CITY OF BELLEFONTAINE NEIGHBORS, MISSOURI

ASHBROOK DRIVE
ROADWAY IMPROVEMENTS

FEDERAL PROJECT NUMBER:
STP-5422(619)

CONSTRUCTION PLANS

UTILITIES

AT&T
TONYA WELLS
402 NORTH 3RD, GROUND FLOOR
ST. CHARLES, MO 63301

METROPOLITIAN SEWER DISTRICT
2350 MARKET STREET
ST. LOUIS, MO 63103
(314) 768-6200

AMEREN UE
KEITH VONHATTEN
6440 NORTH HANLEY RD.
BERKLEY, MO 63134
(314) 992-9812

LACLEDE GAS COMPANY
KENT THAEMERT
6400 GRAHAM RD.
ST. LOUIS, MO 63134
(314) 522-2297

MISSOURI AMERICAN WATER
JAMIE RICHARDSON
727 CRAIG ROAD
ST. LOUIS, MO 63141

CONVENTIONAL SYMBOLS

(USED IN PLANS)

	EXISTING	NEW
BUILDINGS AND STRUCTURES		
CONCRETE RIGHT-OF-WAY MARKER		
STEEL RIGHT-OF-WAY MARKER		
LOCATION SURVEY MARKER		
UTILITIES		
SANITARY SEWER	S	
CABLE TV	CATV	
OVERHEAD TELEPHONE		
UNDERGROUND TELEPHONE	T	
OVERHEAD POWER	OH	
UNDERGROUND POWER	P	
GAS	G	
WATER	W	
GUY WIRE		
MANHOLE		
FIRE HYDRANT	HYD	
WATER VALVE / WATER METER	WV / WM	
GAS VALVE	GV	
DROP INLET		
LAND CORNER		
GROUND MOUNTED SIGN	SIGN	
LIGHT POLE / POWER POLE	PP	
TELEPHONE RISER / POWER RISER	P RISER / T RISER	
POWER AND CABLE POLE	P&C	
TREE		
TELEPHONE MANHOLE	TMH	
FENCE: CHAIN LINK	X	
WOVEN WIRE	V	
IRON PIPE	I.P.	
MAILBOX		
BENCHMARK	BM	
SPRINKLER HEAD		
STREET LIGHT		
STOP BOX	SB	
TRUNCATED DOMES		
LANDSCAPE BOULDER		

TO BE REMOVED	TBR
TO BE REMOVED AND RELOCATED	TBR&REL
TO BE REMOVED BY OTHERS	TBRBO
TO BE REMOVED AND RELOCATED BY OTHERS	TBR&RELBO
TO BE ABANDONED AND FILLED	TBA&F
TEMPORARY CONSTRUCTION EASEMENT	TCE
PERMANENT DRAINAGE & UTILITY EASEMENT	PDUE
ADJUST TO GRADE	ATG
ADJUST TO GRADE BY OTHERS	ATGBO
USE IN PLACE	UIP
TO BE REMOVED AND REPLACED	TBRR
TO BE REMOVED AND REPLACED BY OTHERS	TBRRBO
PERMANENT DRAINAGE EASEMENT	PDE

NOTE: DASHED OR OPEN SYMBOLS INDICATE EXISTING FEATURES

CALL BEFORE YOU DIG!
1–800–DIG–RITE

CALL "MISSOURI ONE CALL" TO HAVE LOCATIONS MARKED IN THE FIELD AND "MODOT" FOR UNDERGROUND LOCATES WITHIN THE RIGHT-OF-WAY. SUBSCRIBING UTILITIES REQUIRE 48 HOURS NOTICE PRIOR TO CONSTRUCTION. CALL MODOT CUSTOMER SERVICE AT 314–340–4100 TWO WORKING DAYS

BEFORE YOU DIG

SPECIAL NOTE TO CONTRACTOR(S):

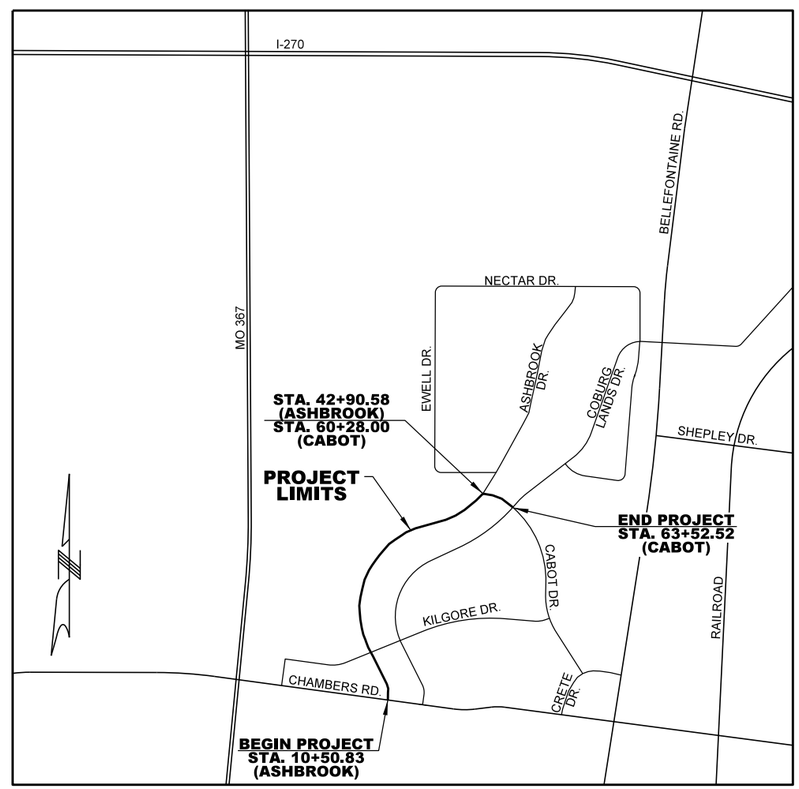
EXISTING UNDERGROUND AND ABOVE-GRADE FACILITIES, STRUCTURES, AND UTILITIES HAVE BEEN PLOTTED ON THESE CONTRACT DOCUMENTS BASED ON THE INFORMATION AND SURVEYS AVAILABLE AT THE TIME OF DRAWING PREPARATION. THE LOCATIONS OF THESE FEATURES MUST, THEREFORE, BE CONSIDERED APPROXIMATE, ONLY, IN ADDITION, THERE MAY BE OTHER FACILITIES, STRUCTURES, AND UTILITIES WHICH DID NOT EXIST (OR THE EXISTENCE OF WHICH WAS NOT KNOWN) AT THE TIME OF DRAWING PREPARATION. IT IS THE SOLE RESPONSIBILITY OF THE CONTRACTOR(S) TO HAVE ALL EXISTING FACILITIES, STRUCTURES, AND UTILITIES LOCATED IN THE FIELD PRIOR TO ANY EXCAVATION OR CONSTRUCTION ACTIVITY; AND TO PROTECT ALL SUCH FEATURES (EXCEPT THOSE SPECIFICALLY NOTED FOR REMOVAL OR DEMOLITION) DURING CONSTRUCTION.

THIS PROJECT INCLUDES RELOCATION, ALTERATION, OR RECONSTRUCTION OF EXISTING MSD FACILITIES. IN ACCORDANCE WITH MSD RESOLUTION 3263, THE DISTRICT REQUIRES THE WAGE RATE TO BE AT LEAST EQUAL TO THE MISSOURI PREVAILING WAGE RATE AT THE TIME OF CONSTRUCTION START. AN AFFIDAVIT CERTIFYING THAT THE MISSOURI PREVAILING WAGE RATE AT THE TIME OF CONSTRUCTION START HAS BEEN PAID FOR ALL WORK RELATED TO RELOCATION, ALTERATION, OR RECONSTRUCTION OF EXISTING MSD FACILITIES IS REQUIRED PRIOR TO MSD CONSTRUCTION APPROVAL OF THIS PROJECT.

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.

MSD STORMWATER MANAGEMENT NOTE:
LAND AREA DISTURBED = 0.79 AC.

ANY FUTURE LAND DISTURBANCE AND/OR INCREASE IN IMPERVIOUS AREA ON THIS SITE MAY REQUIRE ADDITIONAL STORM WATER MANAGEMENT PER MSD REGULATIONS IN PLACE AT THAT TIME (INCLUDING TOTAL LAND DISTURBANCE AND/OR IMPERVIOUSNESS ADDED ON THIS PLAN MSD RECORD NUMBER 18MSD-00033)



VICINITY MAP
NOT TO SCALE

PREPARED
MAY 21, 2018

CITY OF BELLEFONTAINE NEIGHBORS, MISSOURI
9641 BELLEFONTAINE ROAD
BELLEFONTAINE NEIGHBORS, MO 63137
(314) 867-0076

INDEX OF SHEETS

DESCRIPTION	SHEET
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SUMMARY OF QUANTITIES	2A
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DESIGN DESIGNATION

FUNCTIONAL CLASSIFICATION	COLLECTOR
CURRENT POSTED SPEED	20 MPH
DESIGN SPEED	20 MPH
CURRENT ADT (2014)	1866
FUTURE ADT (2034)	2062

LENGTH OF PROJECT:

ASHBROOK DRIVE

BEGINNING STATION	10+50.83
ENDING STATION	42+90.58
APPARENT LENGTH	3239.75 FEET
EQUATIONS AND EXCEPTIONS	NONE
BRIDGE EXCEPTIONS	
TOTAL CORRECTIONS	
NET LENGTH OF PROJECT	3239.75 FEET

CABOT DRIVE

BEGINNING STATION	60+28.00
ENDING STATION	63+56.52
APPARENT LENGTH	328.52 FEET
EQUATIONS AND EXCEPTIONS	NONE
BRIDGE EXCEPTIONS	
TOTAL CORRECTIONS	
NET LENGTH OF PROJECT	328.52 FEET
TOTAL LENGTH OF PROJECT	3568.27 FEET 0.676 MILES

APPROVED BY:
BELLEFONTAINE NEIGHBORS, MISSOURI

MAYOR — DATE 4/25/18

STATE OF MISSOURI — DAVID R. RIECHMANN — NUMBER PE-2011000948 — PROFESSIONAL ENGINEER

NAME:	DAVID R. RIECHMANN
DISCIPLINE:	ENGINEER
LICENSE NO.	PE-2011000948
EXPIRATION DATE:	12-31-19

DATE PREPARED	6/12/2018
ROUTE	
STATE	MO
DISTRICT	SL
SHEET NO.	1
COUNTY	ST. LOUIS
JOB NO.	1608900
MSD BASEMAP	10F, 11F
FEDERAL PROJECT NO.	STP-5422(619)
MSD NUMBER	18MSD-00033

DESCRIPTION

DATE

Bellefontaine Neighbors

HORNER SHIFRIN
THE POWER HOUSE AT UNION STATION
401 S. 18th St., Ste. 400
ST. LOUIS, MO 63103-2296
314-531-4321 FAX: 314-531-6966
www.HornerShifrin.com
Certificate of Authority: 000159
Expiration Date: December 31, 2018

ASHBROOK DRIVE

COVER SHEET

REV.

GENERAL NOTES

1) ALL ROAD CONSTRUCTION TO BE IN ACCORDANCE WITH MISSOURI STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, MOST RECENT EDITION.

2) COMPACT TOP 12" OF SUBGRADE AND EACH LAYER OF BACKFILL OR BACKFILL MATERIAL AT 90% MODIFIED PROCTOR (A.S.T.M. D1557) MAXIMUM DENSITY FOR COHESIVE MATERIAL OR 70% RELATIVE DENSITY (A.S.T.M. D4253 AND A.S.T.M. D4254) FOR COHESIVE MATERIAL.

3) REMOVE ALL WASTE MATERIALS, INCLUDING EXCAVATED MATERIAL, CONCRETE STORM SEWER, TRASH, AND DEBRIS, AND DISPOSE OF IT OFF OWNERS PROPERTY. ANY STAGING OR STORAGE OF MATERIALS OFF CITY RIGHT-OF-WAY SHALL BE APPROVED BY THE CITY.

4) CONTRACTOR SHALL REMOVE, STORE, & REINSTALL AT THE COMPLETION OF CONSTRUCTION ALL MAILBOXES, FENCES, AND SIGNS AFFECTED BY CONSTRUCTION, SUBSEQUENTLY IF DAMAGE OCCURS, IT SHALL BE REPLACED BY CONTRACTOR.

5) THE CONTRACTOR SHALL PROVIDE ADEQUATE EROSION CONTROL FEATURES IN ACCORDANCE WITH ANY LOCAL, STATE AND FEDERAL REGULATIONS AND OBTAIN ANY NECESSARY PERMITS FOR LAND DISTURBANCE. SILTATION CONTROL DEVICES SHALL BE MAINTAINED BY THE CONTRACTOR DURING GRADING OPERATIONS AND UNTIL SUFFICIENT VEGETATION IS ESTABLISHED TO PREVENT EROSION. TEMPORARY SILTATION DEVICES SHALL BE REMOVED UPON COMPLETION OF RE -VEGETATION.

6) EXISTING UTILITY LOCATIONS SHOWN ON THESE PLANS WERE COMPILED FROM THE BEST AVAILABLE RECORDS. CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES TO ESTABLISH EXACT LOCATIONS, DEPTHS, AND POSSIBLE RELOCATION OF THE MAINS PRIOR TO CONSTRUCTION AND SHALL FULLY COMPLY WITH THE PROVISIONS OF THE UNDERGROUND FACILITY SAFETY AND DAMAGE PROVISIONS ACT, CHAPTER 319 RsMO.

7) THE CONTRACTOR SHALL KEEP ALL PAVEMENTS CLEAN AND FREE OF MUD, ROCK AND DEBRIS AT ALL TIMES DURING CONSTRUCTION.

8) THE CONTRACTOR SHALL NOTIFY EACH AFFECTED PROPERTY OWNER A MINIMUM OF 24 HOURS PRIOR TO COMMENCEMENT OF ANY CONSTRUCTION AND/OR GRADING.

9) THE CONTRACTOR SHALL MAINTAIN AT ALL TIMES, ONE LANE OF TRAFFIC THROUGH AREAS OF IMMEDIATE CONSTRUCTION (SEE PLANS AND SPECS FOR TRAFFIC CONTROL, BARRICADES AND SIGNAGE. CONTRACTOR SHALL REMOVE, STORE AND REINSTALL AT THE COMPLETION OF CONSTRUCTION, ALL SIGNS WITHIN THE CONSTRUCTION LIMITS. CONTRACTOR SHALL REPLACE ALL SIGNS DAMAGED BY CONSTRUCTION.

10) CONTRACTOR SHALL ADJUST TO GRADE ALL WATER METER VAULTS, STOP BOX LIDS, METER LIDS AND WATER VALVE BOXES WITHIN PROJECT LIMITS.

11) PROVIDE ADEQUATE OFF-STREET PARKING FOR CONSTRUCTION EMPLOYEES. PARKING ON NON-SURFACED AREAS SHALL BE PROHIBITED IN ORDER TO ELIMINATE THE CONDITION WHEREBY MUD FROM CONSTRUCTION AND EMPLOYEE VEHICLES IS TRACKED ONTO THE PAVEMENT CAUSING HAZARDOUS ROADWAY AND DRIVEWAY CONDITIONS.

12) INTERIM STORM SEWER WATER DRAINAGE CONTROL IN THE FORM OF SILTATION CONTROL MEASURES IS REQUIRED.

13) ANY DISTURBED OFF SITE PROPERTY (I.E. BUSHES, FENCES, MAILBOXES, ETC.) SHALL BE REPLACED, IN KIND, AT THE CONTRACTOR'S EXPENSE.

14) CONTRACTOR SHALL SEED ANY NON-PAVED AREAS DISTURBED BY CONSTRUCTION.

15) CONTRACTOR MUST MAINTAIN ACCESS TO RESIDENTIAL AND COMMERCIAL DRIVEWAYS AT ALL TIMES DURING CONSTRUCTION. IF TEMPORARY CLOSURES OF DRIVEWAYS ARE REQUIRED, 24 HOUR NOTICE SHALL BE PROVIDED TO THE CITY.

16) ANY FILL REQUIRED SHALL BE CLEAN AND FREE OF ANY DEBRIS OR CONSTRUCTION MATERIAL.

17) CARE SHALL BE TAKEN TO AVOID DISTURBING ANY PROPERTY MARKERS ENCOUNTERED DURING CONSTRUCTION. ANY PROPERTY MARKERS REMOVED TO ALLOW FOR GRADING, SHALL BE REPLACED. NO DIRECT PAY FOR THIS WORK.

18) CONTRACTOR SHALL NOT STORE CONSTRUCTION MATERIAL ON ANY PROPERTY WITHOUT PRIOR WRITTEN CONSENT FROM PROPERTY OWNER.

19) ALL SAWCUTS REQUIRED TO BUILD NEW CURB SHALL BE CONSIDERED INCIDENTAL TO OTHER ITEMS.

STORMWATER RUNOFF CALCULATIONS			
(15 YEAR/20 MINUTE STORM)			
DESCRIPTION	AREA (ACRES)	P.I. (DIFFERENTIAL)	Q (CFS)
EX. GRASS AREA TO BE PAVED	0.12	1.84	0.22
DIFFERENTIAL RUNOFF= 0.22 CFS			

STORMWATER MANAGEMENT NOTE:

LAND AREA DISTURBED = 0.79 ACRES
ANY FUTURE LAND DISTURBANCE AND/OR INCREASE IN IMPERVIOUS AREA ON THIS SITE MAY REQUIRE ADDITIONAL STORM WATER MANAGEMENT PER MSD REGULATIONS IN PLACE AT THAT TIME (INCLUDING TOTAL LAND DISTURBANCE AND/OR IMPERVIOUSNESS ADDED ON THIS PLAN MSD RECORD NUMBER 18MSD–00033)

MSD STANDARD CONSTRUCTION NOTES:

ALL STORM AND SANITARY SEWER STRUCTURES AND APPURTENANCES TO BE DEDICATED TO MSD, OR TO BE PRIVATE UNDER MSD INSPECTION, SHALL CONFORM TO
THE METROPOLITAN ST. LOUIS SEWER SEWER DISTRICT, STANDARD CONSTRUCTION SPECIFICATIONS FOR SEWERS AND DRAINAGE FACILITIES, 2009. THAT WILL
INCLUDE STANDARD DETAILS SHOWN THEREIN, AND SHALL INCLUDE ALL SUBSEQUENT CHANGES MADE THERETO.

ALL STORM INLETS SHALL MAINTAIN A MINIMUM 6" THROAT OPENING PER MSD DETAIL SHEET #59 IN MSD STANDARD CONSTRUCTION SPECIFICATIONS FOR SEWERS AND DRAINAGE FACILITIES (2009).

SOME RECENT CHANGES CONCERN PIPE FIELD TESTING AND PERFORMANCE, AND INCLUDE THE FOLLOWING:

PART 4 - PIPE SEWER CONSTRUCTION

SECTION B, PIPE FIELD TESTS, PARAGRAPH 2, REACH INTEGRITY TESTING - DELETE THE FIRST SENTENCE AND THE FOLLOWING REPLACEMENT APPLIES:

ALL SANITARY AND COMBINED SEWERS SHALL SUSTAIN A MAXIMUM LEAKAGE LIMIT OF 100 GALLONS/INCH OF PIPE DIAMETER/MILE OF LINE/DAY, AS
REQUIRED BY THE MISSOURI DEPARTMENT OF NATURAL RESOURCES SPECIFICATIONS.

SECTION B, PIPE FIELD TESTS, PARAGRAPH 2, REACH INTEGRITY TESTING, SUBPARAGRAPH C, INFILTRATION/EXFILTRATION TESTING - DELETE THE SIXTH
SENTENCE, CONCERNING LEAKAGE LIMITS, AND THE FOLLOWING REPLACEMENT APPLIES:

THE MEASUREMENT OF LEAKAGE SHALL NOT EXCEED 100 GALLONS/INCH OF PIPE DIAMETER/MILE OF LINE/DAY, AS REQUIRED BY THE MISSOURI DEPARTMENT
OF NATURAL RESOURCES SPECIFICATIONS.

SECTION B, PIPE FIELD TESTS, PARAGRAPH 4, MANHOLE TESTING, SUBPARAGRAPH A, VACUUM TESTING - AFTER THE FIRST SENTENCE, THE FOLLOWING
ADDITION APPLIES:

THE VACUUM TEST MUST BE PERFORMED PRIOR TO BACKFILLING AROUND THE MANHOLE UNLESS THE CONTRACTOR PROVIDES DOCUMENTATION FROM THE PRECAST
MANHOLE MANUFACTURER STATING THAT THE MANHOLE MAY BE VACUUM TESTED AFTER BACKFILLING HAS TAKEN PLACE. THE CONTRACTOR MUST SUBMIT THIS
DOCUMENTATION PRIOR TO BACKFILLING AROUND ANY MANHOLE.

SECTION B, PIPE FIELD TESTS, PARAGRAPH 4, MANHOLE TESTING, SUBPARAGRAPH B, EXFILTRATION TESTING - DELETE THE SECOND SENTENCE, CONCERNING LEAKAGE
LIMITS, AND THE FOLLOWING ADDITION APPLIES:

FOR EXFILTRATION TESTING, THE ALLOWABLE LEAKAGE LIMIT IS 100 GALLONS/INCH OF PIPE DIAMETER/MILE OF LINE/DAY WHEN THE AVERAGE HEAD ON THE TEST
SECTION IS THREE FEET (3') OR LESS.

ADJUSTMENTS OF MANHOLES TO GRADE:

THE SEWER CONTRACTOR SHALL BE RESPONSIBLE FOR ANY COSTS ASSOCIATED WITH THE FIELD VERIFICATION OF THE SEWER GRADE, OR REMOVAL AND REPLACEMENT OF THE SEWER PIPE OR ASSOCIATED APPURTENANCES

MANHOLES MAY BE RAISED USING COURSES OF BRICK OR APPROVED GRADE RING(S), PROVIDED THE TOTAL ADJUSTMENT OF THE MANHOLE DOES NOT EXCEED 12-INCHES INCLUDING EXISTING RINGS OR COURSES OF BRICK). FOR MANHOLES WHICH WILL EXCEED THE MAXIMUM OF 12-INCHES, THE TRANSISTION SECTION OF THE STRUCTURE SHALL BE REMOVED AND THE BOTTOM SECTION RAISED USING THE SAME MATERIAL AS THE EXISTING STRUCTURE.

MANHOLES MAY BE LOWERED BY REMOVING THE TRANSITION SECTION, AND LOWERING THE EXISTING BOTTOM SECTION BY SAWCUTTING THE EXISTING CAST-IN-PLACE CONCRETE, REMOVING THE REQUIRED COURSES OF BRICK, OR REMOVING THE PRECAST RISER SECTION AS APPROPRIATE.

REMOVE, REPLACE, OR REHABILITATE STRUCTURE:

THE REMOVAL AND REPLACEMENT, OR REHABILITATION OF THE EXISTING PUBLIC STRUCTURE(S) WILL BE DETERMINED BY THE MSD FIELD INSPECTOR.
IF THE STRUCTURE IS DETERMINED TO REMAIN IN PLACE, THEN THE TOP SHALL BE ADJUSTED TO GRADE, IF NEEDED.

INLET GRADE ADJUSTMENTS

THE REMOVAL AND REPLACEMENT, OR CONVERSION OF THE EXISTING STRUCTURE WILL BE DETERMINED BY THE MSD FIELD INSPECTOR. IF THE STRUCTURE IS DETERMINED TO REMAIN IN PLACE, AND THE TOP SECTION CAN BE ADDED AS PROPOSED, AND STILL MEET MSD STANDARDS, THEN MODIFY AND ADJUST TO GRADE. OTHERWISE, THE ENTIRE STRUCTURE WILL HAVE TO BE REMOVED AND REPLACED WITH A NEW STRUCTURE.

THE CONTRACTOR SHALL STAY WITHIN THE LIMITS OF DISTURBANCE AS SHOWN ON THE PLANS AND MINIMIZE DISTURBANCE WITHIN THE WORK AREA WHEREVER POSSIBLE.

EXISTING WATER AND SANITARY CONNECTIONS WILL NOT BE MODIFIED WITH THIS WORK.

STATE OF MISSOURI
DAVID R. RIECHMANN
NUMBER
PE-2011000948
PROFESSIONAL ENGINEER
6-11-18

NAME:	DAVID R. RIECHMANN
DISCIPLINE:	ENGINEER
LICENSE NO.	PE-2011000948
EXPIRATION DATE:	12-31-19

DATE PREPARED: 6/12/2018

ROUTE	STATE
	MO
DISTRICT	SHEET NO.
SL	2

COUNTY: ST. LOUIS
JOB NO.: 1608900
MSD BASEMAP: 10F, 11F
FEDERAL PROJECT NO.: STP-5422(619)
MSD NUMBER: 18MSD-00033

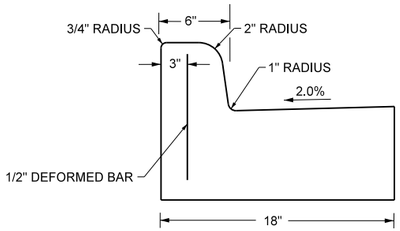
DATE	DESCRIPTION

Bellefontaine Neighbors

HORNER SHIFRIN
THE POWER HOUSE AT UNION STATION
401 S. 18th St., Ste. 400
ST. LOUIS, MO 63103-2296
314-531-4321 FAX: 314-531-6966
www.HornerShifrin.com
Certificate of Authority: 000159
Expiration Date: December 31, 2018

ASHBROOK DRIVE
TYPICAL SECTIONS AND GENERAL NOTES
SHEET 2 OF 2

REV.

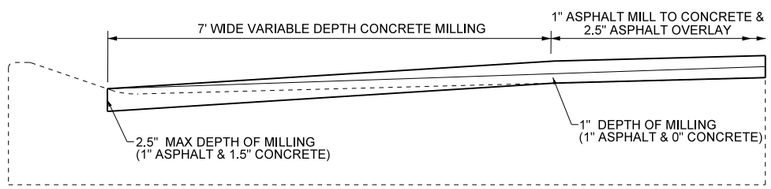


NEW CONCRETE VERTICAL CURB & GUTTER, 18" WIDE DETAIL

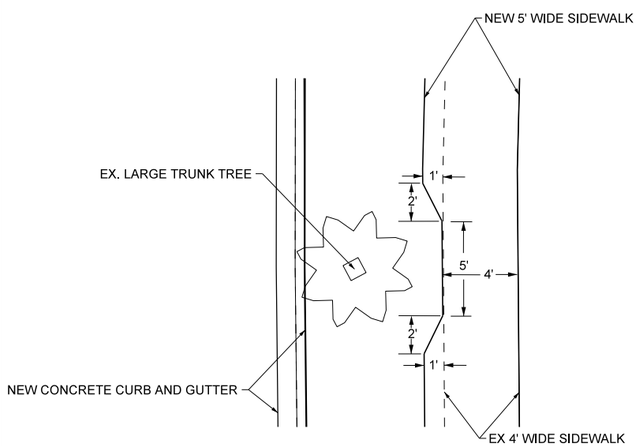
CONSTRUCTION JOINT AND TIE BAR MAY BE OMITTED WHEN CURB IS POURED INTEGRAL WITH GUTTER

LENGTH OF TIE BARS SHALL BE EQUAL TO THE THICKNESS OF PAVEMENT PLUS THE HEIGHT OF CURB LESS 3". TIE BARS SHALL BE PLACED AT 24" CENTERS.

SEE ST. LOUIS COUNTY STANDARD DRAWING C502.14 FOR ADDITIONAL INFORMATION



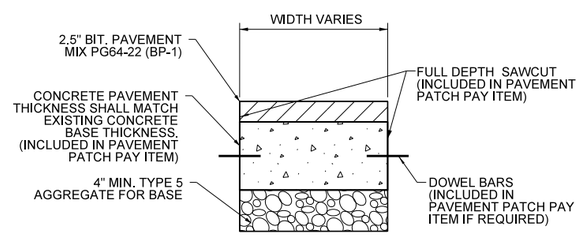
VARIABLE DEPTH MILL OF EXISTING INTEGRAL CURB ON CABOT DRIVE



SIDEWALK TRANSITION AT TREE DETAIL

SEE PLANS FOR LOCATIONS

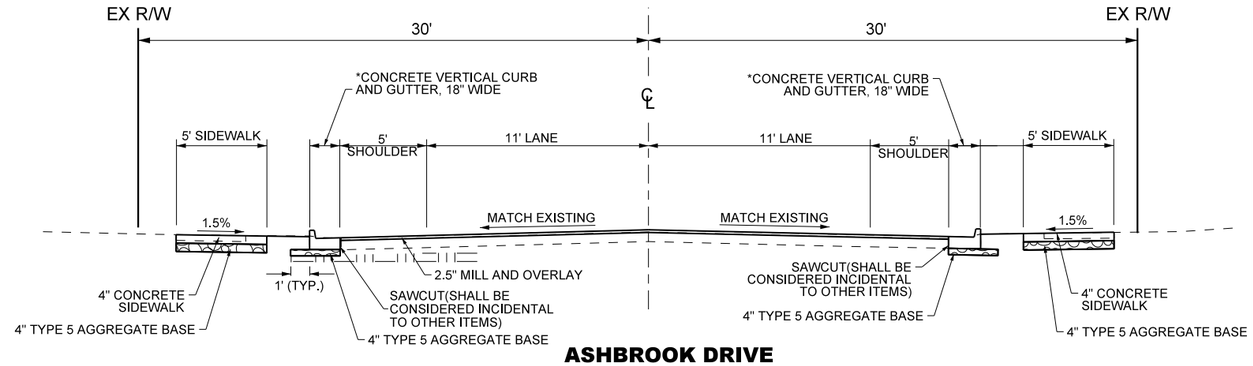
TREE ROOTS SHALL BE REMOVED AS REQUIRED TO CONSTRUCT NEW SIDEWALK. TREE ROOTS LESS THAN 2" IN DIAMETER AND LOCATED WITHIN THE LIMITS OF NEW SIDEWALK SHALL BE REMOVED WITH A CLEAN CUT (USING A SAW, AXE, OR OTHER APPROVED METHOD). TREE ROOTS 2" AND GREATER IN DIAMETER AND LOCATED WITHIN THE LIMITS OF THE SIDEWALK SHALL BE GRINDED BY MECHANICAL METHODS (IE. STUMP GRINDER) TO MINIMIZE HARM TO THE TREE. ALL ROOT REMOVAL AND GRINDING OPERATIONS SHALL BE APPROVED BY THE CITY PRIOR TO CONSTRUCTION. ADDITIONAL PAYMENT WILL NOT BE MADE FOR REMOVAL OF TREE ROOTS AND SHOULD BE CONSIDERED INCIDENTAL TO CONCRETE SIDEWALK (4" THICK)



PAVEMENT PATCH

PAVEMENT PATCH LOCATIONS TO BE DETERMINED BY ENGINEER

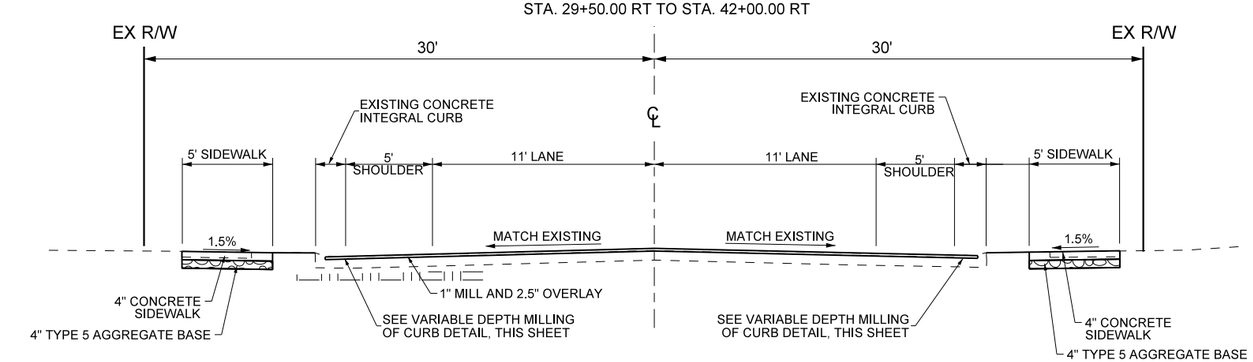
CONCRETE REAPAIR, SHALL ADHERE TO ST. LOUIS COUNTY STANDARD DRAWINGS C613.01-C613.04



ASHBROOK DRIVE

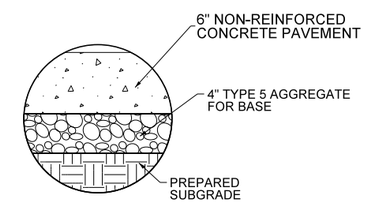
STA. 10+50.83 TO STA. 42+90.58

* OVERLAY SHALL EXTEND TO EXISTING CURB FACE & EXISTING CURB SHALL BE USED IN PLACE FROM:
STA. 10+50.83 LT TO STA. 29+50.00 LT
STA. 31+65.00 LT TO STA. 34+45.00 LT
STA. 29+50.00 RT TO STA. 42+00.00 RT

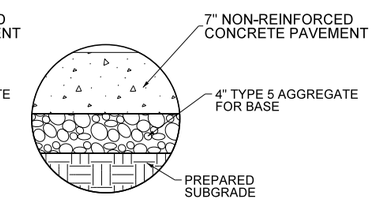


CABOT DRIVE

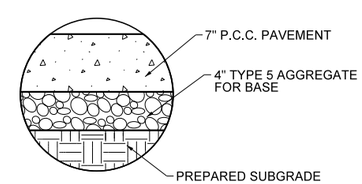
STA. 60+28.00 TO STA. 63+58.94



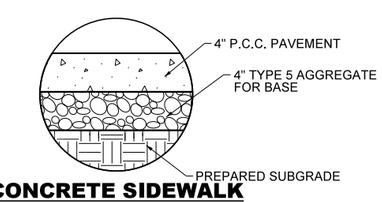
CONCRETE RESIDENTIAL APPROACH



CONCRETE COMMERCIAL APPROACH



CONCRETE CURB RAMP



CONCRETE SIDEWALK *PUBLIC TRANSIT IMPROVEMENTS

* PUBLIC TRANSIT IMPROVEMENTS SHALL CONSIST OF 4" P.C.C. PAVEMENT A MINIMUM OF 7' WIDE AND 8' LONG. THE SIDEWALK MAY BE INCLUDED IN THE TOTAL LENGTH. CONTRACTOR TO COORDINATE WITH LANCE PETERSON, 314-982-1520 FROM METROBUS PRIOR TO CONSTRUCTION.

STATE OF MISSOURI
DAVID R. RIECHMANN
NUMBER PE-2011000948
PROFESSIONAL ENGINEER
6-11-18

NAME:	DAVID R. RIECHMANN
DISCIPLINE:	ENGINEER
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COUNTY	ST. LOUIS
JOB NO.	1608900
MSD BASEMAP	10F, 11F
FEDERAL PROJECT NO.	STP-5422(619)
MSD NUMBER	18MSD-00033

DESCRIPTION

DATE

Bellefontaine Neighbors

HORNER SHIFRIN
THE POWER HOUSE AT UNION STATION
401 S. 18th St., Ste. 400
ST. LOUIS, MO 63103-2296
314-531-4321 FAX: 314-531-6966
www.HornerShifrin.com
Certificate of Authority: 000159
Expiration Date: December 31, 2018

ASHBROOK DRIVE

TYPICAL SECTIONS & GENERAL NOTES

SHEET 1 OF 2

REV.

SUMMARY OF QUANTITIES

ITEM NUMBER	DESCRIPTION	UNIT	QUANTITY
	ROADWAY ITEMS:		
2013000	CLEARING AND GRUBBING	AC.	0.7
2022010	REMOVAL OF IMPROVEMENTS	L.S.	1
2031000	CLASS 'A' EXCAVATION	C.Y.	1100
2036000	COMPACTING EMBANKMENT	C.Y.	108
3040504	TYPE 5 AGGREGATE FOR BASE (4 IN. THICK)	S.Y.	6009
4011209	BITUMINOUS PAVEMENT MIXTURE PG64-22, (BP-1)	TONS	1986
4071005	TACK COAT	GAL	770
4019906	PAVEMENT PATCH	S.Y.	1000
5021106	CONCRETE PAVEMENT (6" NON-REINFORCED)	S.Y.	249
5021107	CONCRETE PAVEMENT (7" NON-REINFORCED)	S.Y.	80
6039902	ADJUST TO GRADE WATER VALVE	EACH	21
6039932	ADJUST TO GRADE GAS VALVE	EACH	11
6042010	ADJUSTING MANHOLE	EACH	15
6042020	ADJUSTING BASIN OR INLET	EACH	14
6099902	CONCRETE CURB & GUTTER, VERTICAL	L.F.	1449
6221001	COLDMILLING BITUMINOUS PAVEMENT FOR REMOVAL OF SURFACING (3" THICK OR LESS)	S.Y.	14677
6274000	CONTRACTOR FURNISHED SURVEYING AND STAKING	L.S.	1
6169901	CONSTRUCTION SIGNS	L.S.	1
6169902	CHANNELIZERS	L.S.	1
6181000	MOBILIZATION	L.S.	1
8061007A	CURB INLET CHECK	EACH	14
	PEDESTRIAN FACILITIES:		
6086004	CONCRETE SIDEWALK (4" THICK)	S.Y.	3309
6089910	CONCRETE SIDEWALK CURB RAMP (7" THICK)	EACH	24
	PAVEMENT MARKING ITEMS:		
6206000C	4 IN. WHITE WATERBORNE PAVEMENT MARKING PAINT, TYPE P BEADS	L.F.	802
6206099	PREFORMED THERMOPLASTIC PAVEMENT MARKING, HANDICAP SYMBOL	EACH	4
6206124A	24 IN. WHITE WATERBORNE PAVEMENT MARKING PAINT, TYPE P BEADS	L.F.	212
	LANDSCAPE/STREETSCAPING ITEMS:		
8052000A	SEEDING-WARM SEASON MIXTURES	AC.	0.7

STATE OF MISSOURI
DAVID R. RIECHMANN
NUMBER
PE-2011000948
PROFESSIONAL ENGINEER
6-11-18

NAME: DAVID R. RIECHMANN
DISCIPLINE: ENGINEER
LICENSE NO. PE-2011000948
EXPIRATION DATE: 12-31-19

DATE PREPARED: 6/12/2018

ROUTE	STATE
	MO

DISTRICT	SHEET NO.
SL	2A

COUNTY: ST. LOUIS

JOB NO.: 1608900

MSD BASEMAP: 10F, 11F

FEDERAL PROJECT NO.: STP-5422(619)

MSD NUMBER: 18MSD-00033

DATE	DESCRIPTION

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ASHBROOK DRIVE

SUMMARY OF QUANTITIES SHEET

REV.

SIDEWALK

LOCATION	SHEET	STATION	STATION	SIDE	CONCRETE SIDEWALK, CURB RAMP (7" THICK)	CONCRETE SIDEWALK (4" THICK)	4" TYPE 5 AGGREGATE BASE	REMARKS
					EACH	AREA (SY)	AREA (SY)	
ASHBROOK	1	10+51.06	20+00	RT		424.9	424.9	SIDEWALK
ASHBROOK	1	10+63.55	20+00	LT		455.0	455.0	SIDEWALK
ASHBROOK	1	15+63.85		RT	2		17.8	KILGORE DRIVE
ASHBROOK	1	15+70.33		LT	2		17.8	KILGORE DRIVE
ASHBROOK	1	16+24.69		RT	2		13.8	KILGORE DRIVE
ASHBROOK	1	16+29.45		LT	2		15.4	KILGORE DRIVE
ASHBROOK	1	16+46.21		LT		4.8	4.8	TRANSIT PAVEMENT
ASHBROOK	1	16+89.46		RT		4.8	4.8	TRANSIT PAVEMENT
ASHBROOK	2	20+00	30+00	RT		444.4	444.4	SIDEWALK
ASHBROOK	2	20+00	30+00	LT		375.0	375.0	SIDEWALK
ASHBROOK	2	20+12.19		LT	1		6.9	GOLDEN DRIVE
ASHBROOK	2	20+62.15		LT	1		7.1	GOLDEN DRIVE
ASHBROOK	2	22+98.43		LT		4.9	4.9	TRANSIT PAVEMENT
ASHBROOK	2	23+24.75		LT	1		5.9	CORINTH DRIVE
ASHBROOK	2	23+60.46		RT		4.7	4.7	TRANSIT PAVEMENT
ASHBROOK	2	23+72.95		LT	1		6.3	CORINTH DRIVE
ASHBROOK	2	25+84.97		LT	1		6.6	COMET DRIVE
ASHBROOK	2	26+34.09		LT	1		6.9	COMET DRIVE
ASHBROOK	2	29+40.97		LT	1		7.3	SURF DRIVE
ASHBROOK	3	30+00	40+00	RT		460.3	460.3	SIDEWALK
ASHBROOK	3	30+00	40+00	LT		564.8	564.8	SIDEWALK
ASHBROOK	3	30+26.16		LT	1		7.3	SURF DRIVE
ASHBROOK	3	31+53.55		RT		5.2	5.2	TRANSIT PAVEMENT
ASHBROOK	3	31+60.30		RT	1		3.6	RAMP
ASHBROOK	3	31+58.78		LT	1		3.7	RAMP
ASHBROOK	3	31+64.88		LT		24.7	24.7	TRANSIT PAVEMENT
ASHBROOK	3	32+82.00		LT	1		14.0	RAMP
ASHBROOK	3	33+25.00		LT	1		20.2	RAMP
ASHBROOK	4	40+00	42+97.12	RT		80.7	80.7	SIDEWALK
ASHBROOK	4	40+00	42+70.41	LT		123.0	123.0	SIDEWALK
ASHBROOK	4	41+90.14		RT	2		17.0	CABOT DRIVE
ASHBROOK	4	42+72.81		RT	2		27.3	CABOT DRIVE
CABOT	4	60+19.13	63+51.81	RT		176.9	176.9	SIDEWALK
CABOT	4	60+69.42	63+48.72	LT		145.1	145.1	SIDEWALK
CABOT	4	61+03.85		LT		4.7	4.7	TRANSIT PAVEMENT
CABOT	4	62+14.45		RT		4.9	4.9	TRANSIT PAVEMENT
				TOTAL	24	3308.8	3513.7	
				USE	24	3309	3514	

CURB & GUTTER

LOCATION	SHEET	STATION	STATION	SIDE	CONCRETE CURB & GUTTER, VERTICAL	TYPE 5 AGGREGATE FOR BASE (4 IN. THICK)	REMARKS
					LENGTH (LF)	AREA (SY)	
ASHBROOK	1	10+54.02	20+00	RT	681.7	189.4	
ASHBROOK	2	20+00	29+28.25	RT	658.5	182.9	
ASHBROOK	3	30+26.41	31+56.33	LT	108.4	30.1	
			TOTAL		1448.6	402.4	
			USE		1449	403	

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SCHEDULE OF QUANTITIES
SHEET 1 OF 3

REV.

UTILITY ADJUSTMENTS

LOCATION	STATION	SIDE	ADJUSTING MANHOLE	ADJUST TO GRADE CURB INLET	ADJUST TO GRADE GAS VALVE	ADJUST TO GRADE WATER VALVE	REMARKS
			EACH (EA)	EACH (EA)	EACH (EA)	EACH (EA)	
ASHBROOK	10+51.71	RT		1			
ASHBROOK	10+54.96	LT		1			
ASHBROOK	10+67.03	LT				1	
ASHBROOK	10+77.87	RT			1		
ASHBROOK	10+85.23	LT				1	
ASHBROOK	11+61.29	RT	1				
ASHBROOK	14+05.11	LT				1	
ASHBROOK	15+06.61	RT				1	
ASHBROOK	15+97.47	LT	1				
ASHBROOK	16+23.47	LT				1	
ASHBROOK	16+33.24	LT				1	
ASHBROOK	16+45.53	RT		1			
ASHBROOK	16+52.91	LT		1			
ASHBROOK	17+27.16	RT			1		
ASHBROOK	18+18.80	LT	1				
ASHBROOK	18+66.69	LT			1		
ASHBROOK	18+68.53	LT				1	
ASHBROOK	19+22.44	LT			1		
ASHBROOK	20+14.85	RT			1		
ASHBROOK	20+37.18	LT	1				
ASHBROOK	20+52.96	RT	1				
ASHBROOK	20+81.48	LT				1	
ASHBROOK	21+62.98	LT		1			
ASHBROOK	21+63.48	RT		1			
ASHBROOK	22+01.74	RT			1		
ASHBROOK	23+08.13	RT				1	
ASHBROOK	23+18.33	RT			1		
ASHBROOK	23+34.36	RT	1				
ASHBROOK	23+49.24	LT	1				
ASHBROOK	23+67.28	LT				1	
ASHBROOK	25+22.41	RT			1		
ASHBROOK	25+39.71	RT			1		
ASHBROOK	25+62.56	LT		1			
ASHBROOK	26+08.18	LT	1				
ASHBROOK	26+25.36	RT		1			
ASHBROOK	26+55.17	LT		1			
ASHBROOK	29+51.39	LT				1	
ASHBROOK	29+52.98	LT				1	
ASHBROOK	29+69.64	RT	1				
ASHBROOK	30+36.94	LT		1			
ASHBROOK	30+39.62	RT		1			
ASHBROOK	30+62.51	RT				1	
ASHBROOK	31+02.88	LT	1				
ASHBROOK	32+59.89	RT			1		
ASHBROOK	32+61.08	RT				1	
ASHBROOK	32+93.03	LT				1	
ASHBROOK	32+93.08	LT				1	
ASHBROOK	33+38.38	LT	1				
ASHBROOK	35+36.60	RT				1	
ASHBROOK	35+83.91	RT	1				
ASHBROOK	38+83.12	LT			1		
ASHBROOK	38+83.94	RT				1	
ASHBROOK	38+89.03	RT				1	
ASHBROOK	39+47.97	RT	1				
ASHBROOK	42+00.67	RT	1				
ASHBROOK	42+14.48	LT		1			
ASHBROOK	42+59.43	RT				1	
CABOT	60+20.01	RT		1			
CABOT	60+85.77	LT		1			
CABOT	60+90.21	LT				1	
CABOT	62+93.56	LT	1				
	TOTAL		15	14	11	21	
	USE		15	14	11	21	

COLDMILLING BITUMINOUS PAVEMENT

LOCATION	STATION	STATION	AREA	COLDMILLING BITUMINOUS PAVEMENT FOR REMOVAL OF SURFACING (3" THICK OR LESS)	REMARKS
			AREA (SF)	AREA (SY)	
ASHBROOK	10+47.96	20+00	32850.9	3650	
ASHBROOK	20+00	30+00	36587.7	4065	
ASHBROOK	30+00	40+00	38321.7	4258	
ASHBROOK	40+00	42+90.40	13116.2	1457	
CABOT	60+37.12	63+58.94	11220.9	1247	
		TOTAL		14677.0	
		USE		14677	

SEEDING

LOCATION	SEEDING-WARM SEASON MIXTURES	REMARKS
	AREA (AC)	
ASHBROOK	0.7	
TOTAL	0.7	
USE	0.7	

EARTHWORK

LOCATION	CLASS 'A' EXCAVATION	COMPACTING EMBANKMENT	REMARKS
	VOLUME (CY)	VOLUME (CY)	
ASHBROOK&CABOT	853	108	MAINLINE
ASHBROOK & CABOT DRIVEWAYS	247	0	DRIVEWAYS & ENTRANCES
TOTAL	1100	108	
USE	1100	108	

PAVEMENT PATCH

LOCATION	PAVEMENT PATCH	TYPE 5 AGGREGATE FOR BASE (4 IN. THICK)	REMARKS
	AREA (SY)	AREA (SY)	
ASHBROOK	1000.0	1000	
TOTAL	1000.0	1000	
USE	1000	1000	

* PAVEMENT PATCH TO BE USED AT ENGINEERS DIRECTION

EROSION CONTROL

LOCATION	CURB INLET CHECK	REMARKS
	EACH (EA)	
ASHBROOK	14	
TOTAL	14	
USE	14	

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SCHEDULE OF QUANTITIES
SHEET 2 OF 3

REV.

CONCRETE PAVEMENT

LOCATION	PLAN SHEET	STATION	SIDE	CONCRETE PAVEMENT (6" NON-REINFORCED)	CONCRETE PAVEMENT (7" NON-REINFORCED)	TYPE 5 AGGREGATE FOR BASE (4 IN. THICK)	REMARKS
				AREA (SY)	AREA (SY)	AREA (SY)	
ASHBROOK	1	11+18.80	RT	17.1		17.1	RESIDENTIAL APPROACH
ASHBROOK	1	11+70.93	RT	15.4		15.4	RESIDENTIAL APPROACH
ASHBROOK	1	12+19.86	LT		29.3	29.3	COMMERCIAL APPROACH
ASHBROOK	1	12+41.67	RT	16.6		16.6	RESIDENTIAL APPROACH
ASHBROOK	1	13+16.05	RT	23.6		23.6	RESIDENTIAL APPROACH
ASHBROOK	1	13+87.92	RT	14.9		14.9	RESIDENTIAL APPROACH
ASHBROOK	1	14+68.13	RT	23.5		23.5	RESIDENTIAL APPROACH
ASHBROOK	1	17+54.80	RT	15.4		15.4	RESIDENTIAL APPROACH
ASHBROOK	1	17+59.85	LT	14.4		14.4	RESIDENTIAL APPROACH
ASHBROOK	1	18+16.46	LT	14.4		14.4	RESIDENTIAL APPROACH
ASHBROOK	1	18+17.33	RT	15.2		15.2	RESIDENTIAL APPROACH
ASHBROOK	1	18+76.47	LT	13.5		13.5	RESIDENTIAL APPROACH
ASHBROOK	1	18+86.21	RT	14.8		14.8	RESIDENTIAL APPROACH
ASHBROOK	1	19+32.35	LT	13.8		13.8	RESIDENTIAL APPROACH
ASHBROOK	1	19+48.34	RT	17.7		17.7	RESIDENTIAL APPROACH
ASHBROOK	1	19+78.15	RT	18.4		18.4	RESIDENTIAL APPROACH
ASHBROOK	2	20+48.13	RT	15.3		15.3	RESIDENTIAL APPROACH
ASHBROOK	2	21+11.45	RT	15.9		15.9	RESIDENTIAL APPROACH
ASHBROOK	2	21+41.65	LT	21.8		21.8	RESIDENTIAL APPROACH
ASHBROOK	2	22+13.00	RT	15.1		15.1	RESIDENTIAL APPROACH
ASHBROOK	2	22+43.97	LT	24.9		24.9	RESIDENTIAL APPROACH
ASHBROOK	2	22+84.07	RT	14.8		14.8	RESIDENTIAL APPROACH
ASHBROOK	2	23+47.74	RT	15.4		15.4	RESIDENTIAL APPROACH
ASHBROOK	2	23+77.60	RT	14.7		14.7	RESIDENTIAL APPROACH
ASHBROOK	2	24+39.97	RT	14.6		14.6	RESIDENTIAL APPROACH
ASHBROOK	2	24+56.19	LT	20.3		20.3	RESIDENTIAL APPROACH
ASHBROOK	2	25+09.75	RT	16.0		16.0	RESIDENTIAL APPROACH
ASHBROOK	2	25+72.44	RT	15.9		15.9	RESIDENTIAL APPROACH
ASHBROOK	2	26+77.52	RT	25.0		25.0	RESIDENTIAL APPROACH
ASHBROOK	2	27+42.74	RT	16.9		16.9	RESIDENTIAL APPROACH
ASHBROOK	2	27+54.29	LT	14.9		14.9	RESIDENTIAL APPROACH
ASHBROOK	2	28+05.87	LT	14.1		14.1	RESIDENTIAL APPROACH
ASHBROOK	2	28+11.25	RT	19.7		19.7	RESIDENTIAL APPROACH
ASHBROOK	2	28+70.20	LT	18.7		18.7	RESIDENTIAL APPROACH
ASHBROOK	2	28+79.11	RT	25.4		25.4	RESIDENTIAL APPROACH
ASHBROOK	2	29+38.34	RT	17.8		17.8	RESIDENTIAL APPROACH
ASHBROOK	3	30+07.21	RT	14.5		14.5	RESIDENTIAL APPROACH
ASHBROOK	3	30+72.78	RT	14.6		14.6	RESIDENTIAL APPROACH
ASHBROOK	3	30+97.78	LT	17.2		17.2	RESIDENTIAL APPROACH
ASHBROOK	3	31+36.53	RT	14.2		14.2	RESIDENTIAL APPROACH
ASHBROOK	3	32+02.10	RT	15.4		15.4	RESIDENTIAL APPROACH
ASHBROOK	3	32+70.25	RT	13.9		13.9	RESIDENTIAL APPROACH
ASHBROOK	3	33+33.62	RT	15.2		15.2	RESIDENTIAL APPROACH
ASHBROOK	3	34+02.24	RT	15.4		15.4	RESIDENTIAL APPROACH
ASHBROOK	3	34+70.34	RT	14.3		14.3	RESIDENTIAL APPROACH
ASHBROOK	3	35+25.88	RT	15.7		15.7	RESIDENTIAL APPROACH
ASHBROOK	3	35+87.98	RT	15.1		15.1	RESIDENTIAL APPROACH
ASHBROOK	3	36+28.34	LT		16.6	16.6	COMMERCIAL APPROACH
ASHBROOK	3	36+46.84	RT	14.9		14.9	RESIDENTIAL APPROACH
ASHBROOK	3	37+00.84	RT	14.4		14.4	RESIDENTIAL APPROACH
ASHBROOK	3	37+65.02	RT	24.4		24.4	RESIDENTIAL APPROACH
ASHBROOK	3	38+24.29	RT	14.0		14.0	RESIDENTIAL APPROACH
ASHBROOK	3	38+77.08	RT	15.5		15.5	RESIDENTIAL APPROACH
ASHBROOK	3	38+98.09	LT		10.6	10.6	COMMERCIAL APPROACH
ASHBROOK	3	39+37.51	RT	15.5		15.5	RESIDENTIAL APPROACH
ASHBROOK	3	39+93.69	RT	14.6		14.6	RESIDENTIAL APPROACH
ASHBROOK	4	40+48.14	LT		6.0	6.0	COMMERCIAL APPROACH
ASHBROOK	4	40+54.30	RT	13.6		13.6	RESIDENTIAL APPROACH
ASHBROOK	4	41+16.03	RT	22.3		22.3	RESIDENTIAL APPROACH
ASHBROOK	4	41+46.38	RT	29.8		29.8	RESIDENTIAL APPROACH
ASHBROOK	4	42+49.75	LT	16.9	16.9	33.8	COMMERCIAL APPROACH
CABOT	4	62+02.22	RT	20.0		20.0	RESIDENTIAL APPROACH
CABOT	4	62+65.98	RT	24.4		24.4	RESIDENTIAL APPROACH
			TOTAL	1011.70	79.40	1091.10	
			USE	1012	80	1092	

ASPHALT PAVEMENT

LOCATION	STATION	STATION	PLAN SHEET	AREA	BITUMINOUS PAVEMENT MIXTURE PG64-22, (BP-1)		TACK COAT	REMARKS
				AREA (SY)	VOLUME (CY)	TONS	VOLUME (GAL)	
ASHBROOK	10+47.96	20+00	1	3650.1	253.5	493.8	201.6	OVERLAY
ASHBROOK	20+00	30+00	2	4065.3	282.3	549.9	204.3	OVERLAY
ASHBROOK	30+00	40+00	3	4258.0	295.7	576.0	213.9	OVERLAY
ASHBROOK	40+00	42+90.40	4	1457.4	101.2	197.1	74.8	OVERLAY
CABOT	60+37.12	63+58.94	4	1246.8	86.6	168.7	75.3	OVERLAY
	CONVERSION FACTOR					1.948 TONS/CY	0.05 GAL/SY	
					TOTAL	1985.5	769.9	
					USE	1986	770	

MOBILIZATION

LUMP SUM = 1

REMOVAL OF IMPROVEMENTS

LUMP SUM = 1

CONTRACTOR FURNISHED SURVEYING AND STAKING

LUMP SUM = 1

CONSTRUCTION SIGNS

LUMP SUM = 1

CHANNELIZERS

LUMP SUM = 1

CLEARING AND GRUBBING

LOCATION	CLEARING AND GRUBBING	REMARKS
	AREA (AC)	
ASHBROOK	0.7	
TOTAL	0.7	
USE	0.7	

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SCHEDULE OF QUANTITIES
SHEET 3 OF 3

REV.

NOTES:

1. ALL EXISTING STRUCTURES NOT LABELED SHALL BE USED IN PLACE.
2. EXISTING ROW AND PROPERTY LINES SHOWN ARE APPROXIMATE ONLY AND ARE FROM THE ST. LOUIS COUNTY GIS RECORDS.
3. CONSTRUCTION LIMITS SHALL BE WITHIN THE EXISTING R/W.
4. ALL STORM INLETS SHALL MAINTAIN A MINIMUM 6" THROAT OPENING PER MSD DETAIL SHEET #59 IN MSD STANDARD CONSTRUCTION SPECIFICATIONS FOR SEWERS AND DRAINAGE FACILITIES (2009)

SPECIAL NOTE TO CONTRACTOR(S):

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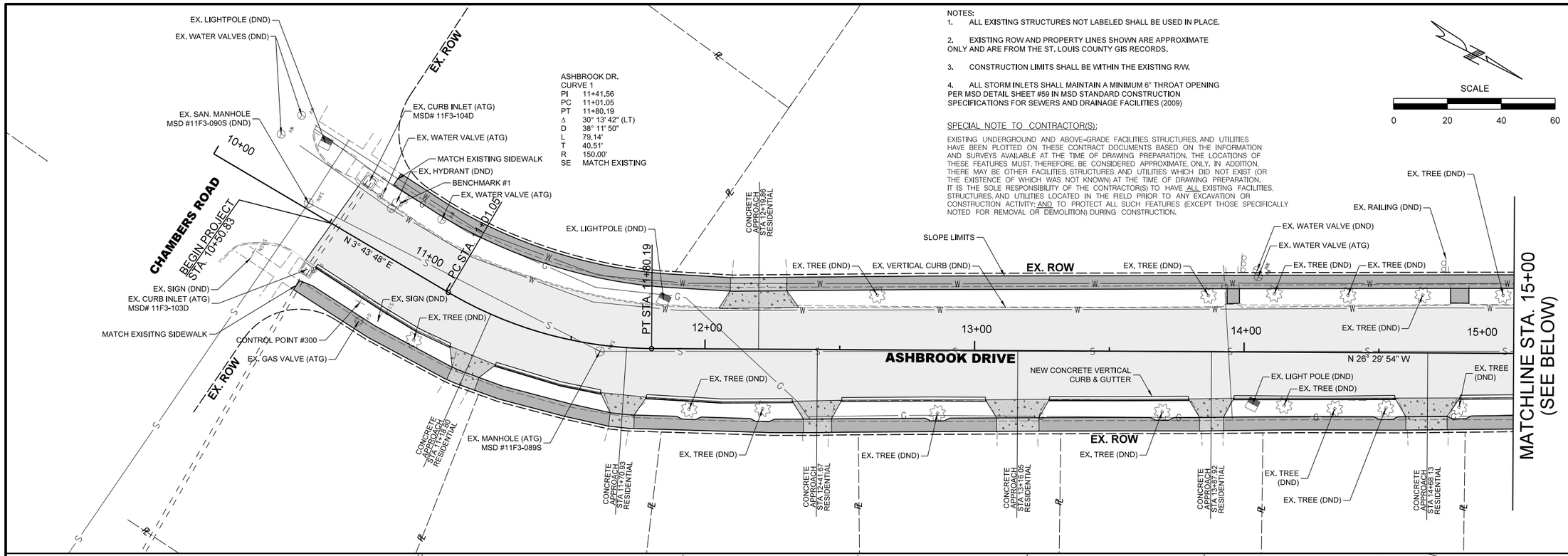
SCALE

0 20 40 60

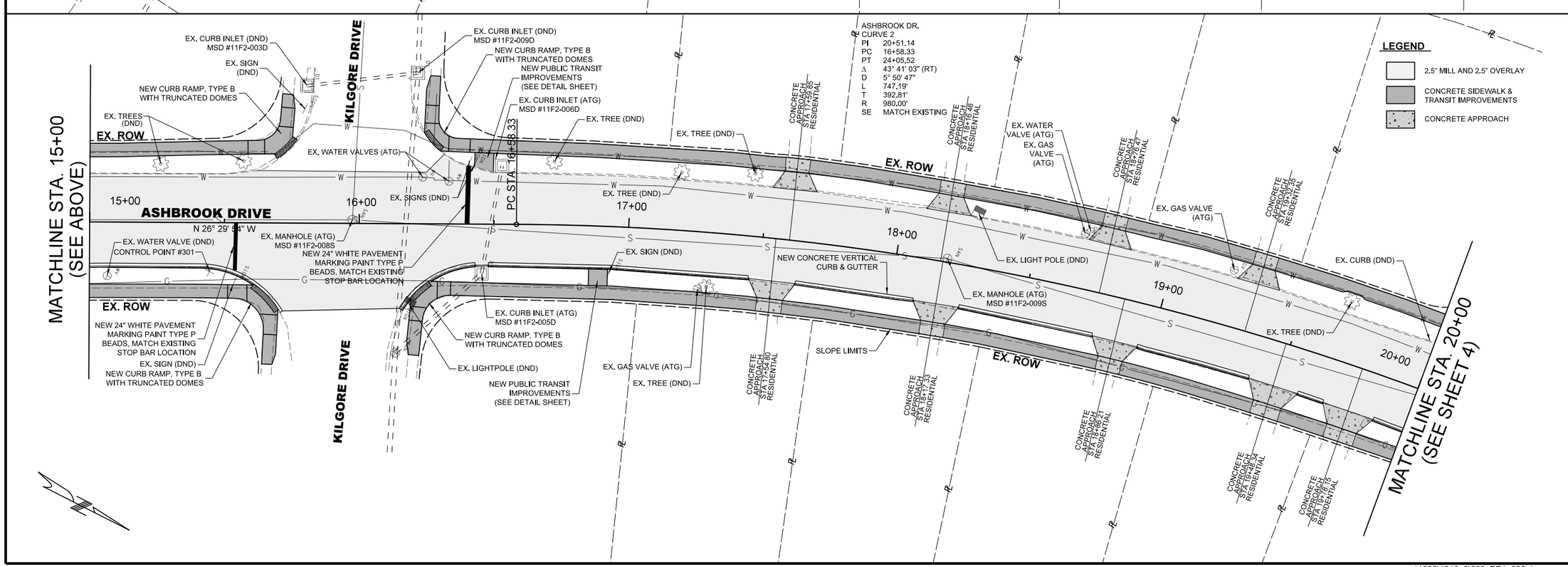
ASHBROOK DR.
CURVE 1

PI	11+41.56
PC	11+01.05
PT	11+80.19
Δ	30° 13' 42" (LT)
D	38° 11' 50"
L	79.14'
T	40.51'
R	150.00'
SE	MATCH EXISTING



ASHBROOK DR.
CURVE 2

PI	20+51.14
PC	16+58.33
PT	24+05.52
Δ	43° 41' 03" (RT)
D	5° 50' 47"
L	747.19'
T	392.81'
R	980.00'
SE	MATCH EXISTING



LEGEND

- 2.5" MILL AND 2.5" OVERLAY
- CONCRETE SIDEWALK & TRANSIT IMPROVEMENTS
- CONCRETE APPROACH

STATE OF MISSOURI
DAVID R. RIECHMANN
NUMBER PE-2011000948
PROFESSIONAL ENGINEER

NAME:	DAVID R. RIECHMANN
DISCIPLINE:	ENGINEER
LICENSE NO.	PE-2011000948
EXPIRATION DATE:	12-31-19

DATE PREPARED	6/12/2018
ROUTE	STATE MO
DISTRICT	SHEET NO. SL 3
COUNTY	ST. LOUIS
JOB NO.	1608900
MSD BASEMAP	10F, 11F
FEDERAL PROJECT NO.	STP-5422(619)
MSD NUMBER	18MSD-00033

DATE | DESCRIPTION | REV.

Bellefontaine Neighbors

HORNER SHIFRIN
THE POWER HOUSE AT UNION STATION
401 S. 18th St. Ste. 400
ST. LOUIS, MO 63103-2296
314-531-4321 FAX: 314-531-6966
www.HornerShifrin.com
Certificate of Authority: 000159
Expiration Date: December 31, 2018

ASHBROOK DRIVE

PLAN - PLAN SHEET

SHEET 1 OF 4

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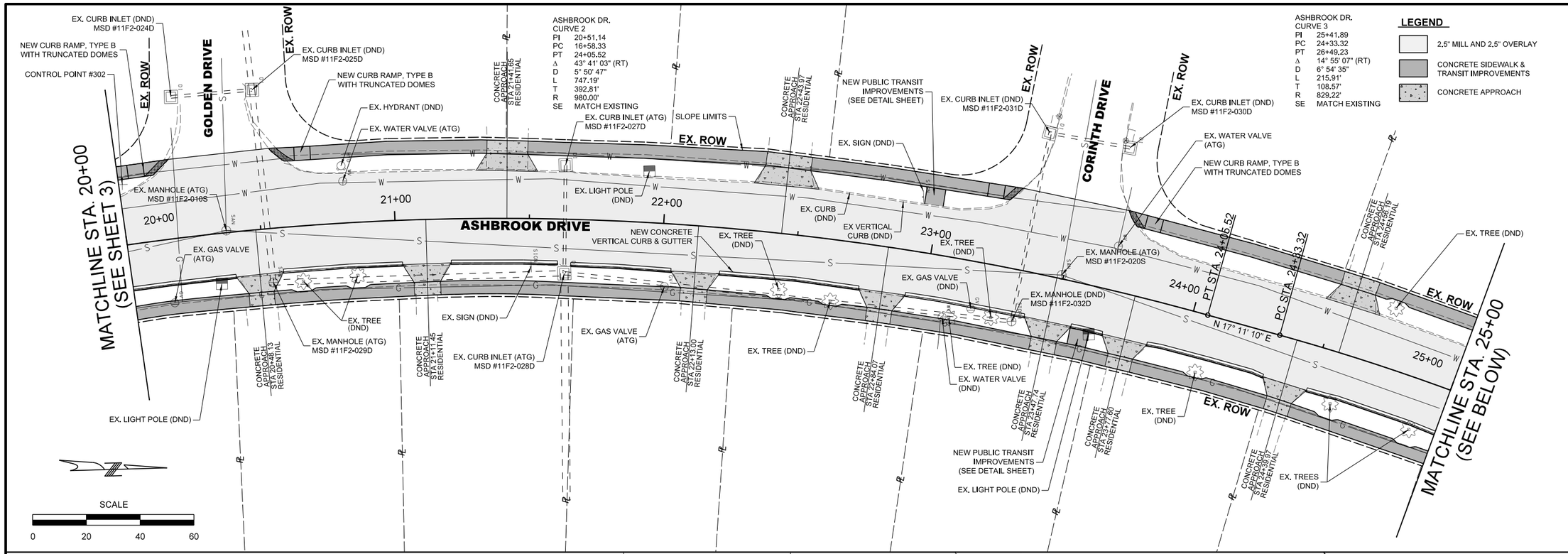

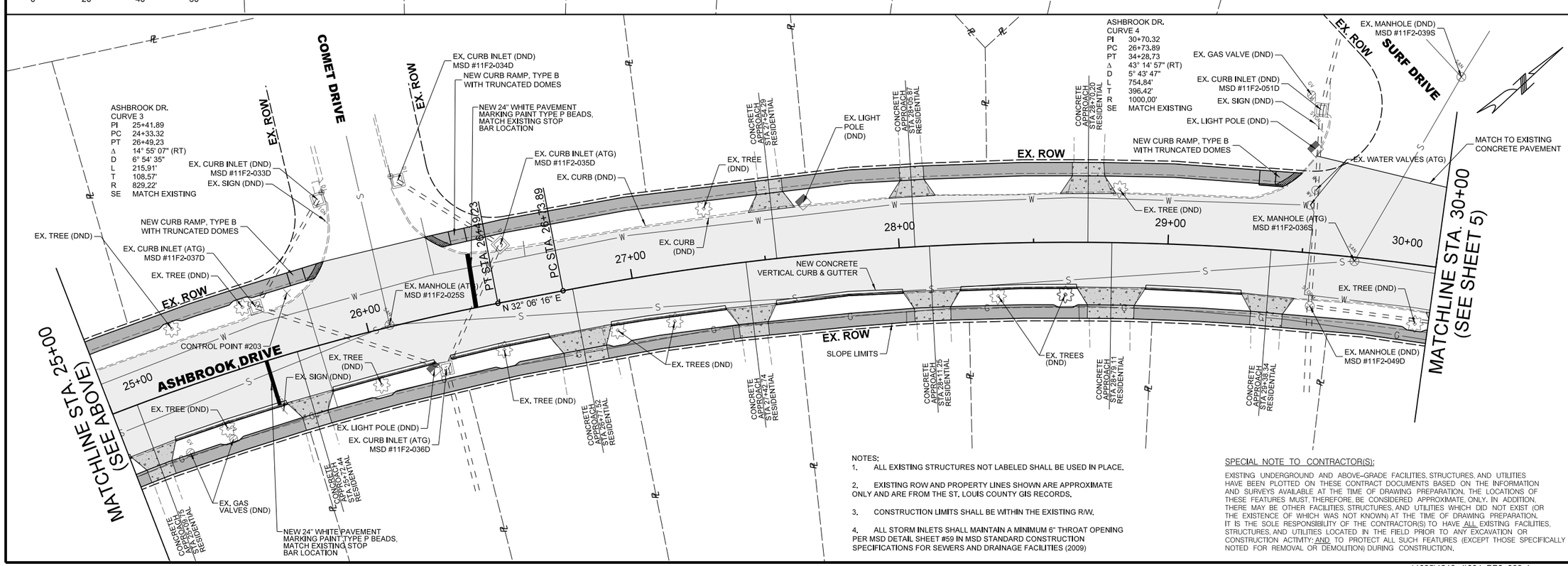

NOTES:

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2. EXISTING ROW AND PROPERTY LINES SHOWN ARE APPROXIMATE ONLY AND ARE FROM THE ST. LOUIS COUNTY GIS RECORDS.
3. CONSTRUCTION LIMITS SHALL BE WITHIN THE EXISTING R/W.
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6-11-18

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EXPIRATION DATE:	12-31-19

DATE PREPARED	6/12/2018
ROUTE	STATE MO
DISTRICT SL	SHEET NO. 4
COUNTY	ST. LOUIS
JOB NO.	1608900
MSD BASEMAP	10F, 11F
FEDERAL PROJECT NO.	STP-5422(619)
MSD NUMBER	18MSD-00033

DATE | DESCRIPTION | REV.

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ASHBROOK DRIVE

PLAN - PLAN SHEET

SHEET 2 OF 4

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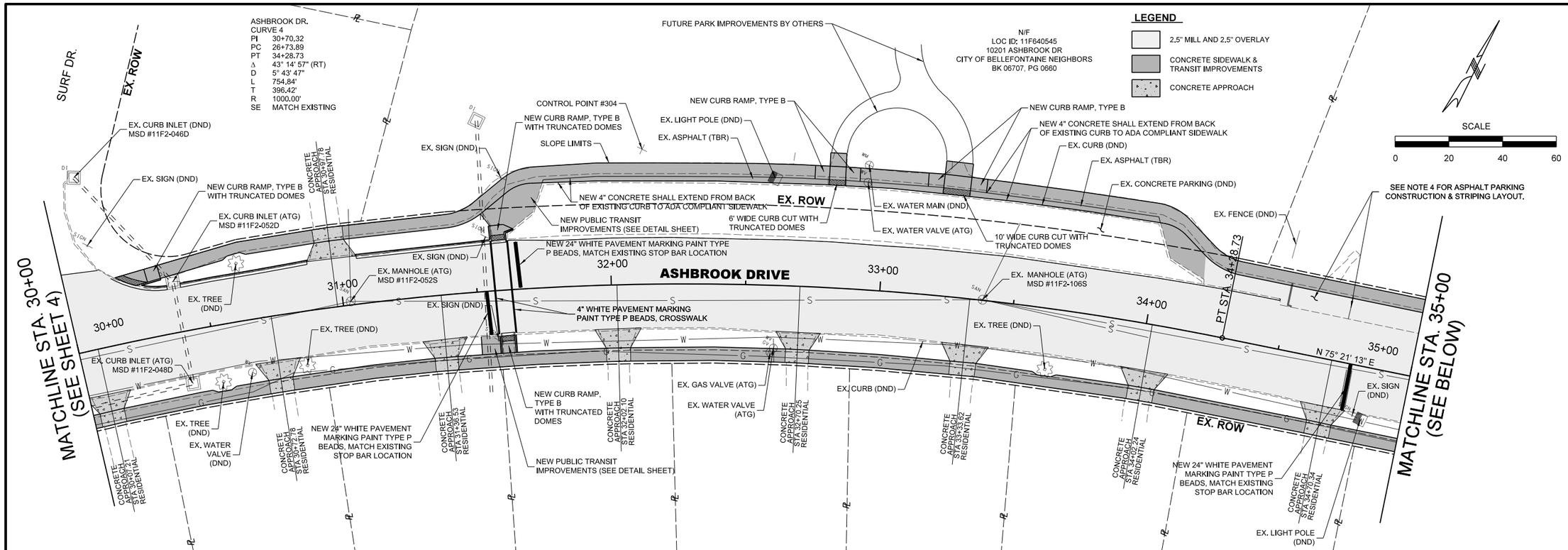

ASHBROOK DR.
CURVE 5
PI 39+46.19
PC 35+90.42
PT 42+73.50
Δ 39° 31' 59" (LT)
D 5° 47' 15"
L 683.08'
T 355.77'
R 990.00'
SE MATCH EXISTING

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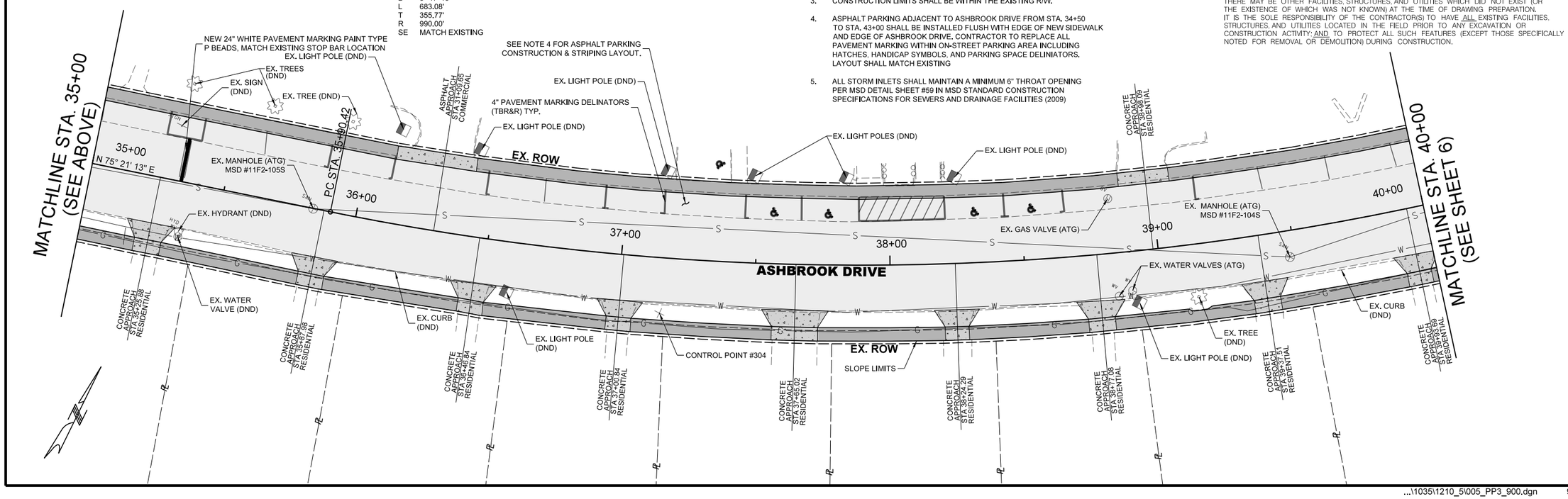

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DISTRICT SL	SHEET NO. 5
COUNTY	ST. LOUIS
JOB NO.	1608900
MSD BASEMAP	10F, 11F
FEDERAL PROJECT NO.	STP-5422(619)
MSD NUMBER	18MSD-00033

DESCRIPTION

DATE

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ASHBROOK DRIVE

PLAN - PLAN SHEET

SHEET 3 OF 4

REV.

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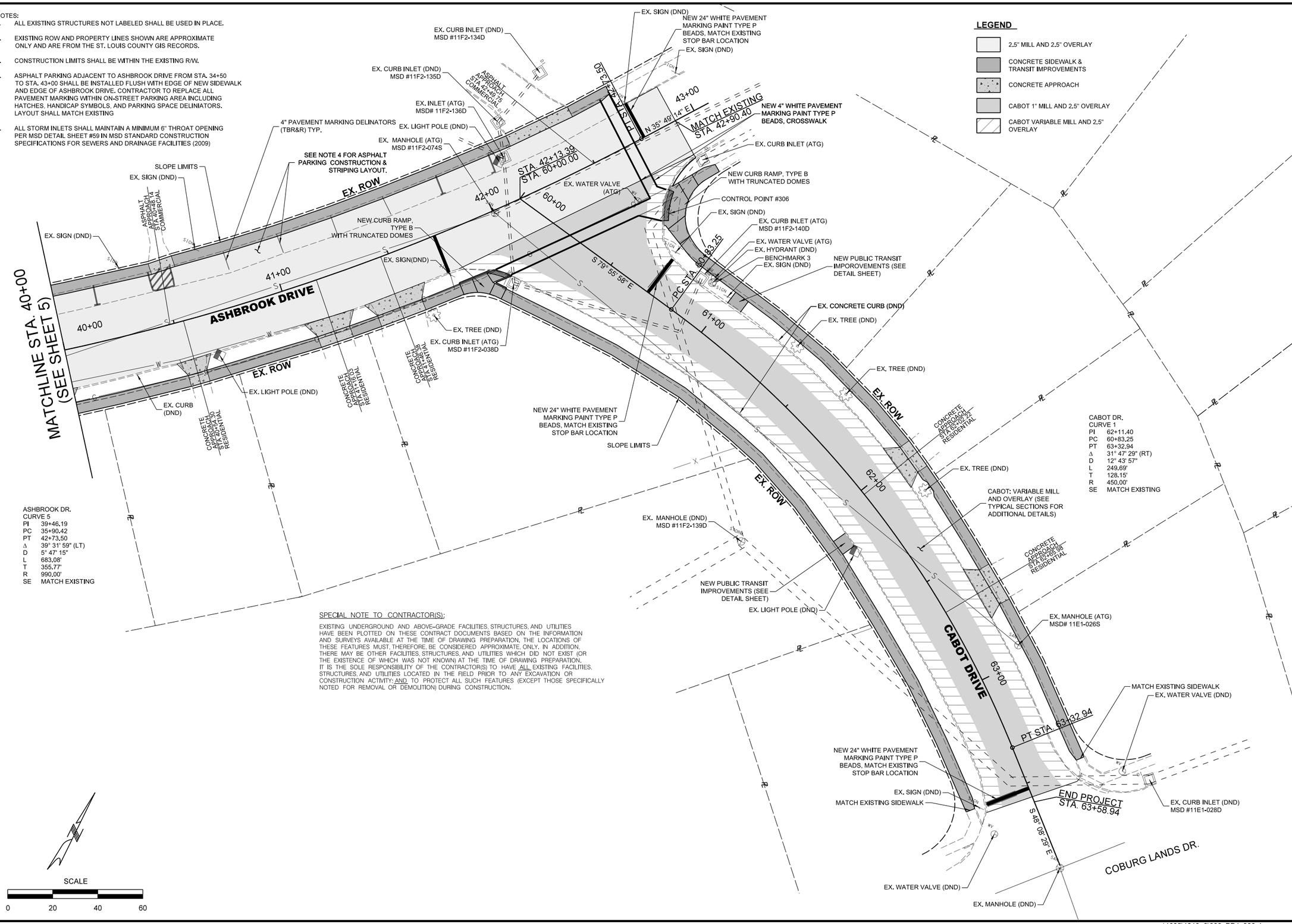

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DISTRICT SL	SHEET NO. 6
COUNTY	ST. LOUIS
JOB NO.	1608900
MSD BASEMAP	10F, 11F
FEDERAL PROJECT NO.	STP-5422(619)
MSD NUMBER	18MSD-00033

DATE	DESCRIPTION

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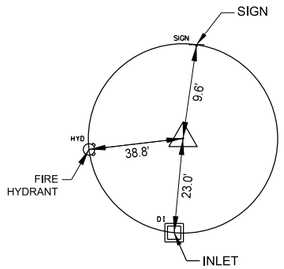
ASHBROOK DRIVE

PLAN SHEET

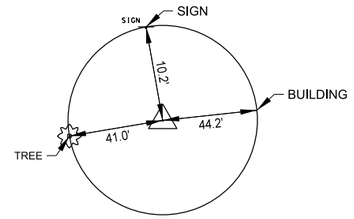
SHEET 4 OF 4

REV.

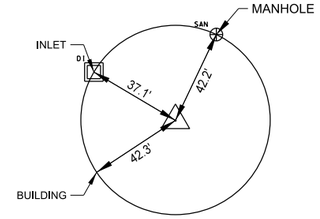
REFERENCE POINTS



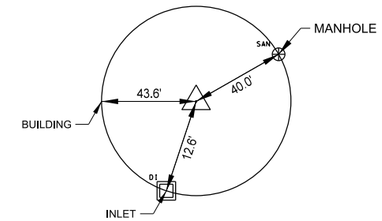
CONTROL POINT 300
N 1062191.386
E 896324.257
IRC
ELEV. = 462.72
STA. = 10+74.68
O/S = 19.84' RT



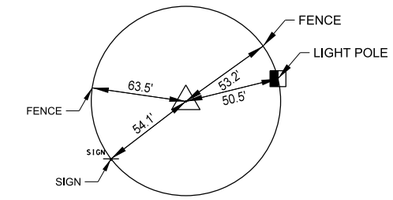
CONTROL POINT 301
N 1062629.866
E 896144.424
IRC
ELEV. = 467.35
STA. = 15+44.55
O/S = 18.16' RT



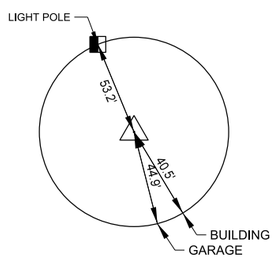
CONTROL POINT 302
N 1063048.304
E 895958.289
IRC
ELEV. = 470.54
STA. = 20+01.32
O/S = 22.50' LT



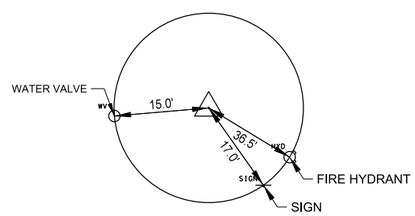
CONTROL POINT 303
N 1063617.893
E 896059.890
IRC
ELEV. = 469.10
STA. = 25+74.79
O/S = 22.02' LT



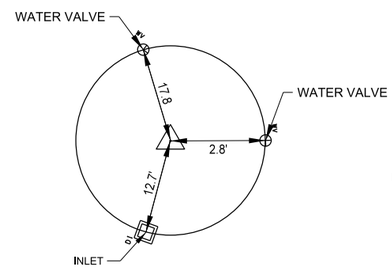
CONTROL POINT 304
N 1064097.432
E 896498.782
IRC
ELEV. = 475.93
STA. = 32+12.25
O/S = 50.23' LT



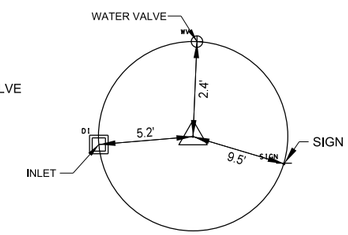
CONTROL POINT 305
N 1064190.558
E 897006.465
IRC
ELEV. = 480.28
STA. = 37+15.62
O/S = 20.62' RT



CONTROL POINT 306
N 1064524.598
E 897458.254
IRC
ELEV. = 485.91
STA. = 42+69.09
O/S = 35.21' RT



BENCHMARK 1
N 1062186.795
E 896285.2280
NORTH BOLT
ELEV. = 464.77
STA. = 10+67.56
O/S = 18.81' LT



BENCHMARK 3
N 1064505.359
E 897488.773
TOP BOLT
ELEV. = 487.97
STA. = 60+90.54 (CABOT DRIVE)
O/S = 20.36' LT

COORDINATE POINTS

SHEET NO.	STATION	LOCATION	NORTHING (FEET)	EASTING (FEET)	DESCRIPTION
1	10+00.00	ASHBROOK DRIVE	1062118.16	896299.60	POT
1	10+25.66	ASHBROOK DRIVE	1062143.77	896301.27	BEGIN CONSTRUCTION
1	11+01.05	ASHBROOK DRIVE	1062219.00	896306.18	PC
1	11+41.56	ASHBROOK DRIVE	1062259.42	896308.81	PI
1	11+80.19	ASHBROOK DRIVE	1062295.68	896290.74	PT
1	16+58.33	ASHBROOK DRIVE	1062723.60	896077.40	PC
2	20+51.14	ASHBROOK DRIVE	1063075.14	895902.14	PI
2	24+05.52	ASHBROOK DRIVE	1063450.41	896018.21	PT
2	24+33.32	ASHBROOK DRIVE	1063476.97	896026.42	PC
2	25+41.89	ASHBROOK DRIVE	1063580.69	896058.50	PI
2	26+49.23	ASHBROOK DRIVE	1063672.66	896116.20	PT
2	26+73.89	ASHBROOK DRIVE	1063693.55	896129.31	PC
3	30+70.32	ASHBROOK DRIVE	1064029.35	896339.99	PI
3	34+28.73	ASHBROOK DRIVE	1064129.59	896723.54	PT
3	35+90.42	ASHBROOK DRIVE	1064170.47	896879.97	PC
3	39+46.19	ASHBROOK DRIVE	1064260.42	897224.18	PI
4	42+73.50	ASHBROOK DRIVE	1064548.90	897432.39	PT
4	42+90.40	ASHBROOK DRIVE	1064562.60	897442.28	END CONSTRUCTION
4	43+07.29	ASHBROOK DRIVE	1064576.30	897452.17	POT
4	60+00.00	CABOT DRIVE	1064501.26	897395.75	BEGIN CONSTRUCTION
4	60+83.25	CABOT DRIVE	1064486.70	897477.72	PC
4	62+11.40	CABOT DRIVE	1064464.30	897603.90	PI
4	63+32.94	CABOT DRIVE	1064378.79	897699.34	PT
4	63+58.94	CABOT DRIVE	1064361.44	897718.71	END CONSTRUCTION
4	63+89.55	CABOT DRIVE	1064341.02	897741.50	POT

MISSOURI COORDINATE SYSTEM AND ELEVATION:
COORDINATES SHOWN HAVE BEEN DERIVED FROM GPS OBSERVATION USING THE MISSOURI DEPARTMENT OF TRANSPORTATION'S GNSS/GPS VRS NETWORK, WGS 84, NAVD88
ELEVATION ARE ON USGS DATUM.

THE ST. LOUIS COUNTY BENCHMARK USED FOR THIS PROJECT IS BENCHMARK NUMBER 10052 NAVD88(SLC2011a) ELEV. = 453.54 FtUS "L" ON SOUTHEAST CORNER OF THE SOUTH HEADWALL OF BRIDGE #159 ON CHAMBERS ROAD; SOUTH OF CHAMBERS ROAD AND 150' EAST OF FONDA DRIVE.

STATE OF MISSOURI
DAVID R. RIECHMANN
NUMBER
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PROFESSIONAL ENGINEER
6-11-18

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DATE PREPARED	6/12/2018
ROUTE	STATE MO
DISTRICT SL	SHEET NO. 7
COUNTY	ST. LOUIS
JOB NO.	1608900
MSD BASEMAP	10F, 11F
FEDERAL PROJECT NO.	STP-5422(619)
MSD NUMBER	18MSD-00033

DESCRIPTION

DATE

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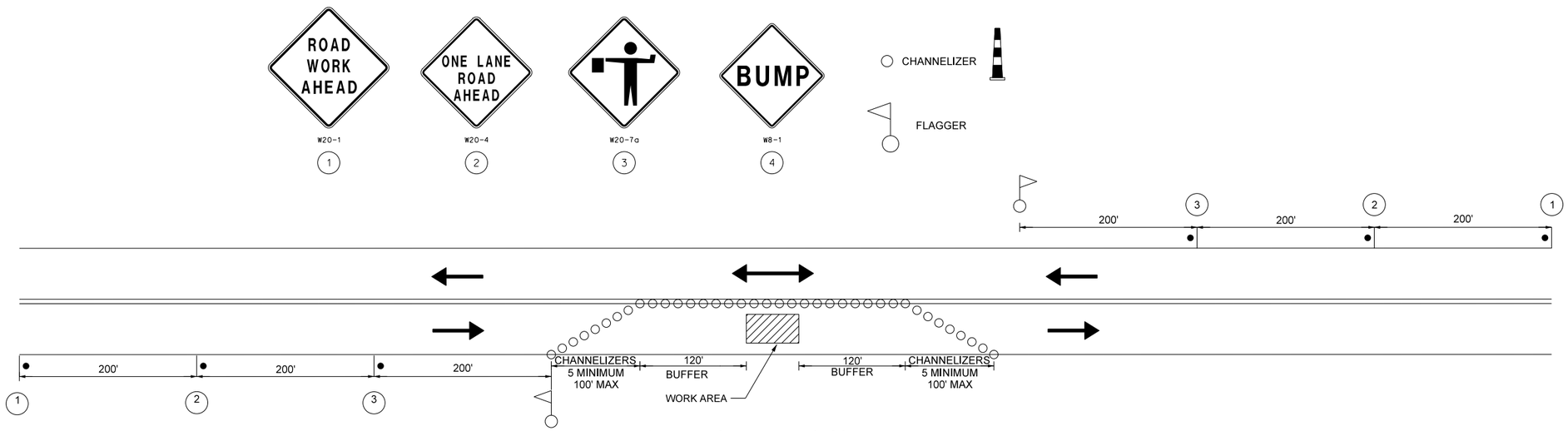
ASHBROOK DRIVE

REFERENCE POINTS
COORDINATE POINTS
SHEET 1 OF 1

REV.



TYPICAL TEMPORARY LANE CLOSURE DETAIL

NOTES:

1) DO NOT SCALE DRAWING. FOLLOW DIMENSIONS.

2) ACCESS MUST BE PROVIDED TO ALL SIDE STREETS AT ALL TIMES.

3) THE CONTRACTOR SHALL MAINTAIN ACCESS TO PRIVATE DRIVEWAYS AND/OR FIELD ENTRANCES. IF TEMPORARY CLOSURES OF PRIVATE DRIVES ARE REQUIRED, 24 HOUR NOTICE SHALL BE PROVIDED TO THE CITY DIRECTOR OF PUBLIC WORKS.

4) ANY REQUIRED TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).

5) ALL LANES MUST REMAIN OPEN OVERNIGHT AND WHEN WORK IS NOT IN PROGRESS. A MINIMUM ONE LANE OF TRAFFIC SHALL REMAIN OPEN AT ALL TIMES DURING CONSTRUCTION EXCEPT AT BRIDGE LOCATIONS.

6) THE BUFFER SPACE SHOULD BE EXTENDED SO THAT TRAFFIC TAPER IS PLACED BEFORE A HORIZONTAL (OR CREST VERTICAL) CURVE TO PROVIDE ADEQUATE SIGHT DISTANCE FOR THE FLAGGER AND A QUEUE OF STOPPED VEHICLES.

7) IF THE EXISTING PAVEMENT MARKINGS ARE REMOVED, THE CONTRACTOR SHALL PROVIDE TEMPORARY PAVEMENT MARKINGS AT THE END OF EACH DAY'S WORK. THE TEMPORARY MARKINGS SHALL BE MAINTAINED BY THE CONTRACTOR UNTIL THE PERMANENT MARKINGS ARE INSTALLED. THE COST OF SUCH PAVEMENT MARKINGS AND ASSOCIATED LABOR SHALL BE BORNE BY THE CONTRACTOR AND SHALL BE INCLUDED IN THE PRICE FOR OTHER WORK. NO DIRECT PAYMENT FOR SUCH PAVEMENT MARKINGS WILL BE MADE.

8) ONCE THE EXISTING PAVEMENT IS REMOVED/MILLED, THE CONTRACTOR SHALL INSTALL THE ASPHALT OVERLAY OR RESTORE A SMOOTH DRIVING SURFACE WITHIN FOURTEEN CALENDAR DAYS.

9) THE CONTRACTOR WILL DETERMINE THE OPTIMUM LENGTH OF WORK ZONES/ AREAS AS CONSTRUCTION PROGRESSES. THE LENGTH OF WORK ZONES/AREAS WILL VARY AS REQUIRED TO MINIMIZE DISRUPTION TO ROAD TRAFFIC WHILE MAXIMIZING THE PROGRESS OF CONSTRUCTION.

10) THE CONTRACTOR SHALL HAVE THE DAY TO DAY RESPONSIBILITY FOR TRAFFIC CONTROL IN WORK ZONE AREAS, AND SHALL PROVIDE ADDITIONAL TRAFFIC CONTROL MEASURES AS THEY DEEM APPROPRIATE TO PROVIDE FOR SAFE TRAFFIC CONTROL AND RELATED CONSTRUCTION OPERATIONS.

11) AT THE END OF EACH WORKING DAY, THE CONTRACTOR SHALL PLACE A MINIMUM 2 FT LONG ASPHALT WEDGE TO TRANSITION MILLED SURFACE TO ORIGINAL SURFACE AT TRANSVERSE LOCATIONS TO THE CENTERLINE. PLACE BUMP SIGNS (NO. 4 SHOWN ABOVE) AT EACH WEDGE LOCATION. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO OTHER ITEMS.

SUMMARY OF APPROXIMATE QUANTITIES

DESCRIPTION	UNIT	QUANTITY (SF)	REMARKS
CHANNELIZING DEVICE	EACH	75	
CONSTRUCTION SIGNS	SF	124	

STATE OF MISSOURI
DAVID R. RIECHMANN
NUMBER
PE-2011000948
PROFESSIONAL ENGINEER
6-11-18

NAME:	DAVID R. RIECHMANN
DISCIPLINE:	ENGINEER
LICENSE NO.	PE-2011000948
EXPIRATION DATE:	12-31-19

DATE PREPARED: 6/12/2018

ROUTE	STATE
	MO
DISTRICT	SHEET NO.
SL	8

COUNTY: ST. LOUIS

JOB NO.: 1608900

MSD BASEMAP: 10F, 11F

FEDERAL PROJECT NO.: STP-5422(619)

MSD NUMBER: 18MSD-00033

DATE	DESCRIPTION

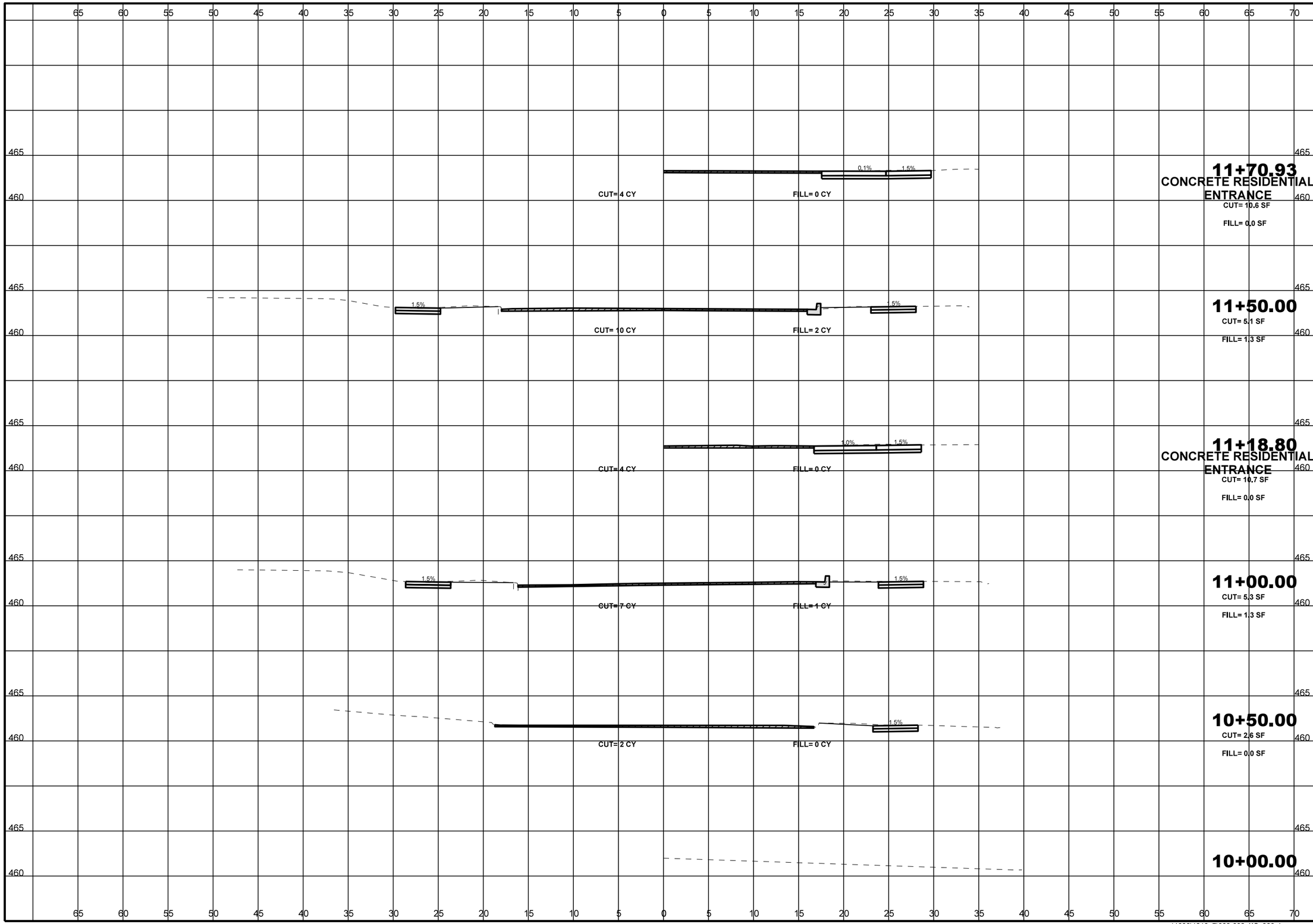
Bellefontaine Neighbors

HORNER SHIFRIN
THE POWER HOUSE AT UNION STATION
401 S. 18th St., Ste. 400
ST. LOUIS, MO 63103-2296
314-531-4321 FAX: 314-531-6966
www.HornerShifrin.com
Certificate of Authority: 000159
Expiration Date: December 31, 2018

ASHBROOK DRIVE

TRAFFIC CONTROL
SHEET 1 OF 1

REV.



STATE OF MISSOURI
DAVID R. RIECHMANN
NUMBER
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ROUTE	STATE
	MO
DISTRICT	SHEET NO.
SL	9

COUNTY
ST. LOUIS

JOB NO.
1608900

MSD BASEMAP
10F, 11F

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STP-5422(619)

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ASHBROOK DRIVE

CROSS SECTIONS
SHEET 1 OF 26

REV.

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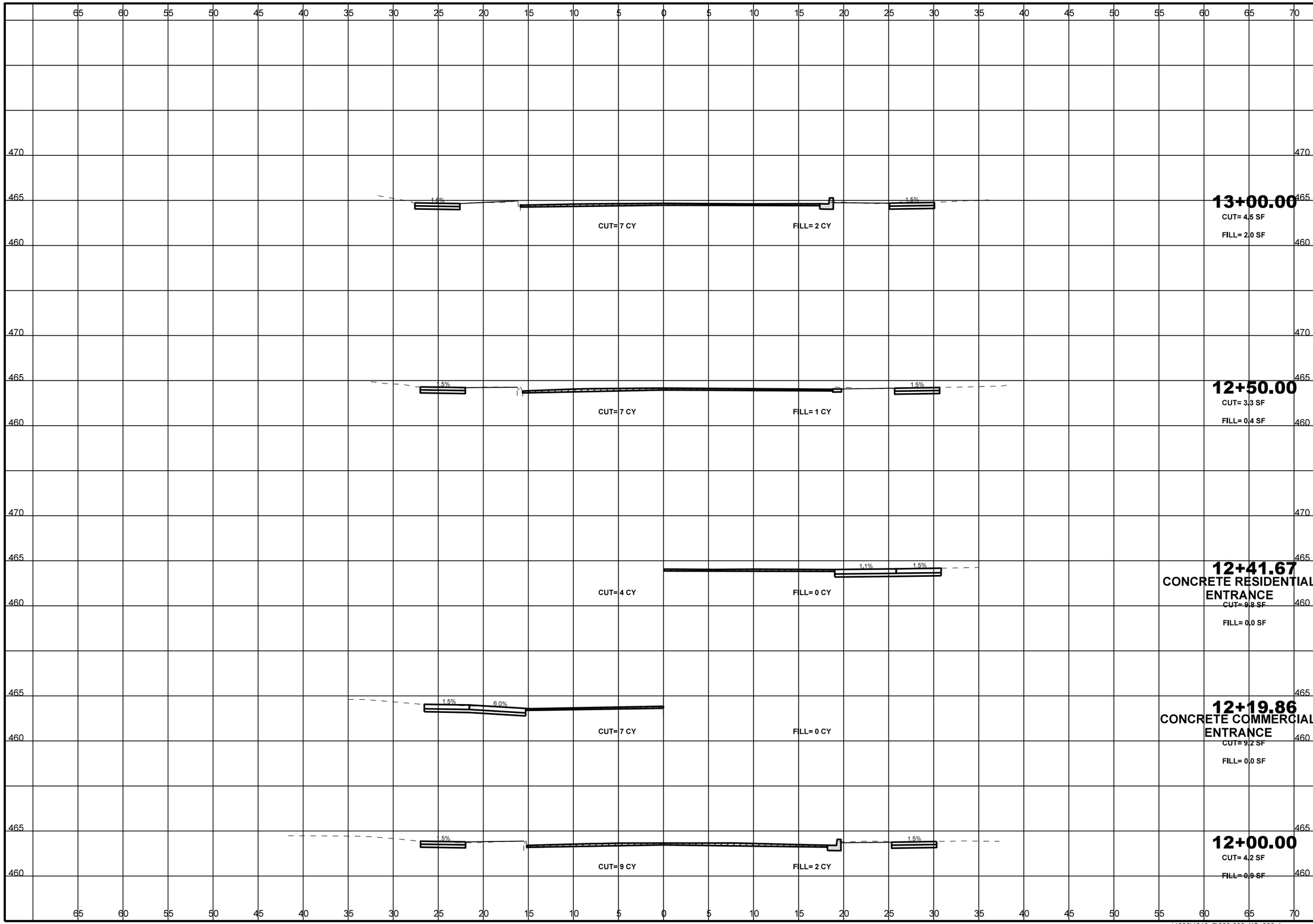

STATE OF MISSOURI
DAVID R. RIECHMANN
NUMBER
PE-2011000948
PROFESSIONAL ENGINEER

NAME:	DAVID R. RIECHMANN
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ROUTE	STATE
	MO
DISTRICT	SHEET NO.
SL	10

COUNTY
ST. LOUIS

JOB NO.
1608900

MSD BASEMAP
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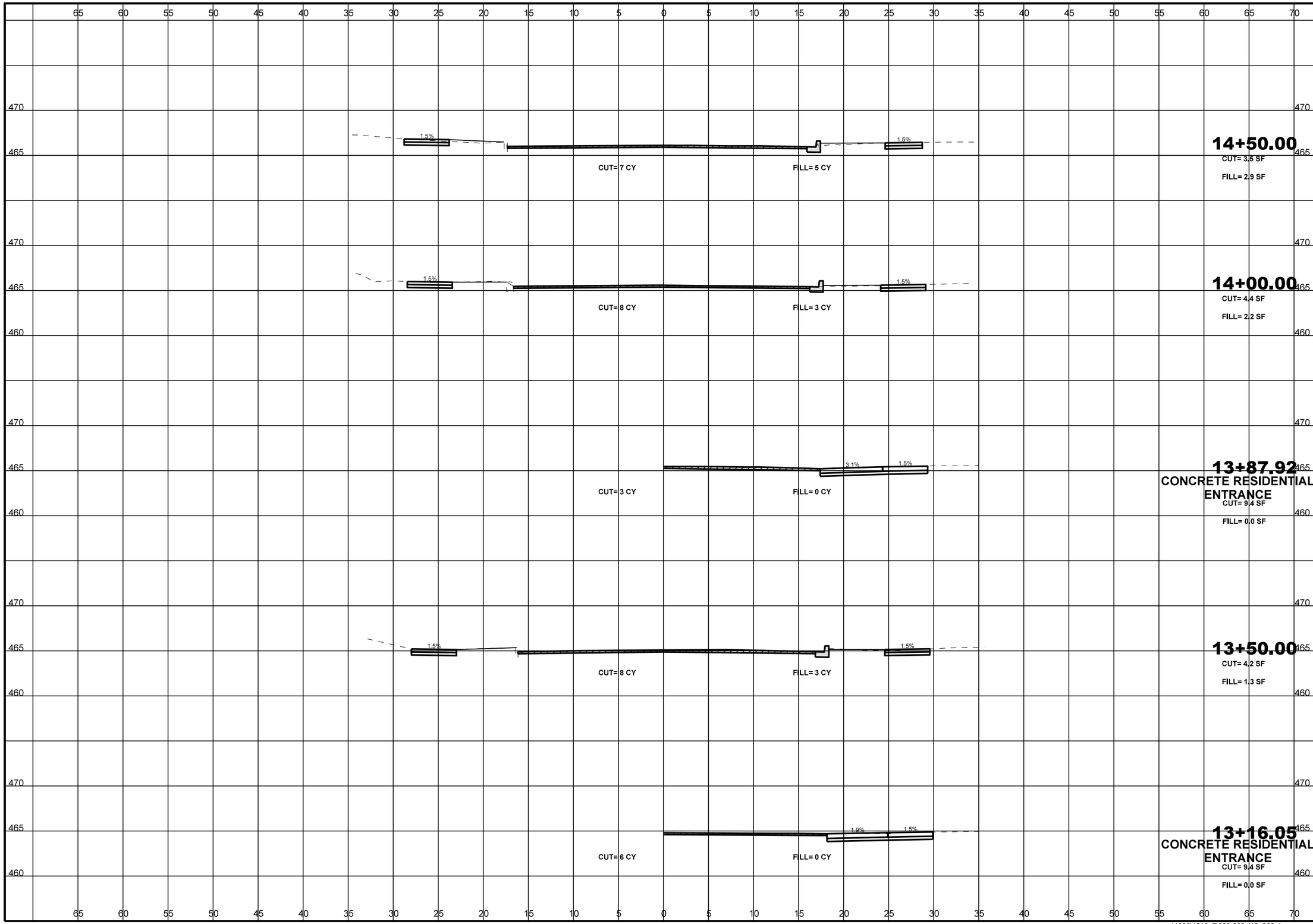
ASHBROOK DRIVE

CROSS SECTIONS
SHEET 2 OF 26

REV.



STATE OF MISSOURI
DAVID R. RIECHMANN
NUMBER
PE-2011000948
PROFESSIONAL ENGINEER
6-11-18

NAME:	DAVID R. RIECHMANN
DISCIPLINE:	ENGINEER
LICENSE NO.	PE-2011000948
EXPIRATION DATE:	12-31-19

DATE PREPARED	6/12/2018
ROUTE	STATE MO
DISTRICT SL	SHEET NO. 11
COUNTY	ST. LOUIS
JOB NO.	1608900
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ASHBROOK DRIVE

CROSS SECTIONS
SHEET 3 OF 26

REV.

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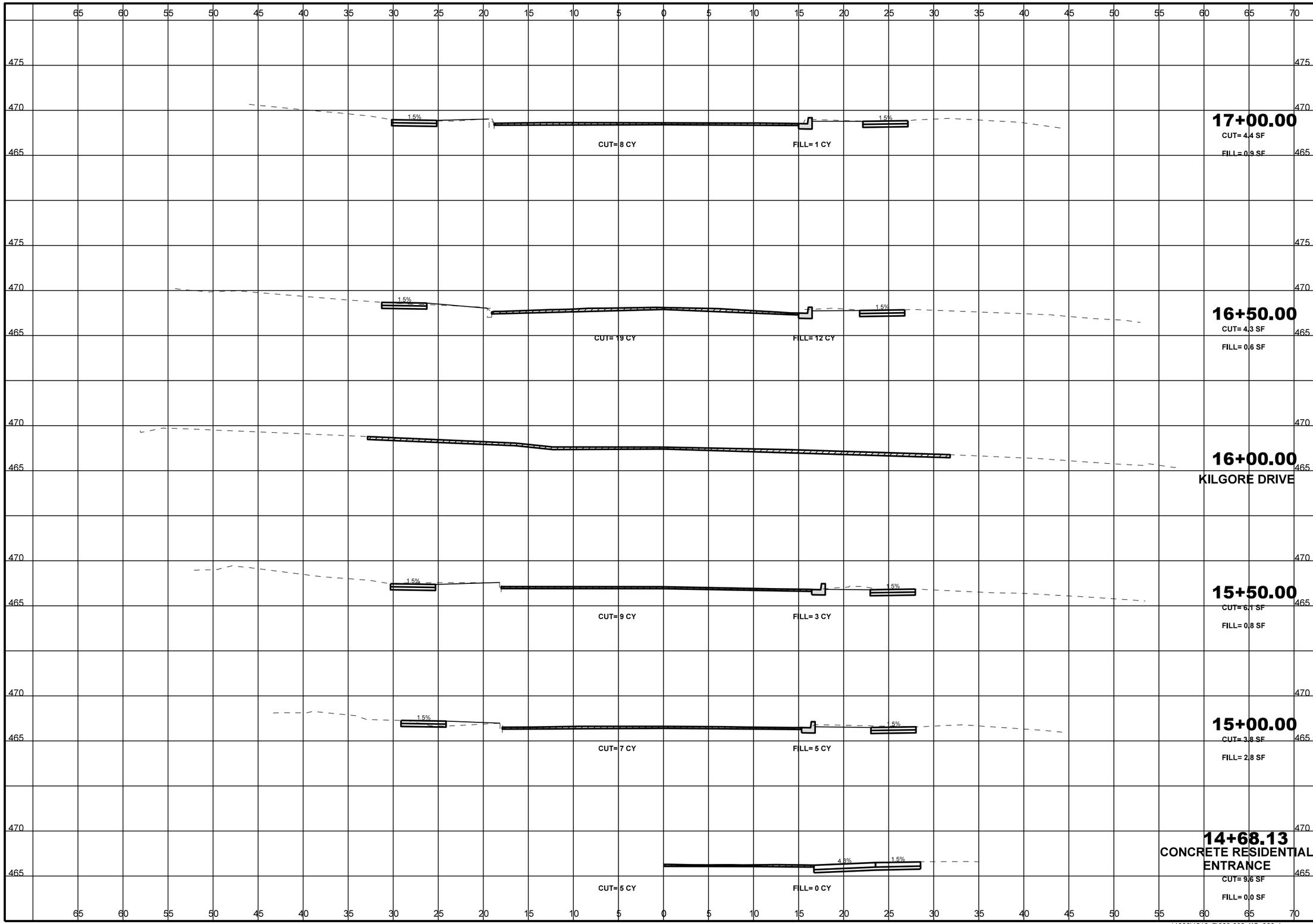

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ROUTE	STATE
	MO
DISTRICT	SHEET NO.
SL	12

COUNTY
ST. LOUIS

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ASHBROOK DRIVE

CROSS SECTIONS
SHEET 4 OF 26

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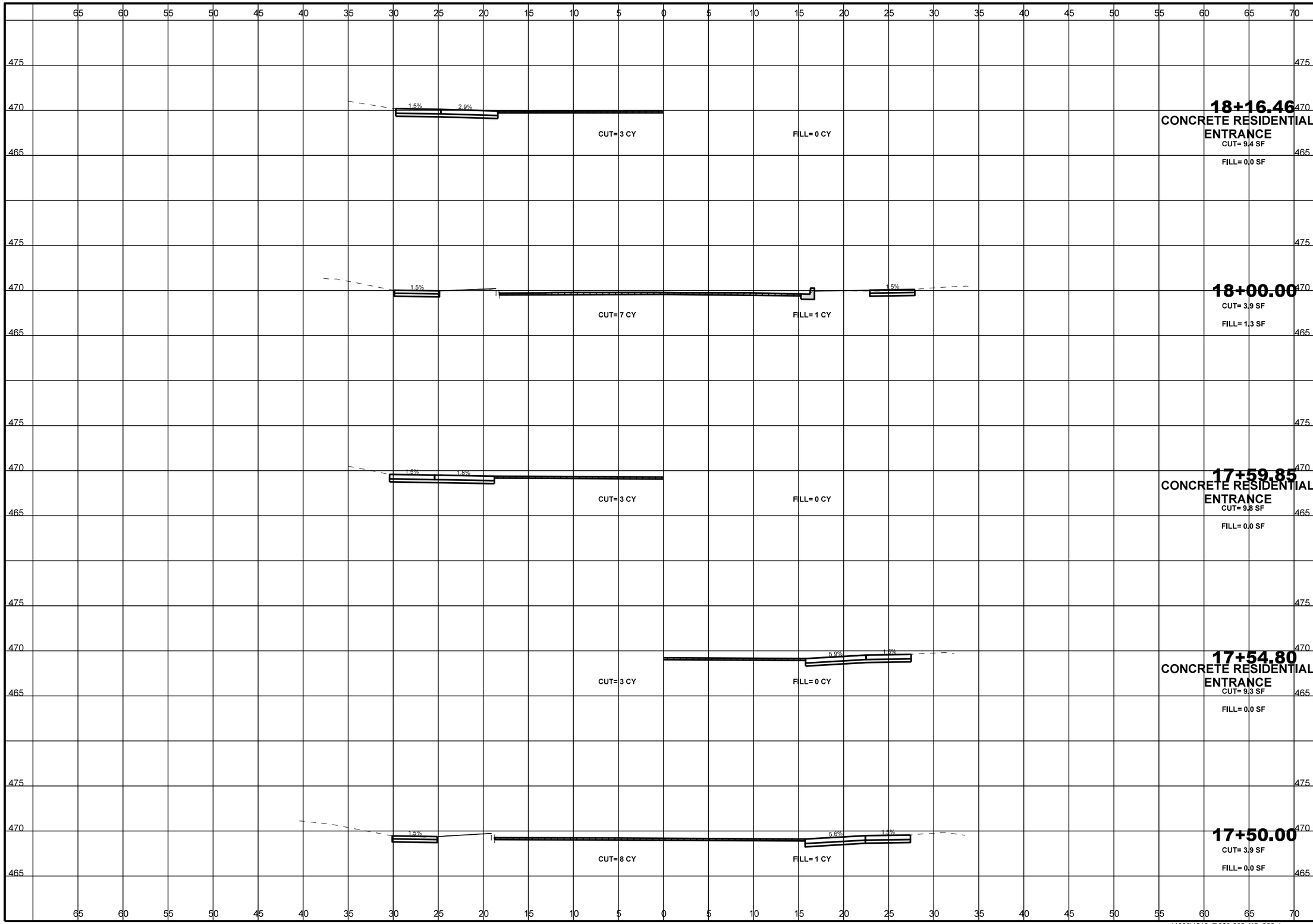

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ROUTE	STATE
	MO
DISTRICT	SHEET NO.
SL	13

COUNTY
ST. LOUIS

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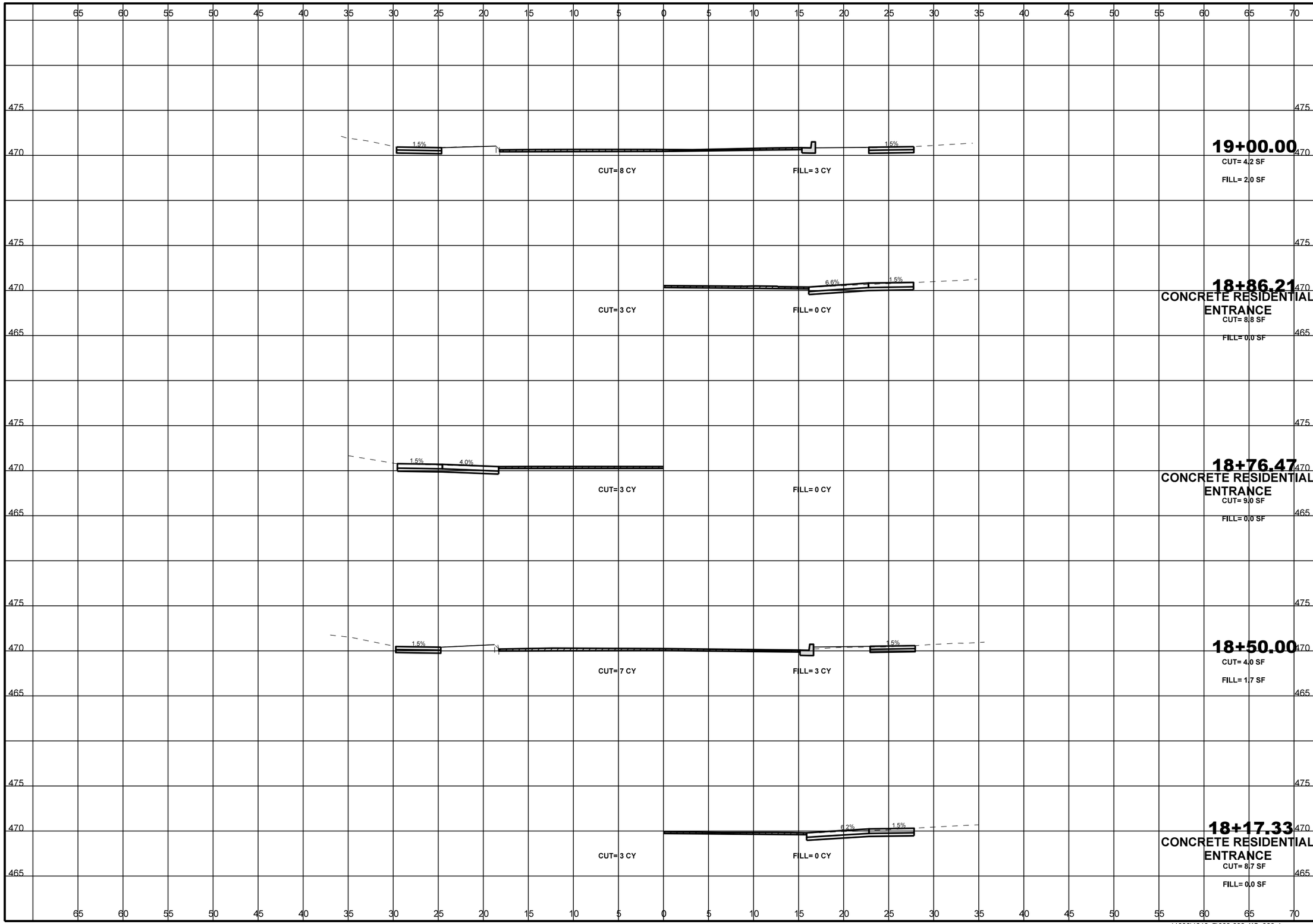
ASHBROOK DRIVE

CROSS SECTIONS
SHEET 5 OF 26

REV.



STATE OF MISSOURI
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ROUTE	STATE
	MO
DISTRICT	SHEET NO.
SL	14

COUNTY
ST. LOUIS

JOB NO.
1608900

MSD BASEMAP
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STP-5422(619)

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Bellefontaine Neighbors

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ASHBROOK DRIVE

CROSS SECTIONS
SHEET 6 OF 26

REV.

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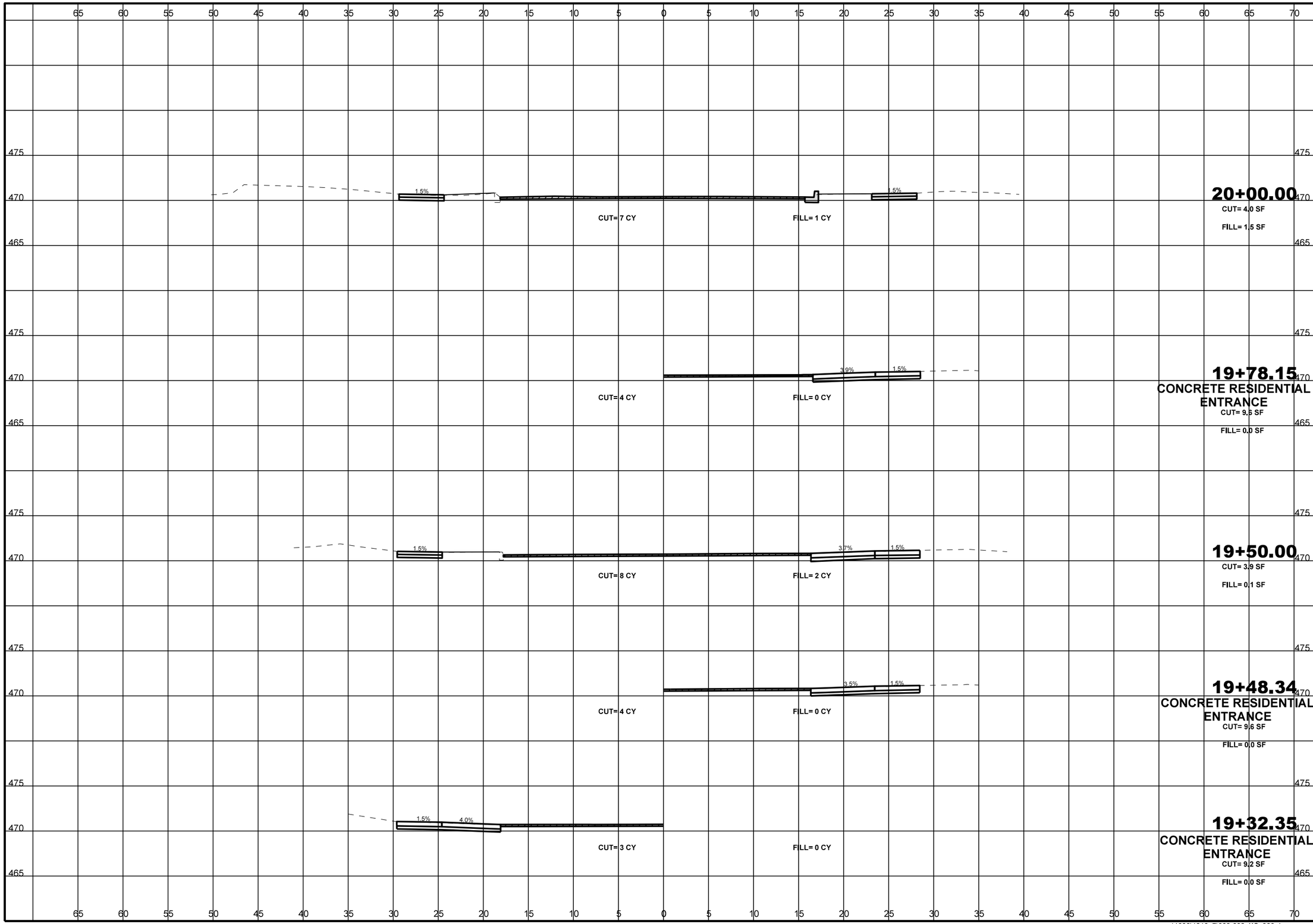

STATE OF MISSOURI
DAVID R. RIECHMANN
NUMBER
PE-2011000948
PROFESSIONAL ENGINEER
6-11-18

NAME:	DAVID R. RIECHMANN
DISCIPLINE:	ENGINEER
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EXPIRATION DATE:	12-31-19

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ROUTE	STATE
	MO
DISTRICT	SHEET NO.
SL	15

COUNTY
ST. LOUIS

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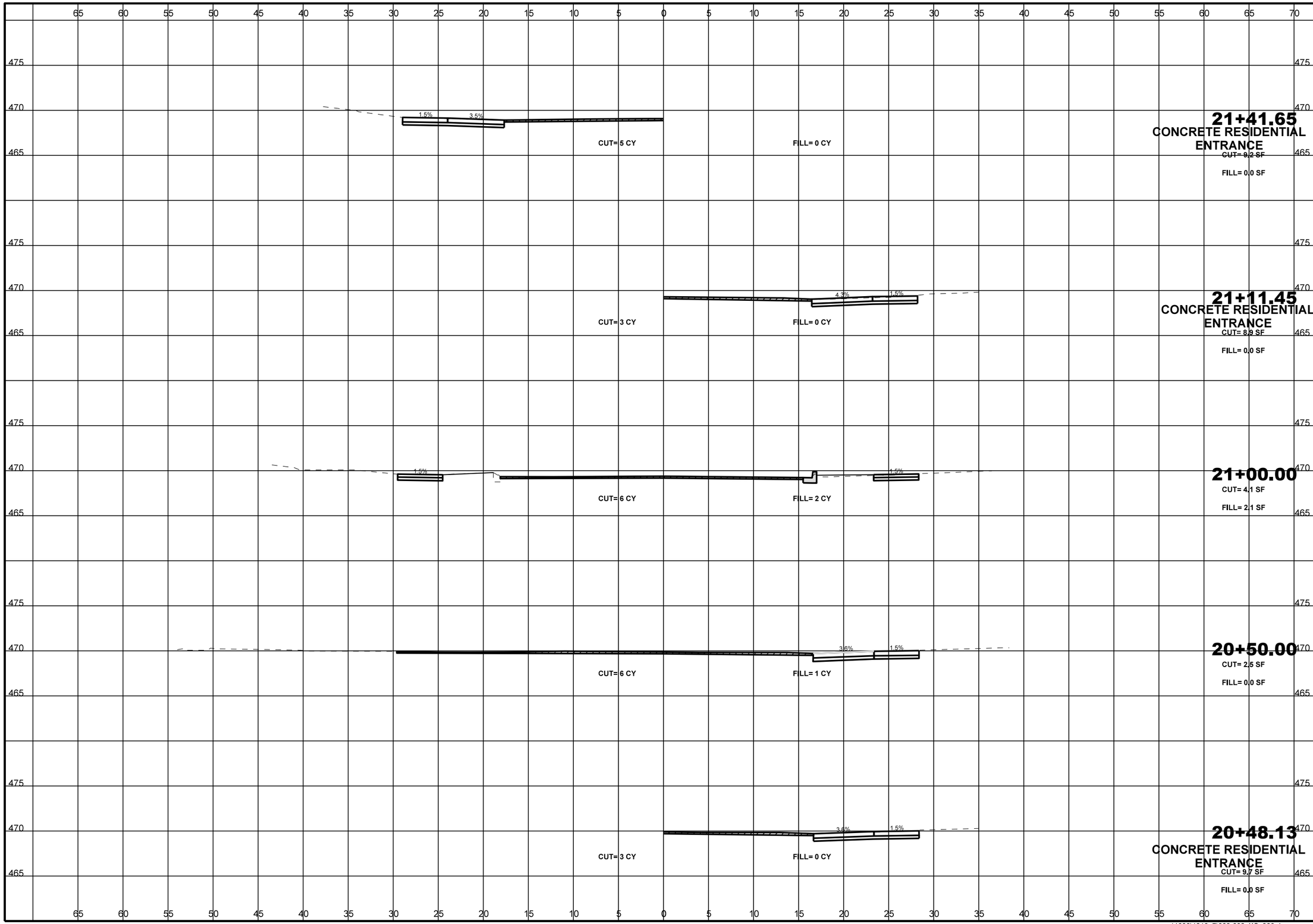
ASHBROOK DRIVE

CROSS SECTIONS
SHEET 7 OF 26

REV.



STATE OF MISSOURI
DAVID R. RIECHMANN
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NAME:	DAVID R. RIECHMANN
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ROUTE	STATE
	MO
DISTRICT	SHEET NO.
SL	16

COUNTY
ST. LOUIS

JOB NO.
1608900

MSD BASEMAP
10F, 11F

FEDERAL PROJECT NO.
STP-5422(619)

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DATE

Bellefontaine Neighbors

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THE POWER HOUSE AT UNION STATION
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ST. LOUIS, MO 63103-2296
314-531-4321 FAX: 314-531-6966
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ASHBROOK DRIVE

CROSS SECTIONS
SHEET 8 OF 26

REV.

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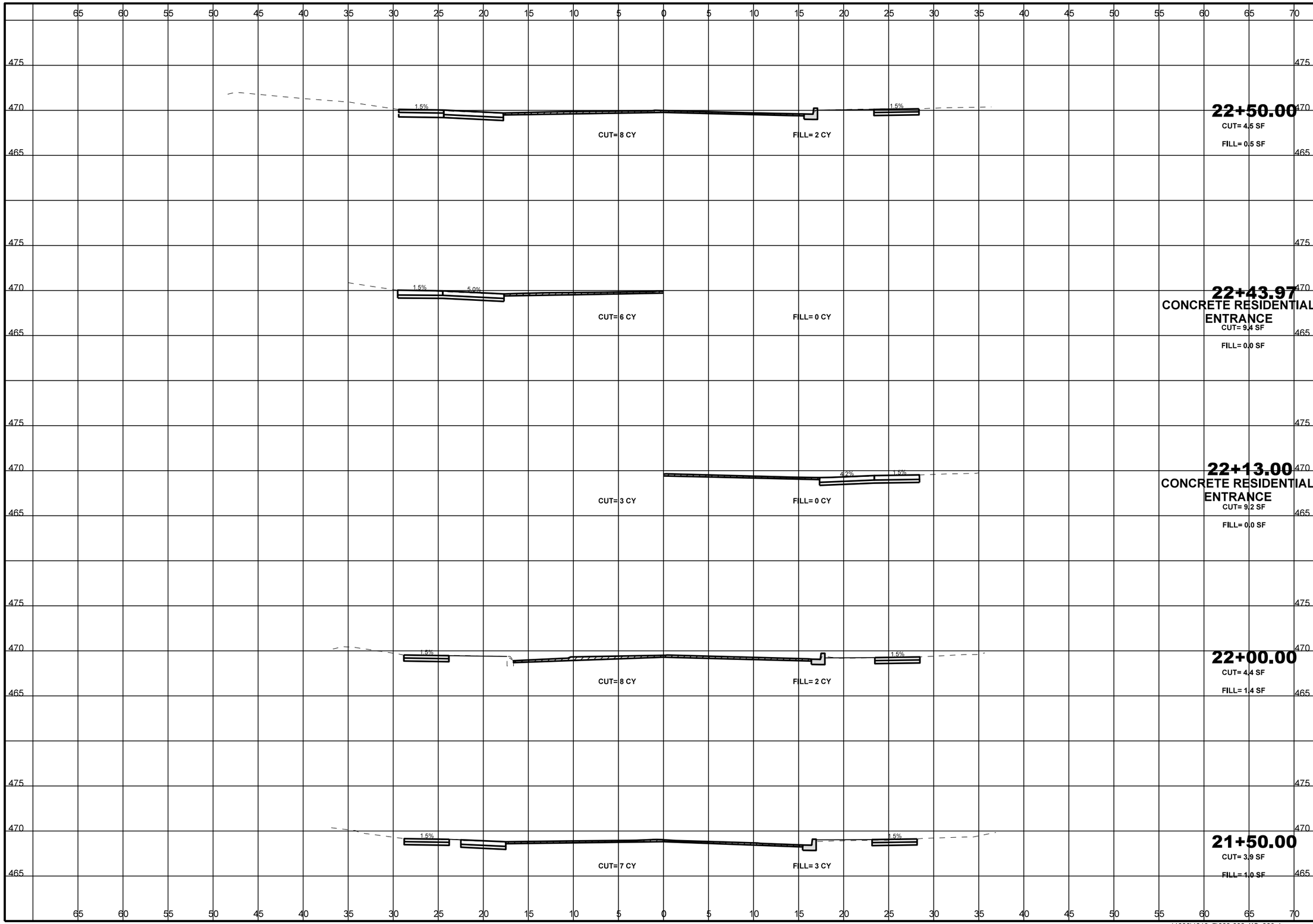

STATE OF MISSOURI
DAVID R. RIECHMANN
NUMBER
PE-2011000948
PROFESSIONAL ENGINEER

NAME:	DAVID R. RIECHMANN
DISCIPLINE:	ENGINEER
LICENSE NO.	PE-2011000948
EXPIRATION DATE:	12-31-19

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6/12/2018

ROUTE	STATE
	MO
DISTRICT	SHEET NO.
SL	17

COUNTY
ST. LOUIS

JOB NO.
1608900

MSD BASEMAP
10F, 11F

FEDERAL PROJECT NO.
STP-5422(619)

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Bellefontaine Neighbors

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THE POWER HOUSE AT UNION STATION
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ASHBROOK DRIVE

CROSS SECTIONS
SHEET 9 OF 26

REV.

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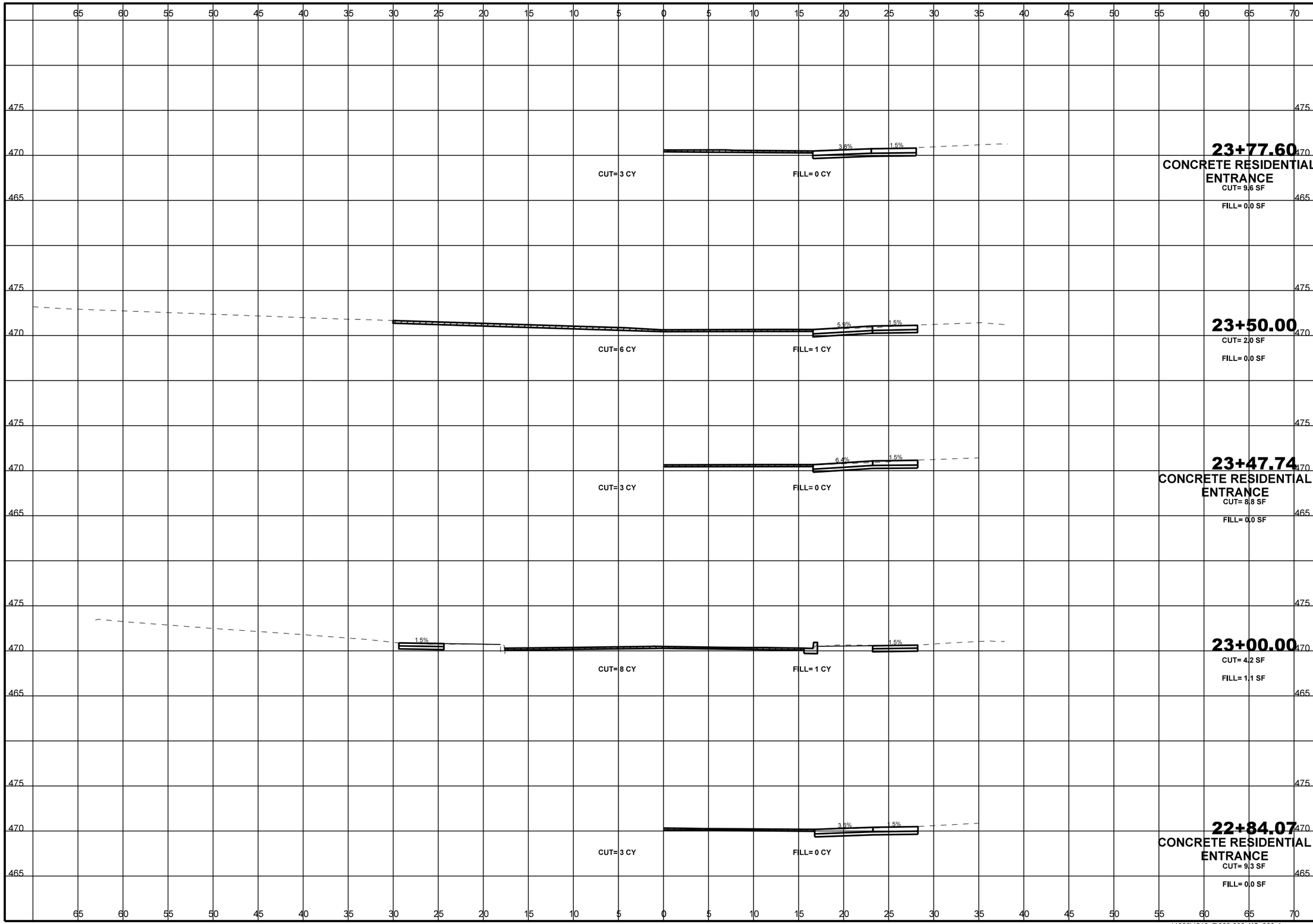

STATE OF MISSOURI
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ROUTE	STATE
	MO
DISTRICT	SHEET NO.
SL	18

COUNTY
ST. LOUIS

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10F, 11F

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ASHBROOK DRIVE

CROSS SECTIONS
SHEET 10 OF 26

REV.

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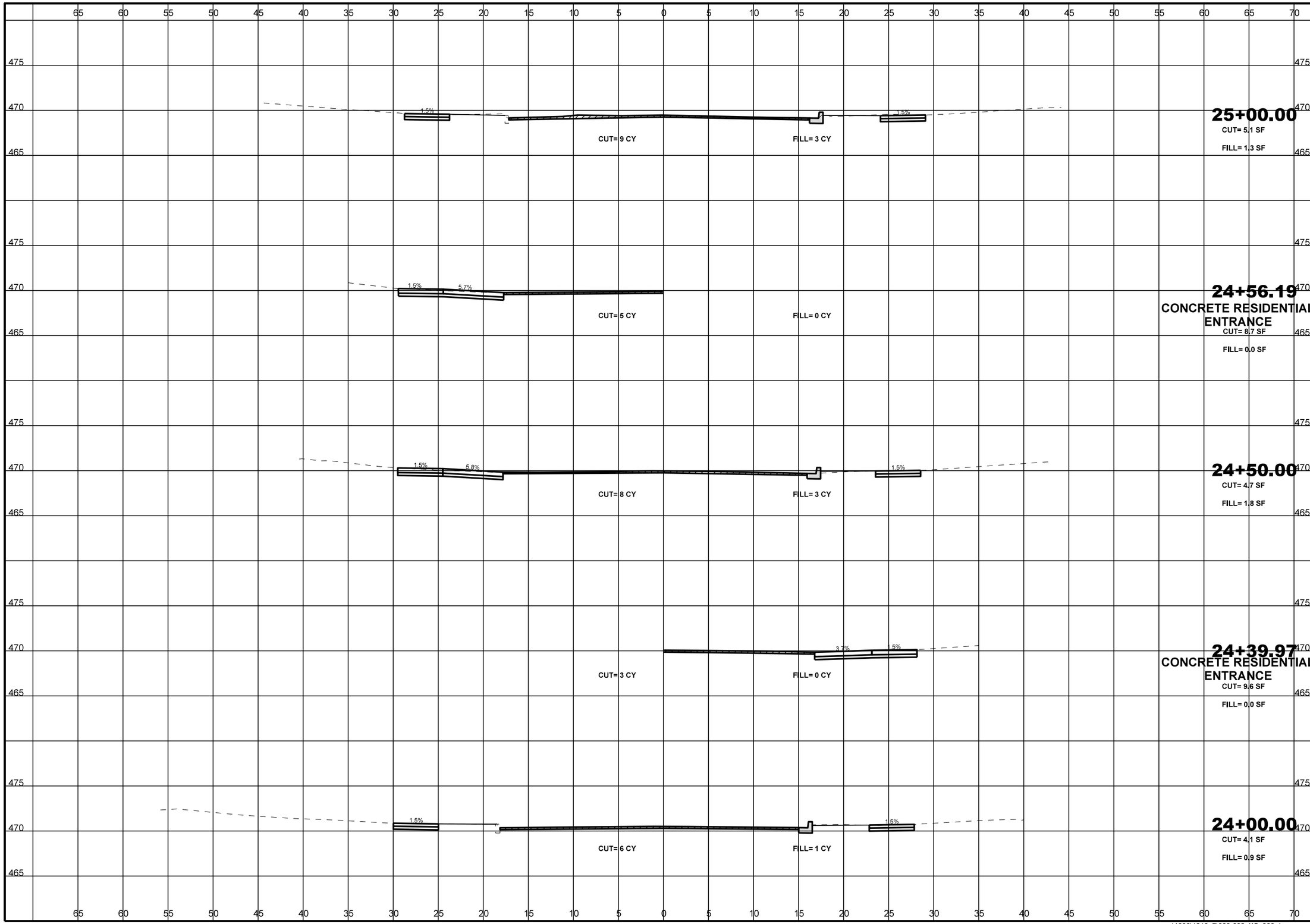

STATE OF MISSOURI
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ROUTE	STATE
	MO
DISTRICT	SHEET NO.
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COUNTY
ST. LOUIS

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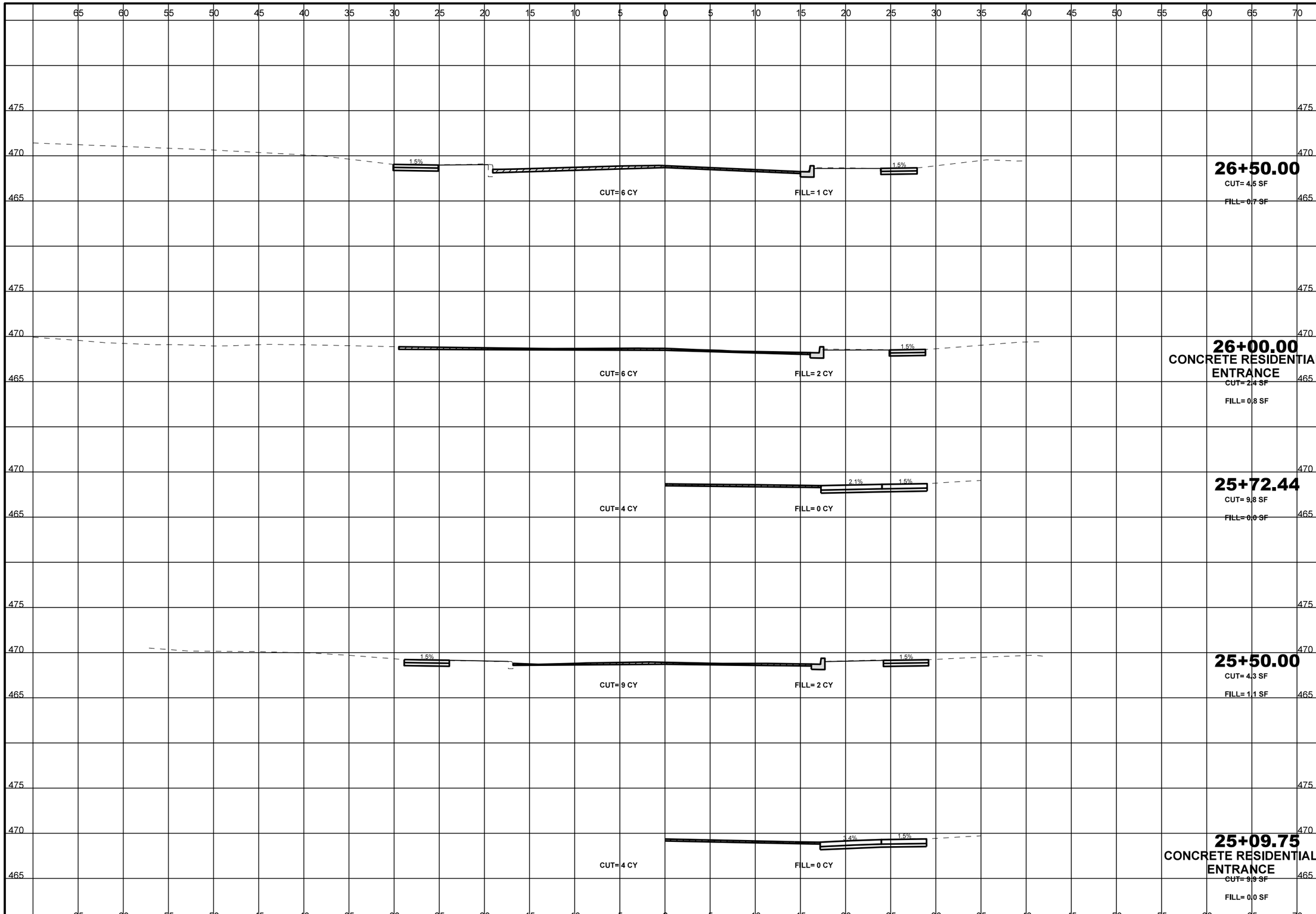
ASHBROOK DRIVE

CROSS SECTIONS
SHEET 11 OF 26

REV.



STATE OF MISSOURI
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ROUTE	STATE
	MO
DISTRICT	SHEET NO.
SL	20

COUNTY
ST. LOUIS

JOB NO.
1608900

MSD BASEMAP
10F, 11F

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STP-5422(619)

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ASHBROOK DRIVE

CROSS SECTIONS
SHEET 12 OF 26

REV.

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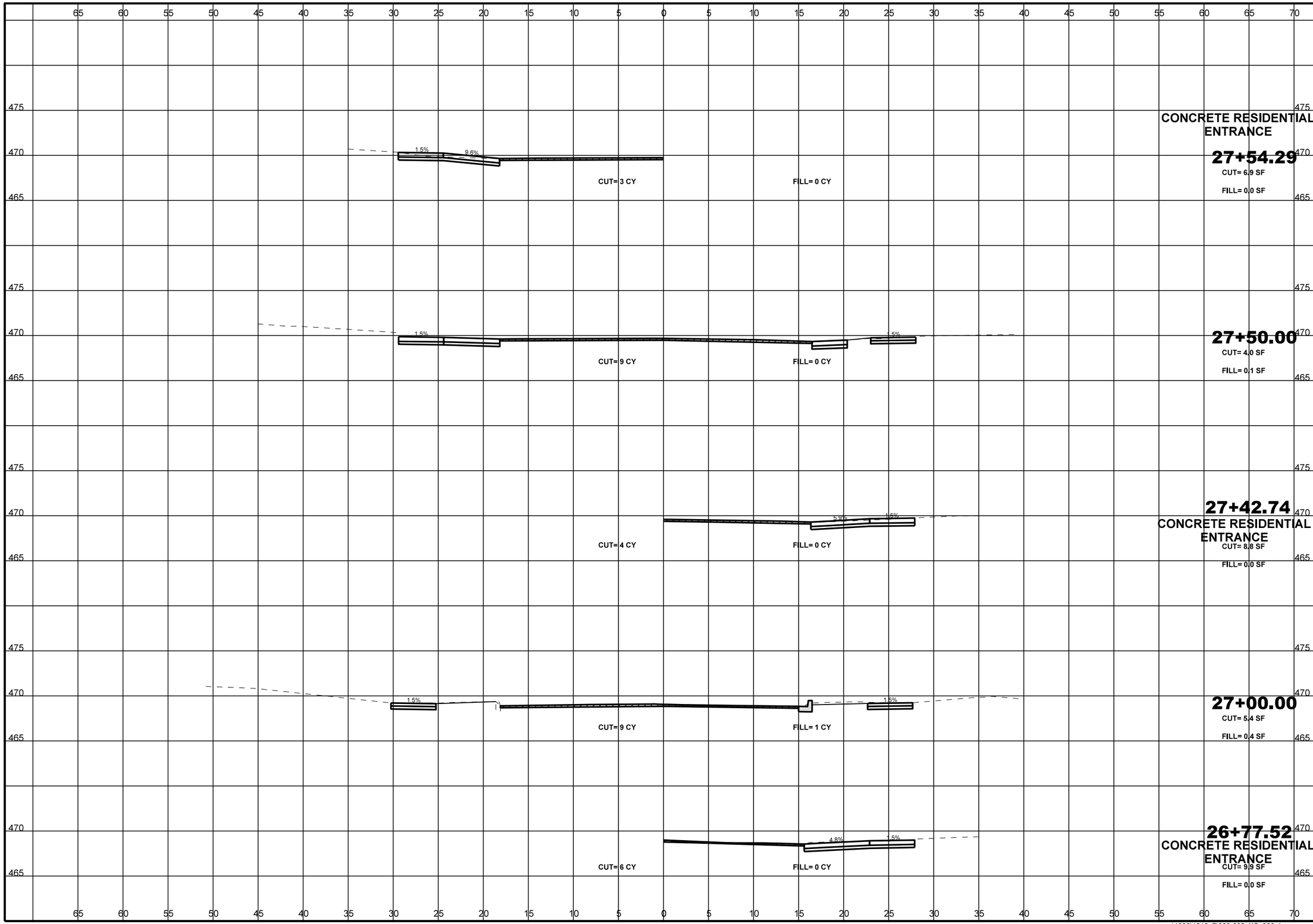

STATE OF MISSOURI
DAVID R. RIECHMANN
NUMBER
PE-2011000948
PROFESSIONAL ENGINEER
6-11-18

NAME:	DAVID R. RIECHMANN
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6/12/2018

ROUTE	STATE
	MO
DISTRICT	SHEET NO.
SL	21

COUNTY
ST. LOUIS

JOB NO.
1608900

MSD BASEMAP
10F, 11F

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Bellefontaine Neighbors

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ASHBROOK DRIVE

CROSS SECTIONS
SHEET 13 OF 26

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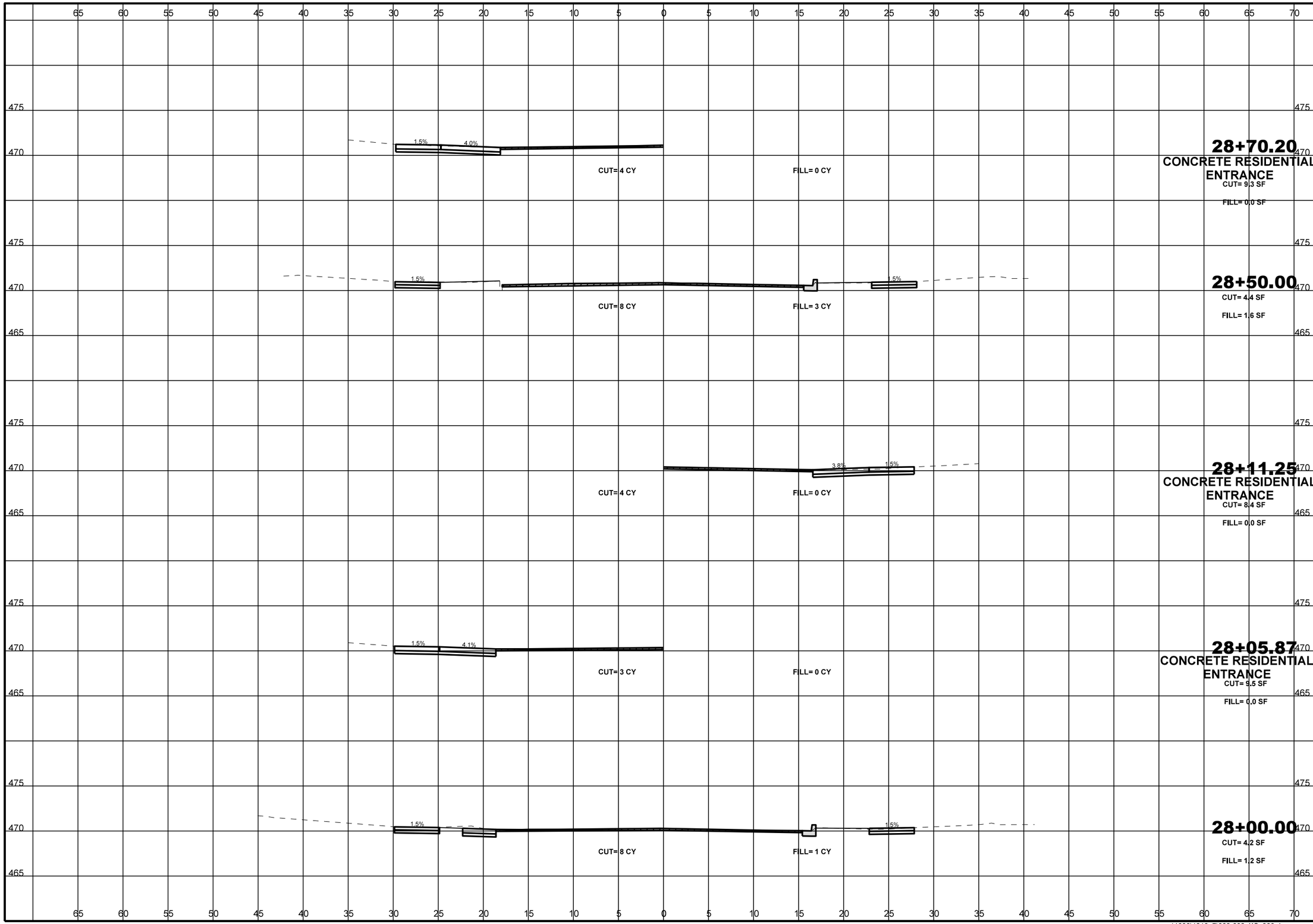

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COUNTY
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CROSS SECTIONS
SHEET 14 OF 26

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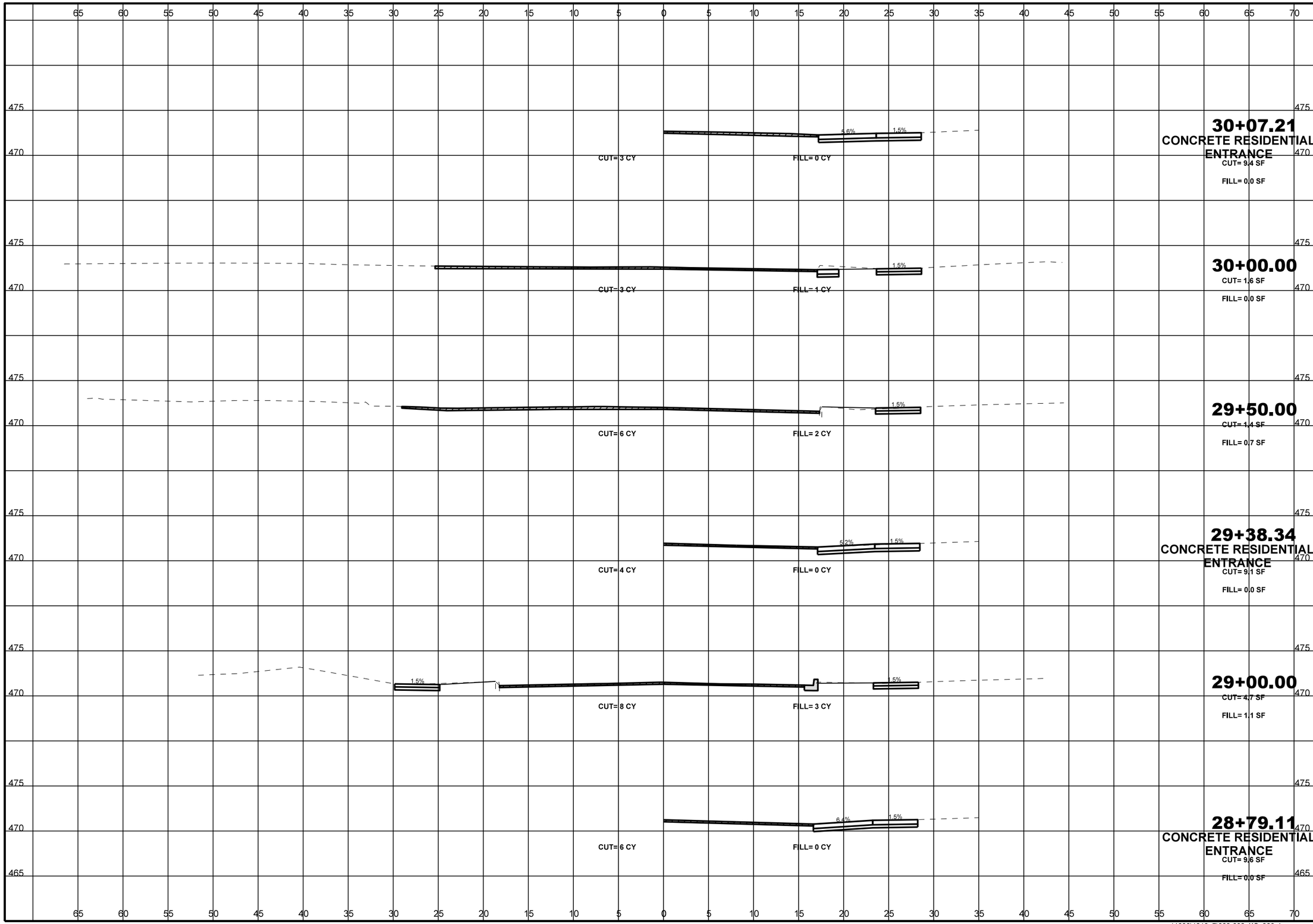

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DISCIPLINE:	ENGINEER
LICENSE NO.	PE-2011000948
EXPIRATION DATE:	12-31-19

DATE PREPARED
6/12/2018

ROUTE	STATE
	MO
DISTRICT	SHEET NO.
SL	23

COUNTY
ST. LOUIS

JOB NO.
1608900

MSD BASEMAP
10F, 11F

FEDERAL PROJECT NO.
STP-5422(619)

MSD NUMBER
18MSD-00033

DESCRIPTION

DATE

Bellefontaine Neighbors

HORNER SHIFRIN
THE POWER HOUSE AT UNION STATION
401 S. 18th St., Ste. 400
ST. LOUIS, MO 63103-2296
314-531-4321 FAX: 314-531-6966
www.HornerShifrin.com
Certificate of Authority: 000159
Expiration Date: December 31, 2018

ASHBROOK DRIVE

CROSS SECTIONS
SHEET 15 OF 26

REV.

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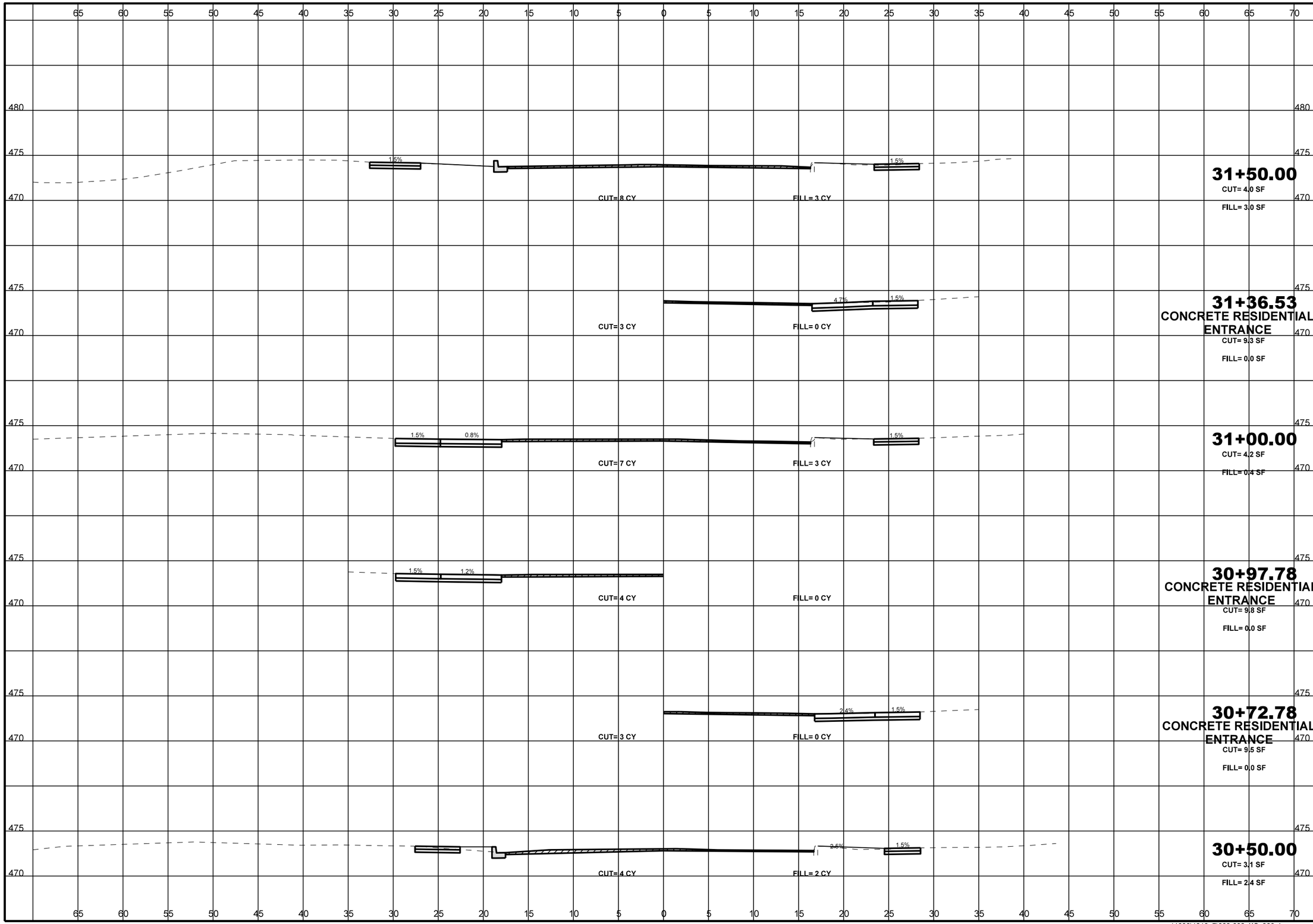

STATE OF MISSOURI
DAVID R. RIECHMANN
NUMBER
PE-2011000948
PROFESSIONAL ENGINEER

NAME:	DAVID R. RIECHMANN
DISCIPLINE:	ENGINEER
LICENSE NO.	PE-2011000948
EXPIRATION DATE:	12-31-19

DATE PREPARED
6/12/2018

ROUTE	STATE
	MO
DISTRICT	SHEET NO.
SL	24

COUNTY
ST. LOUIS

JOB NO.
1608900

MSD BASEMAP
10F, 11F

FEDERAL PROJECT NO.
STP-5422(619)

MSD NUMBER
18MSD-00033

DESCRIPTION

DATE

Bellefontaine Neighbors

HORNER SHIFRIN
THE POWER HOUSE AT UNION STATION
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ST. LOUIS, MO 63103-2296
314-531-4321 FAX: 314-531-6966
www.HornerShifrin.com
Certificate of Authority: 000159
Expiration Date: December 31, 2018

ASHBROOK DRIVE

CROSS SECTIONS
SHEET 16 OF 26

REV.

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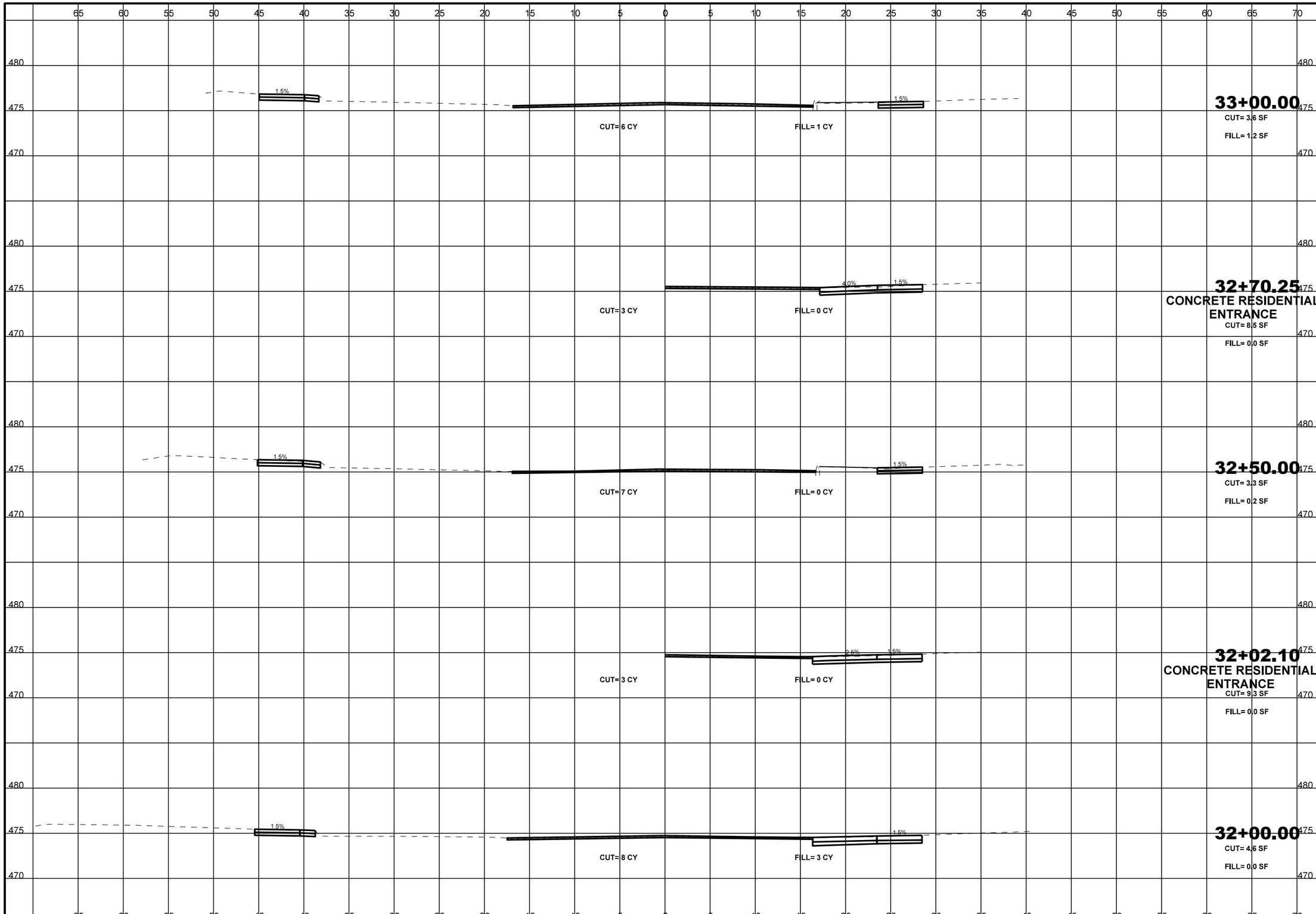

STATE OF MISSOURI
DAVID R. RIECHMANN
NUMBER PE-2011000948
PROFESSIONAL ENGINEER
6-11-18

NAME:	DAVID R. RIECHMANN
DISCIPLINE:	ENGINEER
LICENSE NO.	PE-2011000948
EXPIRATION DATE:	12-31-19

DATE PREPARED
6/12/2018

ROUTE	STATE
	MO
DISTRICT	SHEET NO.
SL	25

COUNTY
ST. LOUIS

JOB NO.
1608900

MSD BASEMAP
10F, 11F

FEDERAL PROJECT NO.
STP-5422(619)

MSD NUMBER
18MSD-00033

DESCRIPTION

DATE

Bellefontaine Neighbors

HORNER SHIFRIN
THE POWER HOUSE AT UNION STATION
401 S. 18th St., Ste. 400
ST. LOUIS, MO 63103-2296
314-531-4321 FAX: 314-531-6966
www.HornerShifrin.com
Certificate of Authority: 000159
Expiration Date: December 31, 2018

ASHBROOK DRIVE

CROSS SECTIONS
SHEET 17 OF 26

REV.

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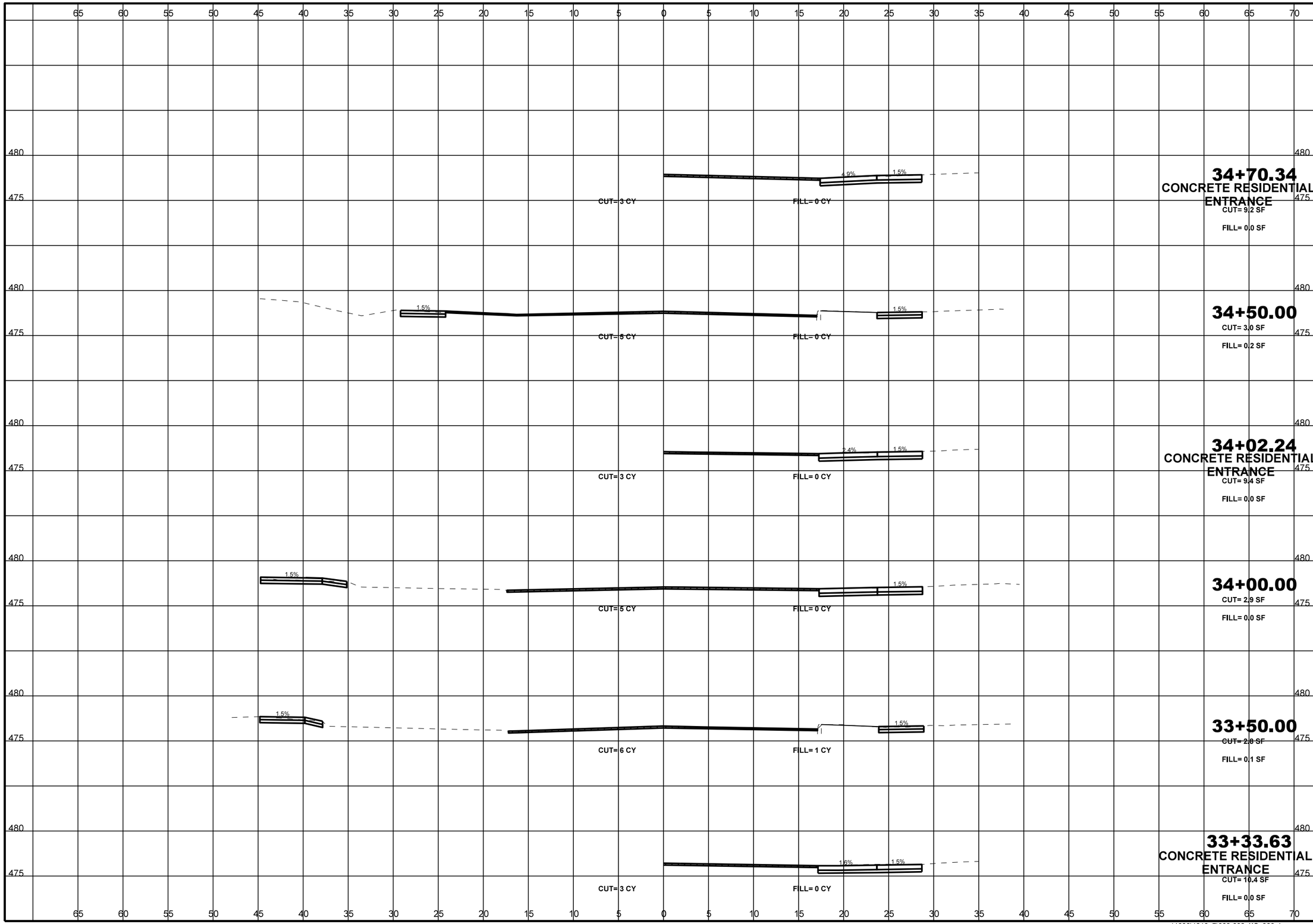

STATE OF MISSOURI
DAVID R. RIECHMANN
NUMBER
PE-2011000948
PROFESSIONAL ENGINEER

NAME:	DAVID R. RIECHMANN
DISCIPLINE:	ENGINEER
LICENSE NO.	PE-2011000948
EXPIRATION DATE:	12-31-19

DATE PREPARED
6/12/2018

ROUTE	STATE
	MO
DISTRICT	SHEET NO.
SL	26

COUNTY
ST. LOUIS

JOB NO.
1608900

MSD BASEMAP
10F, 11F

FEDERAL PROJECT NO.
STP-5422(619)

MSD NUMBER
18MSD-00033

DESCRIPTION

DATE

Bellefontaine Neighbors

HORNER SHIFRIN
THE POWER HOUSE AT UNION STATION
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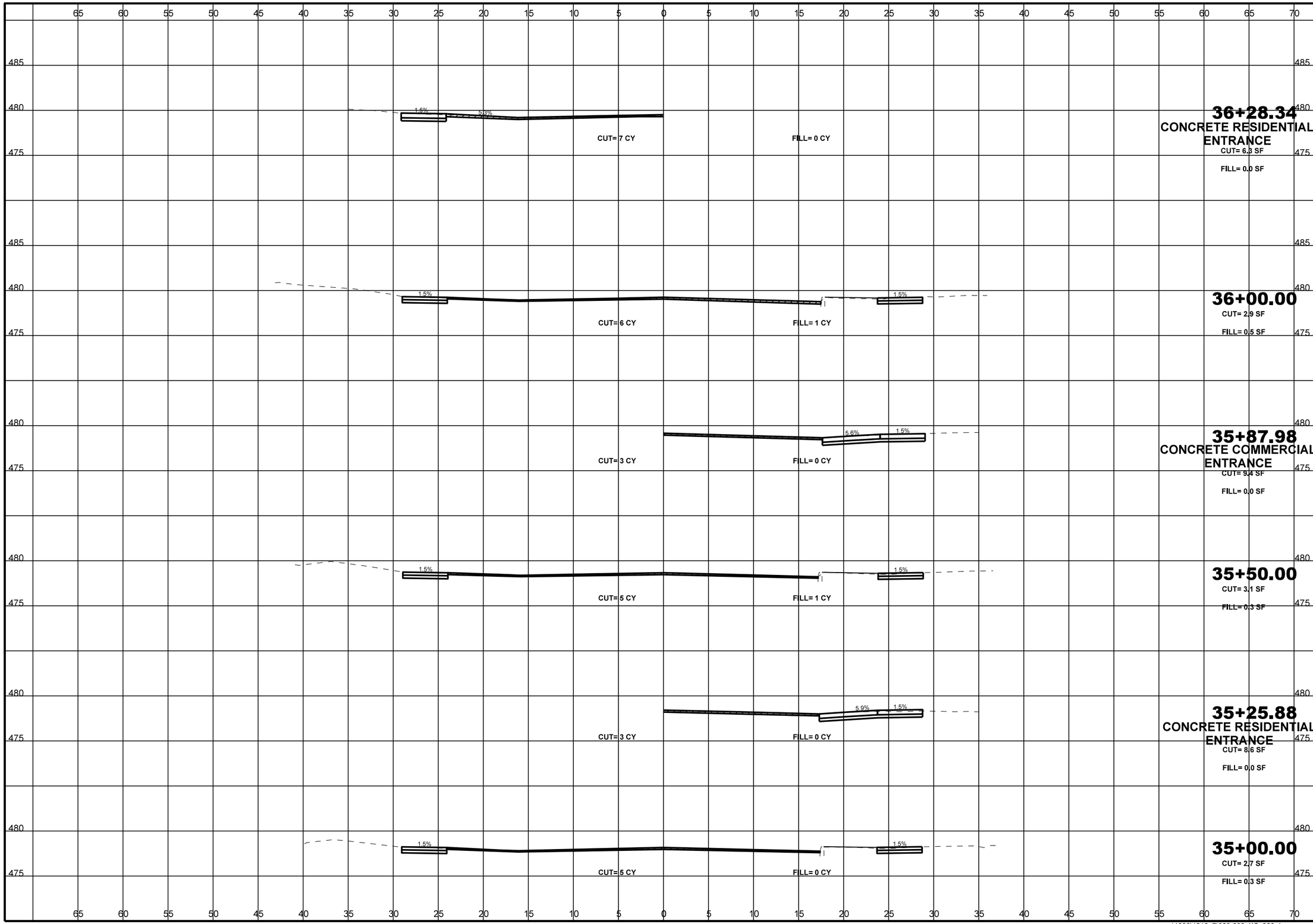
ST. LOUIS, MO 63103-2296
314-531-4321 FAX: 314-531-6966
www.HornerShifrin.com
Certificate of Authority: 000159
Expiration Date: December 31, 2018

ASHBROOK DRIVE

CROSS SECTIONS
SHEET 18 OF 26

REV.



STATE OF MISSOURI
DAVID R. RIECHMANN
NUMBER
PE-2011000948
PROFESSIONAL ENGINEER

6-11-18

NAME:	DAVID R. RIECHMANN
DISCIPLINE:	ENGINEER
LICENSE NO.	PE-2011000948
EXPIRATION DATE:	12-31-19

DATE PREPARED
6/12/2018

ROUTE	STATE
	MO
DISTRICT	SHEET NO.
SL	27

COUNTY
ST. LOUIS

JOB NO.
1608900

MSD BASEMAP
10F, 11F

FEDERAL PROJECT NO.
STP-5422(619)

MSD NUMBER
18MSD-00033

DESCRIPTION

DATE

Bellefontaine Neighbors

HORNER SHIFRIN
THE POWER HOUSE AT UNION STATION
401 S. 18th St., Ste. 400
ST. LOUIS, MO 63103-2296
314-531-4321 FAX: 314-531-6966
www.HornerShifrin.com
Certificate of Authority: 000159
Expiration Date: December 31, 2018

ASHBROOK DRIVE

CROSS SECTIONS
SHEET 19 OF 26

REV.

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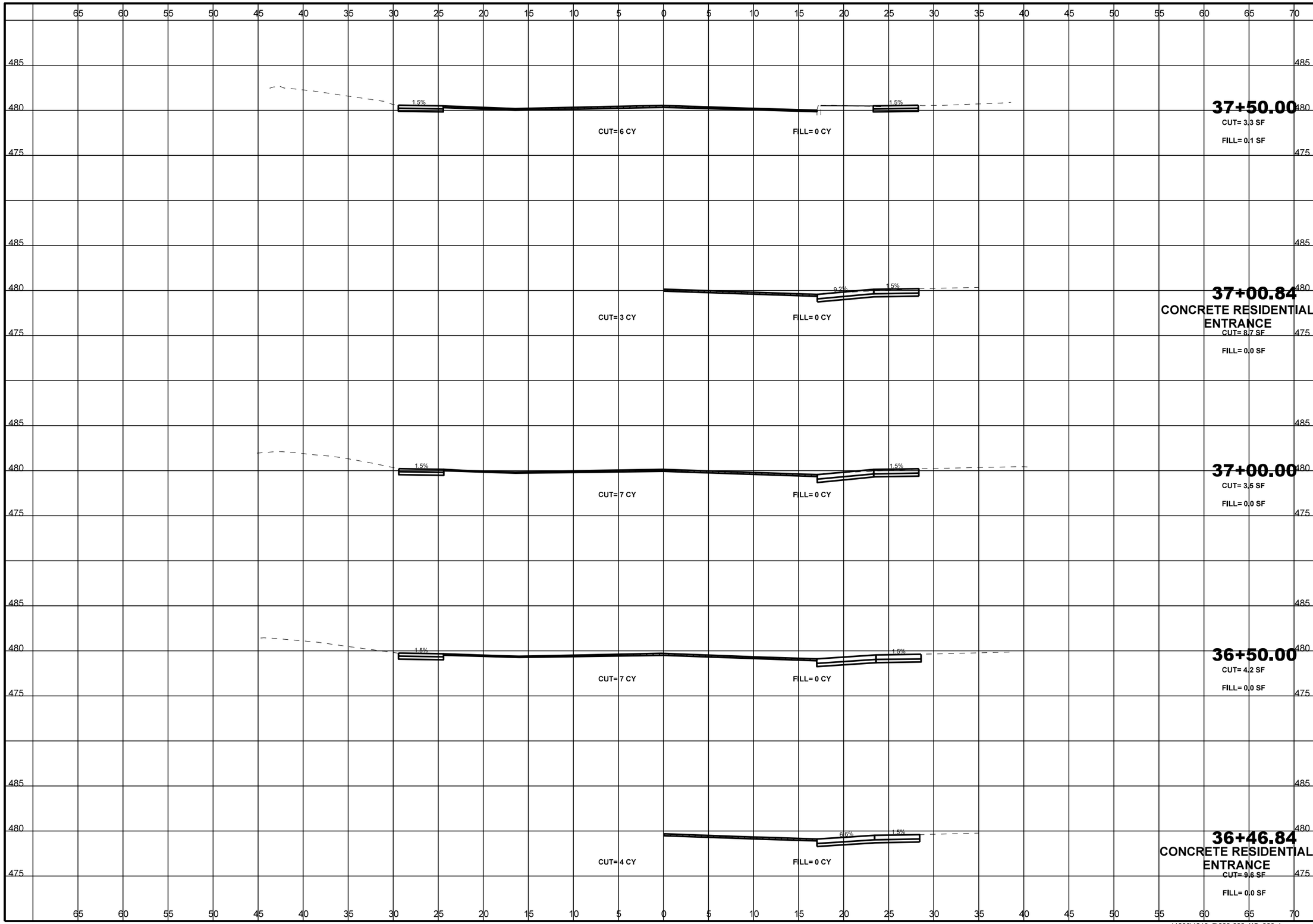


STATE OF MISSOURI
DAVID R. RIECHMANN
NUMBER
PE-2011000948
PROFESSIONAL ENGINEER

NAME:	DAVID R. RIECHMANN
DISCIPLINE:	ENGINEER
LICENSE NO.	PE-2011000948
EXPIRATION DATE:	12-31-19

DATE PREPARED
6/12/2018

ROUTE	STATE
	MO
DISTRICT	SHEET NO.
SL	28

COUNTY
ST. LOUIS

JOB NO.
1608900

MSD BASEMAP
10F, 11F

FEDERAL PROJECT NO.
STP-5422(619)

MSD NUMBER
18MSD-00033

DESCRIPTION

DATE

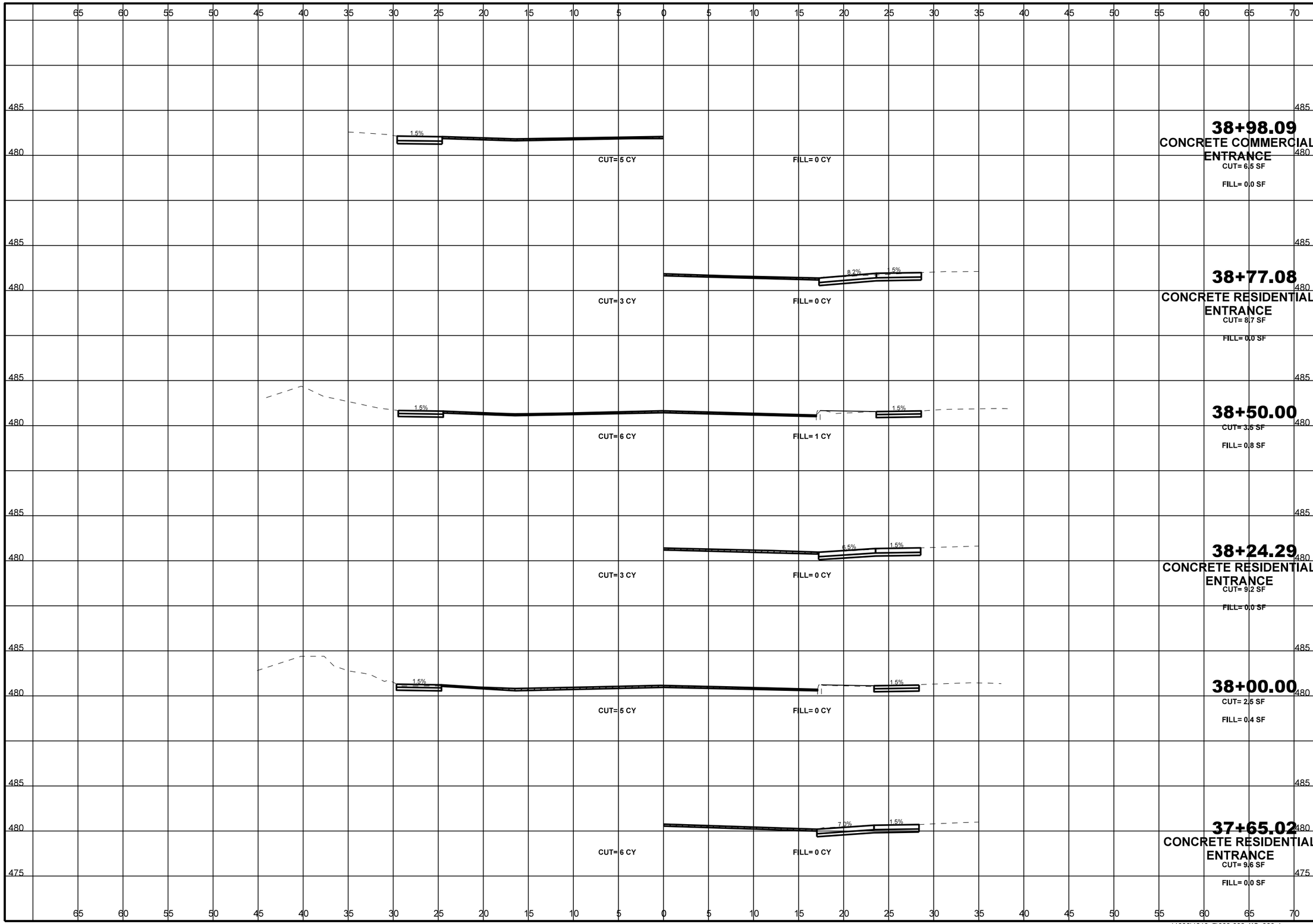
Bellefontaine Neighbors

HORNER SHIFRIN
THE POWER HOUSE AT UNION STATION
401 S. 18th St., Ste. 400
ST. LOUIS, MO 63103-2296
314-531-4321 FAX: 314-531-6966
www.HornerShifrin.com
Certificate of Authority: 000159
Expiration Date: December 31, 2018

ASHBROOK DRIVE

CROSS SECTIONS
SHEET 20 OF 26

REV.



STATE OF MISSOURI
DAVID R. RIECHMANN
NUMBER
PE-2011000948
PROFESSIONAL ENGINEER
6-11-18

NAME:	DAVID R. RIECHMANN
DISCIPLINE:	ENGINEER
LICENSE NO.	PE-2011000948
EXPIRATION DATE:	12-31-19

DATE PREPARED	6/12/2018
ROUTE	STATE MO
DISTRICT SL	SHEET NO. 29
COUNTY	ST. LOUIS
JOB NO.	1608900
MSD BASEMAP	10F, 11F
FEDERAL PROJECT NO.	STP-5422(619)
MSD NUMBER	18MSD-00033

DESCRIPTION

DATE

Bellefontaine Neighbors

HORNER SHIFRIN
THE POWER HOUSE AT UNION STATION
401 S. 18th St., Ste. 400
ST. LOUIS, MO 63103-2296
314-531-4321 FAX: 314-531-6966
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Certificate of Authority: 000159
Expiration Date: December 31, 2018

ASHBROOK DRIVE

CROSS SECTIONS
SHEET 21 OF 26

REV.

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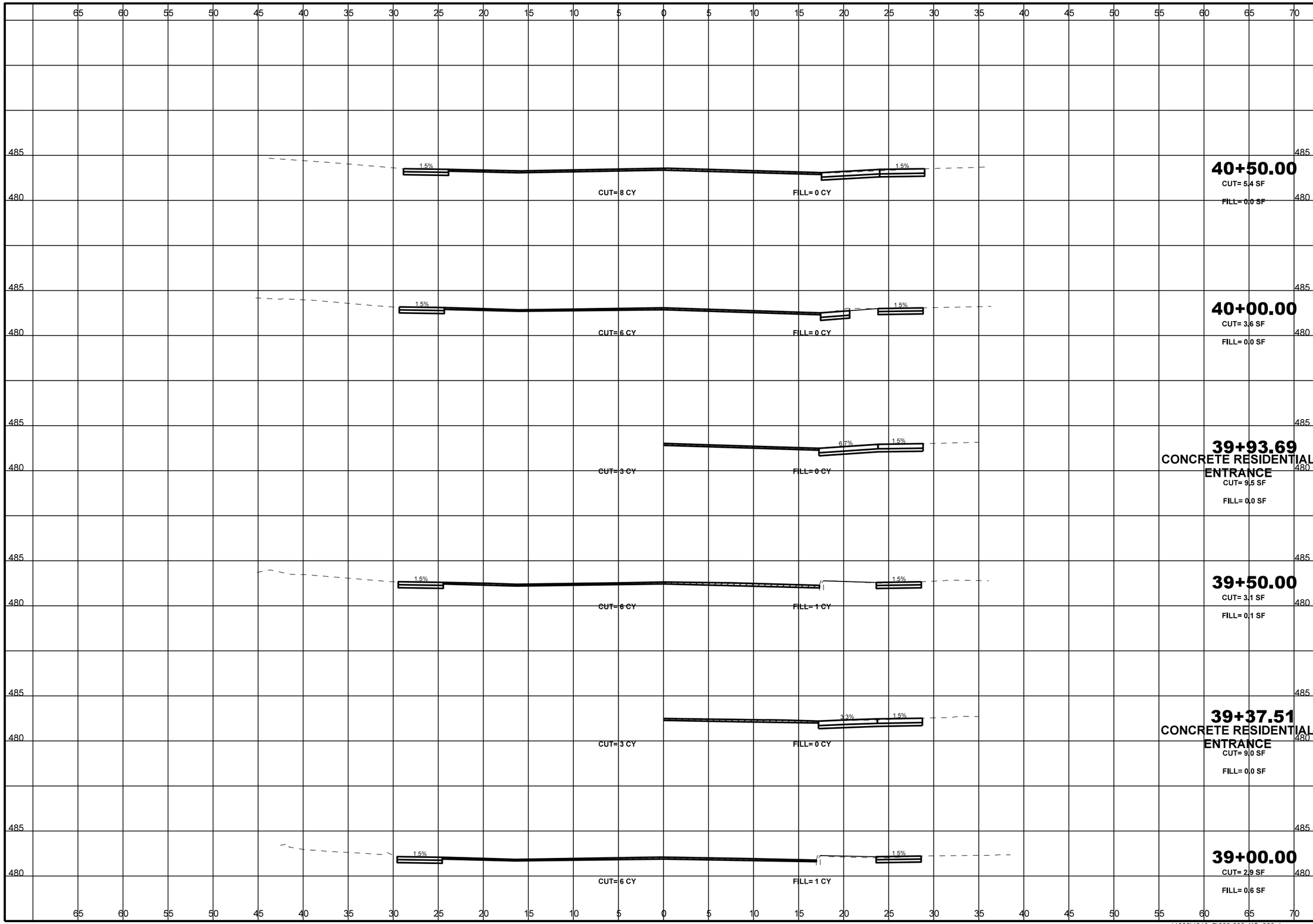

STATE OF MISSOURI
DAVID R. RIECHMANN
NUMBER
PE-2011000948
PROFESSIONAL ENGINEER

NAME:	DAVID R. RIECHMANN
DISCIPLINE:	ENGINEER
LICENSE NO.	PE-2011000948
EXPIRATION DATE:	12-31-19

DATE PREPARED
6/12/2018

ROUTE	STATE
	MO
DISTRICT	SHEET NO.
SL	30

COUNTY
ST. LOUIS

JOB NO.
1608900

MSD BASEMAP
10F, 11F

FEDERAL PROJECT NO.
STP-5422(619)

MSD NUMBER
18MSD-00033

DESCRIPTION

DATE

Bellefontaine Neighbors

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THE POWER HOUSE AT UNION STATION
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ST. LOUIS, MO 63103-2296
314-531-4321 FAX: 314-531-6966
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Expiration Date: December 31, 2018

ASHBROOK DRIVE

CROSS SECTIONS
SHEET 22 OF 26

REV.

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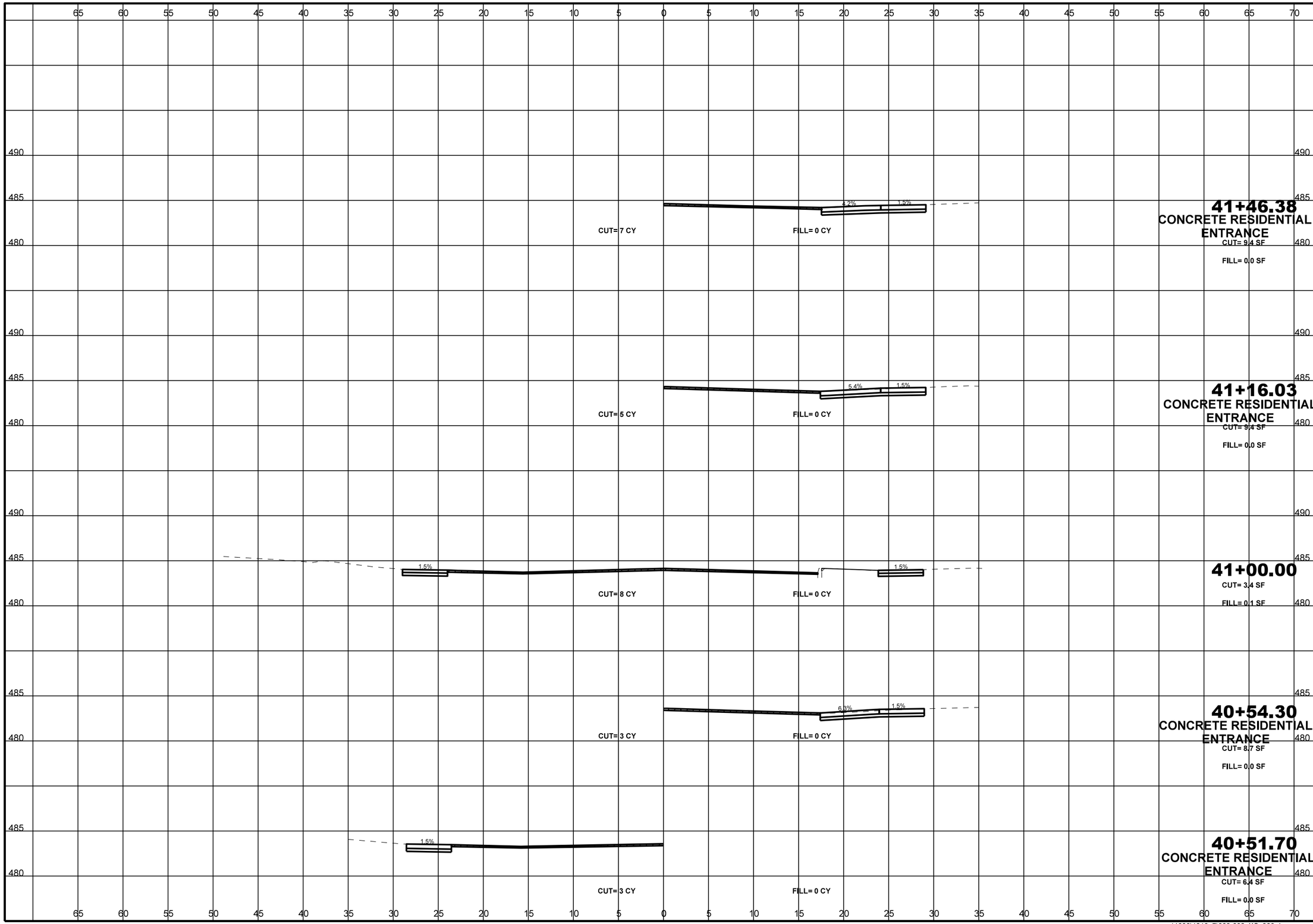

STATE OF MISSOURI
DAVID R. RIECHMANN
NUMBER
PE-2011000948
PROFESSIONAL ENGINEER
6-11-18

NAME:	DAVID R. RIECHMANN
DISCIPLINE:	ENGINEER
LICENSE NO.	PE-2011000948
EXPIRATION DATE:	12-31-19

DATE PREPARED
6/12/2018

ROUTE	STATE
	MO
DISTRICT	SHEET NO.
SL	31

COUNTY
ST. LOUIS

JOB NO.
1608900

MSD BASEMAP
10F, 11F

FEDERAL PROJECT NO.
STP-5422(619)

MSD NUMBER
18MSD-00033

DATE	DESCRIPTION

Bellefontaine Neighbors

HORNER SHIFRIN
THE POWER HOUSE AT UNION STATION
401 S. 18th St., Ste. 400
ST. LOUIS, MO 63103-2296
314-531-4321 FAX: 314-531-6966
www.HornerShifrin.com
Certificate of Authority: 000159
Expiration Date: December 31, 2018

ASHBROOK DRIVE

CROSS SECTIONS
SHEET 23 OF 26

REV.

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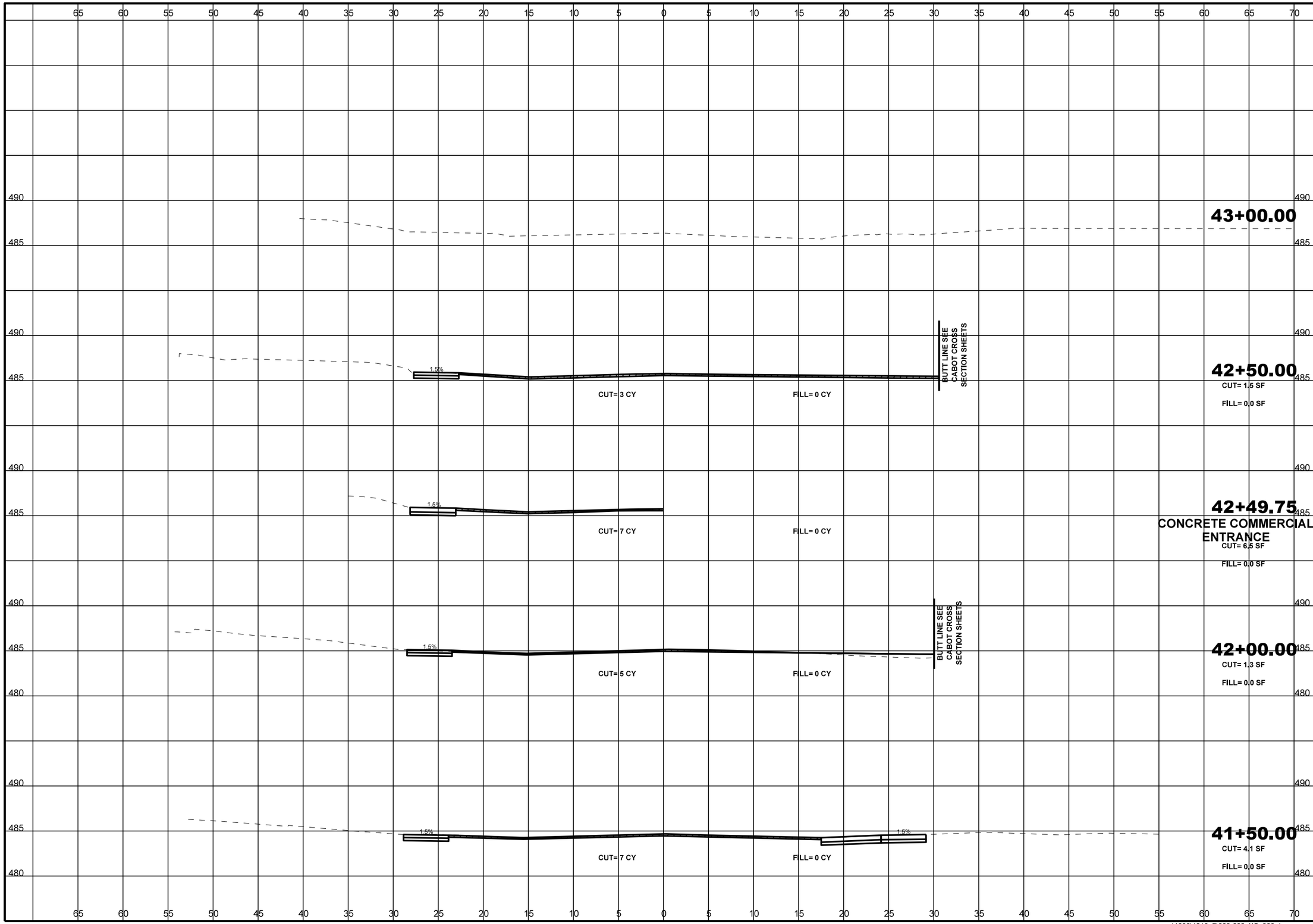

STATE OF MISSOURI
DAVID R. RIECHMANN
NUMBER
PE-2011000948
PROFESSIONAL ENGINEER

NAME:	DAVID R. RIECHMANN
DISCIPLINE:	ENGINEER
LICENSE NO.	PE-2011000948
EXPIRATION DATE:	12-31-19

DATE PREPARED
6/12/2018

ROUTE	STATE
	MO
DISTRICT	SHEET NO.
SL	32

COUNTY
ST. LOUIS

JOB NO.
1608900

MSD BASEMAP
10F, 11F

FEDERAL PROJECT NO.
STP-5422(619)

MSD NUMBER
18MSD-00033

DATE	DESCRIPTION

Bellefontaine Neighbors

HORNER SHIFRIN
THE POWER HOUSE AT UNION STATION
401 S. 18th St., Ste. 400
ST. LOUIS, MO 63103-2296
314-531-4321 FAX: 314-531-6966
www.HornerShifrin.com
Certificate of Authority: 000159
Expiration Date: December 31, 2018

ASHBROOK DRIVE

CROSS SECTIONS
SHEET 24 OF 26

REV.

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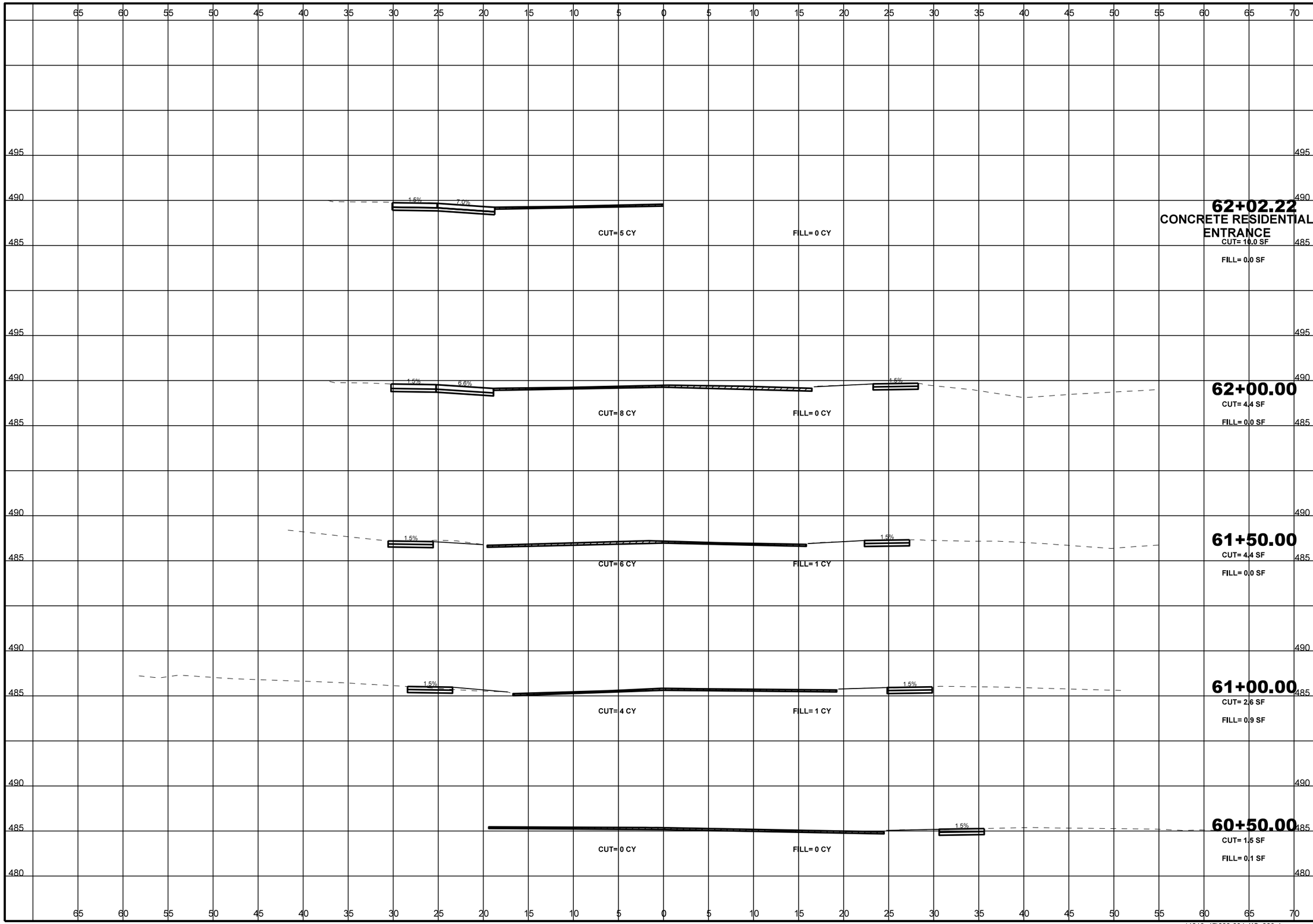

STATE OF MISSOURI
DAVID R. RIECHMANN
NUMBER
PE-2011000948
PROFESSIONAL ENGINEER

NAME:	DAVID R. RIECHMANN
DISCIPLINE:	ENGINEER
LICENSE NO.	PE-2011000948
EXPIRATION DATE:	12-31-19

DATE PREPARED
6/12/2018

ROUTE	STATE
	MO
DISTRICT	SHEET NO.
SL	33

COUNTY
ST. LOUIS

JOB NO.
1608900

MSD BASEMAP
10F, 11F

FEDERAL PROJECT NO.
STP-5422(619)

MSD NUMBER
18MSD-00033

DESCRIPTION

DATE

Bellefontaine Neighbors

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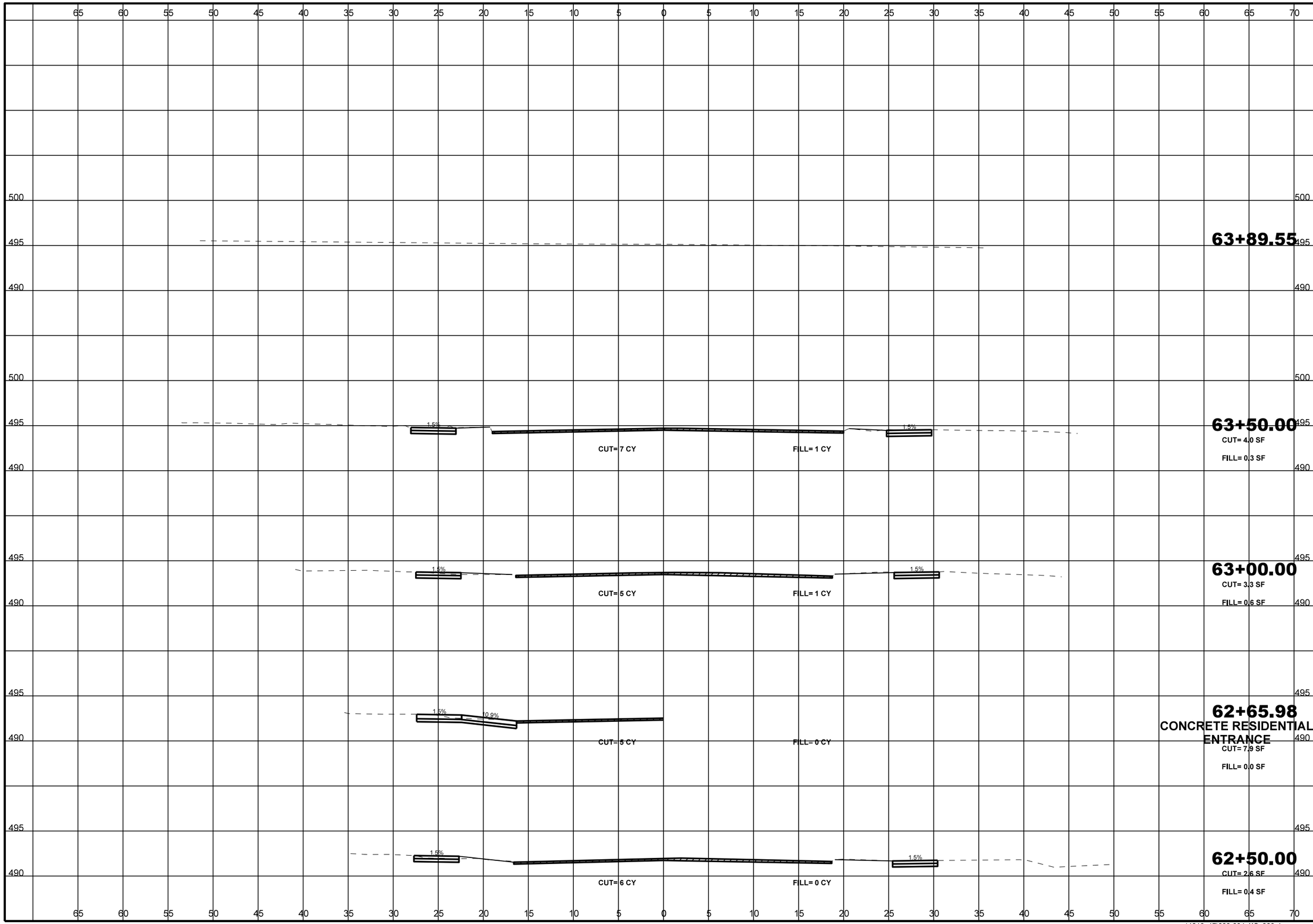
THE POWER HOUSE AT UNION STATION
401 S. 18th St., Ste. 400
ST. LOUIS, MO 63103-2296
314-531-4321 FAX: 314-531-6966
www.HornerShifrin.com
Certificate of Authority: 000159
Expiration Date: December 31, 2018

CABOT DRIVE

CROSS SECTIONS
SHEET 25 OF 26

REV.



STATE OF MISSOURI
DAVID R. RIECHMANN
NUMBER
PE-2011000948
PROFESSIONAL ENGINEER

NAME:	DAVID R. RIECHMANN
DISCIPLINE:	ENGINEER
LICENSE NO.	PE-2011000948
EXPIRATION DATE:	12-31-19

DATE PREPARED
6/12/2018

ROUTE	STATE
	MO
DISTRICT	SHEET NO.
SL	34

COUNTY
ST. LOUIS

JOB NO.
1608900

MSD BASEMAP
10F, 11F

FEDERAL PROJECT NO.
STP-5422(619)

MSD NUMBER
18MSD-00033

DESCRIPTION

DATE

Bellefontaine Neighbors

HORNER SHIFRIN
THE POWER HOUSE AT UNION STATION
401 S. 18th St., Ste. 400
ST. LOUIS, MO 63103-2296
314-531-4321 FAX: 314-531-6966
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Certificate of Authority: 000159
Expiration Date: December 31, 2018

CABOT DRIVE

CROSS SECTIONS
SHEET 26 OF 26

REV.

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