



# QUANTITIES

## BASE BID

ITEM NO.	DESCRIPTION	UNIT	QUANTITY
1	MOBILIZATION / DEMOBILIZATION, INSURANCE AND BONDING	L.S.	1
2	TRAFFIC CONTROL	L.S.	1
3	REMOVAL OF IMPROVEMENTS/ADJUST TO GRADE	L.S.	1
4	SAWCUT	L.F.	409
5	CLEARING AND GRUBBING	ACRES	1.75
6	CLEAR/TRIM/REMOVE EVERGREENS (WOLFRUM RD.)	L.S.	1
7	REMOVAL OF EXISTING TREES (CITY PARK)	E.A.	11
8	REMOVAL OF EXISTING SAPLINGS (CITY PARK)	E.A.	7
9	UNCLASSIFIED EXCAVATION (CUT)	C.Y.	1,060
10	4" THICK TYPE 5 BASE	S.Y.	2,776
11	8" THICK TYPE 5 BASE	S.Y.	377
12	2.5" THICK BASE COURSE ASPHALT	S.Y.	3,152
13	1.5" THICK BP-1 ASPHALT	S.Y.	3,152
14	CONCRETE CURB AND GUTTER	L.F.	187
15	CONCRETE RAMP	S.Y.	71
16	6" CONCRETE VERTICAL CURB	L.F.	32
17	CONCRETE APPROACH	S.Y.	74
18	DETECTABLE WARNING DEVICES	EACH	5
19	RETAINING WALL	S.F.	423
20	BLACK ALUMINUM FENCE	L.F.	162
21	12" RCP STORM PIPE	L.F.	63
22	12" STORM FES	EACH	3
23	4" PVC SCH 40 STORM PIPE	L.F.	44
24	PVC DOME INLET TOP ADJUSTMENT	EACH	2
25	RIP RAP	C.Y.	7
26	SILT FENCE	L.F.	1,866
27	SEED AND MULCH	ACRES	1.10
28	LANDSCAPE RESTORATION (WOLFRUM RD.)	L.S.	1
29	LIGHT POLE (RELOCATE EXISTING)	EACH	1
30	CONTRACTOR FURNISHED SURVEY STAKEOUT	L.S.	1
31	IRRIGATION RESTORATION (WOLFRUM RD.)	L.S.	1
32	DRAIN AND GRADE EXISTING BOG	L.S.	1
33	MISCELLANEOUS STRIPING	L.S.	1
34	PERMANENT SIGNAGE	E.A.	8

## GRADING & LIMITS OF DISTURBANCE

DESCRIPTION	CUT(C.Y.)	FILL(C.Y.)	LIMITS OF DISTURBANCE(ACRES)
SECTION 1 (WOLFRUM RD.)	44	55	0.20
SECTION 2 & 2A	676	489	1.07
SECTION 3	226	46	0.34
SECTION 4 & 4A	115	0	0.14
CUMULATIVE QUANTITIES	1061	590	1.75



Kurt A. Kutter No. PE-2018021213  
Registered Professional Engineer  
State of Missouri  
for Cochran Engineering & Surveying

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wenma@cochraneng.com

North Office  
8 East Main Street  
Wentzville, Missouri 63385

**COCHRAN**

- Civil Engineering
- Land Surveying
- Architecture
- Site Development
- General Consulting
- Master Planning

Missouri State Certificate  
of Authority Numbers:  
2010000046

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 the type of construction required by these plans shall be strictly followed (ie. trenching, blasting, etc.)

**WELDON SPRING  
TRAIL IMPROVEMENTS  
WELDON SPRING, MO**

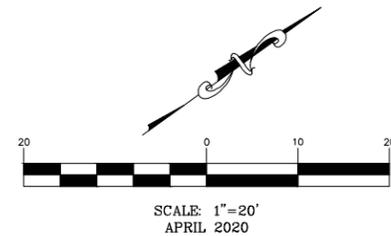
**QUANTITIES**

DWN. BY:	APPR. BY:
CBD	KAK
DATE:	DATE:
APRIL 2020	
SCALE:	
NO SCALE	
PROJ. NO.:	
M19-7755	
DWG. NO.:	
<b>Q-1</b>	





# TRAIL PLAN - SECTION 1



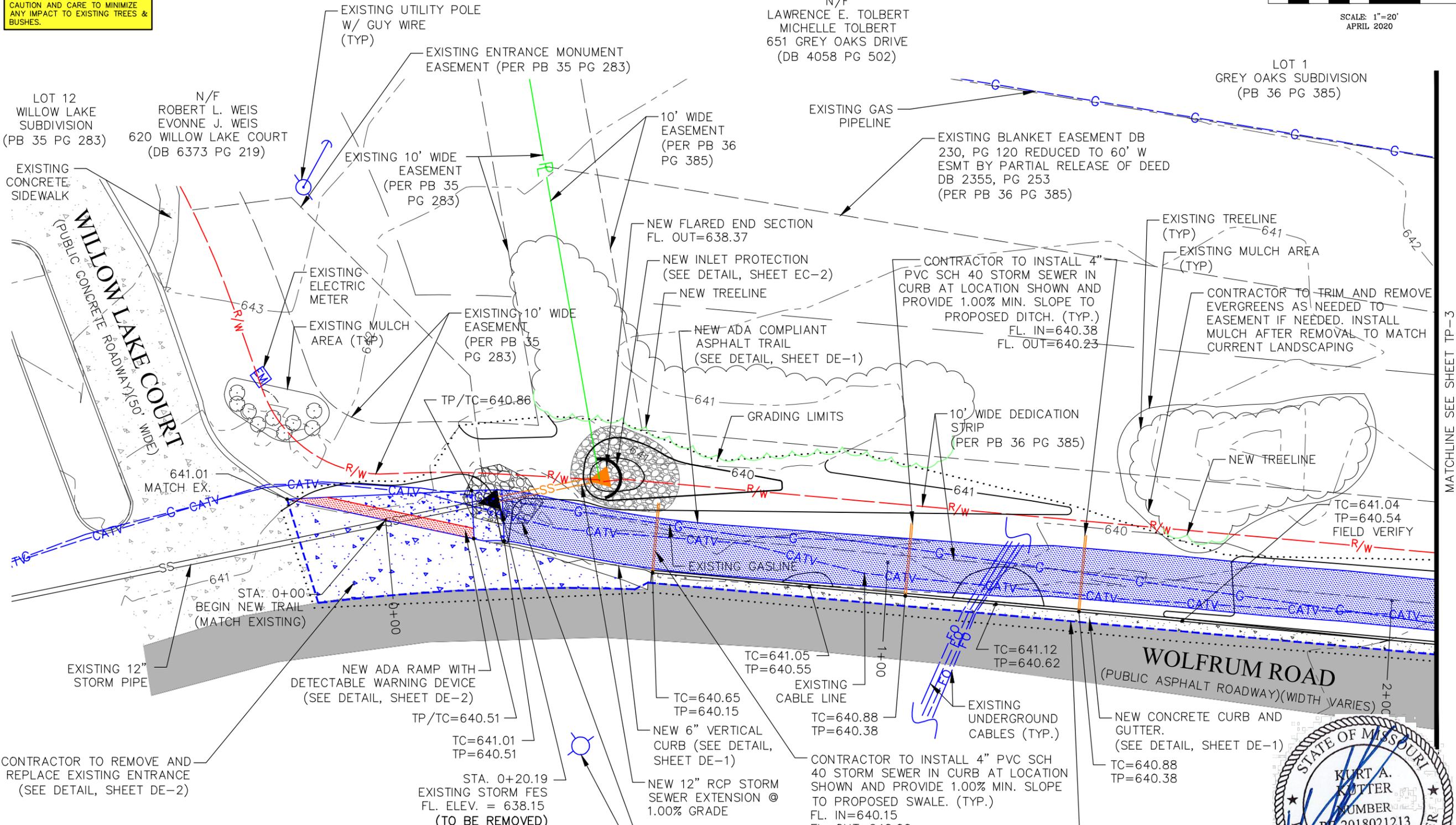
NOTE:  
THIS TRAIL PROJECT HAS BEEN DESIGNED TO COMPLY WITH ALL REQUIRED ADA GUIDELINES AND SPECIFICATIONS.

ALL NEW TRAILS SHALL HAVE A 2.0% OR LESS CROSS SLOPE (PER ADA).

CONTRACTOR TO USE EXTREME CAUTION AND CARE TO MINIMIZE ANY IMPACT TO EXISTING TREES & BUSHES.

NOTE:  
STATIONING IS PER CENTERLINE OF TRAIL.

NOTE:  
ANY UTILITY COVERS THAT REMAIN IN THE PATH OF THE NEW TRAIL SUCH AS MANHOLES AND WATER METERS SHALL HAVE A SLIP RESISTANT TOP (PER ADA).



NOTE:  
BEST MANAGEMENT PRACTICES (BMP'S) AND CONTROLS SHALL CONFORM TO FEDERAL STATE, OR LOCAL REQUIREMENTS OR MANUAL OF PRACTICE, AS APPLICABLE. CONTRACTOR SHALL IMPLEMENT ADDITIONAL CONTROLS AS DIRECTED BY PERMITTING AGENCY OR OWNER.

NOTE:  
THE CONTRACTOR IS CAUTIONED THAT THERE IS IRRIGATION WITHIN SECTION 1 FOR BOTH PARCELS. THE CONTRACTOR WILL BE REQUIRED TO RELOCATE/REPAIR ANY IRRIGATION DAMAGED OR IN THE LOCATION OF THE PROPOSED TRAIL LOCATION.

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63385

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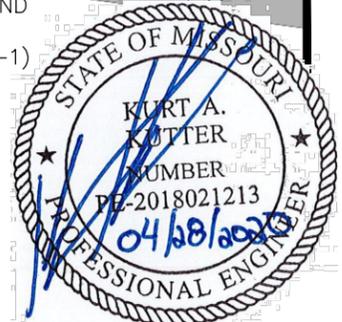
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WELDON SPRING  
TRAIL IMPROVEMENTS  
WELDON SPRING, MO

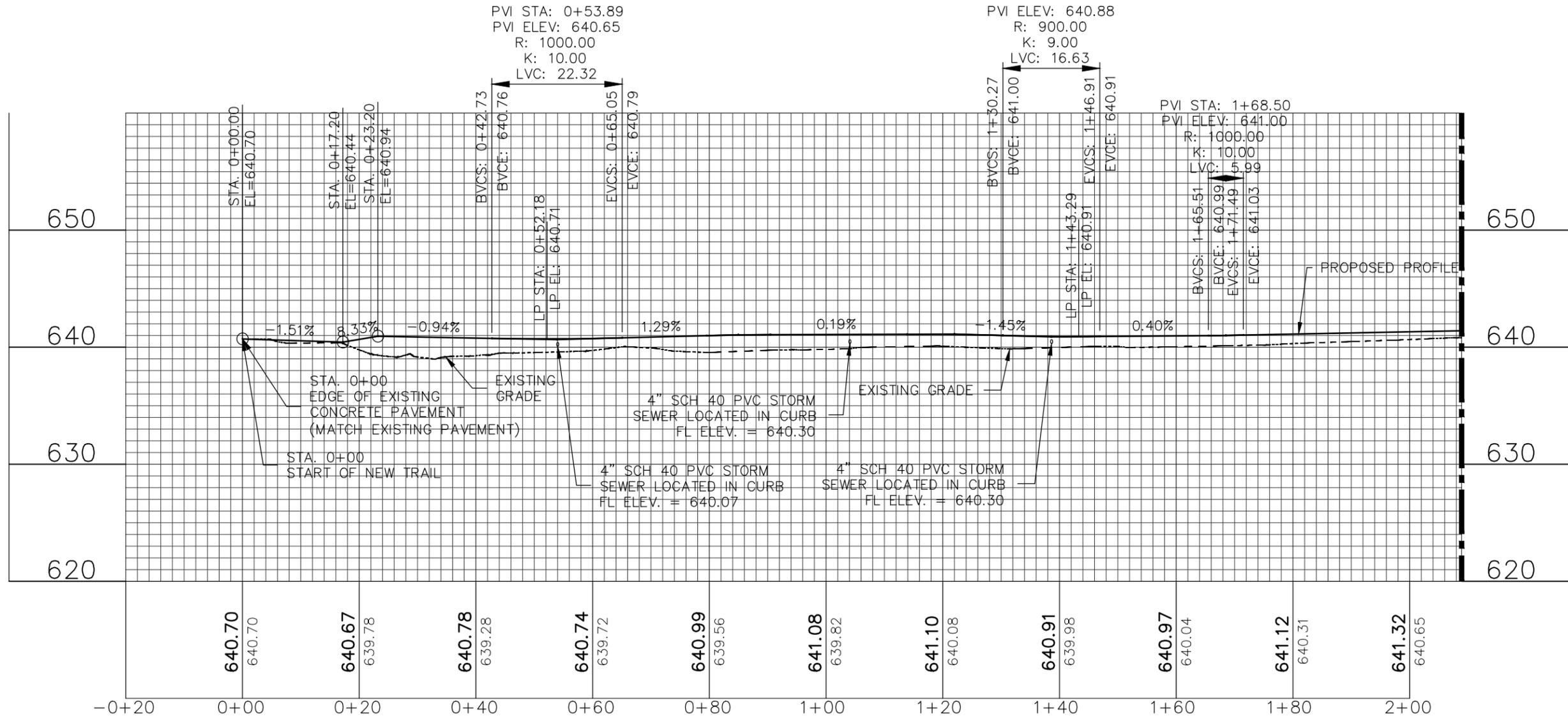
DATE:	APRIL 2020
SCALE:	1" = 20'
PROJ. NO.:	M19-7755
DWG. NO.:	TP-1



Kurt A. Kutter No. PE-2018021213  
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DWG. NAME: j:\2019\m19-7755 - walking trail extensions, weldon spring\engineering\autocad drawings\03\_Construction Drawings\M19\_7755\_TP-1\_TP-30\_PLANS & PROFILES.dwg LAYOUT TAB: TP-1 PLOTTED ON: Apr 28, 2020 - 1:23pm PLOTTED BY: cdeming

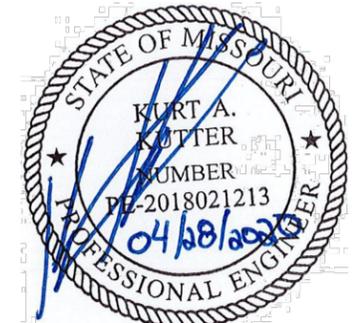
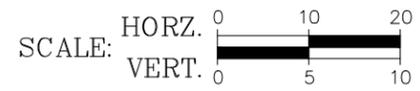
# TRAIL PROFILE - SECTION 1



MATCHLINE (SEE SHEET TP-4)

**NOTE:**  
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**NOTE:**  
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**WELDON SPRING**  
**TRAIL IMPROVEMENTS**  
**WELDON SPRING, MO**

**TRAIL PROFILE - SECTION 1**

DATE:	DATE:
DWN. BY:	APPR. BY:
CBD	KAK
DATE:	DATE:
APRIL 2020	
SCALE:	SCALE:
1" = 20'	
PROJ. NO.:	PROJ. NO.:
M19-7755	
DWG. NO.:	DWG. NO.:

**TP-2**

DWG NAME: j:\2019\m19-7755 - walking trail extensions, weldon spring\engineering\autocad drawings\03\_Construction Drawings\M19\_7755\_TP-1\_IP-30\_PLANS & PROFILES.dwg LAYOUT TAB: TP-3 PLOTTED ON: Apr 28, 2020 - 1:23pm PLOTTED BY: cdeming

# TRAIL PLAN - SECTION 1

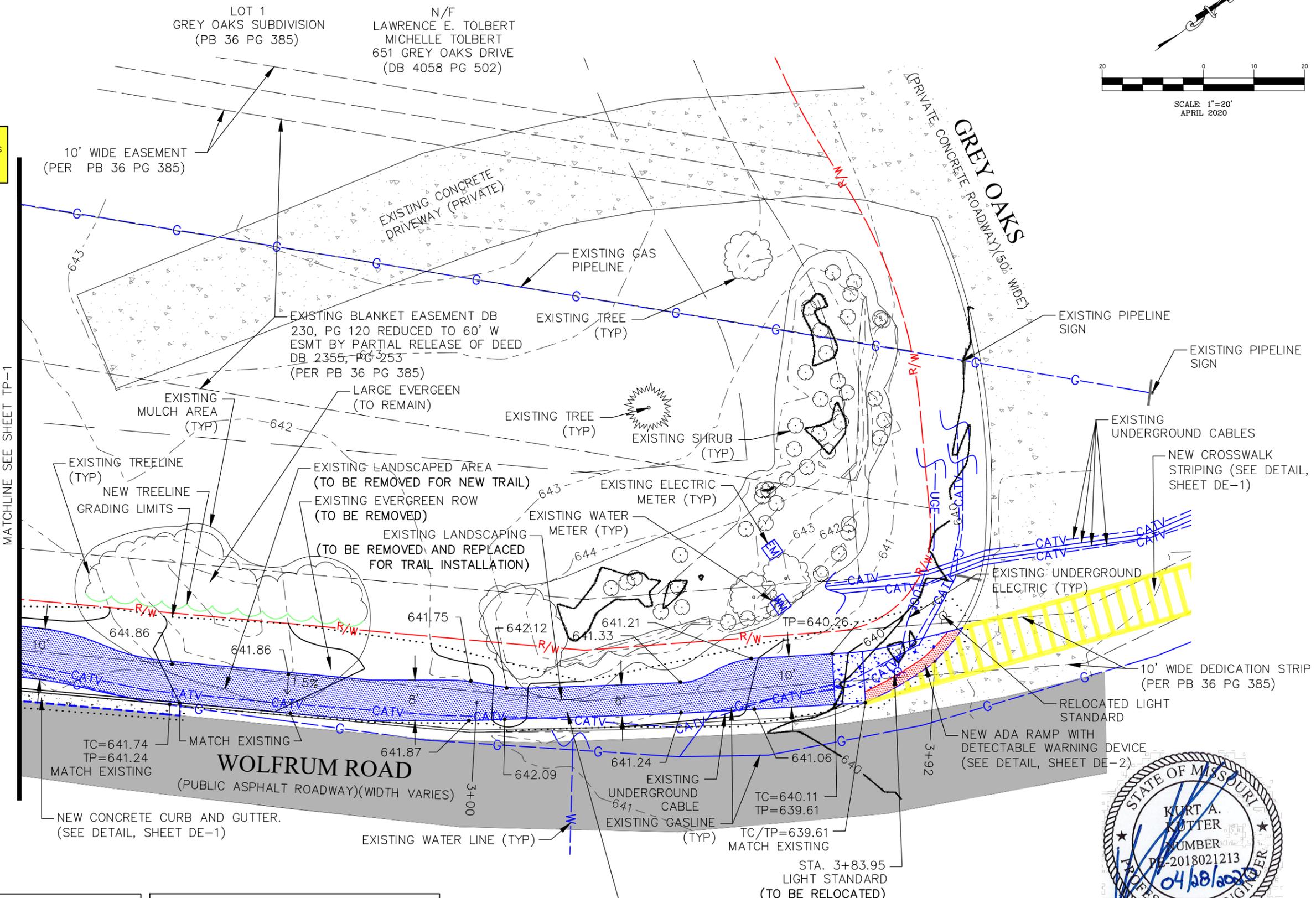
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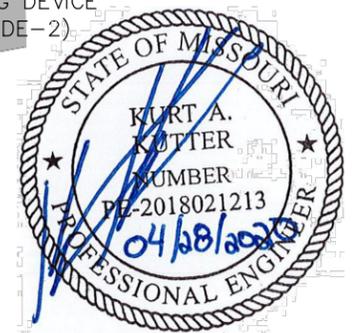
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Kurt A. Kutter No. PE-201802123  
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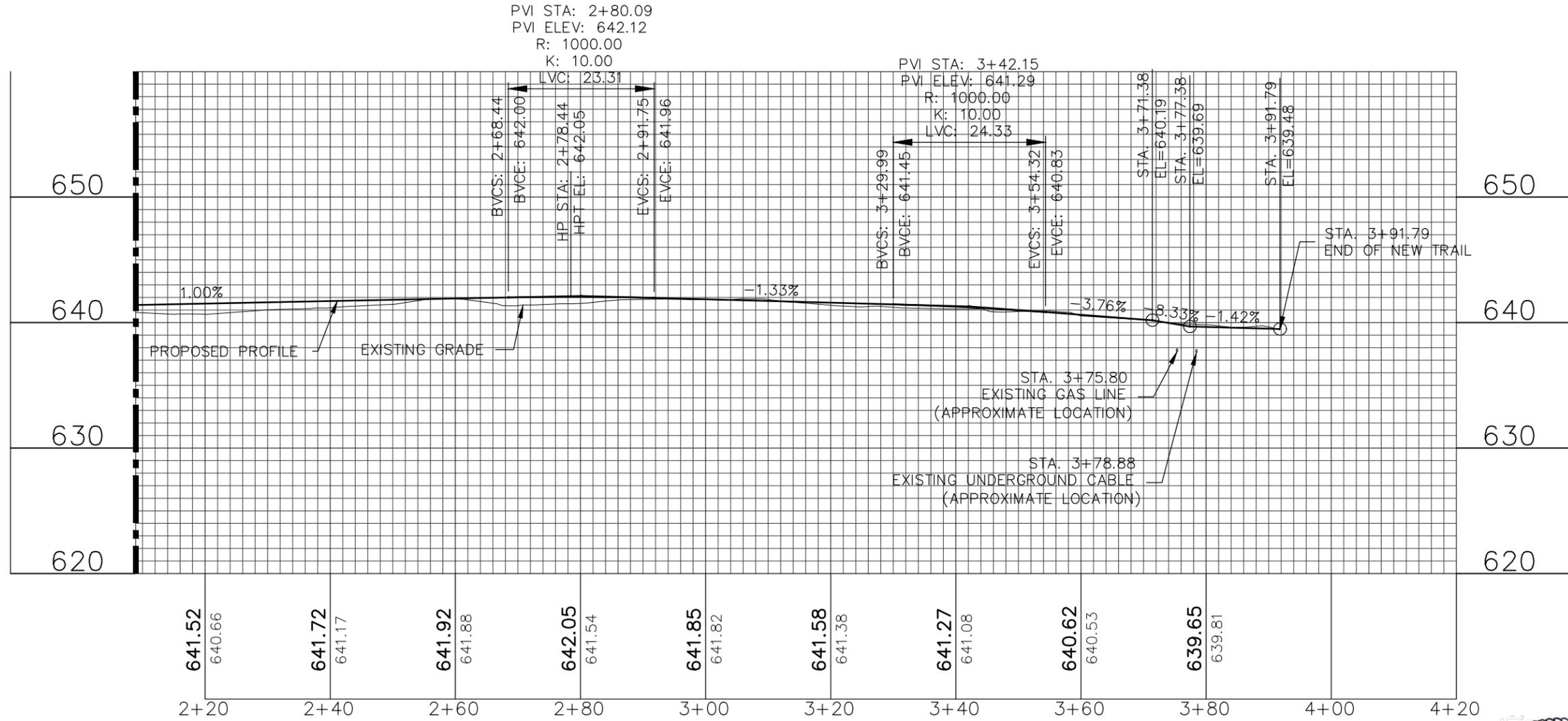
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WELDON SPRING  
TRAIL IMPROVEMENTS  
WELDON SPRING, MO

TRAIL PLAN - SECTION 1	DWN. BY:	APPR. BY:
	CBD	KAK
	DATE:	APRIL 2020
	SCALE:	1" = 20'
	PROJ. NO.:	M19-7755
	DWG. NO.:	TP-3

# TRAIL PROFILE - SECTION 1

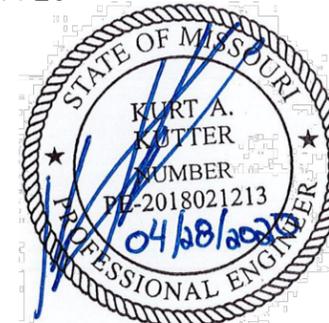
MATCHLINE (SEE SHEET TP-2)



SCALE: HORZ. 0 10 20  
VERT. 0 5 10

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WELDON SPRING  
TRAIL IMPROVEMENTS  
WELDON SPRING, MO

TRAIL PROFILE - SECTION 1

DATE:	DATE:
DWN. BY:	APPR. BY:
CBD	KAK
SCALE:	SCALE:
1" = 20'	1" = 20'
PROJ. NO.:	PROJ. NO.:
M19-7755	M19-7755
DWG. NO.:	DWG. NO.:
TP-4	TP-4

# TRAIL PLAN - SECTION 2 & 2A

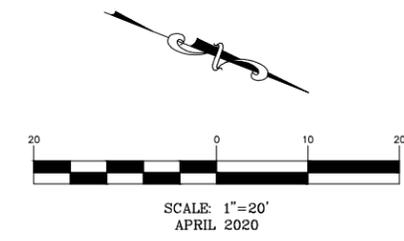
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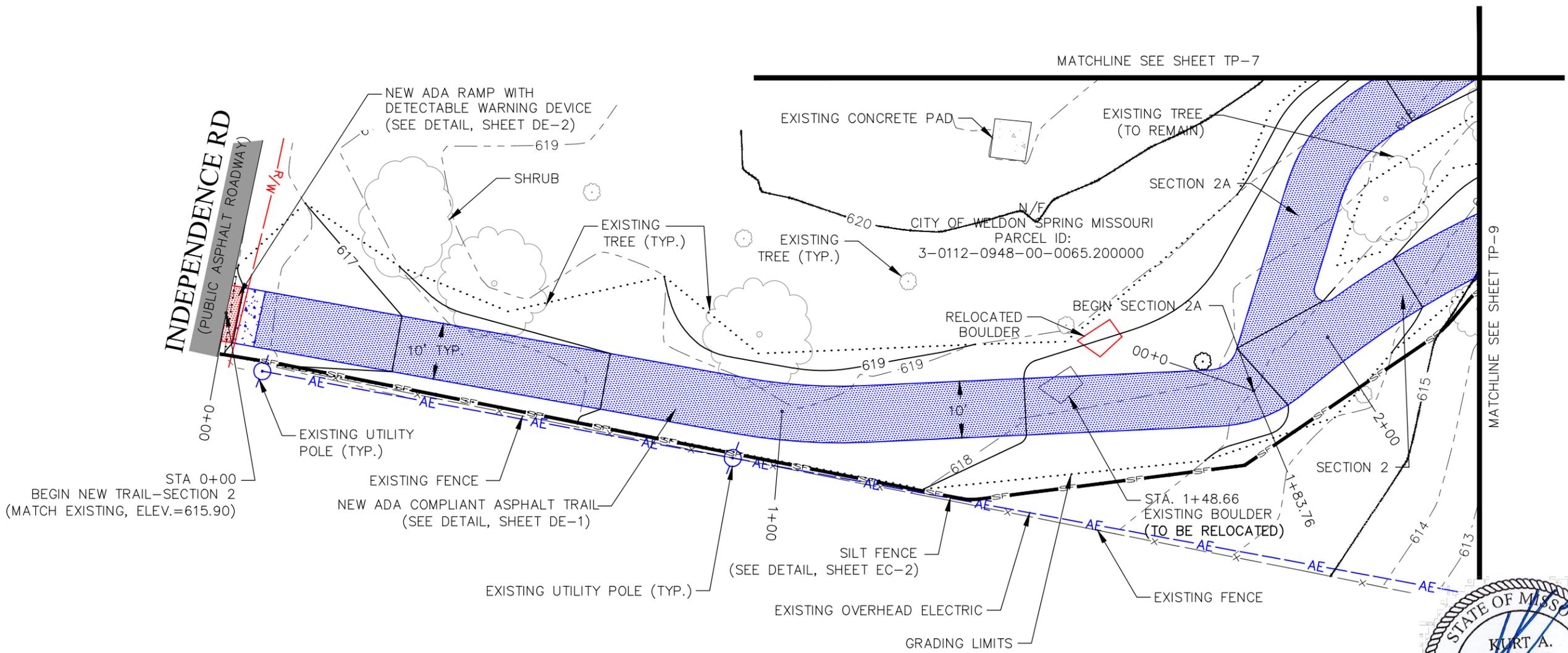
Missouri State Certificate of Authority Numbers:  
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WELDON SPRING  
TRAIL IMPROVEMENTS  
WELDON SPRING, MO

TRAIL PLAN - SECTION 2 & 2A	
DWN. BY:	APPR. BY:
CBD	KAK
DATE:	DATE:
APRIL 2020	APRIL 2020
SCALE:	SCALE:
1" = 20'	1" = 20'
PROJ. NO.:	PROJ. NO.:
M19-7755	M19-7755
DWG. NO.:	DWG. NO.:
TP-5	TP-5



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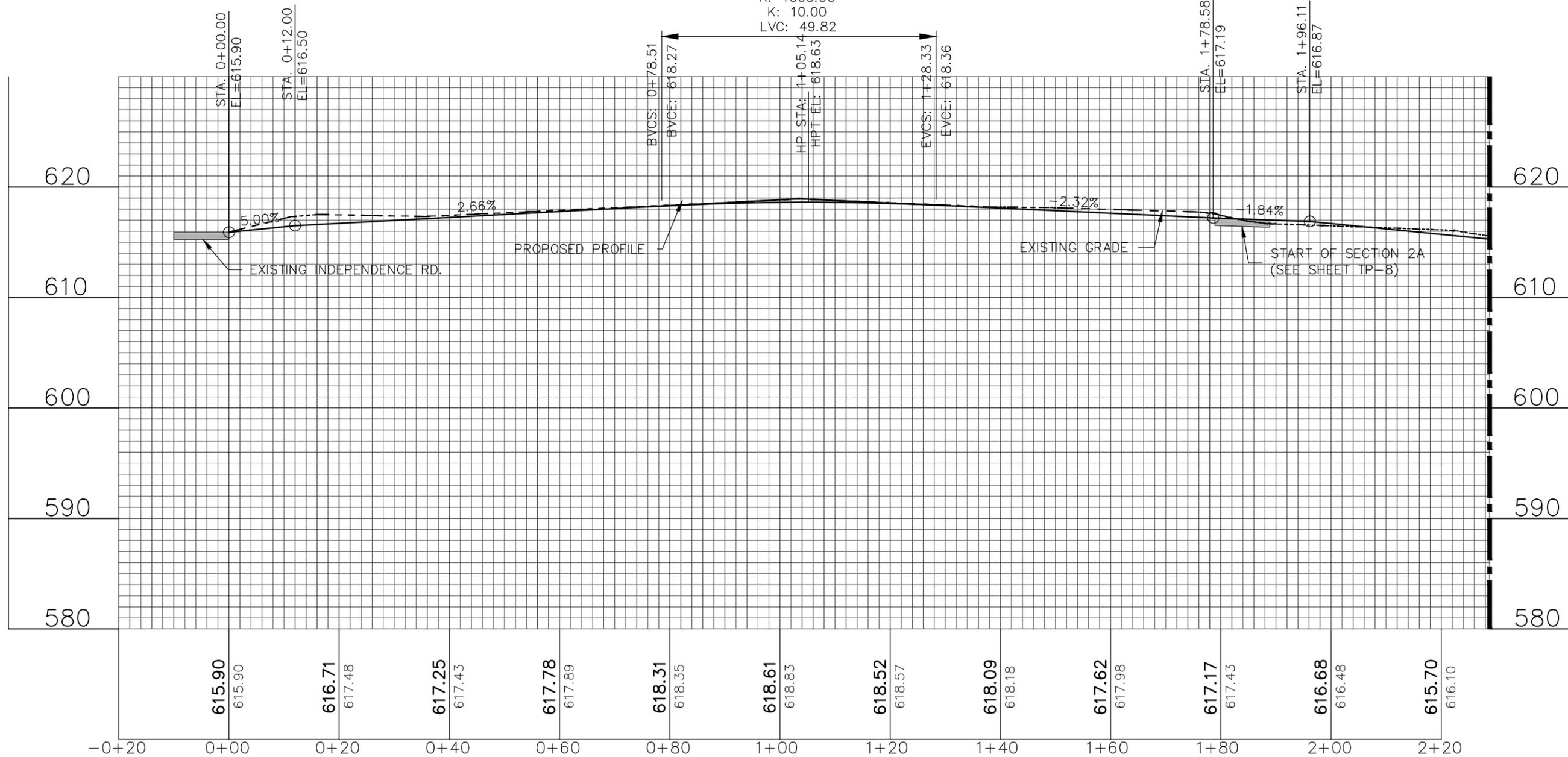


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DWG. NAME: j:\2019\m19-7755 - walking trail extensions, weldon spring\engineering\autocad drawings\03\_Construction Drawings\M19-7755\_TP-1\_TP-5\_PLANS & PROFILES.dwg LAYOUT TAB: TP-5 PLOTTED ON: Apr 28, 2020 - 1:24pm PLOTTED BY: cdeming

# TRAIL PROFILE - SECTION 2

PVI STA: 1+03.42  
 PVI ELEV: 618.93  
 R: 1000.00  
 K: 10.00  
 LVC: 49.82



615.90	615.90	616.71	617.48	617.25	617.43	617.78	617.89	618.31	618.35	618.61	618.83	618.52	618.57	618.09	618.18	617.62	617.98	617.17	617.43	616.68	616.48	615.70	616.10
-0+20	0+00	0+20	0+40	0+60	0+80	1+00	1+20	1+40	1+60	1+80	2+00	2+20											

SCALE: HORZ. 0 10 20  
 VERT. 0 5 10



NOTE:  
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 SHOWN ARE APPROXIMATE. NO POT  
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 for Cochran Engineering & Surveying

MATCHLINE (SEE SHEET TP-10)

WELDON SPRING  
 TRAIL IMPROVEMENTS  
 WELDON SPRING, MO

TRAIL PROFILE- SECTION 2  
 DWN. BY: CBD  
 DATE: APRIL 2020  
 SCALE: 1" = 20'  
 PROJ. NO.: M19-7755  
 DWG. NO.: TP-6

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 636-327-0760 (fax)  
 wenma@cochraneng.com

**COCHRAN**

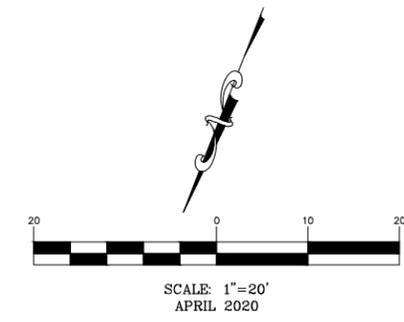
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 of Authority Numbers:  
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# TRAIL PLAN - SECTION 2A



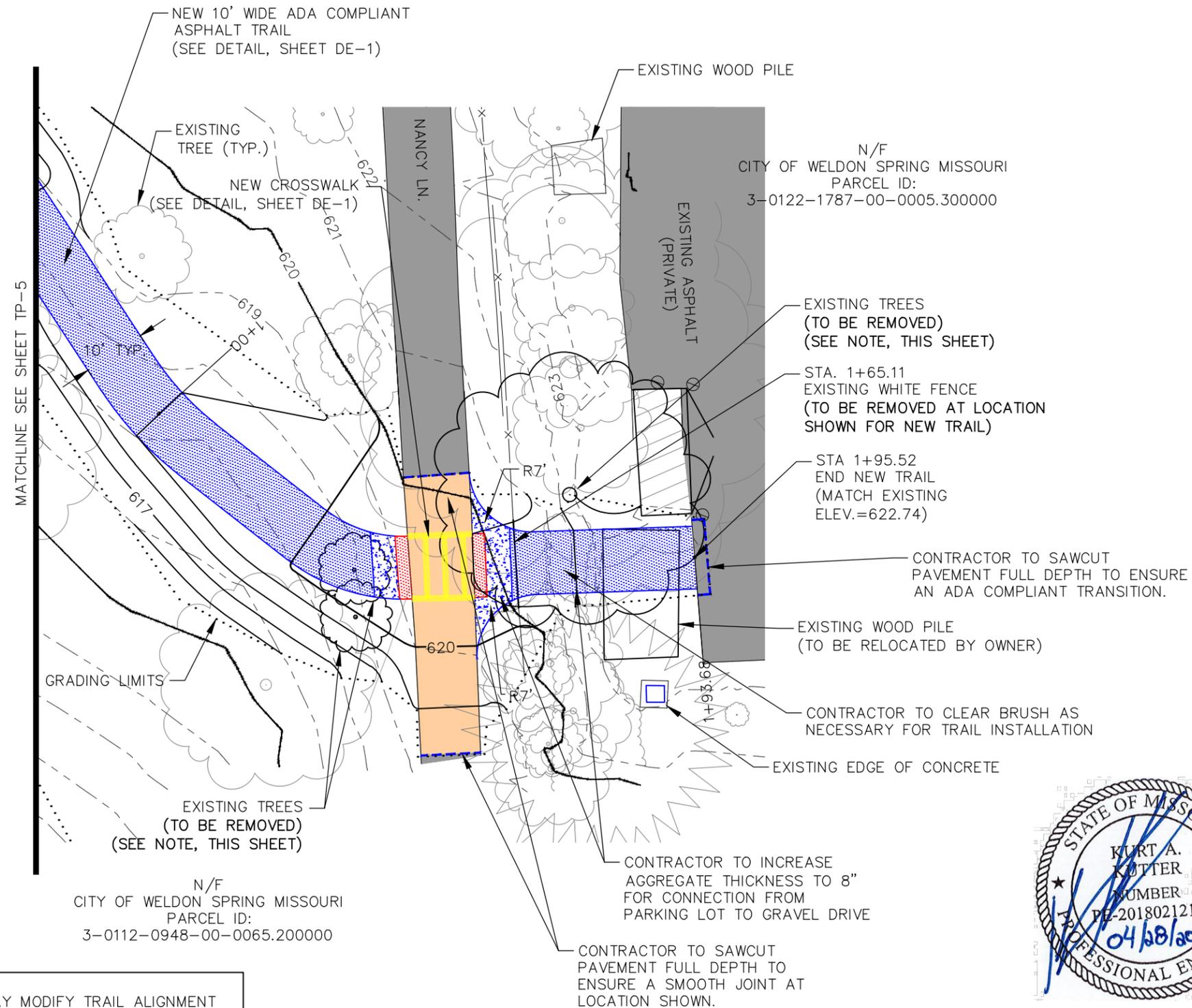
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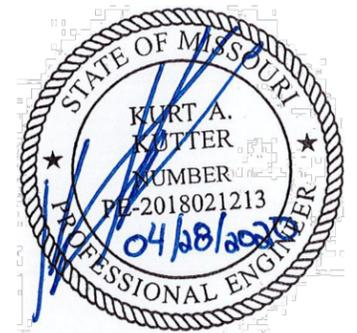
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**WELDON SPRING  
TRAIL IMPROVEMENTS  
WELDON SPRING, MO**

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NOTE:  
CONTRACTOR MAY MODIFY TRAIL ALIGNMENT DURING CONSTRUCTION IN ORDER TO MINIMIZE DAMAGE AND ELIMINATE TREE REMOVAL. IF TRAIL IS MODIFIED, ADA COMPLIANCE MUST BE MAINTAINED.



Kurt A. Kutter No. PE-201802123  
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**TRAIL PLAN - SECTION 2A**

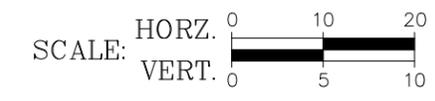
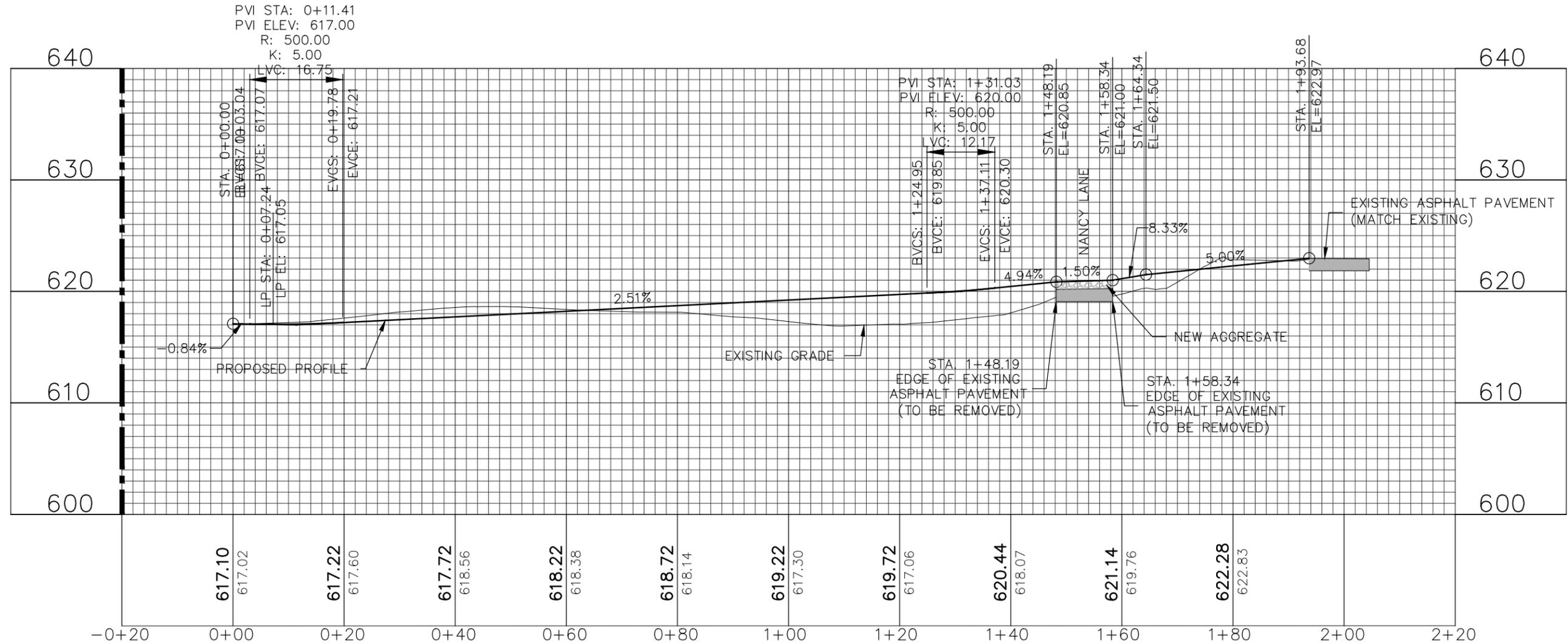
DATE:	DATE:
DWN. BY:	APPR. BY:
CBD	KAK
DATE:	DATE:
APRIL 2020	
SCALE:	SCALE:
1" = 20'	
PROJ. NO.:	PROJ. NO.:
M19-7755	
DWG. NO.:	DWG. NO.:

**TP-7**

DWG NAME: j:\2019\m19-7755 - walking trail extensions, weldon spring\engineering\autocad drawings\03\_Construction Drawings\M19\_7755\_TP-1\_TP-30\_PLANS & PROFILES.dwg LAYOUT TAB: TP-7 PLOTTED ON: Apr 28, 2020 - 1:24pm PLOTTED BY: cdeming

# TRAIL PROFILE - SECTION 2A

MATCHLINE (SEE SHEET TP-6)



NOTE:  
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WELDON SPRING  
TRAIL IMPROVEMENTS  
WELDON SPRING, MO

TRAIL PROFILE - SECTION 2A

DWN. BY:	APPR. BY:
CBD	KAK
DATE:	DATE:
APRIL 2020	
SCALE:	
1" = 20'	
PROJ. NO.:	
M19-7755	
DWG. NO.:	

TP-8

DWG NAME: j:\2019\m19-7755 - walking trail extensions, weldon spring\engineering\autocad drawings\03\_Construction Drawings\M19\_7755\_TP-1\_TP-30\_PLANS & PROFILES.dwg LAYOUT TAB: TP-9 PLOTTED ON: Apr 28, 2020 - 1:24pm PLOTTED BY: cdeming

# TRAIL PLAN - SECTION 2

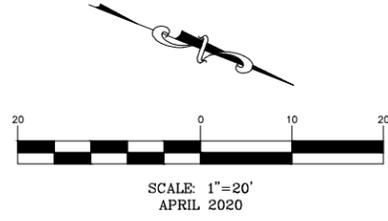
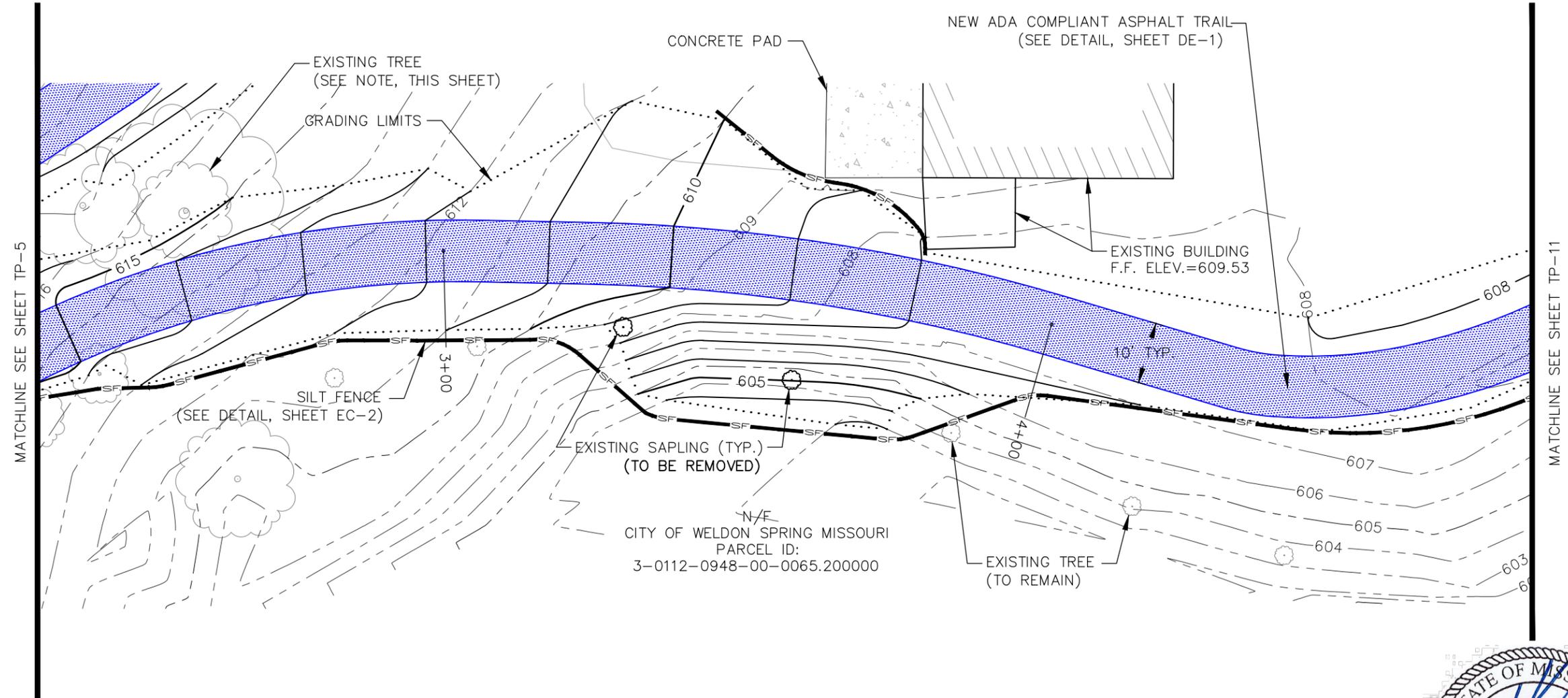
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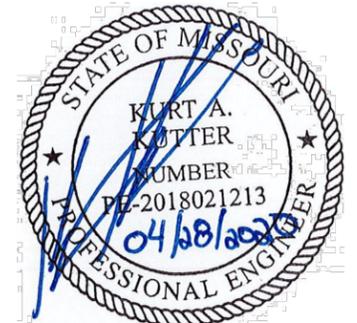
NOTE:  
STATIONING IS PER CENTERLINE OF TRAIL.

NOTE:  
ANY UTILITY COVERS THAT REMAIN IN THE PATH OF THE NEW TRAIL SUCH AS MANHOLES AND WATER METERS SHALL HAVE A SLIP RESISTANT TOP (PER ADA).



NOTE:  
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NOTE:  
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Kurt A. Kutter No. PE-2018021213  
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**COCHRAN**

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- Architecture
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- General Consulting
- Master Planning

North Office  
8 East Main Street  
Wentzville, Missouri 63385

Missouri State Certificate of Authority Numbers: 2010000046

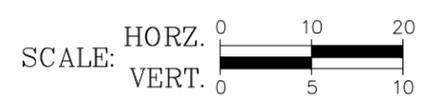
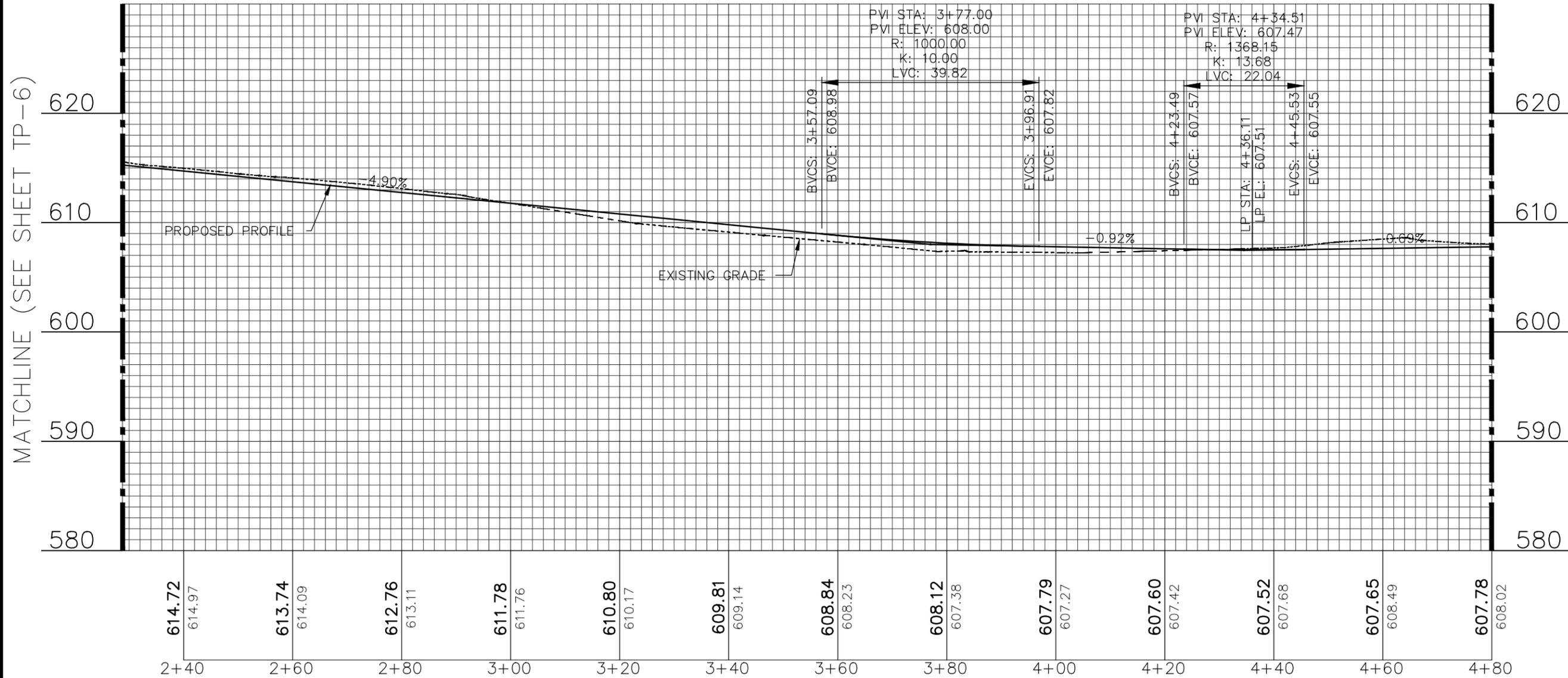
Three working days prior to the start of construction on this site, contractor shall call 1-800-DIG-RITE for utility location information.

All OSHA rules & regulations established for the type of construction required by these plans shall be strictly followed (i.e. trenching, blasting, etc.)

WELDON SPRING  
TRAIL IMPROVEMENTS  
WELDON SPRING, MO

DWN. BY: CBD		APPR. BY: KAK	
DATE: APRIL 2020			
SCALE: 1" = 20'			
PROJ. NO.: M19-7755		DRG. NO.: TP-9	

# TRAIL PROFILE - SECTION 2



**NOTE:**  
UTILITY LOCATIONS AND ELEVATIONS SHOWN ARE APPROXIMATE. NO POT HOLING OR SUBSURFACE LOCATIONS HAVE BEEN PERFORMED.

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WELDON SPRING  
TRAIL IMPROVEMENTS  
WELDON SPRING, MO

TRAIL PROFILE - SECTION 2

DWN. BY:	APPR. BY:
CBD	KAK
DATE:	DATE:
APRIL 2020	
SCALE:	
1" = 20'	
PROJ. NO.:	
M19-7755	
DWG. NO.:	
TP-10	

DWG NAME: j:\2019\m19-7755 - walking trail extensions, weldon spring\engineering\autocad drawings\03\_Construction Drawings\M19-7755\_TP-11\_IP-30\_PLANS & PROFILES.dwg LAYOUT TAB: TP-11 PLOTTED ON: Apr 28, 2020 - 1:24pm PLOTTED BY: cleming

# TRAIL PLAN - SECTION 2

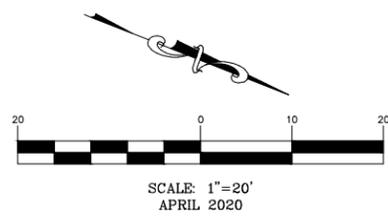
NOTE:  
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NOTE:  
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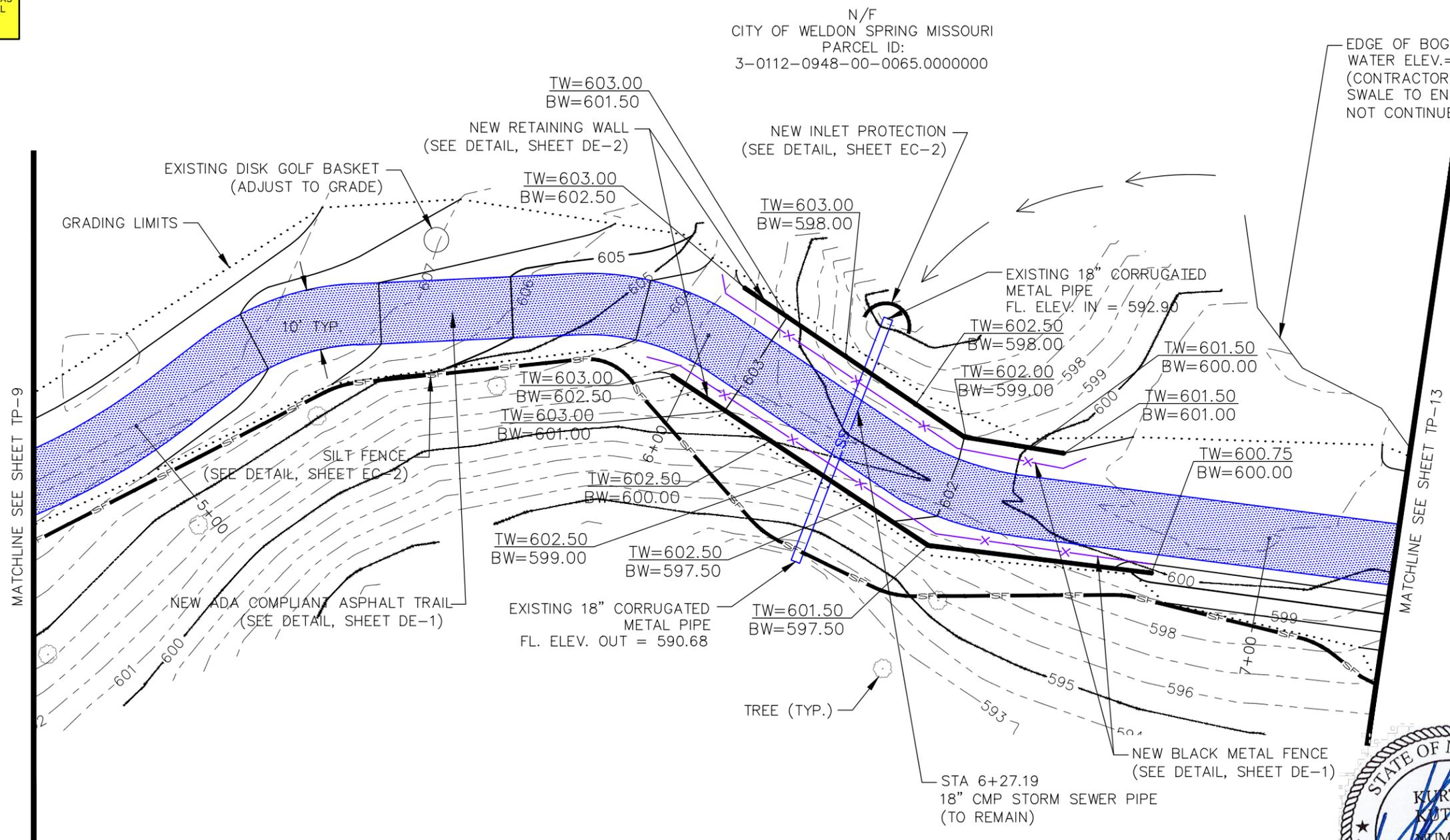
Missouri State Certificate of Authority Numbers: 201000046

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WELDON SPRING  
TRAIL IMPROVEMENTS  
WELDON SPRING, MO

DATE:	DATE:
DWN. BY:	APPR. BY:
CBD	KAK
DATE:	DATE:
APRIL 2020	APRIL 2020
SCALE:	SCALE:
1" = 20'	1" = 20'
PROJ. NO.:	PROJ. NO.:
M19-7755	M19-7755
DWG. NO.:	DWG. NO.:
TP-11	TP-11

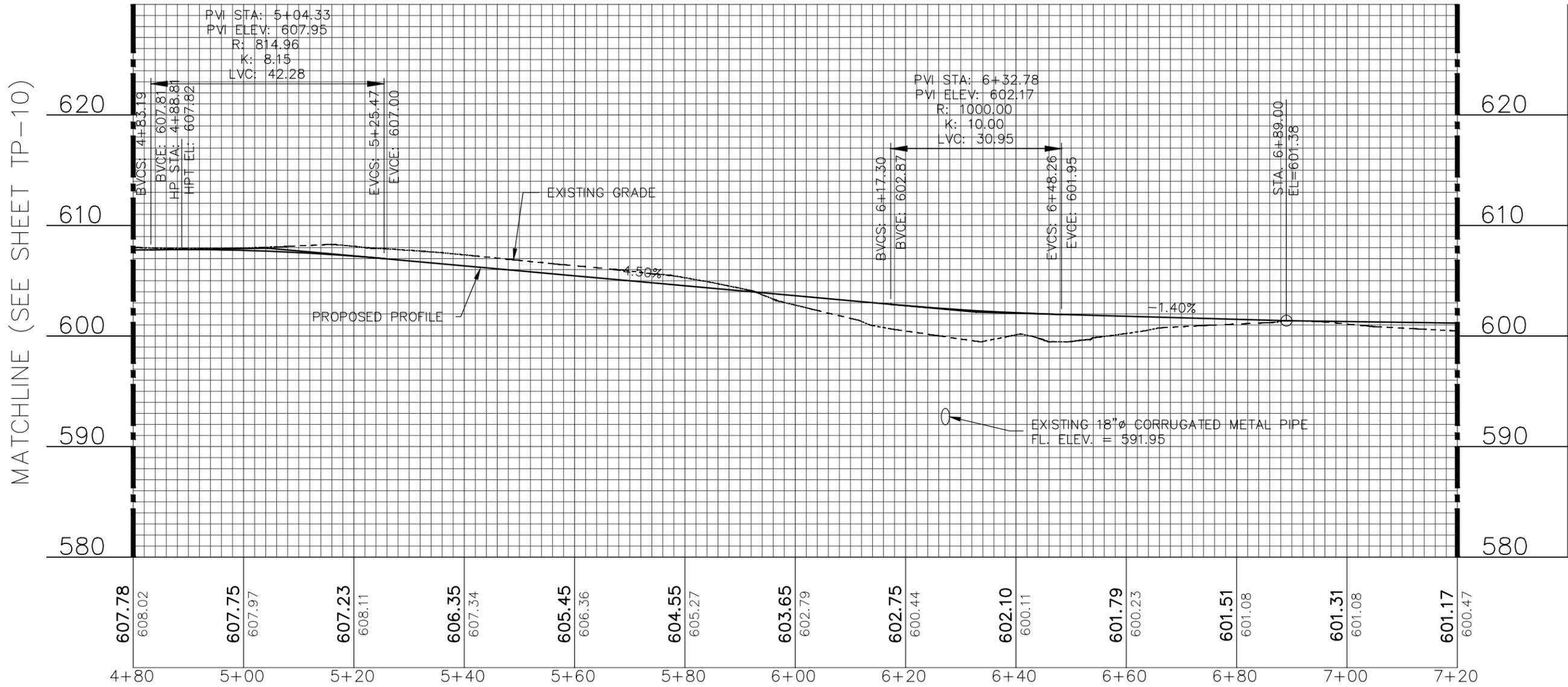


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Registered Professional Engineer  
State of Missouri  
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# TRAIL PROFILE - SECTION 2



MATCHLINE (SEE SHEET TP-10)

MATCHLINE (SEE SHEET TP-14)

NOTE:  
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NOTE:  
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WELDON SPRING  
TRAIL IMPROVEMENTS  
WELDON SPRING, MO

TRAIL PROFILE - SECTION 2

DWN. BY:	APPR. BY:
CBD	KAK
DATE:	DATE:
APRIL 2020	
SCALE:	
1" = 20'	
PROJ. NO.:	
M19-7755	
DWG. NO.:	
TP-12	

DWG NAME: j:\2019\m19-7755 - walking trail extensions, weldon spring\engineering\autocad drawings\03\_Construction Drawings\M19-7755\_TP-1\_IP-30\_PLANS & PROFILES.dwg LAYOUT TAB: TP-13 PLOTTED ON: Apr 28, 2020 - 1:24pm PLOTTED BY: cleming

# TRAIL PLAN - SECTION 2

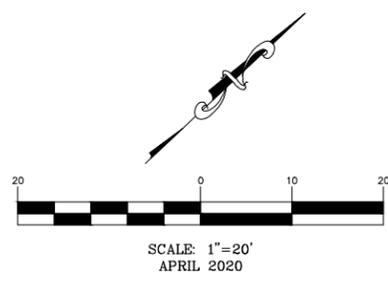
NOTE:  
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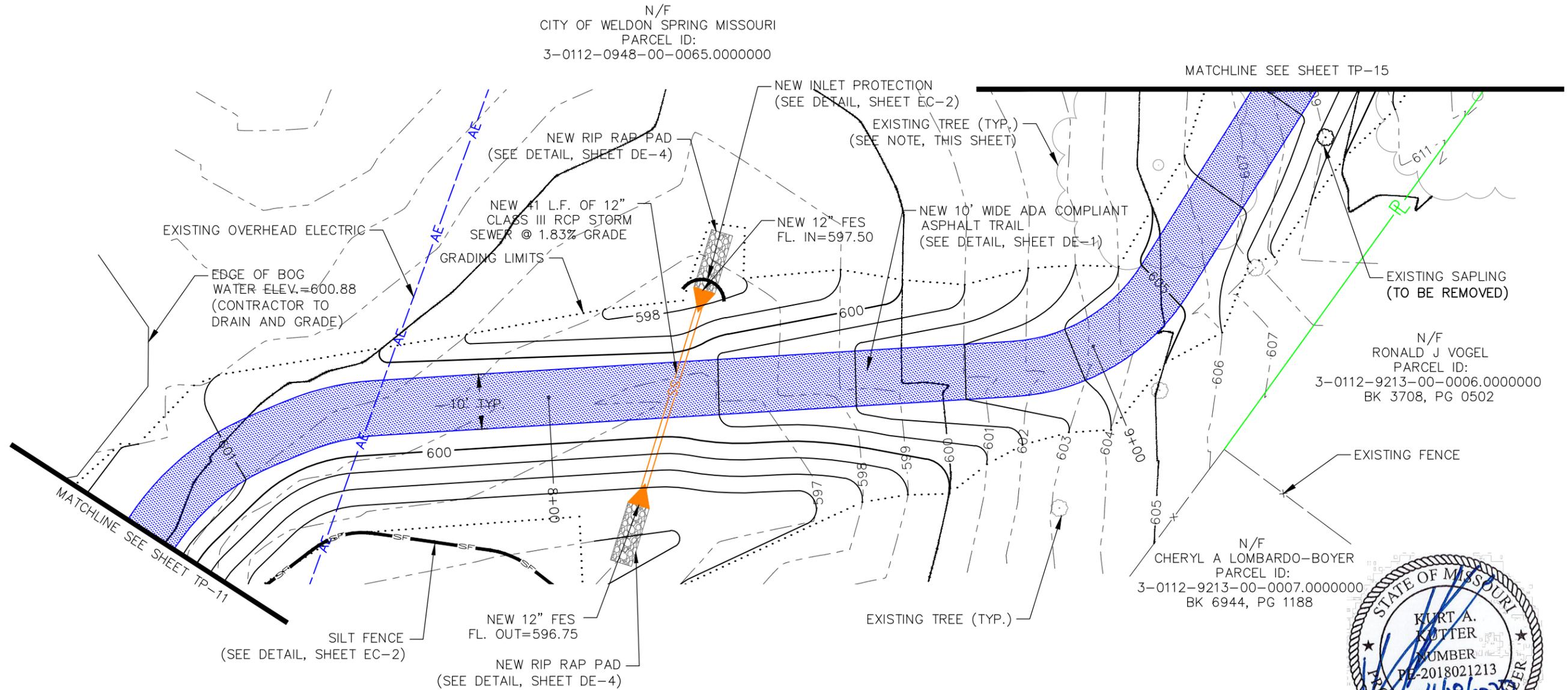
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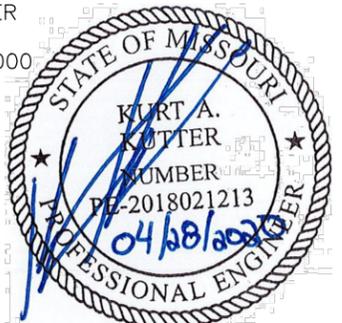


N/F  
CITY OF WELDON SPRING MISSOURI  
PARCEL ID:  
3-0112-0948-00-0065.0000000

MATCHLINE SEE SHEET TP-15

N/F  
RONALD J VOGEL  
PARCEL ID:  
3-0112-9213-00-0006.0000000  
BK 3708, PG 0502

N/F  
CHERYL A LOMBARDO-BOYER  
PARCEL ID:  
3-0112-9213-00-0007.0000000  
BK 6944, PG 1188



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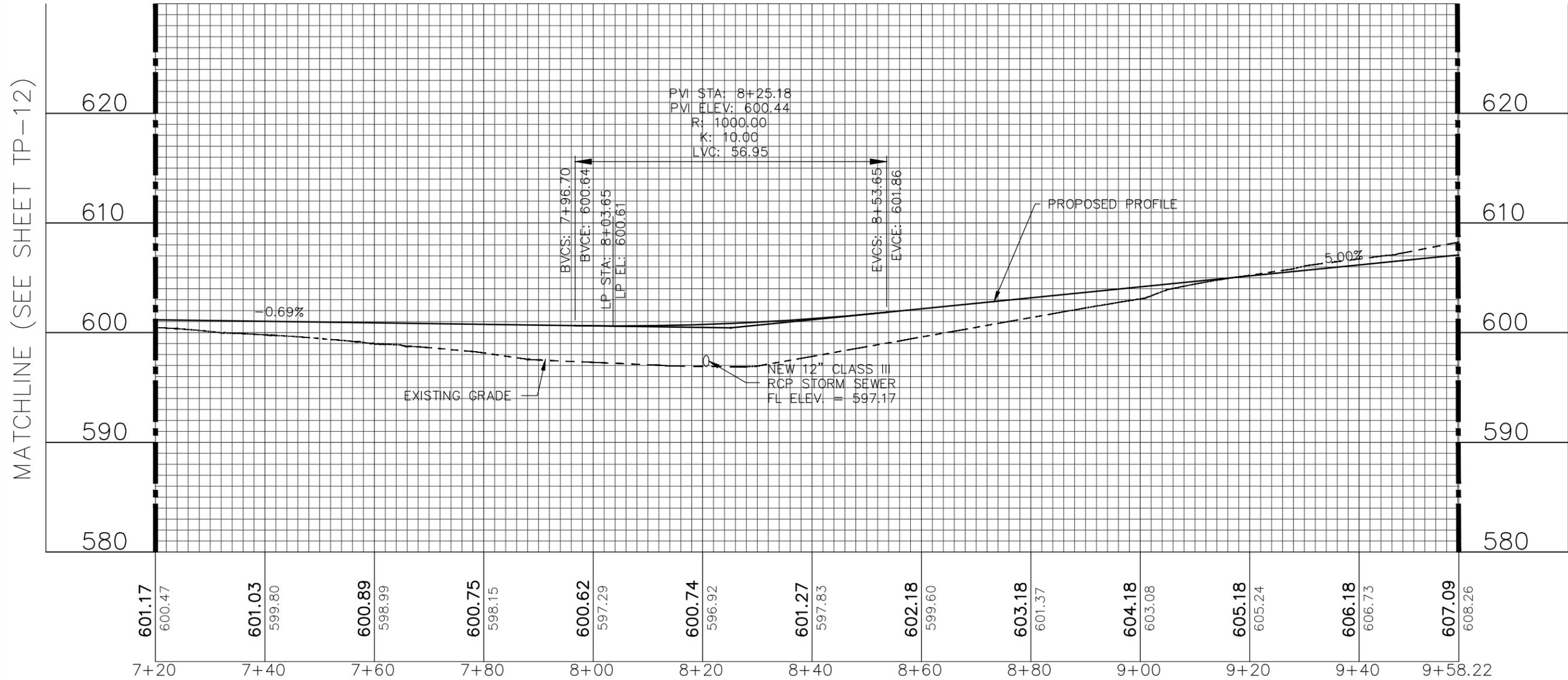
Kurt A. Kutter No. PE-2018021213  
Registered Professional Engineer  
State of Missouri  
for Cochran Engineering & Surveying

WELDON SPRING  
TRAIL IMPROVEMENTS  
WELDON SPRING, MO

TRAIL PLAN - SECTION 2

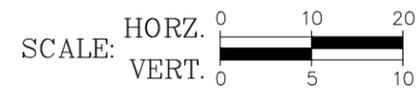
DWN. BY:	APPR. BY:
CBD	KAK
DATE:	DATE:
APRIL 2020	
SCALE:	SCALE:
1" = 20'	
PROJ. NO.:	PROJ. NO.:
M19-7755	
DWG. NO.:	DWG. NO.:
TP-13	

# TRAIL PROFILE - SECTION 2



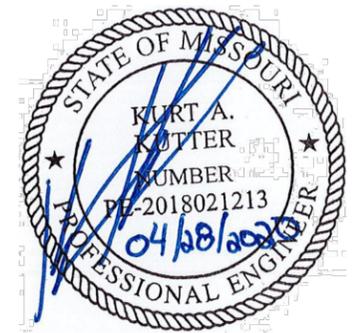
MATCHLINE (SEE SHEET TP-12)

MATCHLINE (SEE SHEET TP-16)



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WELDON SPRING  
TRAIL IMPROVEMENTS  
WELDON SPRING, MO

DWN. BY: APPTD. BY:	
CBD	KAK
DATE: APRIL 2020	
SCALE: 1" = 20'	
PROJ. NO.: M19-7755	
DWG. NO.: TP-14	

DWG NAME: j:\2019\m19-7755 - walking trail extensions, weldon spring\engineering\autocad drawings\03\_Construction Drawings\M19-7755\_TP-1\_TP-30\_PLANS & PROFILES.dwg LAYOUT TAB: TP-15 PLOTTED ON: Apr 28, 2020 - 1:24pm PLOTTED BY: cleming

# TRAIL PLAN - SECTION 2

NOTE:  
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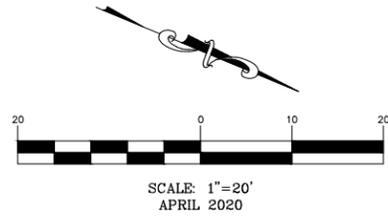
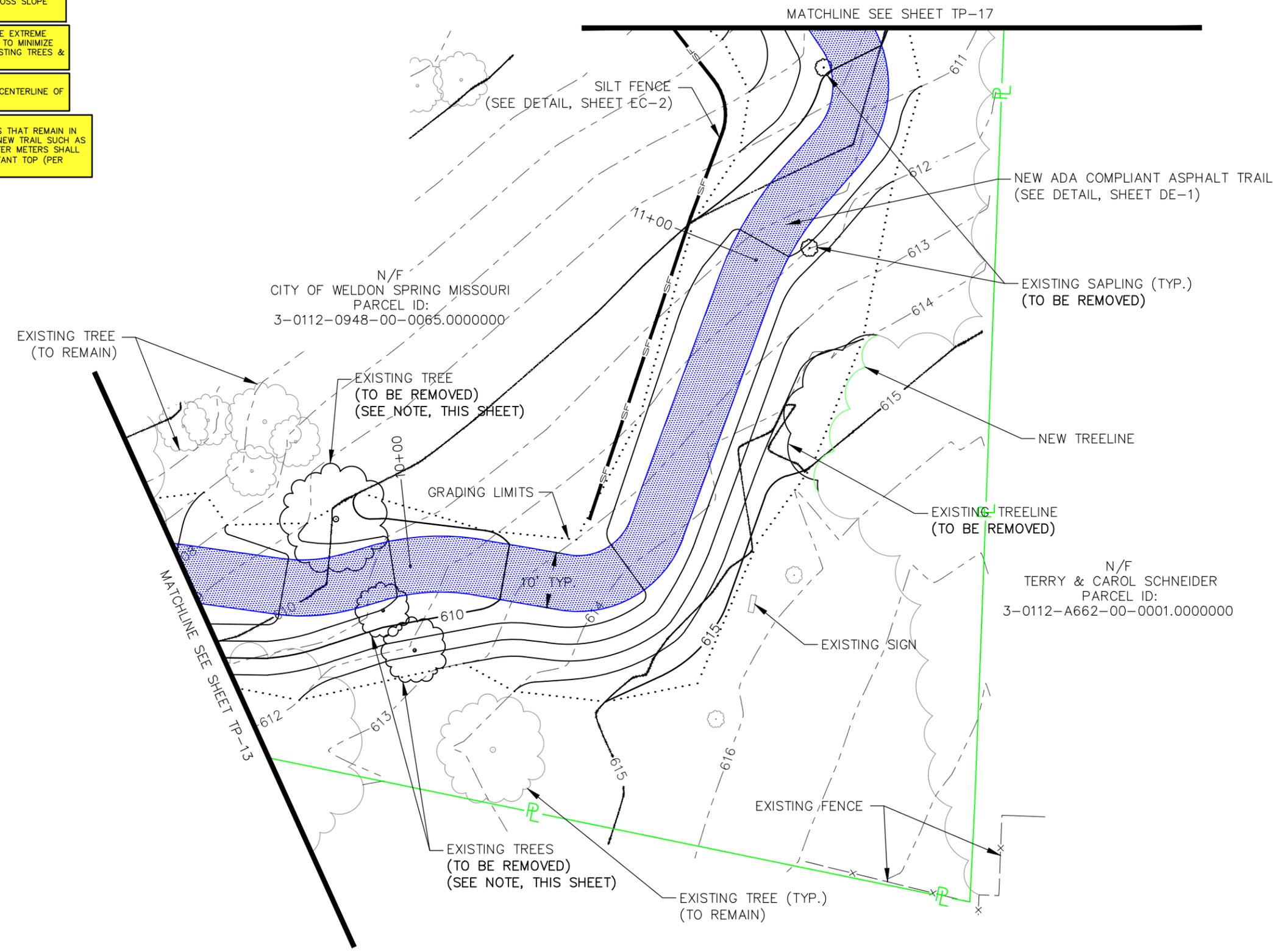
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Wentzville, Missouri 63385

Missouri State Certificate of Authority Numbers: 2010000046

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**WELDON SPRING  
TRAIL IMPROVEMENTS  
WELDON SPRING, MO**



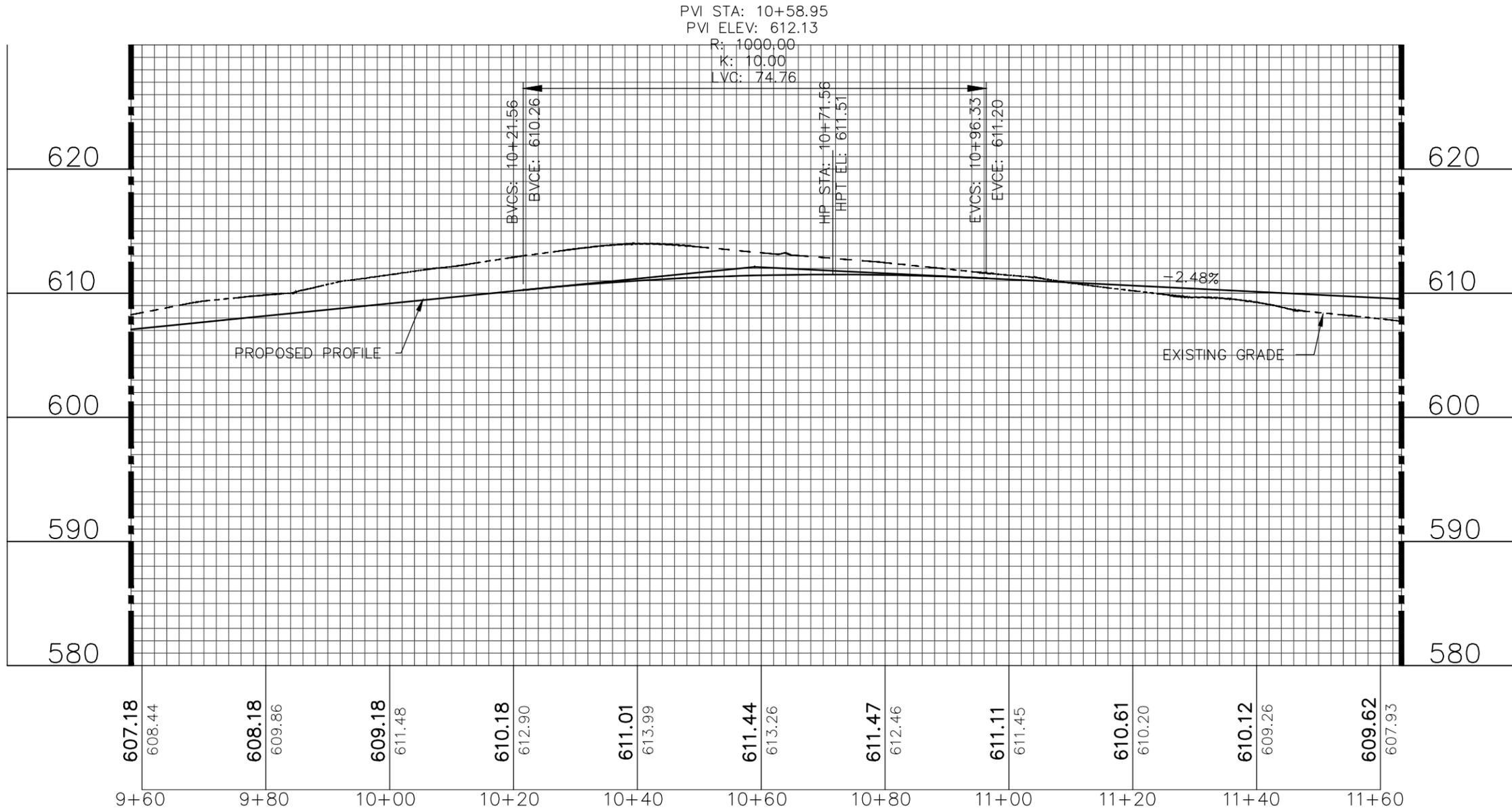
Kurt A. Kutter No. PE-2018021213  
Registered Professional Engineer  
State of Missouri  
for Cochran Engineering & Surveying

**TRAIL PLAN - SECTION 2**

DWN. BY:	APPR. BY:
CBD	KAK
DATE:	DATE:
APRIL 2020	
SCALE:	SCALE:
1" = 20'	
PROJ. NO.:	PROJ. NO.:
M19-7755	
DWG. NO.:	DWG. NO.:
TP-15	

# TRAIL PROFILE - SECTION 2

MATCHLINE (SEE SHEET TP-14)



MATCHLINE (SEE SHEET TP-18)

NOTE:  
UTILITY LOCATIONS AND ELEVATIONS  
SHOWN ARE APPROXIMATE. NO POT  
HOLING OR SUBSURFACE LOCATIONS  
HAVE BEEN PERFORMED.

NOTE:  
CONTRACTOR TO ENSURE TRAIL  
SURFACE IS AT EXISTING GRADE IN ALL  
GRASS AREAS. THIS WILL ENSURE  
DRAINAGE CONDITIONS DO NOT CHANGE  
AFTER THE TRAIL IS CONSTRUCTED.

SCALE: HORZ. 0 10 20  
VERT. 0 5 10



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Wentzville, Missouri 63385

Missouri State Certificate  
of Authority Numbers:  
2010000046

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the start of construction on  
this site, contractor shall  
call 1-800-DIG-RITE for  
utility location information.  
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WELDON SPRING  
TRAIL IMPROVEMENTS  
WELDON SPRING, MO

TRAIL PROFILE - SECTION 2

DATE:	DATE:
DWN. BY:	APPR. BY:
CBD	KAK
DATE:	DATE:
APRIL 2020	
SCALE:	SCALE:
1" = 20'	
PROJ. NO.:	PROJ. NO.:
M19-7755	
DWG. NO.:	DWG. NO.:
TP-16	

DWG NAME: j:\2019\m19-7755 - walking trail extensions, weldon spring\engineering\autocad drawings\03\_Construction Drawings\M19\_7755\_TP-1\_TP-30\_PLANS & PROFILES.dwg LAYOUT TAB: TP-17 PLOTTED ON: Apr 28, 2020 - 1:25pm PLOTTED BY: cleming

# TRAIL PLAN - SECTION 2

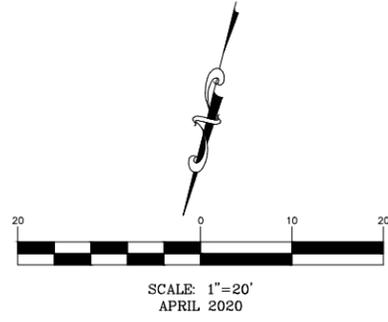
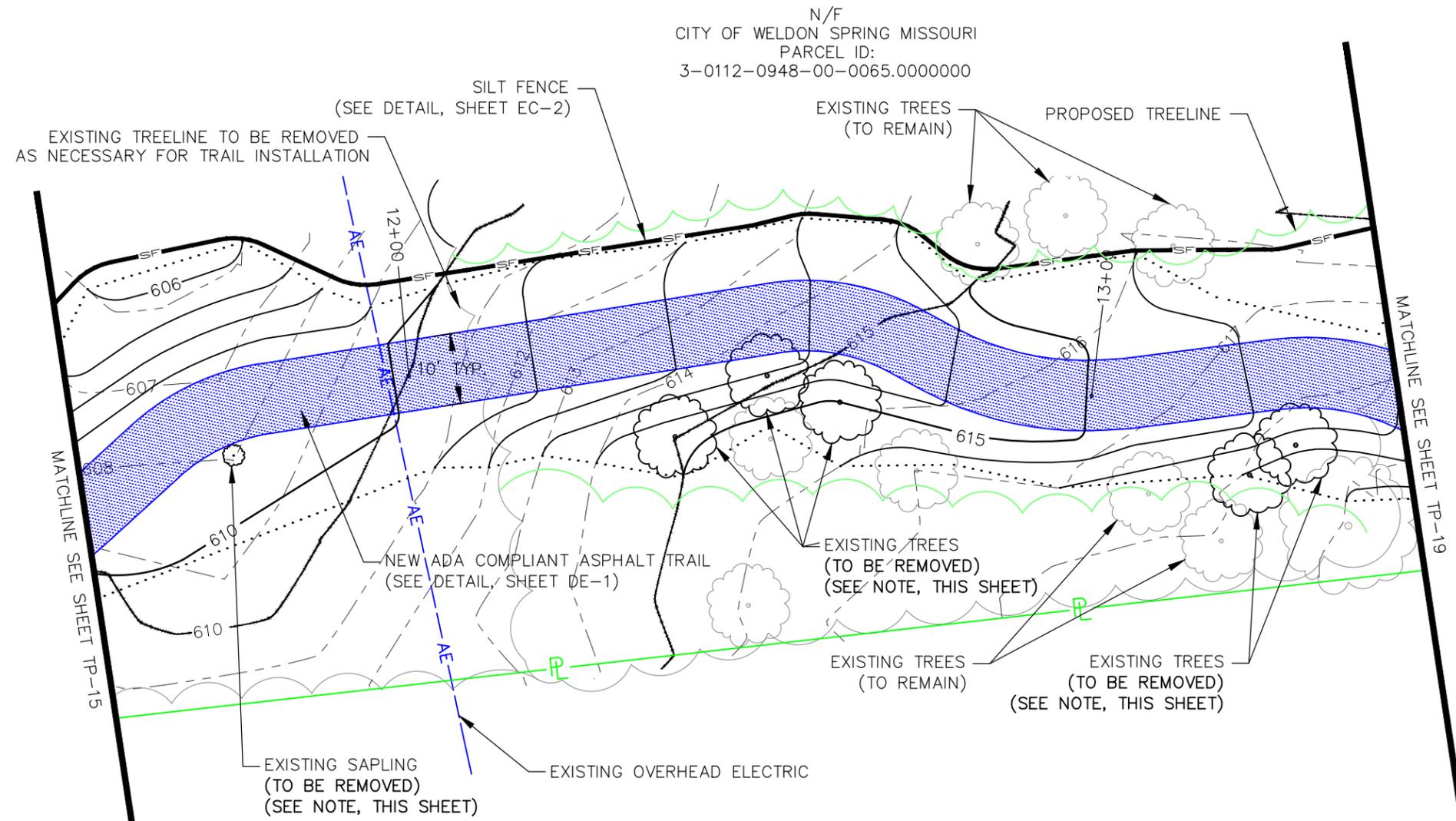
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North Office  
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Wentzville, Missouri 63385

Missouri State Certificate of Authority Numbers: 2010000046

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

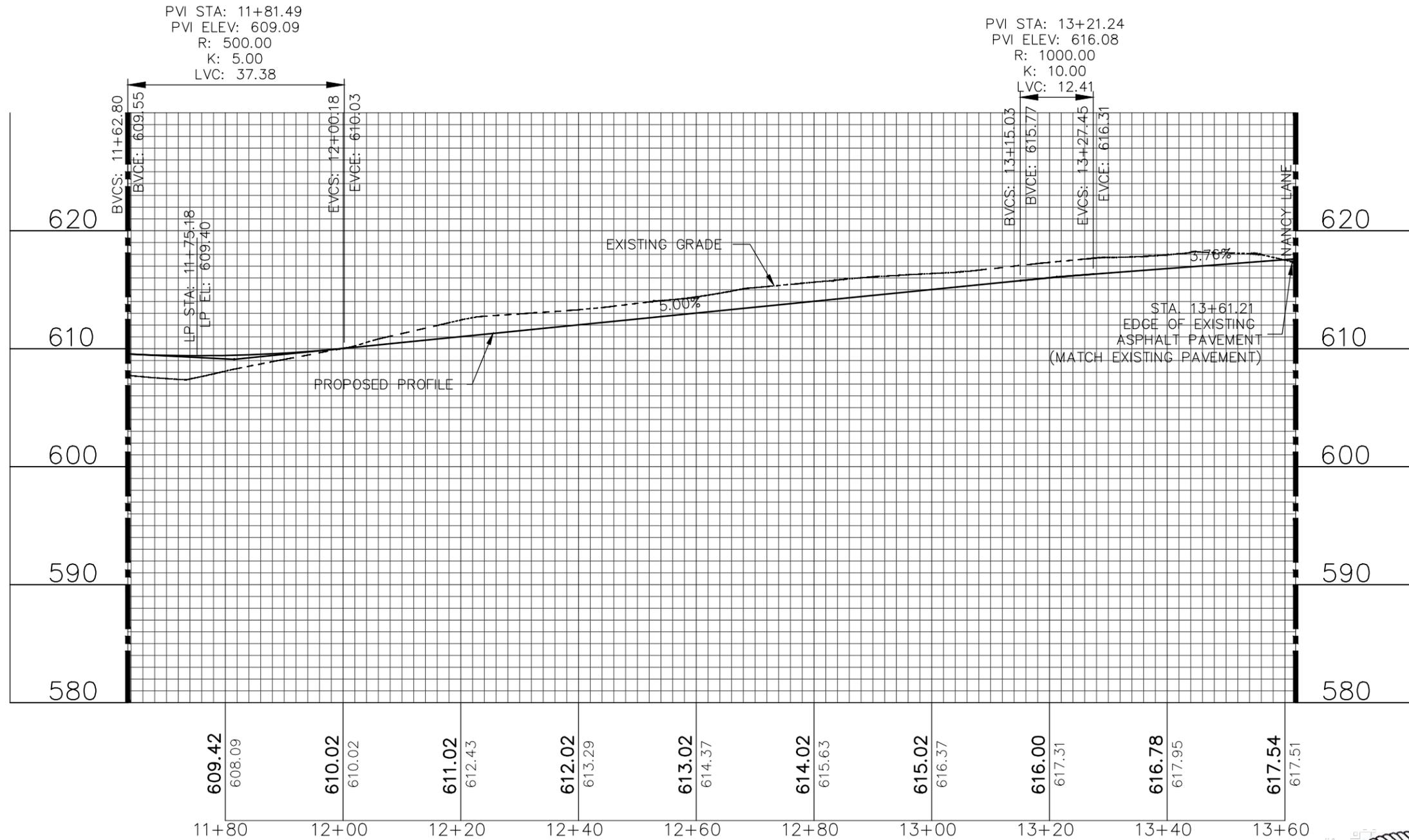
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**WELDON SPRING  
TRAIL IMPROVEMENTS  
WELDON SPRING, MO**

DWN. BY: CBD		APPR. BY: KAK	
DATE: APRIL 2020			
SCALE: 1" = 20'			
PROJ. NO.: M19-7755		DWG. NO.: TP-17	

# TRAIL PROFILE - SECTION 2

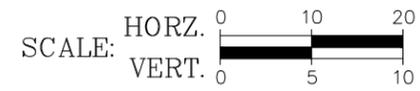
MATCHLINE (SEE SHEET TP-16)



MATCHLINE (SEE SHEET TP-20)

NOTE:  
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WELDON SPRING  
 TRAIL IMPROVEMENTS  
 WELDON SPRING, MO

TRAIL PROFILE - SECTION 2

DATE:	DATE:
DWN. BY:	APPR. BY:
CBD	KAK
DATE:	DATE:
APRIL 2020	
SCALE:	SCALE:
1" = 20'	
PROJ. NO.:	PROJ. NO.:
M19-7755	
DWG. NO.:	DWG. NO.:
TP-18	

DWG NAME: j:\2019\m19-7755 - walking trail extensions, weldon spring\engineering\autocad drawings\03\_Construction Drawings\M19\_7755\_TP-1\_TP-30\_PLANS & PROFILES.dwg LAYOUT TAB: TP-19 PLOTTED ON: Apr 28, 2020 - 1:25pm PLOTTED BY: cleming

# TRAIL PLAN - SECTION 2

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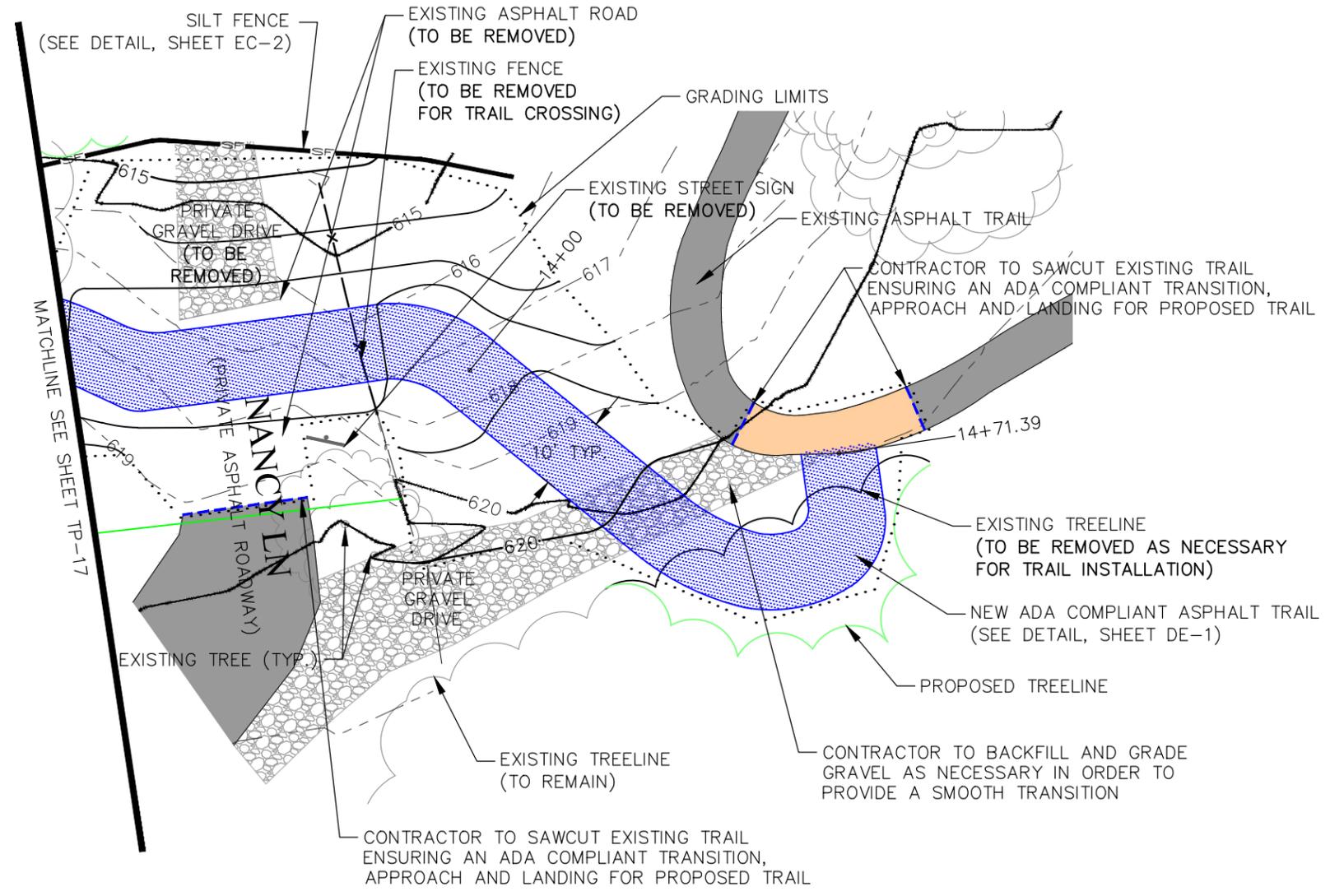
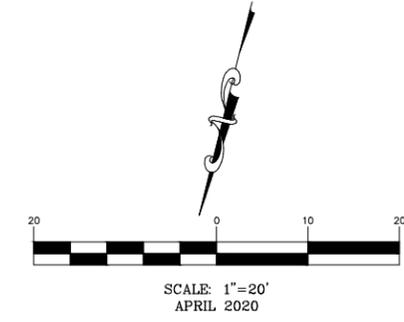
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N/F  
CITY OF WELDON SPRING MISSOURI  
PARCEL ID:  
3-0122-1787-00-0005.300000



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Wentzville, Missouri 63385

Missouri State Certificate of Authority Numbers: 2010000046

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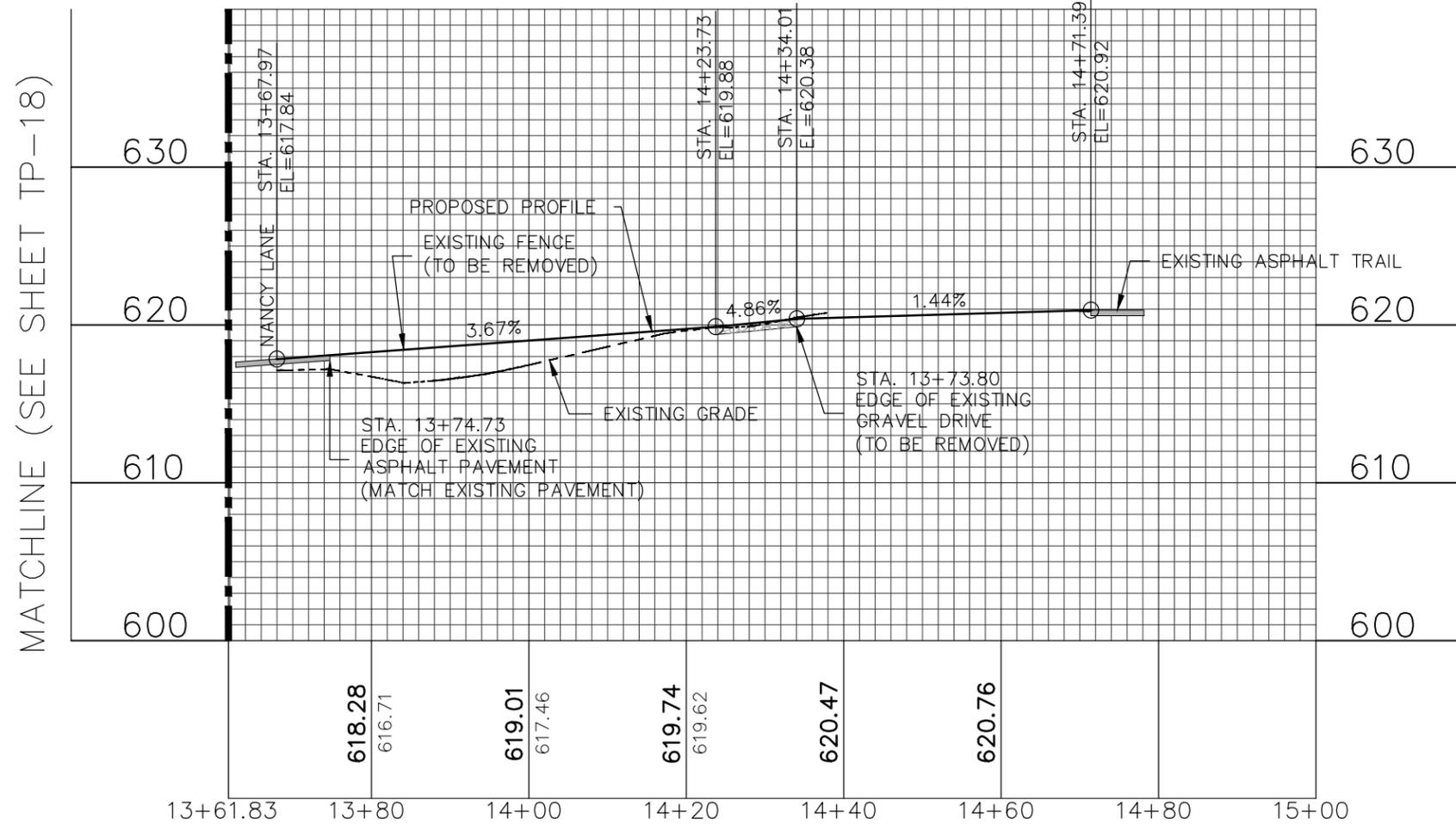
**WELDON SPRING  
TRAIL IMPROVEMENTS  
WELDON SPRING, MO**



Kurt A. Kutter No. PE-2018021213  
Registered Professional Engineer  
State of Missouri  
for Cochran Engineering & Surveying

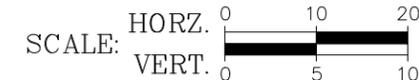
TRAIL PLAN - SECTION 2	
DWN. BY:	APPR. BY:
CBD	KAK
DATE:	DATE:
APRIL 2020	
SCALE:	
1" = 20'	
PROJ. NO.:	
M19-7755	
DWG. NO.:	
TP-19	

# TRAIL PROFILE - SECTION 2



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NOTE:  
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wenma@cochraneng.com

**COCHRAN**

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North Office  
8 East Main Street  
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Missouri State Certificate of Authority Numbers: 2010000046

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WELDON SPRING  
TRAIL IMPROVEMENTS  
WELDON SPRING, MO

TRAIL PROFILE - SECTION 2

DWN. BY:	APPR. BY:
CBD	KAK
DATE:	DATE:
APRIL 2020	
SCALE:	
1" = 20'	
PROJ. NO.:	
M19-7755	
DWG. NO.:	
TP-20	

DWG NAME: j:\2019\m19-7755 - walking trail extensions, weldon spring\engineering\autocad drawings\03\_Construction Drawings\M19\_7755\_TP-1\_TP-30\_PLANS & PROFILES.dwg LAYOUT TAB: TP-21 PLOTTED ON: Apr 28, 2020 - 1:25pm PLOTTED BY: cleming

# TRAIL PLAN - SECTION 3

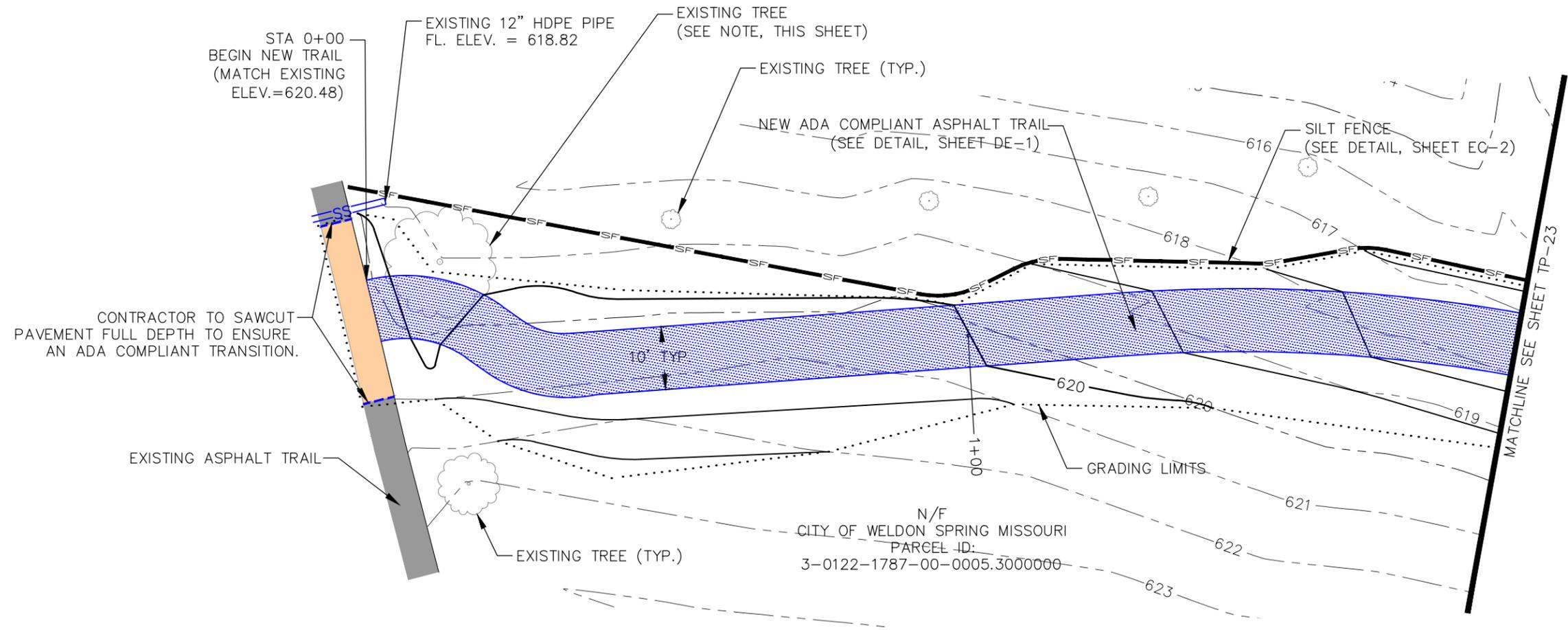
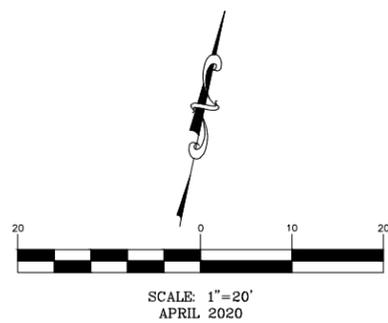
NOTE:  
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ALL NEW TRAILS SHALL HAVE A 2.0% OR LESS CROSS SLOPE (PER ADA).

CONTRACTOR TO USE EXTREME CAUTION AND CARE TO MINIMIZE ANY IMPACT TO EXISTING TREES & BUSHES.

NOTE:  
STATIONING IS PER CENTERLINE OF TRAIL.

NOTE:  
ANY UTILITY COVERS THAT REMAIN IN THE PATH OF THE NEW TRAIL SUCH AS MANHOLES AND WATER METERS SHALL HAVE A SLIP RESISTANT TOP (PER ADA).



NOTE:  
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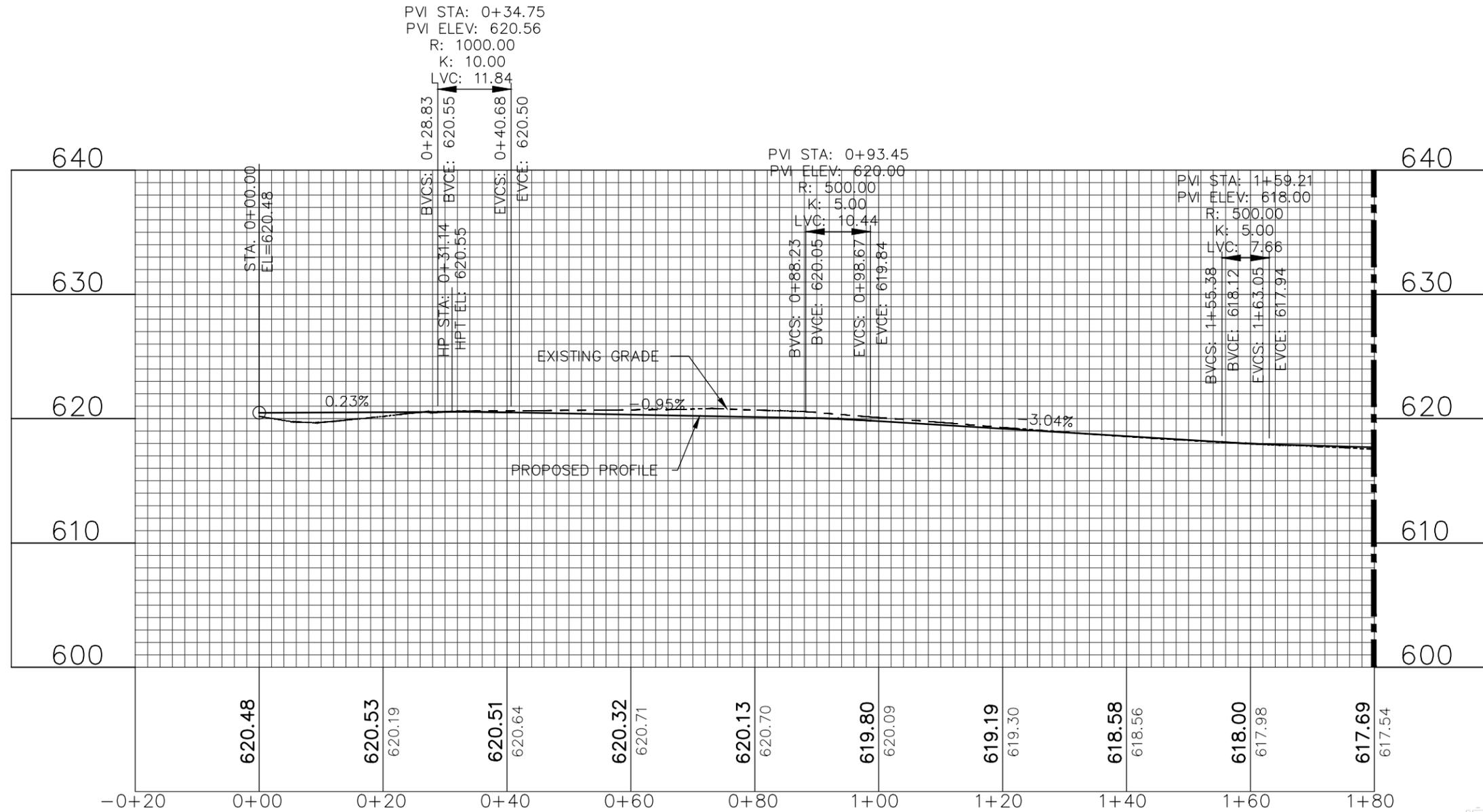
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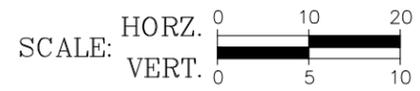
**WELDON SPRING  
TRAIL IMPROVEMENTS  
WELDON SPRING, MO**

DWN. BY: CBD		APPR. BY: KAK	
DATE: APRIL 2020			
SCALE: 1" = 20'			
PROJ. NO: M19-7755		DWG. NO: TP-21	

# TRAIL PROFILE - SECTION 3



MATCHLINE (SEE SHEET TP-24)



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WELDON SPRING  
 TRAIL IMPROVEMENTS  
 WELDON SPRING, MO

TRAIL PROFILE - SECTION 3	DWN. BY: CBD	APPR. BY: KAK
DATE: APRIL 2020		
SCALE: 1" = 20'		
PROJ. NO: M19-7755		
DWG. NO: TP-22		

DWG NAME: j:\2019\m19-7755 - walking trail extensions, weldon spring\engineering\autocad drawings\03\_Construction Drawings\M19-7755\_TP-1\_TP-30\_PLANS & PROFILES.dwg LAYOUT TAB: TP-23 PLOTTED ON: Apr 28, 2020 - 1:25pm PLOTTED BY: cdeining

# TRAIL PLAN - SECTION 3

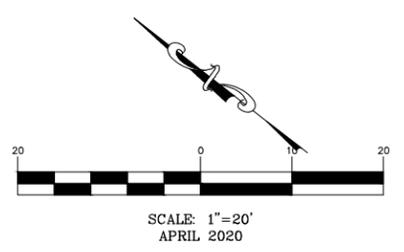
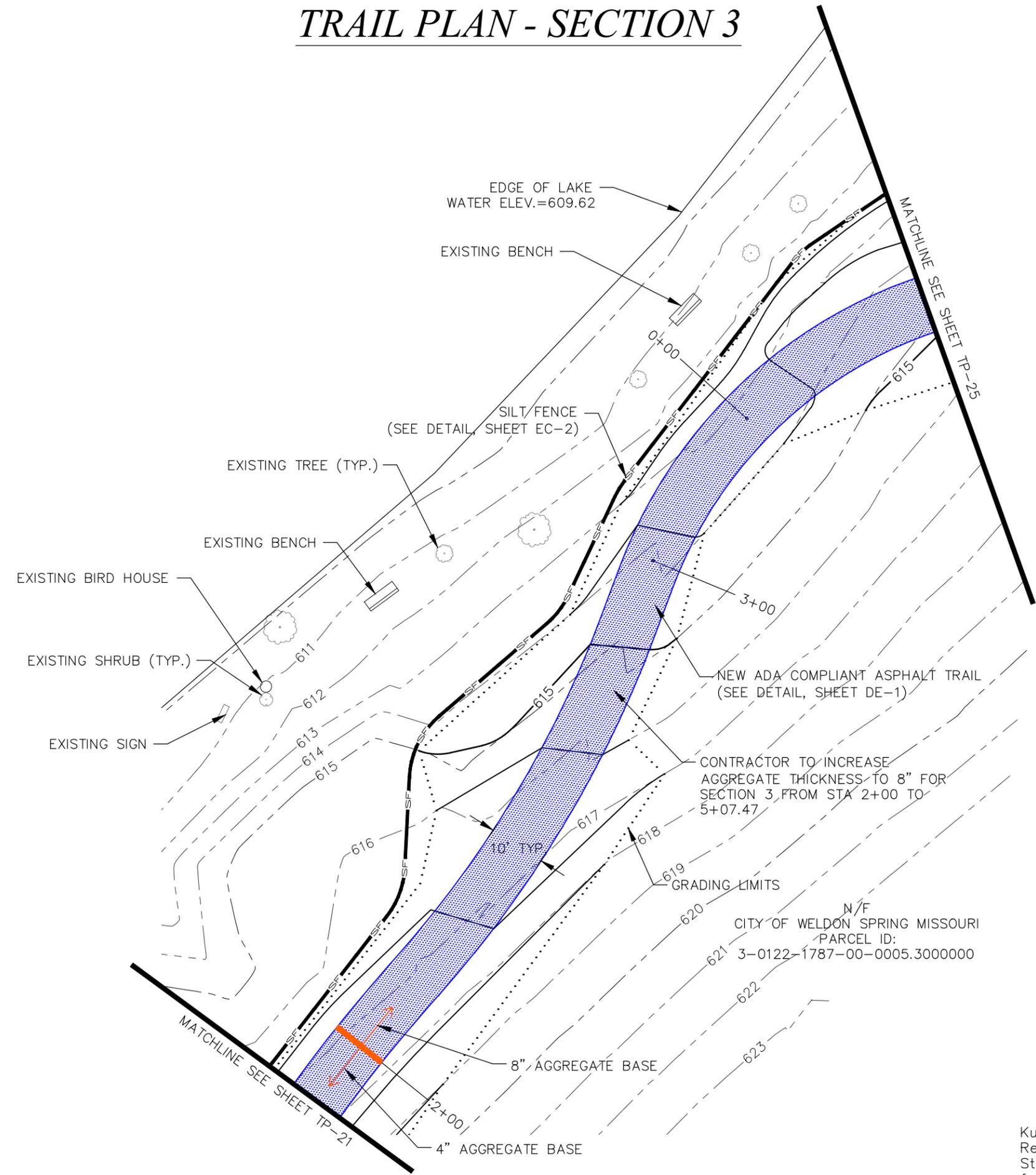
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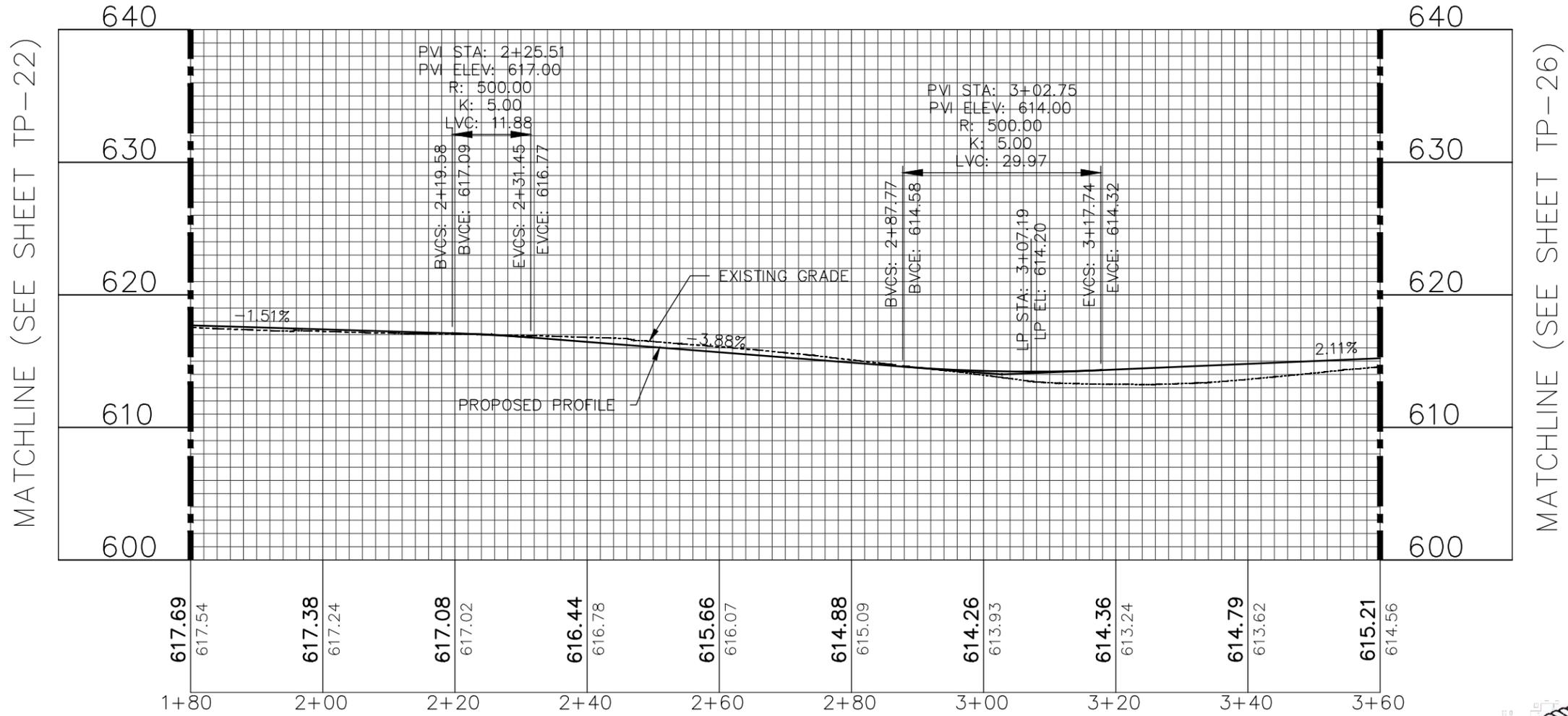
**WELDON SPRING**  
**TRAIL IMPROVEMENTS**  
**WELDON SPRING, MO**

DWN. BY:	APPR. BY:
CBD	KAK
DATE:	DATE:
APRIL 2020	APRIL 2020
SCALE:	SCALE:
1" = 20'	1" = 20'
PROJ. NO.:	PROJ. NO.:
M19-7755	M19-7755
DWG. NO.:	DWG. NO.:
TP-23	TP-23



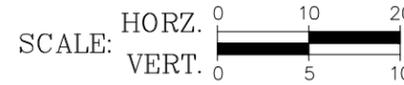
Kurt A. Kutter No. PE-2018021213  
Registered Professional Engineer  
State of Missouri  
for Cochran Engineering & Surveying

# TRAIL PROFILE - SECTION 3



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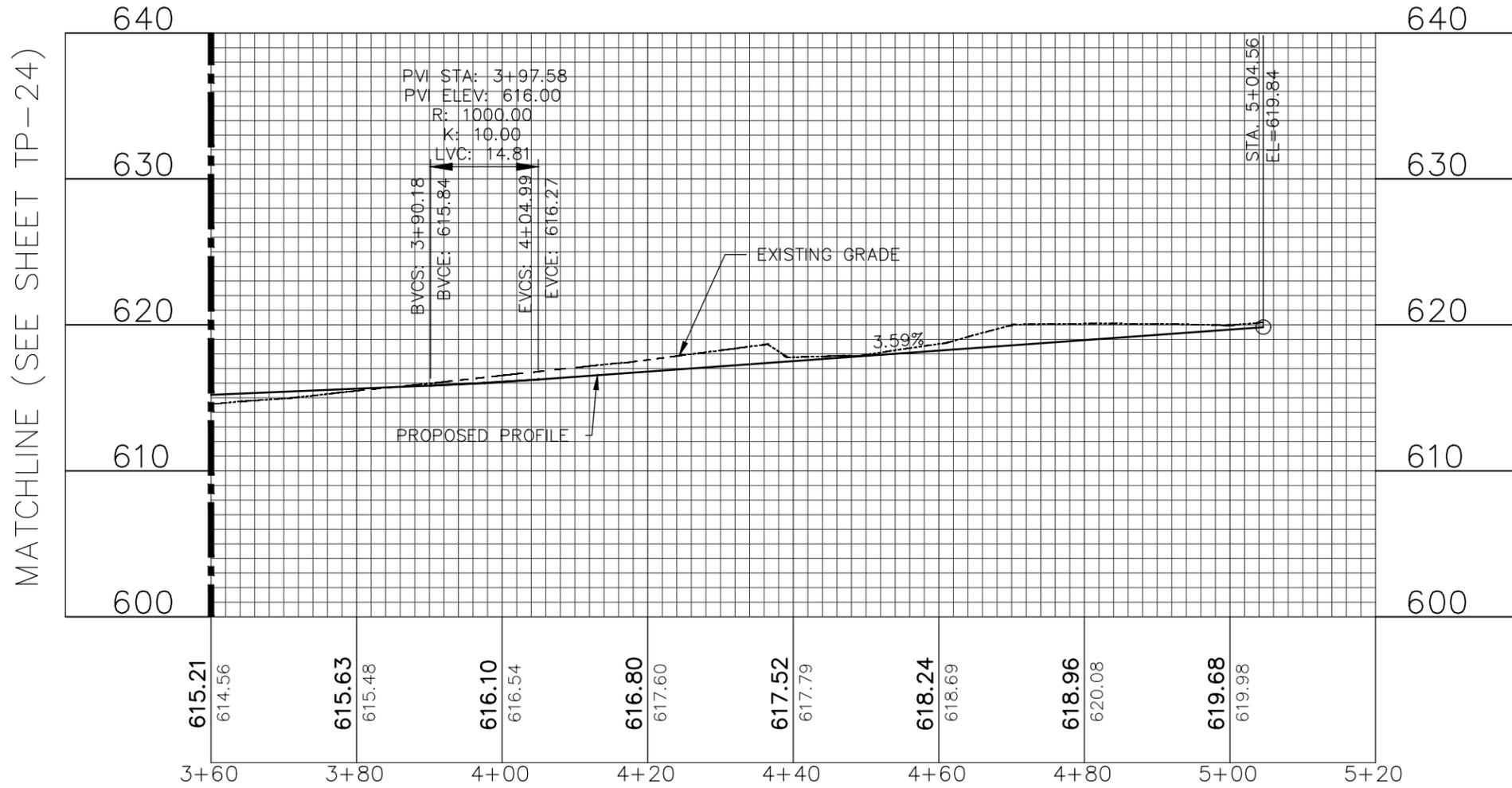
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WELDON SPRING  
TRAIL IMPROVEMENTS  
WELDON SPRING, MO

DWN. BY: APPTD. BY:	
CBD	KAK
DATE: APRIL 2020	
SCALE: 1" = 20'	
PROJ. NO.: M19-7755	
DWG. NO.: TP-24	



# TRAIL PROFILE - SECTION 3



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SCALE: HORZ. 0 10 20  
VERT. 0 5 10



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WELDON SPRING  
TRAIL IMPROVEMENTS  
WELDON SPRING, MO

DWN. BY: APPTD. BY:	
CBD	KAK
DATE: APRIL 2020	
SCALE: 1" = 20'	
PROJ. NO.: M19-7755	
DWG. NO.: TP-26	

# TRAIL PLAN - SECTION 4 & 4A

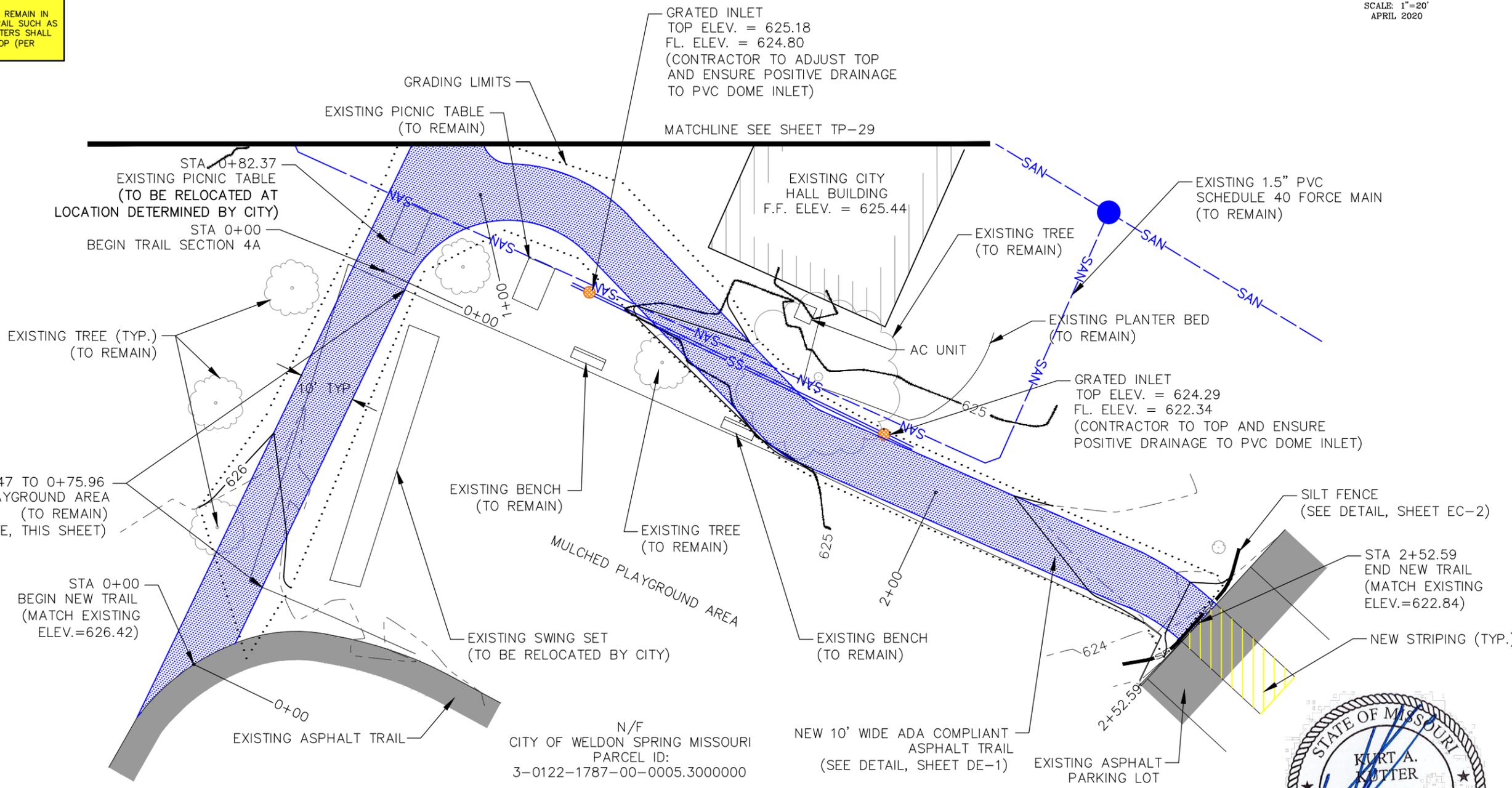
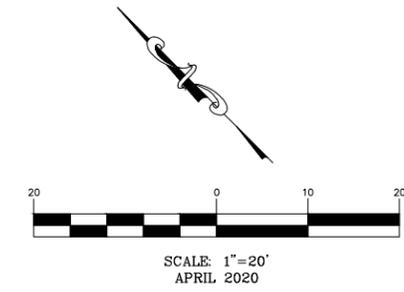
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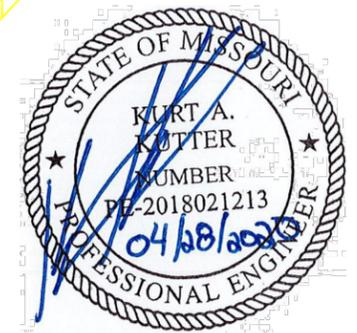
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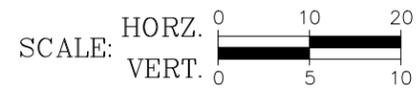
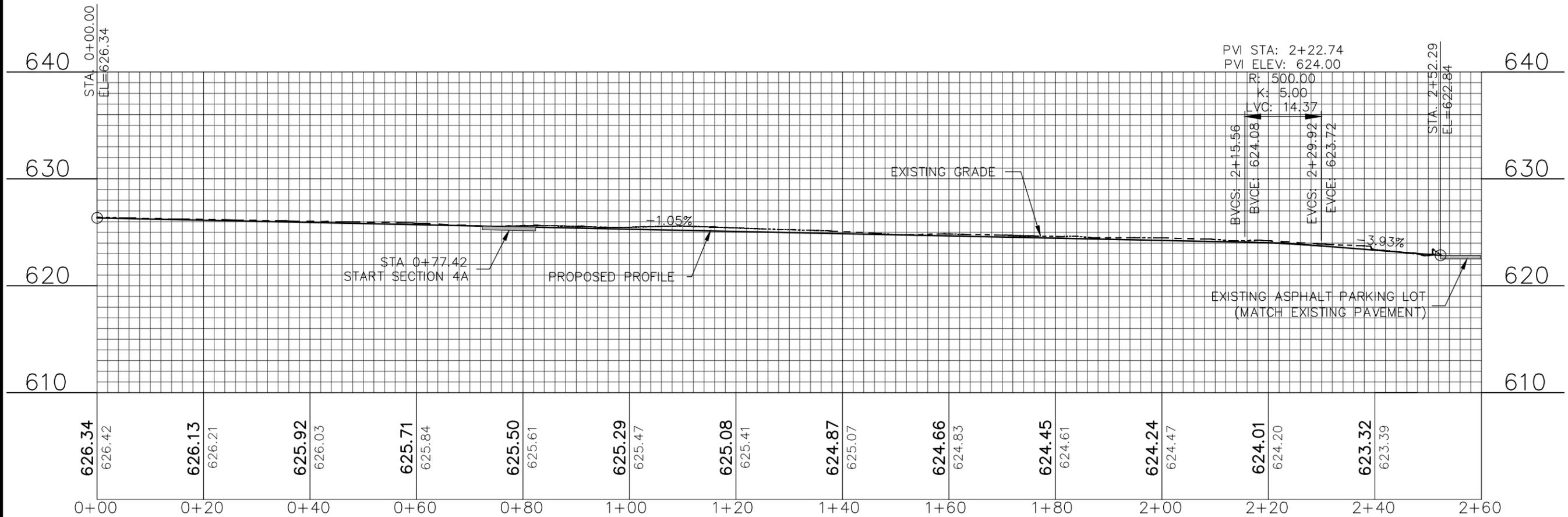
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WELDON SPRING  
TRAIL IMPROVEMENTS  
WELDON SPRING, MO

DATE:	APRIL 2020
SCALE:	1" = 20'
PROJ. NO.:	M19-7755
DWG. NO.:	TP-27

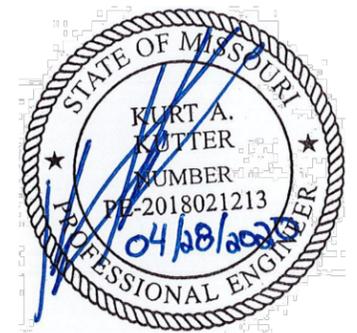
DWG. NAME: j:\2019\m19-7755 - walking trail extensions, weldon spring\engineering\autocad drawings\03\_Construction Drawings\M19\_7755\_TP-1\_TP-30\_PLANS & PROFILES.dwg LAYOUT TAB: TP-27 PLOTTED ON: Apr 28, 2020 - 1:25pm PLOTTED BY: cdeeming

# TRAIL PROFILE - SECTION 4



NOTE:  
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WELDON SPRING  
 TRAIL IMPROVEMENTS  
 WELDON SPRING, MO

TRAIL PROFILE - SECTION 4

DWN. BY:	APPR. BY:
CBD	KAK
DATE:	DATE:
APRIL 2020	
SCALE:	
1" = 20'	
PROJ. NO.:	
M19-7755	
DWG. NO.:	
TP-28	

# TRAIL PLAN - SECTION 4A

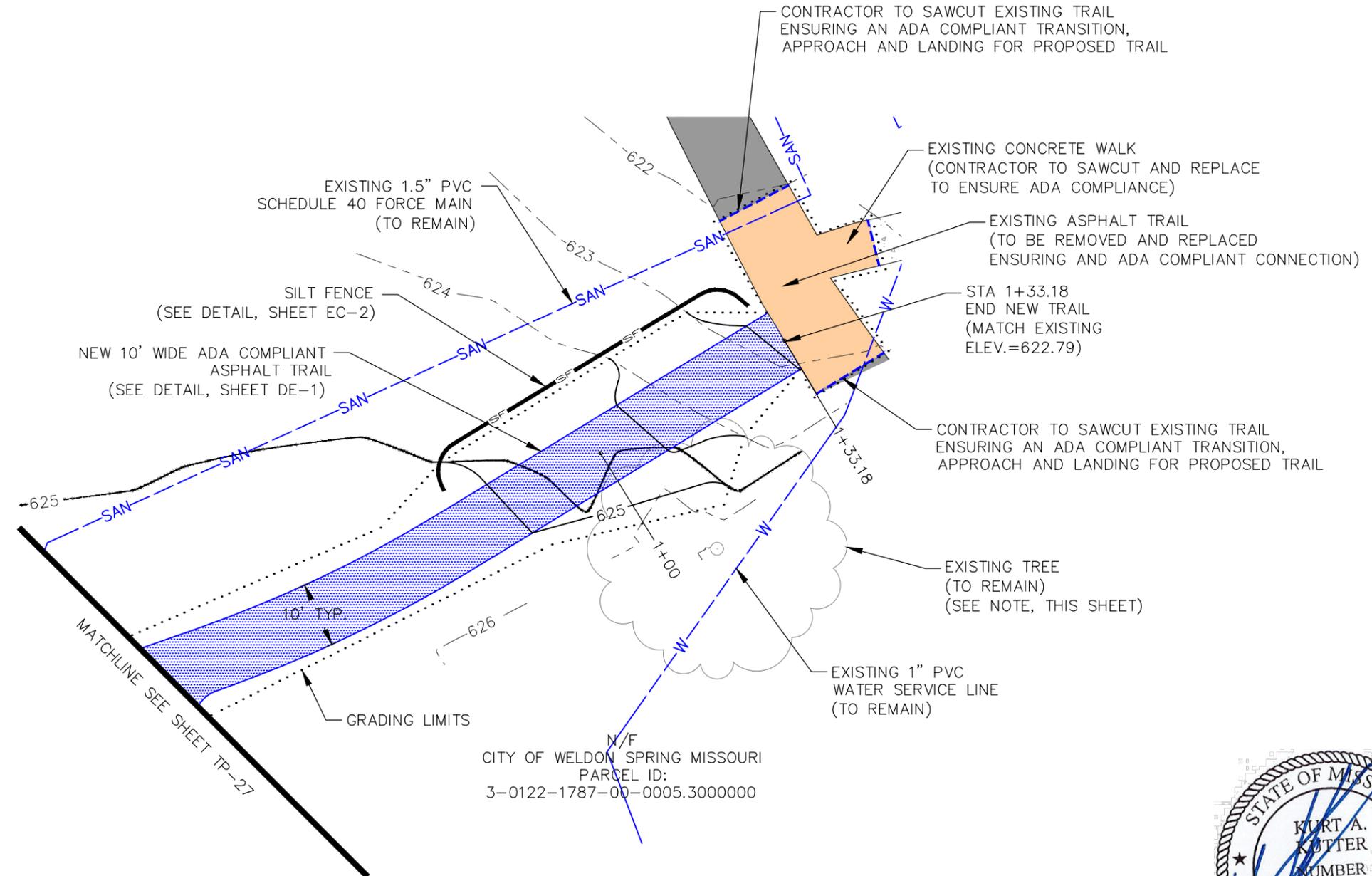
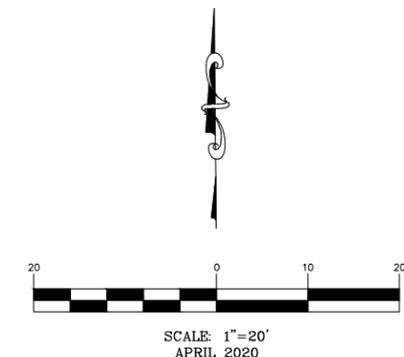
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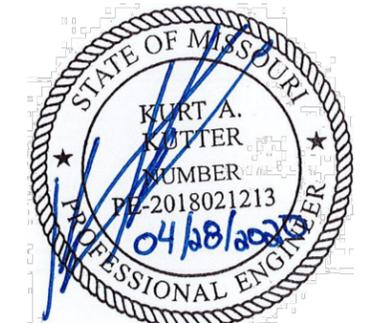
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N/F  
CITY OF WELDON SPRING MISSOURI  
PARCEL ID:  
3-0122-1787-00-0005.3000000

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NOTE:  
CONTRACTOR MAY MODIFY TRAIL ALIGNMENT DURING CONSTRUCTION IN ORDER TO MINIMIZE DAMAGE AND ELIMINATE TREE REMOVAL. IF TRAIL IS MODIFIED, ADA COMPLIANCE MUST BE MAINTAINED.



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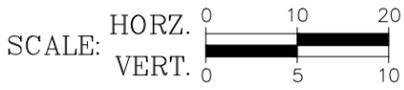
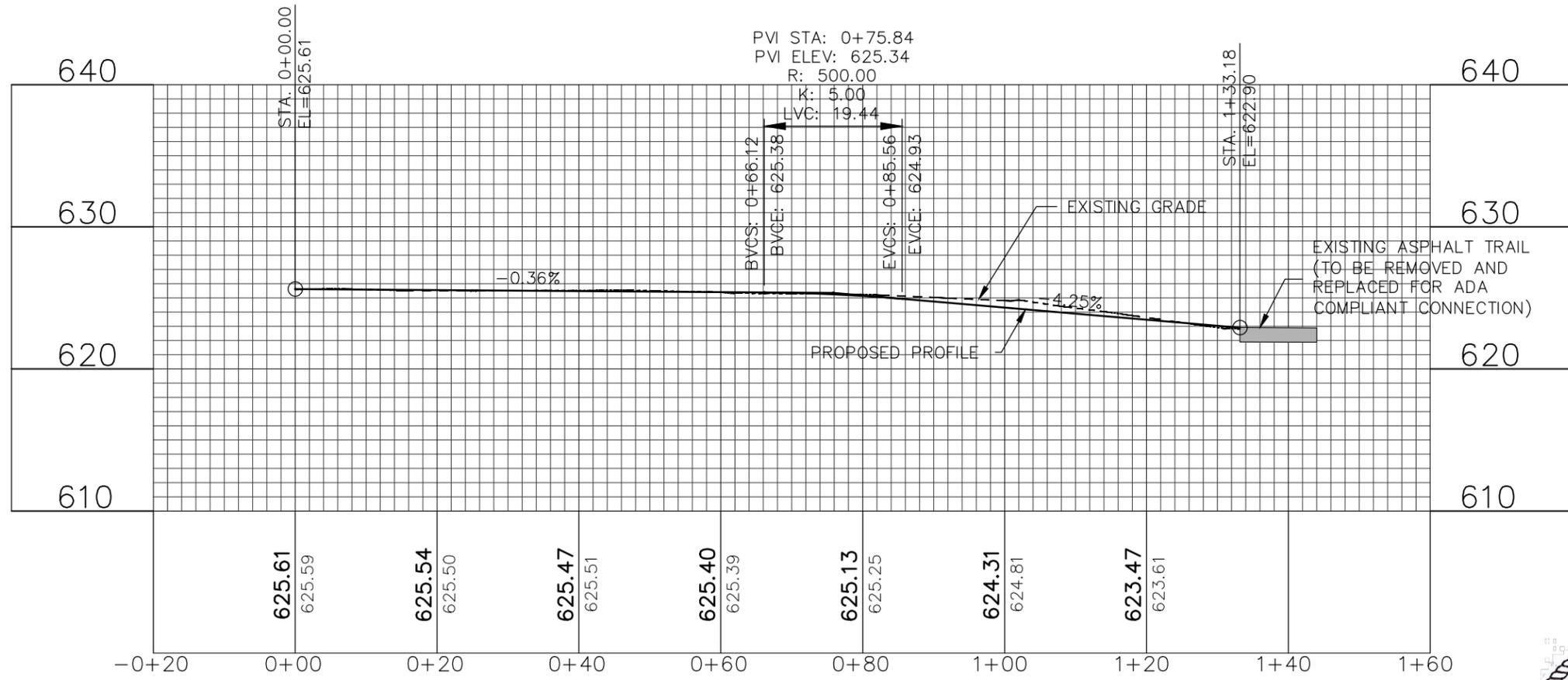
WELDON SPRING  
TRAIL IMPROVEMENTS  
WELDON SPRING, MO

TRAIL PLAN - SECTION 4A

DATE:	DATE:
DWN. BY:	APPR. BY:
CBD	KAK
DATE:	DATE:
APRIL 2020	
SCALE:	SCALE:
1" = 20'	
PROJ. NO.:	PROJ. NO.:
M19-7755	
DWG. NO.:	DWG. NO.:
TP-29	

DWG NAME: j:\2019\m19-7755 - walking trail extensions, weldon spring\engineering\autocad drawings\03\_Construction Drawings\M19-7755\_TP-1\_IP-30\_PLANS & PROFILES.dwg LAYOUT TAB: TP-29 PLOTTED ON: Apr 28, 2020 - 1:26pm PLOTTED BY: cdeeming

# TRAIL PROFILE - SECTION 4A



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WELDON SPRING  
TRAIL IMPROVEMENTS  
WELDON SPRING, MO

TRAIL PROFILE - SECTION 4A

DWN. BY:	APPR. BY:
CBD	KAK
DATE:	DATE:
APRIL 2020	
SCALE:	
1" = 20'	
PROJ. NO.:	
M19-7755	
DWG. NO.:	
TP-30	

DWG NAME: j:\2019\m19-7755 - walking trail extensions, weldon spring\engineering\autocad drawings\03\_Construction Drawings\M19-7755\_DE-1\_DE-4\_DETAILS.dwg LAYOUT TAB: DE-1 PLOTTED ON: Apr 28, 2020 - 1:26pm PLOTTED BY: cdeining

- LEGEND**
- 1.0% MIN., 2.0% MAX. CROSS SLOPE.
  - LANDING AREA. MIN. 5' X 5' WITH 1.0% MIN., 2.0% MAX. SLOPE IN ANY DIRECTION.
  - MAX. RAMP SLOPE IS 1V:12H (8.33%) AND HAVE A CROSS SLOPE OF 1.0% MIN., 2.0% MAX.
  - DETECTABLE WARNING DEVICE. EXTEND 2' IN DIRECTION OF TRAVEL.

- KEYED NOTES**
- (1) VARIABLE CURB HEIGHT. CURB MAY BE ELIMINATED IF UNNECESSARY AND APPROVED BY THE ENGINEER.
  - (2) TRANSITION AREA SLOPE TO BE MAXIMUM OF 5.0% OR MATCH STREET GRADE. SLOPES SHALL NOT CREATE AN AREA THAT HOLDS WATER.
  - (3) SEE PLAN SHEETS FOR WIDTH. TRAILS AT CURB SHALL BE A MINIMUM OF 6' WIDE UNLESS OTHERWISE APPROVED BY THE ENGINEER.
  - (4) FLARE MAX. SLOPE IS 1V:10H WHEN MEASURED PARALLEL TO CURB LINE.
  - (5) ENSURE THAT INSIDE EDGE OF CURVED RAMPS MAINTAIN A 1V:12H (8.33%) MAX. SLOPE.

(6) ENSURE ADEQUATE DRAINAGE OF LANDING AREA. SLOPES SHALL NOT CREATE A LANDING AREA THAT HOLDS WATER.

**CURB RAMP GENERAL NOTES:**

ALL AREAS OF THE PEDESTRIAN ACCESS ROUTE MUST BE COMPLIANT WITH THE "AMERICANS WITH DISABILITIES ACT ACCESSIBILITY GUIDELINES (ADAAG)". EXCEPTIONS MUST BE APPROVED BY THE ENGINEER.

FINISHED TRAIL SHALL BE STABLE, SLIP RESISTANT AND SURFACE DOES NOT POND WATER.

TRAIL AND RAMP CROSS SLOPES SHALL BE A MINIMUM OF 1.0% TO FACILITATE DRAINAGE AND A MAXIMUM OF 2.0% TO BE USABLE FOR DISABLED INDIVIDUALS.

STORMWATER INLETS, SIGNS, POSTS, MANHOLE COVERS, PULL BOXES AND OTHER ACCESS LIDS SHOULD BE AVOIDED WITHIN THE TRAIL. IF SUCH A LOCATION IS NECESSARY, THE FEATURE MUST MEET ADA STANDARDS.

THE RUNNING GRADE OF A TRAIL SHALL NOT EXCEED 5.0% UNLESS IT IS MATCHING THE GRADE OF THE ADJACENT ROADWAY.

ALL RAMPS SHALL NOT HAVE RUNNING SLOPES GREATER THAN 8.33% OR 1V:12H. RAMP LENGTH NOT REQUIRED TO EXCEED 15 FEET.

PEDESTRIAN ACCESS ROUTE SHALL CONTINUE ACROSS DRIVEWAYS.

LANDINGS SHALL BE CONSTRUCTED AT THE TOP AND/OR BOTTOM OF A CURB RAMP WHEREVER A TURNING MOVEMENT OR ACCESS TO PEDESTRIAN PUSH BUTTON IS REQUIRED.

LANDINGS LOCATED IN THE ROADWAY MUST BE COMPLETELY CONTAINED WITHIN THE CROSSWALK.

SIDE FLARES OF CURB RAMPS, IN THE PATH OF PEDESTRIAN TRAVEL (TRAVERSABLE), SHALL NOT EXCEED A SLOPE OF 1V:10H. SIDE FLARES OUTSIDE THE PEDESTRIAN PATH (NONTRAVERSABLE) MAY BE 1V:2H OR VERTICAL.

TRANSITION FROM TRAIL TO GUTTER TO ROADWAY MUST BE FLUSH.

DETECTABLE WARNING DEVICE (TRUNCATED DOMES) SHALL BE PRE-FORMED AND INSTALLED AS PER MANUFACTURER'S RECOMMENDATIONS, AT PUBLIC STREET INTERSECTIONS AND ANY SIGNALIZED INTERSECTIONS. STAMPED CONCRETE WILL NOT BE ACCEPTED.

THE DETECTABLE WARNING DEVICE SHALL BE RED. TRUNCATED DOMES SHALL SPAN THE FULL WIDTH (WITHIN 2") OF THE RAMP OR LANDING.

DETECTABLE WARNING DOMES SHALL BE ALIGNED PARALLEL TO THE SLOPE WHEN INSTALLED ON A RAMP. WHEN INSTALLED ON A LANDING OR BLENDED TRANSITION, THEY SHALL BE ALIGNED PERPENDICULAR OR RADIAL TO THE BREAK BETWEEN THE RAMP, LANDING OR BLENDED TRANSITION AND THE STREET.

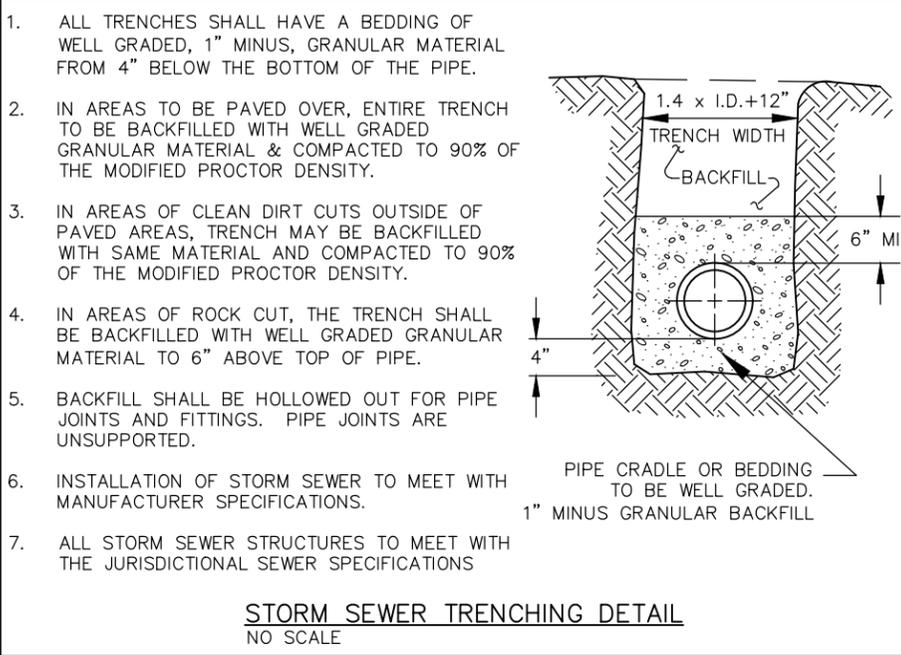
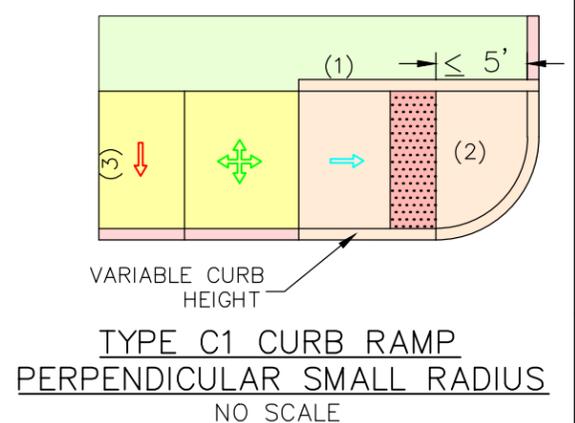
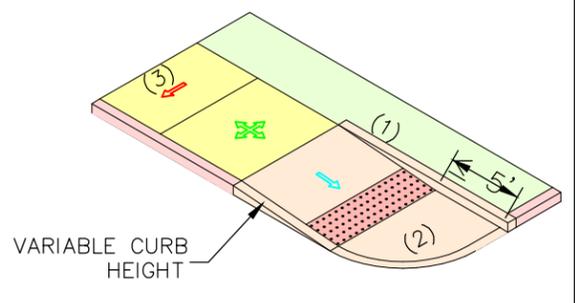
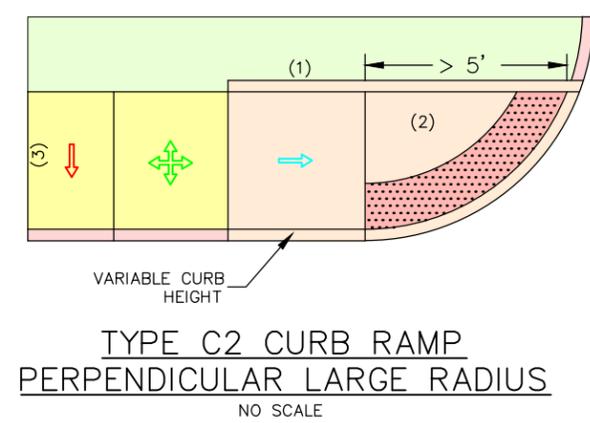
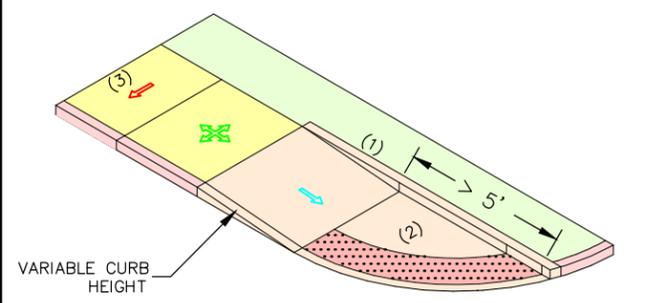
WHEN IT IS TECHNICALLY NOT FEASIBLE TO CONSTRUCT 1V:12H RAMP SLOPE, WHILE ALTERING EXISTING PEDESTRIAN FACILITIES, A SLOPE BETWEEN 1V:12H AND 1V:10H IS PERMISSIBLE FOR A MAXIMUM RISE OF 6", AND A SLOPE BETWEEN 1V:10H AND 1V:8H IS PERMISSIBLE FOR A MAXIMUM RISE OF 3".

IF CONSTRUCTION OF 5' X 5' LANDING IS NOT FEASIBLE, 4' X 4' LANDING MAY BE USED WITH APPROVAL FROM THE ENGINEER.

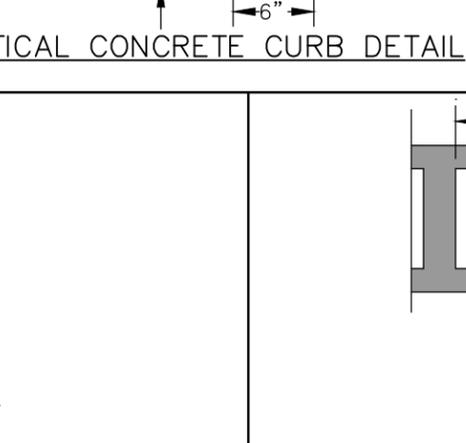
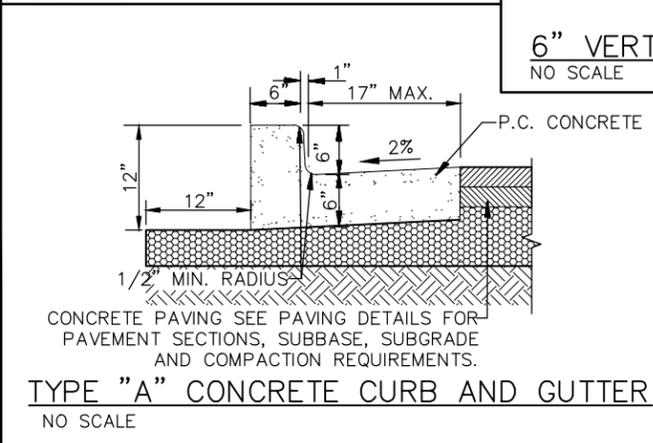
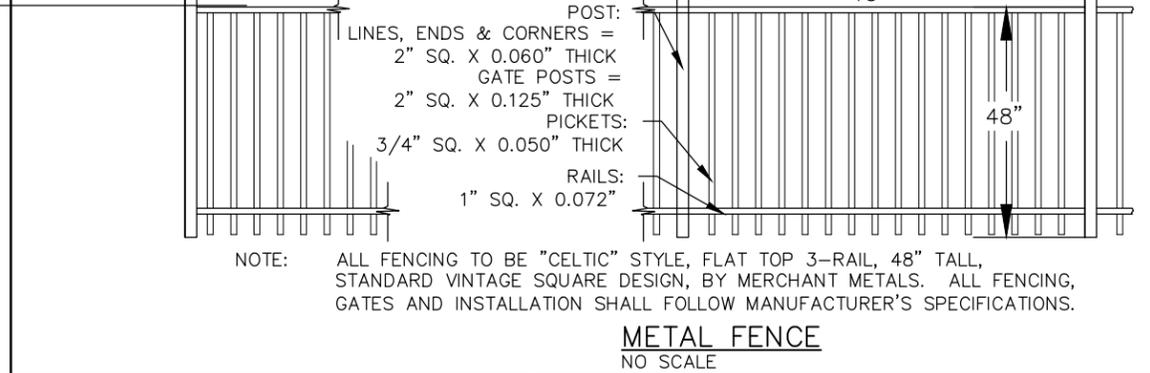
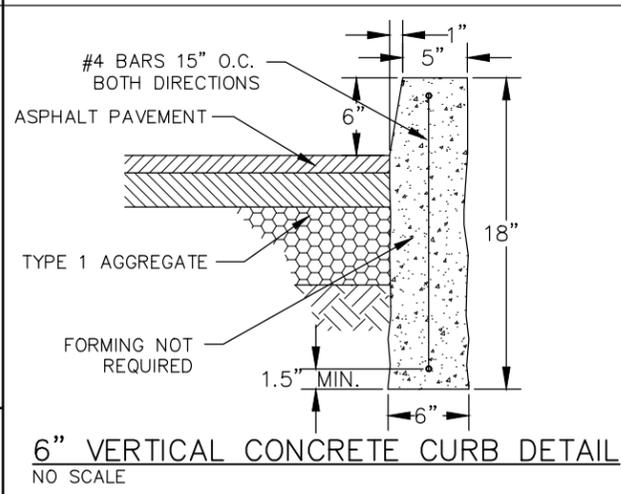
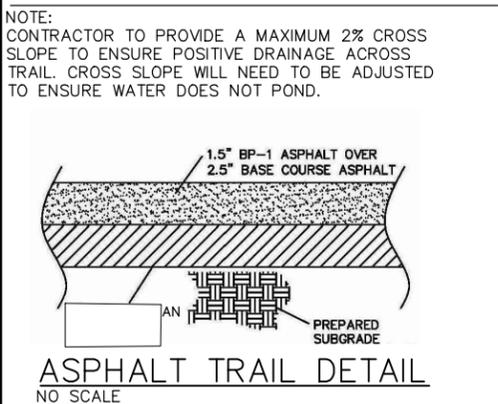
CURB RAMPS AND INTEGRAL CURBS THAT ARE PART OF RAMPS SHALL BE INCLUDED IN THE UNIT BID PRICE FOR CONCRETE RAMP.

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NOTE: FENCE SHALL BE PAINTED POWDER COATED ALUMINUM. EITHER MATERIAL SHALL HAVE A FINISH PRODUCT WHICH IS BLACK IN COLOR.



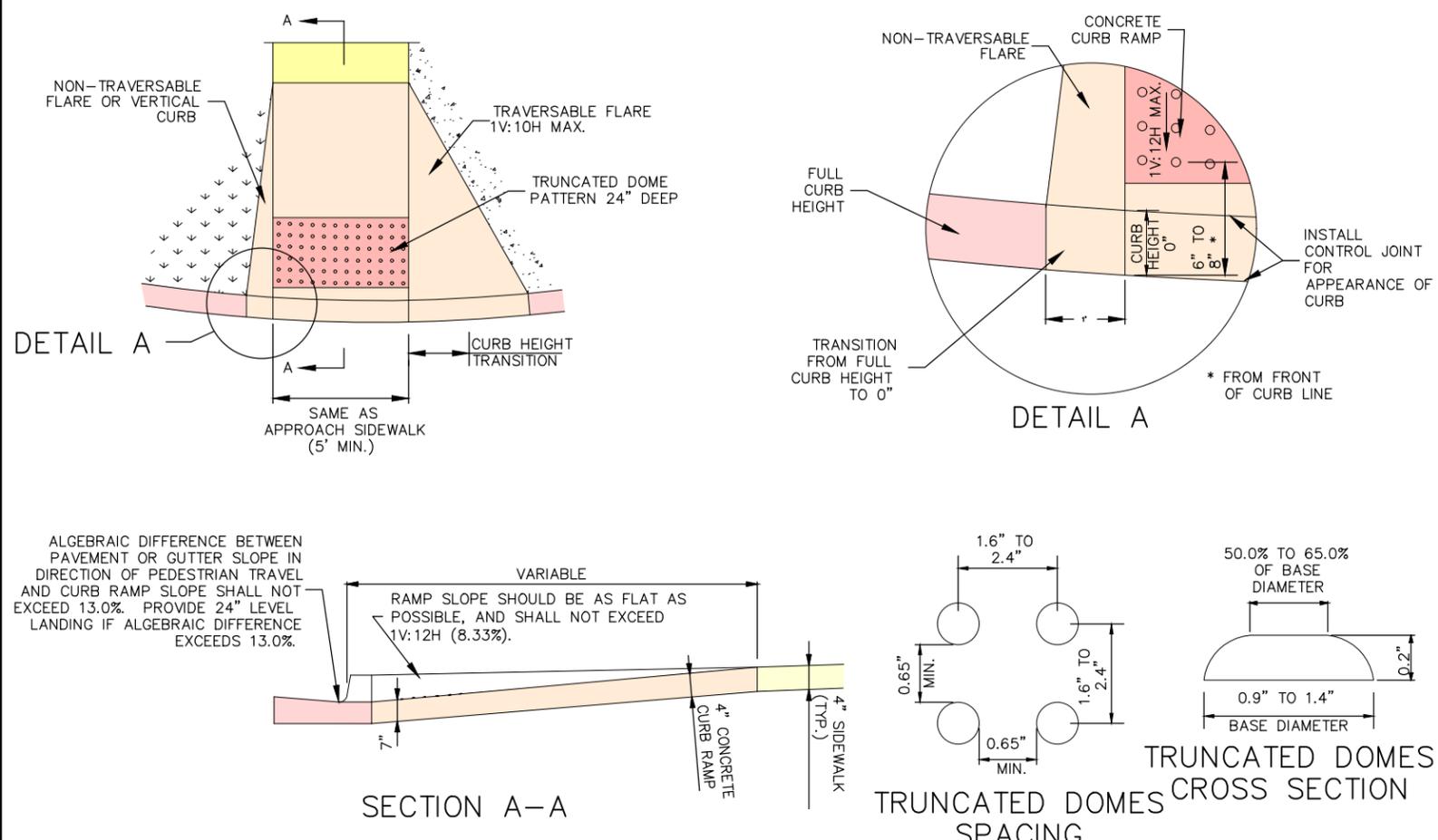
Kurt A. Kutter No. PE-2018021213  
 Registered Professional Engineer  
 State of Missouri  
 for Cochran Engineering & Surveying

Three working days prior to the start of construction on this site, contractor shall call 1-800-DIG-RIPE for utility location information.  
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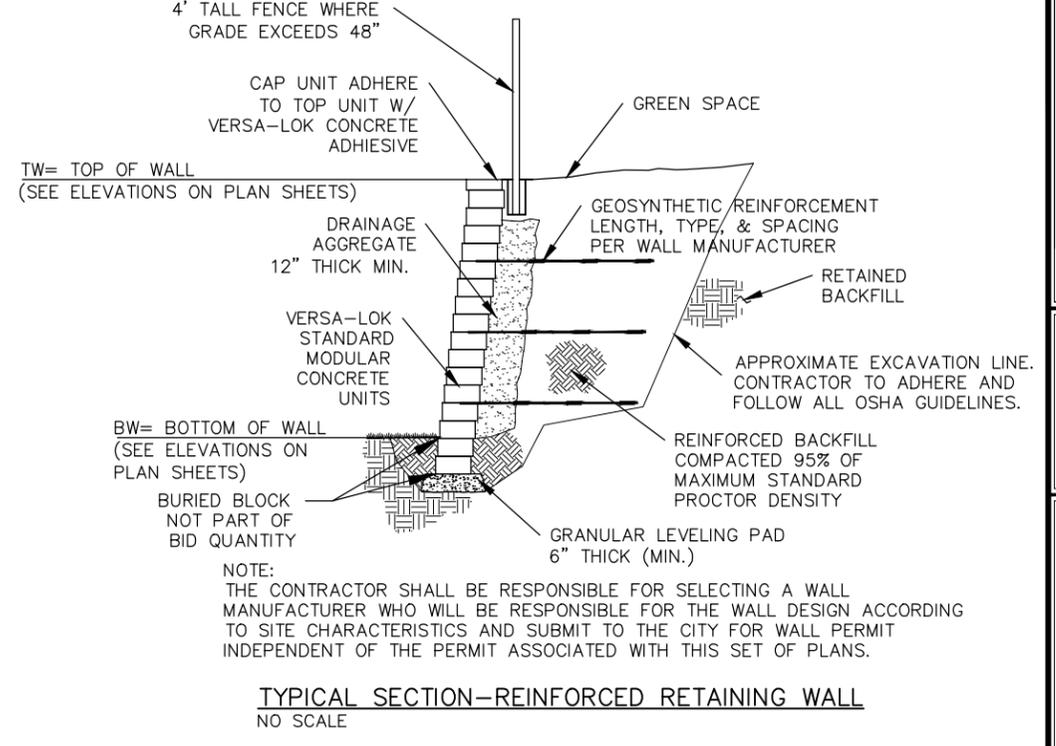
**WELDON SPRING**  
**TRAIL IMPROVEMENTS**  
**WELDON SPRING, MO**

DATE:	APRIL 2020
SCALE:	NO SCALE
PROJ. NO.:	M19-7755
DWG. NO.:	DE-1

DWG NAME: j:\2019\m19-7755 - walking trail extensions, weldon spring\engineering\autocad drawings\03\_Construction Drawings\M19-7755\_DE-1\_DE-4\_DETAILS.dwg LAYOUT TAB: DE-2 PLOTTED ON: Apr 28, 2020 - 1:26pm PLOTTED BY: cleming

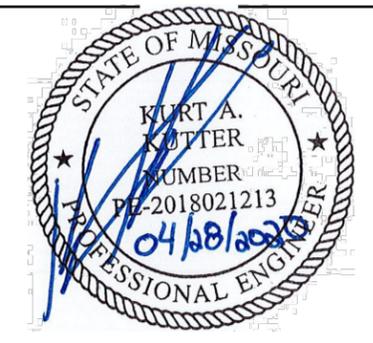
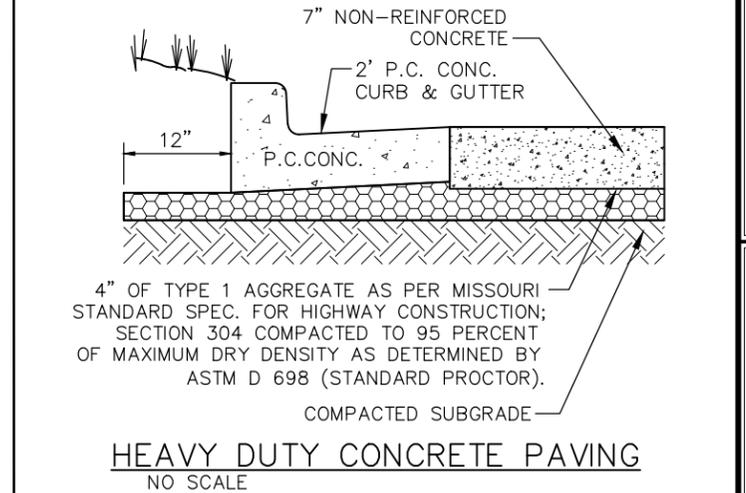
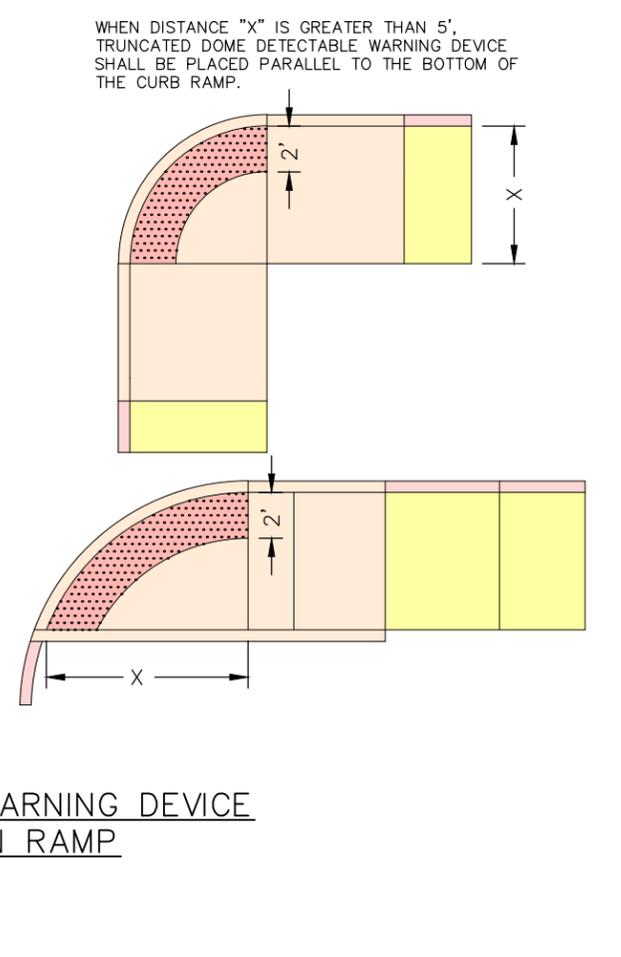
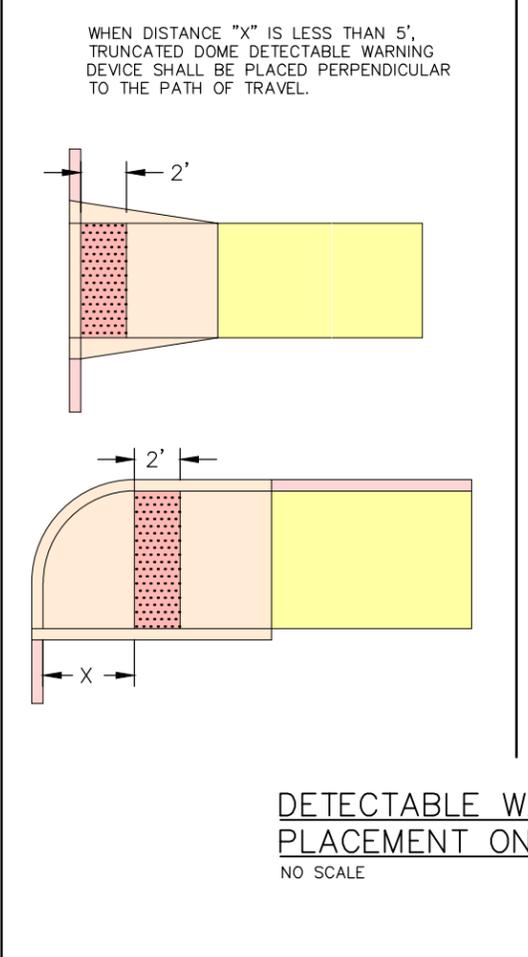
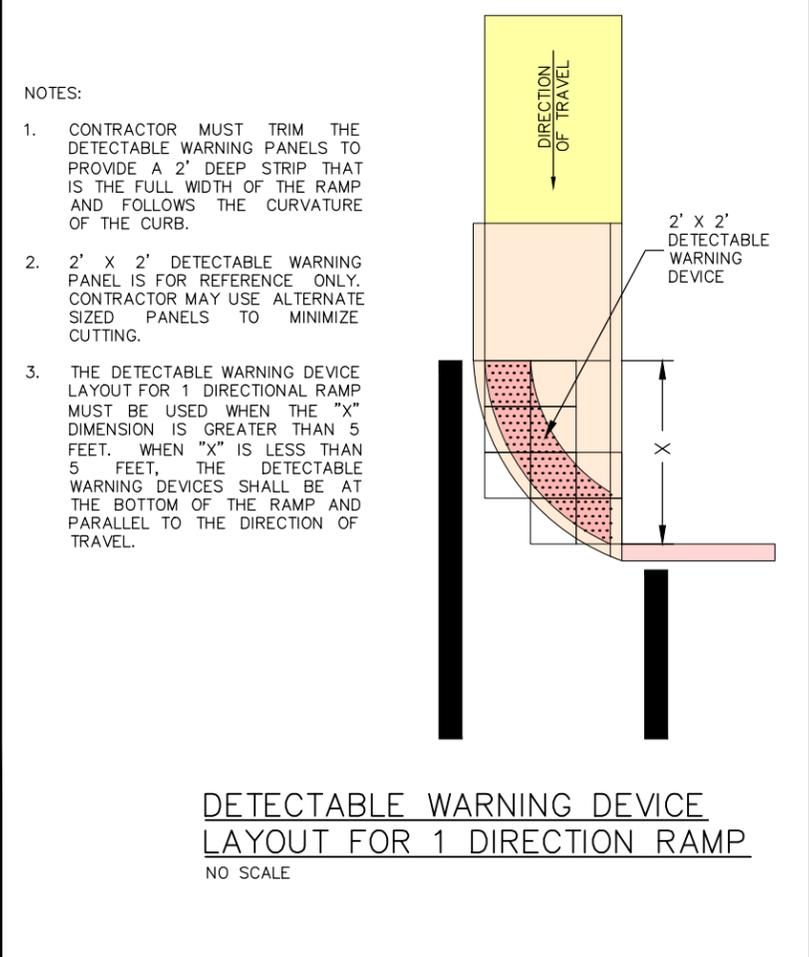


NOTE:  
 THE QUANTITIES OF WALL IN THE BID FORM ARE BASED UPON SQUARE FEET OF EXPOSED WALL ACCORDING TO THE TW AND BW ELEVATIONS SHOWN ON THE PLANS. ANY BLOCK OR FOOTING BELOW THE BW ELEVATION SHOWN ON THE PLANS ARE DEPENDENT ON THE CONTRACTOR AND SELECTED WALL MANUFACTURER/DESIGNER AND SHOULD BE INCLUDED IN THE CONTRACTOR'S UNIT PRICE FOR THE WALL. THE CONTRACTOR SHALL NOT RECEIVE UNIT PRICE PAYMENT FOR ANY BLOCK BELOW FINISH GRADE OR ANY ADDITIONAL PAYMENT FOR THE WALL FOOTING.



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 Missouri State Certificate of Authority Numbers: 201000046  
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**WELDON SPRING TRAIL IMPROVEMENTS WELDON SPRING, MO**



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 for Cochran Engineering & Surveying

DWN. BY:	APPR. BY:
CBD	KAK
DATE:	DATE:
APRIL 2020	
SCALE:	SCALE:
NO SCALE	
PROJ. NO.:	PROJ. NO.:
M19-7755	
DWG. NO.:	DWG. NO.:
DE-2	

**Table 6H-2. Meaning of Symbols on Typical Application Diagrams**

	Arrow board		Shadow vehicle
	Arrow board support or trailer (shown facing down)		Sign (shown facing left)
	Changeable message sign or support trailer		Surveyor
	Channelizing device		Temporary barrier
	Crash cushion		Temporary barrier with warning light
	Direction of temporary traffic detour		Traffic or pedestrian signal
	Direction of traffic		Truck-mounted attenuator
	Flagger		Type 3 barricade
	High-level warning device (Flag tree)		Warning light
	Longitudinal channelizing device		Work space
	Luminaire		Work vehicle
	Pavement markings that should be removed for a long-term project		

**Table 6H-3. Meaning of Letter Codes on Typical Application Diagrams**

Road Type	Distance Between Signs**		
	A	B	C
Urban (low speed)*	100 feet	100 feet	100 feet
Urban (high speed)*	350 feet	350 feet	350 feet
Rural	500 feet	500 feet	500 feet
Expressway / Freeway	1,000 feet	1,500 feet	2,640 feet

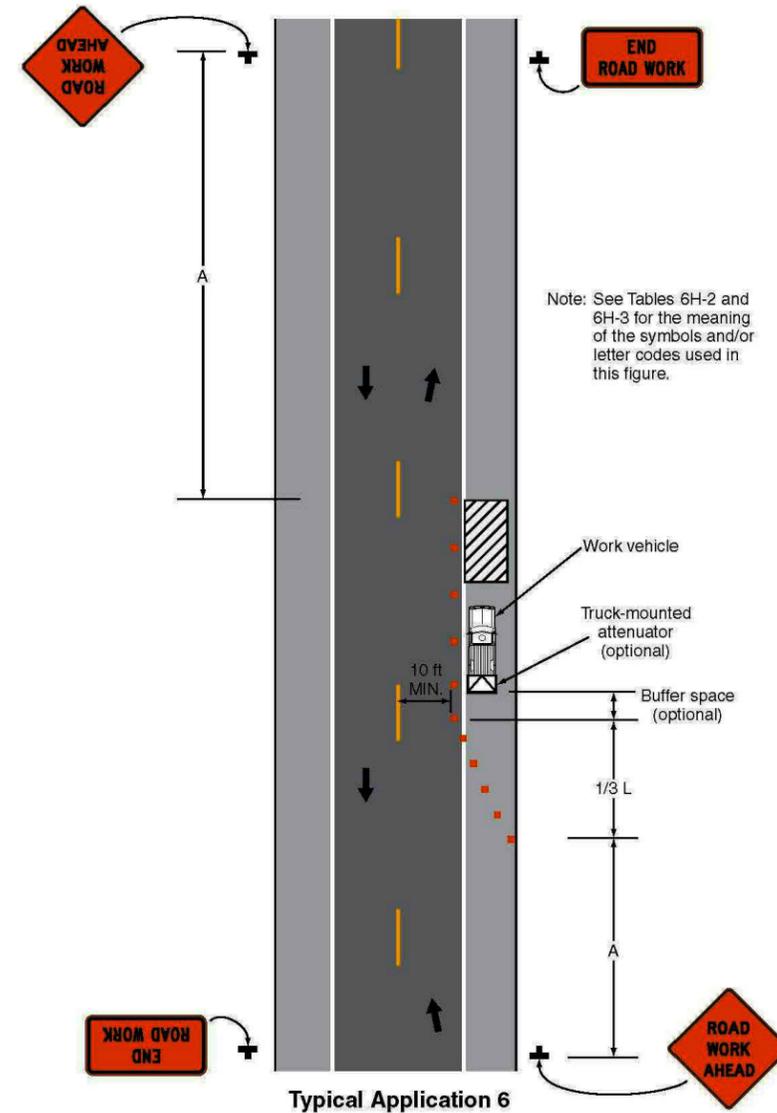
\* Speed category to be determined by highway agency  
 \*\* The column headings A, B, and C are the dimensions shown in Figures 6H-1 through 6H-46. The A dimension is the distance from the transition or point of restriction to the first sign. The B dimension is the distance between the first and second signs. The C dimension is the distance between the second and third signs. (The "first sign" is the sign in a three-sign series that is closest to the TTC zone. The "third sign" is the sign that is furthest upstream from the TTC zone.)

**Table 6H-4. Formulas for Determining Taper Length**

Speed (S)	Taper Length (L) in feet
40 mph or less	$L = \frac{WS^2}{60}$
45 mph or more	$L = WS$

Where: L = taper length in feet  
 W = width of offset in feet  
 S = posted speed limit, or off-peak 85th-percentile speed prior to work starting, or the anticipated operating speed in mph

**Figure 6H-6. Shoulder Work with Minor Encroachment (TA-6)**



NOTES:

- CONTRACTOR TO USE PROPER TRAFFIC CONTROL AND EXERCISE CAUTION WHENEVER OPERATIONS WILL AFFECT MOTORIST OR ENDANGER WORKERS FROM PASSING TRAFFIC.
- TRAFFIC CONTROL SHALL BE USED WHEN INSTALLING CROSS ROAD CULVERTS AND CROSSWALKS.
- ALL OPEN TRENCHES AND EXCAVATION SHALL BE CLOSED AND BACKFILLED ONCE OPERATIONS HAVE CEASED FOR THE WORK DAY. TRAFFIC CONTROL SHALL REMAIN DURING THE NIGHT TIME HOURS WHEN THE CONSTRUCTION ACTIVITIES AFFECT PASSING MOTORISTS WHILE NO WORKERS ARE PRESENT.
- CONTRACTOR IS SOLELY RESPONSIBLE FOR TRAFFIC CONTROL AND SAFETY WITHIN THE WORK ZONE AND ALL NECESSARY PRECAUTIONS TAKEN TO ENSURE THE SAFETY OF ALL.



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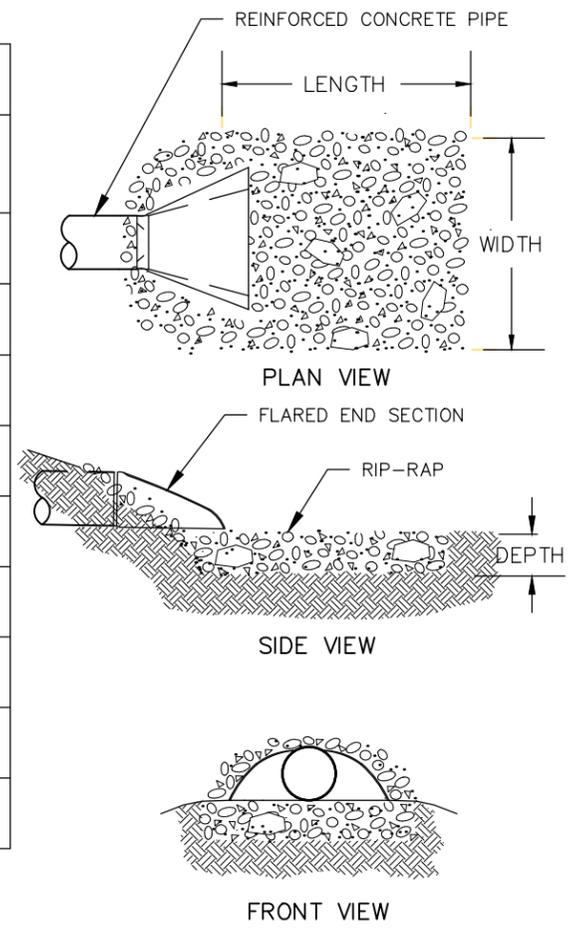
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 WELDON SPRING, MO

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DWG NAME: j:\2019\m19-7755 - walking trail extensions, weldon spring\engineering\autocad drawings\05\_Construction Drawings\M19\_7755\_DE-1\_DE-4\_DETAILS.dwg LAYOUT TAB: DE-4 PLOTTED ON: Apr 28, 2020 - 1:26pm PLOTTED BY: cdeining

RIP-RAP SCHEDULE (MINIMUMS)				
PIPE DIA. (IN.)	DEPTH (IN.)	WIDTH (FT.)	LENGTH (FT.)	MIN. TO MAX. SIZE RIP-RAP (IN.)
12	12	4	10	4-12
15	12	4	11	4-12
18	12	4	12	6-12
21	12	5	13	6-12
24	18	6	14	6-12
30	18	7	16	6-12
36	18	12	20	6-12
48	24	20	20	6-18
60	24	25	25	6-18



END SECTION AND RIP-RAP DETAIL  
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WELDON SPRING  
TRAIL IMPROVEMENTS  
WELDON SPRING, MO

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CBD	KAK
DATE:	DATE:
APRIL 2020	
SCALE:	
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PROJ. NO.:	
M19-7755	
DWG. NO.:	
DE-4	

DETAILS

# EROSION CONTROL PLAN

## GENERAL EROSION NOTES:

- ALL CONTRACTORS AND SUBCONTRACTORS INVOLVED WITH STORM WATER POLLUTION PREVENTION SHALL OBTAIN A COPY OF THE STORM WATER POLLUTION PREVENTION PLAN AND THE STATE OF MISSOURI NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM GENERAL PERMIT (NPDES PERMIT) AND BECOME FAMILIAR WITH THEIR CONTENTS.
- CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES AS REQUIRED BY THE SWPPP. ADDITIONAL BEST MANAGEMENT PRACTICES SHALL BE IMPLEMENTED AS DICTATED BY CONDITIONS AT NO ADDITIONAL COST OF OWNER THROUGHOUT ALL PHASES OF CONSTRUCTION.
- BEST MANAGEMENT PRACTICES (BMP'S) AND CONTROLS SHALL CONFORM TO FEDERAL, STATE, OR LOCAL REQUIREMENTS OR MANUAL OF PRACTICE, AS APPLICABLE CONTRACTOR SHALL IMPLEMENT ADDITIONAL CONTROLS AS DIRECTED BY PERMITTING AGENCY OR OWNER.
- SITE MAP MUST CLEARLY DELINEATE ALL STATE WATERS.
- CONTRACTOR SHALL MINIMIZE CLEARING TO THE MAXIMUM EXTENT PRACTICAL OR AS REQUIRED BY THE GENERAL PERMIT.
- GENERAL CONTRACTOR SHALL DENOTE ON PLAN THE TEMPORARY PARKING AND STORAGE AREA WHICH SHALL ALSO BE USED AS THE EQUIPMENT MAINTENANCE AND CLEANING AREA, EMPLOYEE PARKING AREA, AND AREA FOR LOCATING PORTABLE FACILITIES, OFFICE TRAILERS, AND TOILET FACILITIES.
- ALL WASH WATER (CONCRETE TRUCKS, VEHICLE CLEANING, EQUIPMENT CLEANING, ETC.) SHALL BE DETAINED AND PROPERLY TREATED OR DISPOSED.
- SUFFICIENT OIL AND GREASE ABSORBING MATERIALS AND FLOTATION BOOMS SHALL BE MAINTAINED ON SITE OR READILY AVAILABLE TO CONTAIN AND CLEAN UP FUEL OR CHEMICAL SPILLS AND LEAKS.
- DUST ON THE SITE SHALL BE CONTROLLED. THE USE OF MOTOR OILS AND OTHER PETROLEUM BASED OR TOXIC LIQUIDS FOR DUST SUPPRESSION OPERATIONS IS PROHIBITED.
- RUBBISH, TRASH, GARBAGE, LITTER, OR OTHER SUCH MATERIALS SHALL BE DEPOSITED INTO SEALED CONTAINERS. MATERIALS SHALL BE PREVENTED FROM LEAVING THE PREMISES THROUGH THE ACTION OF WIND OR STORM WATER DISCHARGE INTO DRAINAGE DITCHES OR WATERS OF THE STATE.
- THE CITY OF WELDON SPRING MUST BE NOTIFIED AT LEAST FORTY-EIGHT HOURS PRIOR TO THE COMMENCEMENT OF ANY GRADING OPERATIONS.
- NO GRADED AREA IS TO REMAIN WITHOUT AT LEAST SEVENTY-FIVE (75) PERCENT OF VEGETATIVE GROUND COVER FOR MORE THAN THIRTY (30) DAYS WITHOUT BEING SEEDED AND MULCHED OR SODDED.
- DISTURBED PORTIONS OF THE SITE WHERE CONSTRUCTION ACTIVITY HAS PERMANENTLY STOPPED SHALL BE PERMANENTLY SEEDED. THESE AREAS SHALL BE SEEDED NO LATER THAN 14 DAYS AFTER THE LAST CONSTRUCTION ACTIVITY OCCURRING IN THESE AREAS.
- IF THE ACTION OF VEHICLES TRAVELING OVER THE GRAVEL CONSTRUCTION ENTRANCES IS NOT SUFFICIENT TO REMOVE THE MAJORITY OF DIRT OR MUD, THEN THE TIRES MUST BE WASHED BEFORE THE VEHICLES ENTER A PUBLIC ROAD. IF WASHING IS USED, PROVISIONS MUST BE MADE TO INTERCEPT THE WASH WATER AND TRAP THE SEDIMENT BEFORE IT IS CARRIED OFF THE SITE.
- ALL MATERIALS SPILLED, DROPPED, WASHED, OR TRACKED FROM VEHICLES ONTO ROADWAYS OR INTO STORM DRAINS MUST BE REMOVED IMMEDIATELY.
- CONTRACTORS OR SUBCONTRACTORS WILL BE RESPONSIBLE FOR REMOVING SEDIMENT THAT MAY HAVE COLLECTED IN THE STORM SEWER DRAINAGE SYSTEMS IN CONJUNCTION WITH THE STABILIZATION OF THE SITE.
- SLOPES SHALL BE LEFT IN A ROUGHENED CONDITION DURING THE GRADING PHASE TO REDUCE RUNOFF VELOCITIES AND EROSION.
- DUE TO THE GRADE CHANGES DURING THE DEVELOPMENT OF THE PROJECT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ADJUSTING THE EROSION CONTROL MEASURES (SILT FENCES) TO PREVENT EROSION.
- ALL CONSTRUCTION SHALL BE STABILIZED AT THE END OF EACH WORKING DAY, THIS INCLUDES BACK FILLING OF TRENCHES FOR UTILITY CONSTRUCTION AND PLACEMENT OF GRAVEL OR BITUMINOUS PAVING FOR ROAD CONSTRUCTION.

- THE CONTRACTOR SHALL FIELD INVESTIGATE THE ENTIRE SITE PRIOR TO HIS BID SUBMITTAL NOTING THE EXISTING VEGETATION AND TREES AND INCLUDING THE REMOVAL AND DISPOSAL IN HIS BID.
- 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.
- 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.
- THE BOUNDARY INFORMATION AND CONTOURS SHOWN ARE FROM A SURVEY PERFORMED BY COCHRAN.
- THESE PLANS DO NOT CONSTITUTE A PROPERTY BOUNDARY SURVEY.
- TEMPORARY SILTATION CONTROL STRUCTURES SHALL BE MAINTAINED UNTIL AT LEAST SEVENTY-FIVE (75) PERCENT VEGETATIVE COVER OF AREA DISTURBED IS ESTABLISHED AT A SUFFICIENT DENSITY TO PROVIDE EROSION CONTROL ON THE SITE, AS DETERMINED BY THE CITY ENGINEER.
- WHERE NATURAL VEGETATION IS REMOVED DURING GRADING, VEGETATION SHALL BE REESTABLISHED TO AT LEAST SEVENTY-FIVE (75) PERCENT VEGETATIVE COVER OF AREA DISTURBED AS TO PREVENT EROSION. PERMANENT TYPE GRASSES SHALL BE ESTABLISHED AS SOON AS POSSIBLE OR DURING THE NEXT SEEDING PERIOD AFTER GRADING HAS BEEN COMPLETED.
- WHEN GRADING OPERATIONS ARE COMPLETED OR SUSPENDED FOR MORE THAN THIRTY (30) DAYS, PERMANENT GRASS MUST BE ESTABLISHED TO AT LEAST SEVENTY-FIVE (75) PERCENT VEGETATIVE COVER TO PROVIDE EROSION CONTROL ON THE SITE. BETWEEN PERMANENT GRASS SEEDING PERIODS, TEMPORARY COVER SHALL BE PROVIDED ACCORDING TO THE CITY ENGINEER'S RECOMMENDATIONS. ALL FINISHED GRADES (AREAS NOT TO BE DISTURBED BY FUTURE IMPROVEMENTS) IN TWENTY (20) PERCENT SLOPES (5 HORIZONTAL TO 1 VERTICAL) SHALL BE MULCHED AND TACKED.
- ALL EROSION AND SEDIMENT CONTROL FACILITIES SHALL BE INSPECTED FOLLOWING EACH RAINSTORM CAUSING SIGNIFICANT RUNOFF, OR BEING OF SUFFICIENT INTENSITY OR DURATION AS TO STOP CONSTRUCTION OR GRADING PROGRESS. THE SEDIMENT CONTROL FACILITIES SHALL BE CLEANED OF SEDIMENT, REPAIRED IF DAMAGED AND RESTORED TO SERVICEABLE CONDITIONS IF:
  - EROSION SEDIMENT HAS ACCUMULATED IN SILT DEVICES,
  - SEDIMENT EROSION CONTROL DEVICES HAVE BEEN DAMAGED,
  - OBVIOUS GULLIES OR SEDIMENT DEPOSITS HAVE BEEN FORMED ON THE DOWNSTREAM SIDE OF CONTROL DEVICES, OR
  - SEDIMENT HAS BEEN CARRIED BEYOND THE WORKING SITE.
- THE CONTRACTOR MUST SUPPLY CITY CONSTRUCTION INSPECTORS WITH ALL COPIES OF INTERIM SOIL TESTING REPORTS.
- ALL FILLED PLACES UNDER PROPOSED STORM SEWER, PROPOSED ROADS, AND/OR PAVED OR FUTURE PAVED AREAS SHALL BE COMPACTED TO 95% OF MAXIMUM DENSITY AS DETERMINED BY THE STANDARD PROCTOR TEST AASHTO T-99. ALL FILL PLACED IN PROPOSED ROADS SHALL BE COMPACTED FROM THE BOTTOM OF THE FILL UP. ALL TESTS SHALL BE VERIFIED BY A SOILS ENGINEER CONCURRENT WITH GRADING AND BACK FILLING OPERATIONS.
- AREAS SHALL BE RESEEDED WITH A TEMPORARY MIX AT A RATE OF 6-8 LBS. OF RYE GRASS PER 1000 SQ. FT. FERTILIZER TO BE USED SHALL BE A 12-12-12 MIX AND SHALL BE APPLIED AT A RATE OF 50 LBS. PER 10,000 SQ. FT.

## EROSION CONTROL NOTES:

- CONTRACTOR SHALL ASSURE POSITIVE DRAINAGE IN ALL AREAS.
- NO LAND CLEARING OR GRADING SHALL BEGIN UNTIL ALL EROSION CONTROL MEASURES HAVE BEEN INSTALLED.
- SHOULD CONSTRUCTION STOP FOR LONGER THAN 15 DAYS, THE SITE SHALL BE SEEDED AS SPECIFIED BY TEMPORARY SEEDING MIX.
- MAINTAIN EROSION CONTROL MEASURES AFTER EACH RAIN AND AT LEAST ONCE A WEEK.
- THIS PLAN SHALL NOT BE CONSIDERED ALL INCLUSIVE AS THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PREVENT SOIL SEDIMENT FROM LEAVING THE SITE.
- CONTRACTOR SHALL COMPLY WITH ALL STATE AND LOCAL ORDINANCES THAT APPLY.
- ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSTALLED IF DEEMED NECESSARY BY ON SITE INSPECTION.
- LAND DISTURBING ACTIVITIES SHALL NOT COMMENCE UNTIL APPROVAL TO DO SO HAS BEEN RECEIVED BY GOVERNING AUTHORITIES.
- IF INSTALLATION OF STORM DRAINAGE SYSTEM SHOULD BE INTERRUPTED BY WEATHER OR NIGHTFALL, THE PIPE ENDS SHALL BE COVERED WITH FILTER FABRIC.
- CONTRACTOR SHALL BE RESPONSIBLE TO TAKE WHATEVER MEANS NECESSARY TO ESTABLISH PERMANENT SOIL STABILIZATION.
- CONTRACTOR SHALL ADJUST AND/OR CUT EXISTING PAVEMENT AS NECESSARY TO ASSURE A SMOOTH FIT AND CONTINUOUS GRADE.
- ALL CUT OR FILL SLOPES SHALL BE 3:1 OR FLATTER UNLESS OTHERWISE NOTED.
- ALL STORM PIPE ENTERING STRUCTURES SHALL BE GROUTED TO ASSURE CONNECTION AT STRUCTURE IS WATERTIGHT.



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2010000046

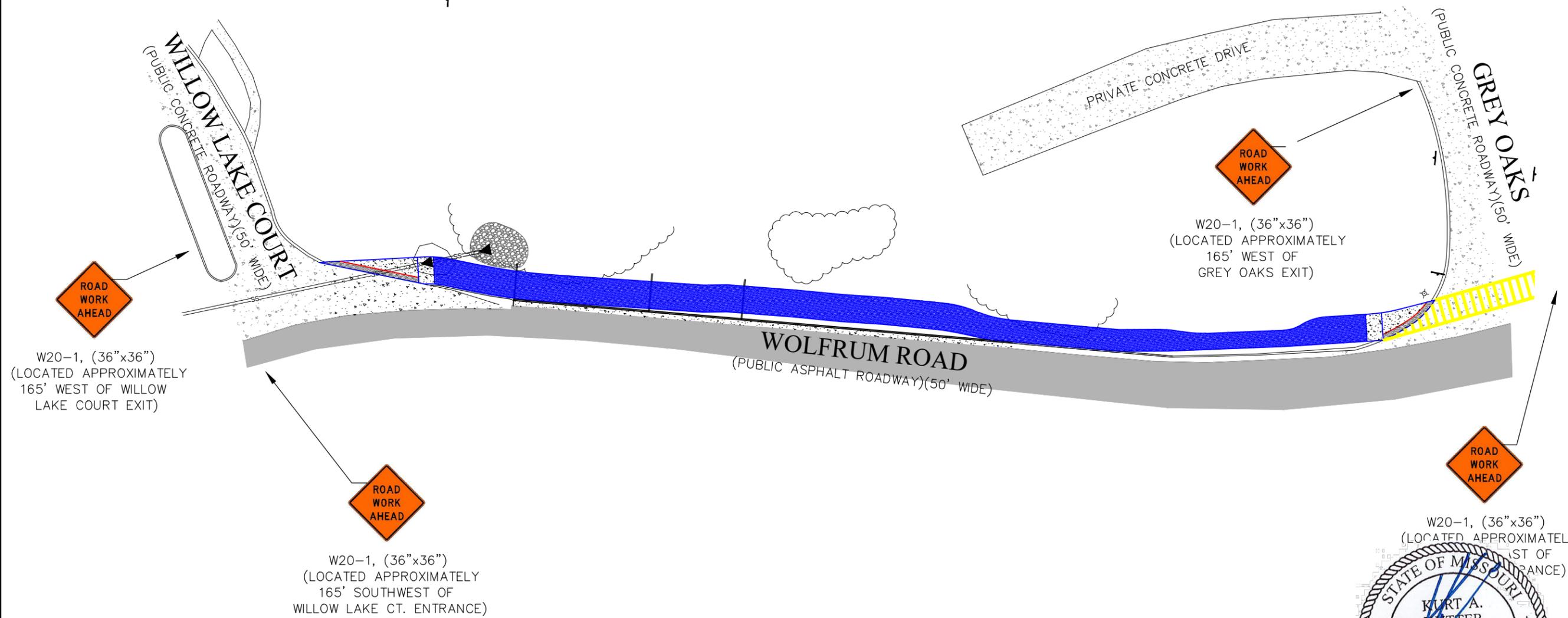
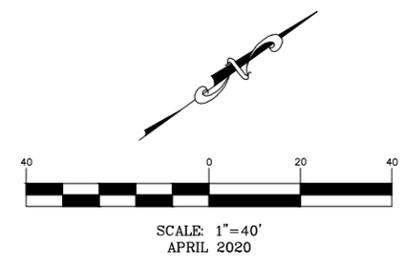
Three working days prior to the start of the project, the contractor shall call 1-800-DIG-RITE for utility location information. All OSHA rules & regulations established for the type of construction required by these plans shall be strictly followed (i.e. trenching, blasting, etc.)

WELDON SPRING  
TRAIL IMPROVEMENTS  
WELDON SPRING, MO

DATE:	APRIL 2020
SCALE:	1" = 20'
PROJ. NO.:	M19-7755
DWG. NO.:	EC-1



# TRAFFIC CONTROL PLAN - SECTION 1



W20-1, (36"x36")  
(LOCATED APPROXIMATELY  
165' WEST OF  
GREY OAKS EXIT)

W20-1, (36"x36")  
(LOCATED APPROXIMATELY  
165' WEST OF  
WILLOW LAKE COURT EXIT)

W20-1, (36"x36")  
(LOCATED APPROXIMATELY  
165' SOUTHWEST OF  
WILLOW LAKE CT. ENTRANCE)

W20-1, (36"x36")  
(LOCATED APPROXIMATELY  
165' WEST OF  
GREY OAKS EXIT)



Kurt A. Kutter No. PE-2018021213  
Registered Professional Engineer  
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636-327-0760 (fax)  
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**COCHRAN**

- Civil Engineering
- Land Surveying
- Architecture
- Site Development
- General Consulting
- Master Planning

Missouri State Certificate  
of Authority Numbers:  
2010000046

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

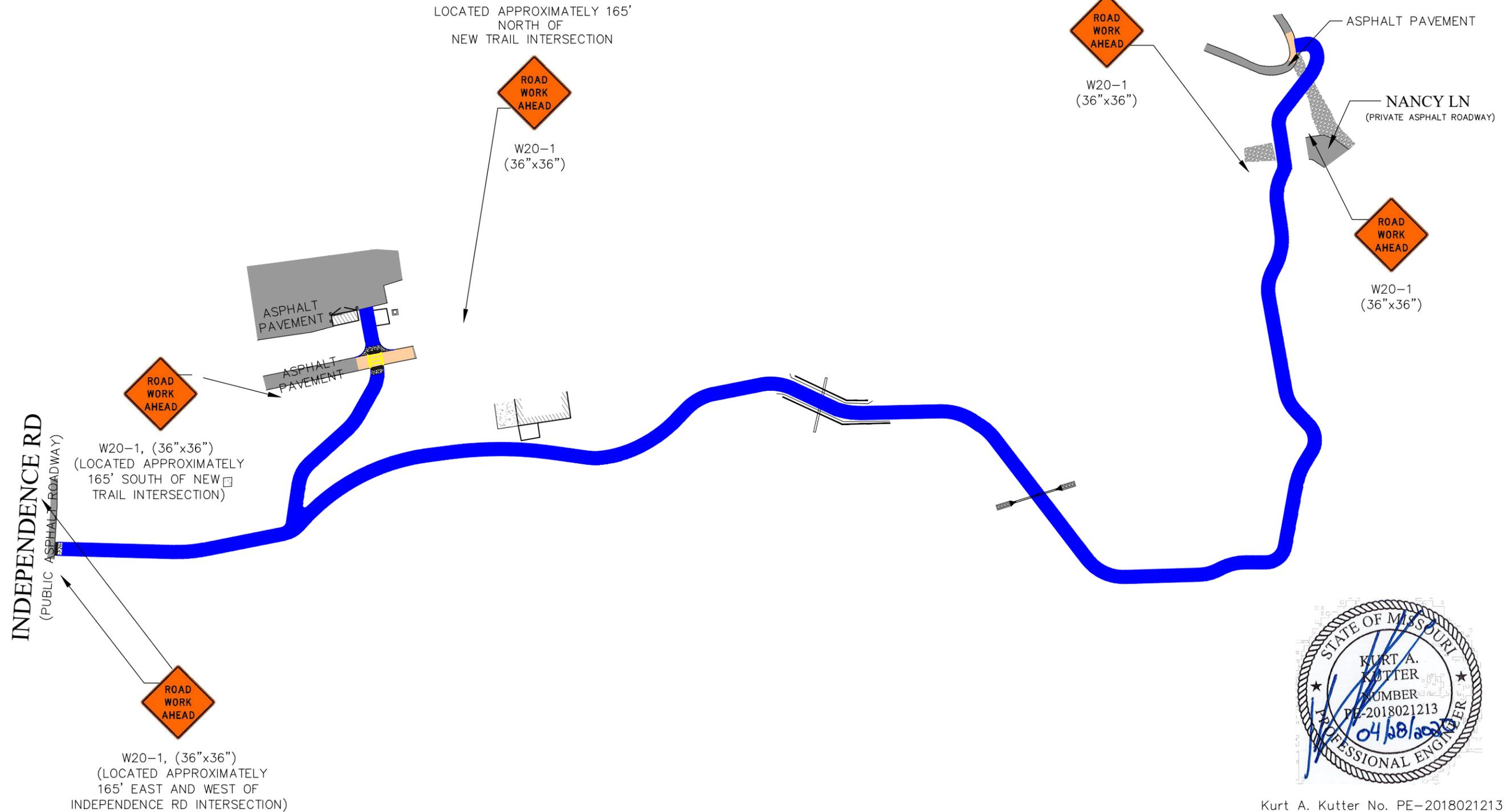
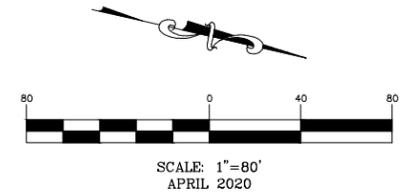
All OSHA rules & regulations established for the type of construction required by these plans shall be strictly followed (ie. trenching, blasting, etc.)

WELDON SPRING  
TRAIL IMPROVEMENTS  
WELDON SPRING, MO

DATE	BY	DATE	BY
DWN. BY:	CBD	APPD. BY:	KAK
DATE:	APRIL 2020	SCALE:	1" = 40'
PROJ. NO.:	M19-7755	DWG. NO.:	TC-1

DWG NAME: j:\2019\m19-7755 - walking trail extensions, weldon spring\engineering\autocad drawings\05\_Construction Drawings\M19-7755\_TC\_TRAFFIC CONTROL.dwg LAYOUT TAB: TC-1 PLOTTED ON: Apr 28, 2020 - 1:26pm PLOTTED BY: cedmng

# TRAIL PLAN - SECTION 2 & 2A



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Missouri State Certificate  
 of Authority Numbers:  
 2010000046

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**WELDON SPRING  
 TRAIL IMPROVEMENTS  
 WELDON SPRING, MO**

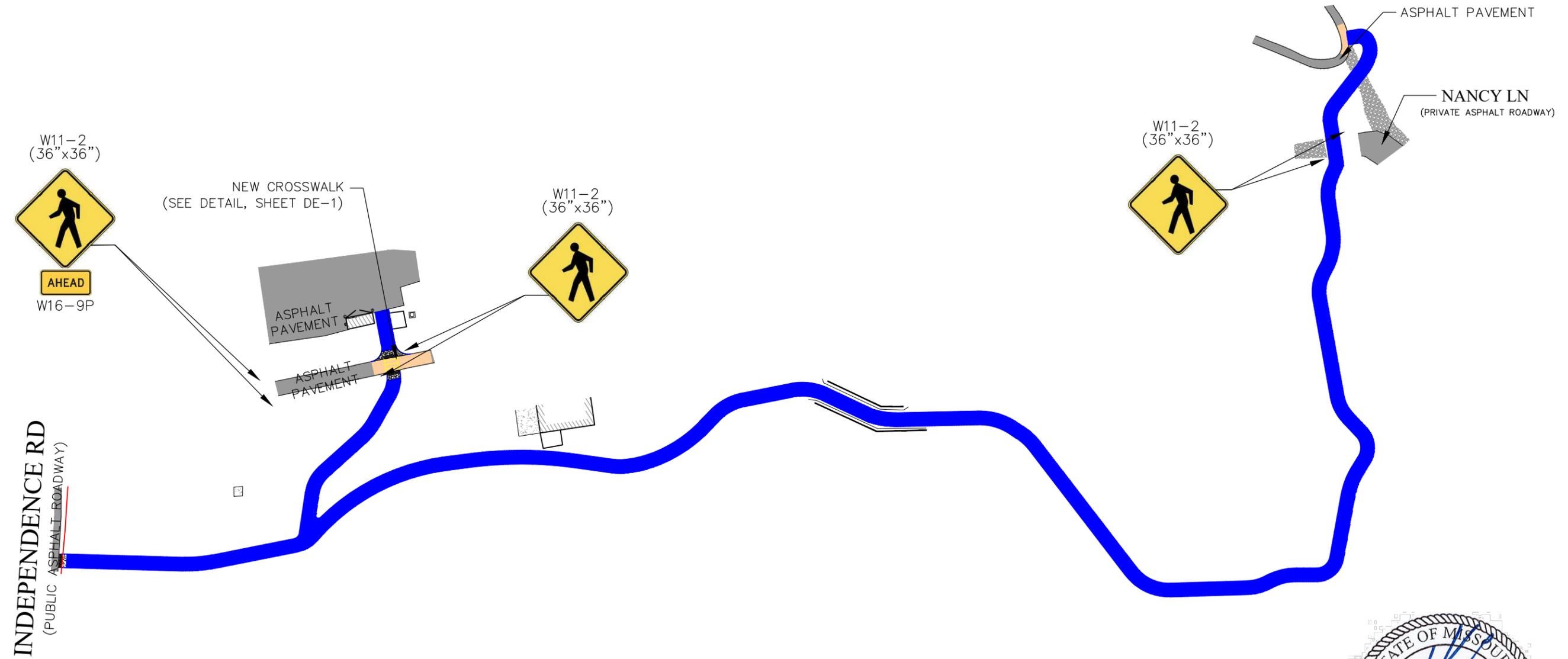
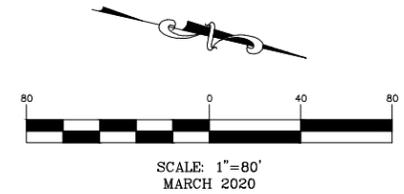
DATE:	DATE:	DATE:	DATE:
DWN. BY:	APPD. BY:	DWN. BY:	APPD. BY:
CBD	KAK		
DATE:	DATE:	DATE:	DATE:
APRIL 2020			
SCALE:	SCALE:	SCALE:	SCALE:
NO SCALE			
PROJ. NO.:	PROJ. NO.:	PROJ. NO.:	PROJ. NO.:
M19-7755			
DWG. NO.:	DWG. NO.:	DWG. NO.:	DWG. NO.:

**TC-2**

DWG NAME: j:\2019\m19-7755 - walking trail extensions, weldon spring\engineering\autocad drawings\05\_Construction Drawings\M19\_7755\_TC\_TRAFFIC CONTROL.dwg LAYOUT TAB: TC-2 PLOTTED ON: Apr 28, 2020 - 1:26pm PLOTTED BY: cdeming



# PAVEMENT MARKING AND SIGNAGE PLAN



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Missouri State Certificate  
 of Authority Numbers:  
 2010000046

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 the type of construction required by these plans shall be strictly followed (i.e. trenching, blasting, etc.)

**WELDON SPRING  
 TRAIL IMPROVEMENTS  
 WELDON SPRING, MO**

PAVEMENT MARKING AND SIGNAGE PLAN

DWN. BY:	APPR. BY:
CBD	KAK
DATE:	DATE:
APRIL 2020	
SCALE:	
1" = 80'	
PROJ. NO.:	
M19-7755	
DWG. NO.:	
PM-2	