

DESIGN DESIGNATION

SEGMENT 1 - ROUTE 21
 AT HILLTOP MOBILE HOME PARK/MACKENZIE RIDGE
 A.A.D.T. - 2019 = 13,430
 A.A.D.T. - 2039 = 18,090
 T = 9%
 V = 55 M.P.H. (POSTED)
 FUNCTIONAL CLASSIFICATION - PRINCIPAL ARTERIAL
 MAJOR ROUTE

SEGMENT 2 - ROUTE 21 AT AMVETS DRIVE
 A.A.D.T. - 2019 = 7,980
 A.A.D.T. - 2039 = 10,750
 T = 6%
 V = 55 M.P.H. (POSTED)
 FUNCTIONAL CLASSIFICATION - PRINCIPAL ARTERIAL
 MAJOR ROUTE

NORMAL RIGHT-OF-WAY
 ACQUISITION WILL BE REQUIRED
 WITH THIS PROJECT

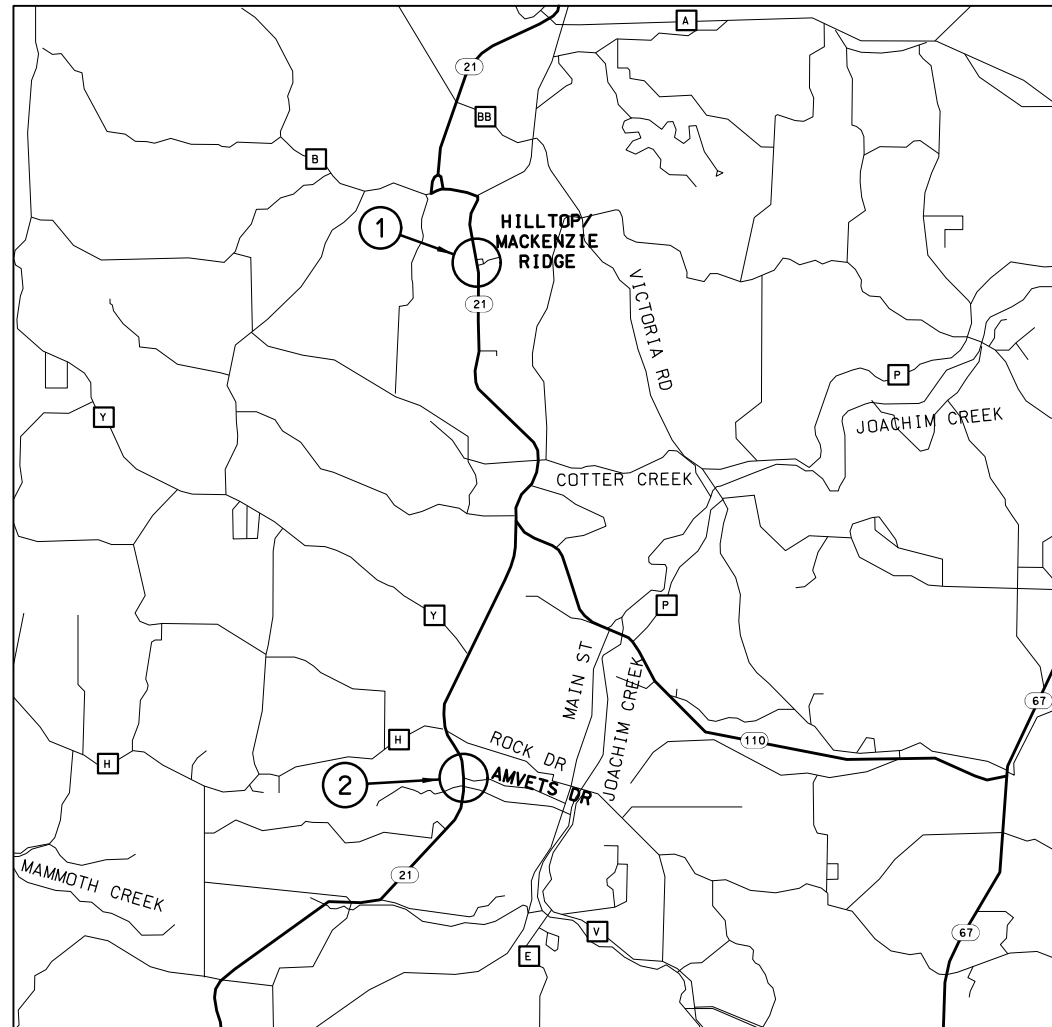
THE EXISTENCE AND APPROXIMATE LOCATION
 OF UTILITY FACILITIES KNOWN TO EXIST,
 AS SHOWN ON THE PLANS, ARE BASED ON THE
 BEST INFORMATION AVAILABLE TO THE
 COMMISSION AT THIS TIME. THIS
 INFORMATION IS PROVIDED BY THE
 COMMISSION "AS-IS" AND THE COMMISSION
 EXPRESSLY DISCLAIMS ANY REPRESENTATION
 OR WARRANTY AS TO THE COMPLETENESS,
 ACCURACY, OR SUITABILITY OF THE
 INFORMATION FOR ANY USE. RELIANCE UPON
 THIS INFORMATION IS DONE AT THE RISK
 AND PERIL OF THE USER, AND THE
 COMMISSION SHALL NOT BE LIABLE FOR ANY
 DAMAGES THAT MAY ARISE FROM ANY ERROR
 IN THE INFORMATION.

CONVENTIONAL SYMBOLS
 (USED IN PLANS)

	EXISTING	NEW
BUILDINGS AND STRUCTURES		
GUARD RAIL		
GUARD CABLE		
CONCRETE RIGHT-OF-WAY MARKER		
STEEL RIGHT-OF-WAY MARKER		
LOCATION SURVEY MARKER		
UTILITIES		
FIBER OPTICS	-FO-	-FO-
OVERHEAD CABLE TV	-OTV-	-OTV-
UNDERGROUND CABLE TV	-UTV-	-UTV-
OVERHEAD TELEPHONE	-OT-	-OT-
UNDERGROUND TELEPHONE	-UT-	-UT-
OVERHEAD POWER	-OE-	-OE-
UNDERGROUND POWER	-UE-	-UE-
SANITARY SEWER	-S-	-S-
STORM SEWER	-SS-	-SS-
GAS	-G-	-G-
WATER	-W-	-W-
MANHOLE		
FIRE HYDRANT		
WATER VALVE		
WATER METER		
DROP INLET		
DITCH BLOCK		
GROUND MOUNTED SIGN		
LIGHT POLE		
H-FRAME POWER POLE		
TELEPHONE PEDESTAL		
FENCE		
CHAIN LINK		
WOVEN WIRE		
GATE POST		
BENCHMARK		

NOTE: DASHED OR OPEN SYMBOLS INDICATE
 EXISTING FEATURES

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
PLANS FOR PROPOSED
STATE HIGHWAY
JEFFERSON COUNTY



SEGMENT 1:
 T 40 N, R 4 E
 SEC. 9 & 10

SEGMENT 2:
 T 39 N, R 4 E
 SEC. 3



NOT TO SCALE

ROUTE 21 INTERSECTION IMPROVEMENTS
 PAVEMENT, GRADING, DRAINAGE,
 GUARDRAIL, SIGNING, AND STRIPING

SEGMENT 1:
 STA. 732+30.00 TO 743+50.00
 LOG MILE 29.774 TO 29.844

SEGMENT 2:
 STA. 1046+28.01 TO 1058+13.01
 LOG MILE 35.686 TO 35.911

INDEX OF SHEETS

DESCRIPTION	SHEET NUMBER
TITLE SHEET	1
TYPICAL SECTIONS (TS) (4 SHEETS)	2
QUANTITIES (QU) (8 SHEETS)	3
PLAN-PROFILE (PP)	4-11
REFERENCE POINTS (RP)	12
COORDINATE POINTS (CP)	13
SPECIAL SHEETS (SS)	14-15
TRAFFIC CONTROL SHEETS (TC)	16-26
EROSION CONTROL SHEETS (EC)	27-28
PAVEMENT MARKING & SIGNING (PM)	29-30
CULVERT SECTIONS (CS)	31
CROSS SECTIONS (XS)	1-17

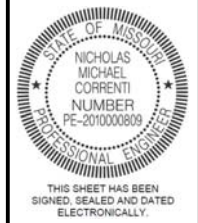
LENGTH OF PROJECT

BEGINNING OF PROJECT	STA. 732+30.00
BEGINNING OF SEGMENT 1	STA. 732+30.00
END OF SEGMENT 1	STA. 743+50.00
LENGTH OF SEGMENT 1	1120.00 FEET
BEGINNING OF SEGMENT 2	STA. 1046+28.01
END OF SEGMENT 2	STA. 1058+13.01
LENGTH OF SEGMENT 2	1185.00 FEET
END OF PROJECT	STA. 1058+13.01
APPARENT LENGTH OF PROJECT	32,583.01 FEET

EQUATIONS AND EXCEPTIONS:

EXCEPTION	STA. 743+50.00 TO 1046+28.01
LENGTH OF EXCEPTION	-30,278.01 FEET
TOTAL CORRECTIONS	-30,278.01 FEET
NET LENGTH OF PROJECT	2,305.00 FEET
STATE LENGTH	0.437 MILES

DISCLAIMER
 THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL
 SEAL APPEAR HEREON ASSUMES RESPONSIBILITY
 ONLY FOR WHAT APPEARS ON THIS PAGE, AND
 DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO)
 SPECIFICATION, ESTIMATES, REPORTS, OR OTHER
 DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE
 UNDERSIGNED PROFESSIONAL RELATING TO OR
 INTENDED TO BE USED FOR ANY PART OR PARTS OF
 THE PROJECT TO WHICH THIS PAGE REFERS.



DATE PREPARED
 3/28/2019

ROUTE 21	STATE MO
DISTRICT SL	SHEET NO. 1

COUNTY
 JEFFERSON

JOB NO.
 J6P3242

CONTRACT ID.

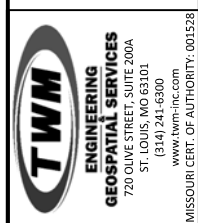
PROJECT NO.

BRIDGE NO.

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION
 COMMISSION

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



TITLE SHEET
 ROUTE 21

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

OPTIONAL PAVEMENT		
	HMA DESIGN	PCCP OPTION (COMPOSITE DESIGN)**
SURFACING:*	1 3/4" SP125CLP W/ PG 70-22	BONDED 1 3/4" SP125CLP W/ PG 70-22
SUB-SURFACE PAV'T:	3" SP250C W/ PG 70-22 OVER 6 1/4" SP250C W/ PG 64-22	9" P.C.C.P WITH 15' JOINTS AND 1 1/4" DOWELS

NOTE: EARTHWORK BASED ON HMA OPTION

* THE SURFACING LIFT PLACED OVER THE OPTIONAL PAVEMENT AREA SHALL BE PLACED MONOLITHICALLY WITH THE SURFACING LIFT PLACED OVER COLDMILLED EXISTING PAVEMENT AREA.
 NO DIRECT PAYMENT WILL BE MADE FOR TACK COAT PLACED BETWEEN OPTIONAL PAVEMENT LIFTS.
 ** BONDING OF SURFACING LIFT (PCCP OPTION ONLY) SHALL BE PERFORMED IN ACCORDANCE WITH THE MODIFIED BONDED ASPHALTIC CONCRETE PAVEMENT JOB SPECIAL PROVISION.

DISCLAIMER
 THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



THIS SHEET HAS BEEN SIGNED, SEALED & DATED ELECTRONICALLY.

DATE PREPARED
4/1/2019

ROUTE 21 STATE MO

DISTRICT SL SHEET NO. 2

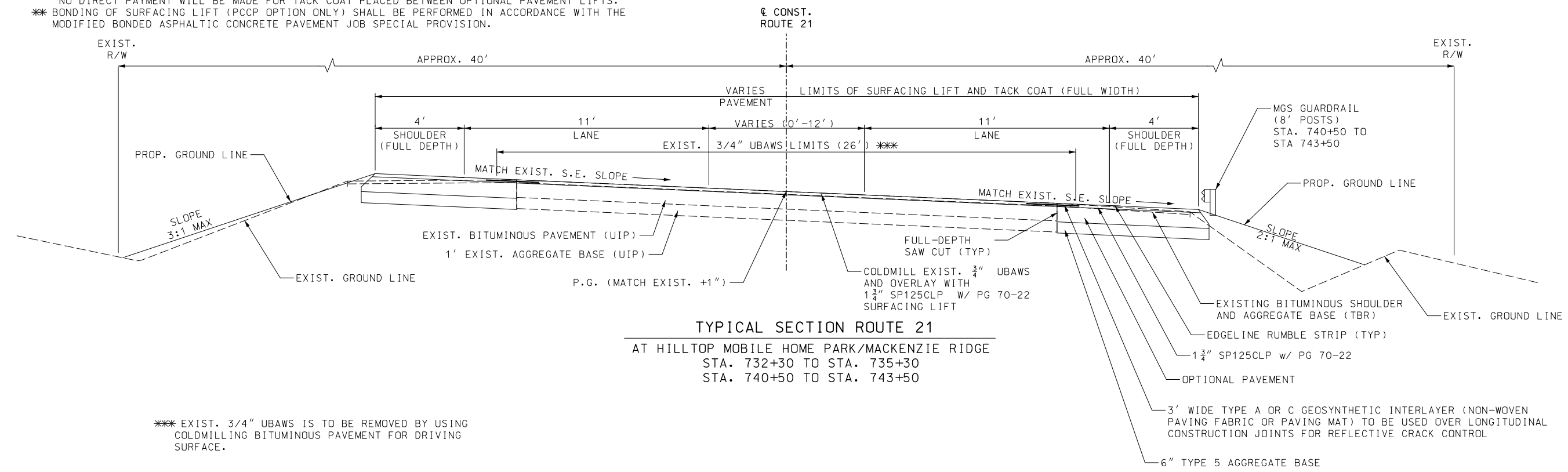
COUNTY JEFFERSON

JOB NO. J6P3242

CONTRACT ID.

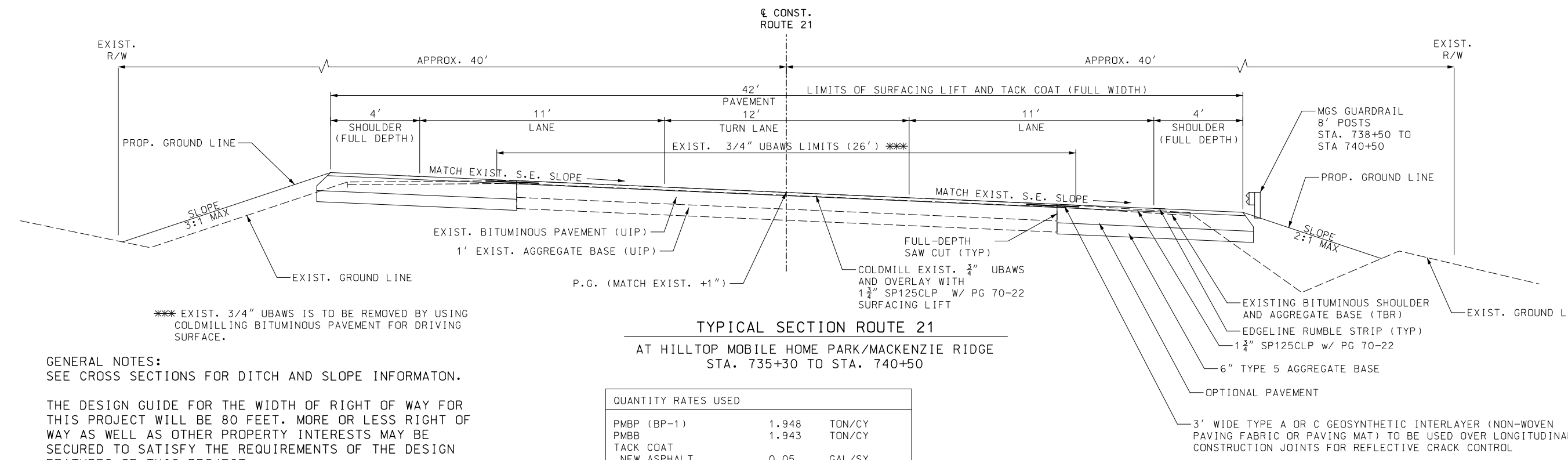
PROJECT NO.

BRIDGE NO.



TYPICAL SECTION ROUTE 21
 AT HILLTOP MOBILE HOME PARK/MACKENZIE RIDGE
 STA. 732+30 TO STA. 735+30
 STA. 740+50 TO STA. 743+50

*** EXIST. 3/4" UBAs IS TO BE REMOVED BY USING COLDMILLING BITUMINOUS PAVEMENT FOR DRIVING SURFACE.



TYPICAL SECTION ROUTE 21
 AT HILLTOP MOBILE HOME PARK/MACKENZIE RIDGE
 STA. 735+30 TO STA. 740+50

*** EXIST. 3/4" UBAs IS TO BE REMOVED BY USING COLDMILLING BITUMINOUS PAVEMENT FOR DRIVING SURFACE.

GENERAL NOTES:
 SEE CROSS SECTIONS FOR DITCH AND SLOPE INFORMATION.

THE DESIGN GUIDE FOR THE WIDTH OF RIGHT OF WAY FOR THIS PROJECT WILL BE 80 FEET. MORE OR LESS RIGHT OF WAY AS WELL AS OTHER PROPERTY INTERESTS MAY BE SECURED TO SATISFY THE REQUIREMENTS OF THE DESIGN FEATURES OF THIS PROJECT.

QUANTITY RATES USED		
PMBP (BP-1)	1.948	TON/CY
PMBB	1.943	TON/CY
TACK COAT		
NEW ASPHALT	0.05	GAL/SY
COLDMILLED SURFACE	0.10	GAL/SY
SP125CLP	1.946	TON/CY

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

ACCESS ENGINEERING LLC

11820 TESSON FERRY ROAD SUITE 602 MO. 63128 (314) 849-8445
 CIVIL ENGINEERING STATE OF MISSOURI AUTHORITY #200811568

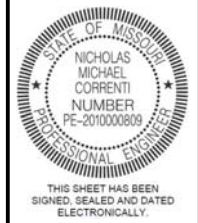
TYPICAL SECTIONS
 ROUTE 21
 SHEET 1 OF 4

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

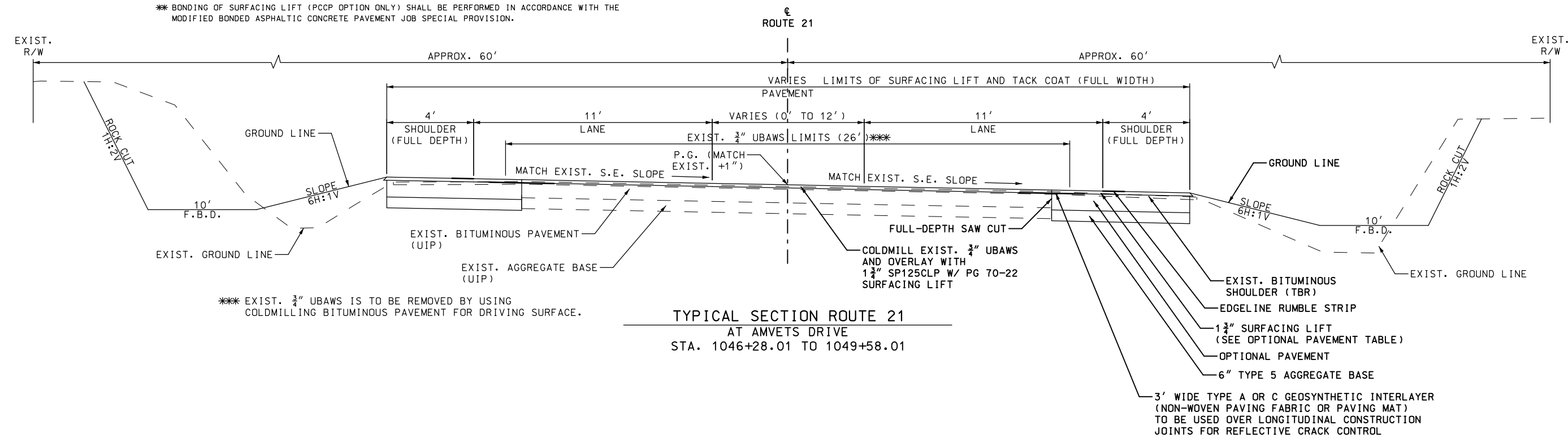
OPTIONAL PAVEMENT		
	HMA OPTION	PCCP OPTION (COMPOSITE DESIGN)**
SURFACING:*	1 1/2" SP125CLP W/ PG 70-22	BONDED 1 1/2" SP125CLP W/ PG 70-22
SUB-SURFACE PAV'T:	3" SP250C W/ PG 70-22 OVER 6 1/4" SP250C W/ PG 64-22	9" P.C.C.P. WITH 15' JOINTS AND 1 1/4" DOWELS

NOTE: EARTHWORK BASED ON HMA OPTION
 * THE SURFACING LIFT PLACED OVER THE OPTIONAL PAVEMENT AREA SHALL BE PLACED MONOLITHICALLY WITH THE SURFACING LIFT PLACED OVER THE COLDMILLED EXISTING PAVEMENT AREA.
 NO DIRECT PAYMENT WILL BE MADE FOR TACK COAT PLACED BETWEEN OPTIONAL PAVEMENT LIFTS.
 ** BONDING OF SURFACING LIFT (PCCP OPTION ONLY) SHALL BE PERFORMED IN ACCORDANCE WITH THE MODIFIED BONDED ASPHALTIC CONCRETE PAVEMENT JOB SPECIAL PROVISION.

DISCLAIMER
 THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

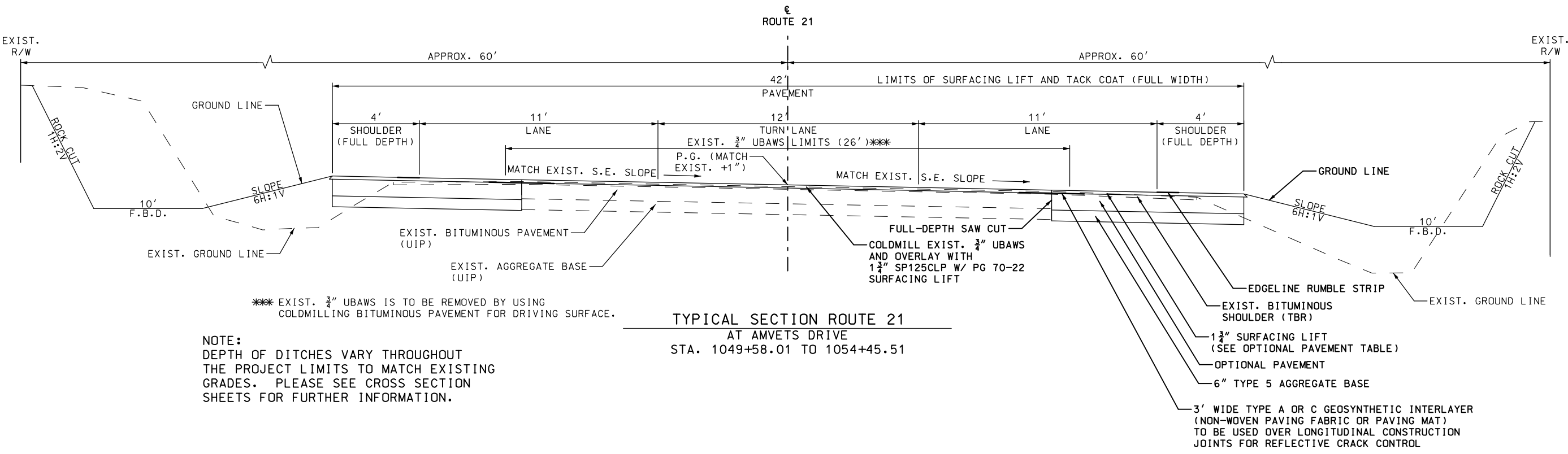


DATE PREPARED 4/1/2019	
ROUTE 21	STATE MO
DISTRICT SL	SHEET NO. 2
COUNTY JEFFERSON	
JOB NO. J6P3242	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	



*** EXIST. 3/4" UBAWS IS TO BE REMOVED BY USING COLDMILLING BITUMINOUS PAVEMENT FOR DRIVING SURFACE.

3' WIDE TYPE A OR C GEOSYNTHETIC INTERLAYER (NON-WOVEN PAVING FABRIC OR PAVING MAT) TO BE USED OVER LONGITUDINAL CONSTRUCTION JOINTS FOR REFLECTIVE CRACK CONTROL



NOTE:
 DEPTH OF DITCHES VARY THROUGHOUT THE PROJECT LIMITS TO MATCH EXISTING GRADES. PLEASE SEE CROSS SECTION SHEETS FOR FURTHER INFORMATION.

3' WIDE TYPE A OR C GEOSYNTHETIC INTERLAYER (NON-WOVEN PAVING FABRIC OR PAVING MAT) TO BE USED OVER LONGITUDINAL CONSTRUCTION JOINTS FOR REFLECTIVE CRACK CONTROL

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

TWM
 ENGINEERING SERVICES
 720 OLIVE STREET, SUITE 200A
 ST. LOUIS, MO 63101
 www.twm-inc.com
 MISSOURI CERT. OF AUTHORITY: 001528

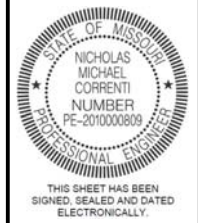
TYPICAL SECTIONS	ROUTE 21	SHEET 2 OF 4
------------------	----------	--------------

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

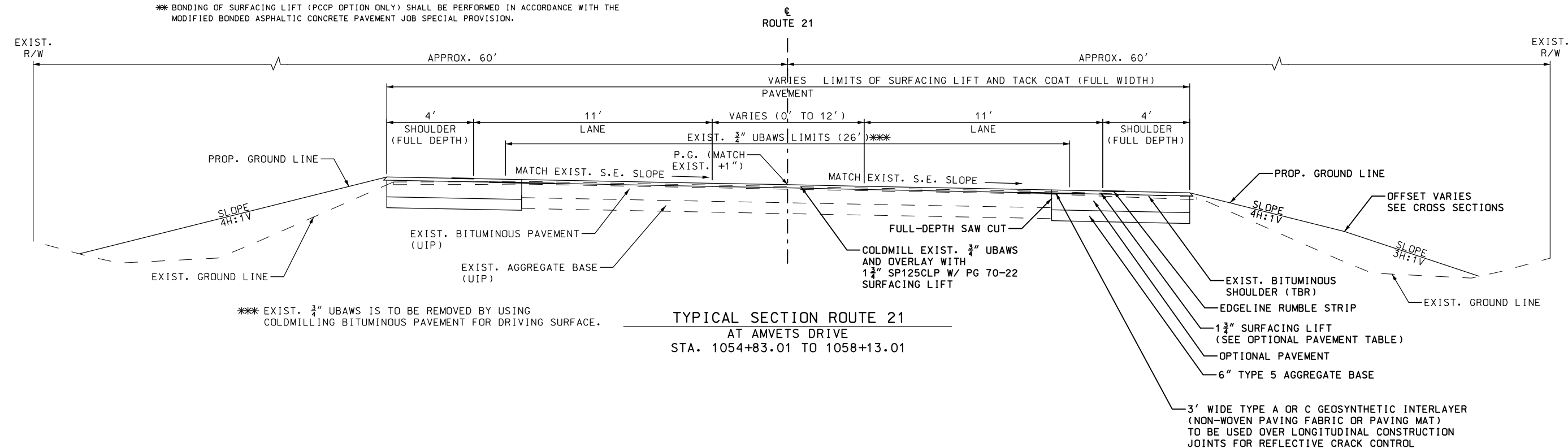
OPTIONAL PAVEMENT		
	HMA OPTION	PCCP OPTION (COMPOSITE DESIGN)**
SURFACING:*	1 1/2" SP125CLP W/ PG 70-22	BONDED 1 1/2" SP125CLP W/ PG 70-22
SUB-SURFACE PAV'T:	3" SP250C W/ PG 70-22 OVER 6 1/4" SP250C W/ PG 64-22	9" P.C.C.P. WITH 15' JOINTS AND 1 1/4" DOWELS

NOTE: EARTHWORK BASED ON HMA OPTION
 * THE SURFACING LIFT PLACED OVER THE OPTIONAL PAVEMENT AREA SHALL BE PLACED MONOLITHICALLY WITH THE SURFACING LIFT PLACED OVER THE COLDMILLED EXISTING PAVEMENT AREA.
 NO DIRECT PAYMENT WILL BE MADE FOR TACK COAT PLACED BETWEEN OPTIONAL PAVEMENT LIFTS.
 ** BONDING OF SURFACING LIFT (PCCP OPTION ONLY) SHALL BE PERFORMED IN ACCORDANCE WITH THE MODIFIED BONDED ASPHALTIC CONCRETE PAVEMENT JOB SPECIAL PROVISION.

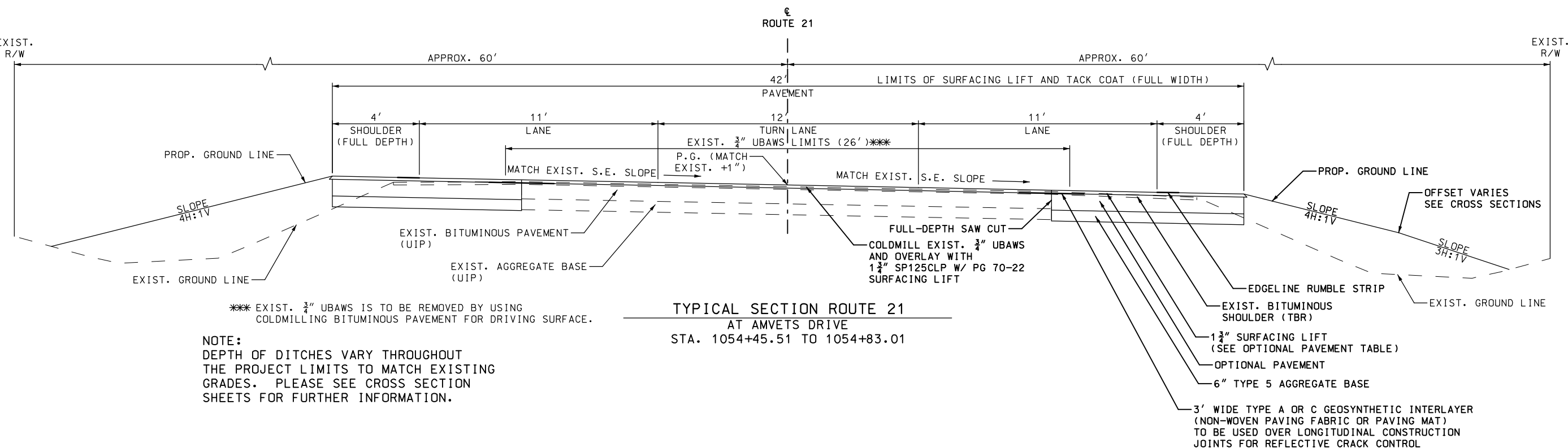
DISCLAIMER
 THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



DATE PREPARED 4/1/2019	
ROUTE 21	STATE MO
DISTRICT SL	SHEET NO. 2
COUNTY JEFFERSON	
JOB NO. J6P3242	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	



TYPICAL SECTION ROUTE 21
 AT AMVETS DRIVE
 STA. 1054+83.01 TO 1058+13.01



TYPICAL SECTION ROUTE 21
 AT AMVETS DRIVE
 STA. 1054+45.51 TO 1054+83.01

NOTE:
 DEPTH OF DITCHES VARY THROUGHOUT THE PROJECT LIMITS TO MATCH EXISTING GRADES. PLEASE SEE CROSS SECTION SHEETS FOR FURTHER INFORMATION.

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

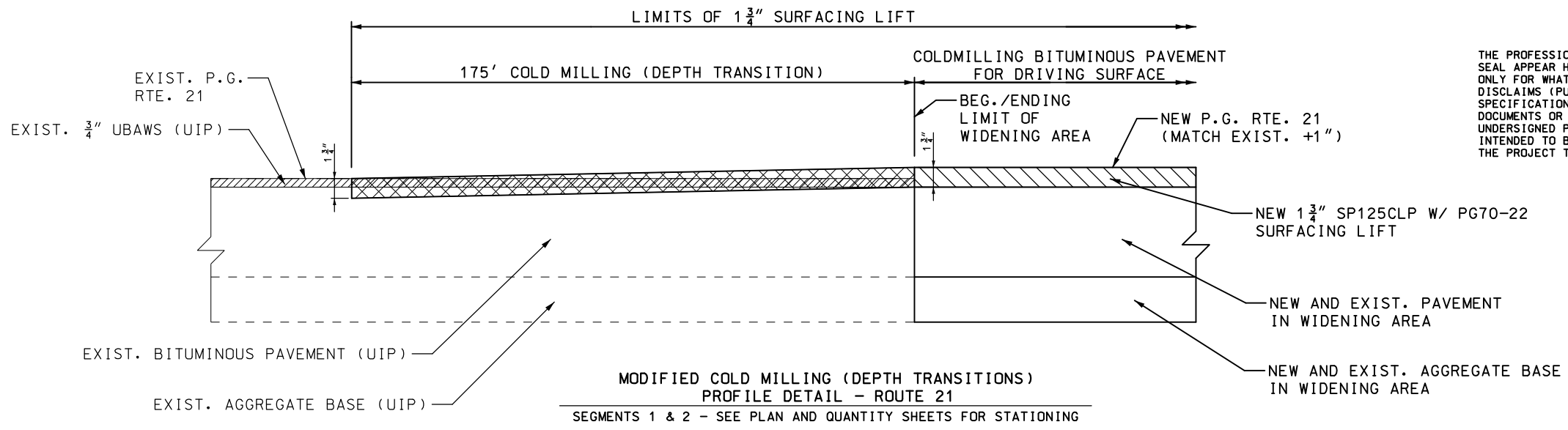
105 WEST CAPITOL
 JEFFERSON CITY, MO 65102
 1-888-ASK-MODOT (1-888-275-6636)

TWM ENGINEERING SERVICES

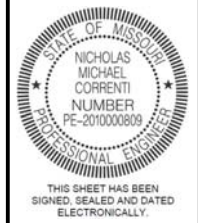
720 OLIVE STREET, SUITE 200A
 ST. LOUIS, MO 63101
 www.twm-inc.com
 MISSOURI CERT. OF AUTHORITY: 001528

TYPICAL SECTIONS
 ROUTE 21
 SHEET 3 OF 4

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

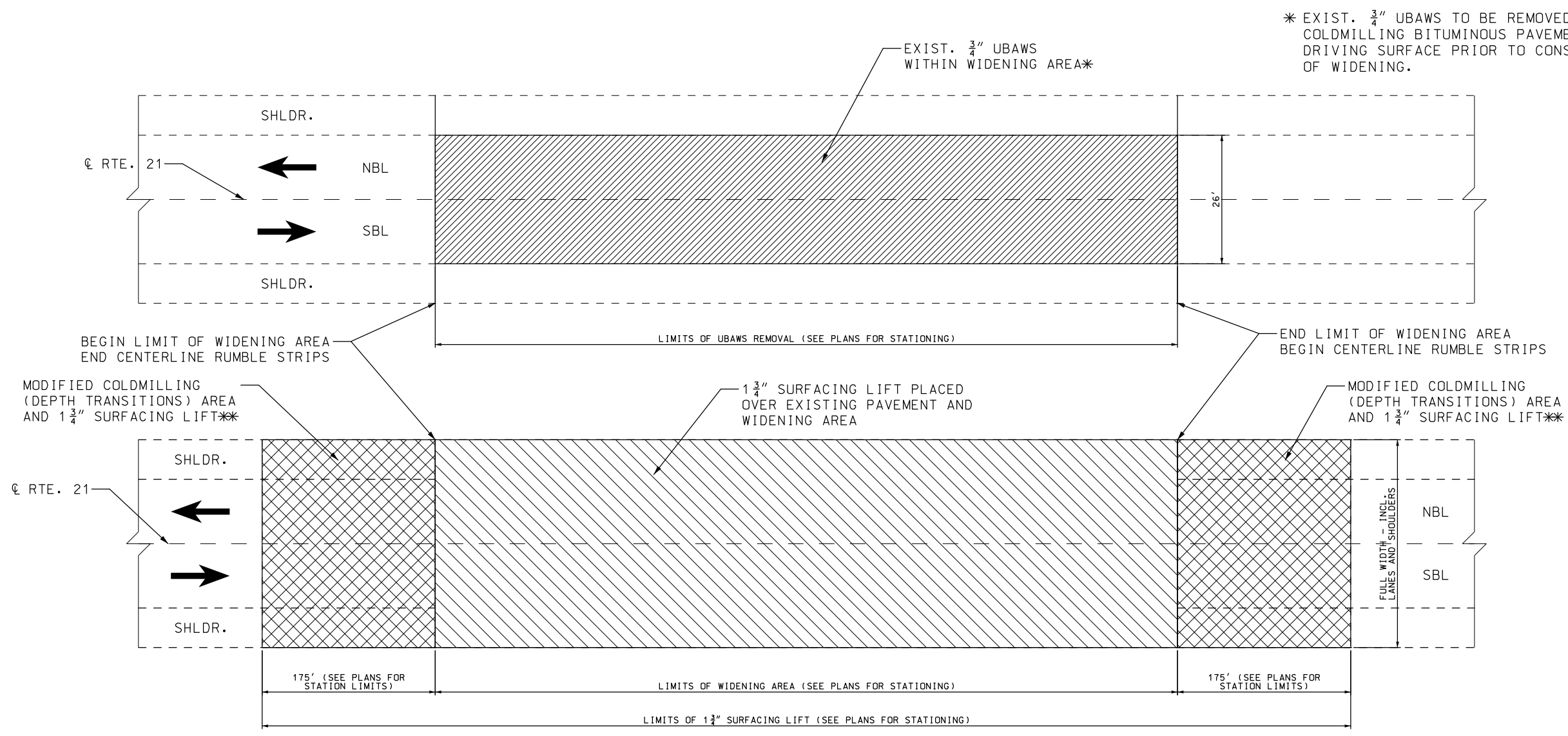


DISCLAIMER
 THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



DATE PREPARED 4/4/2019	
ROUTE 21	STATE MO
DISTRICT SL	SHEET NO. 2
COUNTY JEFFERSON	
JOB NO. J6P3242	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

NOT TO SCALE



* EXIST. 3/4" UBAs TO BE REMOVED BY COLDMILLING BITUMINOUS PAVEMENT FOR DRIVING SURFACE PRIOR TO CONSTRUCTION OF WIDENING.

** MODIFIED COLDMILLING (DEPTH TRANSITIONS) SHALL NOT BE PERFORMED MORE THAN 24 HOURS BEFORE PLACING SURFACING LIFT OF ASPHALT UNLESS AUTHORIZED BY THE ENGINEER.

NOT TO SCALE

COLD MILLING PLAN VIEW DETAILS
ROUTE 21
 SEGMENTS 1 & 2 - SEE PLAN AND QUANTITY SHEETS FOR STATIONING

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

TWM
 ENGINEERING SERVICES
 720 OLIVE STREET, SUITE 200A
 ST. LOUIS 63101
 www.twm-inc.com
 MISSOURI CERT. OF AUTHORITY: 001528

TYPICAL SECTIONS
ROUTE 21
SHEET 4 OF 4

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

REMOVAL OF IMPROVEMENTS							
SHEET	STATION	STATION	OFFSET	LOCATION	DESCRIPTION	QUANTITY	REMARKS
8	1048+19		LT	RTE 21	CONC. HEADWALL	1 EA	
9	1053+51		RT	RTE 21	12" CMP	18 LF	
9	1053+91	1054+36	RT	RTE 21	PAVED DITCH	47 LF	
9	1054+14		LT	RTE 21	STREET SIGN	1 EA	REMOVE & RELOCATE
9	1054+16		LT	RTE 21	STOP SIGN	1 EA	REMOVE & RELOCATE
9	1054+52		RT	RTE 21	18" CMP	47 LF	
8-10	1046+28	1058+13	LT	RTE 21	SAW CUT	1185 LF	
8-10	1046+28	1058+13	RT	RTE 21	SAW CUT	1185 LF	

CLEARING AND GRUBBING						
SHEET	STATION	STATION	LOCATION	AREA (SF)	CLEARING & GRUBBING (ACRE)	REMARKS
12-14	1046+28.01	1058+13.01	RTE 21	63646	1.5	
SUBTOTAL					1.5	
SUBTOTAL - SEGMENT 1					0.6	
PAY TOTAL					2	

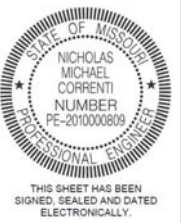
PAVEMENT																		
SHEET	STATION	STATION	OFFSET	LOC.	LENGTH (FT)	TOTAL PAVEMENT AREA (SF)	OVERLAY AREA (SF)	FULL DEPTH PAVEMENT AREA (SF)	OPTIONAL PAVEMENT (SY)	TYPE 5 AGG. FOR BASE (6" THICK) (SY)	ASPH. CONC. MIXTURE SP125CLP PG 70-22 (TONS)	BIT. PAVEMENT MIXTURE (BP-1) PG 64-22 (TONS)	TACK COAT (GAL)	SYSTEM A OR C GEOSYNTHETIC INTERLAYER (SY)	COLDMILLING BIT. PAV'T FOR REM. OF SURF. (3" TH. OR LESS)** (SY)	COLDMILLING BIT. PAV'T FOR DRIVING SURFACE (SY)	MODIFIED COLDMILLING (DEPTH TRANS.) (SY)	REMARKS
-	1036+28.01	1046+28.01	CENTER	RTE 21	1000	2000						36.1	22.2		222			
-	1036+28.01	1046+28.01	RT	RTE 21	1000	2000						36.1	22.2		222			
8-10	1044+53.01	1046+28.01	CENTER	RTE 21	175	6521	6521				69.2		72.5				724.6	
8-10	1046+28.01	1058+13.01	LT	RTE 21	1185	9369	9369	9369	1041.0	1041.0	99.4		104.1	395.0				
8-10	1046+28.01	1058+13.01	CENTER	RTE 21	1185	29271	29271				310.7		325.2			3779.0		
8-10	1046+28.01	1058+13.01	RT	RTE 21	1185	9612	9612	9612	1068.0	1068.0	102.0		106.8	395.0				
8-10	1058+13.01	1059+88.01	CENTER	RTE 21	175	6514	6514				69.1		72.4				723.8	
-	1058+13.01	1068+13.01	LT	RTE 21	1000	2000						36.1	22.2		222			
-	1058+13.01	1068+13.01	CENTER	RTE 21	1000	2000						36.1	22.2		222			
-	1058+13.01	1068+13.01	RT	RTE 21	1000	2000						36.1	22.2		222			
SUBTOTAL									2109.0	2109	650.5	216.4	814.3	790.0	1333.3	3779.0	1448.4	
SUBTOTAL - SEGMENT 1									2016.8	2016	634.2	56.2	706.0	995.6	347.0	3236.0	1462.0	
SUBTOTAL - ENTRANCES									0	576	0	57.6	26.7	0	0	0	0	
PAY TOTAL									4125.8	4701	1284.7	330.2	1547	1785.6	1680	7015	2910	

NOTE: WIDTH OF FULL DEPTH WIDENING IS VARIABLE THROUGHOUT PROJECT LIMITS
 ** FOR REMOVAL OF RUMBLE STRIPS

REMOVAL OF IMPROVEMENTS
1 LUMP SUM
MOBILIZATION
1 LUMP SUM
CONTRACTOR FURNISHED SURVEYING AND STAKING
1 LUMP SUM
ADDITIONAL MOBILIZATION FOR SEEDING
4 EACH

EARTHWORK								
SHEET	STATION	STATION	LOCATION	CLASS A EXCAVATION (CY)	CLASS C EXCAVATION (CY)	COMPACTING EMBANKMENT (CY)	COMPACTING IN CUT (STA.)	REMARKS
8-10	1044+53.01	1046+28.01	RTE 21	0	576	42	0.0	
8-10	1046+28.01	1054+45.50	RTE 21	0	3620	671	8.2	
8-10	1054+45.50	1058+13.01	RTE 21	188	0	2600	3.7	
SUBTOTAL				188	4196	3313	11.9	
SUBTOTAL - SEGMENT 1				1078	0	640	11.2	
PAY TOTAL				1266	4196	3953	23.1	

DISCLAIMER
 THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



DATE PREPARED
4/1/2019
 ROUTE 21 STATE MO
 DISTRICT SL SHEET NO. 3
 COUNTY JEFFERSON
 JOB NO. J6P3242
 CONTRACT ID.
 PROJECT NO.
 BRIDGE NO.

DESCRIPTION	DATE

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



SUMMARY OF QUANTITIES
 ROUTE 21
 SHEET 4 OF 8

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

TYPE A2 SHOULDER					
SHEET	STATION	STATION	LOCATION	TYPE A2 SHOULDER (SY)	REMARKS
-	724+50.00	751+30.00	RTE 21	240.00	AS REQUIRED - SEE NOTE BELOW AND JSP
-	1036+28.01	1068+13.01	RTE 21	300.00	AS REQUIRED - SEE NOTE BELOW AND JSP
SUBTOTAL				540.0	
PAY TOTAL				540.0	

NOTE: THE AREAS INCLUDED ABOVE ARE ESTIMATES ONLY AND ARE INCLUDED TO MAKE REPAIRS TO THE EXISTING SHOULDER AT VARIOUS LOCATIONS IF SHOULDER PAVEMENT FAILURES OCCUR WHILE UNDER TRAFFIC DURING STAGED CONSTRUCTION. QUANTITIES MAY BE ADJUSTED AS REQUIRED BASED ON NEED FOR REPAIRS.

CURB / GUTTER								
SHEET	STATION	STATION	OFFSET	LOCATION	CONCRETE GUTTER TYPE A (LF)	CONCRETE CURB TYPE S (LF)	ASPHALT CURB (LF)	REMARKS
13	1054+03.28	1054+40.49	LT	RTE 21		61		
13	1054+74.36	1054+74.58	LT	RTE 21		17		
13	1054+74.58	1054+80.40	LT	RTE 21	20			
13	1054+80.40	1054+93.28	LT	RTE 21		16		
SUBTOTAL					20	94	0	
SUBTOTAL - SEGMENT 1					40	0	20	
PAY TOTAL					60	94	20	

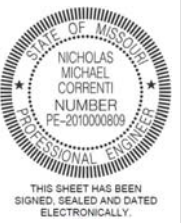
PAVEMENT EDGE TREATMENT					
SHEET	STATION	STATION	LOCATION	PAVEMENT EDGE TREATMENT (LF)	REMARKS
4-6	732+30.00	743+50.00	RTE 21 LT	1120	
4-6	732+30.00	743+50.00	RTE 21 RT	1120	
8-10	1046+28.01	1058+13.01	RTE 21 LT	1185	
8-10	1046+28.01	1058+13.01	RTE 21 RT	1185	
SUBTOTAL				4610	
PAY TOTAL				4610	

GUARDRAIL					
STATION	STATION	LOCATION	MGS GUARDRAIL 8' POSTS 6 FT-3 IN SPACING (LF)	TYPE A CRASHWORTHY END TERMINAL (MASH) (LF)	REMARKS
1046+28.01	1058+13.01	RTE 21 - SEGMENT 2	0	0	NO GUARDRAIL ITEMS
SUBTOTAL			0	0	
SUBTOTAL - SEGMENT 1			400	2	
PAY TOTAL			400	2	

ENTRANCES																
SHEET	STATION	OFFSET	LOCATION	LENGTH (FT)	WIDTH (FT)	ENTRANCE AREA (SF)	PROPOSED SURFACE TYPE	DRIVEWAY TYPE	CLASS 2 LINEAR GRADING (STA.)	6" TYPE 5 AGG. BASE (SY)	GRAVEL (A) OR CRUSHED STONE (B) 6 IN. (SY)	BITUMINOUS PAVEMENT MIXTURE PG 64-22 (BP-1) (TONS)	BITUMINOUS PAVEMENT MIXTURE PG 64-22 (BASE) (TONS)	TACK COAT (GAL)	8" PAVED APPROACH (SY)	REMARKS
9	1053+51	RT	RTE 21	30.0	14.0	446	GRAVEL	I	0.3		49.6					
9	1054+45.50	LT	RTE 21	43.1	36.0	2103	ASPH.	II	0.4	233.7		25.3	75.7	11.7		AMVETS DRIVE
9	1054+52	RT	RTE 21	29.0	10.6	478	GRAVEL	I	0.3		53.1					
SUBTOTAL									1.0	233.7	102.7	25.3	75.7	11.7	0.0	
SUBTOTAL - SEGMENT 1									1.2	342.0	33.0	32.3	48.4	15.0	44.1	
PAY TOTAL									2.2	*	136	*	124.1	*	44.1	

PAY TOTAL INCLUDES CURB & GUTTER UP TO RADIUS POINT AS SHOWN ON MODOT STANDARD PLANS
 * SEE PAVEMENT SCHEDULE FOR PAY TOTALS

DISCLAIMER
 THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



DATE PREPARED
3/29/2019
 ROUTE 21 STATE MO
 DISTRICT SL SHEET NO. 3
 COUNTY JEFFERSON
 JOB NO. J6P3242
 CONTRACT ID.
 PROJECT NO.
 BRIDGE NO.

DATE	DESCRIPTION

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



SUMMARY OF QUANTITIES
 ROUTE 21
 SHEET 5 OF 8

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

TYPE 1 TURF REINFORCEMENT, ROCK BLANKET, AND ROCK LINING												
SHEET	STATION	OFFSET	LENGTH (FT)	WIDTH (FT)	DEPTH (FT)	LOCATION	FURNISHING	PLACING	TYPE 1 TURF	ROCK LINING (CY)	SEPARATION GEOTEXTILE (SY)	REMARKS
							TYPE 1 ROCK BLANKET (CY)	TYPE 1 ROCK BLANKET (CY)	REINFORCEMENT MAT (SY)			
8	1048+18.60	LT	12	4	1	RTE 21				1.8	9.3	
8	1048+27.06	RT	12	4	1	RTE 21				1.8	9.3	
9	1054+88.93	LT	18	4		RTE 21			8.0			
SUBTOTAL							0	0	8.0	3.6	18.7	
SUBTOTAL - SEGMENT 1							22	22	80	0	0	
PAY TOTAL							22	22	88	4	19	

PAVEMENT MARKINGS AND RUMBLE STRIPS												
SHEET	STATION	STATION	OFFSET	LOCATION	HIGH BUILD WATERBORNE PAVEMENT MARKING PAINT, TYPE L BEADS		PREFORMED THERMOPLASTIC PAVEMENT MARKING			BITUMINOUS SHOULDER RUMBLE STRIP (STA.)	BITUMINOUS CENTERLINE RUMBLE STRIP (STA.)	REMARKS
					4 IN. YELLOW (LF)	6 IN. WHITE (LF)	24 IN. WHITE (LF)	24 IN. YELLOW (LF)	LEFT/RIGHT ARROW (EA)			
30	1036+28	1053+53	LT	RTE 21		1729				17.3		
30	1046+28	1054+08	LT	RTE 21	1562							
30	1053+53	1054+03	LT	RTE 21		50						DOUBLE SOLID YELLOW - LEFT EDGE TAPER AND TURN LANE
30	1054+45		LT	RTE 21			24					AMVETS STOP BAR
30	1054+45		LT	RTE 21	54							AMVETS DOUBLE SOLID YELLOW CENTERLINE
30	1054+83	1058+13	LT	RTE 21	660							DOUBLE SOLID YELLOW - RIGHT EDGE TURN LANE TAPER
30	1054+93	1055+43	LT	RTE 21		50						
30	1055+43	1068+13	LT	RTE 21		1271				12.7		
30	1036+28	1046+28	CL	RTE 21	2000						10.0	DOUBLE SOLID YELLOW CENTERLINE
30	1046+28	1049+58	CL	RTE 21				47				DIAGONAL CENTERLINE BARS
30	1051+33		CL	RTE 21					1			LEFT TURN ARROW
30	1053+33		CL	RTE 21					1			LEFT TURN ARROW
30	1054+83	1058+13	CL	RTE 21						42		DIAGONAL CENTERLINE BARS
30	1058+13	1068+13	CL	RTE 21	2000						10.0	DOUBLE SOLID YELLOW CENTERLINE
30	1046+28	1049+58	RT	RTE 21	660							DOUBLE SOLID YELLOW - RIGHT EDGE TURN LANE TAPER
30	1049+58	1050+58	RT	RTE 21		25						DOTTED LINE FOR TURN LANE OPENING
30	1050+58	1054+08	RT	RTE 21		350						SOLID WHITE LANE LINE
30	1054+83	1058+13	RT	RTE 21	674							DOUBLE SOLID YELLOW - RIGHT EDGE TURN LANE TAPER
30	1036+28	1068+13	RT	RTE 21		3180				31.8		
SUBTOTAL					7610	6655	24	89	2	61.8	20.0	
SUBTOTAL - SEGMENT 1					5062	4088	0	129	4	29.4	15.6	
PAY TOTAL					12672	10743	24	218	6	91.2	35.6	

SIGNING AND MAILBOXES										
SHEET	EXIST. STATION	RELOC. TO STATION	LOCATION	OFFSET	POST TYPE	SIGN TYPE	SIGN SIZE	SIGN	MAILBOX	REMARKS
								RELOCATION (EA)	RELOCATION (EA)	
30	1054+14	1054+09	RTE 21	LT	U-CHANNEL	EXIST. D3-1	21"X6"	1		STREET NAME SIGN (AMVETS DR.)
30	1054+16	1054+12	RTE 21	LT	U-CHANNEL	EXIST. R1-1	36"X36"	1		STOP SIGN
SUBTOTAL								2	0	
SUBTOTAL - SEGMENT 1								3	3	
PAY TOTAL								5	3	

DISCLAIMER
 THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STATE OF MISSOURI
 NICHOLAS MICHAEL CORRENTI
 NUMBER PE-2010000809
 PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/29/2019	
ROUTE 21	STATE MO
DISTRICT SL	SHEET NO. 3
COUNTY JEFFERSON	
JOB NO. J6P3242	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

TWM ENGINEERING GEOSPATIAL SERVICES
 720 OLIVE STREET, SUITE 200A
 ST. LOUIS, MO 63101
 www.twm-inc.com
 MISSOURI CERT. OF AUTHORITY: 001528

SUMMARY OF QUANTITIES	ROUTE 21	SHEET 7 OF 8
-----------------------	----------	--------------

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

SIGN	SIZE IN.	AREA SQ.FT.	QTY EACH	TOTAL AREA SQ.FT.	QTY RELOC EACH	TOTAL RELOC SQ.FT.	SIGN NUM.	DESCRIPTION
WARNING SIGNS								
W01-1L	48X48	16.00						TURN (SYMBOL LEFT ARROW)
W01-1R	48X48	16.00						TURN (SYMBOL RIGHT ARROW)
W01-2L	48X48	16.00						CURVE (SYMBOL LEFT ARROW)
W01-2R	48X48	16.00						CURVE (SYMBOL RIGHT ARROW)
W01-3L	48X48	16.00						REVERSE TURN (SYMBOL LEFT ARROW)
W01-3R	48X48	16.00						REVERSE TURN (SYMBOL RIGHT ARROW)
W01-4L	48X48	16.00	4	64	4	64	15L	REVERSE CURVE (SYMBOL LEFT ARROW)
W01-4R	48X48	16.00	4	64	4	64	15R	REVERSE CURVE (SYMBOL RIGHT ARROW)
W01-4bL	48X48	16.00						DOUBLE ARROW REVERSE CURVE (SYMBOL LT ARROWS)
W01-4bR	48X48	16.00						DOUBLE ARROW REVERSE CURVE (SYMBOL RT ARROWS)
W01-4cL	48X48	16.00						TRIPLE ARROW REVERSE CURVE (SYMBOL LT ARROWS)
W01-4cR	48X48	16.00						TRIPLE ARROW REVERSE CURVE (SYMBOL RT ARROWS)
W01-6	60X30	12.50						HORIZONTAL ARROW (SYMBOL)
W01-6a	72X36	18.00						HORIZ. ARROW (SYMBOL ON PERMANENT BARRICADE)
W01-7	60X30	12.50						DOUBLE HEAD HORIZONTAL ARROW (SYMBOL)
W01-7a	72X36	18.00						DOUBLE HEAD HORIZ. ARROW (SYMBOL ON PERM. BARR.)
W01-8	18X24	3.00						CHEVRON (SYMBOL)
W01-8a	30X36	7.50						CHEVRON (SYMBOL FOR DIVIDED HIGHWAYS)
W03-1	48X48	16.00						STOP AHEAD (SYMBOL)
W03-2	48X48	16.00						YIELD AHEAD (SYMBOL)
W03-3	48X48	16.00						SIGNAL AHEAD (SYMBOL)
W03-4	48X48	16.00	4	64	4	64	11	BE PREPARED TO STOP
W03-5	48X48	16.00						SPEED LIMIT AHEAD
W04-1L	48X48	16.00						MERGE (SYMBOL FROM LEFT)
W04-1R	48X48	16.00						MERGE (SYMBOL FROM RIGHT)
W04-1aL	48X48	16.00						MERGE (ARROW SYMBOL)
W04-1aR	48X48	16.00						MERGE (ARROW SYMBOL)
W05-1	48X48	16.00	4	64	4	64	43	ROAD/BRIDGE/RAMP NARROWS
W05-3	48X48	16.00						ONE LANE BRIDGE
W05-5	48X48	16.00						NARROW LANES
W06-1	48X48	16.00						DIVIDED HIGHWAY (SYMBOL)
W06-2	48X48	16.00						DIVIDED HIGHWAY END (SYMBOL)
W06-3	48X48	16.00						TWO WAY TRAFFIC (SYMBOL)
W07-3a	30X24	5.00						NEXT XX MILES (PLAQUE)
W08-1	48X48	16.00						BUMP
W08-2	48X48	16.00						DIP
W08-3	48X48	16.00						PAVEMENT ENDS
W08-4	48X48	16.00						SOFT SHOULDER
W08-5	48X48	16.00						SLIPPERY WHEN WET (SYMBOL)
W08-6	48X48	16.00						TRUCK CROSSING
W08-6c	48X48	16.00						TRUCK ENTRANCE
W08-7	36X36	9.00						LOOSE GRAVEL
W08-7a	36X36	9.00						FRESH OIL/LOOSE GRAVEL
W08-9	48X48	16.00						LOW SHOULDER
W08-11	48X48	16.00	4	64			36	UNEVEN LANES
W08-12	48X48	16.00	4	64			35	NO CENTER LINE
W08-15	48X48	16.00						GROOVED PAVEMENT
W08-15P	30X24	5.00						MOTORCYCLE (PLAQUE)
W08-17	48X48	16.00	2	32	2	32	23	SHOULDER DROP-OFF (SYMBOL)
W08-17P	30X24	5.00	2	10	2	10	23	SHOULDER DROP-OFF (PLAQUE)
W10-1	42RND.	9.62						RAILROAD CROSSING
W012-1	24X24	4.00						DOUBLE DOWN ARROW (SYMBOL)
W012-2	48X48	16.00						LOW CLEARANCE (SYMBOL)
W012-2X	24X18	3.00						LOW CLEARANCE (PLAQUE)
W012-2a	84X24	14.00						OVERHEAD LOW CLEARANCE (FEET AND INCHES)
W012-4	120X60	50.00						LOW CLEARANCE XX FT XX IN XX MILES AHEAD
W012-5	120X60	50.00						WIDTH RESTRICTION XX FT XX IN XX MILES AHEAD
W013-1	30X30	6.25						ADVISORY SPEED (PLAQUE)
W016-2	30X24	5.00						XXX FEET (PLAQUE)
W016-3	30X24	5.00						X MILE (PLAQUE)
W020-1	48X48	16.00	5	80	4	64	2	ROAD/BRIDGE/RAMP WORK AHEAD
W020-2	48X48	16.00						DETOUR AHEAD
W020-3	48X48	16.00						ROAD CLOSED AHEAD
W020-4	48X48	16.00	5	80	4	64	7	ONE LANE ROAD AHEAD
W020-5	48X48	16.00						RIGHT/CENTER/LEFT LANE CLOSED AHEAD
W020-5a	48X48	16.00						2 RIGHT/CENTER/LEFT LANES CLOSED AHEAD
W020-6a	48X48	16.00						RIGHT/CENTER/LEFT LANE CLOSED
W020-7a	48X48	16.00	4	64	4	64	8	FLAGGER (SYMBOL) WITH FLAGS
W021-2	36X36	9.00						FRESH OIL
W021-5	48X48	16.00	1	16	1	16	21	SHOULDER WORK AHEAD
W022-1	48X48	16.00						BLASTING ZONE AHEAD
W022-2	42X36	10.50						TURN OFF 2-WAY RADIO AND PHONE
W022-3	42X36	10.50						END BLASTING ZONE
G022-1	21X15	2.19	2	4.38			N/A	WET PAINT (ARROW PIVOTS)

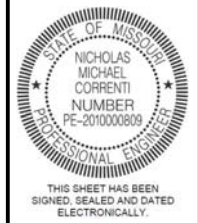
SIGN	SIZE IN.	AREA SQ.FT.	QTY EACH	TOTAL AREA SQ.FT.	QTY RELOC EACH	TOTAL RELOC SQ.FT.	SIGN NUM.	DESCRIPTION
GUIDE SIGNS								
E05-1	36X48	12.00						GORE EXIT
E05-2	48X36	12.00						EXIT OPEN
E05-2a	48X36	12.00						EXIT CLOSED
G020-1	60X24	10.00						ROAD WORK NEXT XX MILES
G020-2	48X24	8.00	4	32			26	END ROAD WORK
G020-4	36X18	4.50						PILOT CAR FOLLOW ME
G020-4a	42X30	8.75						PLEASE WAIT FOR PILOT CAR
G020-5aP	36X24	6.00	4	24	4	24	54	WORK ZONE (PLAQUE)
M04-8a	24X18	3.00						END DETOUR
M04-9L	48X36	12.00						DETOUR (LEFT ARROW)
M04-9R	48X36	12.00						DETOUR (RIGHT ARROW)
M04-9P	48X12	4.00						STREET NAME (PLAQUE)
M04-10L	48X18	6.00						DETOUR (ARROW LEFT)
M04-10R	48X18	6.00						DETOUR (ARROW RIGHT)
REGULATORY SIGNS								
R1-1	48X48	13.25						STOP
R1-2	48TRI.	6.93						YIELD
R1-2a	36X36	9.00						TO ONCOMING TRAFFIC (PLAQUE)
R1-3P	30X12	2.50						ALL WAY (PLAQUE)
R2-1	36X48	12.00	8	96	8	96	4/25	SPEED LIMIT (4-45MPH/4-55MPH)
R3-1	48X48	16.00						NO RIGHT TURN (SYMBOL)
R3-2	48X48	16.00						NO LEFT TURN (SYMBOL)
R3-3	36X36	9.00						NO TURNS
R3-4	48X48	16.00						NO U-TURN (SYMBOL)
R3-7L	30X30	6.25						LEFT LANE MUST TURN LEFT
R3-7R	30X30	6.25						RIGHT LANE MUST TURN RIGHT
R4-1	36X48	12.00						DO NOT PASS
R4-2	36X48	12.00						PASS WITH CARE
R4-8a	36X48	12.00						KEEP LEFT (HORIZONTAL ARROW)
R4-7a	36X48	12.00						KEEP RIGHT (HORIZONTAL ARROW)
R5-1	30X30	6.25						DO NOT ENTER
R5-1a	36X24	6.00						WRONG WAY
R6-1L	54X18	6.75						ONE WAY ARROW (LEFT)
R6-1R	54X18	6.75						ONE WAY ARROW (RIGHT)
R6-2L	24X30	5.00						ONE WAY (LEFT)
R6-2R	24X30	5.00						ONE WAY (RIGHT)
R9-9	24X12	2.00						SIDEWALK CLOSED
R9-11L	24X18	3.00						SIDEWALK CLOSED AHEAD, (ARROW LEFT) CROSS HERE
R9-11R	24X18	3.00						SIDEWALK CLOSED AHEAD, (ARROW RIGHT) CROSS HERE
R10-6	24X36	6.00						STOP HERE ON RED (45° ARROW)
R11-2	48X30	10.00						ROAD CLOSED
R11-3a	60X30	12.50						ROAD CLOSED XX MILES AHEAD
R11-4	60X30	12.50						LOCAL TRAFFIC ONLY
R11-3a	60X30	12.50						ROAD CLOSED TO THRU TRAFFIC
CONST-3A	60X48	20.00						FINE SIGN
CONST-3X	56X12	4.67						SPEEDING/PASSING (PLATE)
MISCELLANEOUS SIGNS								
CONST-5	48X36	12.00						POINT OF PRESENCE
CONST-4	96X48	32.00						POINT OF PRESENCE
CONST-7	48X24	8.00						RATE OUR WORK ZONE
CONST-7	72X36	18.00	4	72			56	RATE OUR WORK ZONE
CONST-8	48X36	12.00	4	48			55	WORK ZONE NO PHONE ZONE

616-10.05	TOTAL	
CONSTRUCTION SIGNS	942	
616-10.10	TOTAL	
RELOCATED SIGNS **	626	

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

TEMPORARY TRAFFIC CONTROL
1 LUMP SUM

ITEM NUMBER	TOTAL QTY	DESCRIPTION
6122008		IMPACT ATTENUATOR 40 MPH (SAND BARRELS)
6122009		IMPACT ATTENUATOR 45 MPH (SAND BARRELS)
6122010		IMPACT ATTENUATOR 50 MPH (SAND BARRELS)
6122012		IMPACT ATTENUATOR 55 MPH (SAND BARRELS)
6122014		IMPACT ATTENUATOR 60 MPH (SAND BARRELS)
6122017		IMPACT ATTENUATOR 65 MPH (SAND BARRELS)
6122019		IMPACT ATTENUATOR 70 MPH (SAND BARRELS)
6122020		REPLACEMENT SAND BARREL
6122030		IMPACT ATTENUATOR (RELOCATION)
6123000A	2	TRUCK OR TRAILER MOUNTED ATTENUATOR (TMA)
6161007		SPEED LIMIT AND STROBE LIGHT ASSEMBLY
6161008	17	ADVANCED WARNING RAIL SYSTEM
6161009	5	FLAG ASSEMBLY
6161012		BUOYS (BOATS KEEP OUT)
6161013		BUOYS (NO WAKE)
6161014		SPECIAL SIGN ASSEMBLY (BOATS KEEP OUT)
6161024		CHANNELIZER (TRIM LINE) WITH LIGHT
6161025	250	CHANNELIZER (TRIM LINE)
6161030		TYPE III MOVEABLE BARRICADE
6161031		TYPE III MOVEABLE BARRICADE WITH LIGHTS
6161033		DIRECTION INDICATOR BARRICADE
6161034		DIRECTION INDICATOR BARRICADE, WITH LIGHT
6161040		FLASHING ARROW PANEL
6161047		TYPE III OBJECT MARKER
6161052		WARNING LIGHT, TYPE B
6161055		SEQUENTIAL FLASHING WARNING LIGHT
6161070		TUBULAR MARKER
6161095		RADAR SPEED ADVISORY SYSTEM
6161096		CHANGEABLE MESSAGE SIGN, COMMISSION FURNISHED/RETAINED
6161098A		CHANGEABLE MESSAGE SIGN W/O COMM. INTERFACE, CONTRACTOR FURNISHED/RETAINED
6161099		CHANGEABLE MESSAGE SIGN WITH COMM. INTERFACE, CONTRACTOR FURNISHED/RETAINED
6162000A		WORK ZONE TRAFFIC SIGNAL SYSTEM
6162002		TEMPORARY LONG-TERM RUMBLE STRIPS
6162004		TEMPORARY SHORT-TERM RUMBLE STRIPS
6173600D		TEMPORARY TRAFFIC BARRIER CONTRACTOR FURNISHED/RETAINED
6173602B		TEMPORARY TRAFFIC BARRIER CONTRACTOR FURNISHED/COMMISSION RETAINED
6174000A		TEMP. TRAFFIC BARRIER HEIGHT TRANSITION
6175010A		RELOCATING TEMPORARY TRAFFIC BARRIER
6176000B		TEMPORARY TRAFFIC BARRIER COMMISSION FURNISHED/RETAINED
6177000B		TEMP. TRAFFIC



DATE PREPARED
3/7/2019

ROUTE 21	STATE MO
DISTRICT SL	SHEET NO. 8

COUNTY
JEFFERSON

JOB NO.
J6P3242

CONTRACT ID.
.

PROJECT NO.
.

BRIDGE NO.
.

DESCRIPTION	DATE

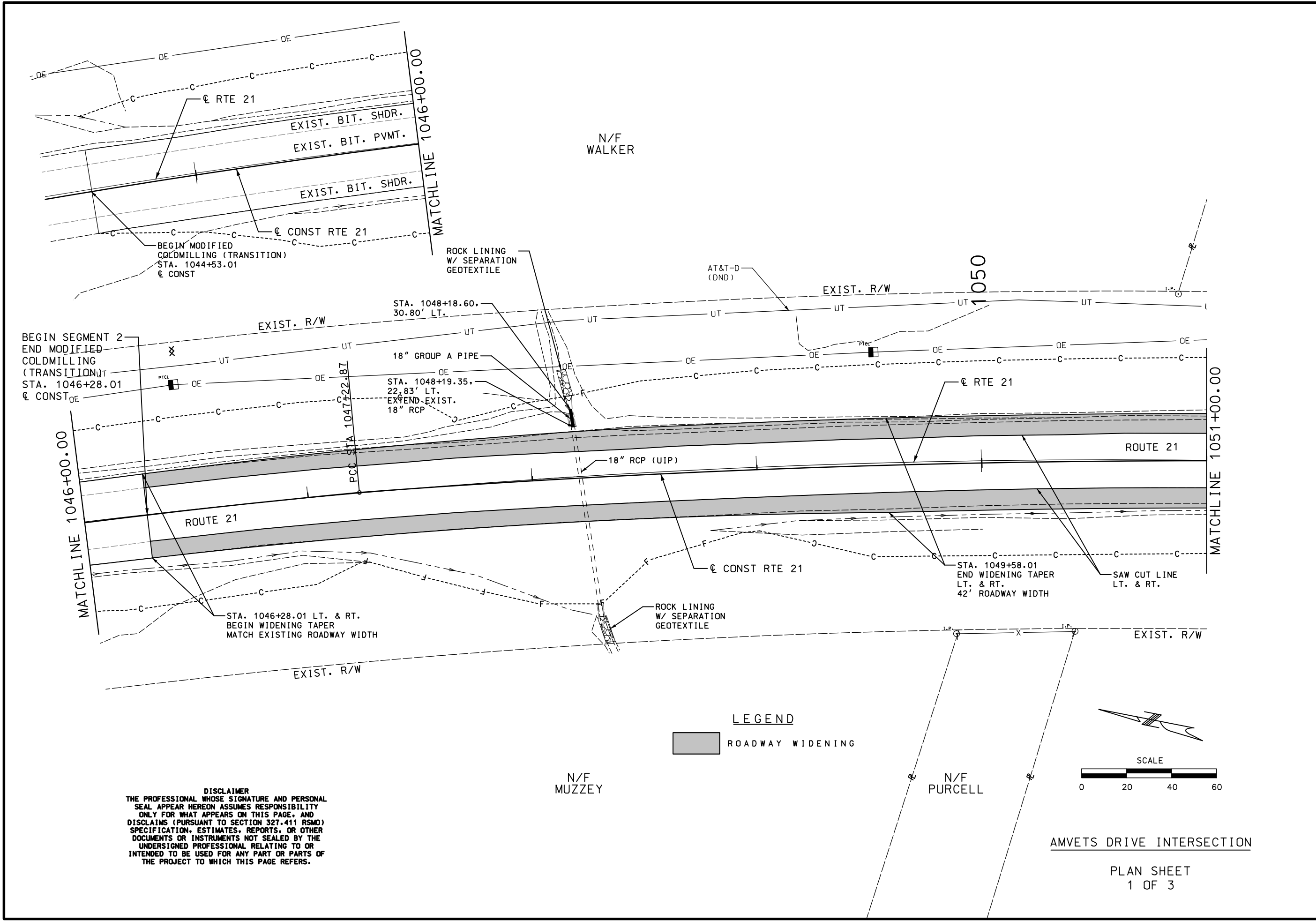
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

TWM
ENGINEERING SERVICES
720 OLIVE STREET, SUITE 200A
ST. LOUIS, MO 63101
www.twm-inc.com
MISSOURI CERT. OF AUTHORITY: 001528

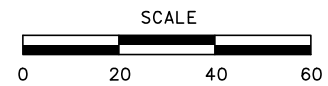
PLAN SHEET
ROUTE 21
SHEET 5 OF 8

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



DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

LEGEND
[Shaded Box] ROADWAY WIDENING



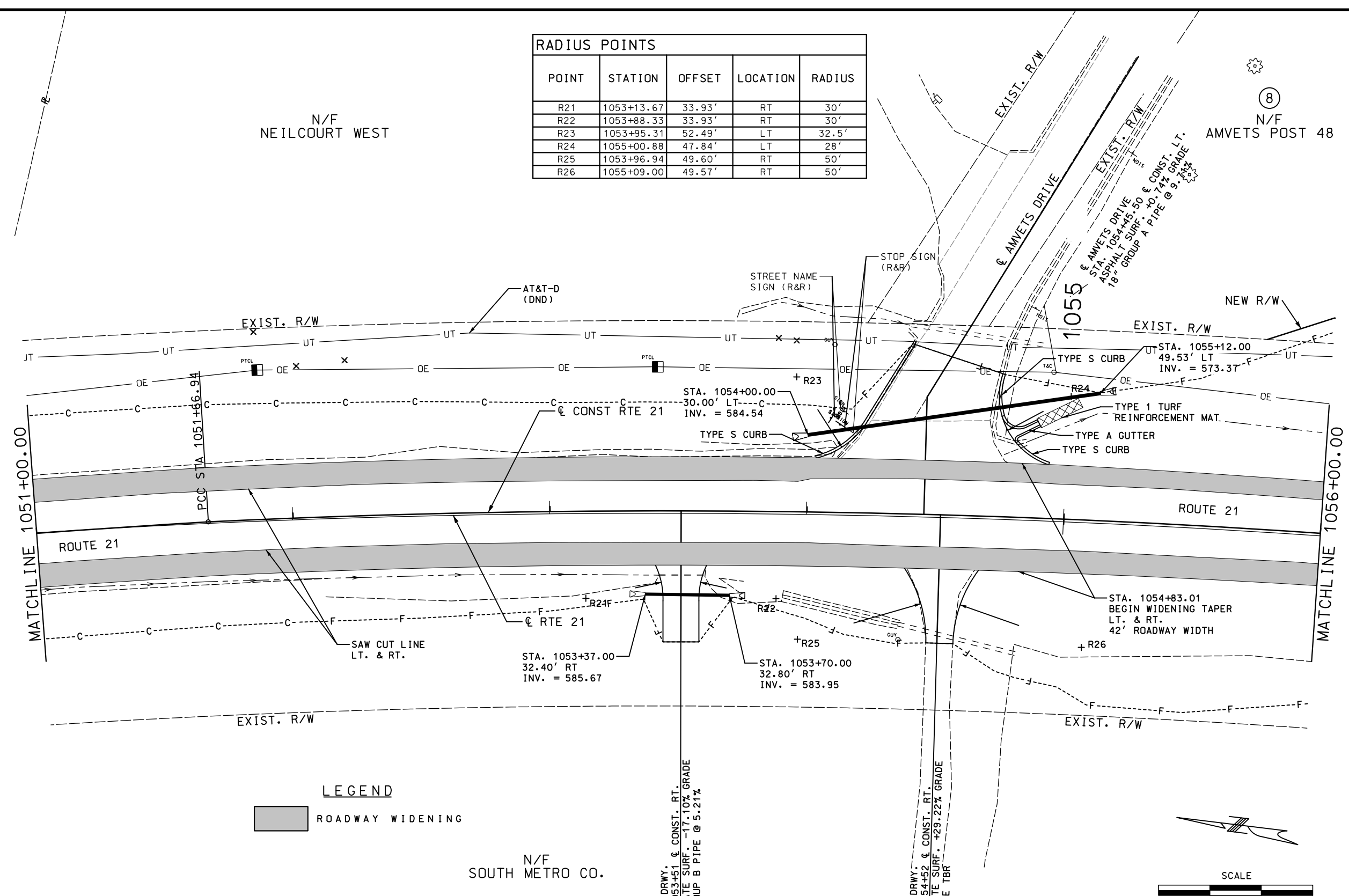
AMVETS DRIVE INTERSECTION
PLAN SHEET
1 OF 3

N/F MUZZEY

N/F PURCELL

N/F WALKER

RADIUS POINTS				
POINT	STATION	OFFSET	LOCATION	RADIUS
R21	1053+13.67	33.93'	RT	30'
R22	1053+88.33	33.93'	RT	30'
R23	1053+95.31	52.49'	LT	32.5'
R24	1055+00.88	47.84'	LT	28'
R25	1053+96.94	49.60'	RT	50'
R26	1055+09.00	49.57'	RT	50'



LEGEND
 ROADWAY WIDENING

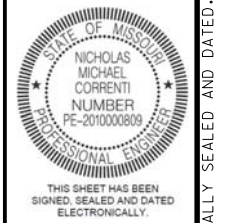
DISCLAIMER
 THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

N/F SOUTH METRO CO.

TYPE I DRWY.
 STA. 1053+51 & CONST. RT.
 AGGREGATE SURF. -17.10% GRADE
 15" GROUP B PIPE @ 5.21%

TYPE I DRWY.
 STA. 1054+52 & CONST. RT.
 AGGREGATE SURF. +29.22% GRADE
 EX. PIPE TBR

AMVETS DRIVE INTERSECTION
 PLAN SHEET
 2 OF 3



DATE PREPARED
 3/7/2019
 ROUTE 21 STATE MO
 DISTRICT SL SHEET NO. 9
 COUNTY JEFFERSON
 JOB NO. J6P3242
 CONTRACT ID.
 PROJECT NO.
 BRIDGE NO.

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

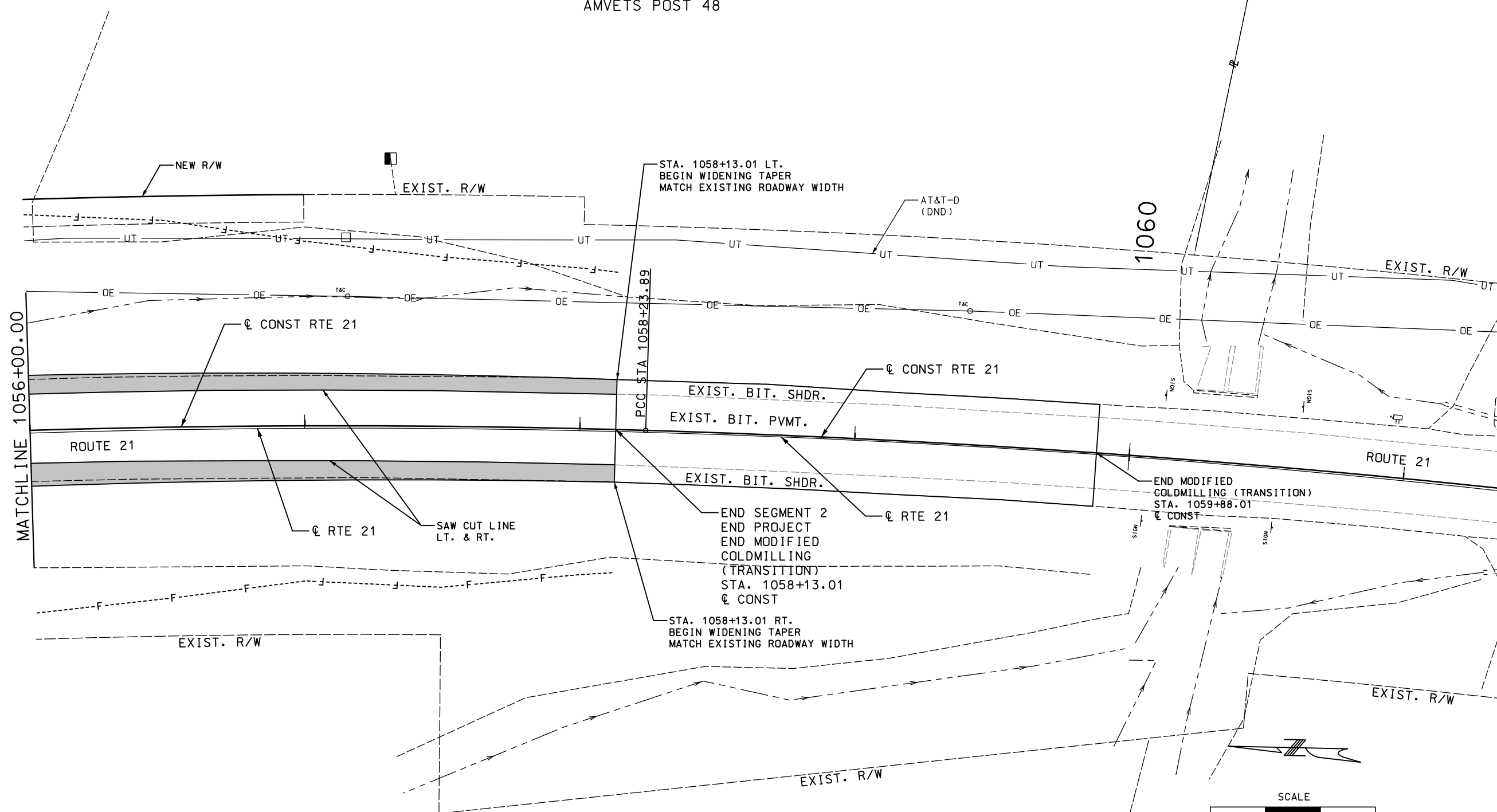
 105 WEST CAPITOL
 JEFFERSON CITY, MO 65102
 1-888-ASK-MODOT (1-888-278-6636)

TWM
 ENGINEERING SERVICES
 720 OLIVE STREET, SUITE 200A
 ST. LOUIS, MO 63101
 (314) 241-6300
 www.twm-inc.com
 MISSOURI CERT. OF AUTHORITY: 001528

PLAN SHEET
 ROUTE 21
 SHEET 6 OF 8

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

(8)
N/F
AMVETS POST 48



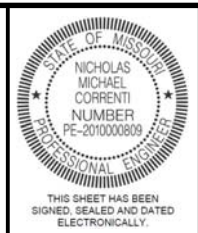
DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

N/F
SOUTH METRO CO.

LEGEND
[Shaded Box] ROADWAY WIDENING

AMVETS DRIVE INTERSECTION

PLAN SHEET
3 OF 3



DATE PREPARED 3/7/2019	
ROUTE 21	STATE MO
DISTRICT SL	SHEET NO. 1-0
COUNTY JEFFERSON	
JOB NO. J6P3242	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DATE	DESCRIPTION

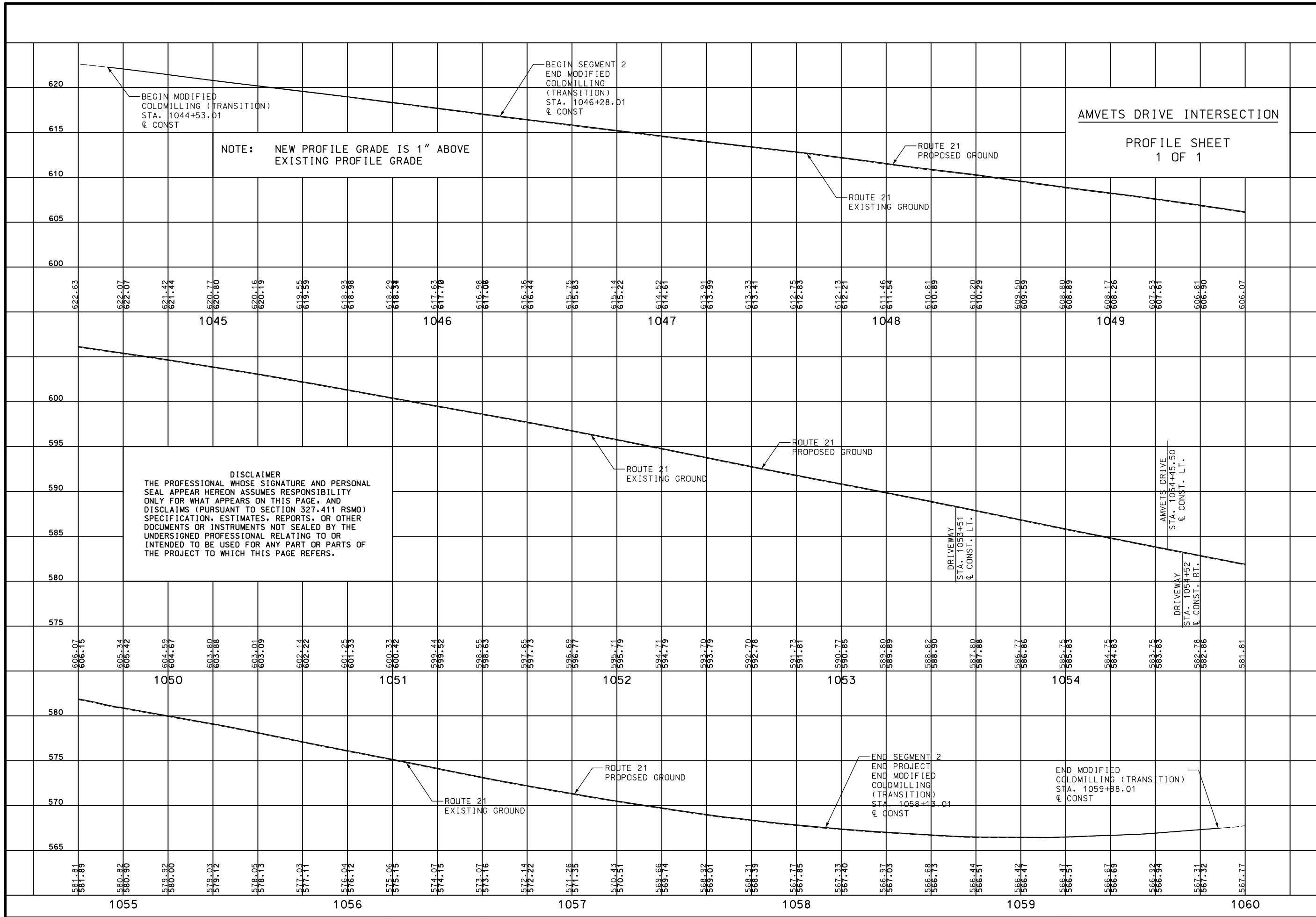
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

TWM
ENGINEERING
GEOSPATIAL SERVICES
720 OLIVE STREET, SUITE 200A
ST. LOUIS, MO 63101
www.twm-inc.com
MISSOURI CERT. OF AUTHORITY: 001528

PLAN SHEET
ROUTE 21
SHEET 7 OF 8

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



BEGIN MODIFIED
COLDMILLING (TRANSITION)
STA. 1044+53.01
& CONST

BEGIN SEGMENT 2
END MODIFIED
COLDMILLING
(TRANSITION)
STA. 1046+28.01
& CONST

NOTE: NEW PROFILE GRADE IS 1" ABOVE
EXISTING PROFILE GRADE

AMVETS DRIVE INTERSECTION

PROFILE SHEET
1 OF 1

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL
SEAL APPEAR HEREON ASSUMES RESPONSIBILITY
ONLY FOR WHAT APPEARS ON THIS PAGE, AND
DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO)
SPECIFICATION, ESTIMATES, REPORTS, OR OTHER
DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE
UNDERSIGNED PROFESSIONAL RELATING TO OR
INTENDED TO BE USED FOR ANY PART OR PARTS OF
THE PROJECT TO WHICH THIS PAGE REFERS.



THIS SHEET HAS BEEN
SIGNED, SEALED AND DATED
ELECTRONICALLY.

DATE PREPARED 3/7/2019	
ROUTE 21	STATE MO
DISTRICT SL	SHEET NO. 1:1
COUNTY JEFFERSON	
JOB NO. J6P3242	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DATE	DESCRIPTION

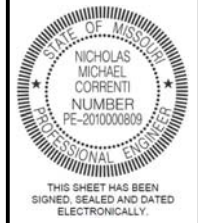
MISSOURI HIGHWAYS AND TRANSPORTATION
COMMISSION

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

TWM
ENGINEERING
GEOSPATIAL SERVICES
720 OLIVE STREET, SUITE 200A
ST. LOUIS 63101
www.twm-inc.com
MISSOURI CERT. OF AUTHORITY: 001528

PROFILE SHEET
ROUTE 21
SHEET 8 OF 8

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



DATE PREPARED
3/28/2019

ROUTE 21 STATE MO
DISTRICT SL SHEET NO. 12

COUNTY
JEFFERSON

JOB NO.
J6P3242

CONTRACT ID.

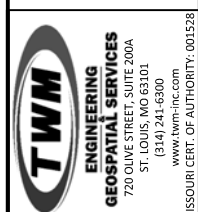
PROJECT NO.

BRIDGE NO.

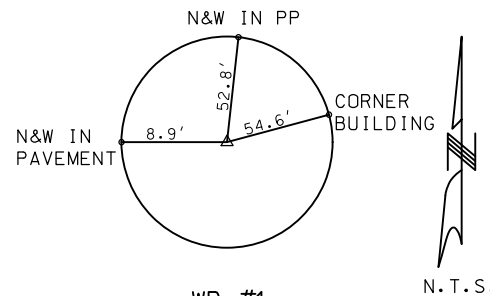
DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

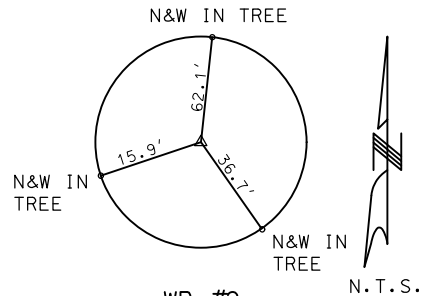
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)



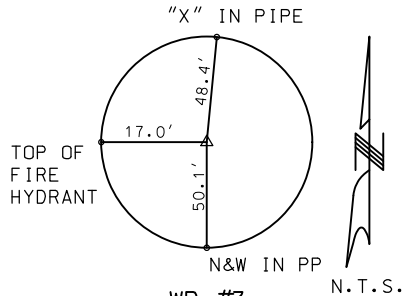
REFERENCE POINT SHEET
ROUTE 21
SHEET 1 OF 1



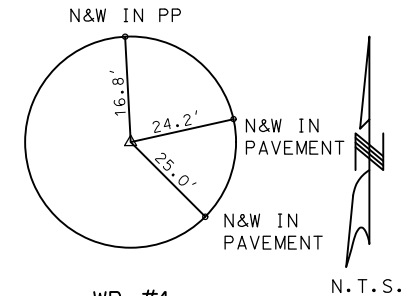
WP #1
80D SPIKE 2" ± DEEP
45' ± SOUTH OF SOUTHERN
ENTR. TO 11096 RTE. 21
N = 867468.074
E = 798987.766
ELEV. = 797.326



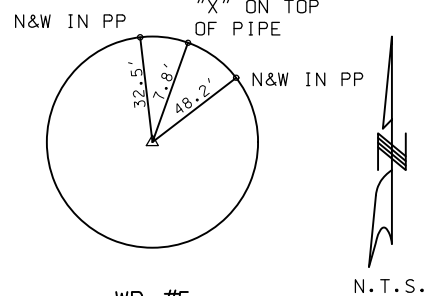
WP #2
80D SPIKE 2" ± DEEP
310' ± SOUTH OF
ENTR. TO 11099 RTE. 21
N = 867091.484
E = 798989.243
ELEV. = 797.800



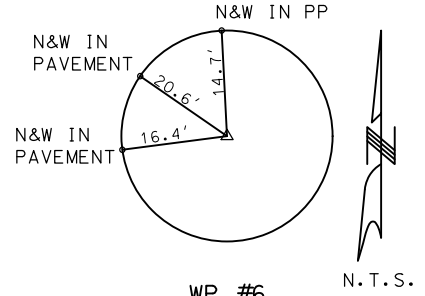
WP #3
80D SPIKE 2" ± DEEP
55' ± SOUTH OF
DRIVE TO 11021 RTE. 21
N = 866286.756
E = 798744.434
ELEV. = 804.113



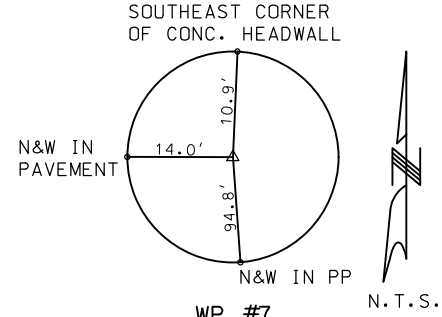
WP #4
80D SPIKE 2" ± DEEP
125' ± NORTH OF
DRIVE TO 11133 RTE. 21
N = 866864.051
E = 799039.891
ELEV. = 811.084



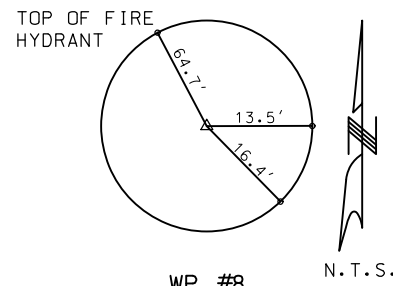
WP #5
80D SPIKE 2" ± DEEP
AT THE NORTHERN ENTR.
TO HILLTOP ESTATES
N = 866570.484
E = 799172.252
ELEV. = 802.327



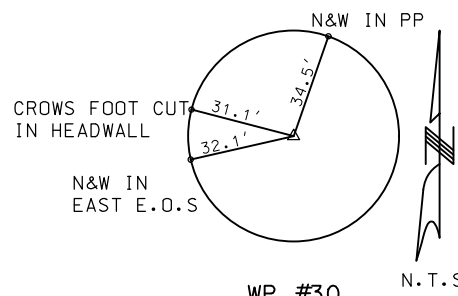
WP #6
80D SPIKE 2" ± DEEP
AT THE SOUTHERN ENTR.
TO HILLTOP ESTATES
N = 866379.863
E = 799214.351
ELEV. = 794.159



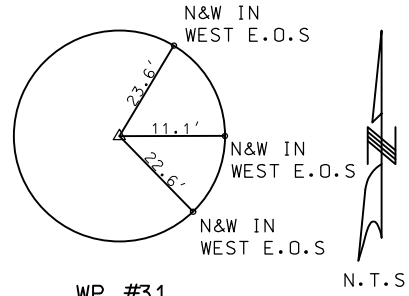
WP #7
80D SPIKE 2" ± DEEP
ON EAST SIDE OF RTE. 21
200' ± SOUTH OF SOUTH
ENTR. TO HILLTOP ESTATES
N = 866166.782
E = 799236.003
ELEV. = 781.623



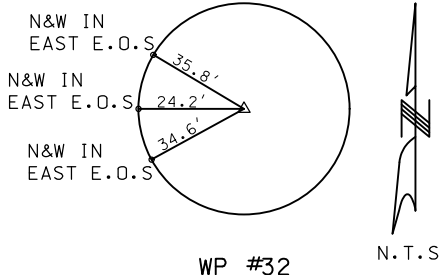
WP #8
80D SPIKE 2" ± DEEP
ON WEST SIDE OF RTE. 21
275' ± NORTH OF ENTR.
TO JEWEL-LYNN APARTMENTS
N = 865961.450
E = 799182.376
ELEV. = 770.477



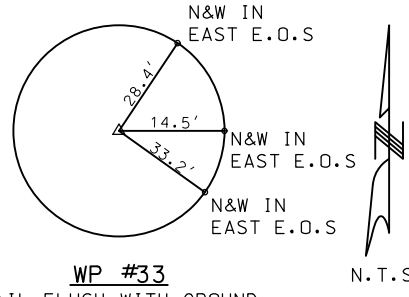
WP #30
NAIL FLUSH WITH GROUND
IN GRASSY FIELD ENTRANCE
50' ± SOUTH OF SOUTHERN
ENTR. TO 13055 RTE. 21
N = 839587.251
E = 798216.658
ELEV. = 632.984



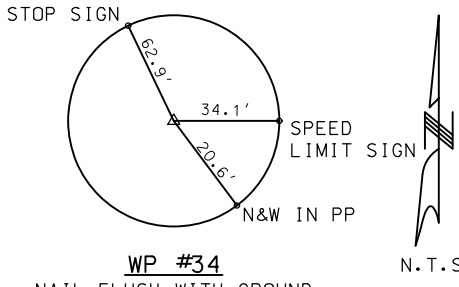
WP #31
NAIL FLUSH WITH GROUND
25' WEST OF @ ROUTE 21
940' ± NORTH OF AMVETS DRIVE
N = 839216.570
E = 798281.013
ELEV. = 618.822



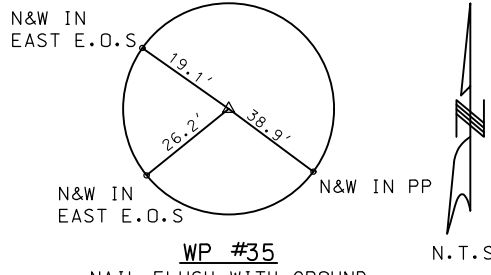
WP #32
NAIL FLUSH WITH GROUND
40' ± EAST OF @ ROUTE 21
600' NORTH OF AMVETS DRIVE
N = 838905.595
E = 798448.871
ELEV. = 613.043



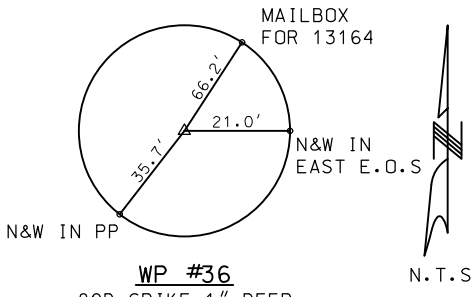
WP #33
NAIL FLUSH WITH GROUND
32' ± WEST OF @ ROUTE 21
400' NORTH OF AMVETS DRIVE
N = 838696.123
E = 798418.982
ELEV. = 603.495



WP #34
NAIL FLUSH WITH GROUND
IN THE SOUTHEAST QUAD. OF
ROUTE 21 AND AMVETS DRIVE
27' ± SOUTH OF @ AMVETS DRIVE
N = 838297.440
E = 798559.324
ELEV. = 582.160



WP #35
NAIL FLUSH WITH GROUND
18' EAST OF @ ROUTE 21
6' OFF EDGE OF SHOULDER
460' SOUTH OF AMVETS DRIVE
N = 837854.754
E = 798540.9467
ELEV. = 566.3085



WP #36
80D SPIKE 1" DEEP
37' ± WEST OF @ ROUTE 21
75' SOUTH OF 13164 RTE. 21
N = 837553.345
E = 798462.8881
ELEV. = 579.2928

NOTE: ALL UNITS ARE IN FEET UNLESS OTHERWISE SPECIFIED.

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

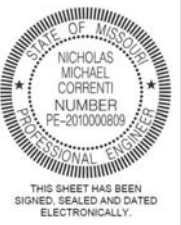
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.

Coordinate Point Listing Missouri Coordinate System of 1983

EASTERN ZONE

Reciprocal Average Grid Factor : 0.99991221

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



	SHEET NO.	STATION ¹	LOCATION	OFFSET ¹	NORTHING (FEET)	EASTING (FEET)	DESCRIPTION	DESIGN PT. ID
SEG. 1	--	727+00.00	RTE 21 CONST BL	0	867,595.8203	798,924.7905	BEGIN CONSTBL	
	--	736+93.62	RTE 21 CONST BL	0	866,624.5475	799,134.3422	PC CURVE CONSTBL_1	
	--	741+40.56	RTE 21 CONST BL	0	866,187.6618	799,228.6000	PI CURVE CONSTBL_1	
	--	745+82.95	RTE 21 CONST BL	0	865,740.9904	799,213.1648	PT CURVE CONSTBL_1	
	--	746+02.38	RTE 21 CONST BL	0	865,721.5652	799,212.4935	END CONSTBL	
N. EXIST. ALIGN.	--	720+98.95	RTE 21 EXIST CL	0	868,183.4472	798,798.4751	BEGIN EXISTCL1	
	--	737+79.52	RTE 21 EXIST CL	0	866,540.2726	799,151.0192	PC CURVE EXISTCL1_1	
	--	742+73.43	RTE 21 EXIST CL	0	866,057.3465	799,254.6304	PI CURVE EXISTCL1_1	
	--	747+58.51	RTE 21 EXIST CL	0	865,566.7584	799,197.3925	PT CURVE EXISTCL1_1	
	--	750+73.84	RTE 21 EXIST CL	0	865,253.5518	799,160.8501	PC CURVE EXISTCL1_2	
	--	754+28.04	RTE 21 EXIST CL	0	864,901.7336	799,119.8028	PI CURVE EXISTCL1_2	
	--	757+78.81	RTE 21 EXIST CL	0	864,550.2843	799,163.8965	PT CURVE EXISTCL1_2	
	--	769+90.25	RTE 21 EXIST CL	0	863,348.2645	799,314.7037	PC CURVE EXISTCL1_3	
	--	779+99.77	RTE 21 EXIST CL	0	862,346.5967	799,440.3756	PI CURVE EXISTCL1_3	
	--	789+88.78	RTE 21 EXIST CL	0	861,362.2969	799,216.1308	PT CURVE EXISTCL1_3	
	--	EQ 789+88.79 (BK)= 789+98.61 (AH)	RTE 21 EXIST CL	0	861,362.2938	799,216.1301	POINT STAEQU4	
--	796+90.21	RTE 21 EXIST CL	0	860,678.3912	799,060.3233	END EXISTCL1		
SEGMENT 2	--	1041+19.48	RTE 21 CONST BL	0	839,595.1189	798,156.9684	PC CURVE CONSTBL2_1	
	--	1044+21.79	RTE 21 CONST BL	0	839,322.1244	798,286.8337	PI CURVE CONSTBL2_1	
	8	1047+22.87	RTE 21 CONST BL	0	839,032.2305	798,372.5805	PCC CURVE CONSTBL2_2	
	8	1049+45.05	RTE 21 CONST BL	0	838,818.0425	798,431.6442	PI CURVE CONSTBL2_2	
	9	1051+66.94	RTE 21 CONST BL	0	838,599.4799	798,471.5871	PCC CURVE CONSTBL2_3	
	9	1054+45.50	RTE 21 CONST BL	0	838,323.3791	798,508.0150	CL AMVETS DRIVE	
	9	1054+96.27	RTE 21 CONST BL	0	838,274.8188	798,526.8599	PI CURVE CONSTBL2_3	
	10	1058+23.89	RTE 21 CONST BL	0	837,945.4968	798,524.2184	PCC CURVE CONSTBL2_4	
	--	1061+05.02	RTE 21 CONST BL	0	837,664.3767	798,521.9636	PI CURVE CONSTBL2_4	
	--	1063+85.29	RTE 21 CONST BL	0	837,386.1387	798,481.7489	PT CURVE CONSTBL2_4	
S. EX. ALIGN.	--	1030+00.00	RTE 21 EXIST CL	0	840,591.9496	797,594.2729	BEGIN EXISTCL2	
	--	1031+00.00	RTE 21 EXIST CL	0	840,476.6887	797,646.5279	PI POINT	
	--	1037+00.23	RTE 21 EXIST CL	0	839,964.9247	797,960.1796	PC CURVE EXISTCL2_1	
	--	1068+69.49	RTE 21 EXIST CL	0	837,262.7894	799,616.2733	PI CURVE EXISTCL2_1	
	--	1089+92.41	RTE 21 EXIST CL	0	835,134.7733	797,267.7144	PT CURVE EXISTCL2_1	
	--	EQ 1093+84.20 (BK)= 1093+83.00 (AH)	RTE 21 EXIST CL	0	834,871.7028	796,977.3844	POINT STAEQU5	
	--	1095+00.00	RTE 21 EXIST CL	0	834,793.1402	796,890.6812	END EXISTCL2	

1 Ground Distance

NOTE : The reciprocal of the average grid factor is used as a multiplier from state plane distance to ground distance.

DATE PREPARED 3/28/2019	
ROUTE 21	STATE MO
DISTRICT SL	SHEET NO. 13
COUNTY JEFFERSON	
JOB NO. J6P3242	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

TWM
ENGINEERING SERVICES
720 OLIVE STREET, SUITE 200A
ST. LOUIS 63101
www.twm-inc.com
MISSOURI CERT. OF AUTHORITY: 001528

COORDINATE POINT SHEET
ROUTE 21
SHEET 1 OF 1

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

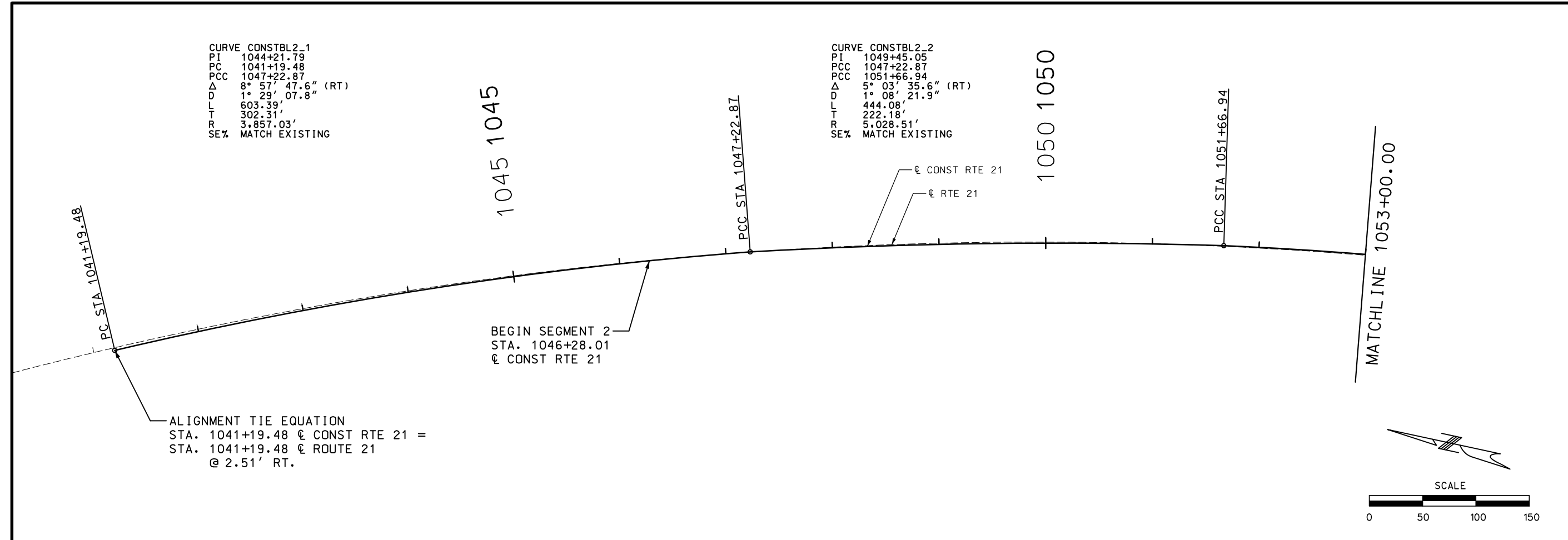
CURVE CONSTBL2_1
 PI 1044+21.79
 PC 1041+19.48
 PCC 1047+22.87
 Δ 8° 57' 47.6" (RT)
 D 1° 29' 07.8"
 L 603.39'
 T 302.31'
 R 3.857.03'
 SE% MATCH EXISTING

CURVE CONSTBL2_2
 PI 1049+45.05
 PCC 1047+22.87
 PCC 1051+66.94
 Δ 5° 03' 35.6" (RT)
 D 1° 08' 21.9"
 L 444.08'
 T 222.18'
 R 5,028.51'
 SE% MATCH EXISTING

CURVE CONSTBL2_3
 PI 1054+96.27
 PCC 1051+66.94
 PCC 1058+23.89
 Δ 10° 07' 17.0" (RT)
 D 1° 32' 26.4"
 L 656.95'
 T 329.33'
 R 3,718.91'
 SE% MATCH EXISTING

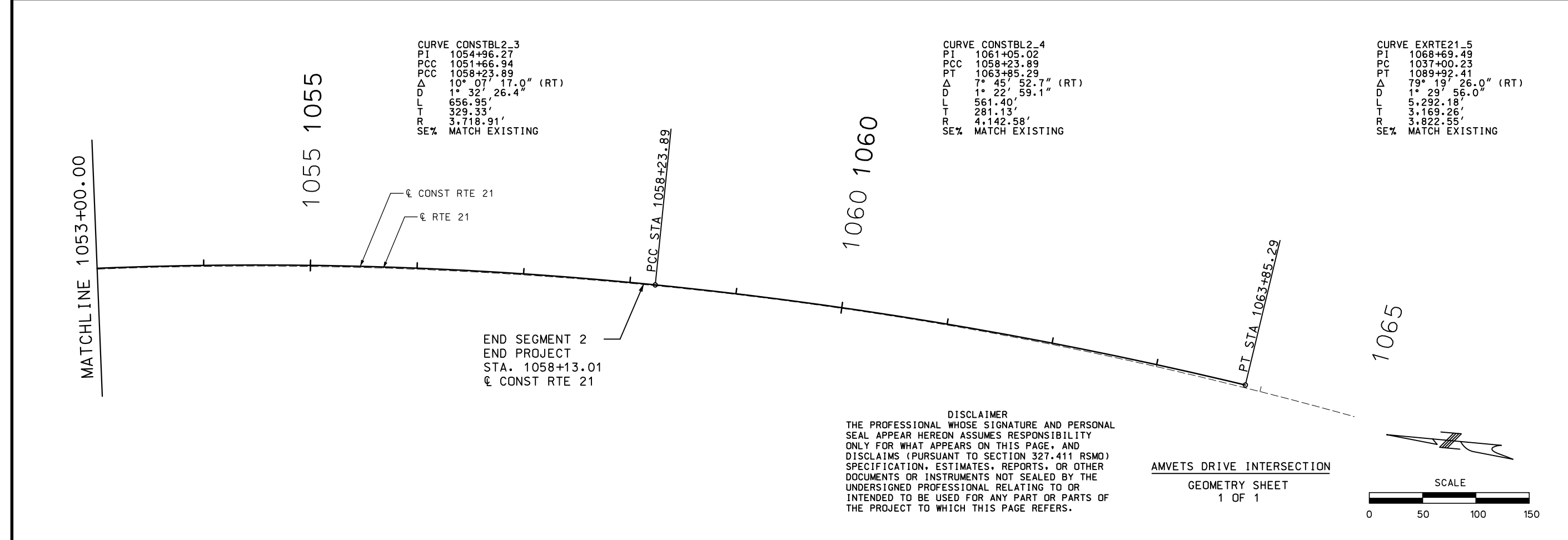
CURVE CONSTBL2_4
 PI 1061+05.02
 PCC 1058+23.89
 PT 1063+85.29
 Δ 7° 45' 52.7" (RT)
 D 1° 22' 59.1"
 L 561.40'
 T 281.13'
 R 4,142.58'
 SE% MATCH EXISTING

CURVE EXRTE21_5
 PI 1068+69.49
 PC 1037+00.23
 PT 1089+92.41
 Δ 79° 19' 26.0" (RT)
 D 1° 29' 56.0"
 L 5,292.18'
 T 3,169.26'
 R 3,922.55'
 SE% MATCH EXISTING



ALIGNMENT TIE EQUATION
 STA. 1041+19.48 @ CONST RTE 21 =
 STA. 1041+19.48 @ ROUTE 21
 @ 2.51' RT.

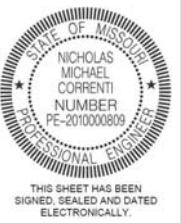
BEGIN SEGMENT 2
 STA. 1046+28.01
 @ CONST RTE 21



END SEGMENT 2
 END PROJECT
 STA. 1058+13.01
 @ CONST RTE 21

DISCLAIMER
 THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

AMVETS DRIVE INTERSECTION
 GEOMETRY SHEET
 1 OF 1



DATE PREPARED 3/7/2019	
ROUTE 21	STATE MO
DISTRICT SL	SHEET NO. 15
COUNTY JEFFERSON	
JOB NO. J6P3242	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DATE	DESCRIPTION

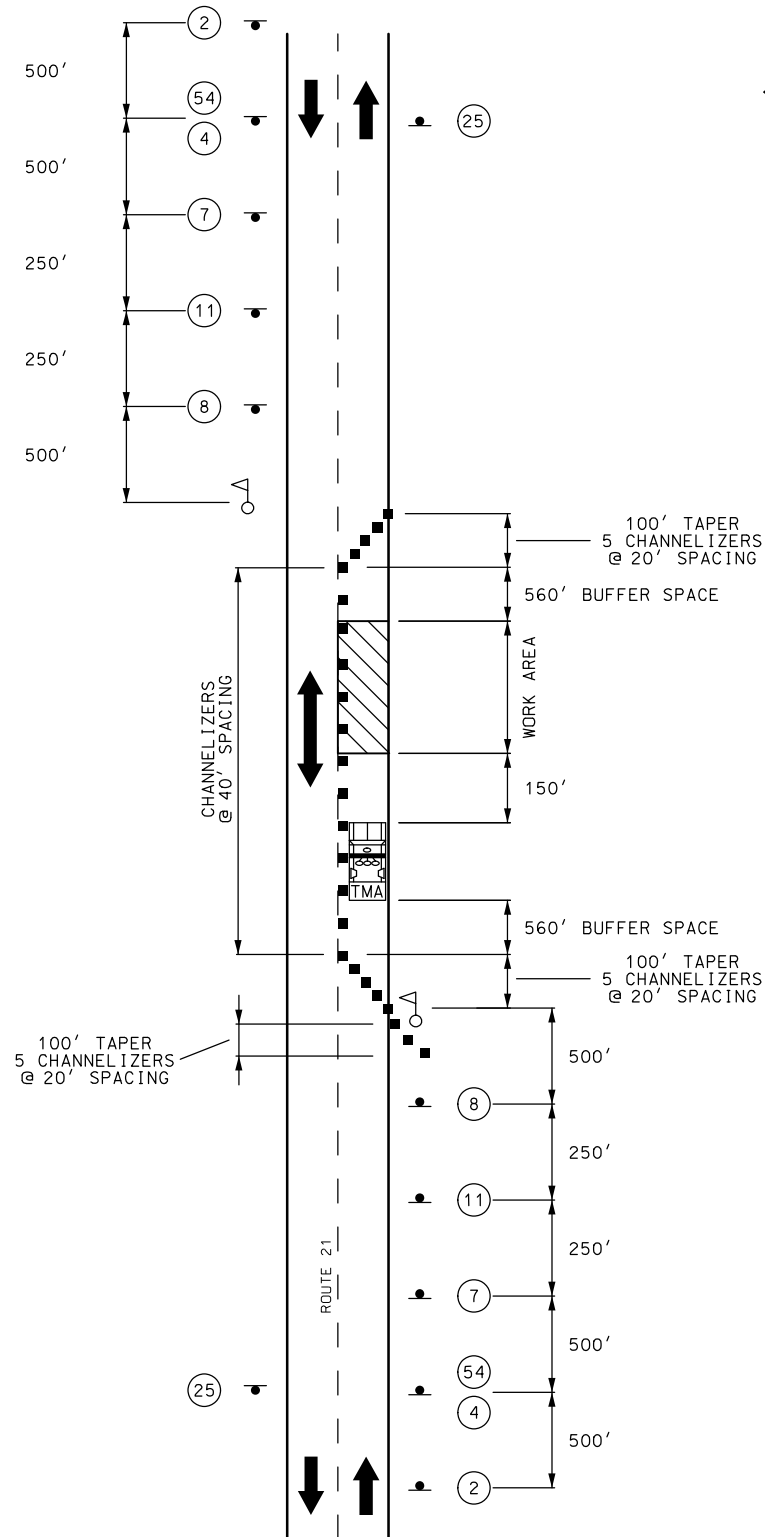
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

TWM ENGINEERING SERVICES
 720 OLIVE STREET, SUITE 200A
 ST. LOUIS, MO 63101
 www.twm-inc.com
 MISSOURI CERT. OF AUTHORITY: 001528

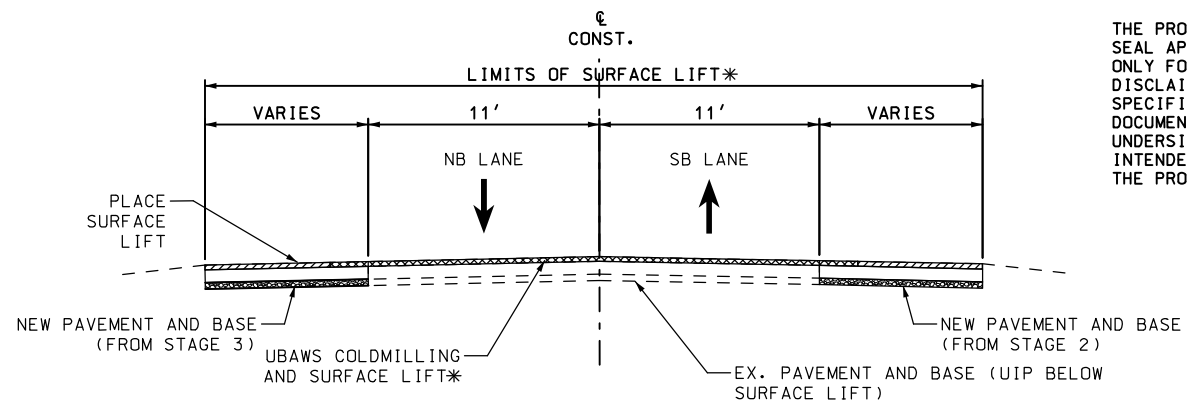
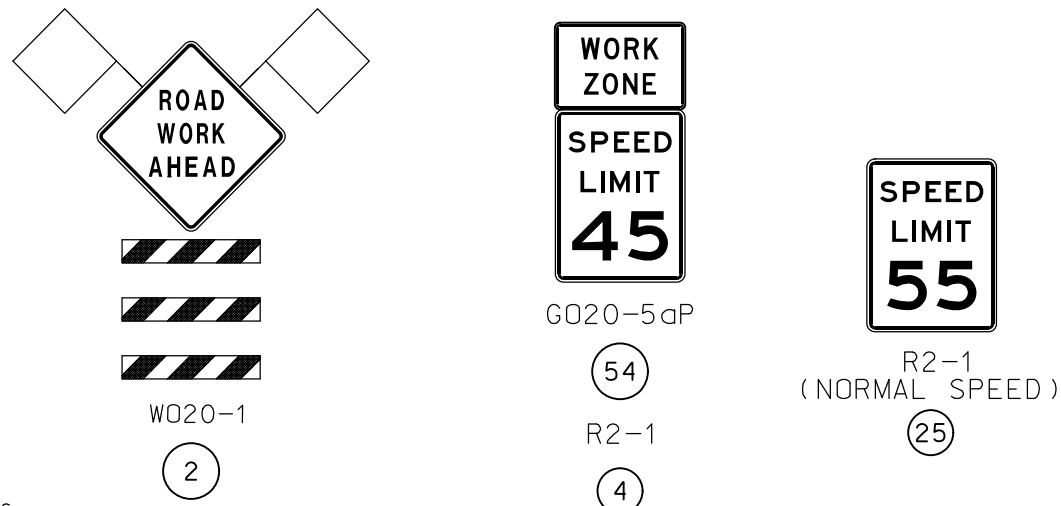
SPECIAL SHEET
 ROUTE 21
 SHEET 2 OF 2

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



SURFACE WORK (STAGES 1 & 4) - DESCRIPTION OF WORK

1. COLDMILL EXISTING UBAWS ASPHALT SURFACE ON ROUTE 21.
- 4A. PLACE NEW ASPHALT SURFACE LIFT OVER BOTH EXISTING ROUTE 21 PAVEMENT AND NEW PAVEMENT WIDENING.
- 4B. PLACE FINAL STRIPING (STRIPING WORK MAY BE PERFORMED WITH EITHER A FLAGGING OR MOVING OPERATION AS NEEDED).



TYPICAL SECTION ROUTE 21 - SURFACE WORK (STAGES 1 & 4)

* SEE TYPICAL SECTION FOR LIMITS OF UBAWS COLDMILLING.

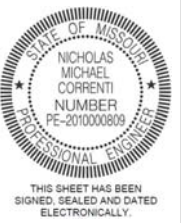
NOTES:

1. ACCESS TO ENTRANCES MUST BE COORDINATED WITH PROPERTY OWNERS.
2. ANY EXISTING SIGNS THAT CONFLICT WITH THE TRAFFIC CONTROL PLAN SHALL BE COMPLETELY COVERED OR REMOVED.
3. ALL DISTANCES AND SPACINGS OF THE TRAFFIC CONTROL DEVICES ARE APPROXIMATE AND MAY BE REVISED AS DIRECTED BY THE ENGINEER TO FIT FIELD CONDITIONS.
4. LANES SHALL BE A MINIMUM OF 10 FEET WIDE.
5. FOR DAYLIGHT FLAGGING OPERATIONS ONLY.
6. NO CENTER LINE AND UNEVEN LANES SIGNS TO BE USED AS REQUIRED DURING PAVING OPERATIONS AND WHEN CONDITIONS WARRANT THEIR USE.

TRAFFIC CONTROL LEGEND

- TMA TRUCK MOUNTED ATTENUATOR
- CHANNELIZER (TRIMLINE)
- FLAGGER
- ▲ SIGN (SINGLE SIDED)
- ▨ WORK AREA

DISCLAIMER
 THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



DATE PREPARED 3/7/2019	
ROUTE 21	STATE MO
DISTRICT SL	SHEET NO. 16
COUNTY JEFFERSON	
JOB NO. J6P3242	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DESCRIPTION	DATE

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



TEMPORARY TRAFFIC CONTROL
 ROUTE 21
 SHEET 1 OF 11

ROUTE 21 FLAGGING OPERATION

SHEET 1 OF 1

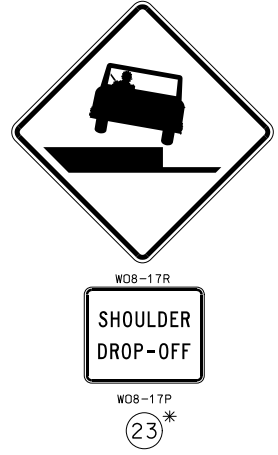
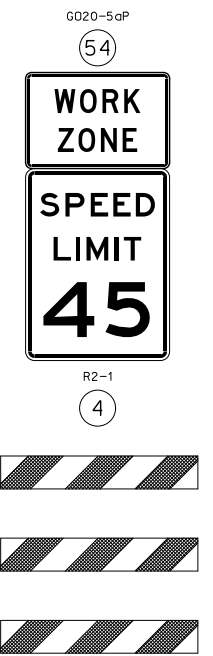
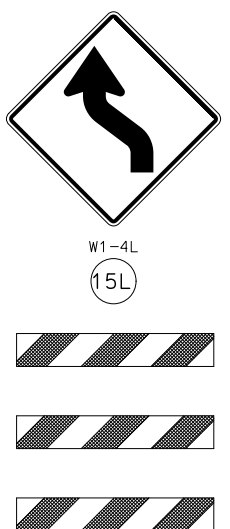
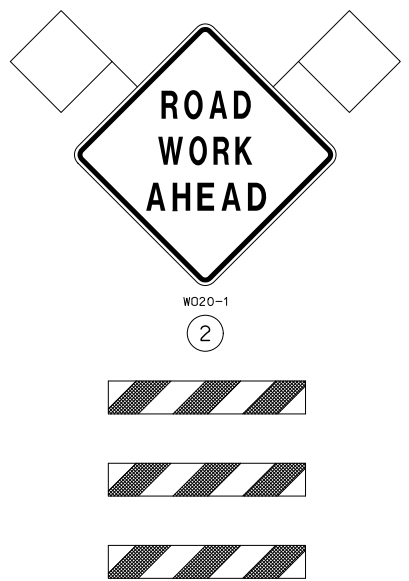
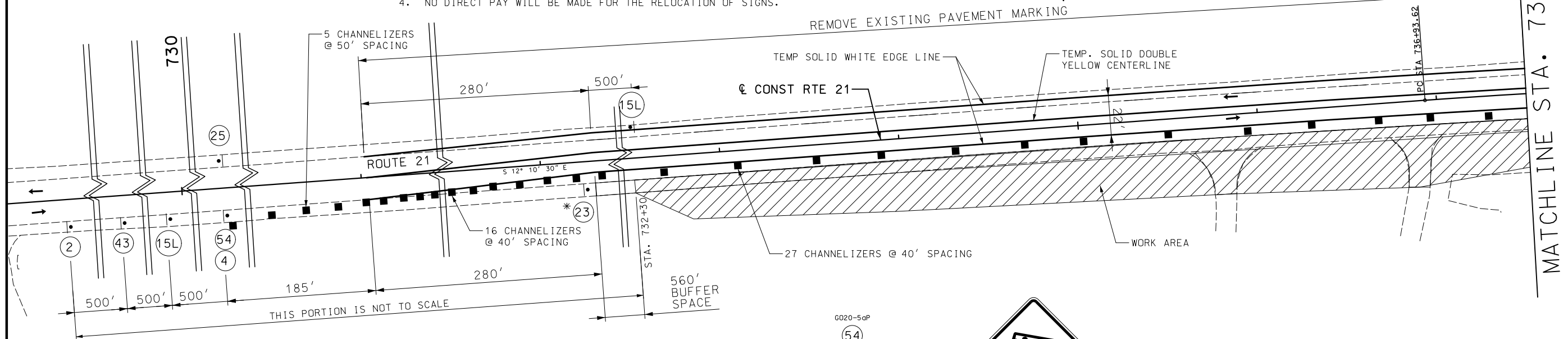
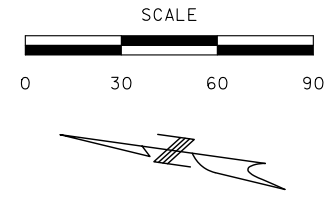
NOT TO SCALE

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

DISCLAIMER
 THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

NOTES:

1. ACCESS TO ENTRANCES MUST BE COORDINATED WITH PROPERTY OWNERS.
2. ANY EXISTING SIGNS IN CONFLICT WITH THE TRAFFIC CONTROL PLAN SHALL BE COMPLETELY COVERED OR REMOVED.
3. ALL DISTANCES AND SPACINGS OF THE TRAFFIC CONTROL DEVICES ARE APPROXIMATE AND MAY BE REVISED AS DIRECTED BY THE ENGINEER TO FIT FIELD CONDITIONS.
4. NO DIRECT PAY WILL BE MADE FOR THE RELOCATION OF SIGNS.



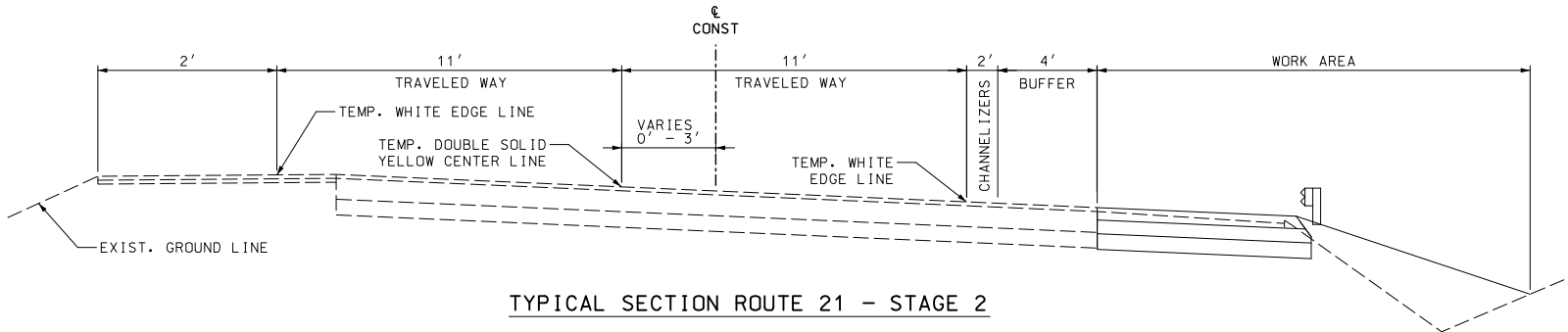
* TO BE DISPLAYED WHEN NO WORKERS ARE PRESENT

STAGE 2 - DESCRIPTION OF WORK

1. SAW CUT AND REMOVE EXISTING SHOULDER ON THE SOUTHBOUND SIDE OF ROUTE 21.
2. CONSTRUCT NEW AGGREGATE BASE.
3. PLACE NEW OPTIONAL PAVEMENT (MINUS ASPHALT SURFACE LIFT).

TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- CHANNELIZER (TRIM-LINE)
- ▨ WORK AREA



TYPICAL SECTION ROUTE 21 - STAGE 2

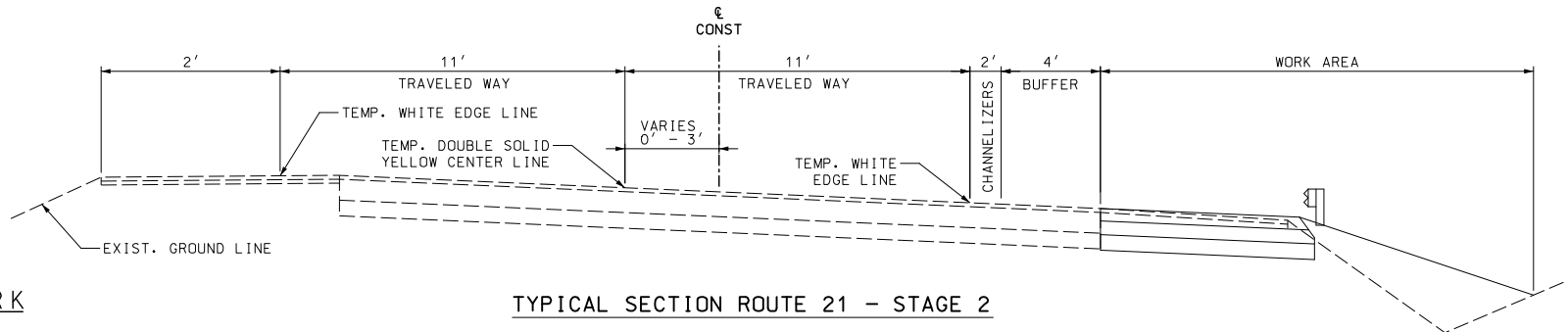
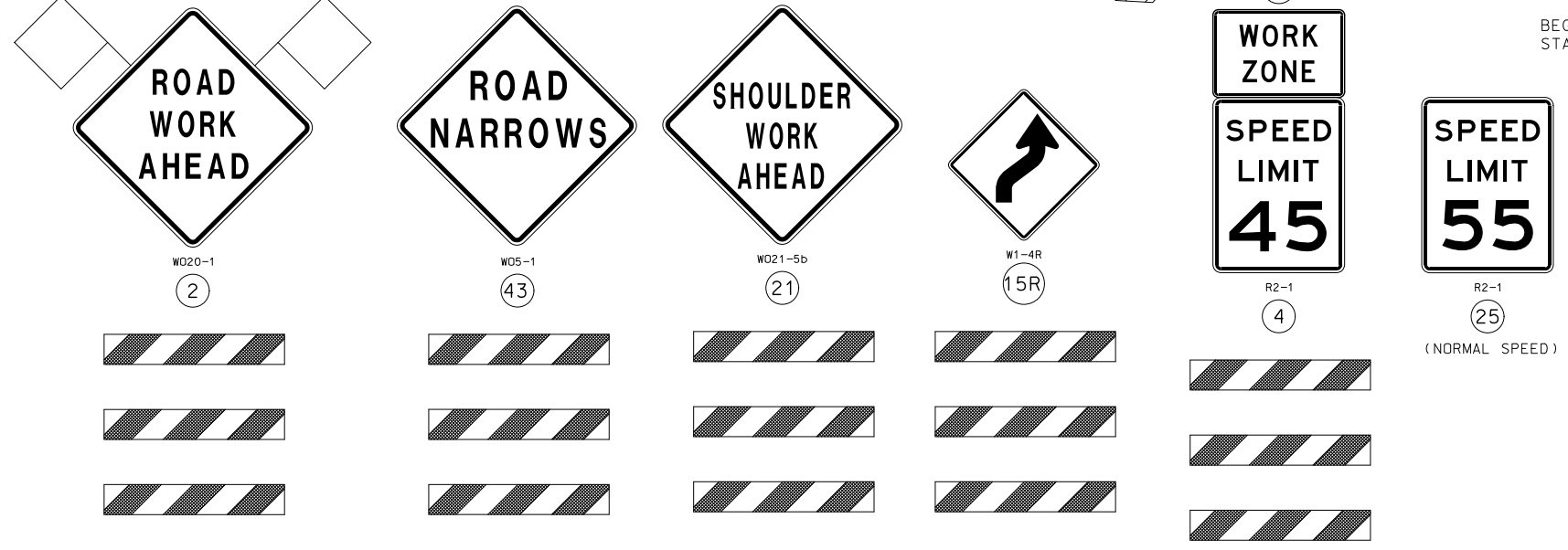
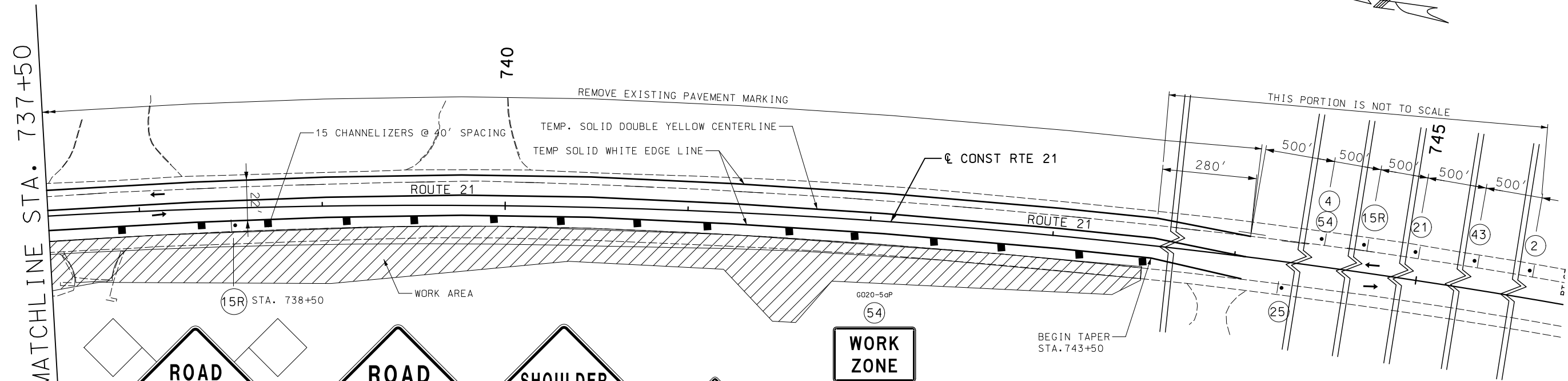
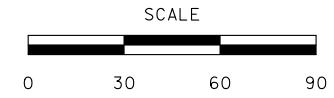
DATE PREPARED: 3/5/2019	
ROUTE: 21	STATE: MO
DISTRICT: SL	SHEET NO.: 17
COUNTY: JEFFERSON	
JOB NO.: J6P3242	
CONTRACT ID.:	
PROJECT NO.:	
BRIDGE NO.:	
DESCRIPTION:	DATE:
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION	
105 WEST CAPITOL JEFFERSON CITY, MO 65102 1-888-ASK-MODOT (1-888-275-6636)	
11820 TESSON FERRY ROAD SUITE 603 JEFFERSON CITY, MO 65128 (314) 843-8445 CIVIL ENGINEERING LICENSE OF AUTHORITY #200011568	
TEMPORARY TRAFFIC CONTROL	ROUTE 21
	SHEET 2 OF 11

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

DISCLAIMER
 THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

NOTES:

1. ACCESS TO ENTRANCES MUST BE COORDINATED WITH PROPERTY OWNERS.
2. ANY EXISTING SIGNS IN CONFLICT WITH THE TRAFFIC CONTROL PLAN SHALL BE COMPLETELY COVERED OR REMOVED.
3. ALL DISTANCES AND SPACINGS OF THE TRAFFIC CONTROL DEVICES ARE APPROXIMATE AND MAY BE REVISED AS DIRECTED BY THE ENGINEER TO FIT FIELD CONDITIONS.
4. NO DIRECT PAY WILL BE MADE FOR THE RELOCATION OF SIGNS.



STAGE 2 - DESCRIPTION OF WORK

1. SAW CUT AND REMOVE EXISTING SHOULDER ON THE SOUTHBOUND SIDE OF ROUTE 21.
2. CONSTRUCT NEW AGGREGATE BASE.
3. PLACE NEW OPTIONAL PAVEMENT (MINUS ASPHALT SURFACE LIFT).

TYPICAL SECTION ROUTE 21 - STAGE 2

HILLTOP/MACKENZIE RIDGE INTERSECTION
 TEMPORARY TRAFFIC CONTROL SHEET 2 OF 4

THIS SHEET HAS BEEN SIGNED, SEALED & DATED ELECTRONICALLY.

DATE PREPARED 3/7/2019	
ROUTE 21	STATE MO
DISTRICT SL	SHEET NO. 18
COUNTY JEFFERSON	
JOB NO. J6P3242	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

ACCESS ENGINEERING LLC

11820 TESSON FERRY ROAD
 SUITE 603
 JEFFERSON CITY, MO 65128
 (314) 843-8445
 CIVIL ENGINEERING STATE OF MISSOURI LICENSE # 2000115688

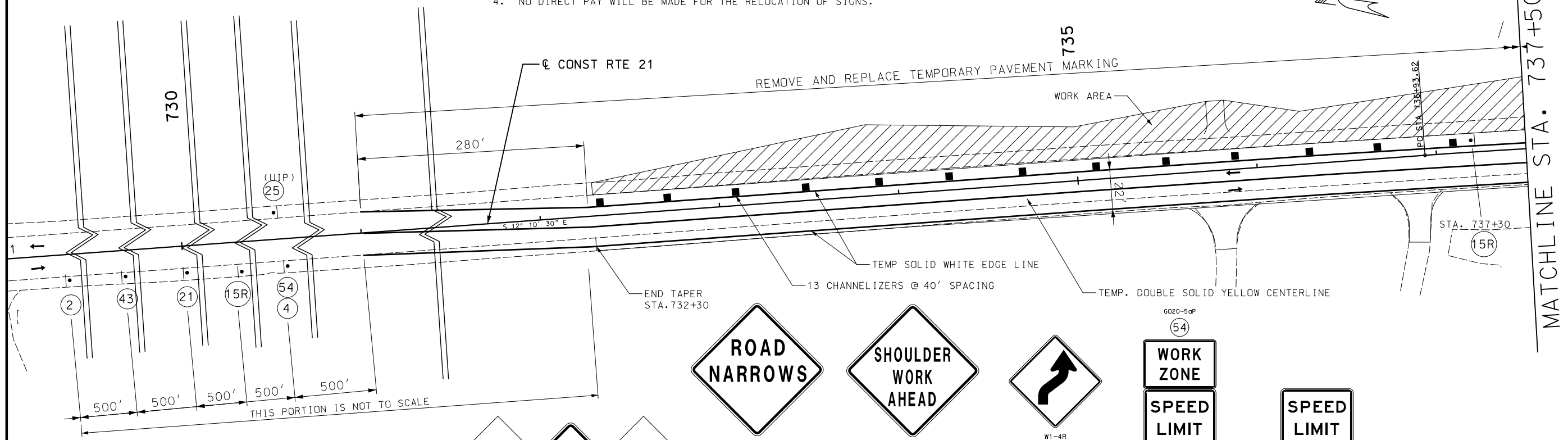
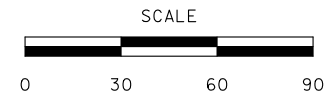
TEMPORARY TRAFFIC CONTROL
 ROUTE 21
 SHEET 3 OF 11

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

DISCLAIMER
 THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

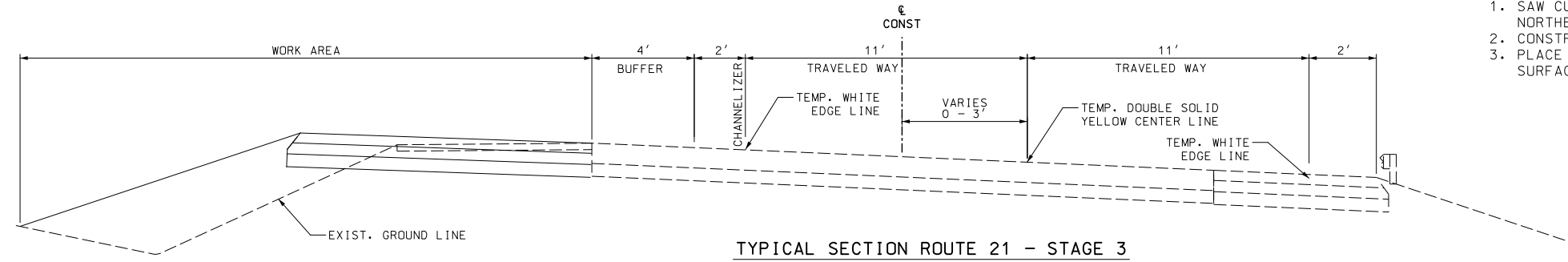
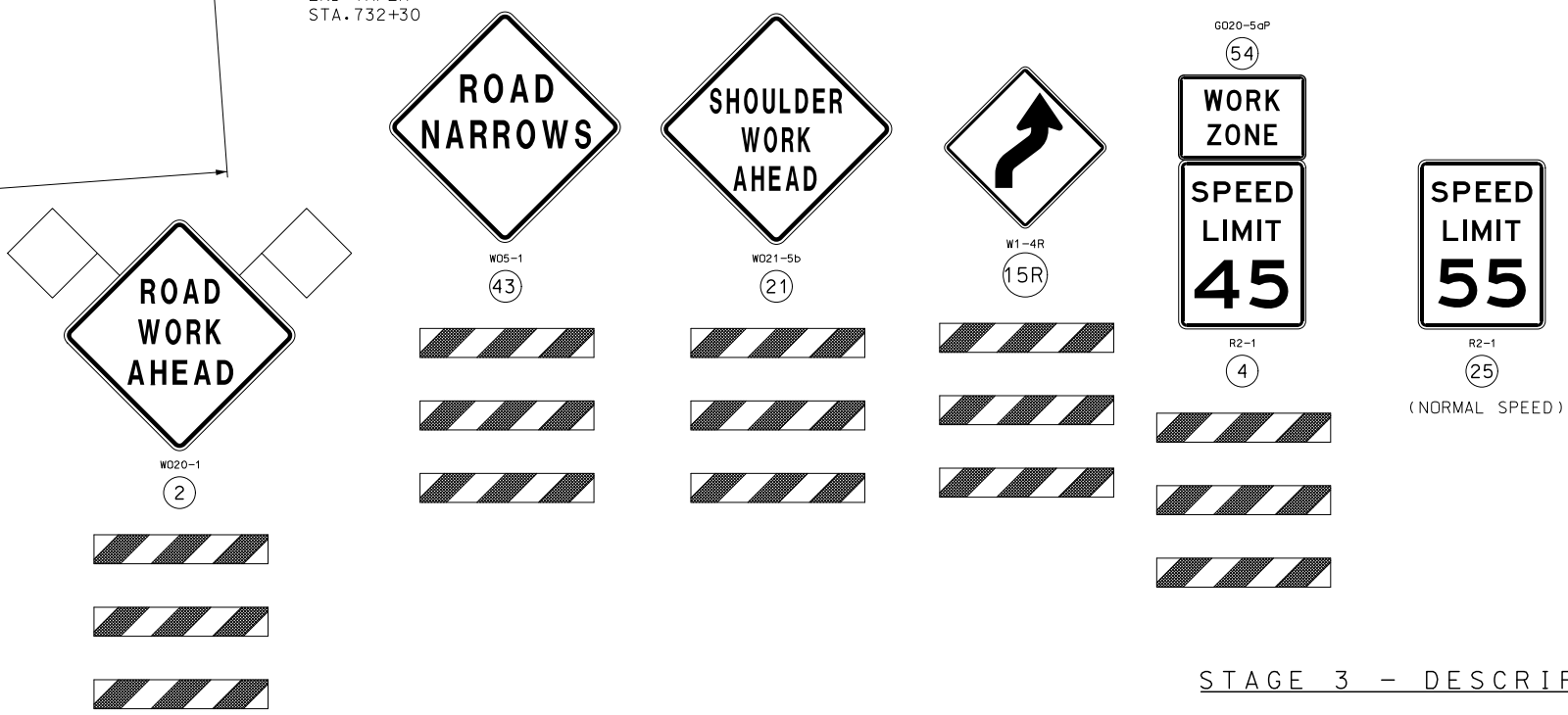
NOTES:

1. ACCESS TO ENTRANCES MUST BE COORDINATED WITH PROPERTY OWNERS.
2. ANY EXISTING SIGNS IN CONFLICT WITH THE TRAFFIC CONTROL PLAN SHALL BE COMPLETELY COVERED OR REMOVED.
3. ALL DISTANCES AND SPACINGS OF THE TRAFFIC CONTROL DEVICES ARE APPROXIMATE AND MAY BE REVISED AS DIRECTED BY THE ENGINEER TO FIT FIELD CONDITIONS.
4. NO DIRECT PAY WILL BE MADE FOR THE RELOCATION OF SIGNS.



TRAFFIC CONTROL LEGEND

- SIGN (SINGLE SIDED)
- CHANNELIZER (TRIM-LINE)
- ▨ WORK AREA



STAGE 3 - DESCRIPTION OF WORK

1. SAW CUT AND REMOVE EXISTING SHOULDER ON THE NORTHBOUND SIDE OF ROUTE 21.
2. CONSTRUCT NEW AGGREGATE BASE.
3. PLACE NEW OPTIONAL PAVEMENT (MINUS ASPHALT SURFACE LIFT).

THIS SHEET HAS BEEN SIGNED, SEALED & DATED ELECTRONICALLY.

DATE PREPARED 3/5/2019	
ROUTE 21	STATE MO
DISTRICT SL	SHEET NO. 19
COUNTY JEFFERSON	
JOB NO. J6P3242	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

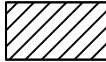


105 WEST CAPITOL
 JEFFERSON CITY, MO 65102
 1-888-ASK-MODOT (1-888-275-6636)

ACCESS ENGINEERING LLC
 11820 TESSON FERRY ROAD
 SUITE 1003 MO 63128
 (314) 843-8445
 CIVIL ENGINEERING STATE OF MISSOURI AUTHORITY #2008171588

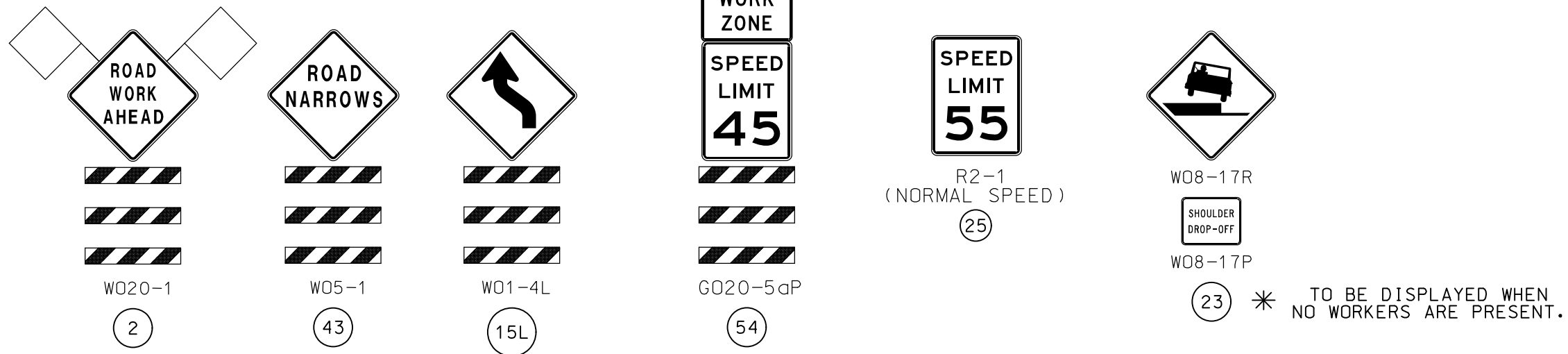
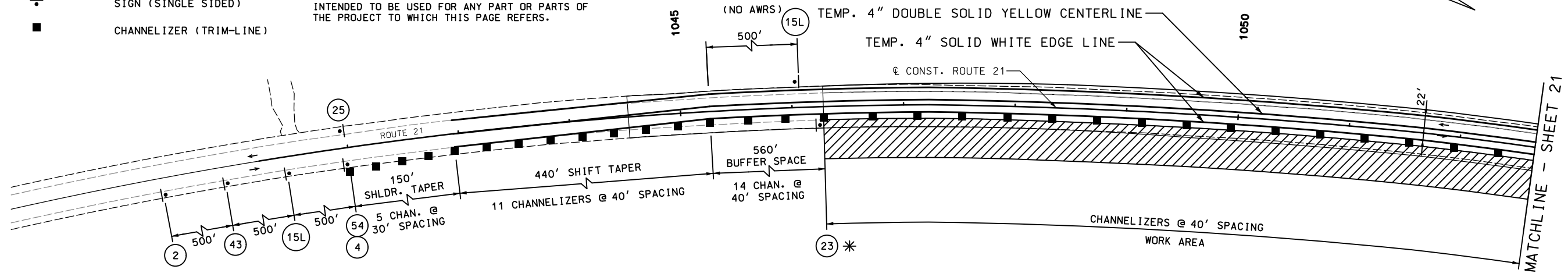
TEMPORARY TRAFFIC CONTROL
 ROUTE 21
 SHEET 4 OF 11

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

TRAFFIC CONTROL LEGEND

-  WORK AREA
-  SIGN (SINGLE SIDED)
-  CHANNELIZER (TRIM-LINE)

DISCLAIMER
 THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

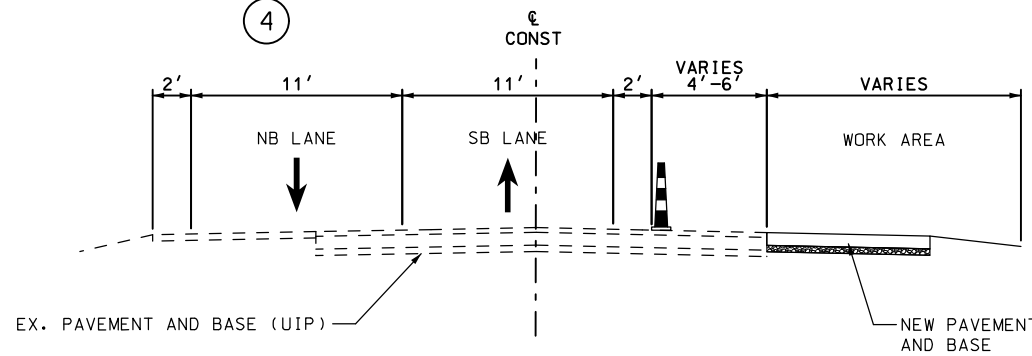


NOTES:

1. ACCESS TO ENTRANCES MUST BE COORDINATED WITH PROPERTY OWNERS.
2. ANY EXISTING SIGNS THAT CONFLICT WITH THE TRAFFIC CONTROL PLAN SHALL BE COMPLETELY COVERED OR REMOVED.
3. ALL DISTANCES AND SPACINGS OF THE TRAFFIC CONTROL DEVICES ARE APPROXIMATE AND MAY BE REVISED AS DIRECTED BY THE ENGINEER TO FIT FIELD CONDITIONS.

STAGE 2 - DESCRIPTION OF WORK

1. SAW CUT AND REMOVE EXISTING SHOULDER ON THE SOUTHBOUND SIDE OF ROUTE 21.
2. CONSTRUCT NEW AGGREGATE BASE.
3. PLACE NEW OPTIONAL PAVEMENT (MINUS ASPHALT SURFACE LIFT).

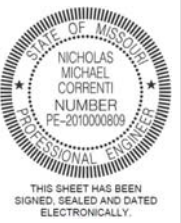


TYPICAL SECTION ROUTE 21 - STAGE 2

AMVETS DRIVE INTERSECTION

SHEET 1 OF 4

NOT TO SCALE



DATE PREPARED 3/7/2019	
ROUTE 21	STATE MO
DISTRICT SL	SHEET NO. 21
COUNTY JEFFERSON	
JOB NO. J6P3242	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION



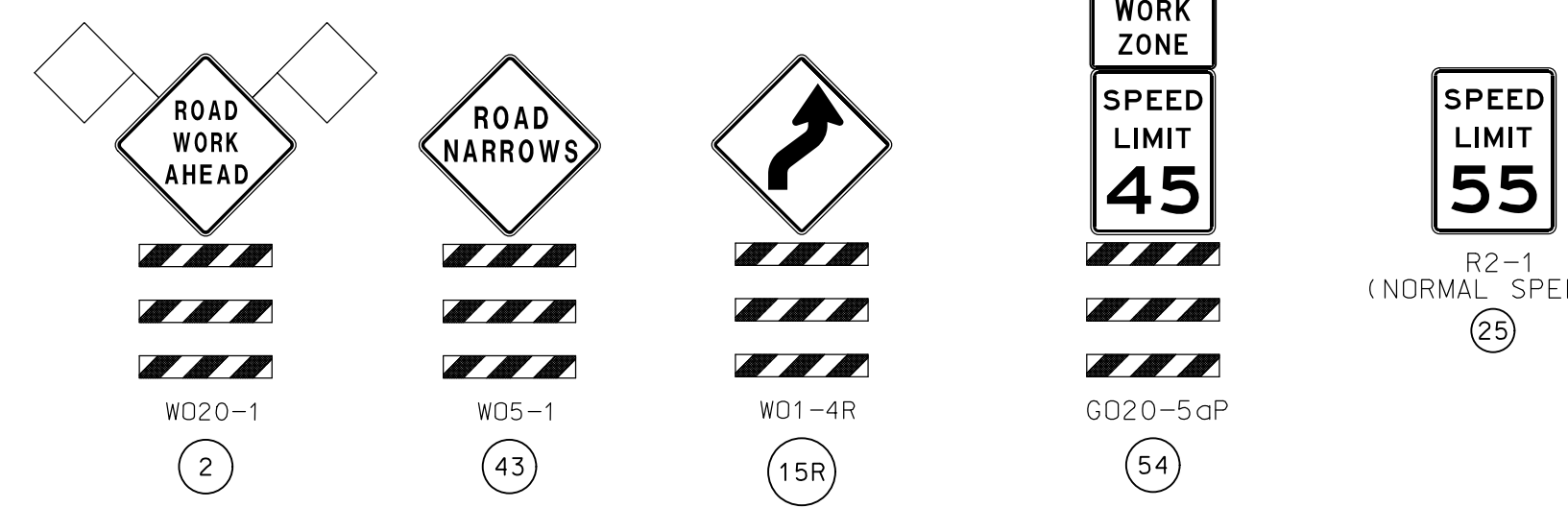
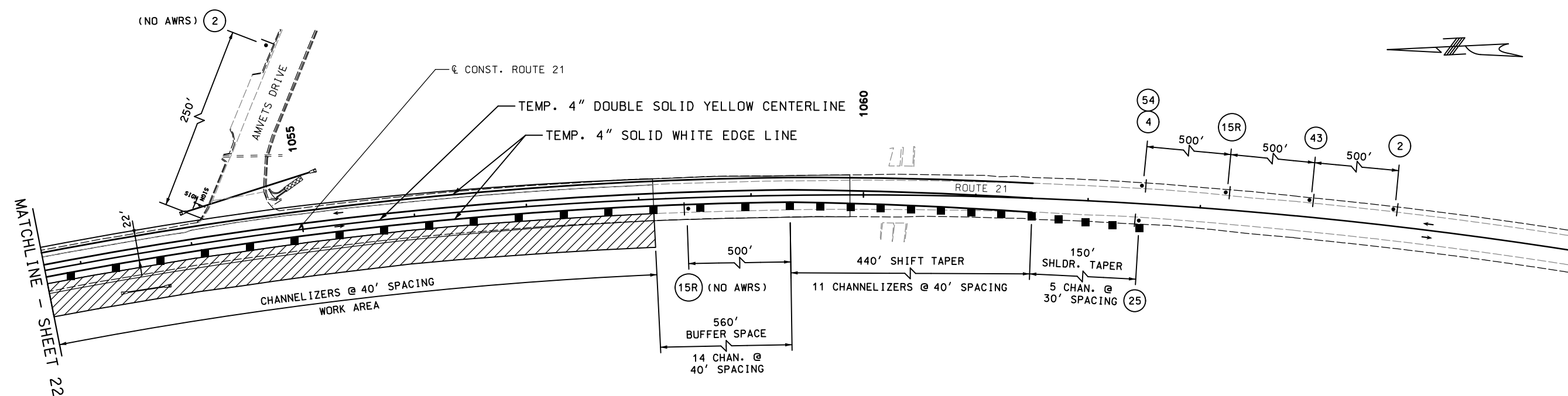
105 WEST CAPITOL
 JEFFERSON CITY, MO 65102
 1-888-ASK-MODOT (1-888-275-6636)



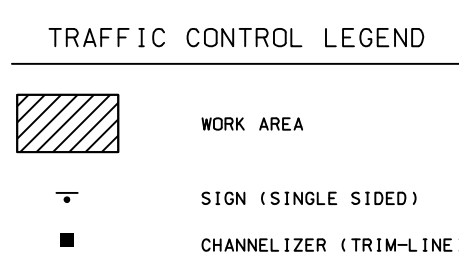
TWM
 ENGINEERING
 GEOSPATIAL SERVICES
 720 OLIVE STREET, SUITE 200A
 ST. LOUIS, MO 63101
 www.twm-inc.com
 MISSOURI CERT. OF AUTHORITY: 001528

TEMPORARY TRAFFIC CONTROL
 ROUTE 21
 SHEET 6 OF 11

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



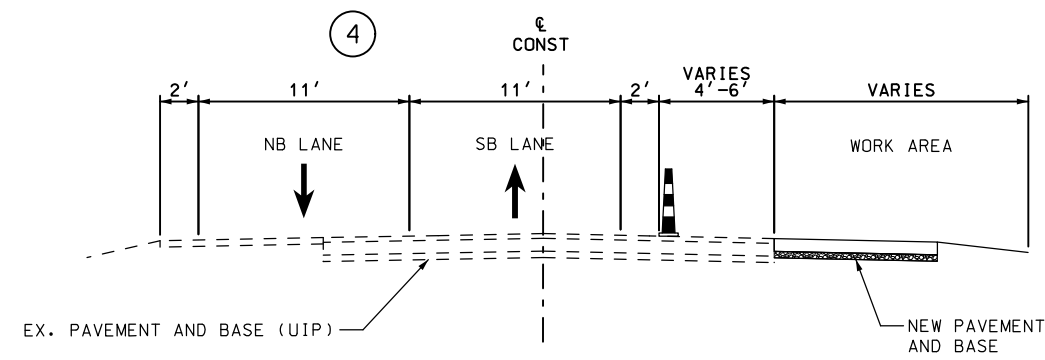
- NOTES:
1. ACCESS TO ENTRANCES MUST BE COORDINATED WITH PROPERTY OWNERS.
 2. ANY EXISTING SIGNS THAT CONFLICT WITH THE TRAFFIC CONTROL PLAN SHALL BE COMPLETELY COVERED OR REMOVED.
 3. ALL DISTANCES AND SPACINGS OF THE TRAFFIC CONTROL DEVICES ARE APPROXIMATE AND MAY BE REVISED AS DIRECTED BY THE ENGINEER TO FIT FIELD CONDITIONS.



DISCLAIMER
 THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

STAGE 2 - DESCRIPTION OF WORK

1. SAW CUT AND REMOVE EXISTING SHOULDER ON THE SOUTHBOUND SIDE OF ROUTE 21.
2. CONSTRUCT NEW AGGREGATE BASE.
3. PLACE NEW OPTIONAL PAVEMENT (MINUS ASPHALT SURFACE LIFT).



TYPICAL SECTION ROUTE 21 - STAGE 2

AMVETS DRIVE INTERSECTION
 SHEET 2 OF 4
 NOT TO SCALE

STATE OF MISSOURI
 NICHOLAS MICHAEL CORRENTI
 LICENSE NUMBER PE-2010000809
 PROFESSIONAL ENGINEER

THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED 3/7/2019	
ROUTE 21	STATE MO
DISTRICT SL	SHEET NO. 22
COUNTY JEFFERSON	
JOB NO. J6P3242	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DESCRIPTION	DATE

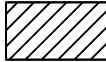


MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

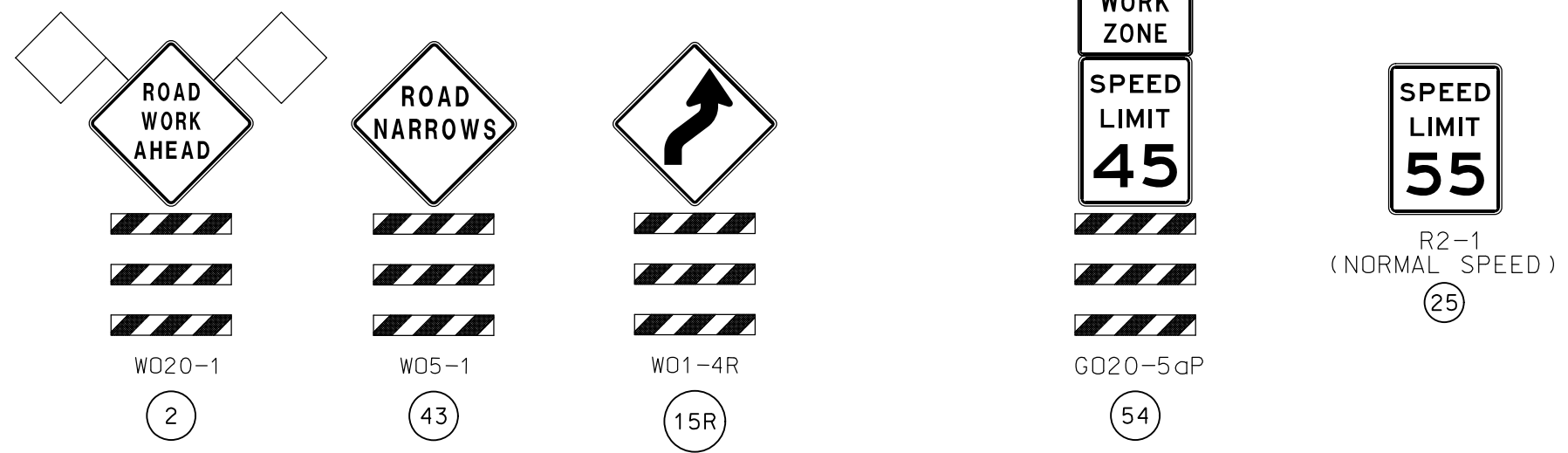
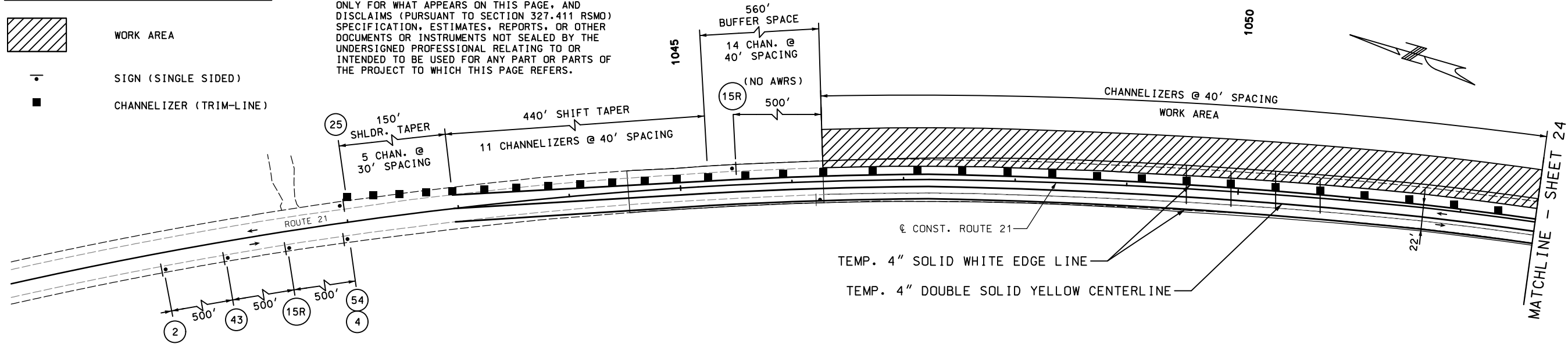
TWM ENGINEERING GEOSPATIAL SERVICES
 720 OLIVE STREET, SUITE 200A
 ST. LOUIS, MO 63101
 www.twm-inc.com
 MISSOURI CERT. OF AUTHORITY: 001528

TEMPORARY TRAFFIC CONTROL ROUTE 21 SHEET 2 OF 11

TRAFFIC CONTROL LEGEND

-  WORK AREA
-  SIGN (SINGLE SIDED)
-  CHANNELIZER (TRIM-LINE)

DISCLAIMER
 THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

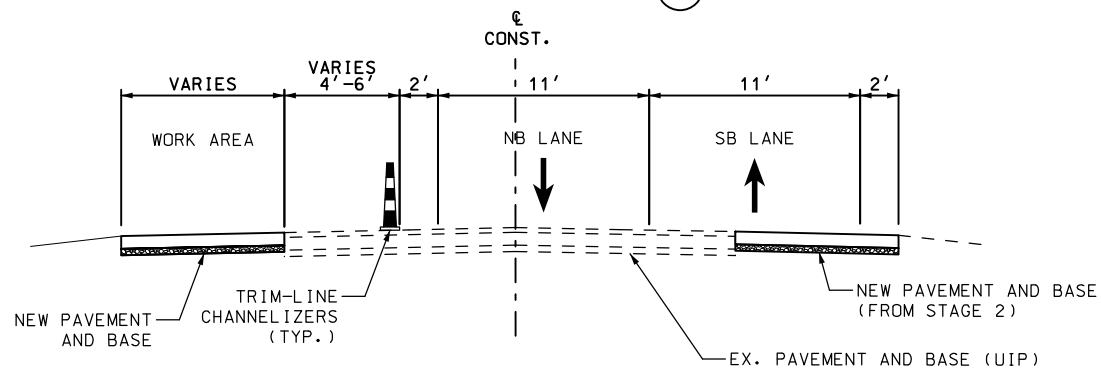


NOTES:

1. ACCESS TO ENTRANCES MUST BE COORDINATED WITH PROPERTY OWNERS.
2. ANY EXISTING SIGNS THAT CONFLICT WITH THE TRAFFIC CONTROL PLAN SHALL BE COMPLETELY COVERED OR REMOVED.
3. ALL DISTANCES AND SPACINGS OF THE TRAFFIC CONTROL DEVICES ARE APPROXIMATE AND MAY BE REVISED AS DIRECTED BY THE ENGINEER TO FIT FIELD CONDITIONS.

STAGE 3 - DESCRIPTION OF WORK

1. SAW CUT AND REMOVE EXISTING SHOULDER ON THE NORTHBOUND SIDE OF ROUTE 21.
2. CONSTRUCT NEW AGGREGATE BASE.
3. PLACE NEW OPTIONAL PAVEMENT (MINUS ASPHALT SURFACE LIFT).

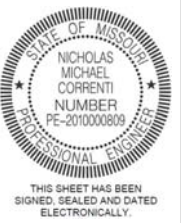


TYPICAL SECTION ROUTE 21 - STAGE 3

AMVETS DRIVE INTERSECTION

SHEET 3 OF 4

NOT TO SCALE



DATE PREPARED 3/7/2019	
ROUTE 21	STATE MO
DISTRICT SL	SHEET NO. 23
COUNTY JEFFERSON	
JOB NO. J6P3242	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DESCRIPTION	DATE

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION



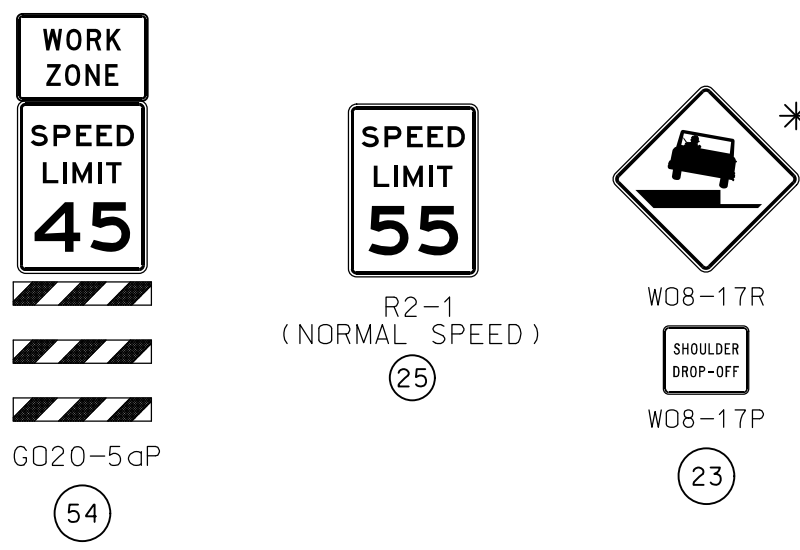
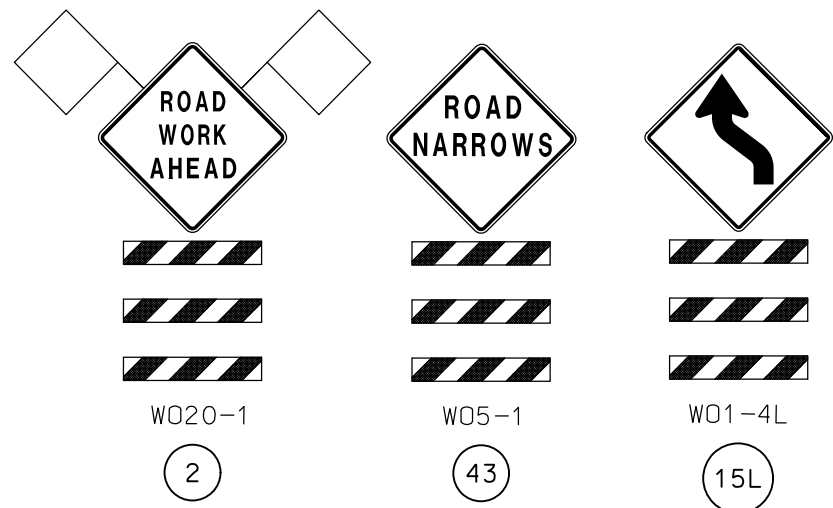
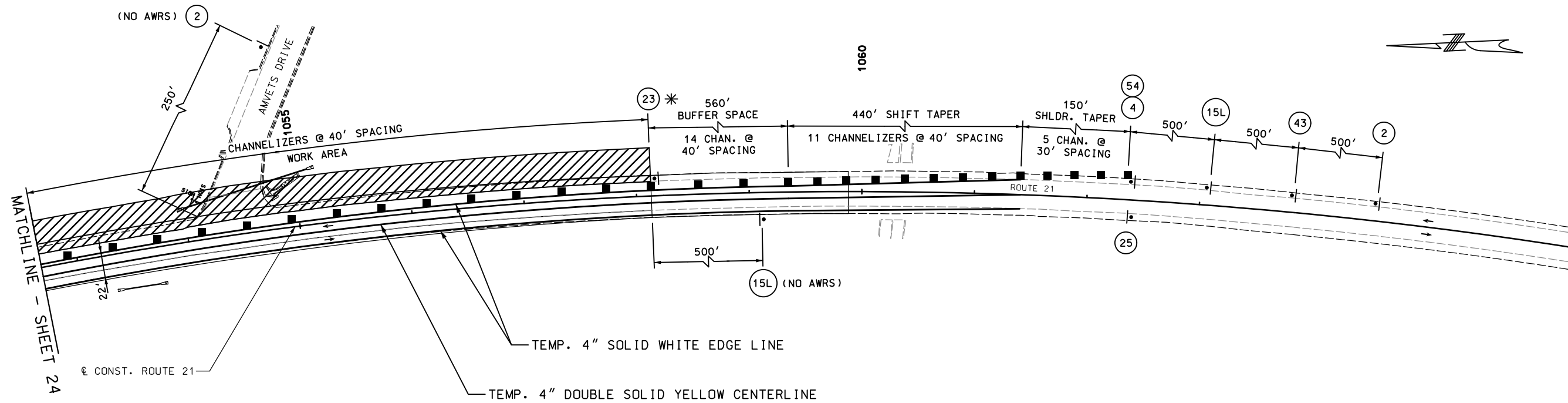
105 WEST CAPITOL
 JEFFERSON CITY, MO 65102
 1-888-ASK-MODOT (1-888-275-6636)



TWM
 ENGINEERING SERVICES
 GEOSPATIAL SERVICES
 720 OLIVE STREET, SUITE 200A
 ST. LOUIS, MO 63101
 www.twm-inc.com
 MISSOURI CERT. OF AUTHORITY: 001528

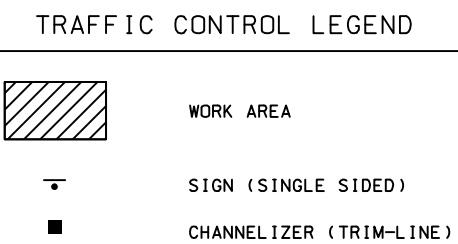
TEMPORARY TRAFFIC CONTROL
 ROUTE 21
 SHEET 8 OF 11

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



* TO BE DISPLAYED WHEN NO WORKERS ARE PRESENT.

DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

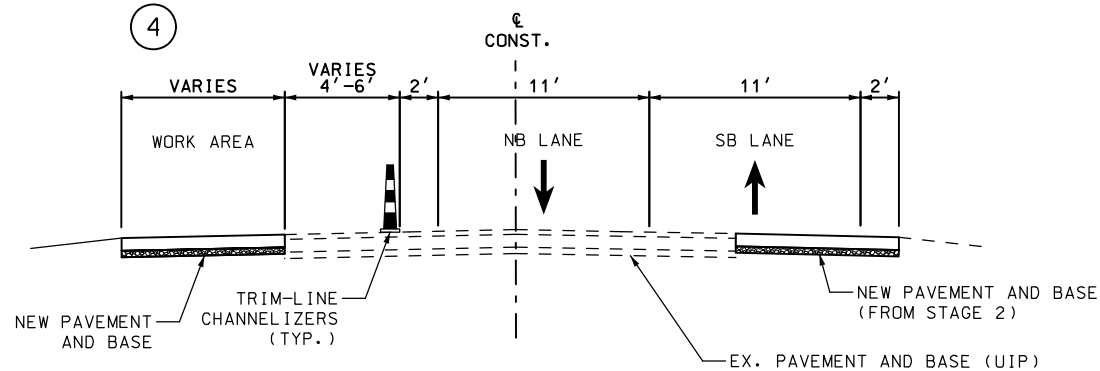


NOTES:

1. ACCESS TO ENTRANCES MUST BE COORDINATED WITH PROPERTY OWNERS.
2. ANY EXISTING SIGNS THAT CONFLICT WITH THE TRAFFIC CONTROL PLAN SHALL BE COMPLETELY COVERED OR REMOVED.
3. ALL DISTANCES AND SPACINGS OF THE TRAFFIC CONTROL DEVICES ARE APPROXIMATE AND MAY BE REVISED AS DIRECTED BY THE ENGINEER TO FIT FIELD CONDITIONS.

STAGE 3 - DESCRIPTION OF WORK

1. SAW CUT AND REMOVE EXISTING SHOULDER ON THE NORTHBOUND SIDE OF ROUTE 21.
2. CONSTRUCT NEW AGGREGATE BASE.
3. PLACE NEW OPTIONAL PAVEMENT (MINUS SURFACE LIFT).

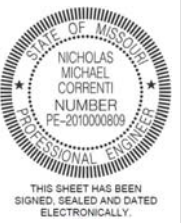


TYPICAL SECTION ROUTE 21 - STAGE 3

AMVETS DRIVE INTERSECTION

SHEET 4 OF 4

NOT TO SCALE



DATE PREPARED 3/7/2019	
ROUTE 21	STATE MO
DISTRICT SL	SHEET NO. 2-4
COUNTY JEFFERSON	
JOB NO. J6P3242	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DESCRIPTION	DATE

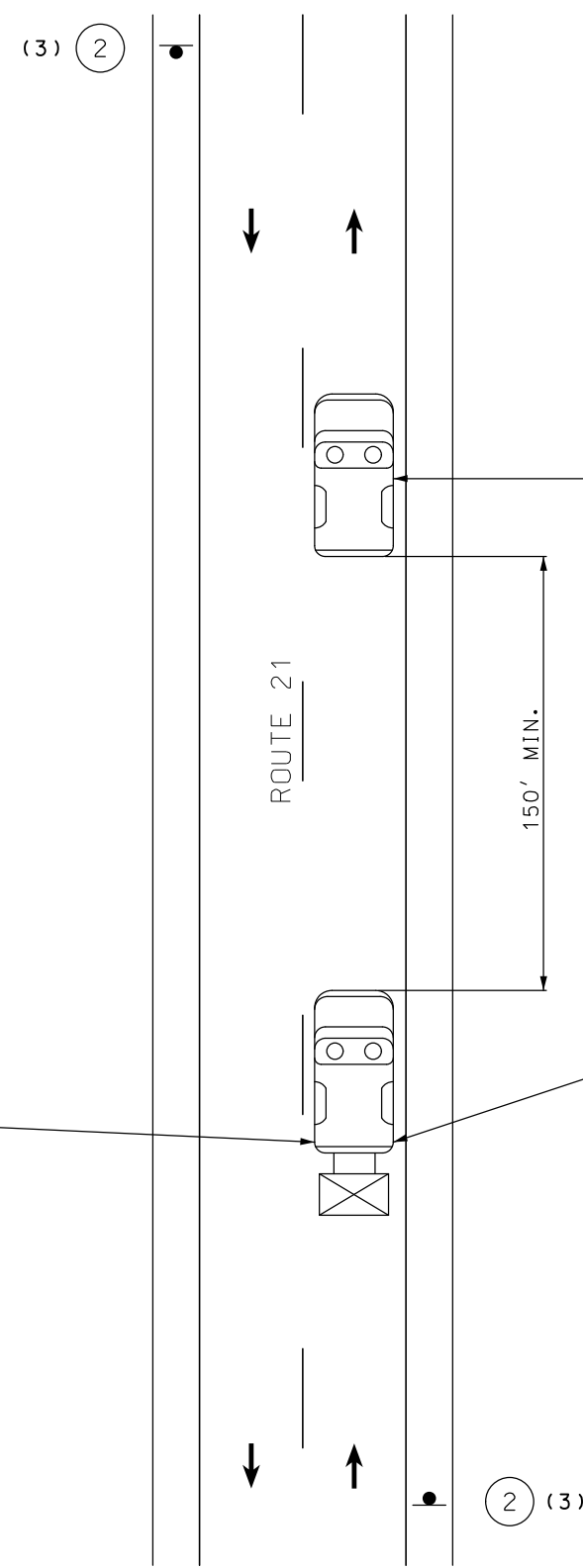
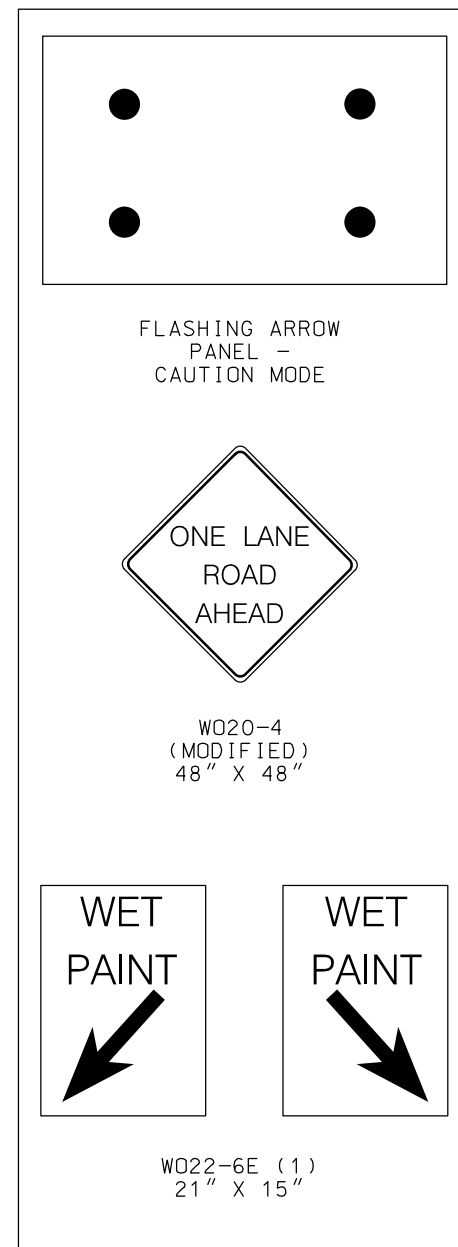
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

TWM ENGINEERING SERVICES
 720 OLIVE STREET, SUITE 200A
 ST. LOUIS 63101
 www.twm-inc.com
 MISSOURI CERT. OF AUTHORITY: 001528

TEMPORARY TRAFFIC CONTROL
 ROUTE 21
 SHEET 9 OF 11

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

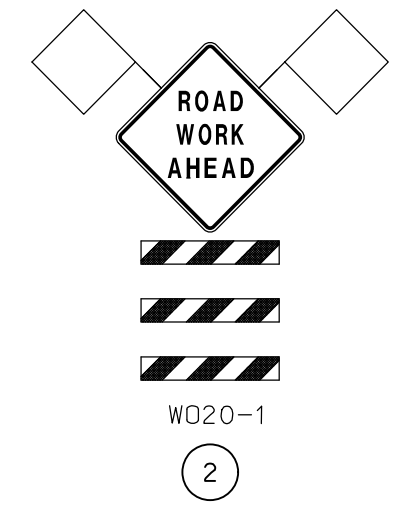


- GENERAL NOTES:
1. ACCESS TO ENTRANCES MUST BE COORDINATED WITH PROPERTY OWNERS.
 2. ANY EXISTING SIGNS THAT CONFLICT WITH THE TRAFFIC CONTROL PLAN SHALL BE COMPLETELY COVERED OR REMOVED.
 3. ALL DISTANCES AND SPACINGS OF THE TRAFFIC CONTROL DEVICES ARE APPROXIMATE AND MAY BE REVISED AS DIRECTED BY THE ENGINEER TO FIT FIELD CONDITIONS.

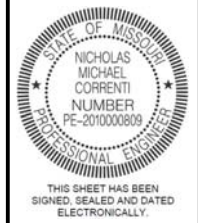
DISCLAIMER
 THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

TRAFFIC CONTROL LEGEND

● SIGN (SINGLE SIDED)



- NOTES:
- ALL SIGNS HAVE FLUORESCENT ORANGE RETROREFLECTIVE.
- (1) WET PAINT SIGNS ARE INSTALLED TO INDICATE THE SIDE WHICH THE PAVEMENT MARKING MATERIAL IS BEING APPLIED. AT THE CONTRACTOR'S OPTION, A FRONT FACING WET PAINT SIGN MAY BE INSTALLED ON THE LEFT SIDE OF THE PAVEMENT MARKING EQUIPMENT.
 - (2) ADVANCE WARNING TRUCK IS POSITIONED AT THE NO TRACK POINT OF THE PAVEMENT MARKING MATERIAL OR SPACING SHOWN, WHICHEVER IS GREATER.
 - (3) ROAD WORK AHEAD SIGNS ARE TO BE PLACED A MINIMUM OF 500 FEET IN ADVANCE OF THE AREA TO BE STRIPED.



DATE PREPARED 3/7/2019	
ROUTE 21	STATE MO
DISTRICT SL	SHEET NO. 26
COUNTY JEFFERSON	
JOB NO. J6P3242	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

TWM ENGINEERING SERVICES
 720 OLIVE STREET, SUITE 200A
 ST. LOUIS, MO 63101
 www.twm-inc.com
 MISSOURI CERT. OF AUTHORITY: 001528

CENTERLINE/EDGELINE STRIPING ON TWO-LANE HIGHWAYS

ROUTE 21 MOVING OPERATION

SHEET 1 OF 1

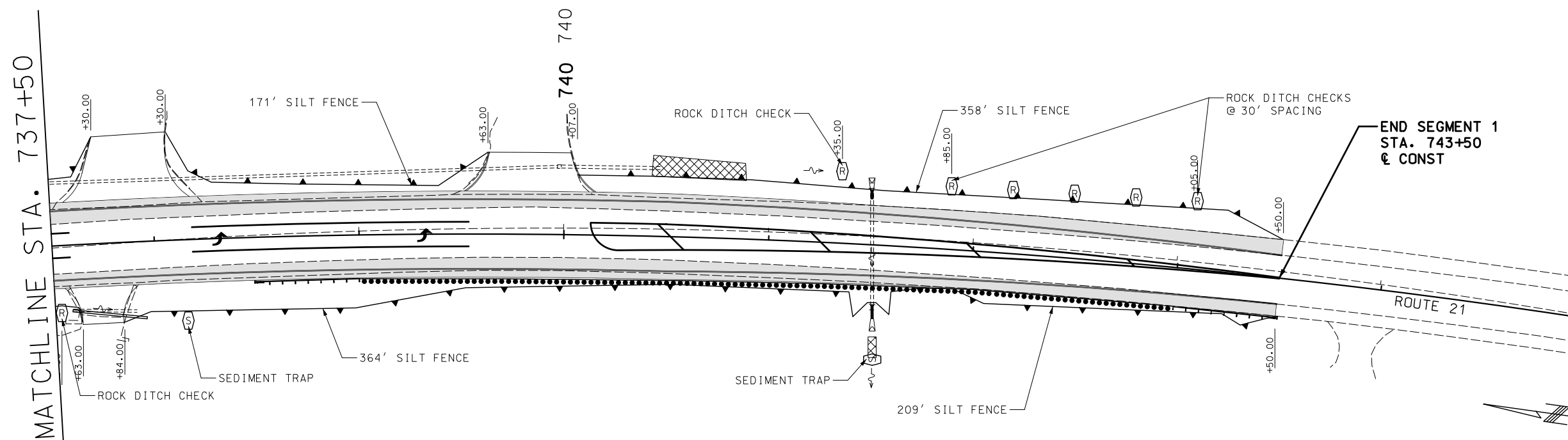
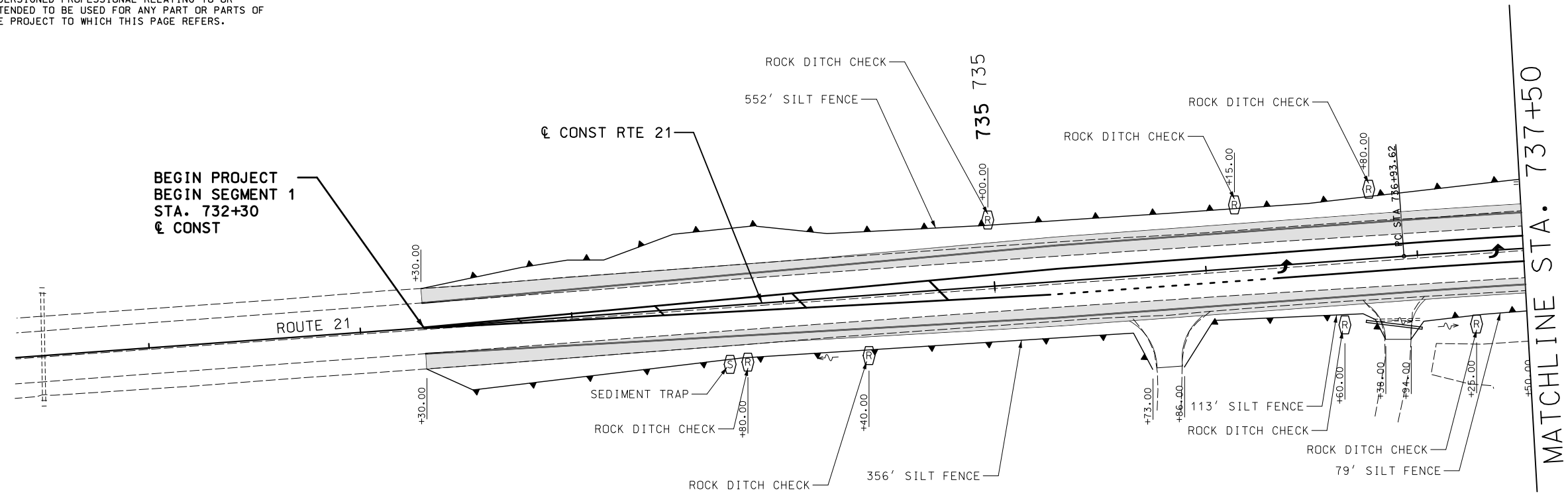
NOT TO SCALE

TEMPORARY TRAFFIC CONTROL
 ROUTE 21
 SHEET 11 OF 11

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

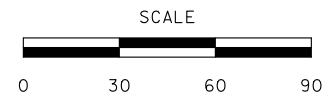
DISCLAIMER
 THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

NOTES:
 ANY WORK INDICATED ON THE PLANS THAT EXTENDS BEYOND THE PROJECT LIMITS IS CONSIDERED INCIDENTAL TO AND A PART OF THE CONSTRUCTION OF THIS PROJECT.



TEMPORARY EROSION CONTROL LEGEND	
	ROCK DITCH CHECK
	SEDIMENT TRAP
	SILT FENCE

PRIMARY RECEIVING WATERS: MURRIL BRANCH AND SHEPLEY HOLLOW
 SECONDARY: COTTER CREEK



HILLTOP/MACKENZIE RIDGE INTERSECTION
 EROSION CONTROL SHEET 1 OF 1



THIS SHEET HAS BEEN SIGNED, SEALED & DATED ELECTRONICALLY.

DATE PREPARED 3/7/2019	
ROUTE 21	STATE MO
DISTRICT SL	SHEET NO. 27
COUNTY JEFFERSON	
JOB NO. J6P3242	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DESCRIPTION	DATE

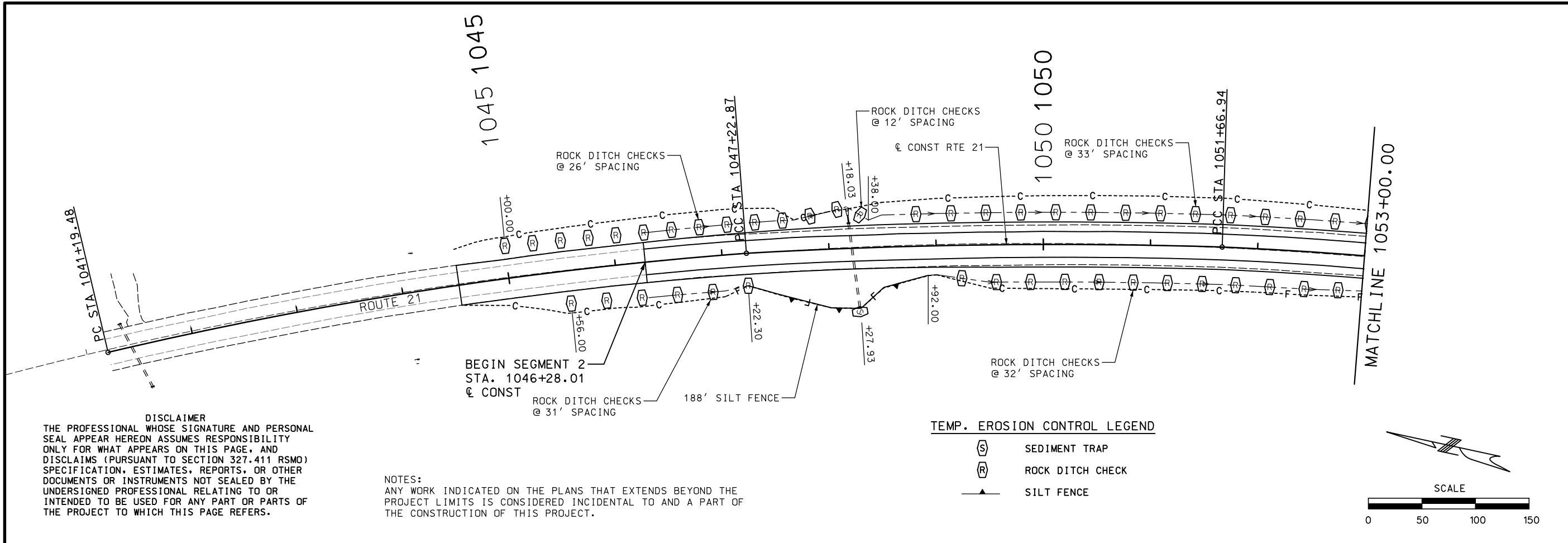
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

ACCESS ENGINEERING LLC
 11820 TESSON FERRY ROAD
 SUITE 603
 JEFFERSON CITY, MO 65128
 (314) 849-8445
 CIVIL ENGINEERING
 AUTHORITY #200812588

EROSION CONTROL
 ROUTE 21
 SHEET 1 OF 2

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

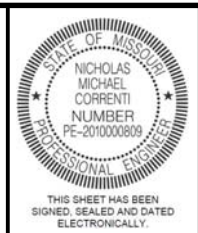


DISCLAIMER
 THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

NOTES:
 ANY WORK INDICATED ON THE PLANS THAT EXTENDS BEYOND THE PROJECT LIMITS IS CONSIDERED INCIDENTAL TO AND A PART OF THE CONSTRUCTION OF THIS PROJECT.

TEMP. EROSION CONTROL LEGEND

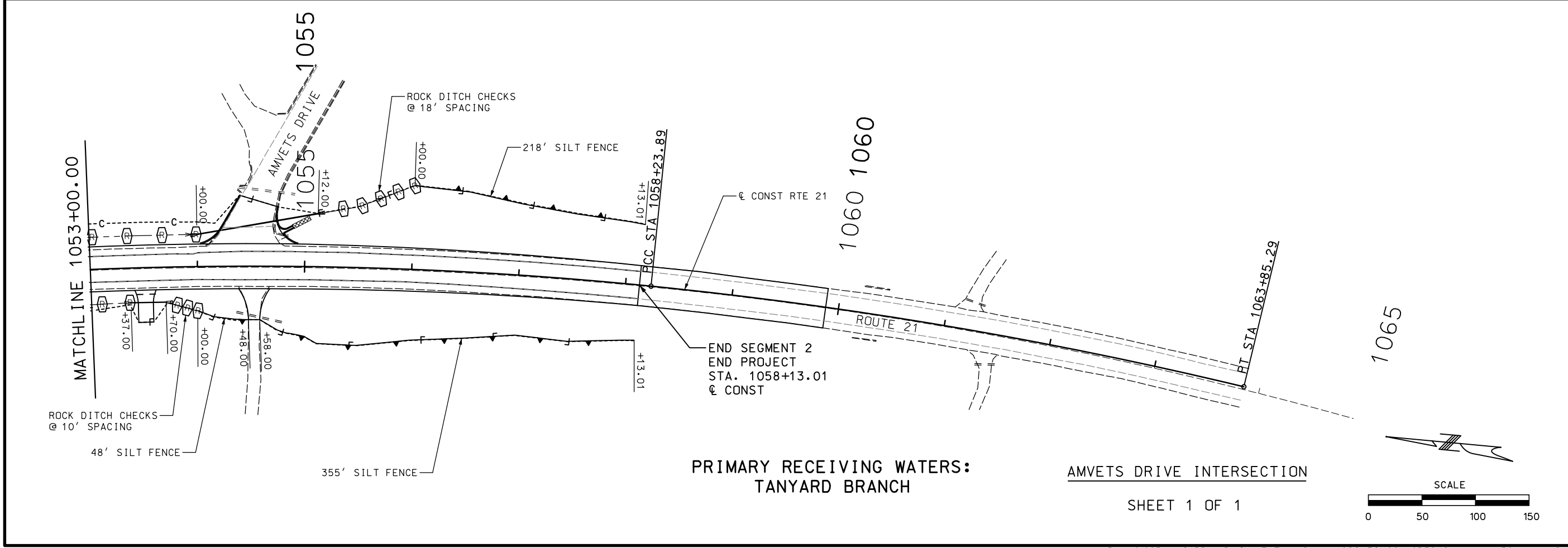
- SEDIMENT TRAP
- ROCK DITCH CHECK
- SILT FENCE



DATE PREPARED 3/7/2019	
ROUTE 21	STATE MO
DISTRICT SL	SHEET NO. 28
COUNTY JEFFERSON	
JOB NO. J6P3242	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DATE	DESCRIPTION

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



PRIMARY RECEIVING WATERS:
 TANYARD BRANCH

AMVETS DRIVE INTERSECTION

SHEET 1 OF 1

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

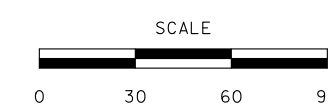
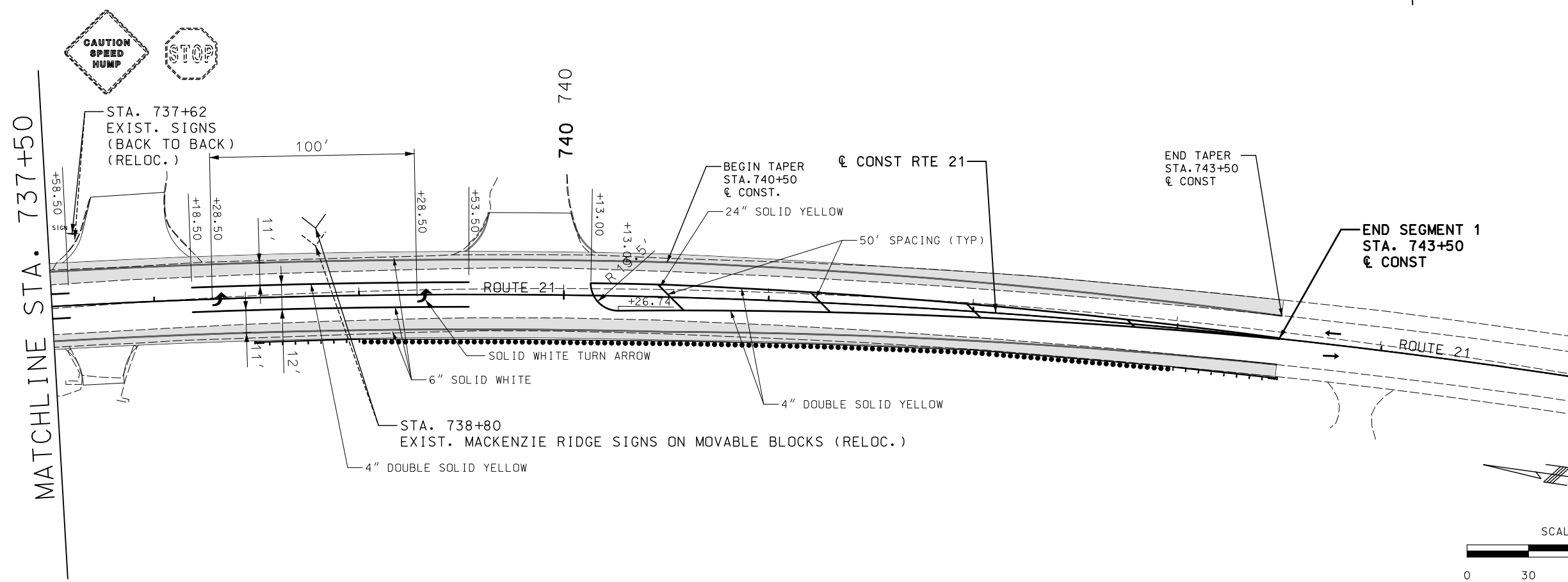
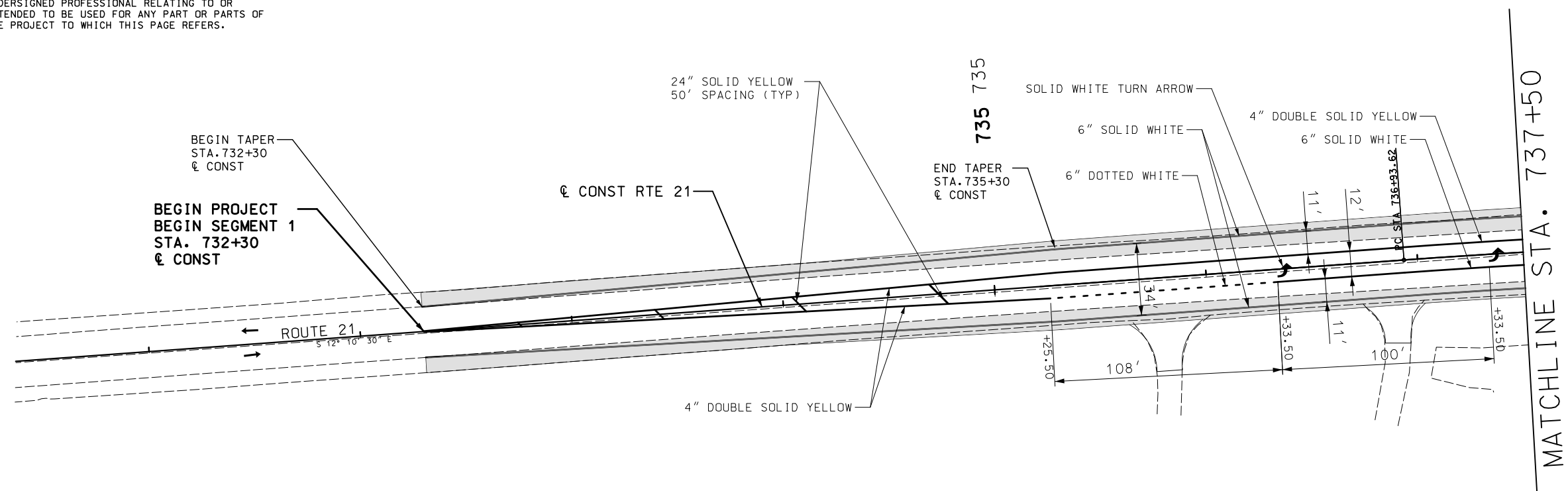
105 WEST CAPITOL
 JEFFERSON CITY, MO 65102
 1-888-ASK-MODOT (1-888-275-6636)

TWM
 ENGINEERING
 GEOSPATIAL SERVICES
 720 OLIVE STREET, SUITE 200A
 ST. LOUIS, MO 63101
 www.twm-inc.com
 MISSOURI CERT. OF AUTHORITY: 001528

EROSION CONTROL
 ROUTE 21
 SHEET 2 OF 2

DISCLAIMER
 THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.

NOTES:
 ANY WORK INDICATED ON THE PLANS THAT EXTENDS BEYOND THE PROJECT LIMITS IS CONSIDERED INCIDENTAL TO AND A PART OF THE CONSTRUCTION OF THIS PROJECT.



HILLTOP/MACKENZIE RIDGE INTERSECTION
 PAVEMENT MARKING SHEET 1 OF 1



THIS SHEET HAS BEEN SIGNED, SEALED & DATED ELECTRONICALLY.

DATE PREPARED 3/5/2019	
ROUTE 21	STATE MO
DISTRICT SL	SHEET NO. 29
COUNTY JEFFERSON	
JOB NO. J6P3242	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	

DATE	DESCRIPTION

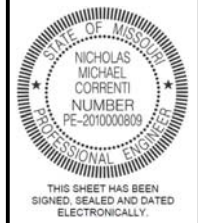
MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

ACCESS ENGINEERING LLC
 11820 TESSON FERRY ROAD
 SUITE 602
 JEFFERSON CITY, MO 65128
 (314) 843-8445
 CIVIL ENGINEERING STATE OF MISSOURI LICENSE # 2006115688

PAVEMENT MARKING AND SIGNING
 ROUTE 21
 SHEET 1 OF 2

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



THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

DATE PREPARED: 3/8/2019

ROUTE 21	STATE MO
DISTRICT SL	SHEET NO. 30

COUNTY: JEFFERSON

JOB NO.: J6P3242

CONTRACT ID.:

PROJECT NO.:

BRIDGE NO.:

DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

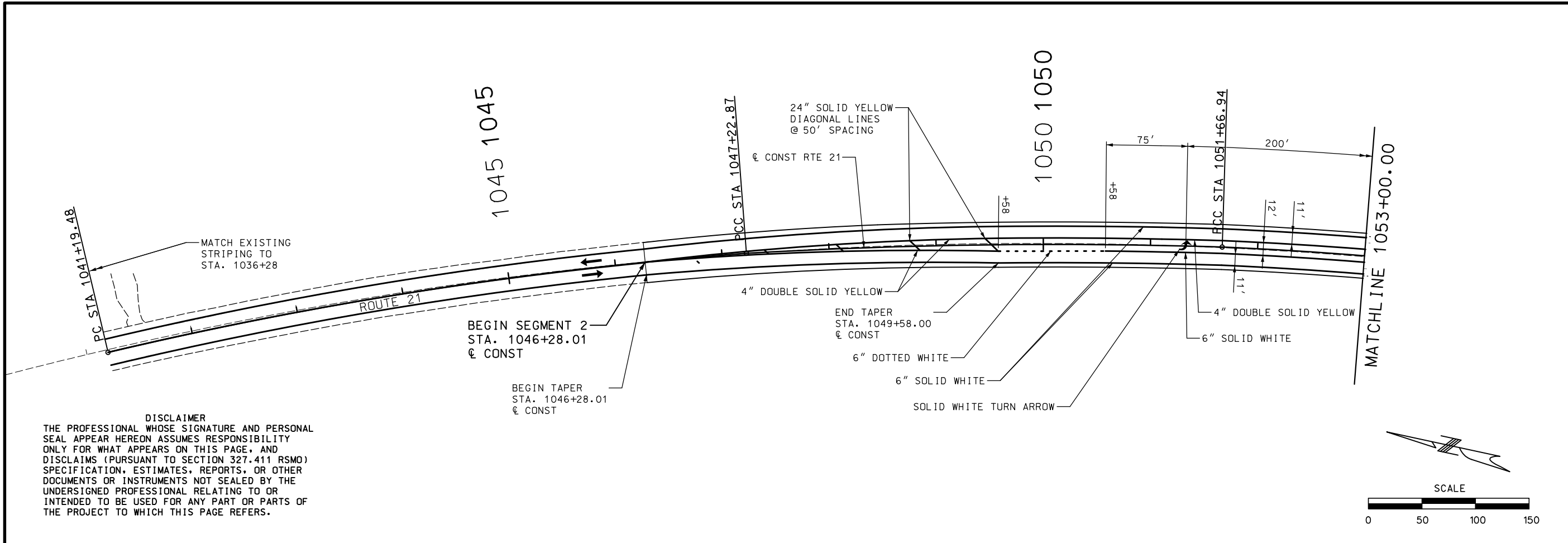
105 WEST CAPITOL JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

TWM ENGINEERING SERVICES
720 OLIVE STREET, SUITE 200A
ST. LOUIS, MO 63101
www.twm-inc.com
MISSOURI CERT. OF AUTHORITY: 001528

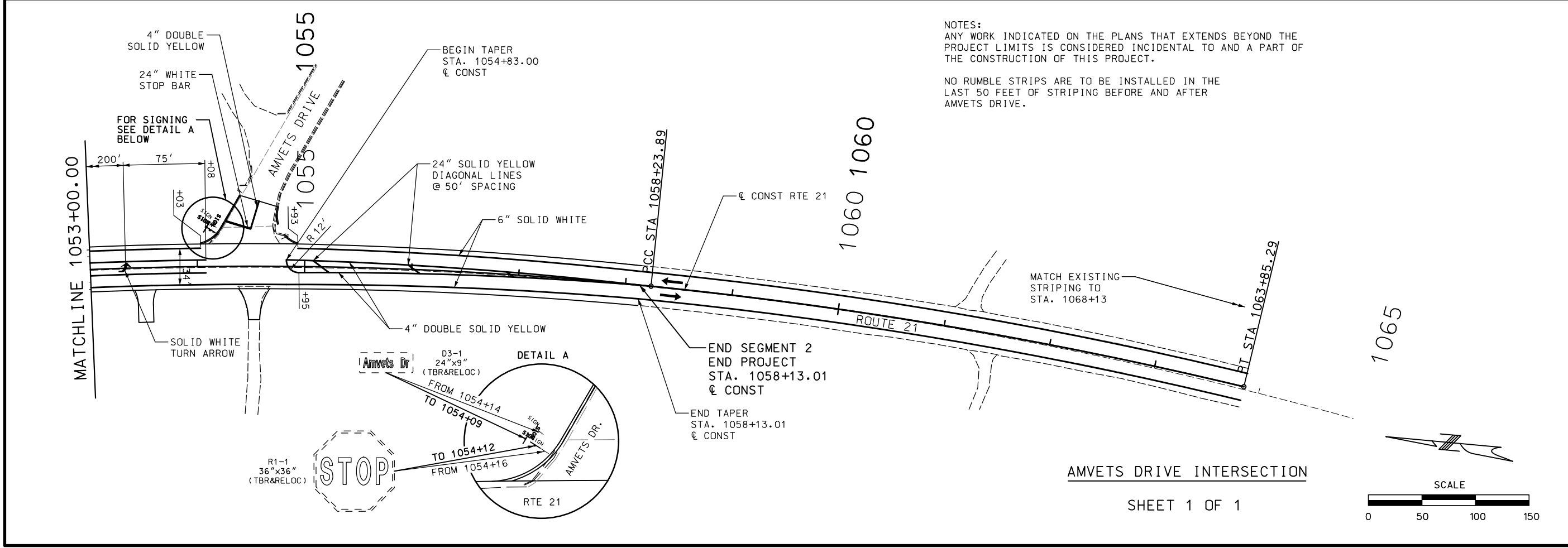
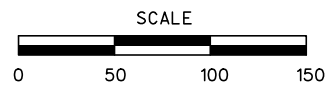
PAVEMENT MARKING AND SIGNING

ROUTE 21

SHEET 2 OF 2

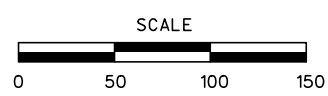


DISCLAIMER
THE PROFESSIONAL WHOSE SIGNATURE AND PERSONAL SEAL APPEAR HEREON ASSUMES RESPONSIBILITY ONLY FOR WHAT APPEARS ON THIS PAGE, AND DISCLAIMS (PURSUANT TO SECTION 327.411 RSMO) SPECIFICATION, ESTIMATES, REPORTS, OR OTHER DOCUMENTS OR INSTRUMENTS NOT SEALED BY THE UNDERSIGNED PROFESSIONAL RELATING TO OR INTENDED TO BE USED FOR ANY PART OR PARTS OF THE PROJECT TO WHICH THIS PAGE REFERS.



NOTES:
ANY WORK INDICATED ON THE PLANS THAT EXTENDS BEYOND THE PROJECT LIMITS IS CONSIDERED INCIDENTAL TO AND A PART OF THE CONSTRUCTION OF THIS PROJECT.

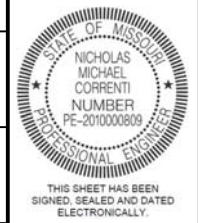
NO RUMBLE STRIPS ARE TO BE INSTALLED IN THE LAST 50 FEET OF STRIPING BEFORE AND AFTER AMVETS DRIVE.



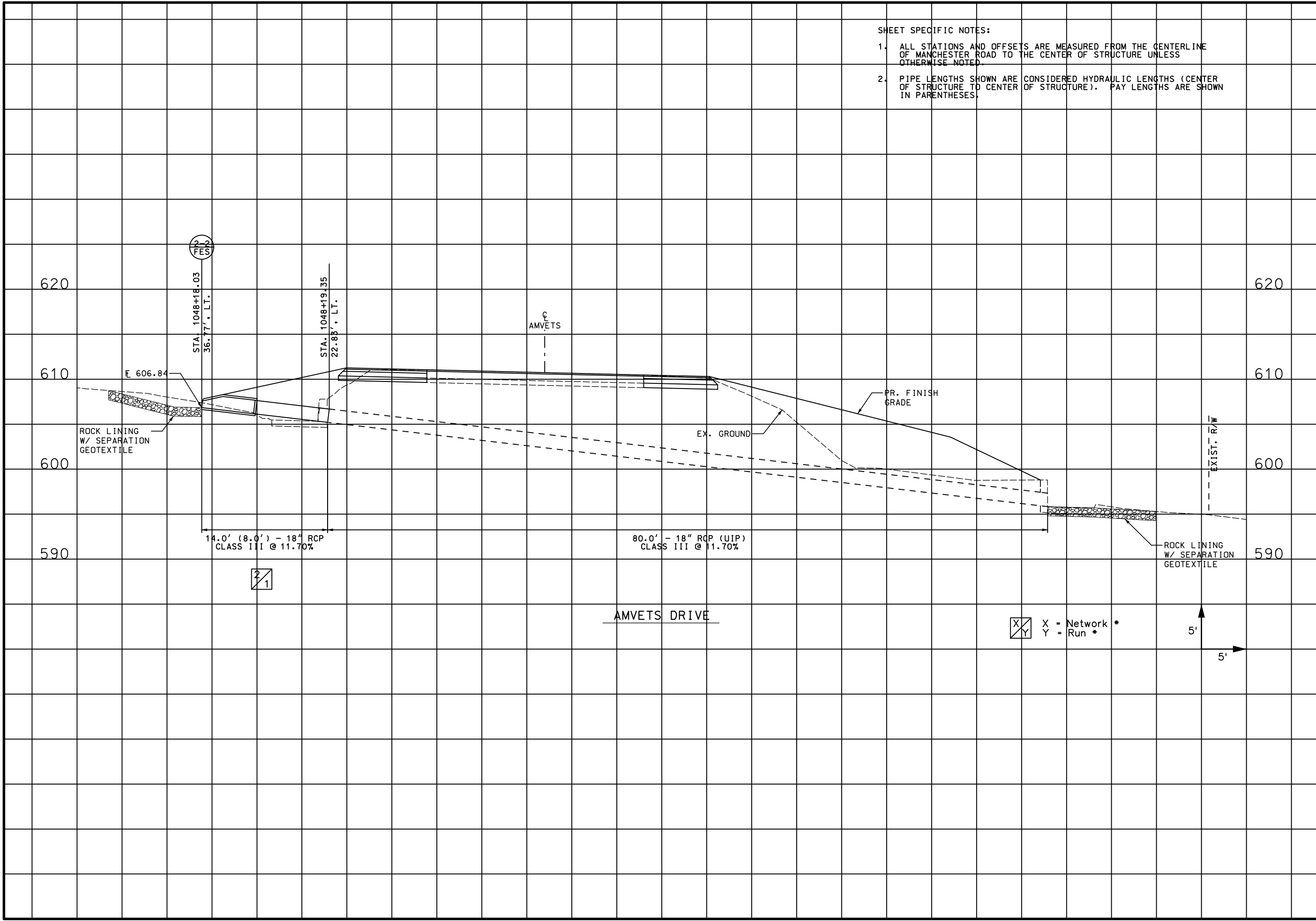
AMVETS DRIVE INTERSECTION

SHEET SPECIFIC NOTES:

1. ALL STATIONS AND OFFSETS ARE MEASURED FROM THE CENTERLINE OF MANCHESTER ROAD TO THE CENTER OF STRUCTURE UNLESS OTHERWISE NOTED.
2. PIPE LENGTHS SHOWN ARE CONSIDERED HYDRAULIC LENGTHS (CENTER OF STRUCTURE TO CENTER OF STRUCTURE). PAY LENGTHS ARE SHOWN IN PARENTHESES.



DATE PREPARED 3/7/2019	
ROUTE 21	STATE MO
DISTRICT SL	SHEET NO. 31
COUNTY JEFFERSON	
JOB NO. J6P3242	
CONTRACT ID.	
PROJECT NO.	
BRIDGE NO.	



DATE	DESCRIPTION

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION

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

TWM
ENGINEERING SERVICES
720 OLIVE STREET, SUITE 200A
ST. LOUIS 63101
www.twm-inc.com
MISSOURI CERT. OF AUTHORITY: 001528

CULVERT - PROFILE
LOWRY LANE/AMVETS DRIVE
SHEET 1 OF 1

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