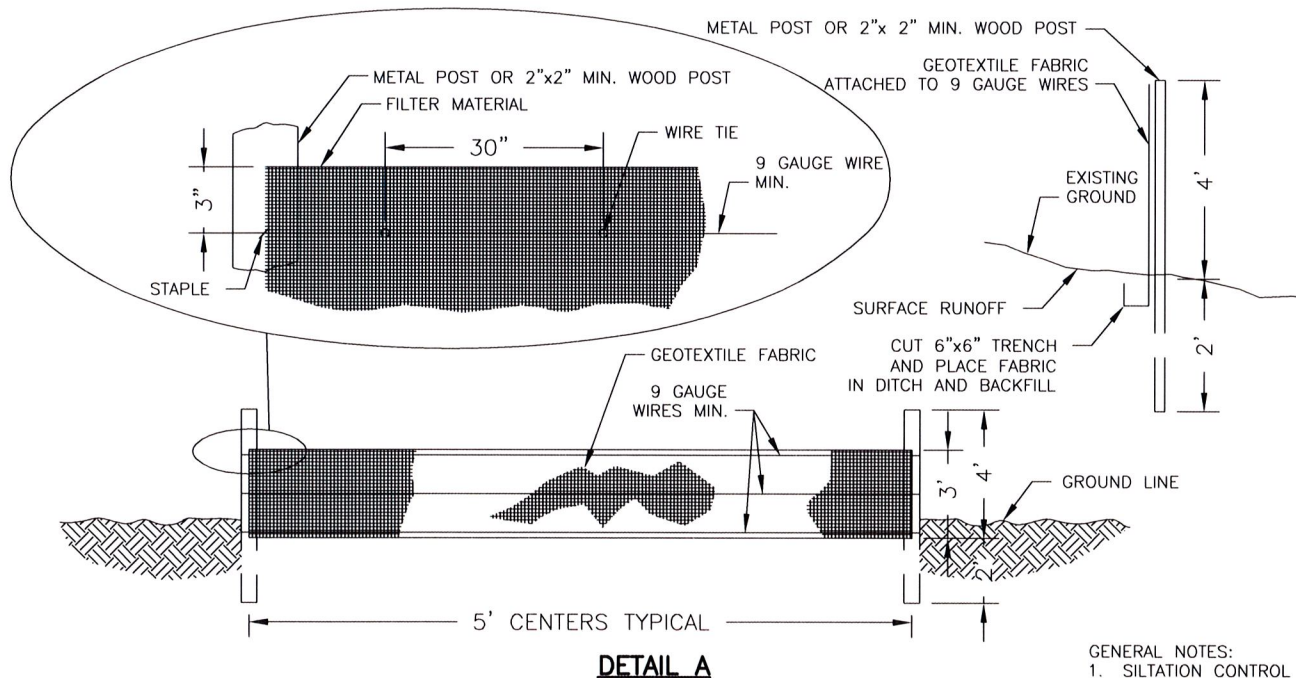
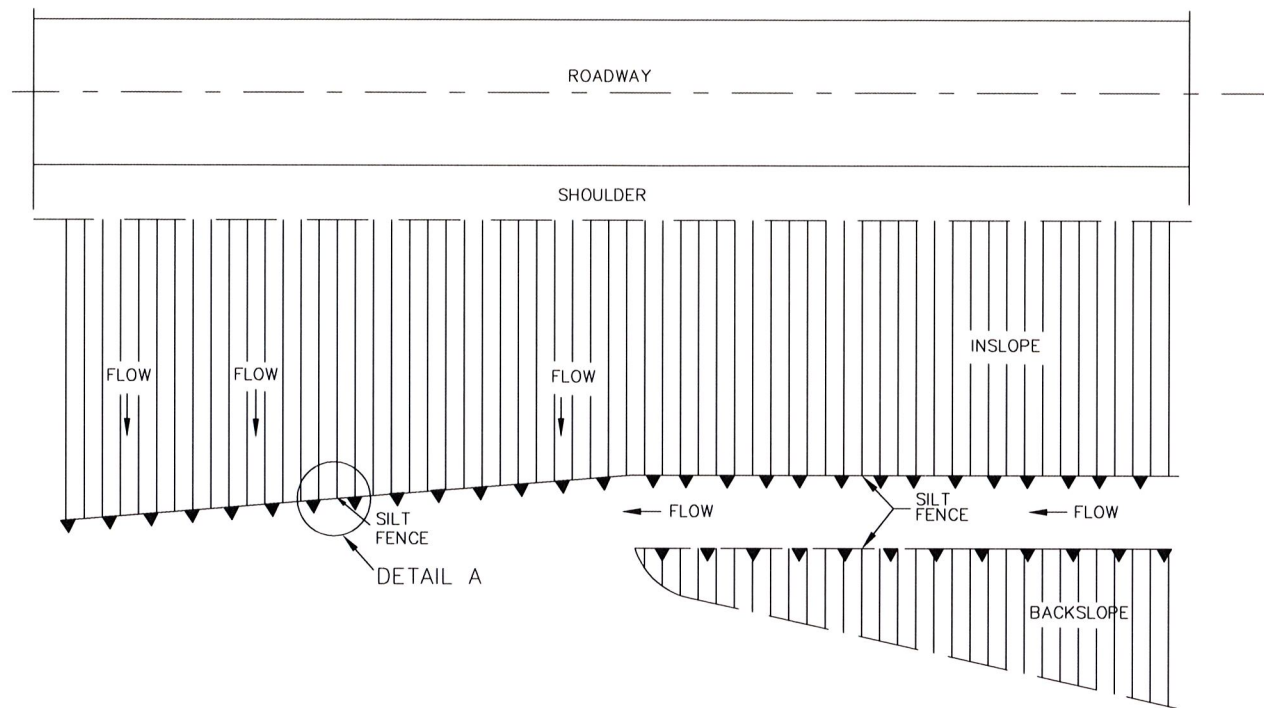
**OLD HIGHWAY 100
 HYDRAULIC STUDY
 FRANKLIN COUNTY, MO**

DATE	REVISION	DWN. BY	APPD. BY

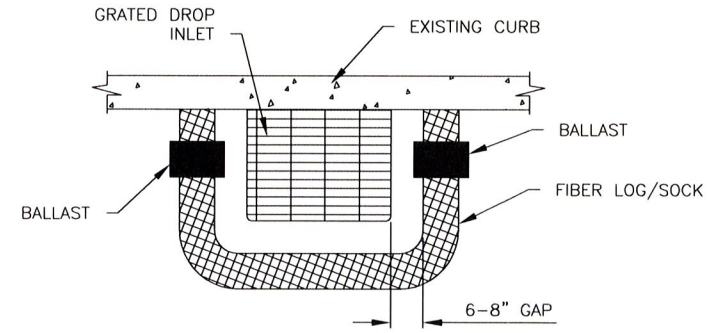
DWA. BY: A.J.M. APPD. BY: T.D.T.
 DATE: DEC. 2017
 SCALE: 1" = 30H 6V
 PROJ. NO: SC17-768
 DWG. NO: DP-1



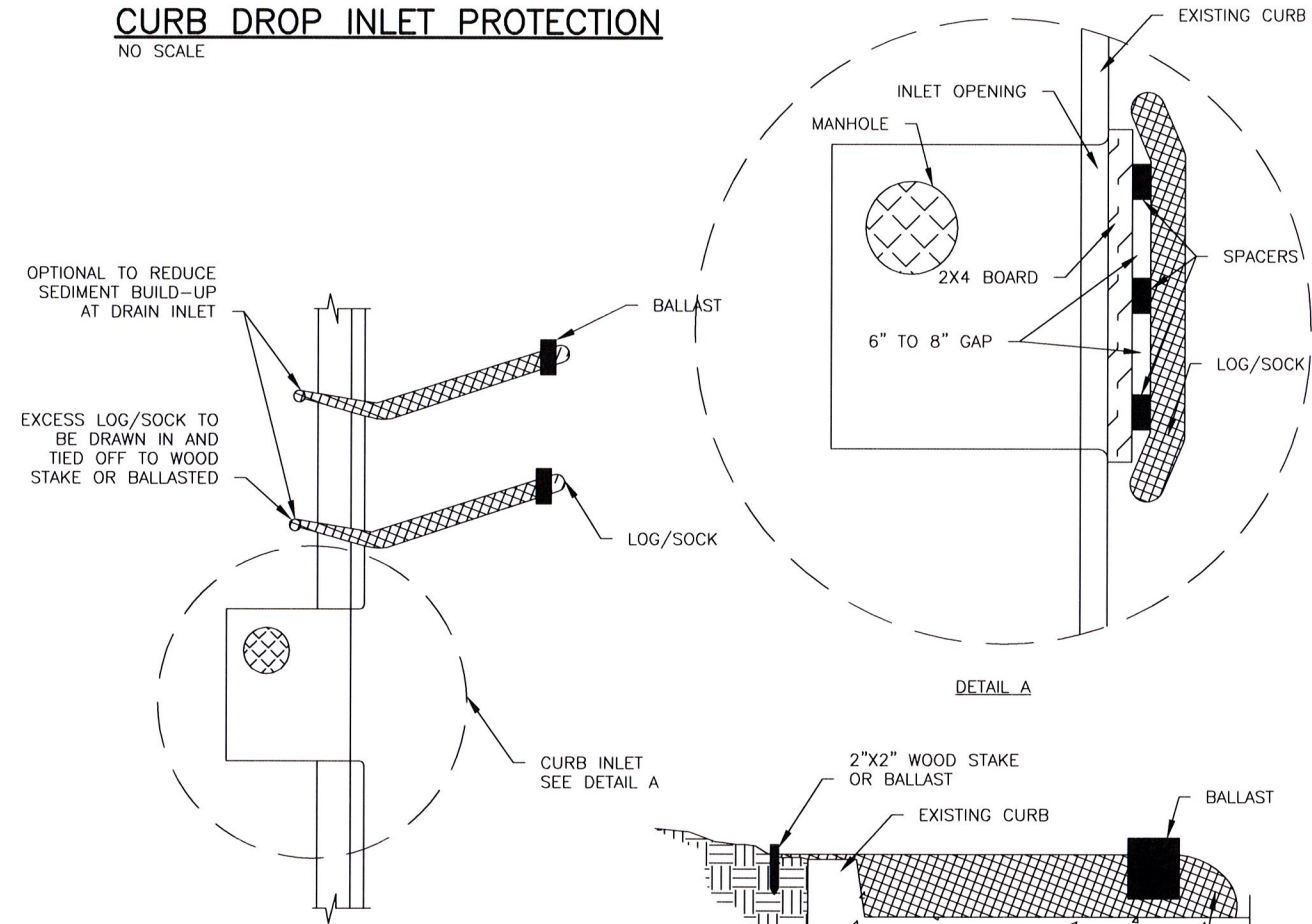
EROSION CONTROL PLAN



DETAIL A
SILTATION CONTROL DETAILS
NO SCALE



CURB DROP INLET PROTECTION
NO SCALE



CURB INLET PROTECTION
NO SCALE

- GENERAL NOTES:
1. SILTATION CONTROL DEVICES TO REMAIN IN PLACE UNTIL ADEQUATE VEGETATIVE GROWTH ENSURES NO FURTHER EROSION OF THE SOIL. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING THE SILT FENCE.
 2. SILT FENCES SHALL BE INSPECTED PERIODICALLY FOR DAMAGE AND FOR THE AMOUNT OF SEDIMENTATION WHICH HAS ACCUMULATED. REMOVAL OF SEDIMENT WILL BE REQUIRED WHEN IT REACHES 1/2 OF THE HEIGHT OF THE SILT FENCE.
 3. ATTACHMENT OF THE GEOTEXTILE FABRIC TO BE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATION.
 4. SILTATION CONTROL SHALL BE INSTALLED AS NEEDED OR AS DIRECTED BY THE ENGINEER TO ENSURE THAT NO SILT LEAVES THE CONSTRUCTION AREA.
 5. USE SILT FENCE FOR ALL SLOPES OVER 3 FEET IN HEIGHT.
 6. FOR FABRIC SILT FENCE:
MINIMUM LONGITUDINAL SPLICE OVERLAP SHALL BE 2' WITH A POST AT EACH END.
SECURE FABRIC TO POSTS.
 7. CONTRACTOR SHALL USE INLET CHECK EROSION CONTROL DEVICES TO PREVENT ANY SILT OR DEBRIS FROM ENTERING ANY NEW OR EXISTING CURB INLETS DURING CONSTRUCTION.

NOTE: THIS DRAWING IS NOT TO SCALE. PLEASE FOLLOW DIMENSIONS



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CERTIFICATE OF AUTHORITY NUMBER - 006937

Three working days prior to the start of any excavation on this site, the contractor shall call 1-800-DIG-RTTE for utility location information.

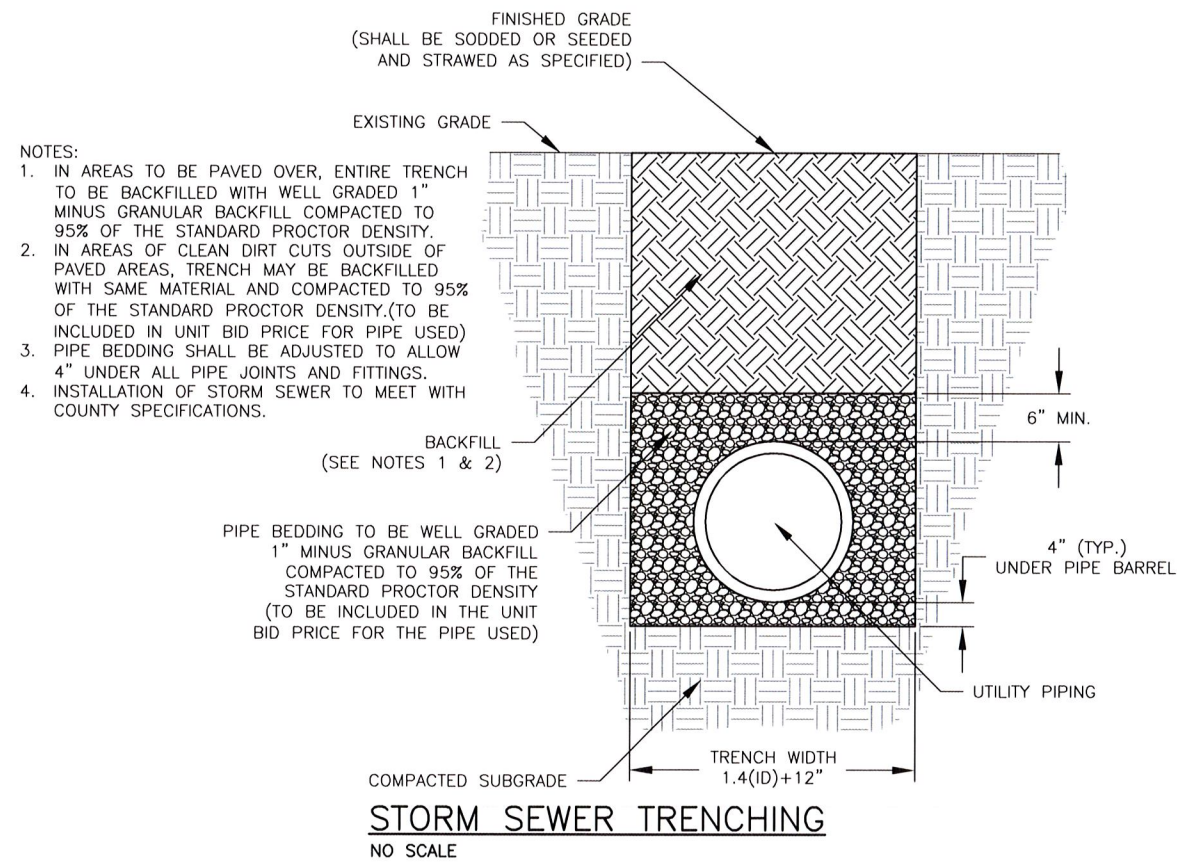
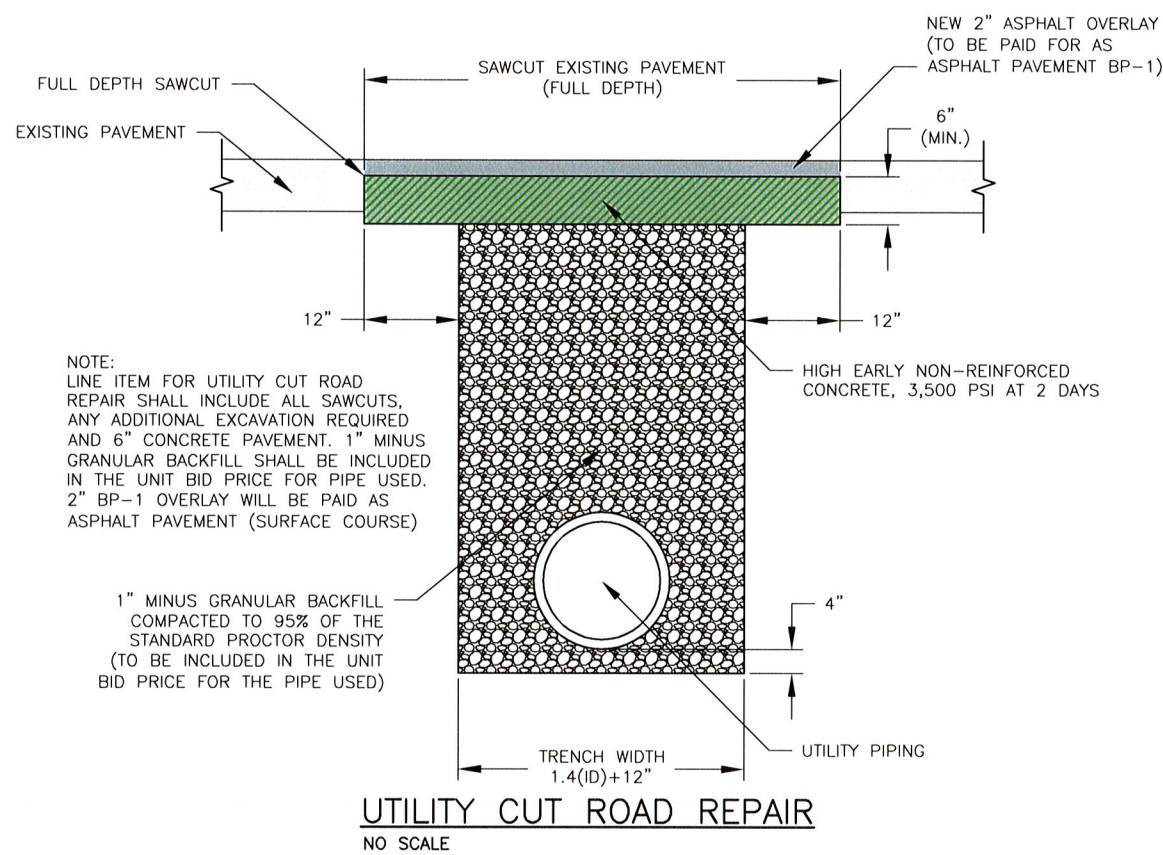
All OSHA rules & regulations established for the type of construction required by this project shall be strictly followed (i.e. Trenching, Blasting, etc.).

OLD HIGHWAY 100
HYDRAULIC STUDY
FRANKLIN COUNTY, MO

EROSION CONTROL PLAN

DRAWN BY:	APPROVED BY:
DATE:	DATE:
REVISION:	
DRAWN BY: A.J.M.	APPROVED BY: T.D.T.
DATE: DEC. 2017	
SCALE: NOT TO SCALE	
PROJ. NO: SC17-768	
DWG. NO: EC-1	

DETAILS



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CERTIFICATE OF AUTHORITY NUMBER - 006937

Three working days prior to the start of any excavation on this site, contractor shall call 1-800-DIG-RITE for utility location information.

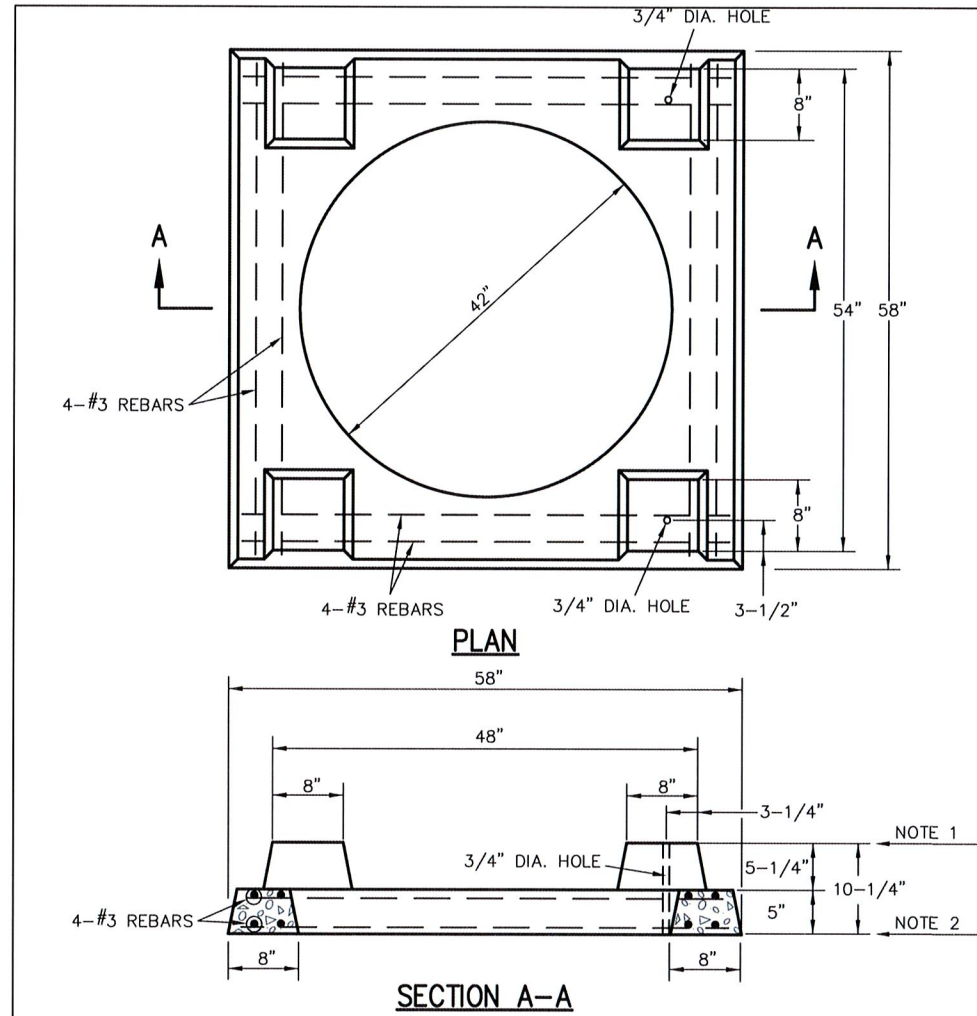
All OSHA rules & regulations established for excavation shall be followed by these plans and shall be strictly followed (i.e. Trenching, Blasting, etc)

**OLD HIGHWAY 100
HYDRAULIC STUDY
FRANKLIN COUNTY, MO**

DATE	REVISION	DWN. BY	APPD. BY

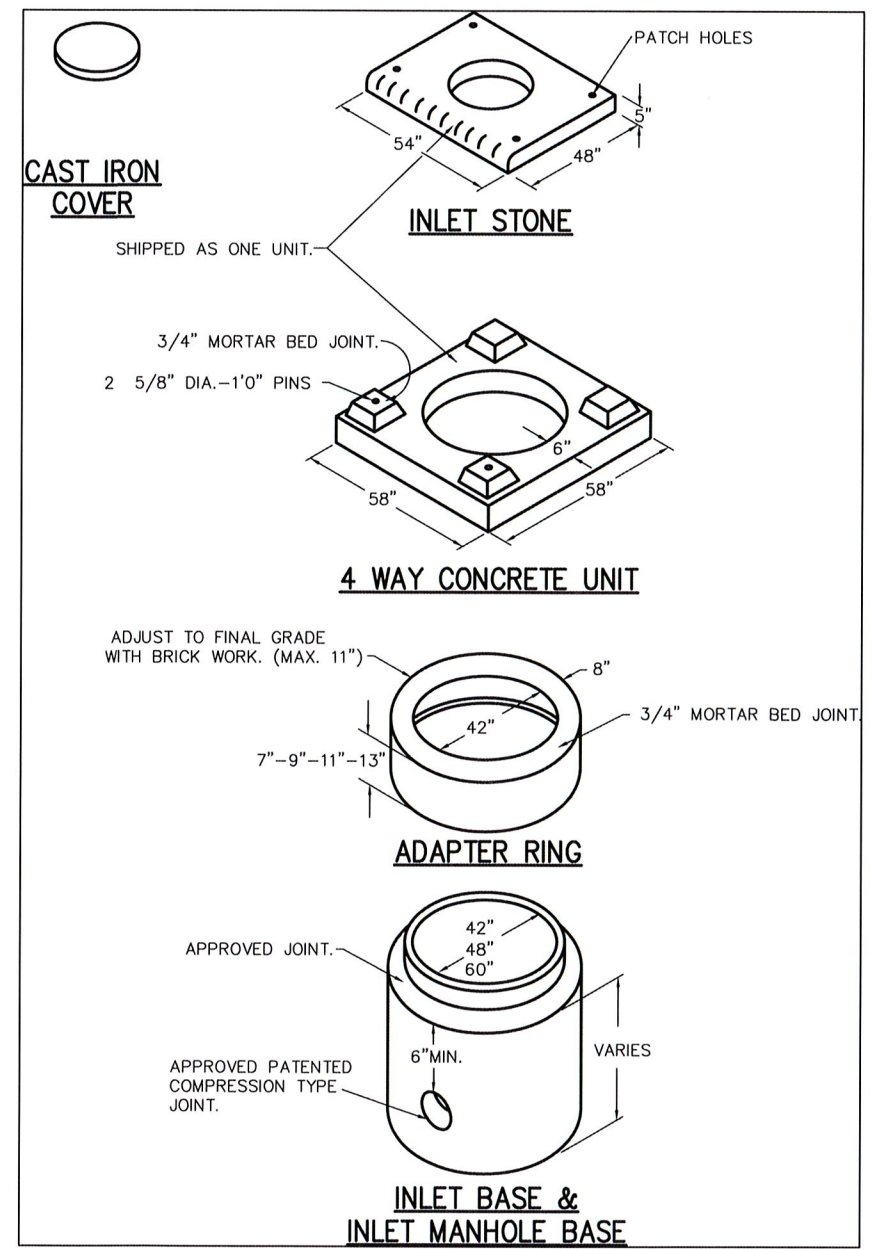
DWN. BY: A.J.M. APPD. BY: T.D.T.
DATE: DEC. 2017
SCALE: NOT TO SCALE
PROJ. NO: SC17-768
DWG. NO: D-1

DETAILS

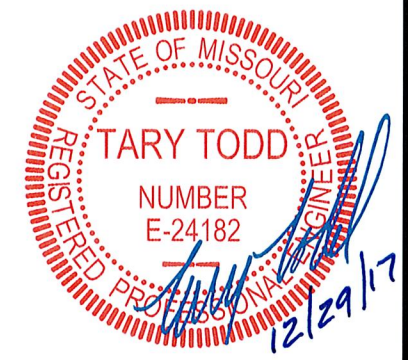


- NOTES:
- 1) SET STANDARD INLET STONE IN 3/4" MORTAR BED AND DOWEL WITH 5/8" DIA. 1'-0" LONG PINS AND GROUT.
 - 2) RAISE TO FINAL GRADE WITH COURSES OF BRICK AND SET THE UNIT TO BASE WITH 3/4" MORTAR BED.
 - 3) THIS UNIT TO BE USED WITH 42 INCH I.D. BASE.
 - 4) 5000 P.S.I. CONCRETE IS REQUIRED.

4 WAY CONCRETE UNIT
NO SCALE



AREA INLET ASSEMBLY
NO SCALE



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CERTIFICATE OF AUTHORITY NUMBER - 006937

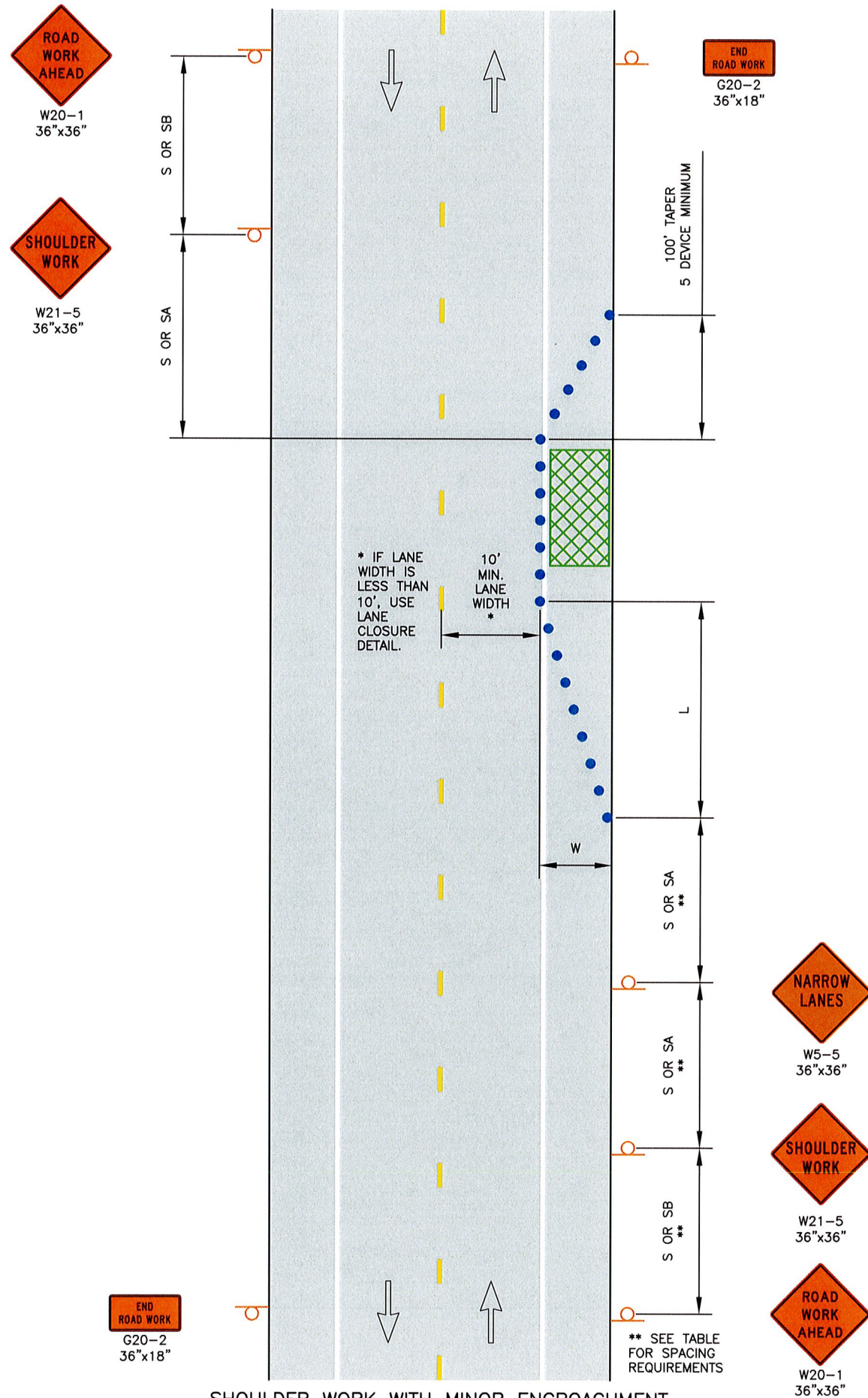
Three working days prior to the start of construction on the site of construction shall call 1-800-DIG-RITE for utility location information.

All OSHA rules & regulations established for the type of construction shall be strictly followed (i.e. Trenching, Blasting, etc)

**OLD HIGHWAY 100
HYDRAULIC STUDY
FRANKLIN COUNTY, MO**

DATE:	REVISION:	DWN. BY:	APPD. BY:
DATE:		A.J.M.	T.D.T.
SCALE:		DEC. 2017	
PROJ. NO.:		NOT TO SCALE	
DWG. NO.:		SC17-768	
		D-2	

TRAFFIC CONTROL PLAN



SHOULDER WORK WITH MINOR ENCROACHMENT
NO SCALE

GENERAL NOTES:

- TRAFFIC CONTROL SHALL BE MAINTAINED IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). SIZES SHOWN ARE MINIMUM SIZES.
- TEMPORARY PAVEMENT MARKINGS, IF NECESSARY, SHALL BE CONSIDERED AS INCIDENTAL TO THE CONSTRUCTION OF THE PROJECT AND NO DIRECT PAYMENT WILL BE MADE FOR THIS ITEM. PAVEMENT MARKINGS SHALL BE MAINTAINED IN ACCORDANCE WITH PART VI OF THE MUTCD. INTERIM PAVEMENT MARKINGS MAY BE LEFT IN PLACE FOR SITUATIONS OF TWO WEEKS OR LESS.
- CHANNELIZERS SHALL BE PLACED EVERY 25 FEET UNLESS SHOWN OTHERWISE ON THE PLANS. A MINIMUM 10 FOOT WIDE DRIVING LANE SHALL BE MAINTAINED. CHANNELIZERS SHALL BE PLACED IN OPEN TRENCH DURING NON-WORKING HOURS.
- IF AN OPEN TRENCH CONDITION WILL REMAIN OPEN OVERNIGHT, "PAVEMENT EDGE TREATMENT" SHALL BE PROVIDED IN ACCORDANCE WITH MODOT STANDARD DRAWING 619.10 AND SHALL BE CONSIDERED INCIDENTAL.
- ANY EXISTING SIGNS WHICH CONFLICT WITH THE TRAFFIC CONTROL PLAN SHALL BE COVERED.
- ALL SPACING AND DISTANCES ARE APPROXIMATE AND MAY BE ADJUSTED BY THE ENGINEER TO FIT FIELD CONDITIONS.
- FOR SHOULDER WORK, USE A FLAGGER WHEN MOVING EQUIPMENT ON AND OFF THE ROADWAY, OTHERWISE OPTIONAL. FOR ANY LANE CLOSURE A FLAGGER IS MANDATORY.
- PORTABLE STOP SIGNS WILL BE REQUIRED ON ALL APPROACHES DURING TRAFFIC SIGNAL "DOWN TIME".
- ALL VEHICLES, EQUIPMENT, WORKERS AND THEIR ACTIVITIES SHALL BE RESTRICTED TO ONE SIDE OF THE PAVEMENT.

LEGEND

- CHANNELIZERS (SAFETY CONES, BARRICADES, AND/OR PLASTIC DRUMS)
- INFORMATIONAL SIGNING
- AREA OF CONSTRUCTION

POSTED SPEED MPH (P)	TAPER LENGTHS AND SPACING OF CHANNELIZING DEVICES				
	MINIMUM TAPER LENGTHS (L) FOR LATERAL SHIFTS (W) (3)			MAXIMUM CHANNELIZER SPACING	
	10 FT (W)	11 FT (W)	12 FT (W)	THROUGH TAPER	THROUGH WORK AREA
0 - 35	68 FT	75 FT	82 FT	35 FT	50 FT
40 - 45	150 FT	165 FT	180 FT	40 FT	100 FT
50 - 55	183 FT	202 FT	220 FT	50 FT	100 FT
60 - 70	233 FT	257 FT	280 FT	60 FT	100 FT

POSTED SPEED MPH (P)	SIGN SPACING FOR ADVANCE SIGNS (1) (2)	
	NON-DIVIDED HIGHWAYS (S)	DIVIDED HIGHWAYS (S)
0 - 35	200 FT	200 FT
40 - 45	350 FT	500 FT
50 - 55	500 FT	1000 FT
60 - 70	SA - 1000 FT, SB - 1500 FT SC - 2640	

KEYED NOTES:

- SPACING BETWEEN SIGNS AND SPACING BETWEEN LAST SIGN AND FLAGGER, BEGINNING OF TAPER, OR SIGNED CONDITION.
- SPACING MAY BE ADJUSTED AS NECESSARY TO MEET FIELD CONDITIONS.
- FOR OTHER WIDTHS NOT SHOWN, $L=(WP)/3$ FOR 40 MPH OR MORE AND $L=((WP^2)/60)/3$ FOR 35 MPH OR LESS.

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CERTIFICATE OF AUTHORITY NUMBER - 006937

Three working days prior to the start of any excavation shall call 1-800-DIG-RITE for utility location information.
All OSHA rules & regulations established for the type of construction required by strictly followed (i.e., trenching, blasting, etc.)

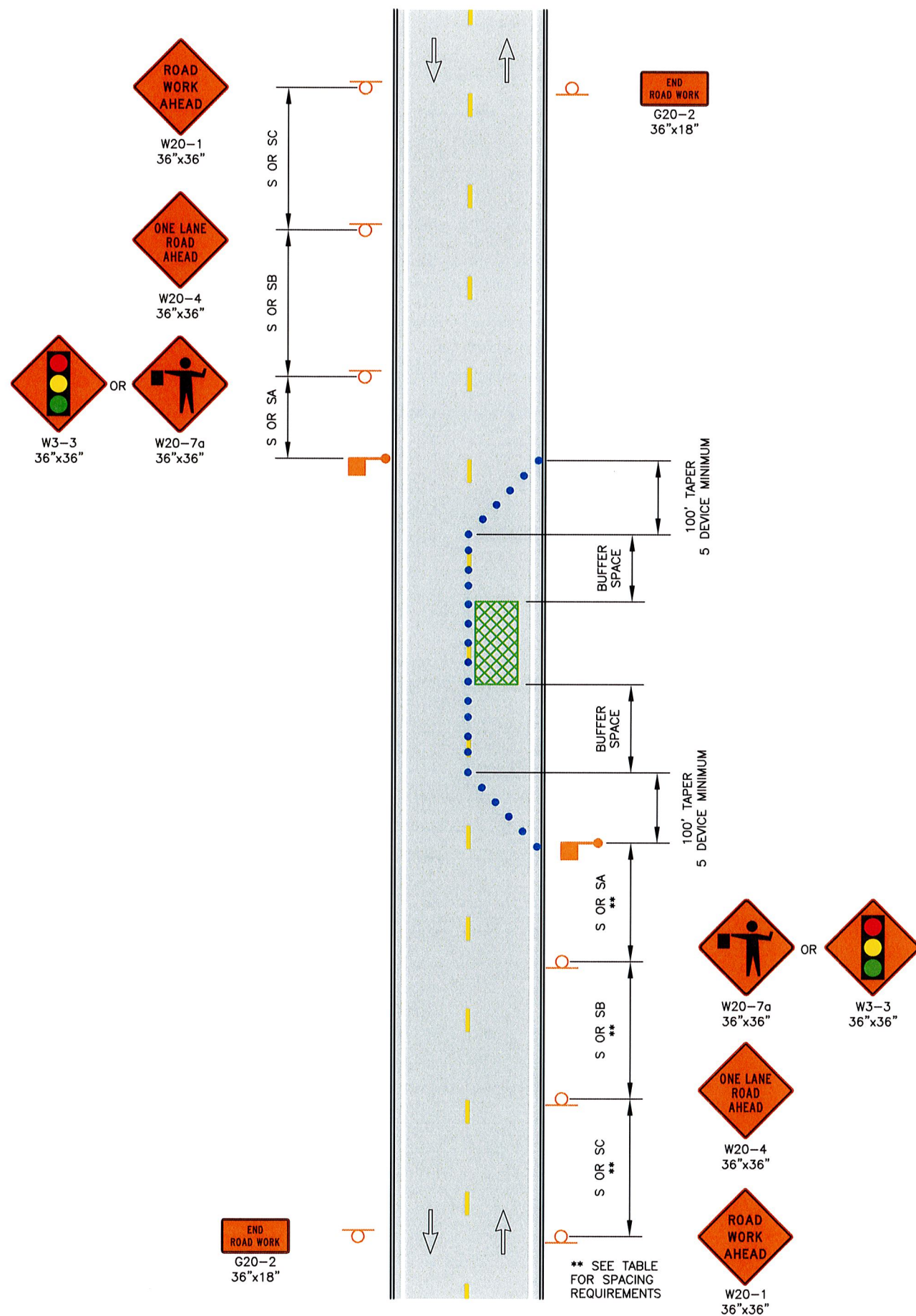
OLD HIGHWAY 100
HYDRAULIC STUDY
FRANKLIN COUNTY, MO

TRAFFIC CONTROL PLAN

DWN. BY: A.J.M.
APPD. BY: T.D.T.
DATE: DEC. 2017
SCALE: NOT TO SCALE
PROJ. NO: SC17-768
DWG. NO: TC-1

REGISTERED PROFESSIONAL ENGINEER
TARY TODD
NUMBER E-24182
12/29/17

TRAFFIC CONTROL PLAN



LANE CLOSURE ON A MINOR STREET
NO SCALE

NOTES:

- TRAFFIC CONTROL SHALL BE MAINTAINED IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). SIZES SHOWN ARE MINIMUM SIZES.
- TEMPORARY PAVEMENT MARKINGS, IF NECESSARY, SHALL BE CONSIDERED AS INCIDENTAL TO THE CONSTRUCTION OF THE PROJECT AND NO DIRECT PAYMENT WILL BE MADE FOR THIS ITEM. PAVEMENT MARKINGS SHALL BE MAINTAINED IN ACCORDANCE WITH PART VI OF THE MUTCD. INTERIM PAVEMENT MARKINGS MAY BE LEFT IN PLACE FOR SITUATIONS OF TWO WEEKS OR LESS.
- CHANNELIZERS SHALL BE PLACED EVERY 25 FEET UNLESS SHOWN OTHERWISE ON THE PLANS. A MINIMUM 10 FOOT WIDE DRIVING LANE SHALL BE MAINTAINED. CHANNELIZERS SHALL BE PLACED IN OPEN TRENCH DURING NON-WORKING HOURS.
- IF AN OPEN TRENCH CONDITION WILL REMAIN OPEN OVERNIGHT, "PAVEMENT EDGE TREATMENT" SHALL BE PROVIDED IN ACCORDANCE WITH MODOT STANDARD DRAWING 619.10 AND SHALL BE CONSIDERED INCIDENTAL.
- ANY EXISTING SIGNS WHICH CONFLICT WITH THE TRAFFIC CONTROL PLAN SHALL BE COVERED.
- ALL SPACING AND DISTANCES ARE APPROXIMATE AND MAY BE ADJUSTED BY THE ENGINEER TO FIT FIELD CONDITIONS.
- FOR SHOULDER WORK, USE A FLAGGER WHEN MOVING EQUIPMENT ON AND OFF THE ROADWAY, OTHERWISE OPTIONAL. FOR ANY LANE CLOSURE A FLAGGER IS MANDATORY.
- PORTABLE STOP SIGNS WILL BE REQUIRED ON ALL APPROACHES DURING TRAFFIC SIGNAL "DOWN TIME".
- ALL VEHICLES, EQUIPMENT, WORKERS AND THEIR ACTIVITIES SHALL BE RESTRICTED TO ONE SIDE OF THE PAVEMENT.
- WHEN A LANE IS SHUT DOWN THE CONTRACTOR SHALL PROVIDE FOR ONE LANE TWO WAY TRAFFIC WITH A FLAGGER OR TEMPORARY TRAFFIC SIGNALS PRESENT. IN THE EVENT ONE LANE TRAFFIC IS TO REMAIN WHILE THE CONTRACTOR IS NOT ON SITE, TEMPORARY TRAFFIC SIGNALS SHALL BE USED TO CONTROL THE FLOW OF TRAFFIC.
- SIZE OF BUFFER SPACE VARIES BASED ON CONSTRUCTION REQUIREMENTS.

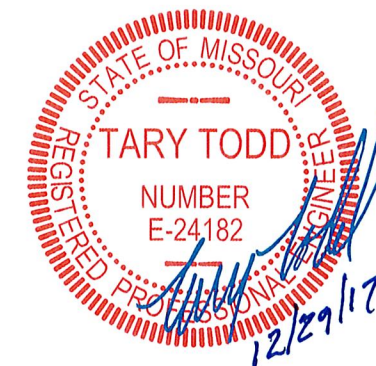
LEGEND

- CHANNELIZERS (SAFETY CONES, BARRICADES, AND/OR PLASTIC DRUMS)
- INFORMATIONAL SIGNING
- FLAGGER OR TEMPORARY TRAFFIC SIGNAL
- AREA OF CONSTRUCTION

SIGN SPACING FOR ADVANCE SIGNS (1) (2)		
POSTED SPEED MPH (P)	NON-DIVIDED HIGHWAYS (S)	DIVIDED HIGHWAYS (S)
0 - 35	200 FT	200 FT
40 - 45	350 FT	500 FT
50 - 55	500 FT	1000 FT
60 - 70	SA - 1000 FT, SB - 1500 FT SC - 2640	

KEYED NOTES:

- SPACING BETWEEN SIGNS AND SPACING BETWEEN LAST SIGN AND FLAGGER, BEGINNING OF TAPER, OR SIGNED CONDITION.
- SPACING MAY BE ADJUSTED AS NECESSARY TO MEET FIELD CONDITIONS.



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Three working days prior to the start of any excavation shall call 1-800-DIG-RITE for utility location information.

All OSHA rules & regulations established for the type of construction required by these plans shall be strictly followed. Penalties, Blasting, etc.

**OLD HIGHWAY 100
HYDRAULIC STUDY
FRANKLIN COUNTY, MO**

DATE	REVISION	DWN. BY:	APPD. BY:
		A.J.M.	T.D.T.

DATE: DEC. 2017
SCALE: NOT TO SCALE
PROJ. NO: SC17-653
DWG. NO: TC-2