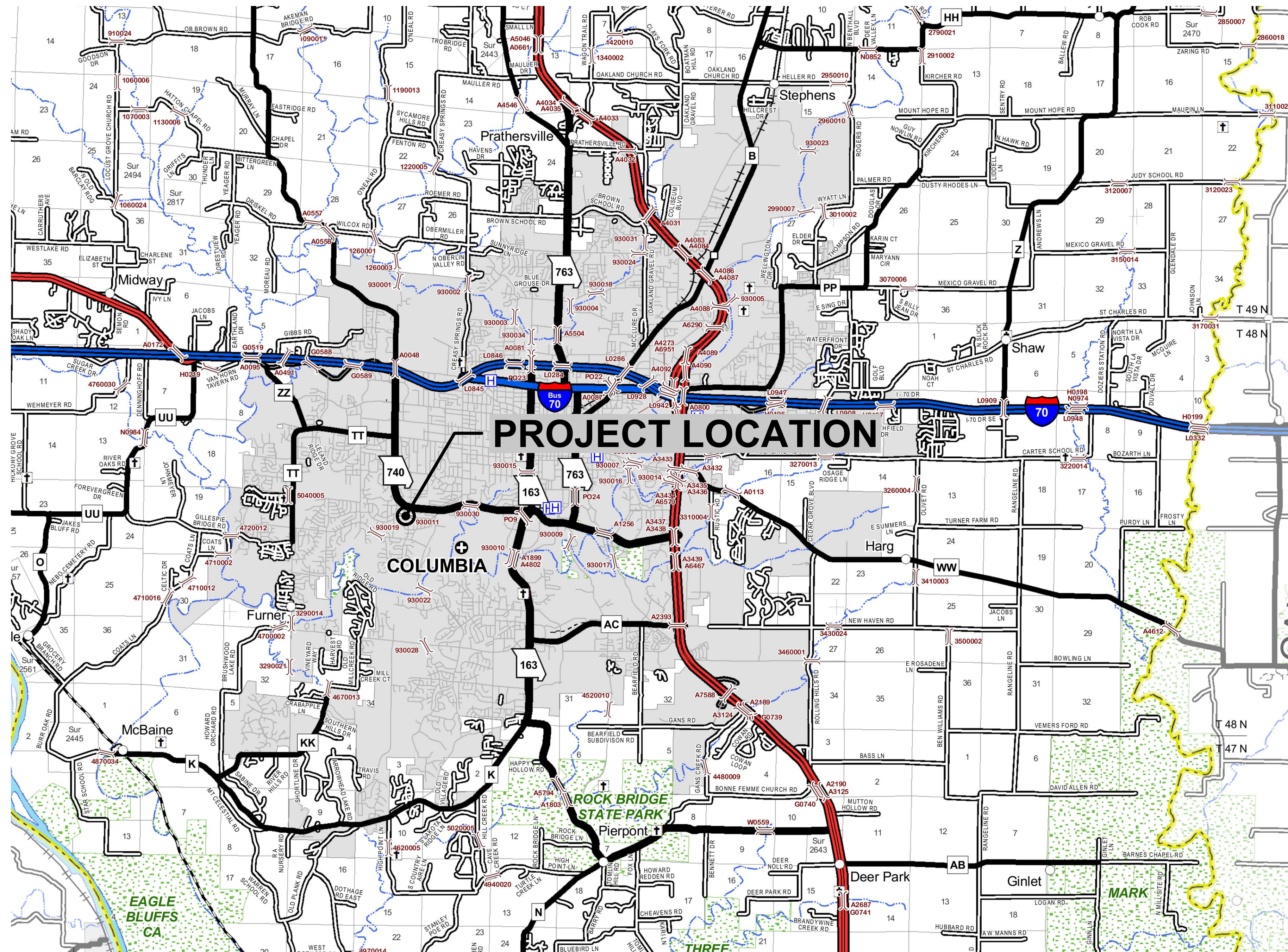


RIDGEMONT DR. BRIDGE OVER COUNTY HOUSE BRANCH FOR CITY OF COLUMBIA, MISSOURI

BRIDGE NO. 930011
50' BRIDGE & ASPHALT SURFACE



SECTION 22, T48N, R13W

COUNTY BOONE
ROUTE RIDGEMONT DR.
PROJECT RIDGEMONT BRIDGE
JOB NO. 20KC40008

DESIGN DESIGNATION
ADT (2020) 1000
DESIGN ADT. (2040) 1500
AADT TRUCK 3%
DESIGN SPEED 25 MPH
D (DIRECTION) 50%

FUNCTIONAL CLASSIFICATION LOCAL

LENGTH OF PROJECT
BEGINNING OF PROJECT 8+99.92
END OF PROJECT 11+05.05
APPARENT LENGTH 205.13 FEET
EQUATIONS & EXCEPTIONS -
TOTAL CORRECTIONS -
NET LENGTH OF PROJECT 0.04 MILES
STATE LENGTH -
FEDERAL LENGTH 0.1 MILES

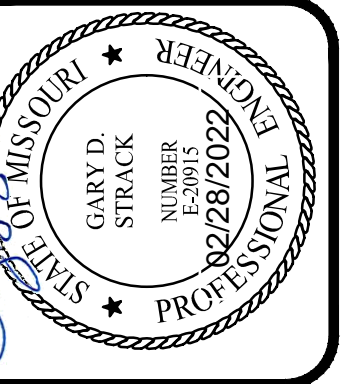
DESCRIPTION	SHEET NO.
COVER SHEET	1
TYPICAL SECTIONS	2
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GRADING & EROSION CONTROL PLAN	4
TRAFFIC CONTROL PLAN	5
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CALL OR CLICK 3 DAYS BEFORE YOU DIG!
MISSOURI 1-800-DIG-RITE or 811
www.mo1call.com

CAUTION:
INFORMATION ON THIS DRAWING CONCERNING TYPE & LOCATION OF UNDERGROUND & OTHER UTILITIES IS NOT GUARANTEED TO BE ACCURATE OR ALL INCLUSIVE. THE CONTRACTOR IS RESPONSIBLE FOR MAKING HIS OWN DETERMINATION AS TO THE TYPE & LOCATION OF UNDERGROUND & OTHER UTILITIES AS MAY BE NECESSARY TO AVOID DAMAGE THERETO.

CONSULTANT
Gary D. Strack
PROJECT ENGINEER 02/28/2022 DATE

CITY
DATE

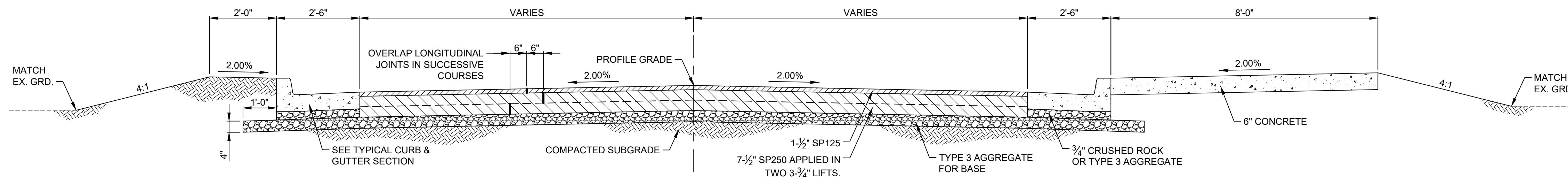


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	FIELD BOOK: 20KC40008		
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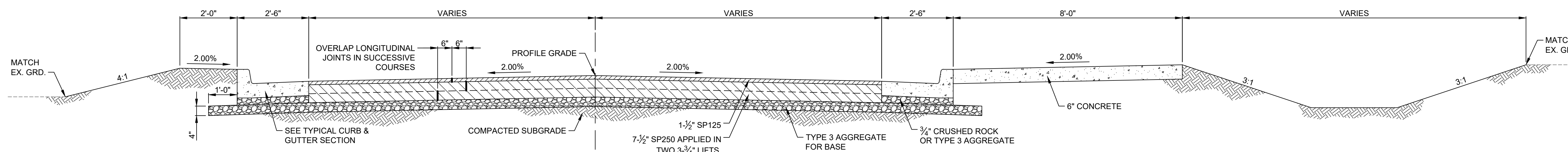
COVER SHEET
RIDGEMONT DR. BRIDGE OVER
COUNTY HOUSE BRANCH
SEC. 22 T48N, R13W
CITY OF COLUMBIA, MISSOURI

SHEET NUMBER
01
OF **28**

NOTE:
EDGE OF TRAVELED WAY AND SHOULDERS TO TRANSITION TO MATCH EXISTING AT ENDS OF PROJECT.



TYPICAL SECTION
RIDGEMONT RD., STA. 8+99.92 TO 9+73.00



TYPICAL SECTION
RIDGEMONT RD., STA. 10+23.00 TO 11+05.05

LEGEND
(USED IN PLANS)

- EXISTING CONTOUR (MAJOR)
- EXISTING CONTOUR (MINOR)
- EXISTING FEATURE
- EXISTING FENCE
- EXISTING GUARDRAIL
- SECTION LINE
- EXISTING PROPERTY LINE
- EXISTING EASEMENT
- EXISTING STORM WATER
- EXISTING GAS LINE
- EXISTING WATER LINE
- EXISTING SANITARY SEWER
- EXISTING UNDERGROUND ELECTRIC
- EXISTING OVERHEAD ELECTRIC
- EXISTING UNDERGROUND TELEPHONE
- EXISTING OVERHEAD TELEPHONE
- EXISTING FIBER OPTIC
- EXISTING UNDERGROUND CABLE TV
- EXISTING OVERHEAD CABLE TV
- EXISTING MAILBOX
- ⊙ EXISTING STORM INLET
- ⊙ EXISTING GAS METER
- ⊙ EXISTING GAS VALVE
- ⊙ EXISTING WATER METER
- ⊙ EXISTING WATER VALVE
- ⊙ EXISTING FIRE HYDRANT
- ⊙ EXISTING WATER WELL
- ⊙ EXISTING SANITARY MANHOLE
- ⊙ EXISTING POWER POLE
- ⊙ EXISTING LIGHT POLE
- ⊙ EXISTING GUY WIRE ANCHOR
- ⊙ EXISTING TELEPHONE PEDESTAL
- ⊙ EXISTING SIGN
- ⊙ EXISTING TREE
- ⊙ CONTROL POINT
- ⊙ IBF FOUND IRON BAR
- ⊙ EXISTING BENCHMARK

ABBREVIATION TABLE

- BC: BACK OF CURB
- CL: CENTERLINE
- CONT: CONTINUOUS
- C.P: CONTROL POINT
- EG: EXISTING GRADE
- EX: EXISTING
- FG: FINISH GRADE
- FL: FLOW LINE
- GL: GUTTER LINE
- MAX: MAXIMUM
- MIN: MINIMUM
- OFF: OFFSET
- PL: PROPERTY LINE
- PR: PROPOSED
- R/W: RIGHT-OF-WAY
- STA: STATION
- TBM: TEMPORARY BENCHMARK
- T.C.E: TEMPORARY CONSTRUCTION EASEMENT
- TEMP: TEMPORARY
- TYP: TYPICAL

UTILITIES INFORMATION

ELECTRIC
SHAWN CARRICO
PUBLIC WORKS - ELECTRIC DEPARTMENT
CITY OF COLUMBIA
701 E BROADWAY, COLUMBIA, MO 65205
(573) 823-9124
SHAWN.CARRICO@COMO.GOV

GAS
AMEREN
TRENTON SNODGRASS
2001 MAGUIRE BLVD,
COLUMBIA, MO 65201
(573) 876-3063

CABLE TELEVISION
CHARTER COMMUNICATIONS
TRAVIS RECTOR
904 RAIN FOREST PARKWAY,
COLUMBIA, MO 65202
(636) 667-6132

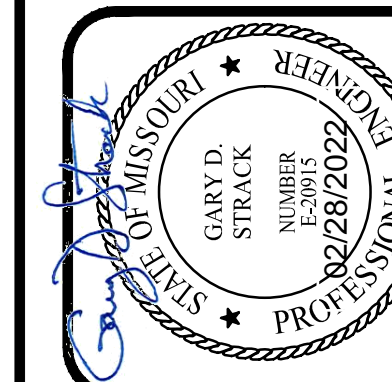
CABLE TELEVISION
MEDIACOM
BOB BONER
1211 WILKES BOULEVARD,
COLUMBIA, MO 65201
(573) 489-1937

WATER
DAN CLARK
PUBLIC WORKS - WATER DEPARTMENT
CITY OF COLUMBIA
701 E BROADWAY, COLUMBIA, MO 65205
(573) 874-7738
DAN.CLARK@COMO.GOV

CABLE TELEVISION
CENTURY LINK
DAVID ROBERTS
119 N 9TH STREET,
COLUMBIA, MO 65201
(573) 876-3503

CABLE TELEVISION
SOCKET TELECOM
TODD PULIS
2703 CLARK LANE,
COLUMBIA, MO 65202
(573) 818-4778

NOTE:
DASHED OR SCREENED SYMBOL INDICATES EXISTING FEATURE.



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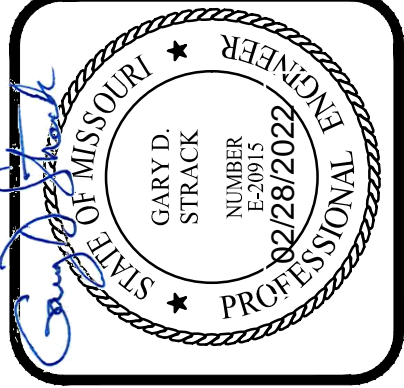
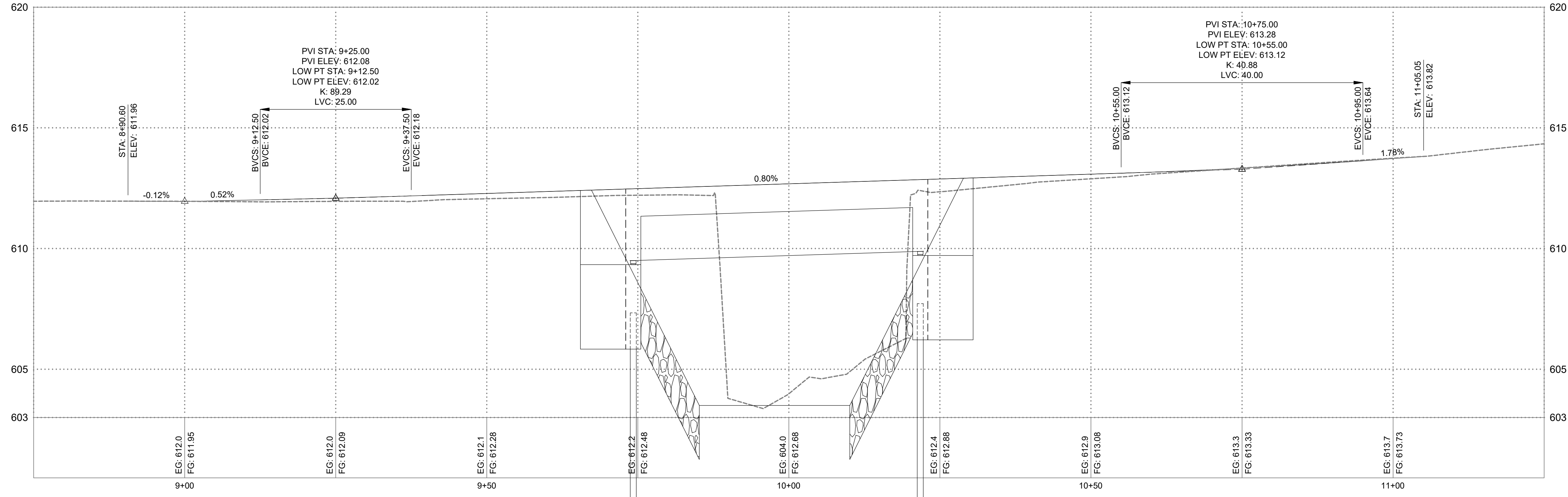
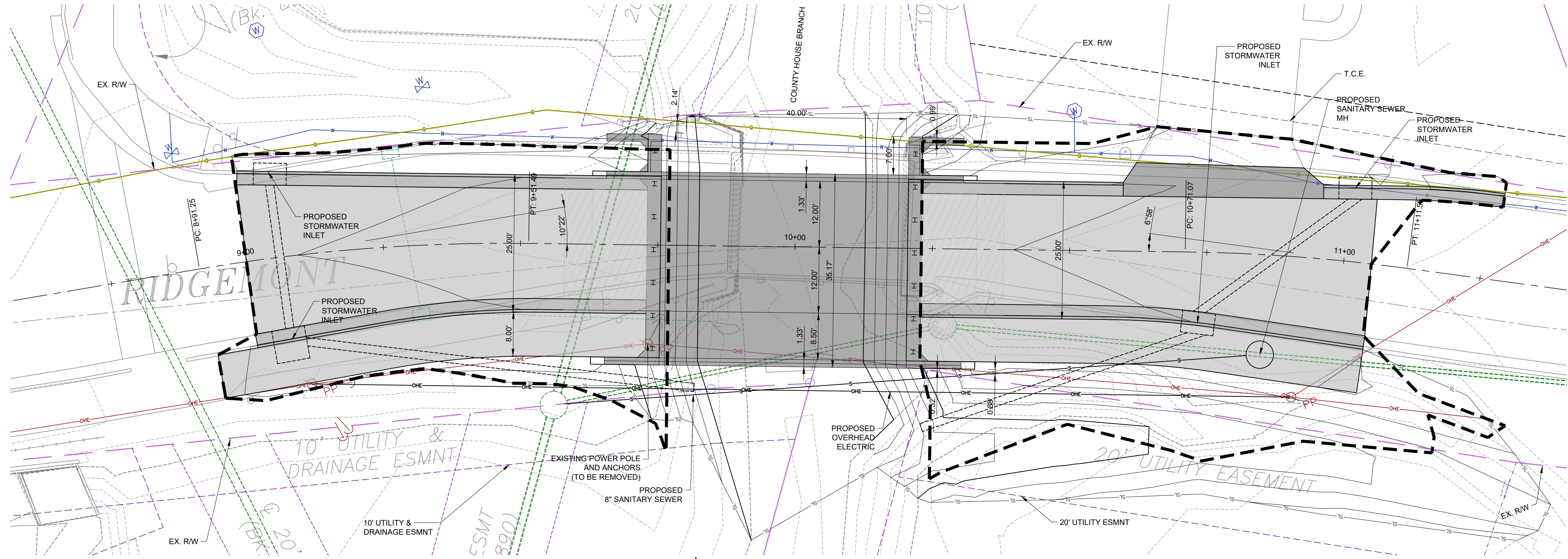
REVISIONS	DATE	BY	DESCRIPTION

FIELD BY:	FIELD BOOK:
ND/CAW	20NC4008
GDS	
10/21/2021	
DATE:	

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TYPICAL SECTIONS
RIDGEMONT DR. BRIDGE OVER
COUTNY HOUSE BRANCH
SEC. 22 T48N, R13W
CITY OF COLUMBIA, MISSOURI

SHEET NUMBER
02
OF 28



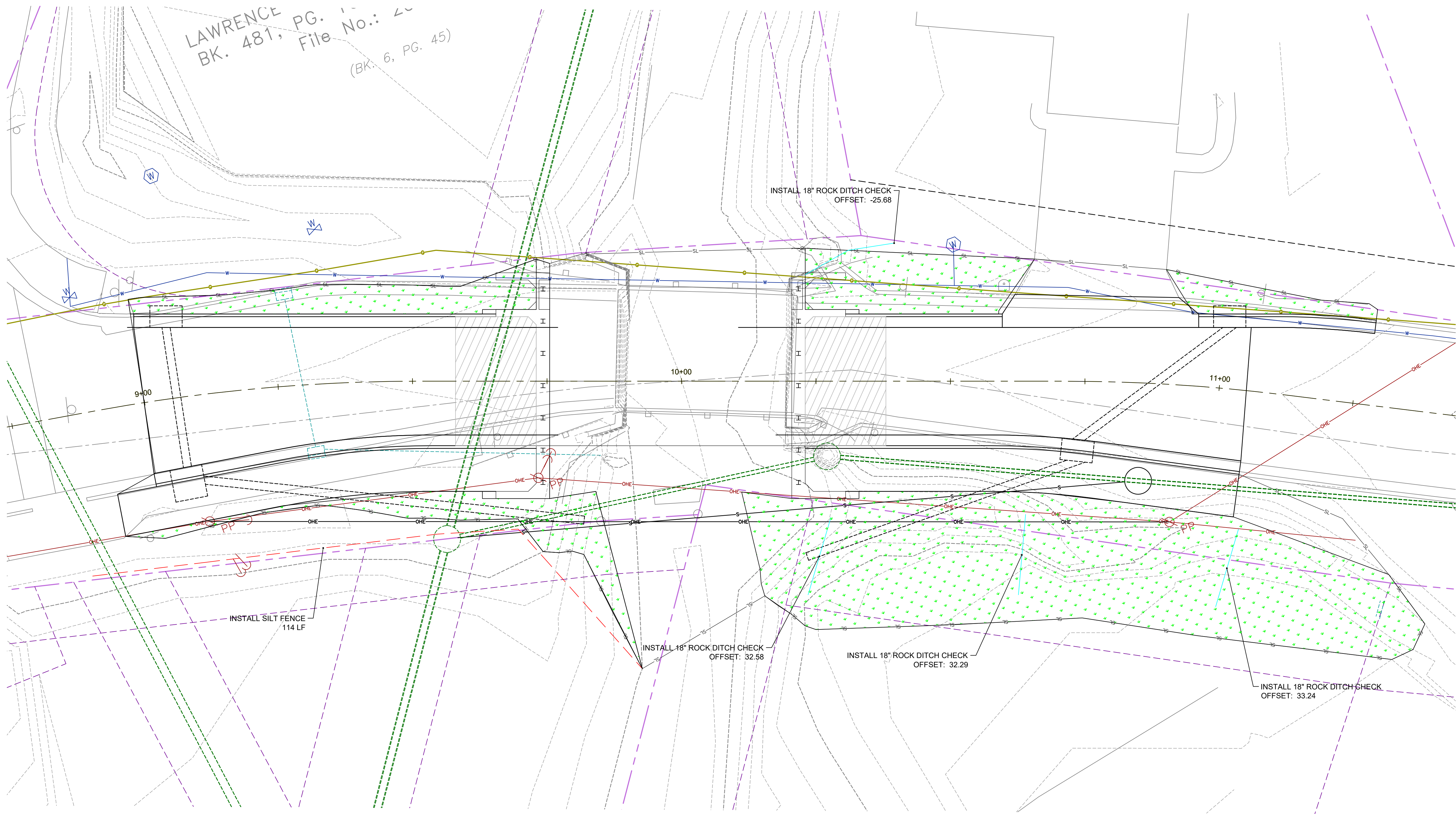
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NO.	DESCRIPTION	BY	DATE

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DATE:	10/21/2021	JOB NUMBER:	

PLAN & PROFILE
 RIDGEMONT DR. BRIDGE OVER
 COUNTY HOUSE BRANCH
 SEC. 22 T48N, R13W
 CITY OF COLUMBIA, MISSOURI

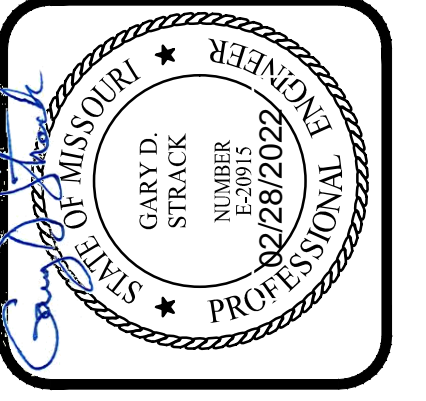
SHEET NUMBER
03
 OF 28

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QUANTITIES:

Seeding: 0.1 Acres
Silt Fence: 114 LF
Rock Ditch Check: 63 LF

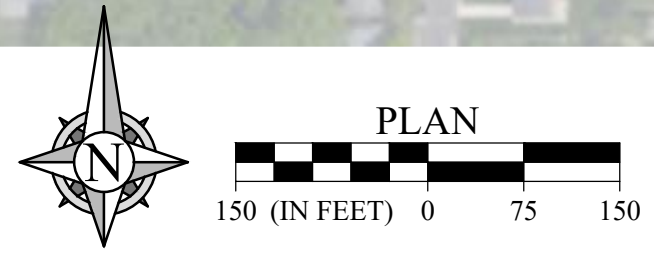
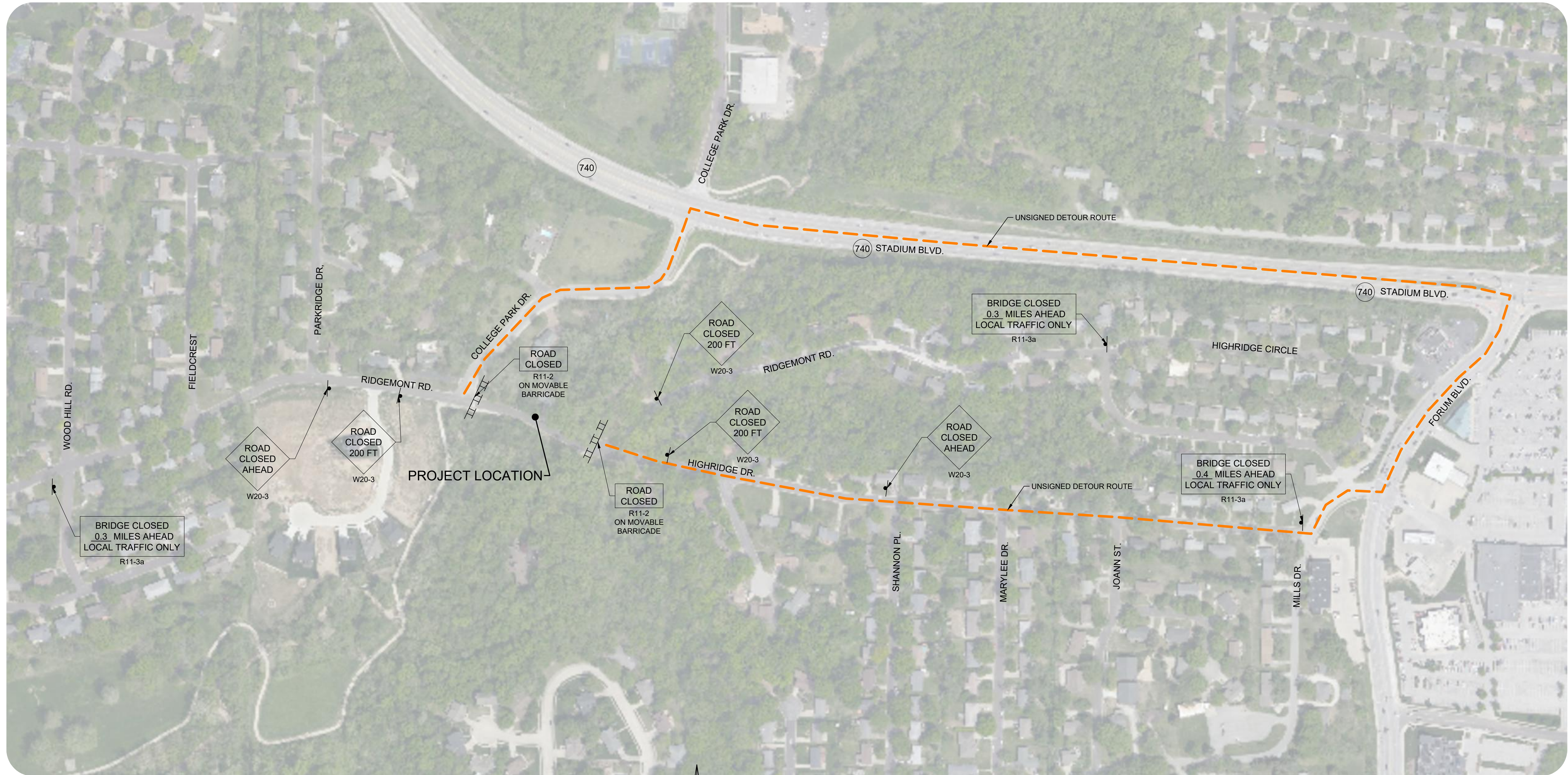


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				DRAWN BY:	
				CHECK BY:	
				DATE:	
				FIELD BOOK:	
				JOB NUMBER:	

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EROSION CONTROL
RIDGEMONT DR. BRIDGE OVER
COUTNY HOUSE BRANCH
SEC. 22 T48N, R13W
CITY OF COLUMBIA, MISSOURI

SHEET NUMBER
04
OF **28**



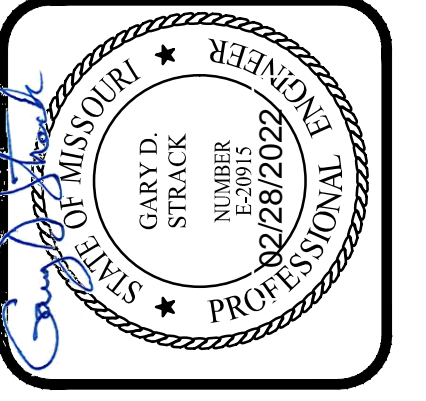
NOTES:
 TRAFFIC CONTROL SHALL COMPLY WITH THE MUTCD (2009) WITH REVISION NUMBERS 1 AND 2, AND WITH MISSOURI STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (2020)
 TRAFFIC CONTROL LAYOUT, QUANTITIES AND ITEMS MAY BE ADJUSTED BY THE ENGINEER IF DEEMED NECESSARY AND WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.

LEGEND

	UNSIGNED LOCAL DETOUR
	SIGN
	MOVABLE BARRICADE

SIGNING QUANTITIES				
SIGN	SIZE (IN.)	AREA (S.F.)	QTY.	TOTAL AREA (S.F.)
R11-2	48x30	10.00	2	20.00
R11-3a	60x30	12.50	2	25.00
W20-1	48x48	16.00	1	16.00
TOTAL				61.00

MOVABLE BARRICADE	6
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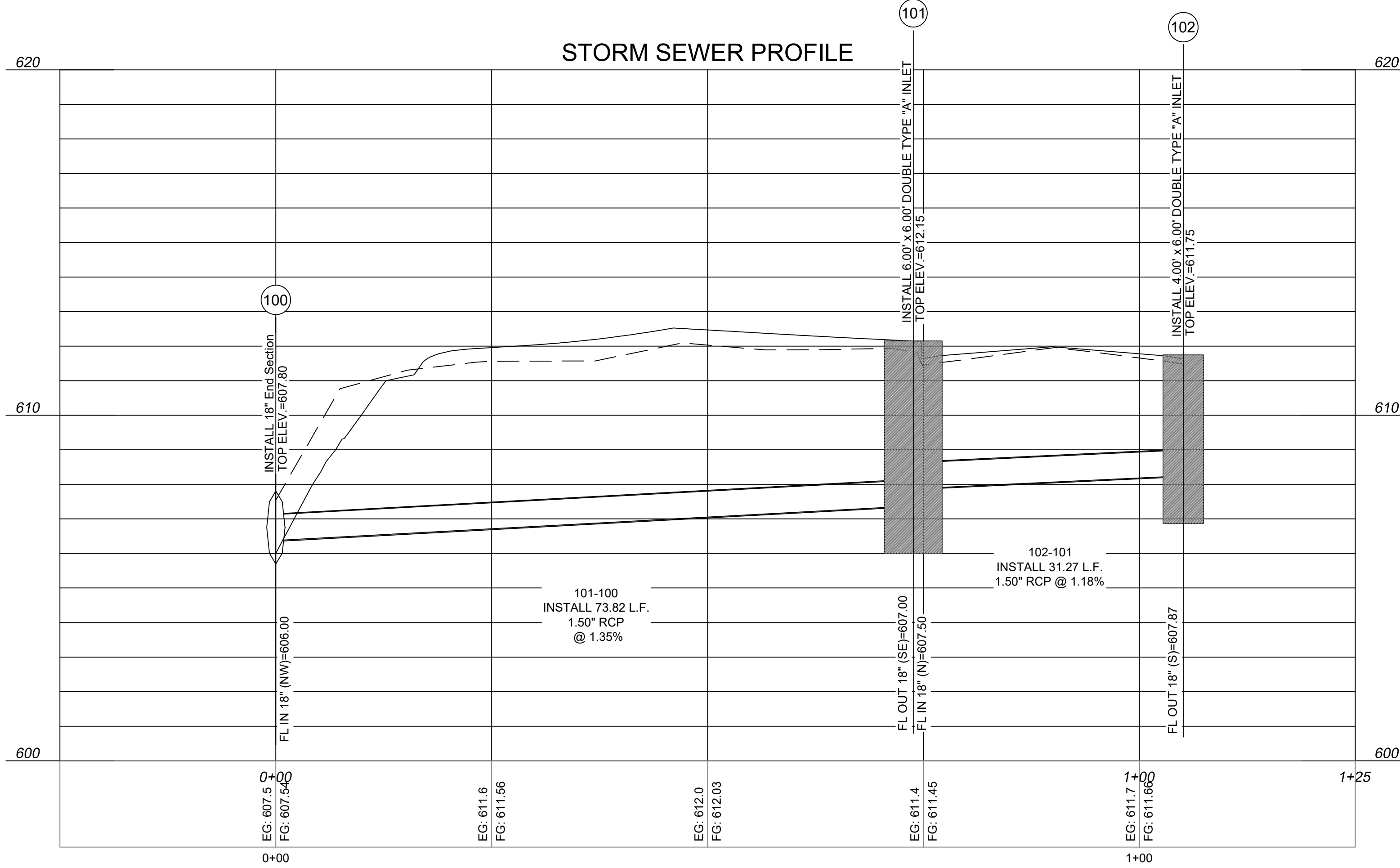
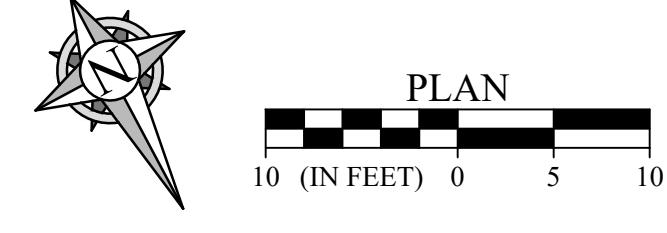
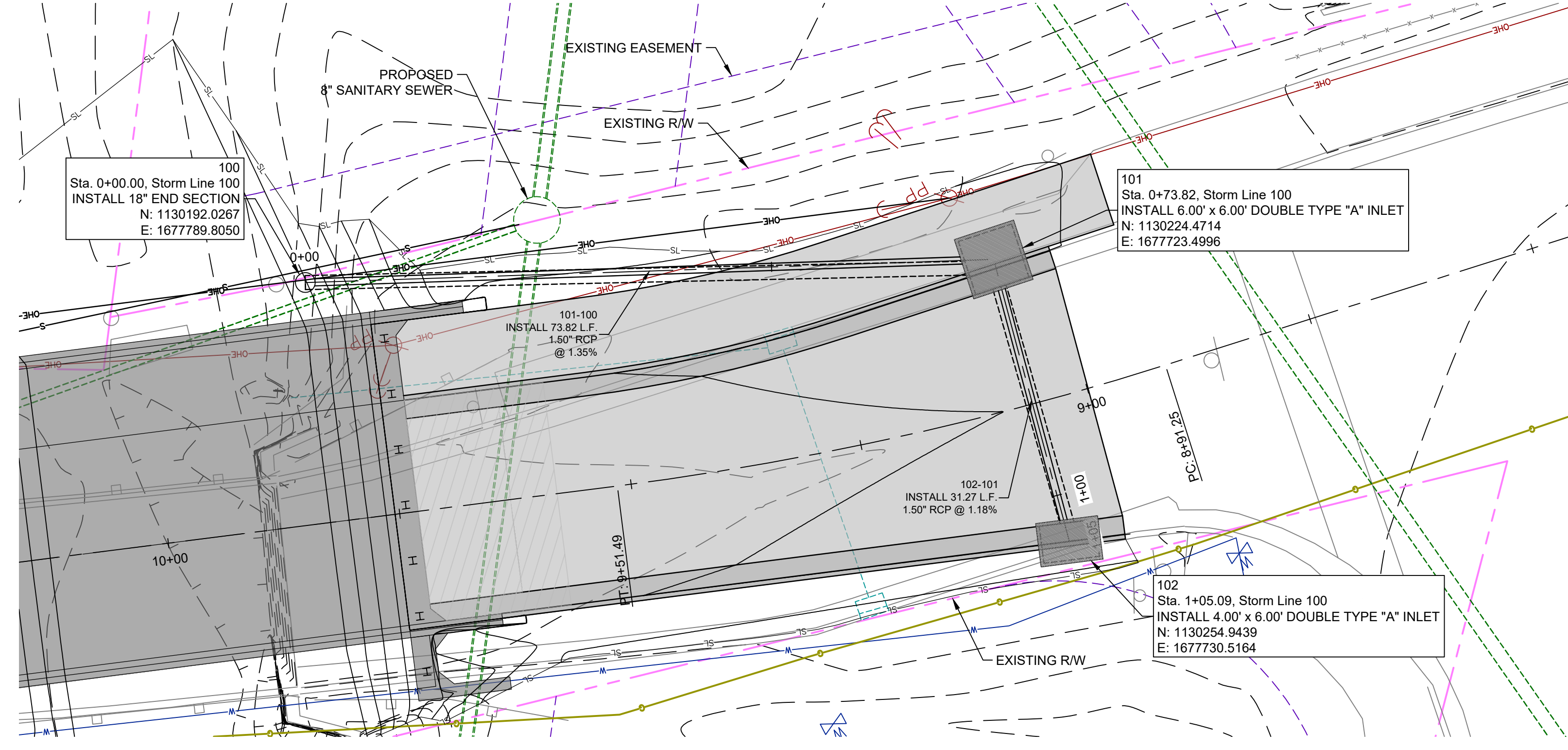


REVISIONS		DRAWING INFO.			
NO.	DESCRIPTION	BY	DATE	FIELD BY:	FIELD BOOK:
				ND/CAW	
				STRACK	GDS
				DATE:	10/21/2021
				FIELD BOOK:	
				JOB NUMBER:	20NC40008

TRAFFIC CONTROL
 RIDGEMONT DR. BRIDGE OVER
 COUNTRY HOUSE BRANCH
 SEC. 22 T48N, R13W
 CITY OF COLUMBIA, MISSOURI

SHEET NUMBER
05
 OF 28

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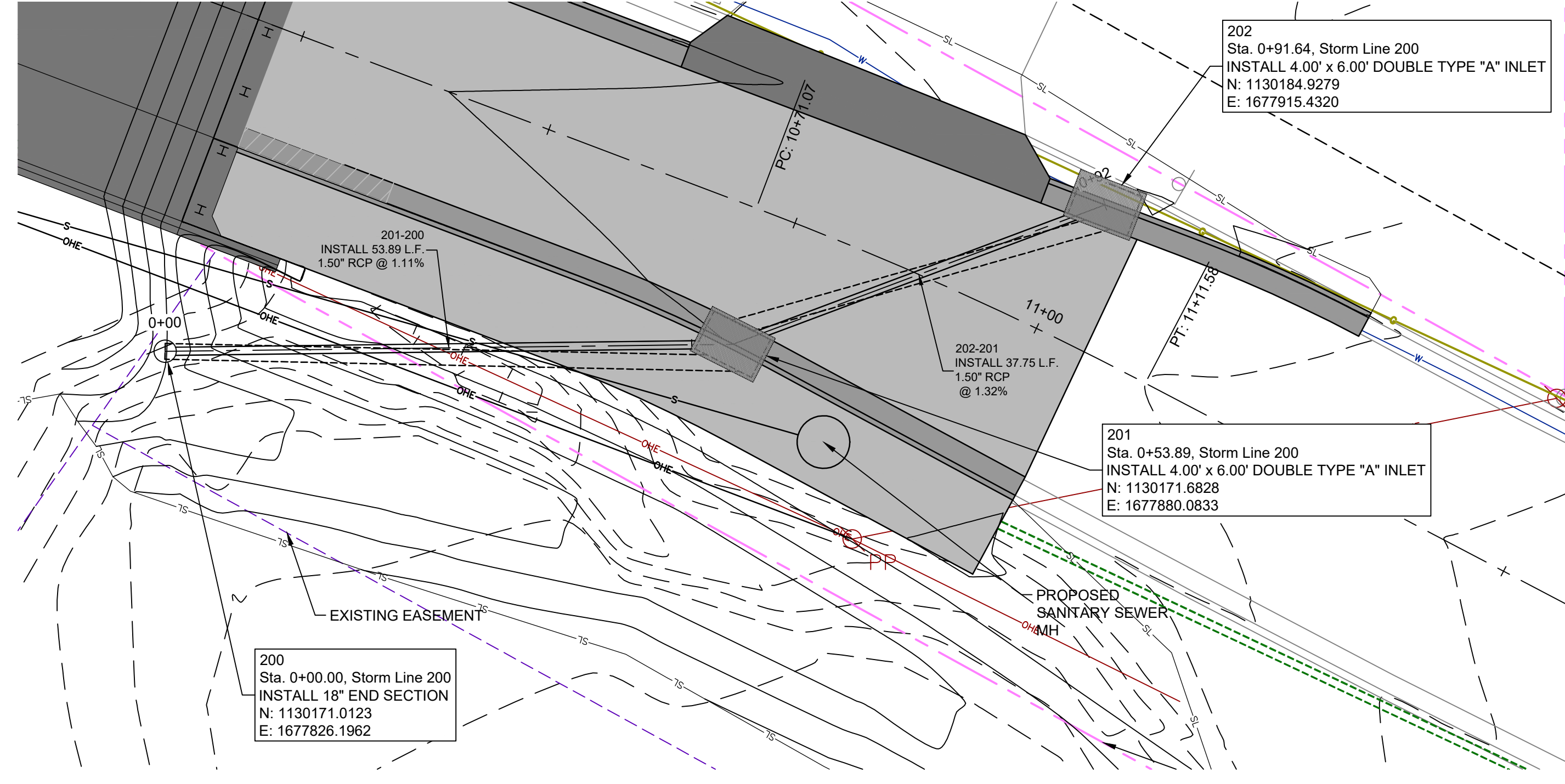
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NO.	DESCRIPTION	BY	DATE

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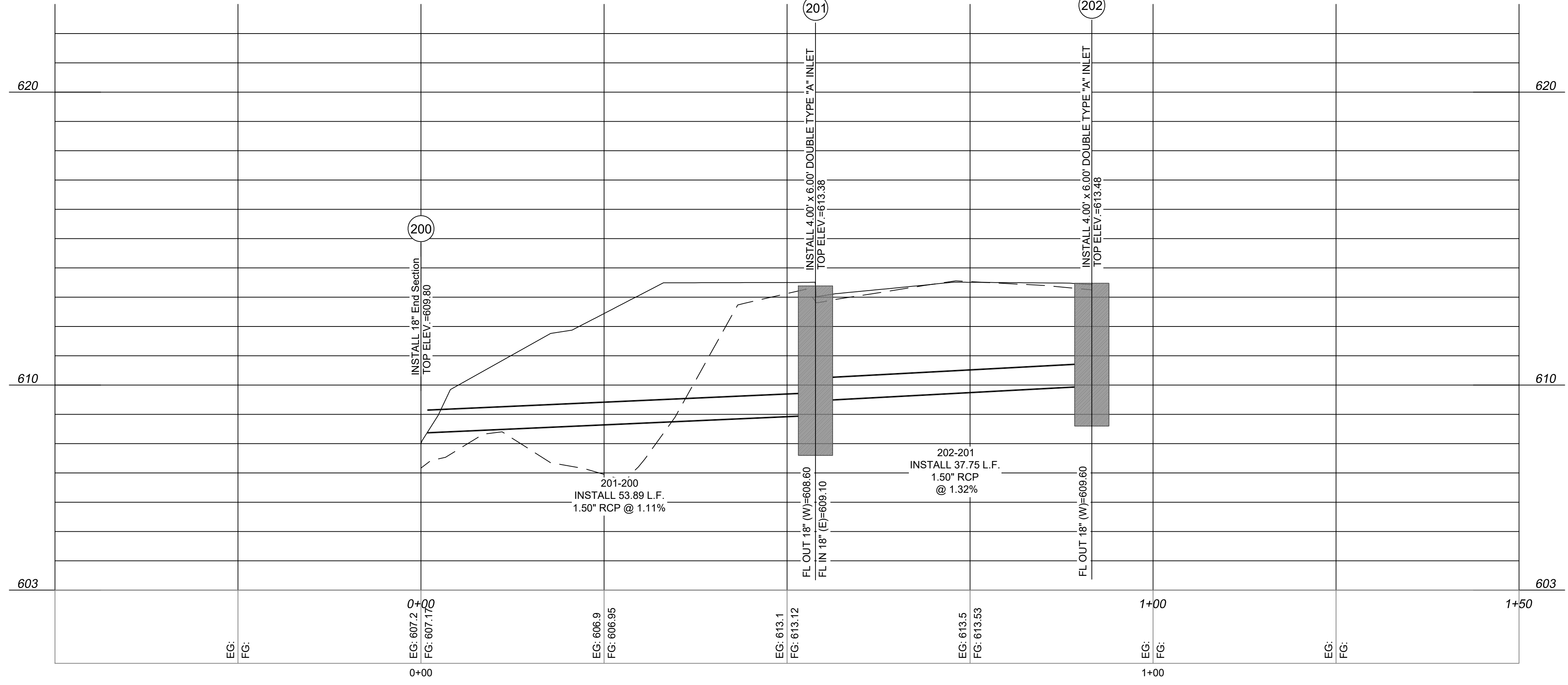
STORM PLAN & PROFILES
 RIDGEMONT DR. BRIDGE OVER
 COUNTRY HOUSE BRANCH
 SEC. 22 T48N, R13W
 CITY OF COLUMBIA, MISSOURI

SHEET NUMBER
06
 OF 28

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STORM SEWER PROFILE



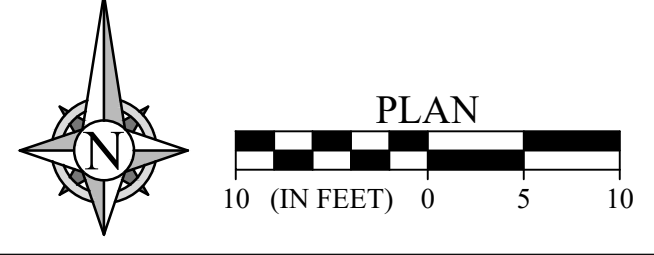
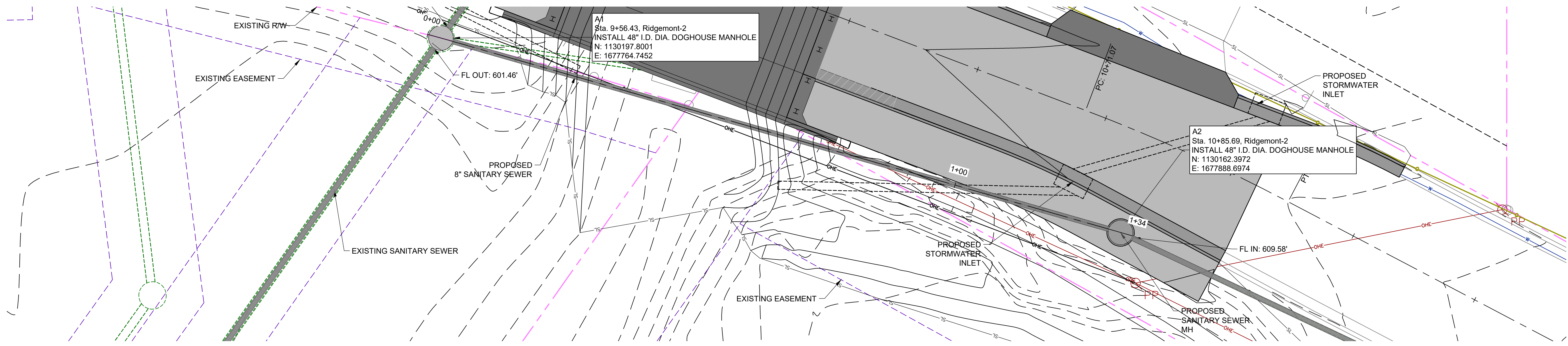
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NO.	DESCRIPTION	BY	DATE

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CHECK BY:	GDS
DATE:	10/21/2021
FIELD BOOK:	20NC4008
JOB NUMBER:	20NC4008

STORM PLAN & PROFILES
 RIDGEMONT DR. BRIDGE OVER
 COUTNY HOUSE BRANCH
 SEC. 22 T48N, R13W
 CITY OF COLUMBIA, MISSOURI

SHEET NUMBER
07
 OF **28**

© Shared drive#19 ND/CAW/Strack/02/28/2022 Ridgemont Bridge/CAD/Plan/Profile Storm Sewer Plan



REVISIONS		DRAWING INFO.	
NO.	DESCRIPTION	BY	DATE

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DATE:	10/21/2021
FIELD BOOK:	20NC4008
JOB NUMBER:	20NC4008

SANITARY PLAN & PROFILES
 RIDGEMONT DR. BRIDGE OVER
 COUNTRY HOUSE BRANCH
 SEC. 22 T48N, R13W
CITY OF COLUMBIA, MISSOURI

SHEET NUMBER
08
 OF 28

© Shared drive#93_ND/CAW/Strack/02/28/2022_Ridgemont Bridge/CAD/Plan/Profile_Sanitary Sewer Plan

ROADWAY QUANTITIES			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY
201-30.00	CLEARING AND GRUBBING	ACRE	0.1
202-20.10	REMOVAL OF IMPROVEMENTS	LUMP SUM	1
203-50.00	UNCLASSIFIED EXCAVATION	CUBIC YARD	319
203-55.00	EMBANKMENT IN PLACE	CUBIC YARD	191
609-99.03	MISC. CONCRETE CURB AND GUTTER (2.5')	LINEAR FOOT	285
403-99.05	MISC. ASPHALTIC CONCRETE, SURFACE COURSE (1.5 IN.)	SQUARE YARD	327
403-99.05	MISC. ASPHALTIC CONCRETE, BASE COURSE (7.5 IN.)	SQUARE YARD	327
310-99.05	MISC. ROCK BASE (TYPE 3) (4 IN.)	CUBIC YARD	50
611-30.10	FURNISHING TYPE 1 ROCK BLANKET	CUBIC YARD	129
611-30.30	PLACING TYPE 1 ROCK BLANKET	CUBIC YARD	129
614-99.02	MISC. DOUBLE TYPE "A" INLET (4'x6')	EACH	3
614-99.02	MISC. DOUBLE TYPE "A" INLET (6'x6')	EACH	1
614-99.02	MISC. SANITARY SEWER MANHOLE (48")	EACH	2
726-99.23	SEWER, STORM SEWER PIPE (RCP) (18")	LINEAR FOOT	197
726-99.23	SEWER, SANITARY SEWER PIPE (SDR 35 PVC) (8")	LINEAR FOOT	129
732-99.02	MISC. END SECTION (RCP) (18")	EACH	2
608-99.05	MISC. CONCRETE SIDEWALK (6")	SQUARE YARD	140.0
502-99.05	MISC. CONCRETE DRIVEWAY (6")	SQUARE YARD	23.0
503-99.05	GRS APPROACH SUBGRADE, GRADATION 1" CLEAN WITH GEOTEXTILE	SQUARE YARD	79.7
618-10.00	MOBILIZATION	LUMP SUM	1
627-40.00	CONTRACTOR FURNISHED SURVEYING AND STAKING	LUMP SUM	1
805-10.00A	SEEDING - COOL SEASON MIXTURES	ACRE	0.1
806-10.19	SILT FENCE	LINEAR FOOT	114
806-30.2.1	ROCK DITCH CHECK	LINEAR FOOT	63

TRAFFIC CONTROL QUANTITIES			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY
616	TRAFFIC CONTROL ITEMS	LS	1

BRIDGE QUANTITIES			
ITEM NO.	DESCRIPTION	UNIT	QUANTITY
206-10.00	CLASS 1 EXCAVATION	CUBIC YARD	85.0
216-05.00	REMOVAL OF BRIDGES	LUMP SUM	1
608-60.08	CONCRETE SIDEWALK, 8 IN.	SQUARE YARD	18.2
617-31.00	CONCRETE TRAFFIC BARRIER, TYPE D	LINEAR FOOT	130
702-10.10	STRUCTURAL STEEL PILES (10 IN.)	LINEAR FOOT	140
702-60.00	PRE-BORE FOR PILING	LINEAR FOOT	119
702-70.00	PILE POINT REINFORCEMENT	EACH	14
703-20.03	CLASS B CONCRETE (SUBSTRUCTURE)	CUBIC YARD	37.7
703-42.12	SLAB ON STEEL	SQUARE YARD	196
712-10.00	FABRICATED STRUCTURAL CARBON STEEL (MISC)	POUND	1,060
712-11.13	FABRICATED STRUCTURAL LOW ALLOY STEEL (I-BEAM) A709, GRADE 50W	POUND	28,280
712-99.03	PEDESTRIAN RAIL	LINEAR FOOT	65
716-10.02	LAMINATED NEOPRENE BEARING PAD	EACH	14

ALL CONCRETE ABOVE THE CONSTRUCTION JOINT IN THE END BENTS IS INCLUDED IN THE ESTIMATED QUANTITIES FOR SLAB ON STEEL.

ALL REINFORCEMENT IN THE END BENTS IS INCLUDED IN THE ESTIMATED QUANTITIES FOR SLAB ON STEEL.

ALL CONCRETE AND REINFORCING STEEL IN SIDEWALK WILL BE CONSIDERED COMPLETELY COVERED BY THE CONTRACT UNIT PRICE FOR SIDEWALK (BRIDGES).

ESTIMATED QUANTITIES FOR SLAB ON STEEL		
ITEM	UNIT	TOTAL
CLASS B-2 CONCRETE	CUBIC YARDS	56.4
REINFORCING STEEL (EPOXY COATED)	POUNDS	17,671

THE TABLE OF ESTIMATED QUANTITIES FOR SLAB ON STEEL REPRESENTS THE QUANTITIES USED BY THE OWNER IN PREPARING THE COST ESTIMATE FOR CONCRETE SLABS. THE AREA OF THE CONCRETE SLAB WILL BE MEASURED TO THE NEAREST SQUARE YARD WITH THE HORIZONTAL DIMENSIONS AS SHOWN ON THE PLAN OF SLAB. PAYMENT FOR PRESTRESSED PANELS, CONVENTIONAL FORMS, ALL CONCRETE AND COATED AND UNCOATED REINFORCING STEEL WILL BE CONSIDERED COMPLETELY COVERED BY THE CONTRACT UNIT PRICE FOR SLAB ON CONCRETE I-GIRDER. VARIATIONS MAY BE ENCOUNTERED IN THE ESTIMATED QUANTITIES BUT THE VARIATIONS CANNOT BE USED FOR AN ADJUSTMENT IN THE CONTRACT UNIT PRICE.

METHOD OF FORMING THE SLAB SHALL BE AS SHOWN ON THE SHOP DRAWINGS AND IN ACCORDANCE WITH SEC 703. ALL HARDWARE FOR FORMING THE SLAB TO BE LEFT IN PLACE AS A PERMANENT PART OF THE STRUCTURE SHALL BE COATED IN ACCORDANCE WITH ASTM A123 OR ASTM B633 WITH A THICKNESS CLASS SC 4 AND A FINISH TYPE I, II OR III.

THE ESTIMATED QUANTITIES FOR SLAB ON STEEL ARE BASED ON SQUARE PRECAST PRESTRESSED END PANELS.

CLASS B-2 CONCRETE QUANTITY IS BASED ON MINIMUM TOP FLANGE THICKNESS AND MINIMUM JOINT MATERIAL THICKNESS.

THE PRESTRESSED PANEL QUANTITIES ARE NOT INCLUDED IN THE TABLE OF ESTIMATED QUANTITIES FOR SLAB ON STEEL.

FOUNDATION DATA				
TYPE	DESIGN DATA	BENT NUMBER		
		1	2	
LOAD BEARING PILE	PILE TYPE AND SIZE	HP 10x42	HP 10x42	
	NUMBER	7	7	
	APPROXIMATE LENGTH PER EACH	FEET	10	10
	PILE POINT REINFORCEMENT	EACH	7	7
	PILE DRIVING VERIFICATION METHOD	DF	DF	
	HAMMER ENERGY REQUIRED	FT-LB	12,555	12,555
	DESIGN BEARING MINIMUM NOMINAL AXIAL COMPRESSIVE RESISTANCE	KIP	111	111

DF = FHWA-MODIFIED GATES DYNAMIC FORMULA

LOAD BEARING PILE:

MINIMUM NOMINAL AXIAL COMPRESSIVE RESISTANCE = MAXIMUM FACTORED LOADS/RESISTANCE FACTORS

MINIMUM ENERGY REQUIREMENT OF HAMMER IS BASED ON PLAN LENGTH AND DESIGN BEARING VALUE OF PILES. ALL PILES SHALL BE DRIVEN TO PRACTICAL REFUSAL.

MINIMUM PILE LENGTHS SHALL BE IN ACCORDANCE WITH SECTION 702.4.11 OF THE STANDARD SPECIFICATIONS.

PAYMENT FOR PILE SPLICES WILL ONLY BE MADE FOR PILES REACHING LENGTHS BEYOND 40 FEET.

EMBANKMENT IN PLACE SHALL INCLUDE HAULING AND REMOVING MATERIAL FROM/TO THE SITE, PLACEMENT AND COMPACTION OF MATERIAL AND EXCAVATION OF DITCHES TO MAKE GRADE SHOWN ON PLANS. PAYMENT WILL ONLY BE MADE FOR FILL MATERIAL PLACED PER PLAN REQUIREMENTS.

GENERAL NOTES:

DESIGN SPECIFICATIONS:

2020 AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS (9TH ED.)
SEISMIC PERFORMANCE CATEGORY A

2019 AASHTO GUIDELINES FOR GEOMETRIC DESIGN OF VERY LOW-VOLUME LOCAL ROADS (ADT≤400)

CONSTRUCTION SPECIFICATIONS:

MISSOURI STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION

MISSOURI STANDARD PLANS FOR HIGHWAY CONSTRUCTION

DESIGN LOADING:

HS20-44
FATIGUE STRESS - CASE III
FUTURE WEARING SURFACE = 35 LB/SF
EARTH PRESSURE = 120 LB/CF
EQUIVALENT FLUID PRESSURE = 45 LB/CF
SUPERSTRUCTURE:
SIMPLY SUPPORTED NON-COMPOSITE FOR DEAD LOAD.
COMPOSITE FOR LIVE LOAD.

DESIGN UNIT STRESSES:

CLASS B CONCRETE (SUBSTRUCTURE) f_c = 3,000 p.s.i.
CLASS B-1 CONCRETE (BARRIER) f_c = 4,000 p.s.i.
CLASS B-2 CONCRETE (SUPERSTRUCTURE, EXCEPT BARRIER) f_c = 4,000 p.s.i.
REINFORCING STEEL (GRADE 60) f_y = 60,000 p.s.i.
STRUCTURAL CARBON STEEL (ASTM A709 GRADE 36) f_y = 36,000 p.s.i.
STRUCTURAL STEEL (ASTM A709 GRADE 50W) f_y = 50,000 p.s.i.
STEEL PILE (ASTM A709 GRADE 50) f_y = 50,000 p.s.i.

FOR PRECAST PRESTRESSED PANEL STRESSES, SEE SHEET NO. 19.

NEOPRENE PADS:

NEOPRENE BEARING PADS SHALL BE 60 DUROMETER AND SHALL BE IN ACCORDANCE WITH SEC 716.

JOINT FILLER:

ALL JOINT FILLER SHALL BE IN ACCORDANCE WITH SEC 1057 FOR PREFORMED SPONGE RUBBER EXPANSION AND PARTITION JOINT FILLER, EXCEPT AS NOTED.

REINFORCING STEEL:

MINIMUM CLEARANCE TO THE REINFORCING STEEL SHALL BE 1-1/2 INCHES, UNLESS OTHERWISE SHOWN.

TRAFFIC HANDLING:

STRUCTURE TO BE CLOSED DURING CONSTRUCTION. TRAFFIC TO BE MAINTAINED ON OTHER ROUTES DURING CONSTRUCTION. SEE ROADWAY PLANS FOR TRAFFIC CONTROL.

PROTECTIVE COATINGS:

STRUCTURAL STEEL PILES TO BE CLEANED AND BITUMINOUS COATED AT 3' BELOW THE BOTTOM OF THE CAP, PER MODOT SPECIFICATION 702.4.8.1

THE CONTRACTOR MAY CHOOSE TO GALVANIZE THE ENTIRE PILE IN LIEU OF BITUMINOUS COATING REQUIREMENTS.

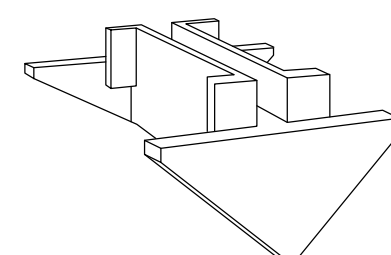
GALVANIZED STRUCTURAL STEEL PILES SHALL BE IN ACCORDANCE WITH MODOT SPECIFICATION 702.4.8.2

NOTE:

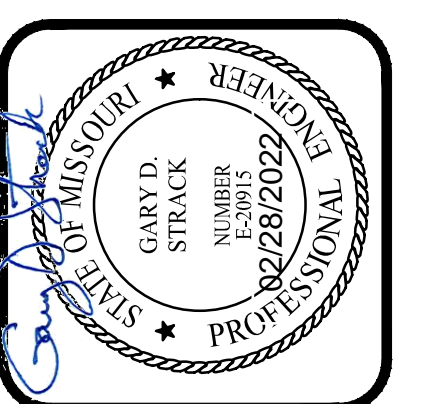
QUANTITIES SHOWN ON THESE PLANS ARE NOT GUARANTEED BY THE OWNER AND ARE USED SOLELY FOR THE PURPOSE OF COMPARING BIDS AND AWARDED THE CONTRACT, AND MAY OR MAY NOT REPRESENT THE ACTUAL QUANTITIES ON THE JOB. SEE SPECIFICATIONS.

ANY ITEMS NOT SHOWN IN BID TAB, SHALL BE CONSIDERED SUBSIDIARY TO OTHER ITEMS.

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO SUBMIT FORM 106, TO MISSOURI DEPARTMENT OF NATURAL RESOURCES, HISTORIC PRESERVATION PROGRAM FOR ANY BORROW AREAS TO BE USED ON THIS PROJECT.



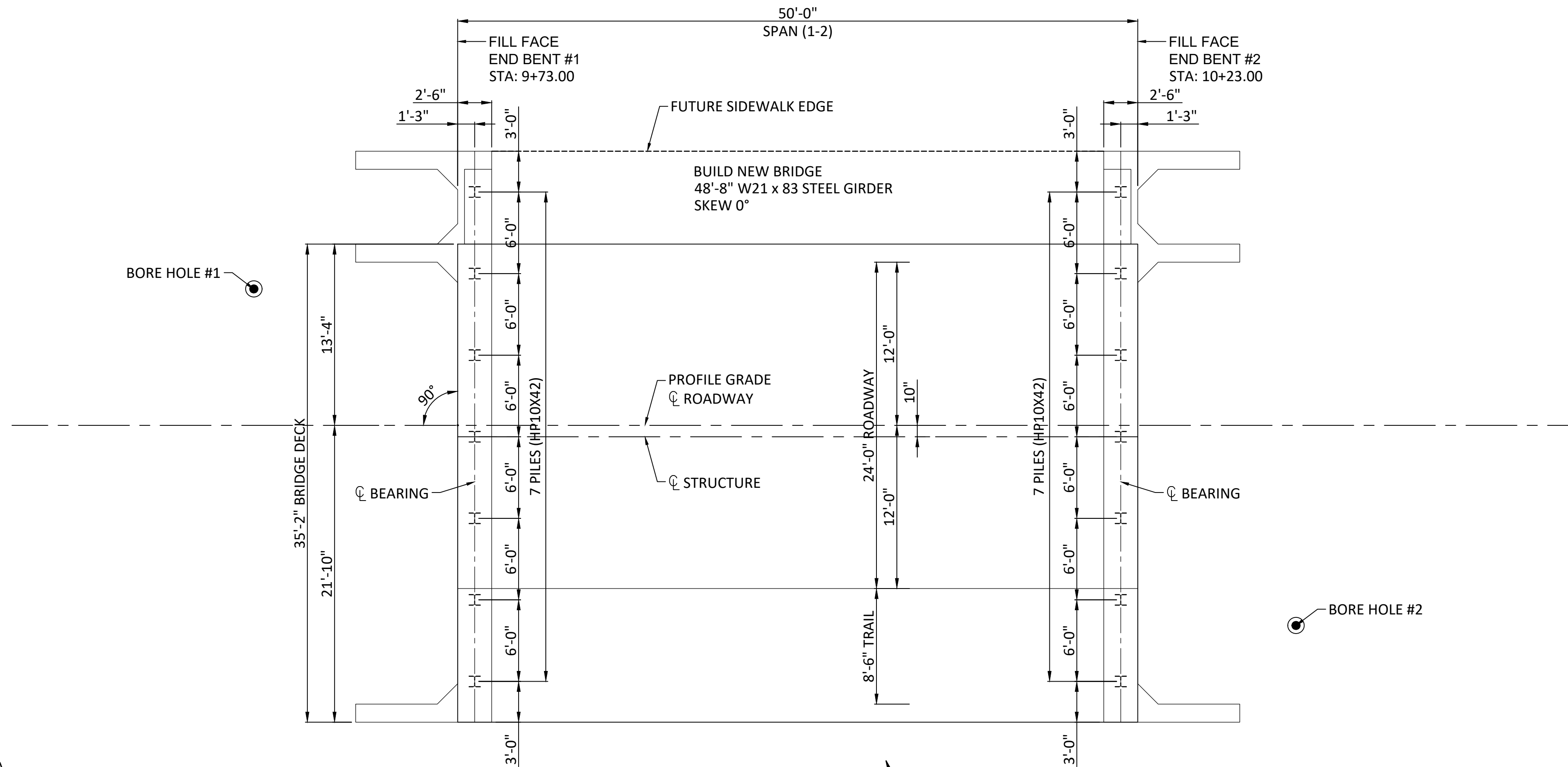
CAST STEEL PILE POINT



DRAWING INFO.		FIELD BY:		DATE	
NO.	DESCRIPTION	BY	DATE	NO.	DESCRIPTION
		CAW			
		GIS	10/29/2020		
		FIELD BOOK:			
		JOB NUMBER:			

GENERAL NOTES & QUANTITIES
RIDGEMONT DR. BRIDGE OVER
COUNTY HOUSE BRANCH
SEC. 22 T48N, R13W
CITY OF COLUMBIA, MISSOURI

SHEET NUMBER
9
OF **28**



BRIDGE PLAN

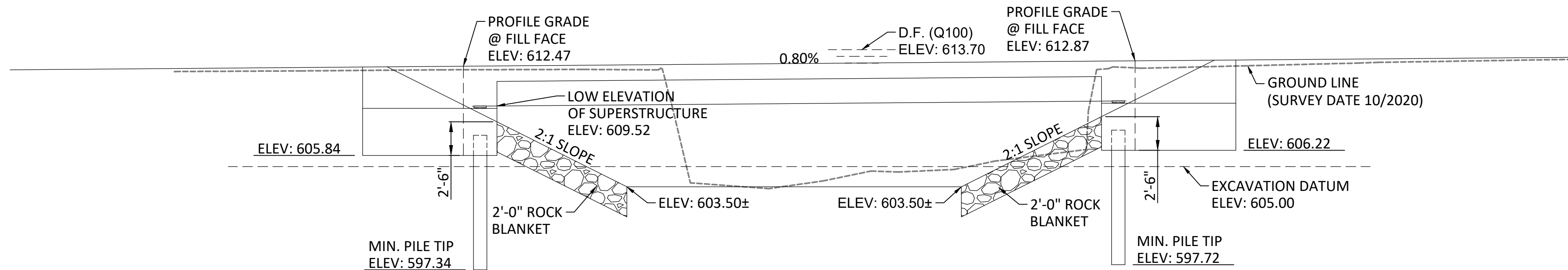


● INDICATES LOCATION OF BORINGS.

NOTICE AND DISCLAIMER REGARDING BORING LOG DATA

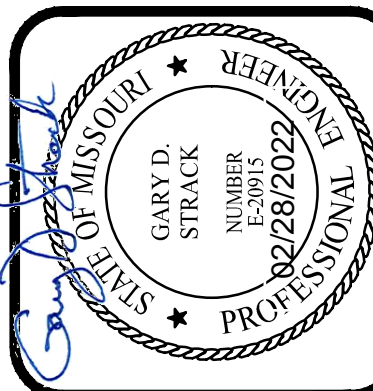
THE LOCATIONS OF ALL SUBSURFACE BORINGS FOR THIS STRUCTURE ARE SHOWN ON THE BRIDGE PLAN SHEET(S) FOR THIS STRUCTURE. BORING DATA FOR ALL LOCATIONS IS SHOWN ON SHEET NO. B2. THE BORING DATA FOR ALL LOCATIONS INDICATED, AS WELL AS ANY OTHER BORING LOGS OR OTHER FACTUAL RECORDS OF SUBSURFACE DATA AND INVESTIGATIONS PERFORMED BY THE DEPARTMENT FOR THE DESIGN OF THE PROJECT, WILL BE PROVIDED IN THE BRIDGE ELECTRONIC DELIVERABLE FILE OR WILL BE AVAILABLE FROM THE PROJECT CONTACT UPON WRITTEN REQUEST. NO GREATER SIGNIFICANCE OR WEIGHT SHOULD BE GIVEN TO THE BORING DATA DEPICTED ON THE PLAN SHEETS THAN IS SUBSURFACE DATA AVAILABLE FROM THE DISTRICT OR ELSEWHERE.

THE COMMISSION DOES NOT REPRESENT OR WARRANT THAT ANY SUCH BORING DATA ACCURATELY DEPICTS THE CONDITIONS TO BE ENCOUNTERED IN CONSTRUCTING THIS PROJECT. A CONTRACTOR ASSUMES ALL RISKS IT MAY ENCOUNTER IN BASING ITS BID PRICES, TIME OR SCHEDULE OF PERFORMANCE ON THE BORING DATA DEPICTED HERE OR THOSE AVAILABLE FROM THE DISTRICT, OR ON ANY OTHER DOCUMENTATION NOT EXPRESSLY WARRANTED, WHICH THE CONTRACTOR MAY OBTAIN FROM THE COMMISSION.



BRIDGE PROFILE

HYDROLOGIC DATA	
DRAINAGE AREA = 1.05 SQ. MI.	
DESIGN FLOOD FREQUENCY = 100 YEARS	
DESIGN FLOOD DISCHARGE = 3,486 CFS	
DESIGN FLOOD (D.F.) ELEVATION = 613.70	
BASE FLOOD (100-YEAR)	
BASE FLOOD ELEVATION = 613.70	
BASE FLOOD DISCHARGE = 3,486 CFS	
ESTIMATED BACKWATER = 1.50 FT	
FREEBOARD (10-YEAR)	
FREEBOARD = -0.25 FT (HIGH SIDE)	
ROADWAY OVERTOPPING	
OVERTOPPING FLOOD DISCHARGE = 2,220 CFS	
OVERTOPPING FLOOD FREQUENCY = 10 YEARS	
OVERTOPPING FLOOD ELEVATION = 611.95	

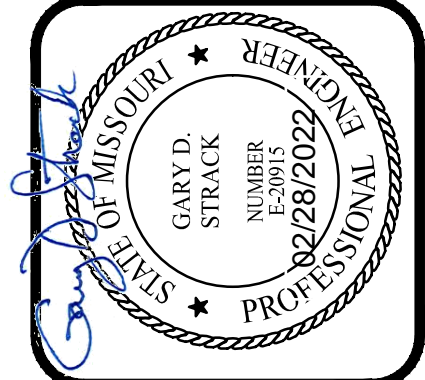


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		DRAWN BY:	GDS
		CHECK BY:	10/29/2020
		DATE:	FIELD BOOK:
		FIELD NO.:	JOB NUMBER:
			20NC40008

BRIDGE PLAN & PROFILE
 RIDGEMONT DR. BRIDGE OVER
 COUNTY HOUSE BRANCH
 SEC. 22 T48N, R13W
 CITY OF COLUMBIA, MISSOURI

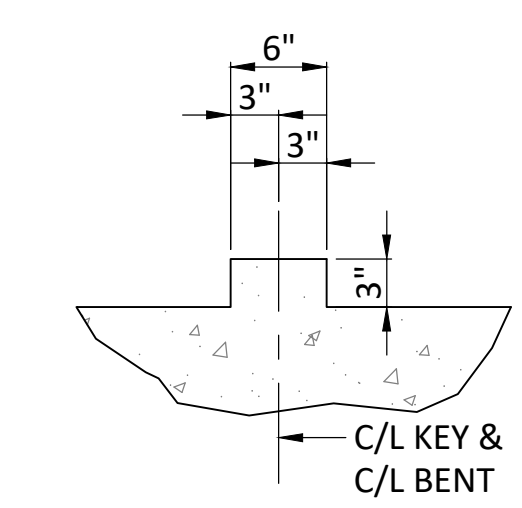
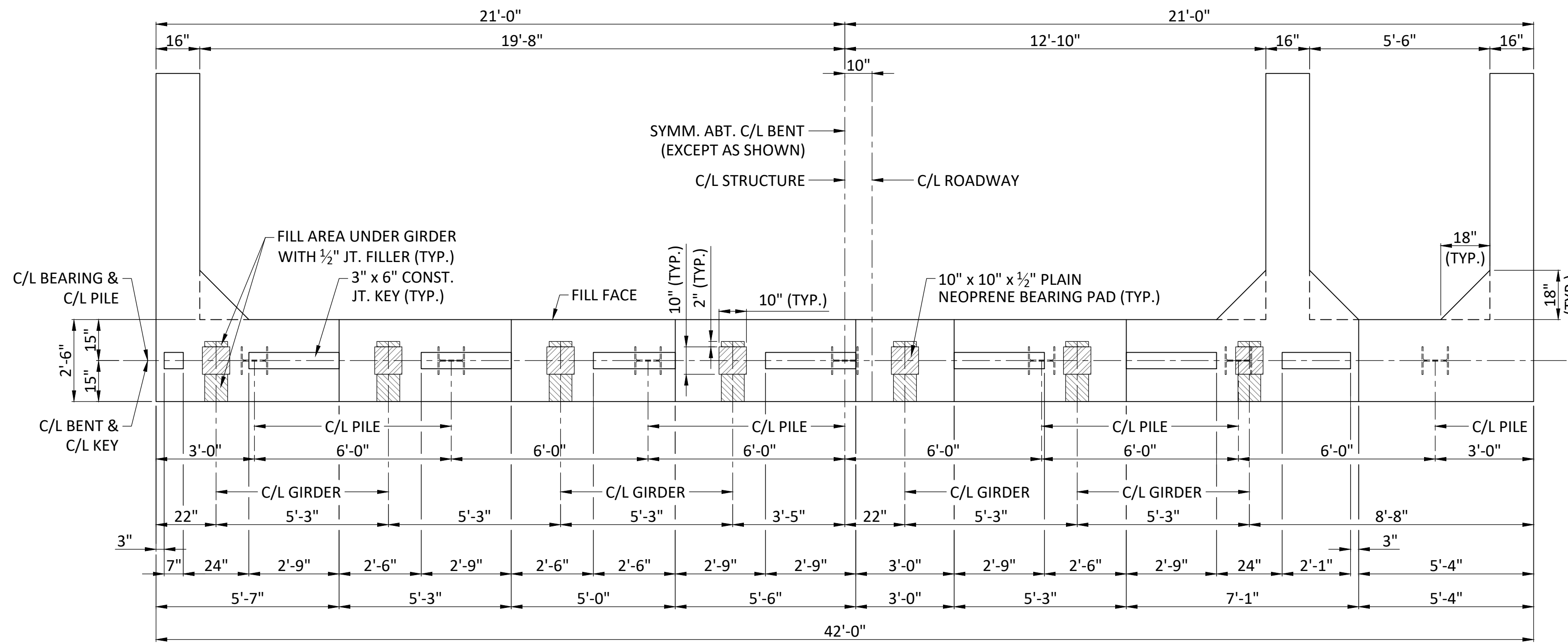
SHEET NUMBER
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 OF **28**

© 10/19/2020 09:00:00 - Ridgemont Dr. Bridge Plan & Profile

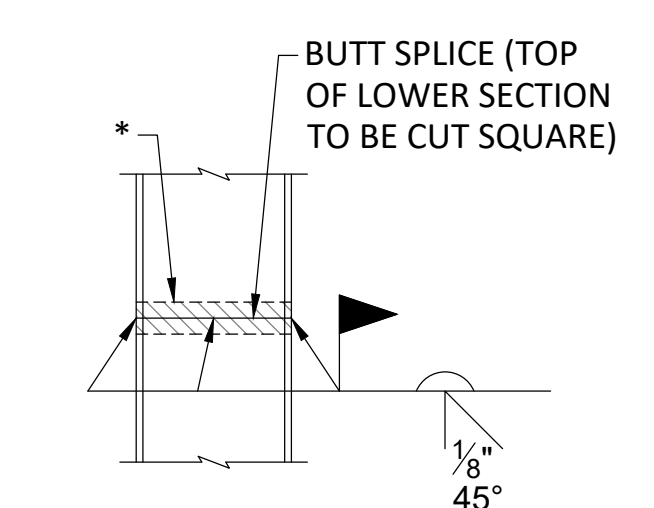


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DATE:	10/29/2020		



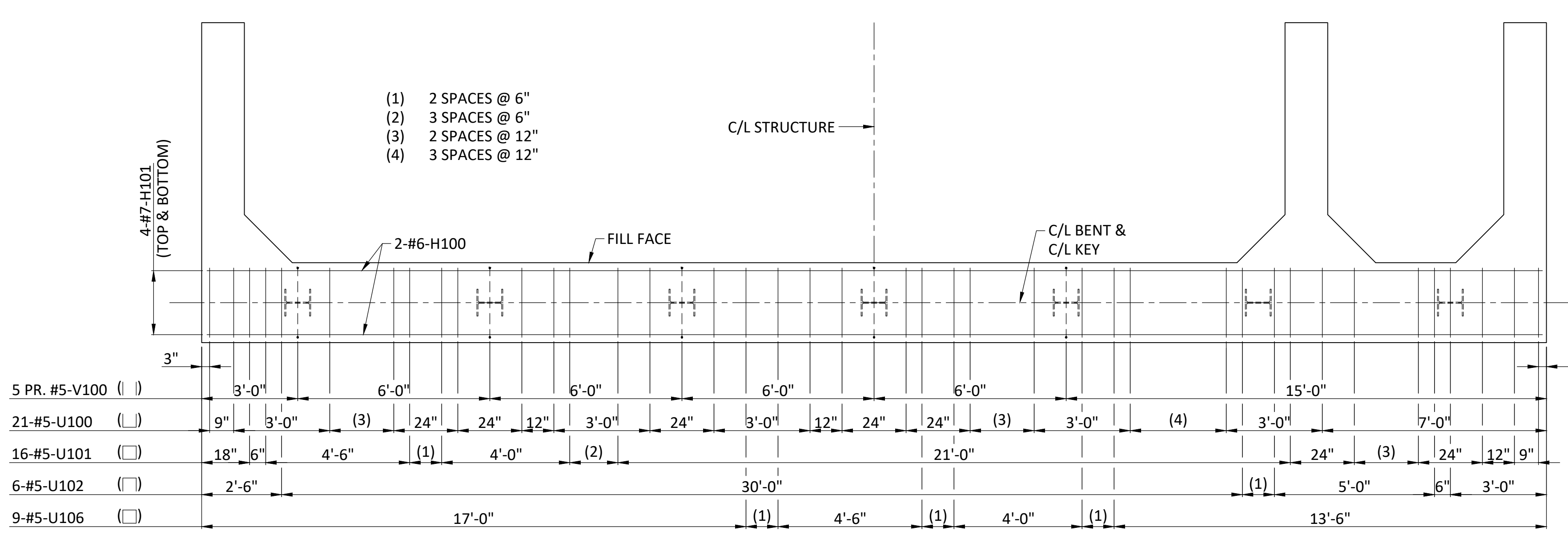
SECTION THRU KEY



STEEL PILE SPlice (IF REQUIRED)

* GALVANIZING MATERIAL SHALL BE OMITTED OR REMOVED ONE INCH CLEAR OF WELD LOCATIONS IN ACCORDANCE WITH SEC 702.

PLAN OF BEAM



PLAN OF BEAM SHOWING REINFORCEMENT
KEYS NOT SHOWN FOR CLARITY.

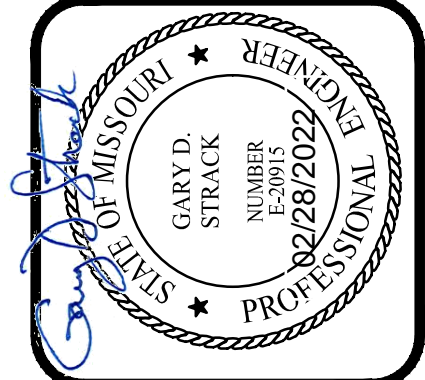
GENERAL NOTES:
WORK THIS SHEET WITH SHEETS NO. 12 & 13.
ALL U BARS AND PAIRS OF V BARS SHALL BE PLACED PARALLEL TO CENTERLINE OF ROADWAY.
REINFORCING STEEL SHALL BE SHIFTED TO CLEAR PILES.
U BARS SHALL CLEAR PILES BY AT LEAST 1 1/2 INCHES.

ITEM	QUANTITY
CLASS 1 EXCAVATION	CU. YARD 43.0
GALVANIZED STRUCTURAL STEEL PILES (12 IN.)	LINEAR FOOT 70
PRE-BORE FOR PILING	LINEAR FOOT 59.5
PILE POINT REINFORCEMENT	EACH 7
CLASS B CONCRETE (SUBSTRUCTURE)	CU. YARD 18.8

THESE QUANTITIES ARE INCLUDED IN THE ESTIMATED QUANTITIES TABLE ON SHEET NO. 9

END BENT 1
RIDGEMONT DR. BRIDGE OVER
COUNTY HOUSE BRANCH
SEC. 22 T48N, R13W
CITY OF COLUMBIA, MISSOURI

SHEET NUMBER
11
OF **28**

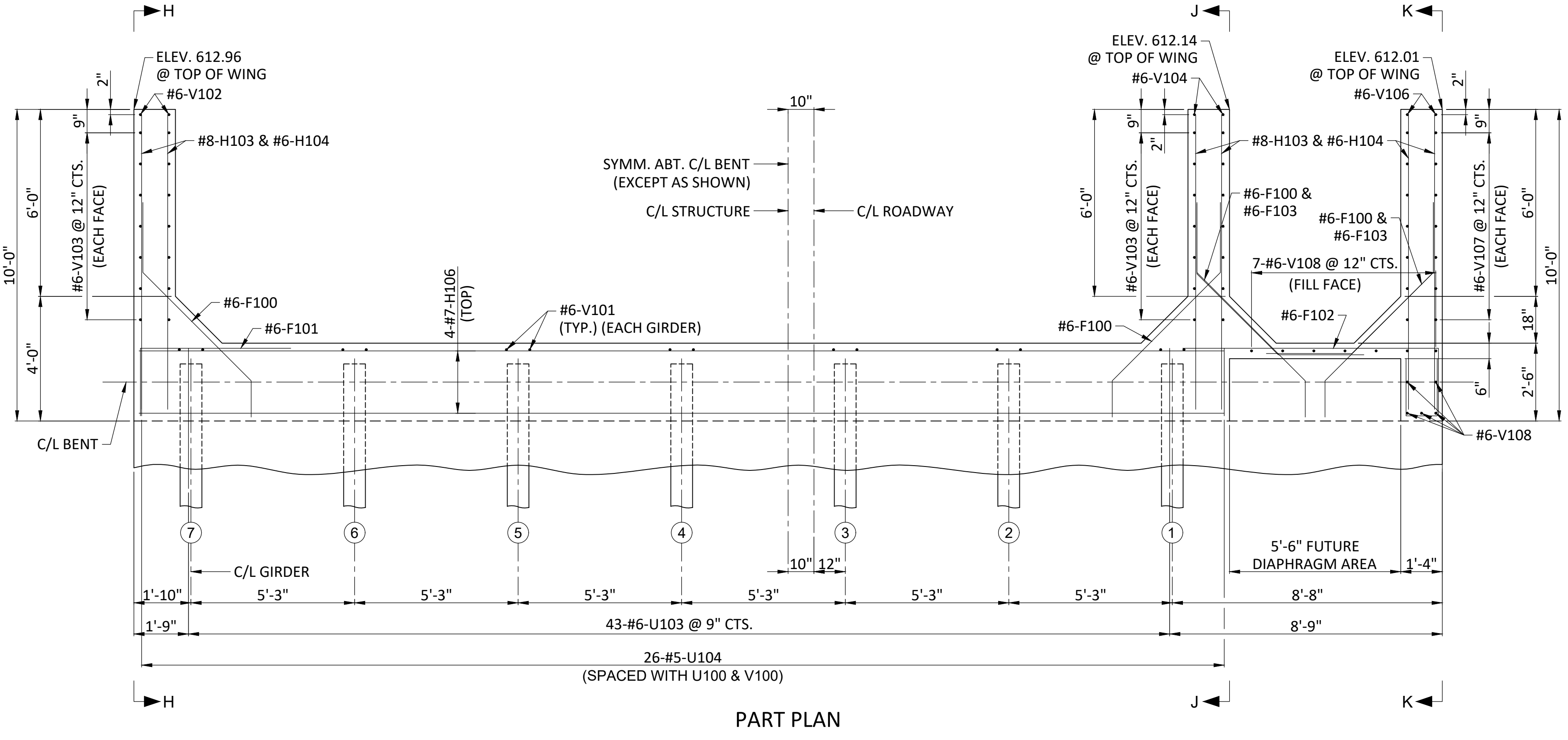
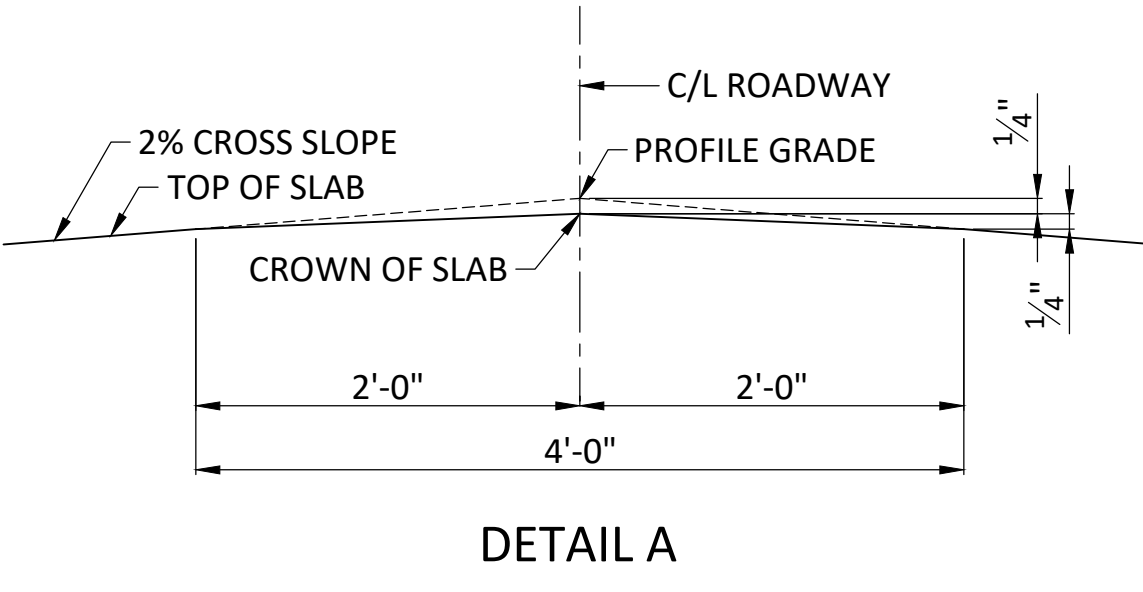
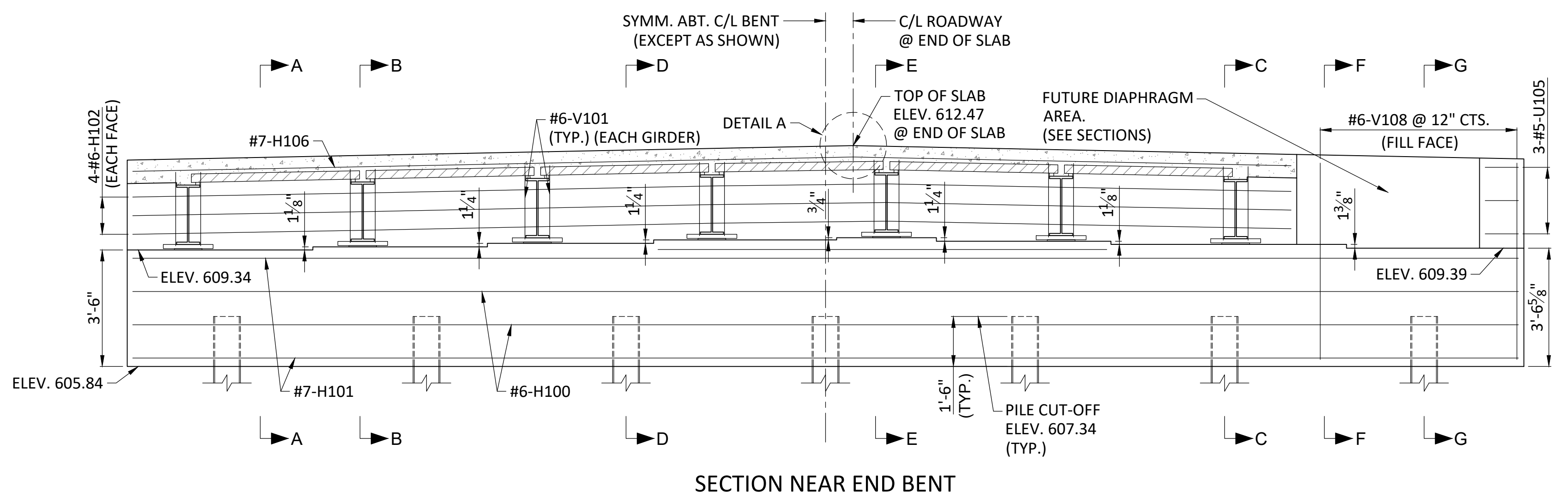


REVISIONS		DRAWING INFO.	
NO.	DESCRIPTION	BY	DATE

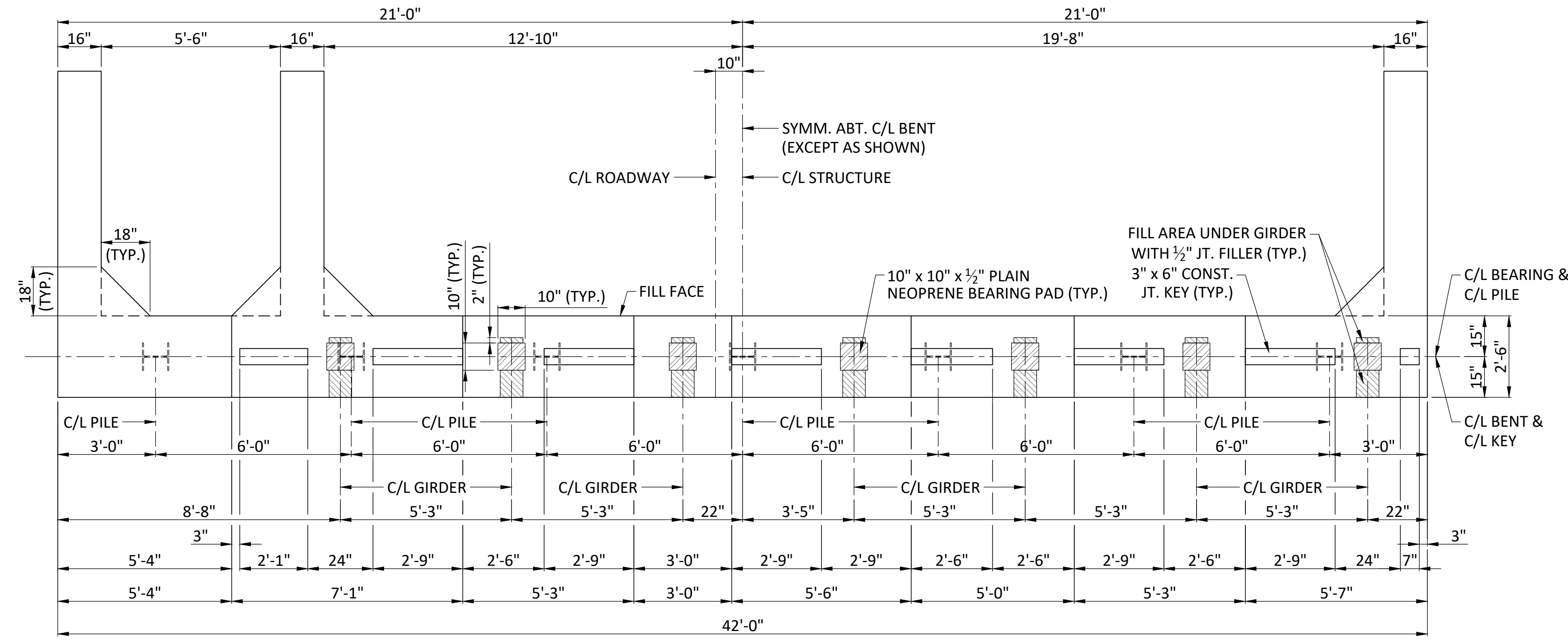
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CHECK BY:	GDS
DATE:	10/29/2020
FIELD BOOK:	2008
JOB NUMBER:	2008C0008

END BENT I
 RIDGEMONT DR. BRIDGE OVER
 COUNTY HOUSE BRANCH
 SEC. 22 T48N, R13W
 CITY OF COLUMBIA, MISSOURI

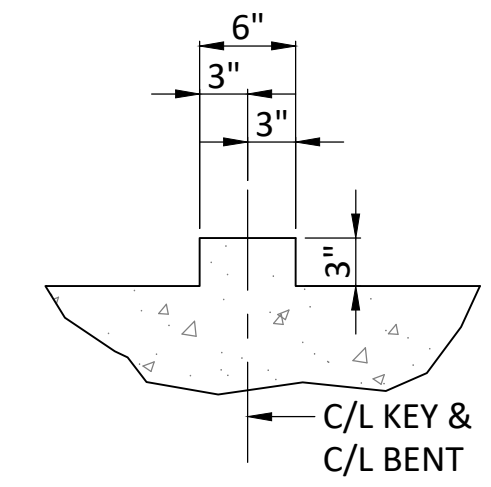
SHEET NUMBER
12
 OF 28



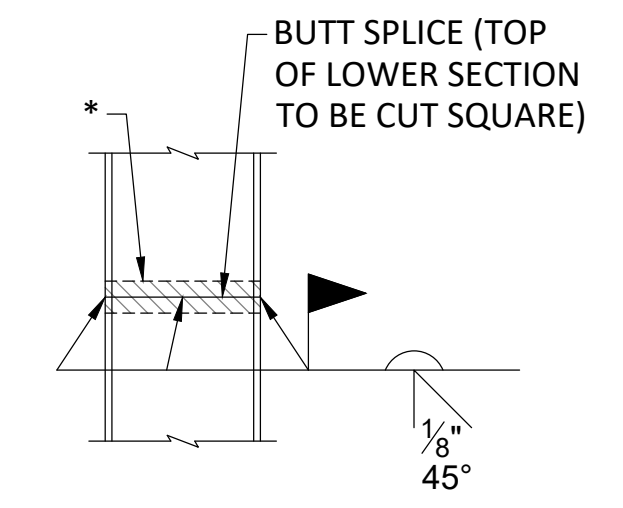
GENERAL NOTES:
 WORK THIS SHEET WITH SHEETS NO. 11 & 13.
 FOR SECTIONS AND ELEVATIONS SEE SHEET NO. 13
 THE #6-F100 BARS SHALL BE BENT IN THE FIELD TO CLEAR GIRDERS.
 ALL U BARS AND PAIRS OF V BARS SHALL BE PLACED PARALLEL TO CENTERLINE OF ROADWAY.
 ALL CONCRETE IN THE END BENT ABOVE TOP OF BEAM AND BELOW TOP OF SLAB SHALL BE CLASS B-2.



PLAN OF BEAM

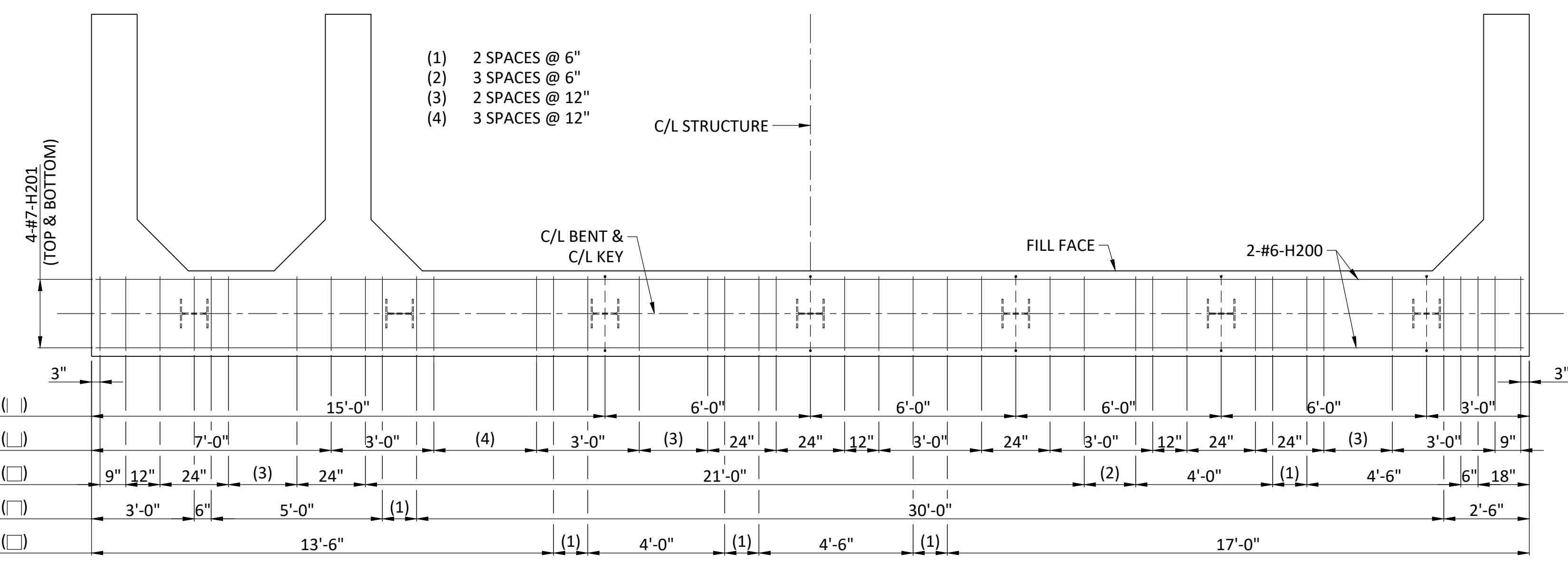


SECTION THRU KEY



STEEL PILE SPlice
(IF REQUIRED)

* GALVANIZING MATERIAL SHALL BE OMITTED OR REMOVED ONE INCH CLEAR OF WELD LOCATIONS IN ACCORDANCE WITH SEC 702.



PLAN OF BEAM SHOWING REINFORCEMENT
KEYS NOT SHOWN FOR CLARITY.

GENERAL NOTES:
 WORK THIS SHEET WITH SHEETS NO. 15 & 16.
 ALL U BARS AND PAIRS OF V BARS SHALL BE PLACED PARALLEL TO CENTERLINE OF ROADWAY.
 REINFORCING STEEL SHALL BE SHIFTED TO CLEAR PILES.
 U BARS SHALL CLEAR PILES BY AT LEAST 1 1/2 INCHES.

SUBSTRUCTURE QUANTITY TABLE FOR BENT NO. 2		
ITEM		QUANTITY
CLASS 1 EXCAVATION	CU. YARD	41.8
GALVANIZED STRUCTURAL STEEL PILES (12 IN.)	LINEAR FOOT	70
PRE-BORE FOR PILING	LINEAR FOOT	59.5
PILE POINT REINFORCEMENT	EACH	7
CLASS B CONCRETE (SUBSTRUCTURE)	CU. YARD	18.8

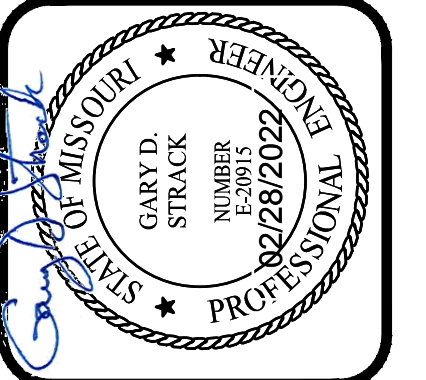
THESE QUANTITIES ARE INCLUDED IN THE ESTIMATED QUANTITIES TABLE ON SHEET NO. 9



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GDS			
DATE:	10/29/2020		
FIELD BOOK:			
JOB NUMBER:	20NC40008		

END BENT 2
 RIDGEMONT DR. BRIDGE OVER
 COUNTY HOUSE BRANCH
 SEC. 22 T48N, R13W
 CITY OF COLUMBIA, MISSOURI

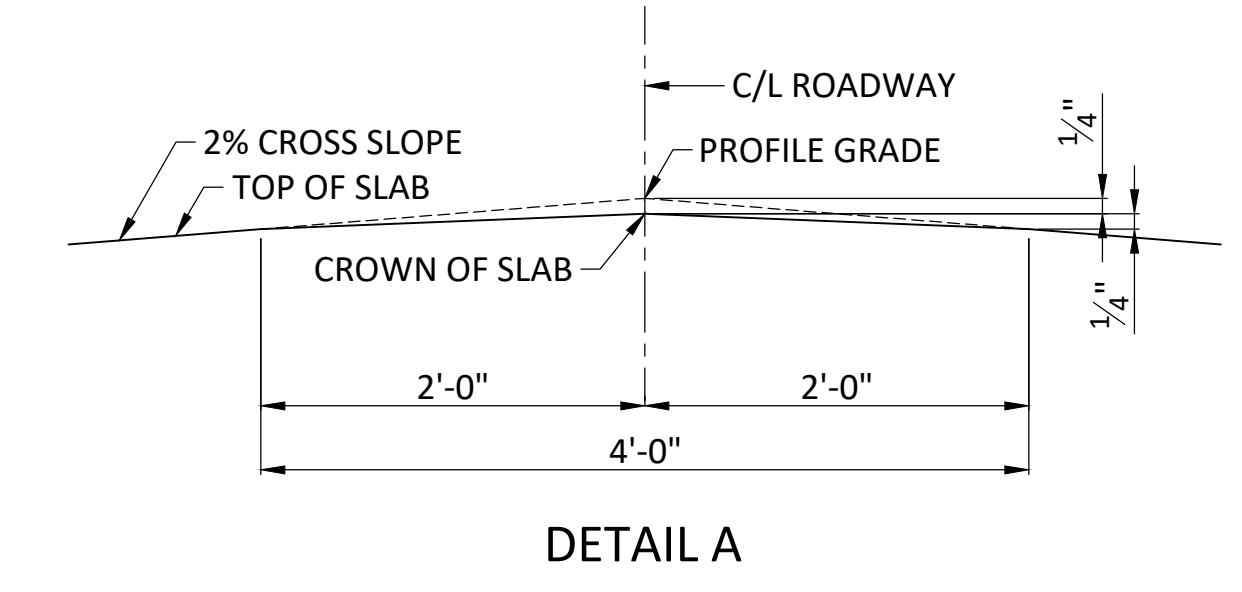
SHEET NUMBER
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 OF **28**



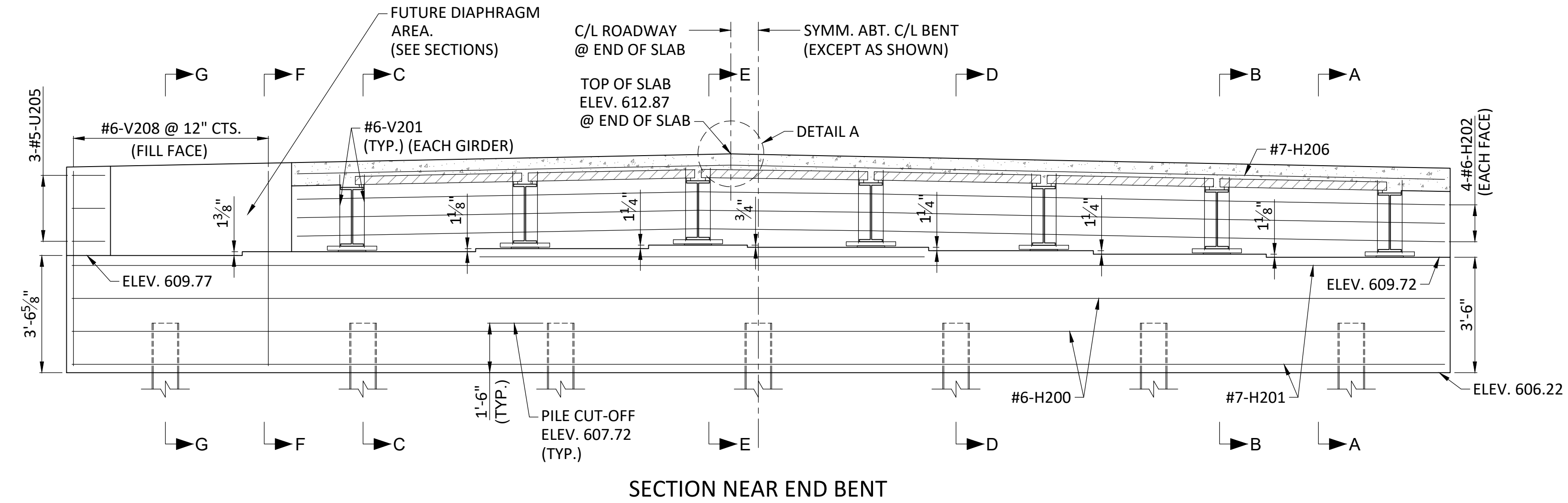
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REVISIONS	DATE
FIELD BY:	CAW
DRAWN BY:	GDS
CHECK BY:	10/29/2020
DATE:	FIELD BOOK:
DATE:	JOB NUMBER:
DATE:	20NC40008

END BENT 2
 RIDGEMONT DR. BRIDGE OVER
 COUNTY HOUSE BRANCH
 SEC. 22 T48N, R13W
 CITY OF COLUMBIA, MISSOURI

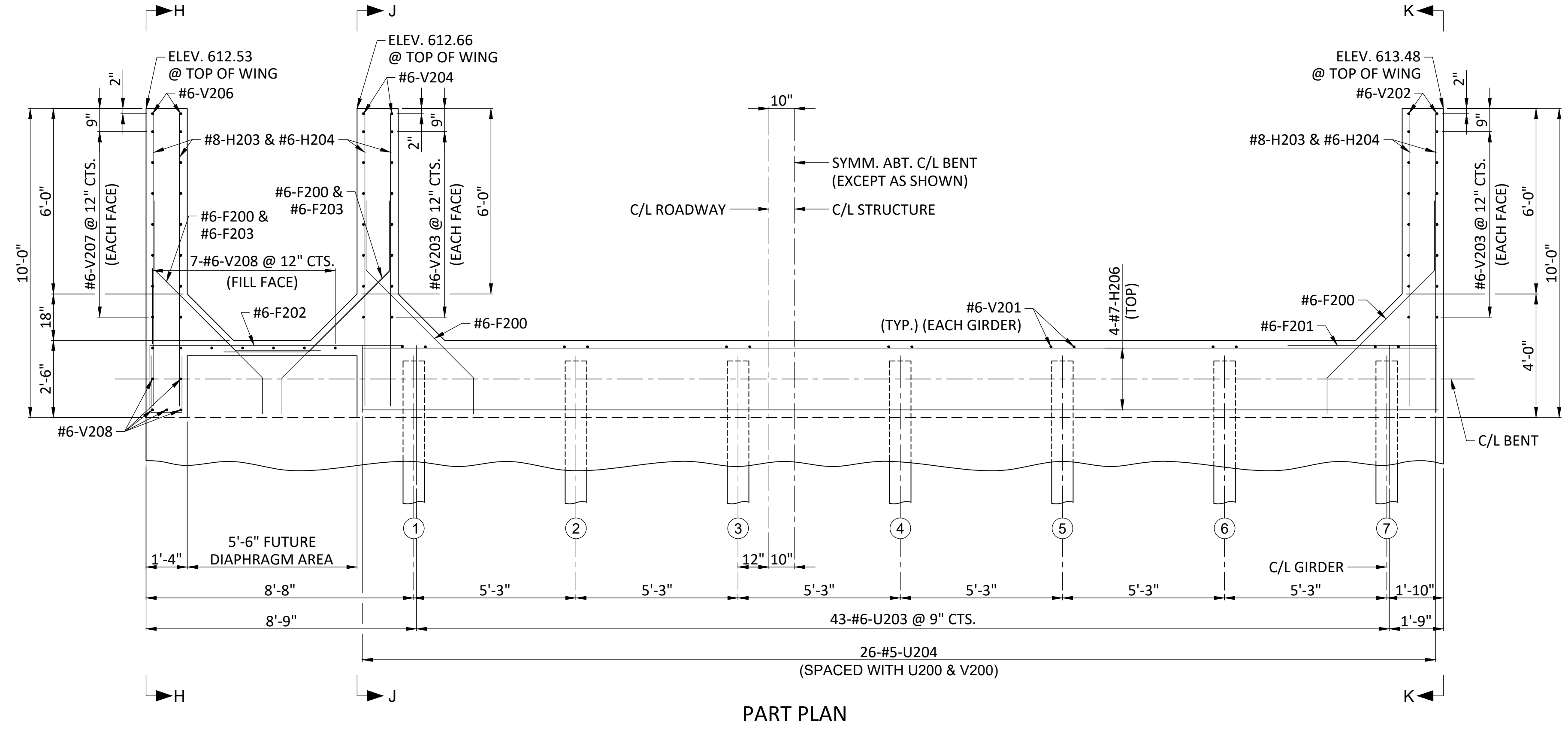
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DETAIL A

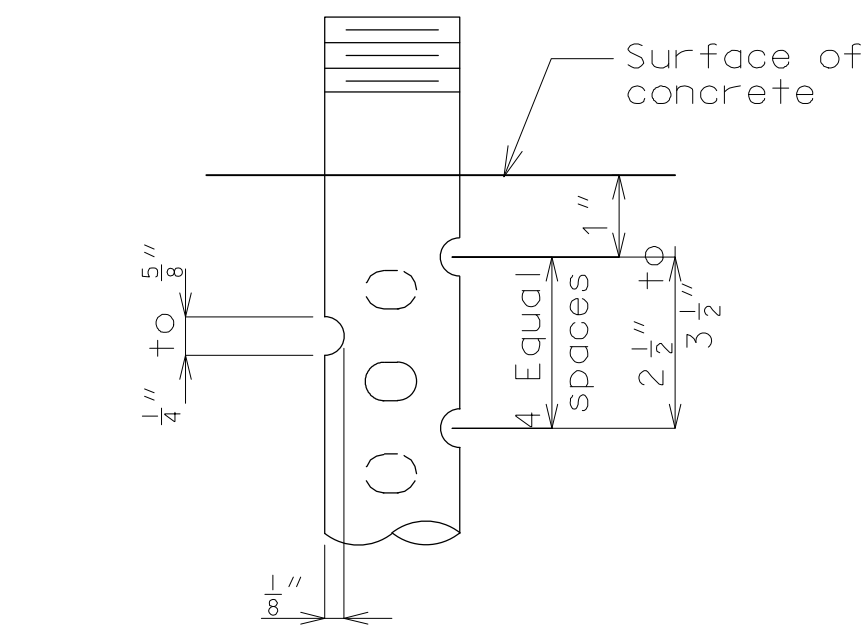


SECTION NEAR END BENT

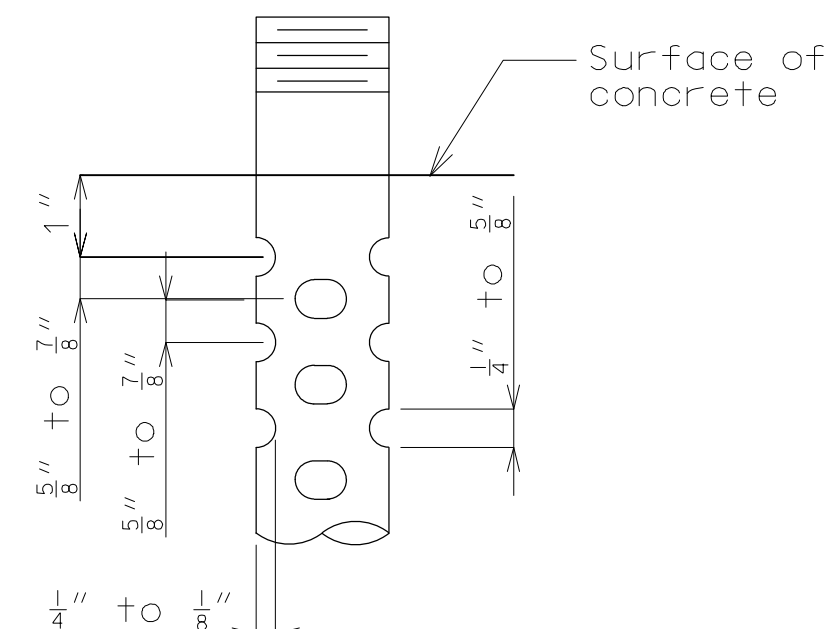


PART PLAN

GENERAL NOTES:
 WORK THIS SHEET WITH SHEETS NO. 14 & 16.
 FOR SECTIONS AND ELEVATIONS SEE SHEET NO. 16
 THE #6-F200 BARS SHALL BE BENT IN THE FIELD TO CLEAR GIRDERS.
 ALL U BARS AND PAIRS OF V BARS SHALL BE PLACED PARALLEL TO CENTERLINE OF ROADWAY.
 ALL CONCRETE IN THE END BENT ABOVE TOP OF BEAM AND BELOW TOP OF SLAB SHALL BE CLASS B-2.

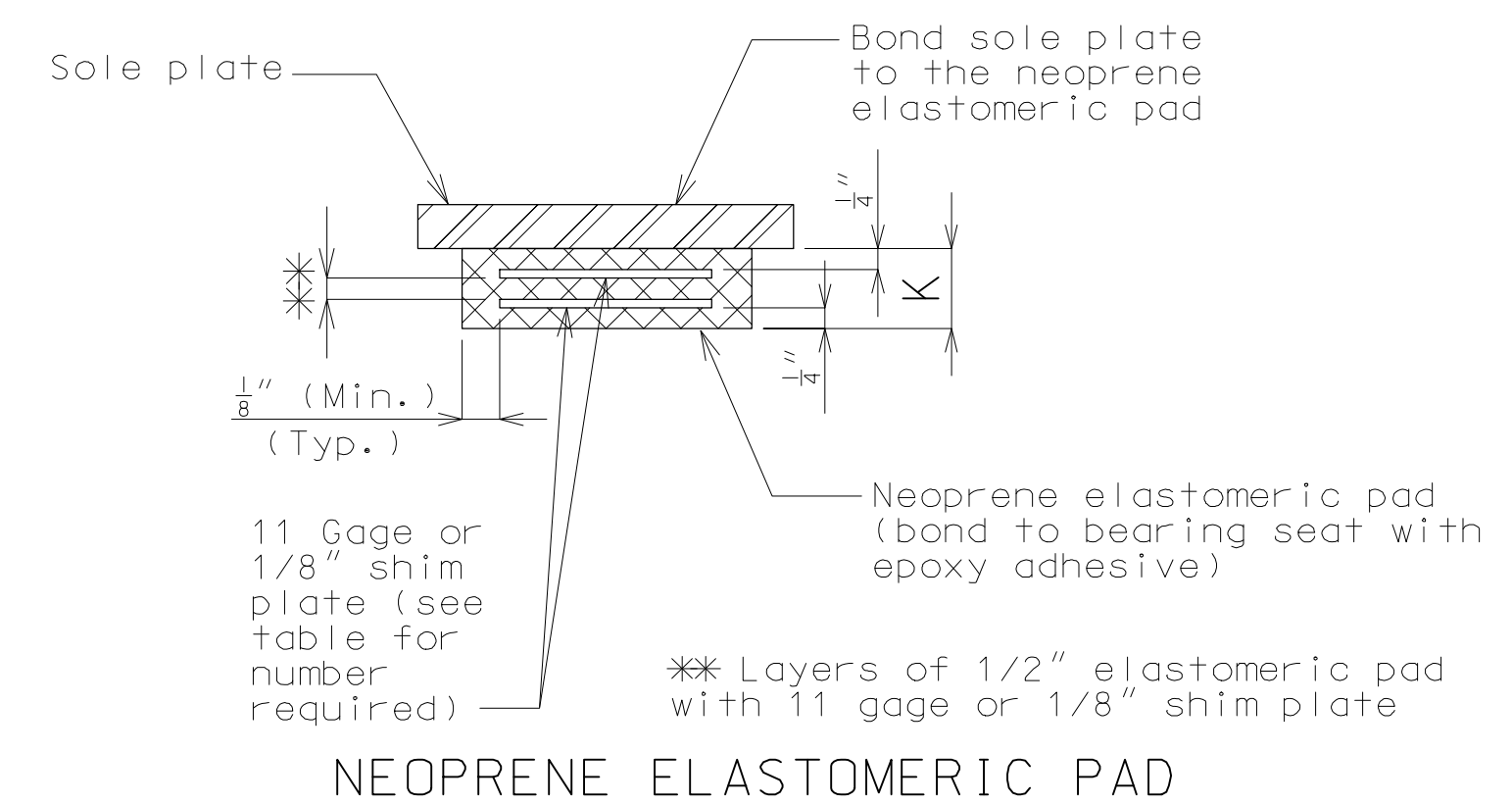
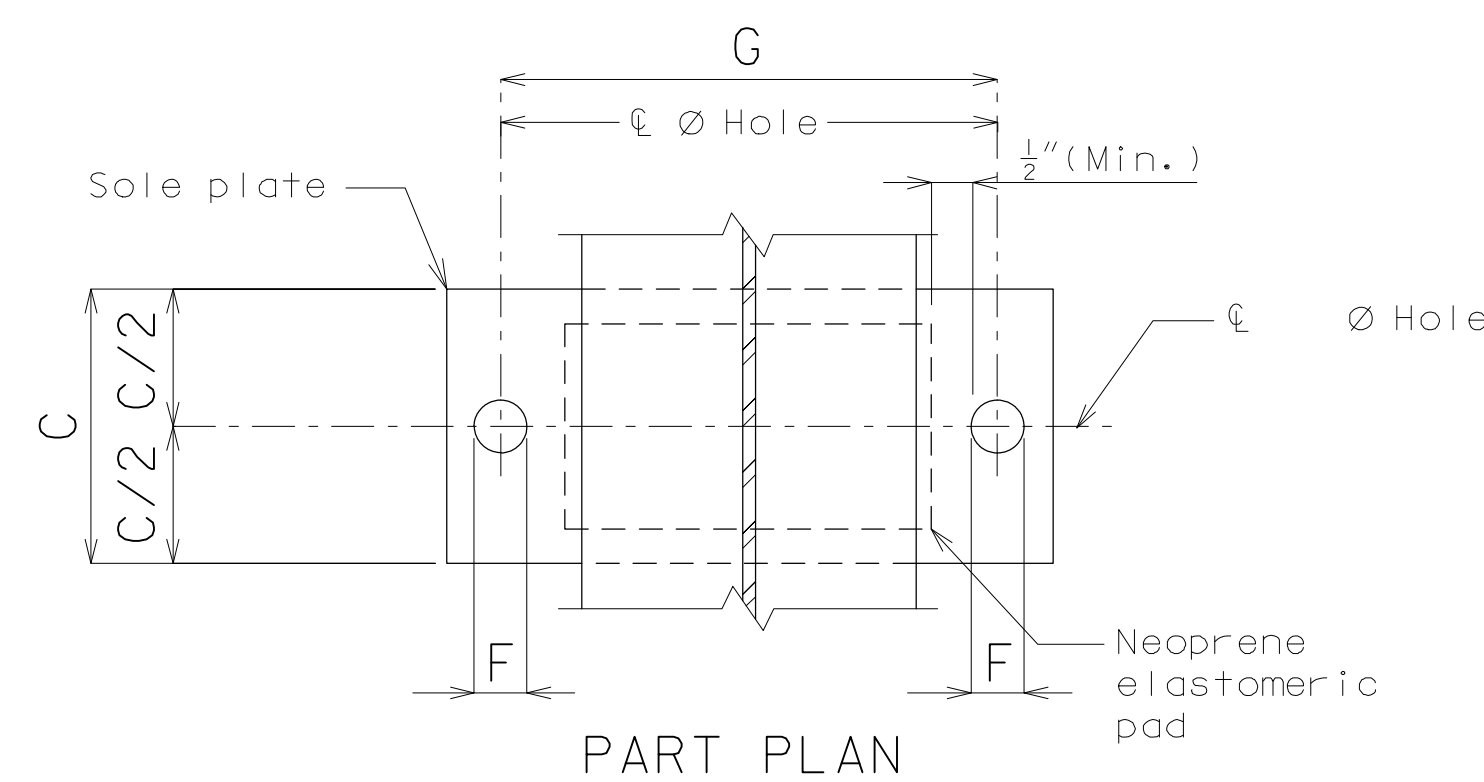
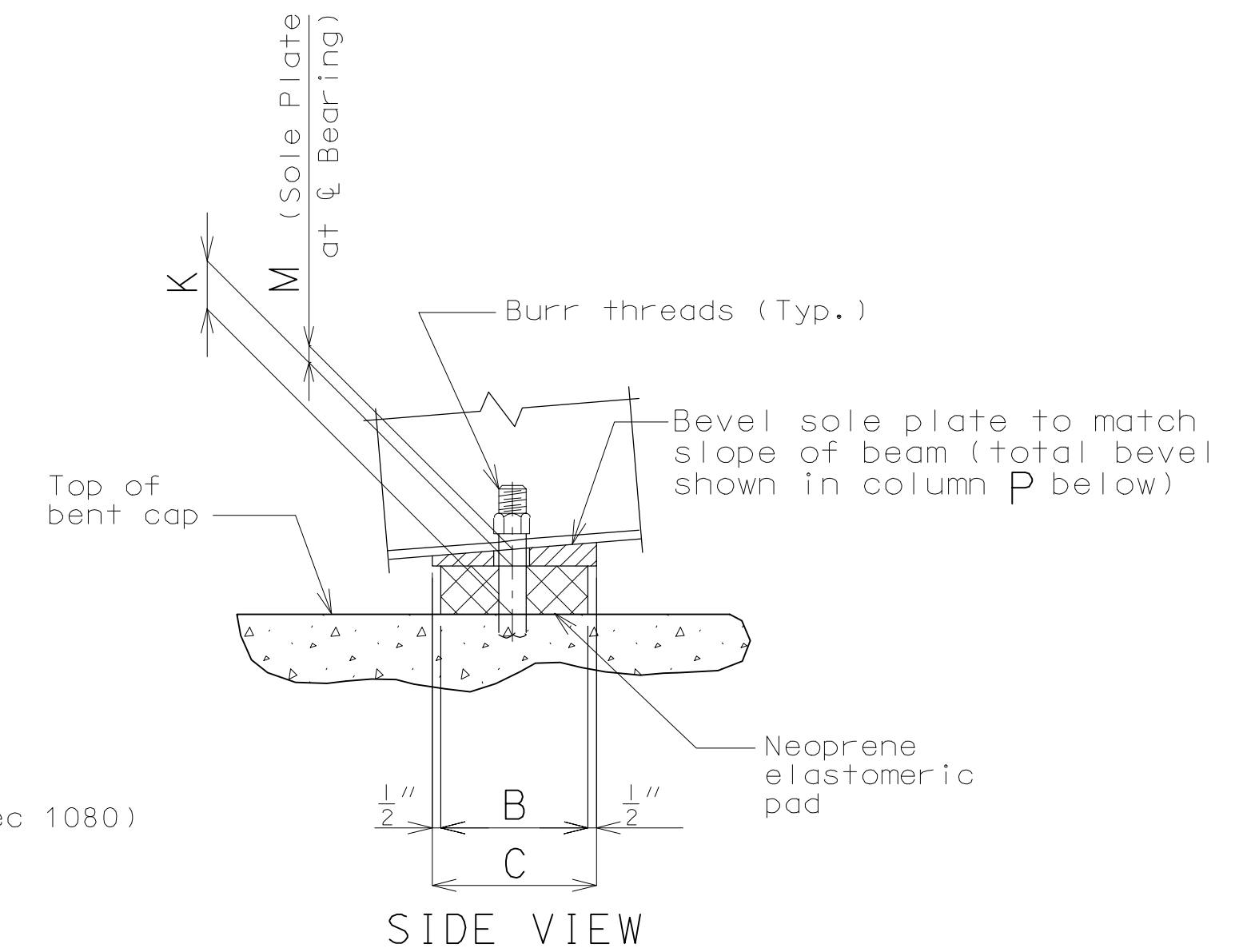
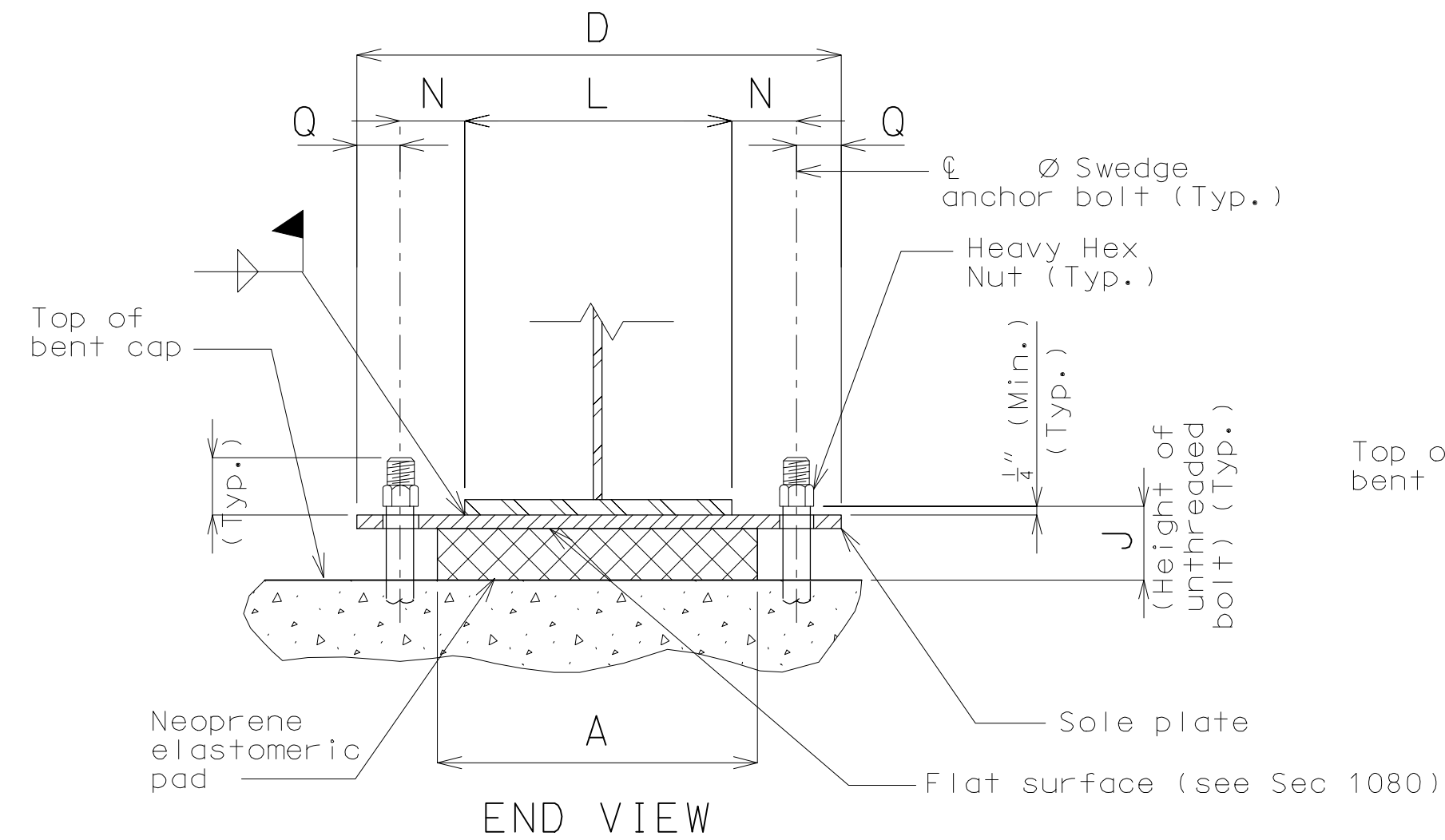


DETAIL FOR 3/4" Ø THRU 2 1/2" Ø ANCHOR BOLTS



OPTIONAL DETAIL FOR 1 3/8" Ø THRU 2 1/2" Ø ANCHOR BOLTS

SWEDGE ANCHOR BOLT DETAILS



FIXED BEARINGS														NUMBER OF SHIM PLATES *	NUMBER REQUIRED
BENT NO.	A	B	C	D	F	G	J	K	L	M	N	P	Q		
1	10"	10"	11"	18"	1 1/8"	13 1/2"	2 1/4"	1/2"	8 3/8"	1 1/2"	2 9/16"	0"	2 1/4"	0	7
2	10"	10"	11"	18"	1 1/8"	13 1/2"	2 1/4"	1/2"	8 3/8"	1 1/2"	2 9/16"	0"	2 1/4"	0	7
														TOTAL BEARINGS	14

* The required shim plate shall be placed between layers of elastomer and molded together to form an integral unit.

GENERAL NOTES:

Anchor bolts shall be 1" Ø ASTM F1554 Grade 55 swaged bolts and shall extend 15" into the concrete with ASTM A563 Grade A Heavy Hex nuts. Actual manufacturer's certified mill test reports (chemical and mechanical) shall be provided. Swedging shall be 1" less than extension into the concrete.

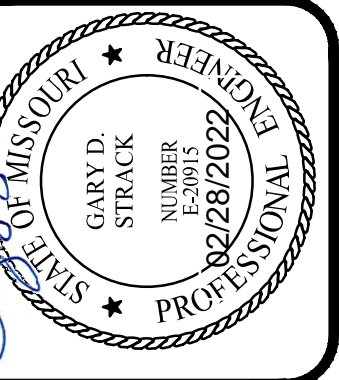
Anchor bolts and heavy hex nuts shall be coated with a minimum of two coats of inorganic zinc primer to provide a total dry film thickness of 4 mils minimum, 6 mils maximum, or galvanized in accordance with Sec 1081.

Neoprene Elastomeric Pads shall be 60 Durometer.

Structural steel for sole plate shall be ASTM A709 Grade 50W and shall be coated with a minimum of two coats of inorganic zinc primer to provide a total dry film thickness of 4 mils minimum, 6 mils maximum. The welds shall have corrosion resistance and weathering characteristics compatible with the base material.

Laminated Neoprene Bearing Pad Assembly shall be in accordance with Sec 716.

LAMINATED NEOPRENE BEARING PAD ASSEMBLY



NO.	REVISIONS		DRAWING INFO.			
	DESCRIPTION	BY	DATE	FIELD BY:	FIELD DATE:	JOB NUMBER:
				CAW		20NC4008
				GDS	10/29/2020	

BEARING PAD ASSEMBLY
RIDGEMONT DR. BRIDGE OVER
COUNTY HOUSE BRANCH
SEC. 22 T48N, R13W
CITY OF COLUMBIA, MISSOURI

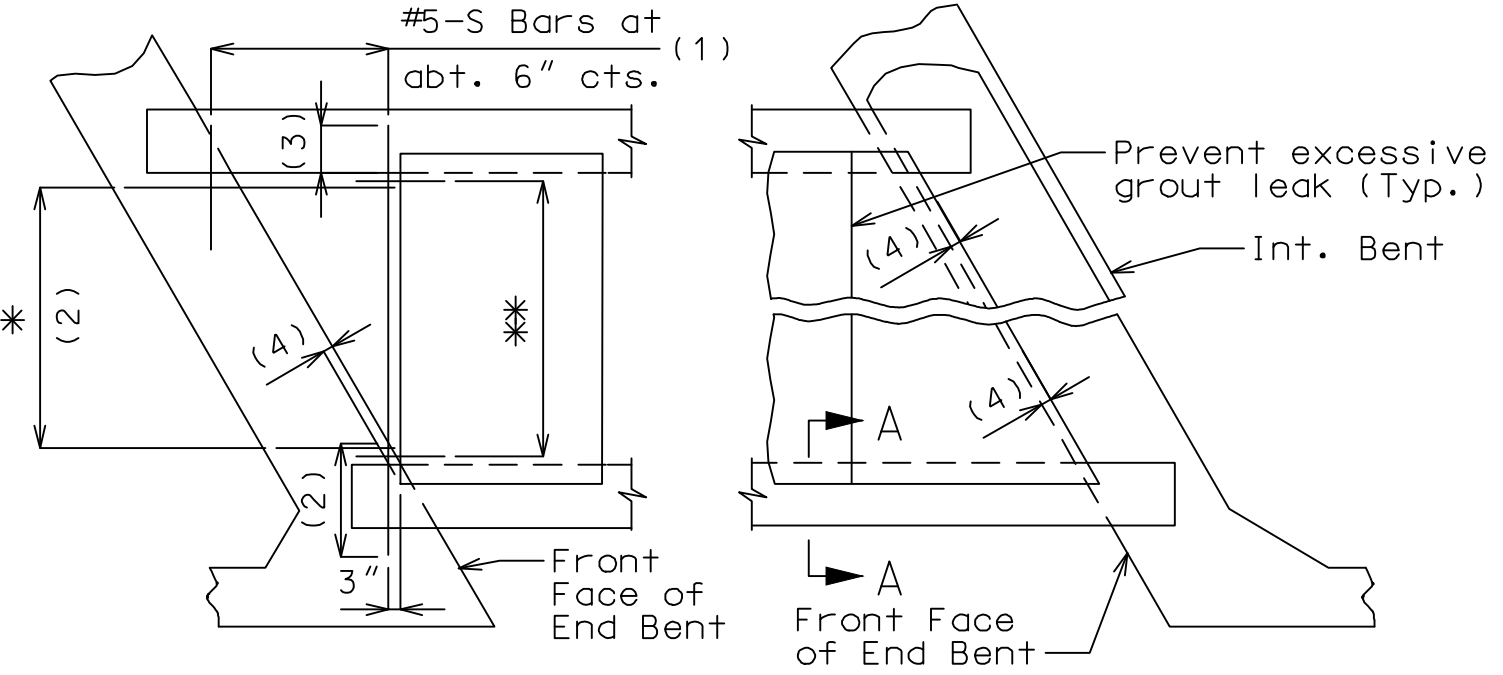
SHEET NUMBER
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OF 28

© 2019, DWG 2019-0009 - Ridgemont DR Bridge Over County House Branch Bearing Pad Assembly

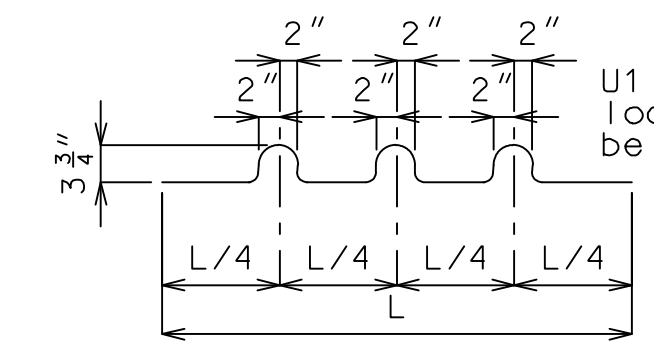


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DATE:			
FIELD BOOK:			
20NC40008			
JOB NUMBER:			

DETAILS OF PRESTRESSED PANELS
RIDGEMONT DR. BRIDGE OVER
COUNTY HOUSE BRANCH
CITY OF COLUMBIA, MISSOURI
SEC. 22 T48N, R13W



SQUARED END PANELS (INTEGRAL) SKEWED END PANELS (INTEGRAL)
PLAN SHOWING PANELS PLACEMENT

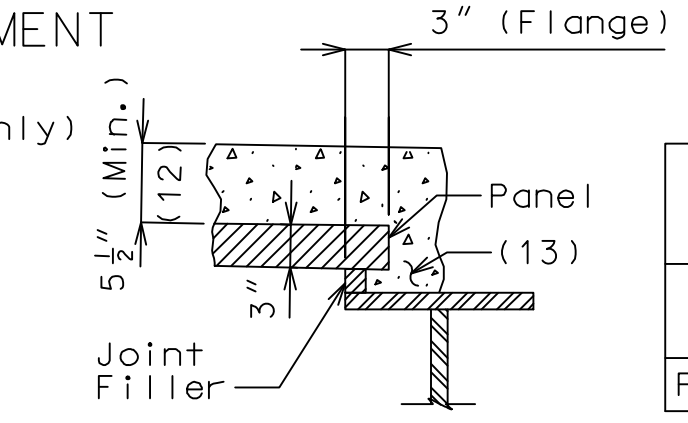


BENDING DIAGRAM FOR U1 BAR

U1 Bars may be oriented at right angles to location and spacing shown. U1 Bars shall be placed between P1 bars.

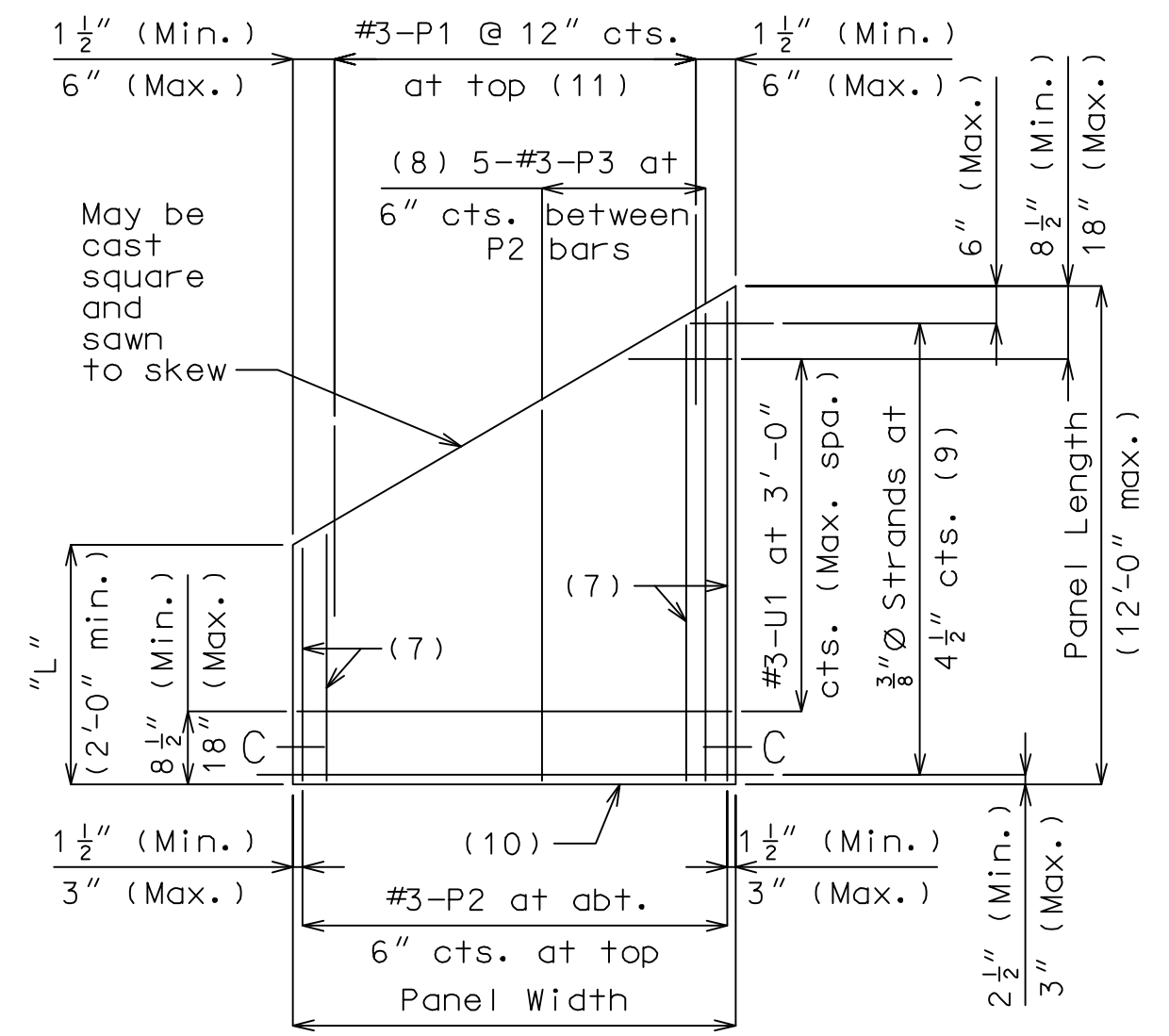
* #5-S Bars at abt. 9" cts. (1)
** #3-P1 at 12" cts. (End panels only)

Loc.	Width (W)	Height (H)
		Min. Max.
Flange	1 1/2"	1" 2"

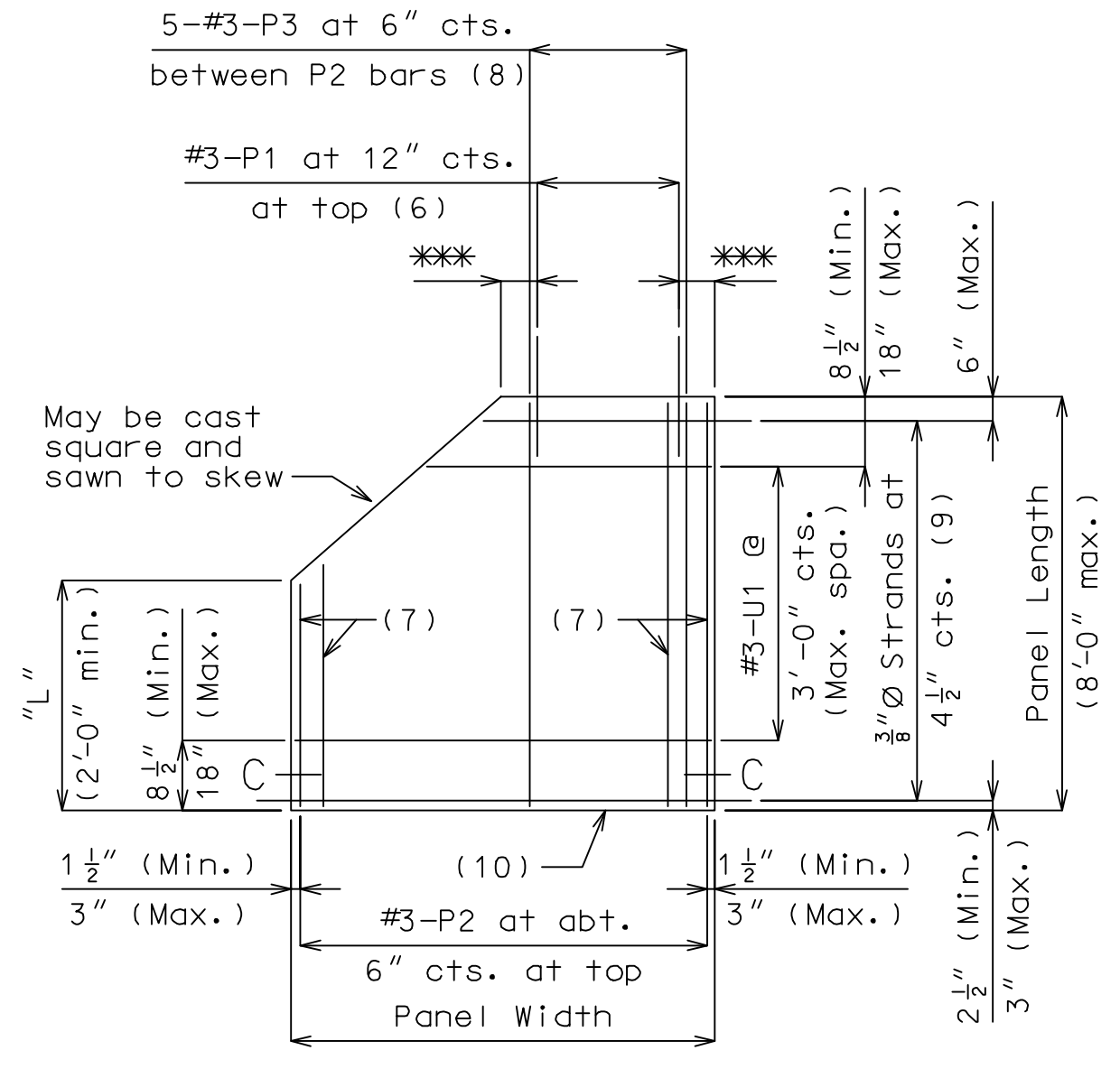


SECTION A-A
Reference Notes:

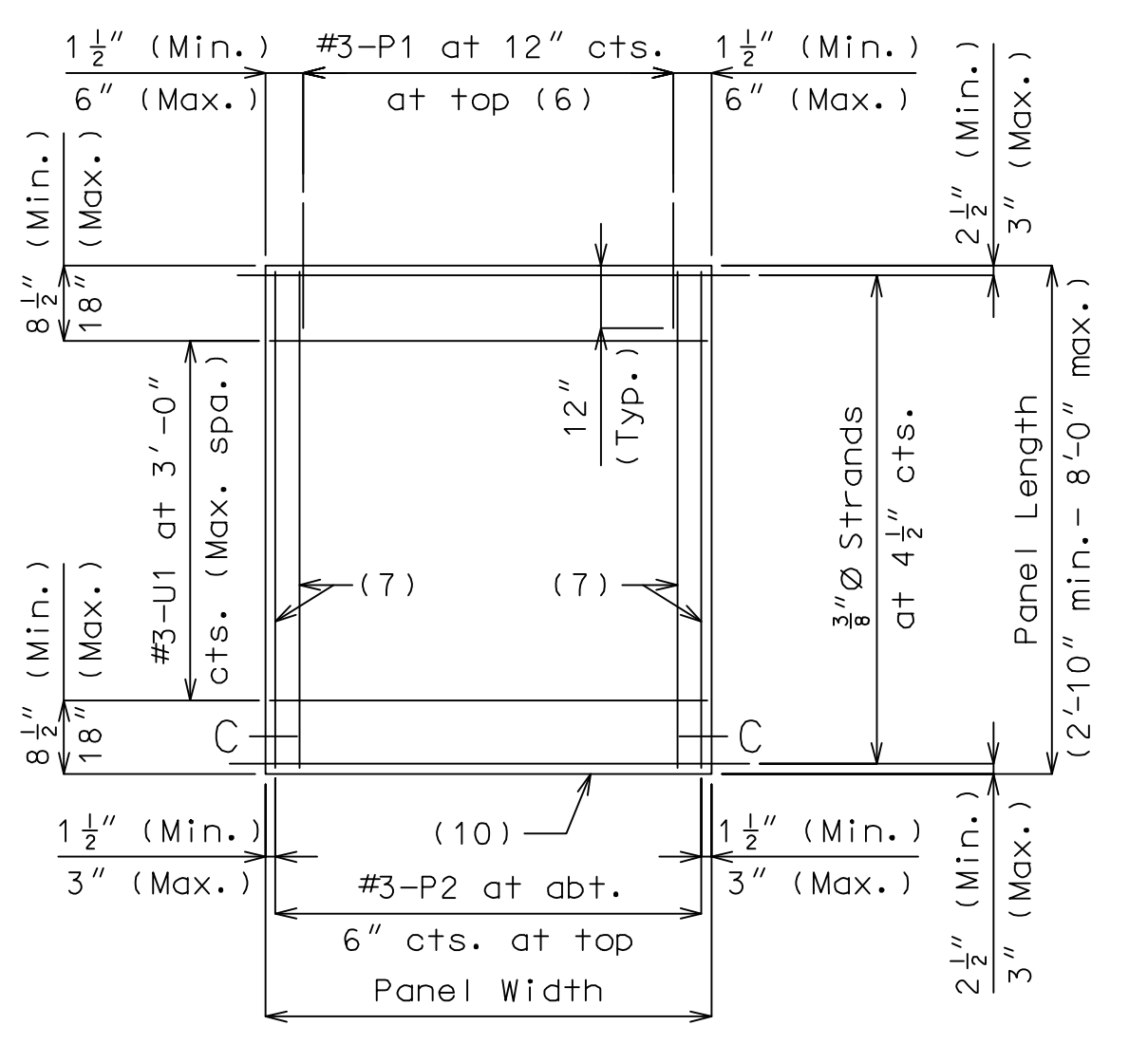
- Plan of Panels Placement:
- S-bars shown are bottom steel in slab between panels and used with squared and truncated end panels only.
 - Extend S-bars 18 inches beyond the front face of end bents and int. bents for squared and truncated end panels only.
 - Extend S-bars 9 inches beyond edge of girder (Typ.).
 - End panels shall be dimensioned 1/2" min. to 1 1/2" max. from the inside face of diaphragm.
 - For truncated end panels, use a min. of #5-S bars at 6" crossings in openings, or min. 4x4-W7xW7.
- Plans of Panels:
- For end panels only, P1 bars shall be 2'-0" in length and embedded 12". P1 bars will not be required for panels at squared integral end bents.
 - #3-P2 bars near edge of panel at bottom (under strands).
 - Use #3-P3 bars if panel is skewed 45° or greater.
 - Any strand 2'-0" or shorter shall have a #4 reinforcing bar on each side of it, centered between strands. Strands 2'-0" or shorter may then be debonded at the fabricator's option.
 - Optional 1/2" x 45° Chamfer one or both sides at bottom.
 - P1 bars not required for integral end bents.



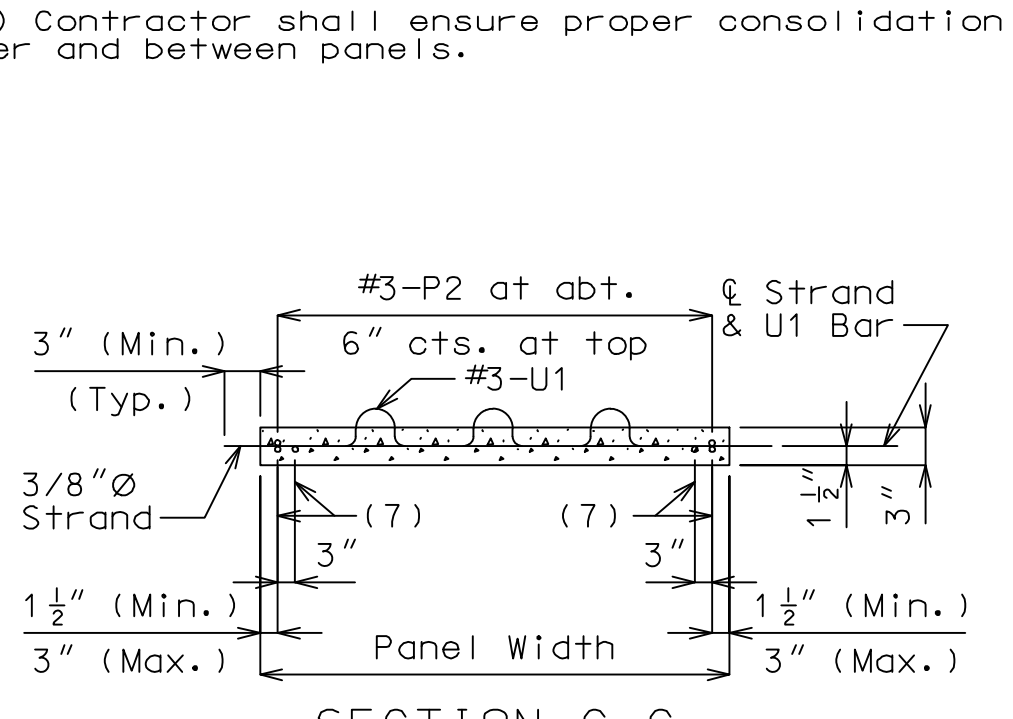
PLAN OF OPTIONAL SKEWED END PANEL



PLAN OF OPTIONAL TRUNCATED END PANEL
*** 3" (Min.), 6" (Max.)



PLAN OF SQUARED PANEL



SECTION C-C

DETAILS OF PRESTRESSED PANELS

General Notes:
Prestressed Panels:
Concrete for prestressed panels shall be Class A-1 with $f'c = 6,000$ psi, $f'ci = 4,000$ psi.
The top surface of all panels shall receive a scored finish with a depth of scoring of 1/8" perpendicular to the prestressing strands in the panels.
Prestressing tendons shall be high-tensile strength uncoated seven-wire low-relaxation strands for prestressed concrete in accordance with AASHTO M 203 Grade 270, with nominal diameter of strand = 3/8" and nominal area = 0.085 sq. in. and minimum ultimate strength = 22.95 kips (270 ksi). Larger strands may be used with the same spacing and initial tension.
Initial prestressing force = 17.2 kips/strand.

The method and sequence of releasing the strands shall be shown on the shop drawings.
Suitable anchorage devices for lifting panels may be cast in panels, provided the devices are shown on the shop drawings and approved by the engineer. Panel lengths shall be determined by the contractor and shown on the shop drawings.
When squared end panels are used at skewed bents, the skewed portion shall be cast full depth. No separate payment will be made for additional concrete and reinforcing required.

Support from diaphragm forms is required under the optional skewed end until cast-in-place concrete has reached 3,000 psi compressive strength.
Prestressed panels shall be brought to saturated surface-dry (SSD) condition just prior to the deck pour. There shall be no free standing water on the panels or in the area to be cast.
The prestressed panel quantities are not included in the table of estimated quantities for slab.

Reinforcing Steel:
All dimensions are out to out.
Hooks and bends shall be in accordance with the CRSI Manual of Standard Practice for Detailing Reinforced Concrete Structures, Stirrup and Tie Dimensions.
Minimum clearance to reinforcing steel shall be 1 1/2", unless otherwise shown.
If U1 bars interfere with placement of slab steel, U1 loops may be bent over, as necessary, to clear slab steel.

Deformed welded wire reinforcement (WWR) providing a minimum area of reinforcing perpendicular to strands of 0.22 sq in./ft, with spacing parallel to strands sufficient to ensure proper handling, may be used in lieu of the #3-P2 bars shown. Wire diameter shall not be larger than 0.375 inch. The above alternative reinforcement criteria may be used in lieu of the #3-P3 bars, when required, and placed over a width not less than 2 feet.
The following reinforcing steel shall be tied securely to the strands with the following maximum spacing in each direction:
#3-P2 bars at 16 inches.
WWR at 24 inches.

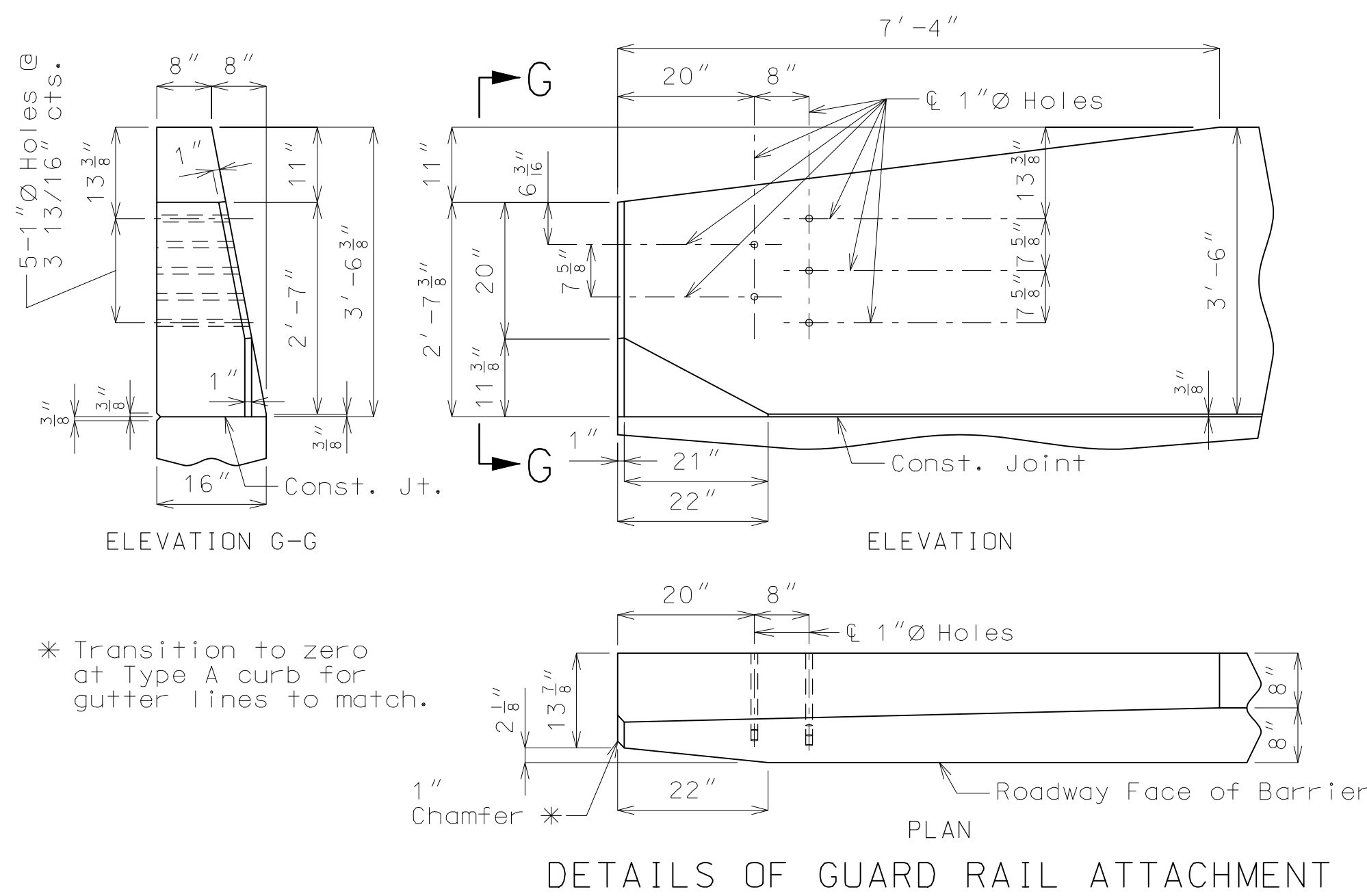
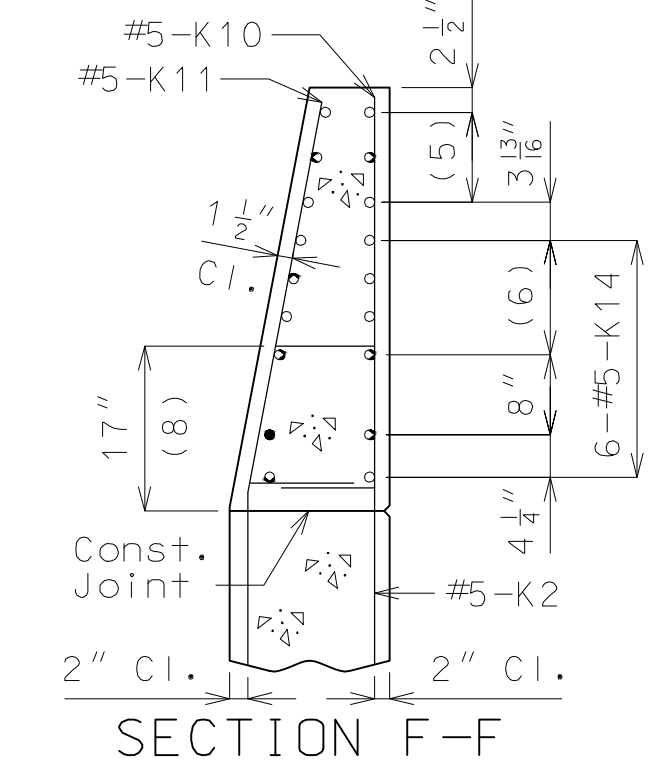
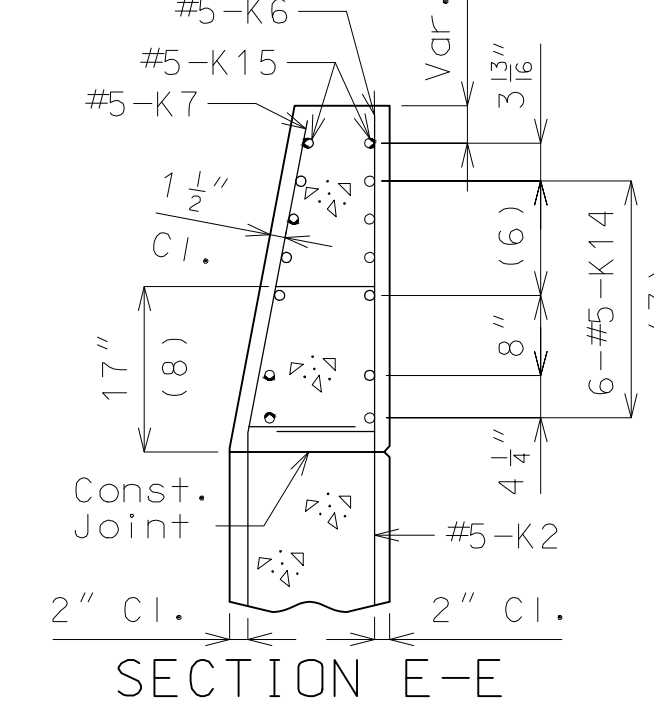
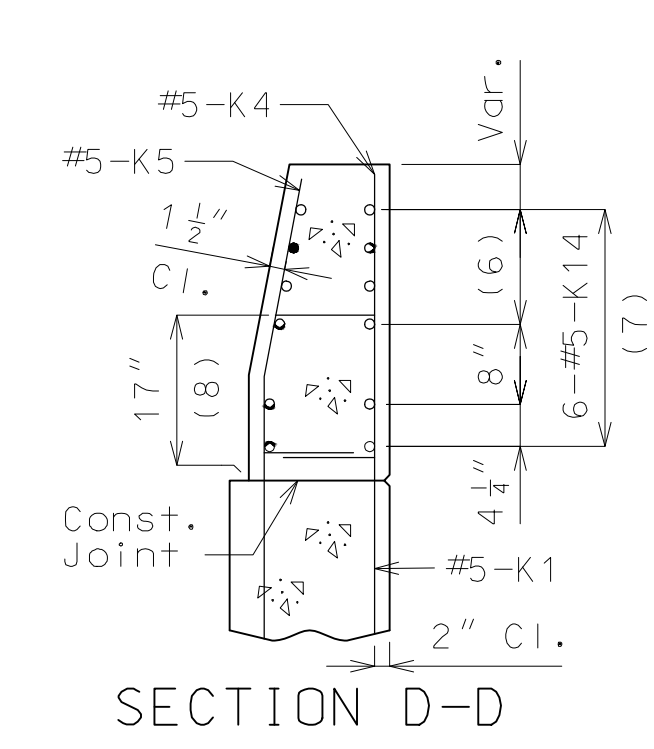
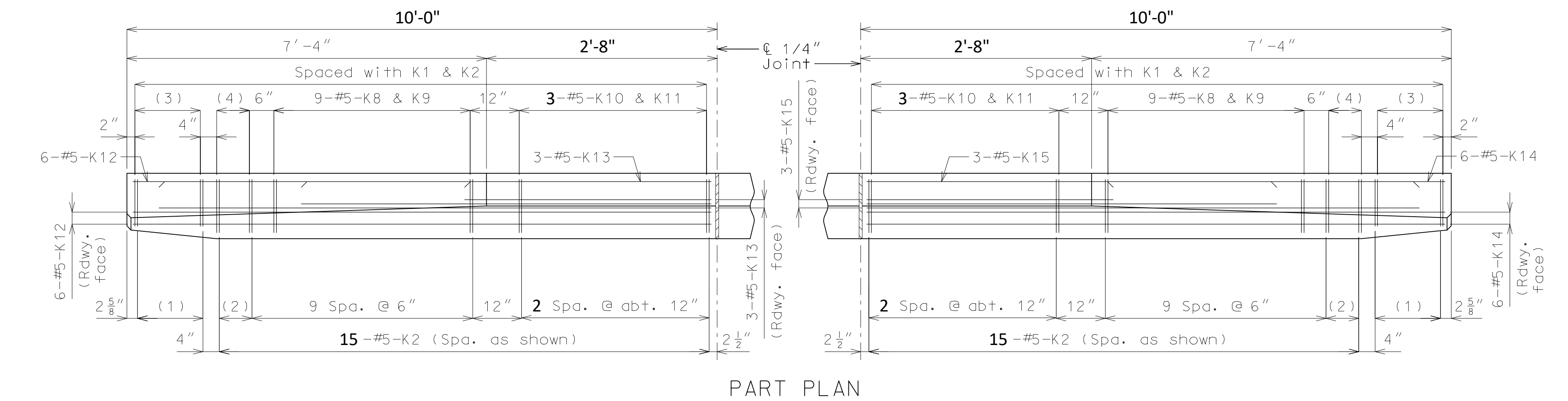
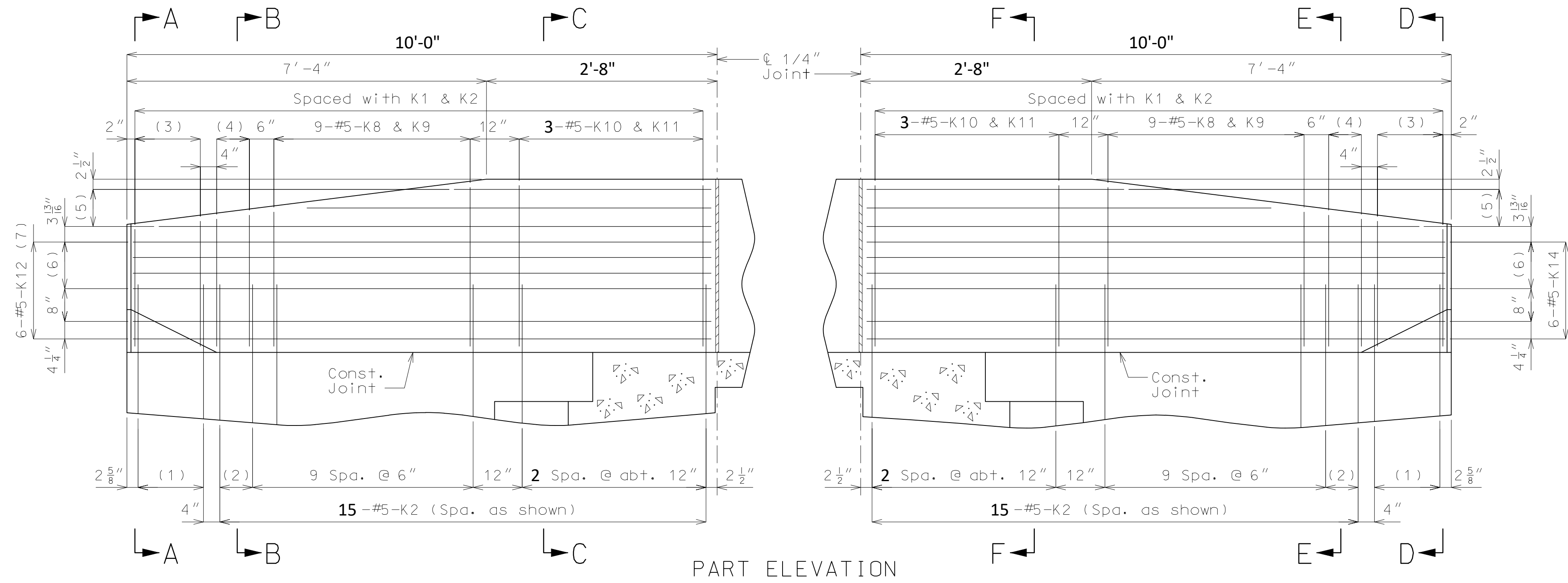
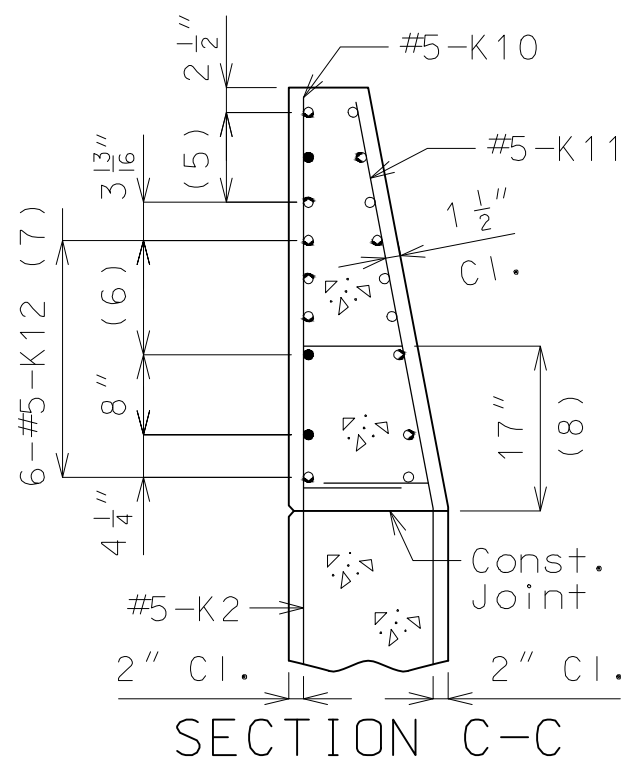
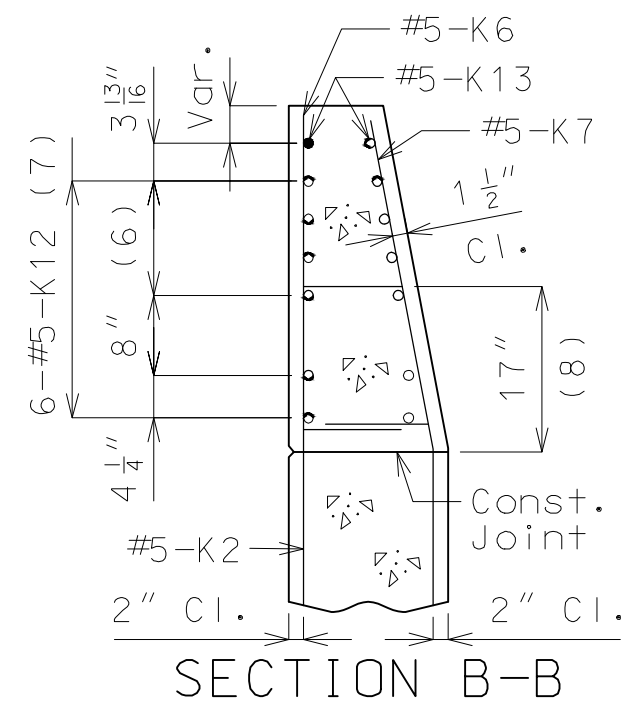
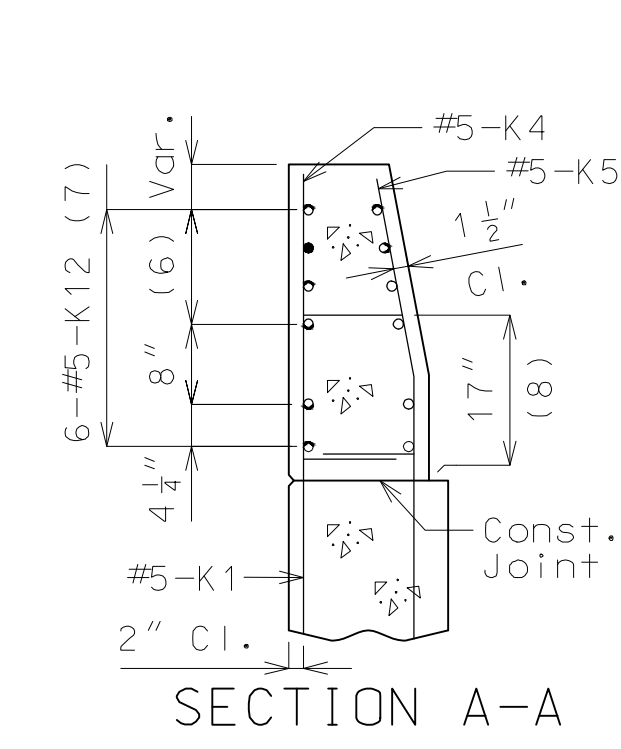
The #3-U1 bars shall be tied securely to #3-P2 bars, to WWR or to strands (when placed between P1 bars) at about 3-foot centers.
Minimum reinforcement steel length shall be 2'-0".
All reinforcement other than prestressing strands shall be epoxy coated.
Precast panels may be in contact with stirrup reinforcing in diaphragms.
S-bars are not listed in the bill of reinforcing.
Cost of S-bars will be considered completely covered by the contract unit price for the Slab.

Joint Filler:
Joint filler shall be preformed fiber expansion joint material in accordance with Sec 1057 or expanded or extruded polystyrene bedding material in accordance with Sec 1073.

The thickness of the joint filler shall be adjusted to achieve the slab haunching dimension found on Sheet No. 20. These adjustments shall be within the limits noted in the table of Joint Filler Dimensions.
Thicker material shall be used on one or both sides of the girder to reduce cast-in-place concrete thickness to within tolerances.

The same thickness of material shall be used under any one edge of any panel except at splices, and the maximum change in thickness between adjacent panels shall be 1/4 inch to correct for variations from Girder Camber Diagram. The polystyrene bedding material may be cut to match haunch height above top of flange.

Joint filler shall be glued to the girder. When thickness exceeds 1 1/2 inches, the joint filler shall be glued top and bottom. The glue used shall be the type recommended by the joint filler manufacturer.
Edges of panels shall be uniformly seated on the joint filler before slab reinforcement is placed.



* Transition to zero at Type A curb for gutter lines to match.

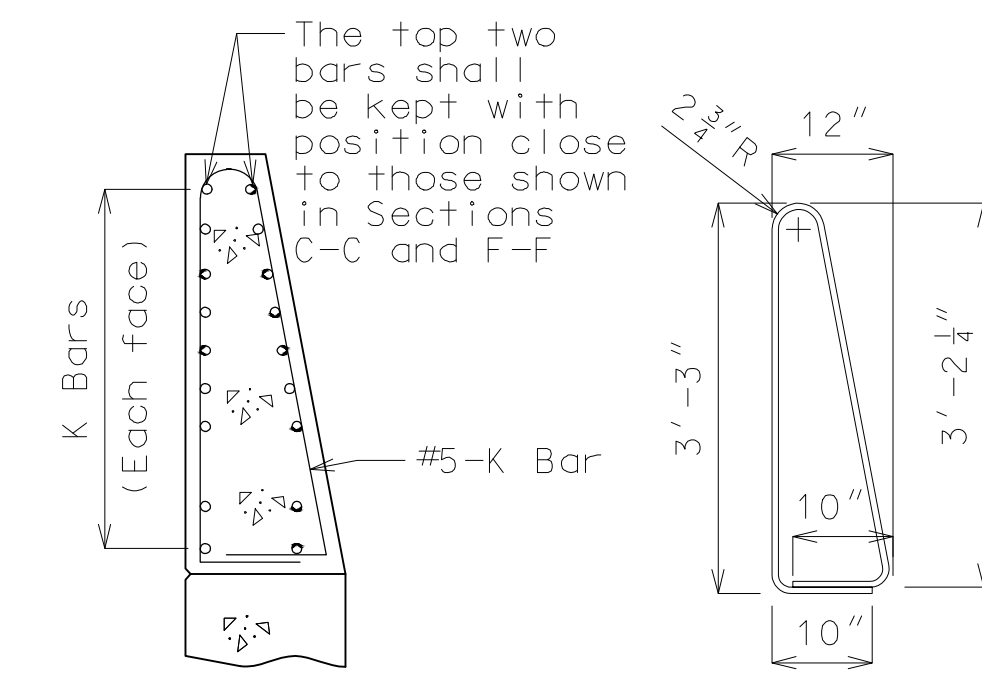
- (1) 5-#5-K1 @ 4" cts.
- (2) 2 spaces @ 4"
- (3) 5-#5-K4 & K5
- (4) 3-#5-K6 & K7
- (5) 3-#5-K13 or K15 @ 4 1/2" cts., each face
- (6) 3 spaces @ 3 13/16"
- (7) Spaced as shown, each face
- (8) To top of bar

General Notes:

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

Reinforcing Steel:

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

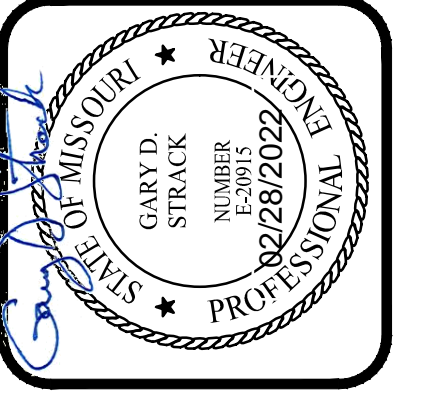


K10-K11 BAR PERMISSIBLE ALTERNATE SHAPE

(Other K bars not shown for clarity)
The K10-K11 bar combination may be furnished as one bar as shown, at the contractor's option.

All dimensions are out to out.

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



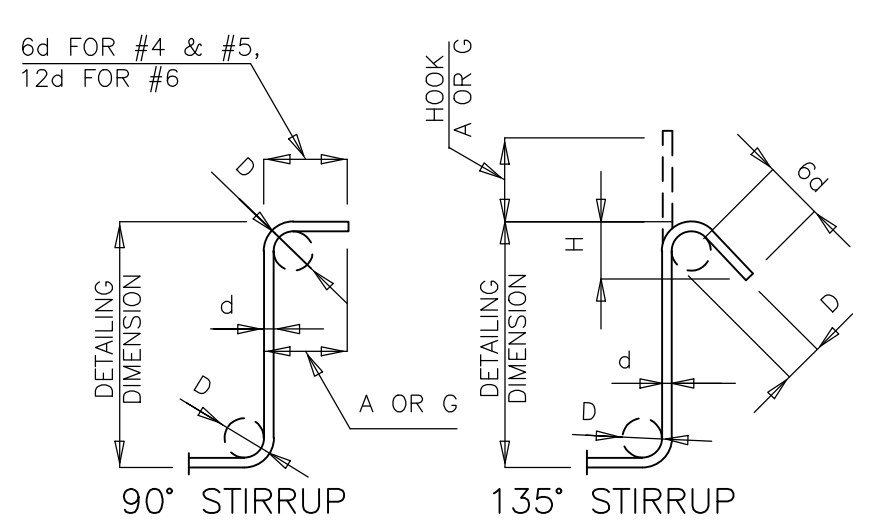
REVISIONS		DRAWING INFO.			
NO.	DESCRIPTION	BY	DATE	FIELD BY:	JOB NUMBER:
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				GDS	
				10/29/2020	
				FIELD BOOK:	
				JOB NUMBER:	

TYPE D BARRIER AT END BENTS
RIDGEMONT DR. BRIDGE OVER
COUNTY HOUSE BRANCH
CITY OF COLUMBIA, MISSOURI
SEC. 22 T48N, R13W

SHEET NUMBER
22
OF **28**

BILL OF REINFORCING STEEL

NO. REQ'D.	MARK NO.	LOCATION	EPOXY (E)	SHAPE NO.	STIRRUP (S)	SUBSTR. (X)	VARIES (V)	DIMENSIONS																NOMINAL LENGTH	ACTUAL LENGTH	WEIGHT
								B		C		D		E		F		H		K						
								FT.	IN.	FT.	IN.	FT.	IN.	FT.	IN.	FT.	IN.	FT.	IN.	FT.	IN.	FT.	IN.			
SUPERSTRUCTURE																										
END BENT 1																										
24	6F100	Wing	E	23	S			1	2.000	4	10.875	2	3.000	1	7.125	1	7.125	0	9.875	0	9.875	8	4	8	3	297
3	6F101	Diaphragm	E	19	S			4	9.875	2	2.000											7	0	6	11	31
3	6F102	Diaphragm	E	19	S			8	2.500	2	2.000											10	5	10	4	47
6	6F103	Diaphragm	E	15	S			2	9.000	3	8.125	2	3.000	1	7.125	1	7.000	1	11.250	1	11.375	8	8	8	7	77
4	6H100	Beam	E	20				41	8.000													41	8	41	8	250
8	7H101	Beam	E	20				41	8.000													41	8	41	8	681
6	6H102	Diaphragm	E	20				34	10.125													34	10	34	10	314
24	8H103	Diaphragm	E	20				9	5.500													9	6	9	6	609
52	6H104	Diaphragm	E	20				8	7.500													8	8	8	8	677
4	7H105	Diaphragm	E	20				13	6.000													13	6	13	6	110
4	8H106	Wing	E	20				34	10.125													34	10	34	10	372
21	5U100	Beam	E	31	S			5	1.625	2	2.000	5	1.625									13	4	13	2	288
16	5U101	Beam	E	13	S			2	2.000	3	1.000	2	2.000	3	1.000							11	5	11	1	185
6	5U102	Beam	E	10	S			3	1.000	2	2.000											8	4	8	2	51
43	6U103	Diaphragm	E	19	S			2	3.625	4	6.000											6	10	6	8	431
26	6U104	Diaphragm	E	31	S			2	2.125	2	2.000	2	2.125									7	5	7	3	283
3	5U105	Diaphragm	E	10	S			1	10.000	1	0.000											4	8	4	6	14
9	5U106	Beam	E	13	S			2	2.000	3	3.625	2	2.000	3	3.625							11	10	11	6	108
10	5V100	Beam	E	20				5	2.125													5	2	5	2	54
14	6V101	Diaphragm	E	20				2	2.500													2	3	2	3	47
2	6V102	Wing	E	20				6	10.000													6	10	6	10	21
14	6V103	Wing	E	20		V	2	6	10.000													6	10	6	10	144
		INCREMENT = -0.125						6	10.625													6	11			
2	6V104	Wing	E	20				6	0.125													6	0	6	0	18
14	6V105	Wing	E	20		V	2	6	0.250													6	0	6	0	127
		INCREMENT = -0.125						6	0.750													6	1			
2	6V106	Wing	E	20				5	10.375													5	10	5	10	18
14	6V107	Wing	E	20		V	2	5	10.500													5	11			124
		INCREMENT = -0.125						5	11.125													5	11			
12	6V108	Wing	E	20				5	10.875													5	11	5	11	107
END BENT 2																										
24	6F100	Wing	E	23	S			1	2.000	4	10.875	2	3.000	1	7.125	1	7.125	0	9.875	0	9.875	8	4	8	3	297
3	6F101	Diaphragm	E	19	S			4	9.875	2	2.000											7	0	6	11	31
3	6F102	Diaphragm	E	19	S			8	2.500	2	2.000											10	5	10	4	47
6	6F103	Diaphragm	E	15	S			2	9.000	3	8.125	2	3.000	1	7.125	1	7.000	1	11.250	1	11.375	8	8	8	7	77
4	6H100	Beam	E	20				41	8.000													41	8	41	8	250
8	7H101	Beam	E	20				41	8.000													41	8	41	8	681
6	6H102	Diaphragm	E	20				34	10.125													34	10	34	10	314
24	8H103	Diaphragm	E	20				9	5.500													9	6	9	6	609
52	6H104	Diaphragm	E	20				8	7.500													8	8	8	8	677
4	7H105	Diaphragm	E	20				13	6.000													13	6	13	6	110
4	8H106	Wing	E	20				34	10.125													34	10	34	10	372
21	5U100	Beam	E	31	S			5	1.625	2	2.000	5	1.625									13	4	13	2	288
16	5U101	Beam	E	13	S			2	2.000	3	1.000	2	2.000	3	1.000							11	5	11	1	185
6	5U102	Beam	E	10	S			3	1.000	2	2.000											8	4	8	2	51
43	6U103	Diaphragm	E	19	S			2	3.625	4	6.000											6	10	6	8	431
26	6U104	Diaphragm	E	31	S			2	2.125	2	2.000	2	2.125									7	5	7	3	283
3	5U105	Diaphragm	E	10	S			1	10.000	1	0.000											4	8	4	6	14
9	5U106	Beam	E	13	S			2	2.000	3	3.625	2	2.000	3	3.625							11	10	11	6	108
10	5V100	Beam	E	20				5	2.125													5	2	5	2	54
14	6V101	Diaphragm	E	20				2	2.500													2	3	2	3	47
2	6V102	Wing	E	20				6	10.000													6	10	6	10	21
14	6V103	Wing	E	20		V	2	6	10.000													6	10	6	10	144
		INCREMENT = -0.125						6	10.625													6	11			
2	6V104	Wing	E	20				6	0.125													6	0	6	0	18
14	6V105	Wing	E	20		V	2	6	0.250													6	0	6	0	127
		INCREMENT = -0.125						6	0.750													6	1			
2	6V106	Wing	E	20				5	10.375													5	10	5	10	18
14	6V107	Wing	E	20		V	2	5	10.500													5	11			124
		INCREMENT = -0.125						5	11.125													5	11			
12	6V108	Wing	E	20				5	10.875													5	11	5	11	107
SLAB																										
60	5S1	Slab	E	20				34	11.000													34	11	34	11	3,147
46	5S2	Slab	E	20				49	9.000													49	9	49	9	2,387
120	5S3	Slab	E	20				1	8.125													1	8	1	8	209
4	5S4	Slab	E	20				49	9.000													49	9	49	9	208
50	5S5	Slab	E	11				1	10.000	1	0.625	9	3.000	8	7.50							14	8	14	3	743

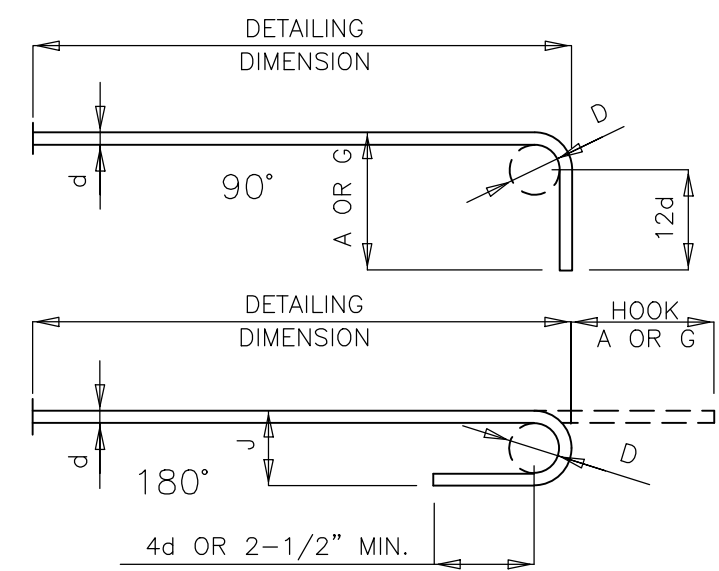


STIRRUP HOOK DIMENSIONS

GRADES 40 - 50 - 60 KSI

BAR SIZE	D (IN.)	90° HOOK		135° HOOK	
		H OOK A OR G	H OOK A OR G	A P P R O X . H	H
#4	2-1/2"	4-1/2"	4-1/2"	3"	
#5	2-1/2"	6"	5-1/2"	3-3/4"	
#6	4-1/2"	12"	8"	4-1/2"	

NOTE: UNLESS OTHERWISE NOTED DIAMETER "D" IS THE SAME FOR ALL BENDS AND HOOKS ON A BAR.



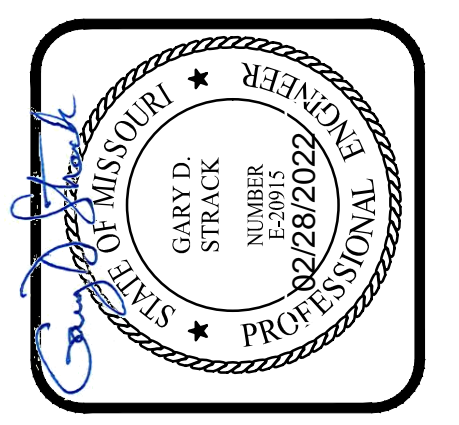
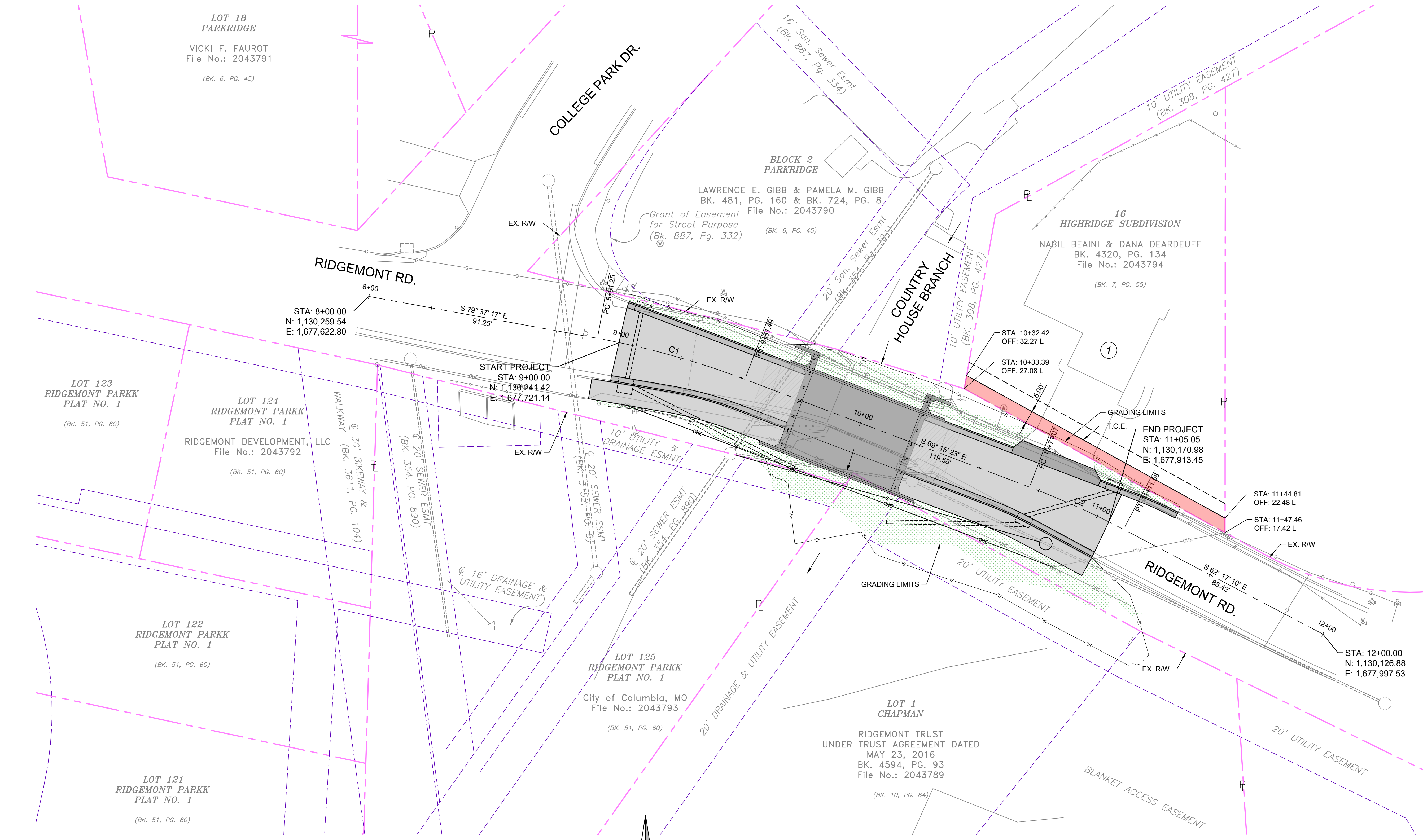
END HOOK DIMENSIONS

BAR SIZE	D (IN.)	ALL GRADES			
		180° HOOKS		90° HOOKS	
		A OR G	J	A OR G	J
#3	2-1/4"	5"	3"	6"	
#4	3"	6"	4"	8"	
#5	3-3/4"	7"	5"	10"	
#6	4-1/2"	8"	6"	12"	
#7	5-1/4"	10"	7"	14"	
#8	6"	11"	8"	16"	
#9	9-1/2"	15"	11-3/4"	19"	
#10	10-3/4"	17"	13-1/4"	22"	
#11	12"	19"	14-3/4"	2'-0"	
#14	18-1/4"	2'-3"	21-3/4"	2'-7"	

NOTE: TWO ADDITIONAL BARS, OF EACH SIZE, ARE REQUIRED FOR TESTING BUT

CURVE TABLE							
CURVE #	RADIUS	LENGTH	TANGENT	DELTA	CHORD DIRECTION	START POINT	END POINT
C1	333.00	60.24'	30.20	10°21'54"	S 74° 26' 20" E	STA: 8+91.25 (N: 1130243.11, E: 1677712.56)	STA: 9+51.49 (N: 1130226.97, E: 1677770.51)
C2	333.00	40.51'	20.28	6°58'13"	S 65° 46' 17" E	STA: 10+71.07 (N: 1130184.61, E: 1677882.33)	STA: 11+11.58 (N: 1130168.00, E: 1677919.25)

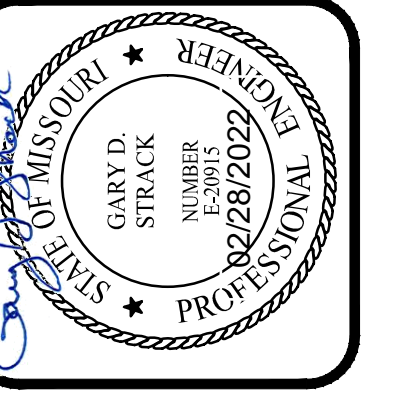
PROPERTY OWNERS				
TRACT	TOTAL ACREAGE	PROPOSED R.O.W.	T.C.E.	REMAINING ACREAGE
1	0.27	0.00	0.01	0.27



REVISIONS		DRAWING INFO.			
NO.	DESCRIPTION	DATE	BY	FIELD BOOK	JOB NUMBER

RIGHT-OF-WAY PLAN
 RIDGEMONT DR. BRIDGE OVER
 COUNTRY HOUSE BRANCH
 SEC. 22 T48N, R13W
 CITY OF COLUMBIA, MISSOURI

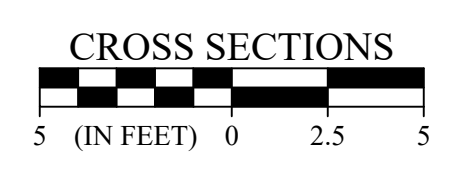
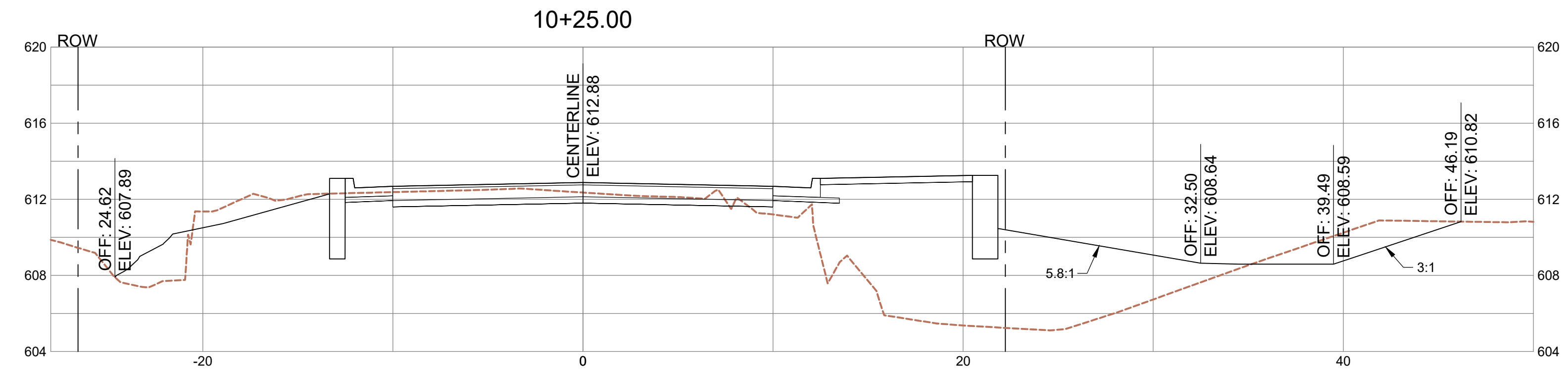
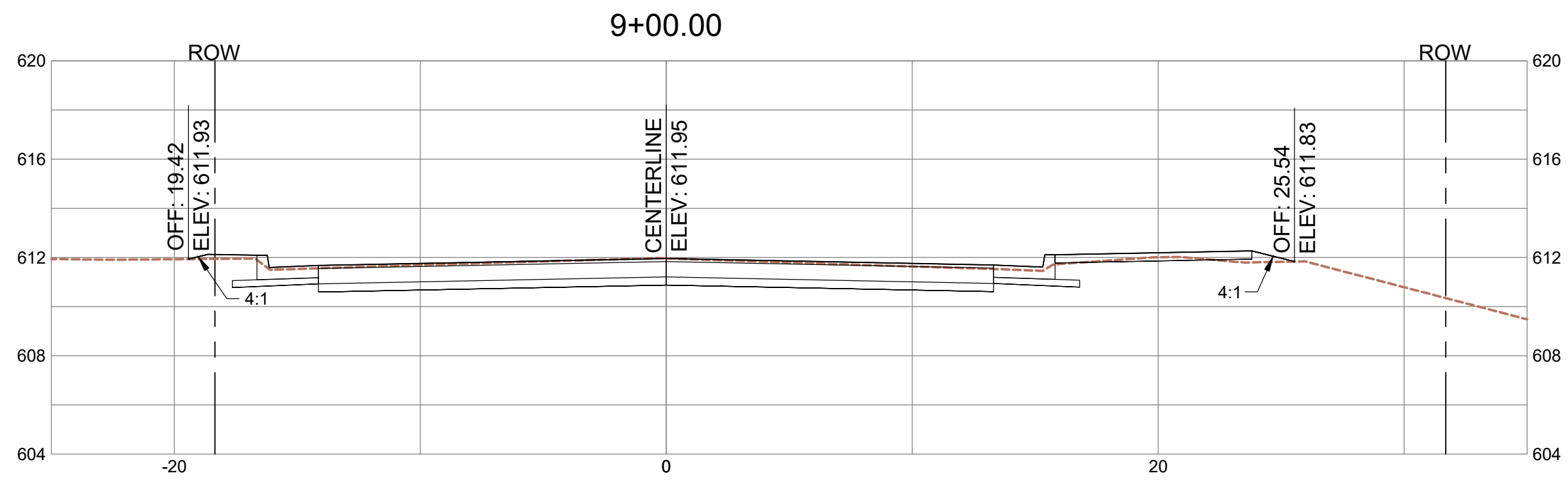
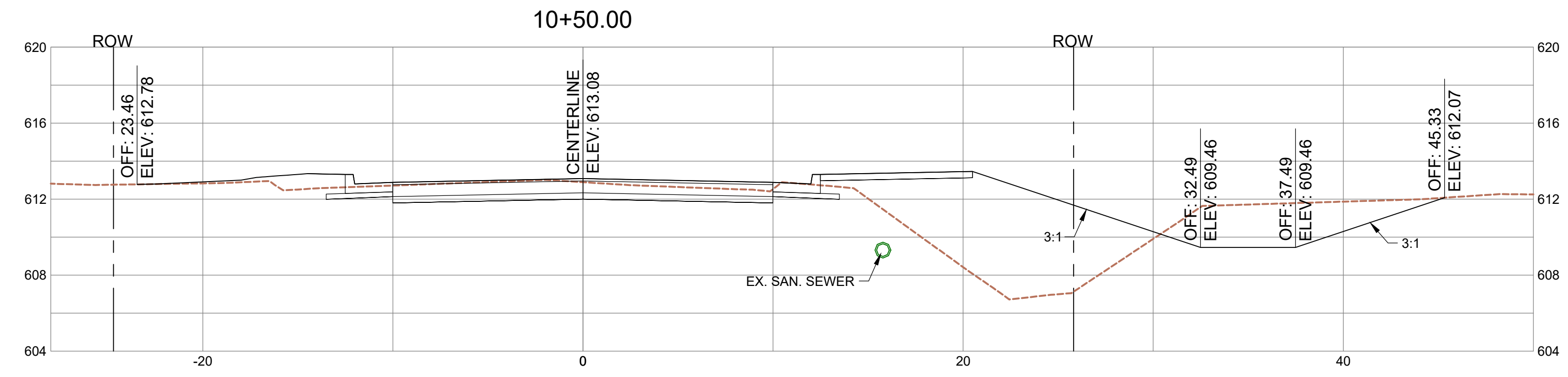
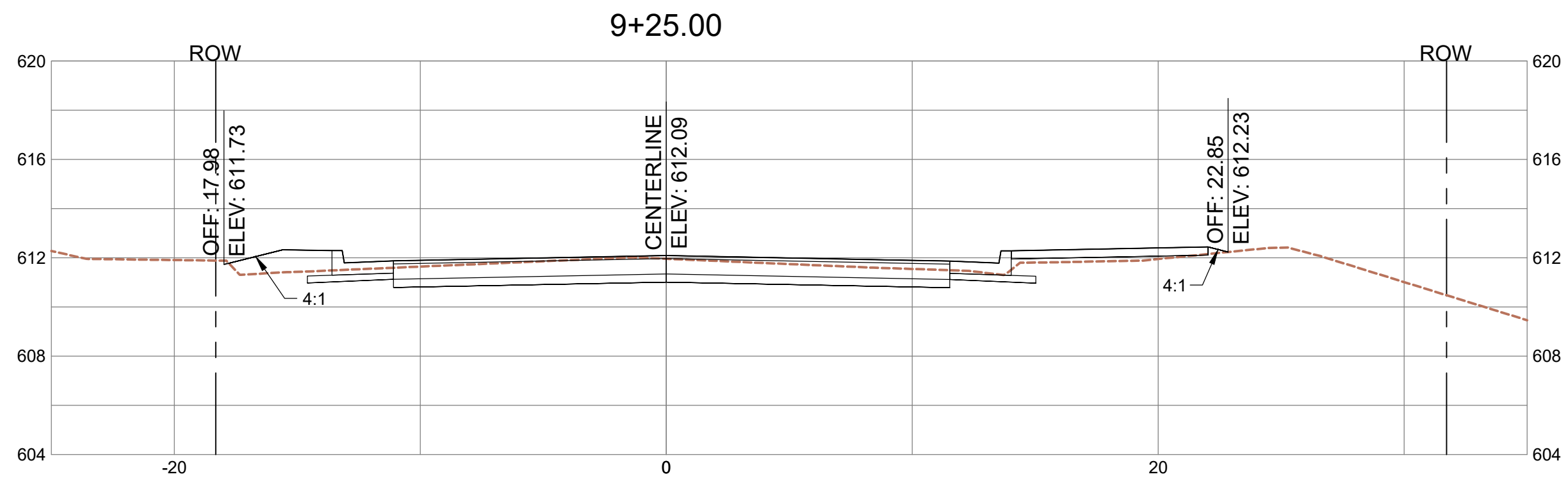
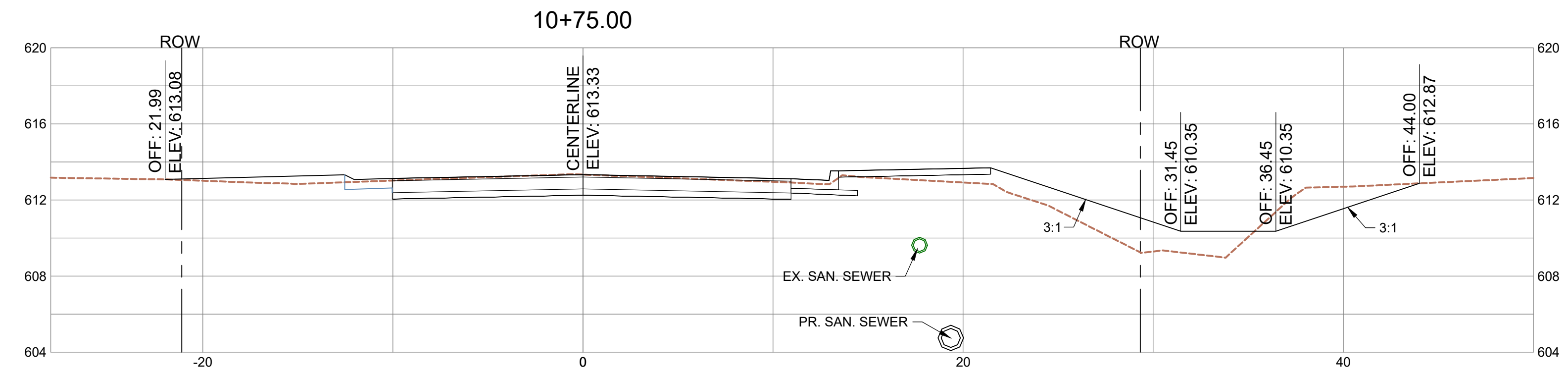
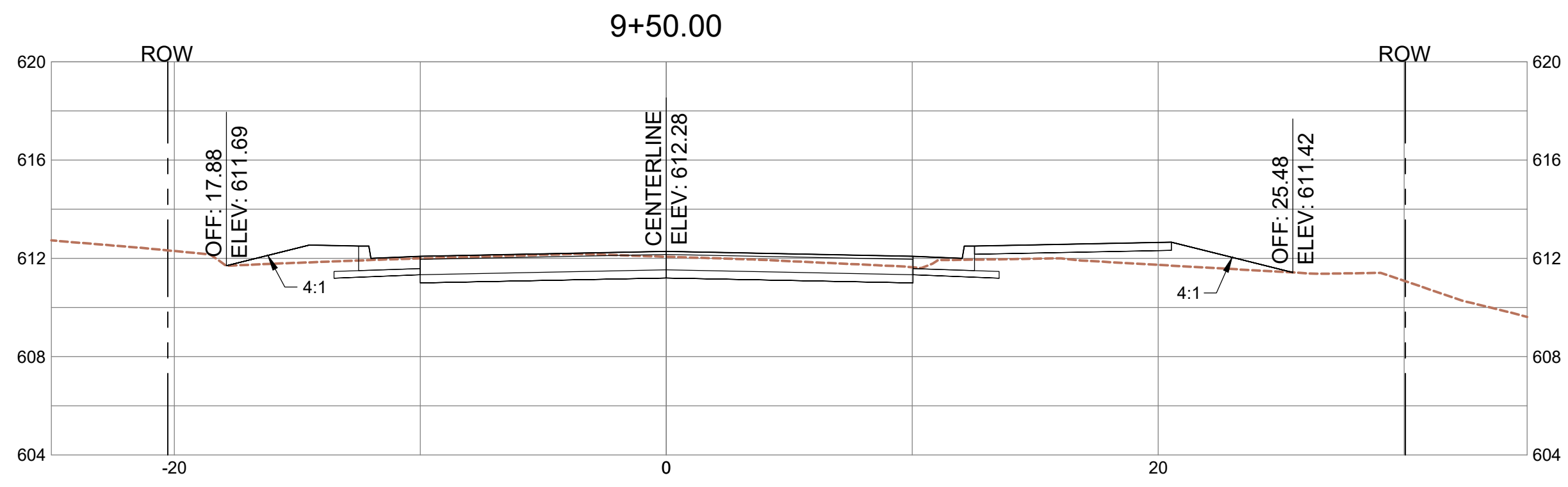
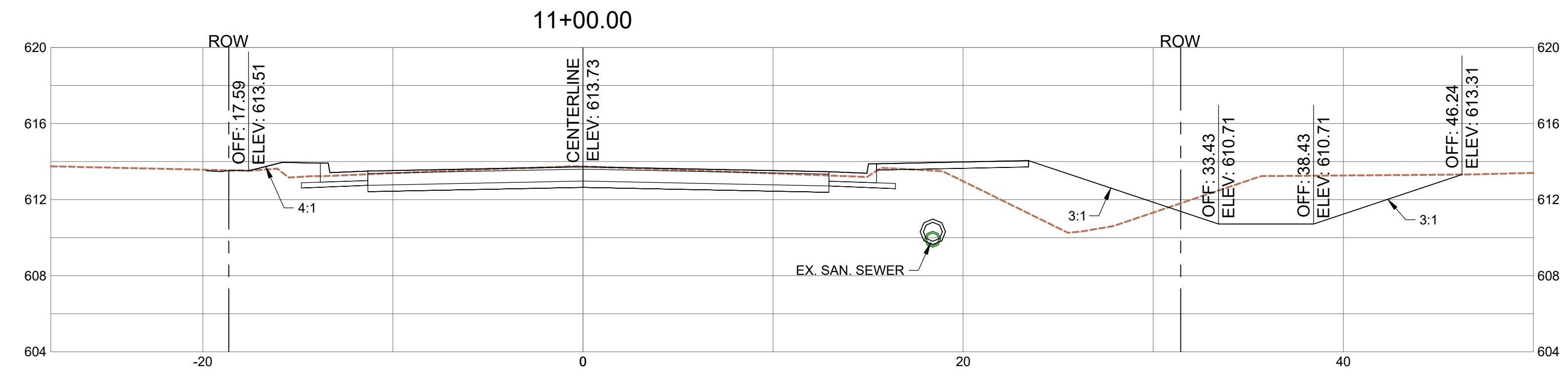
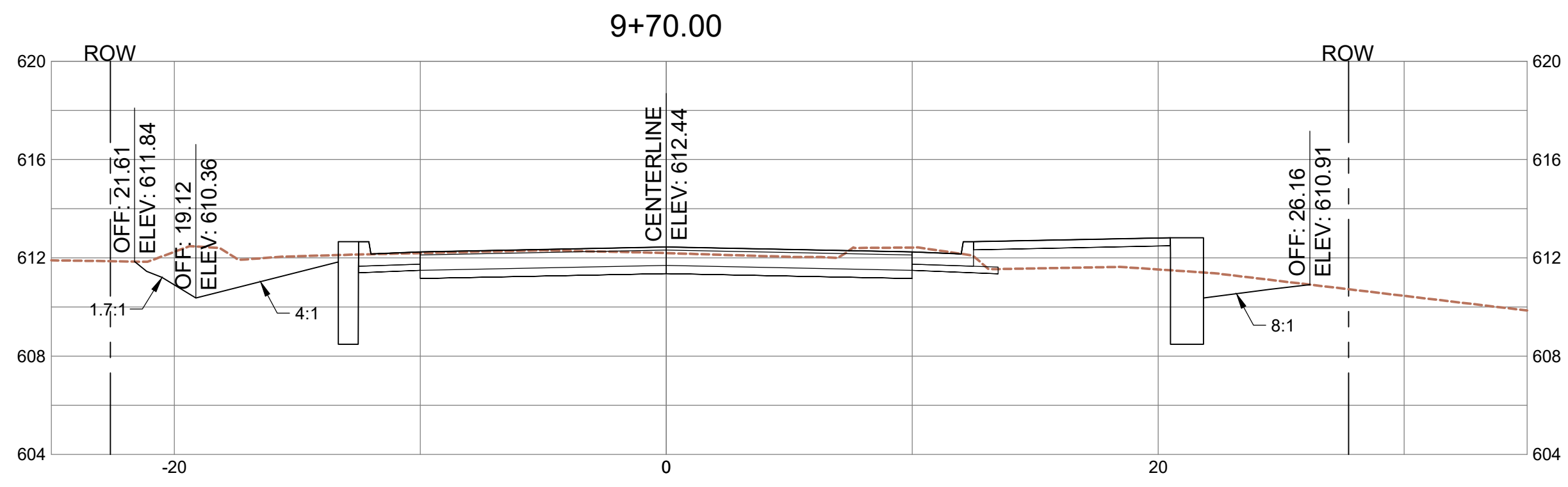
SHEET NUMBER
24
 OF 28

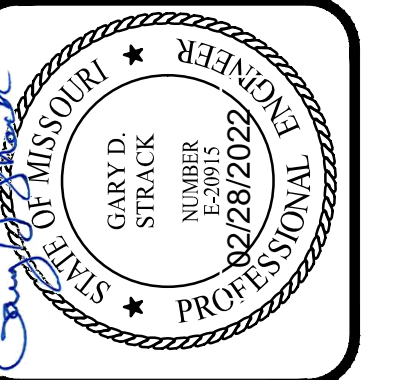
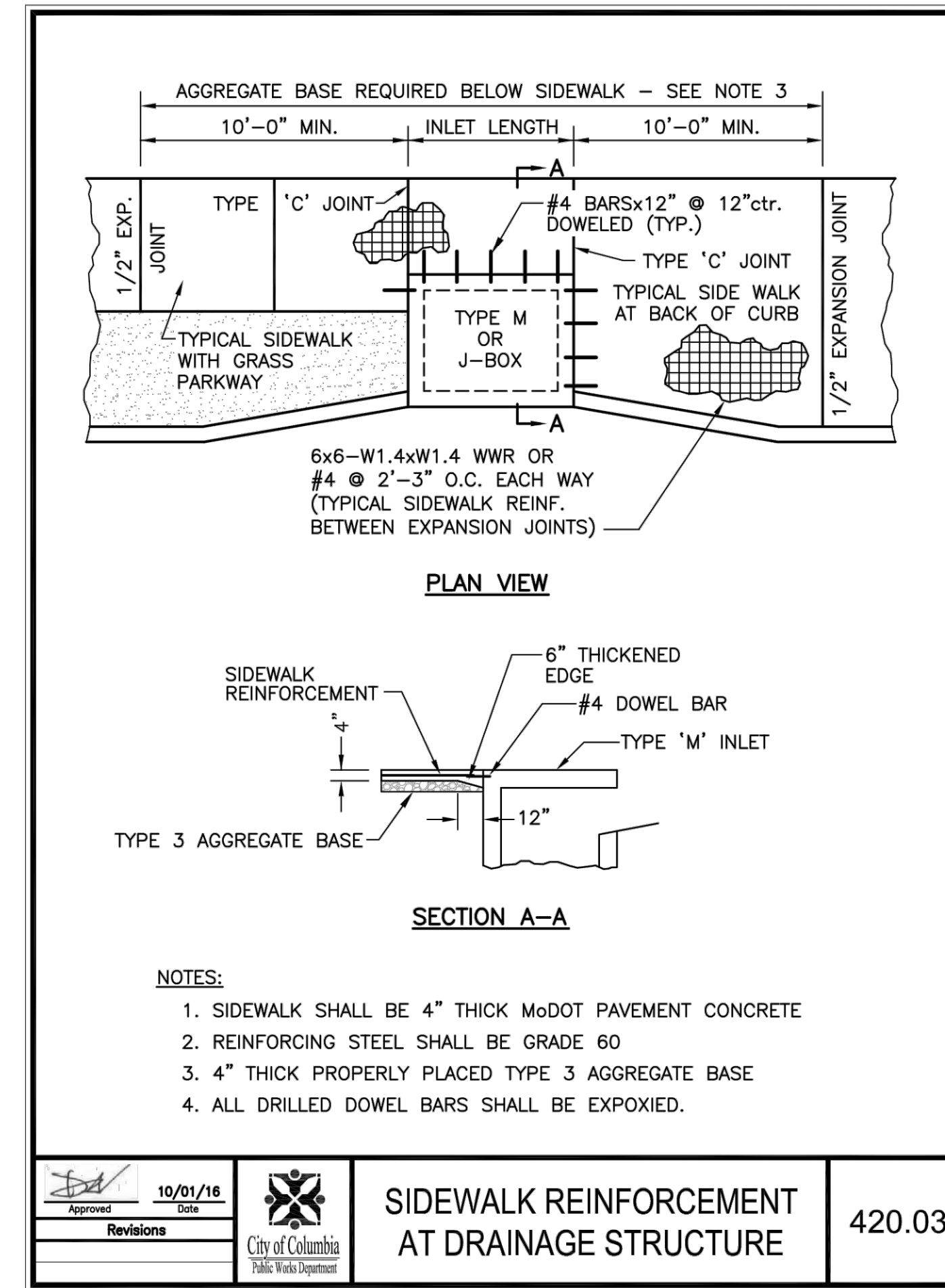
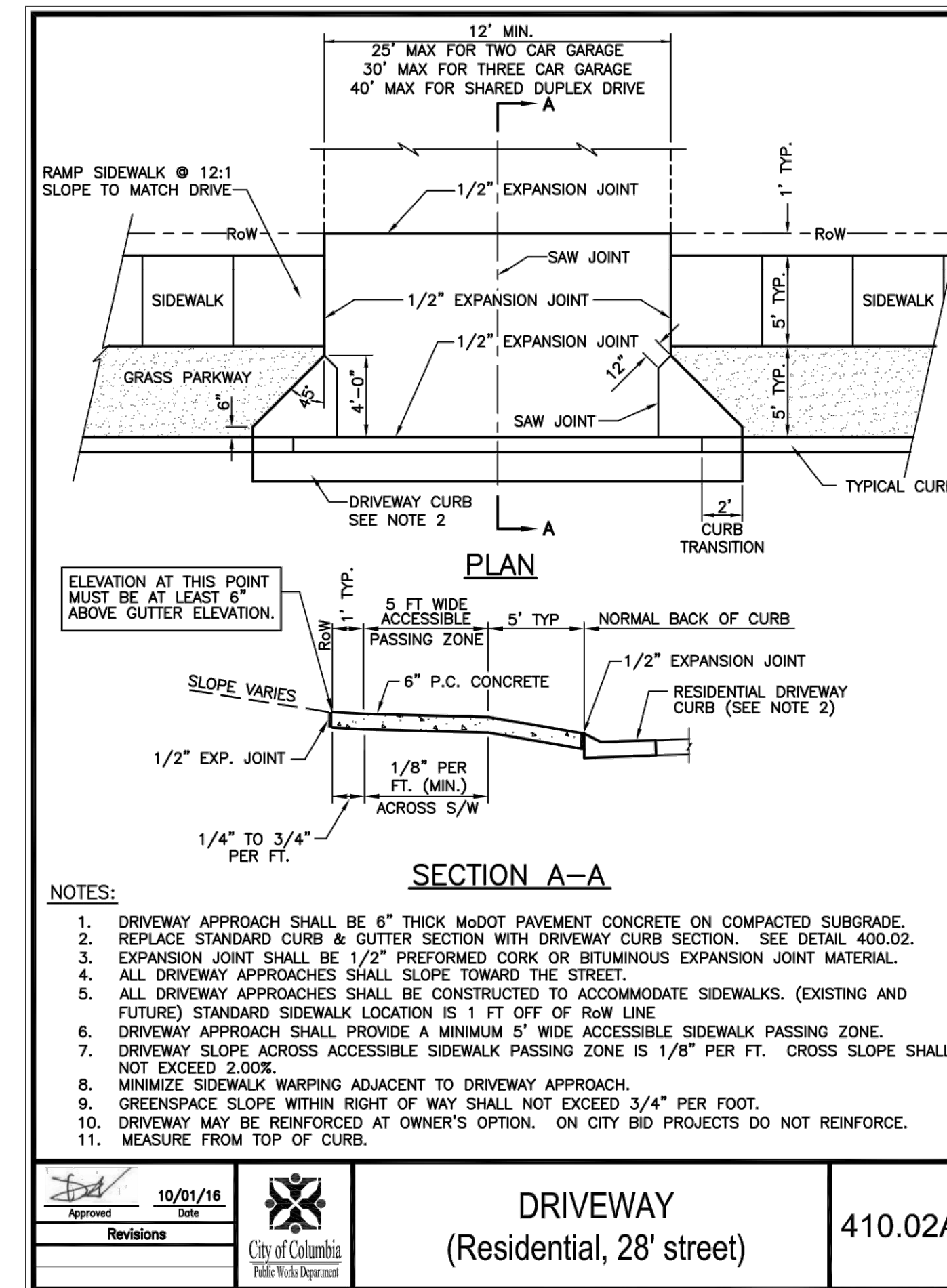
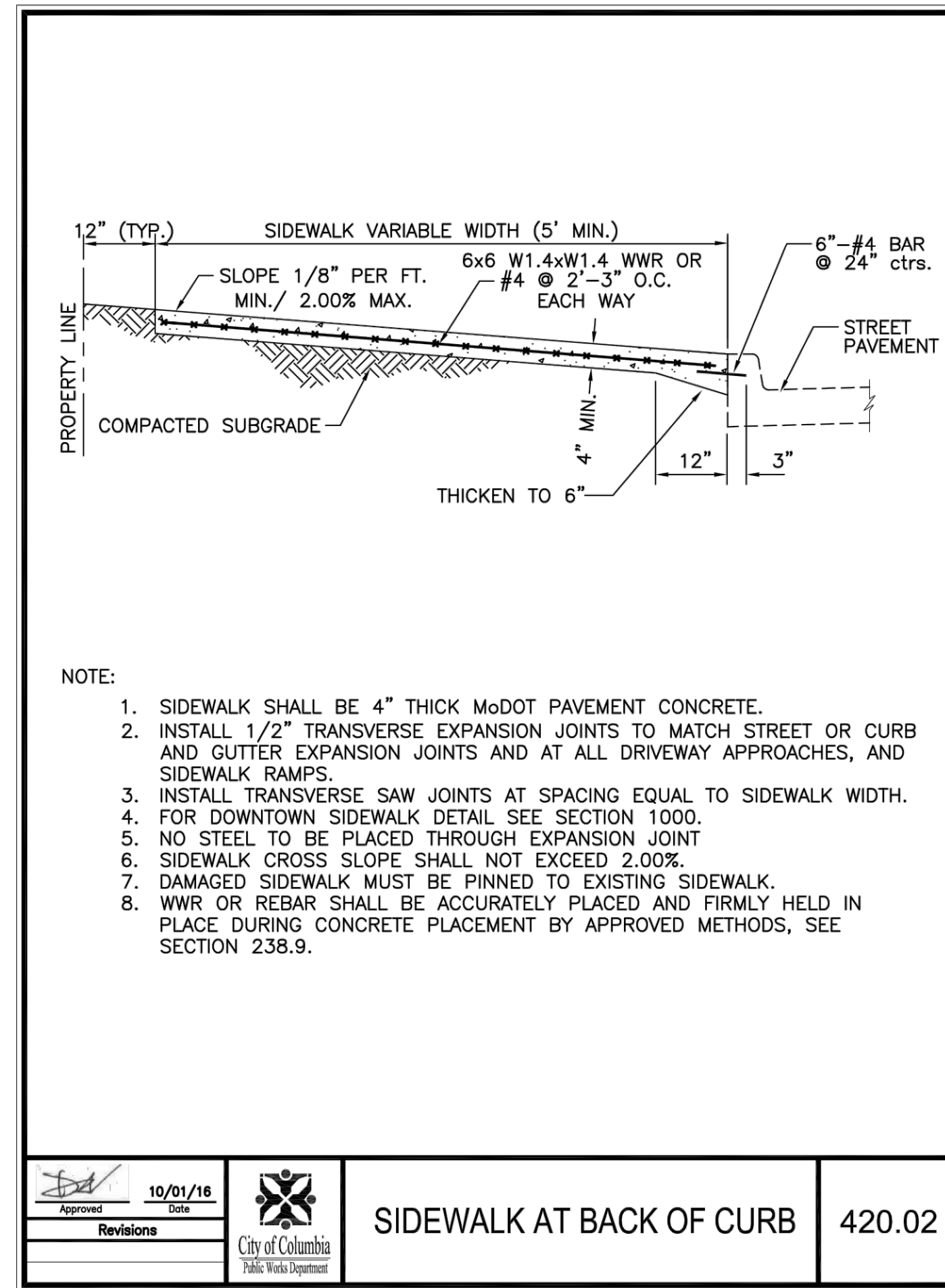
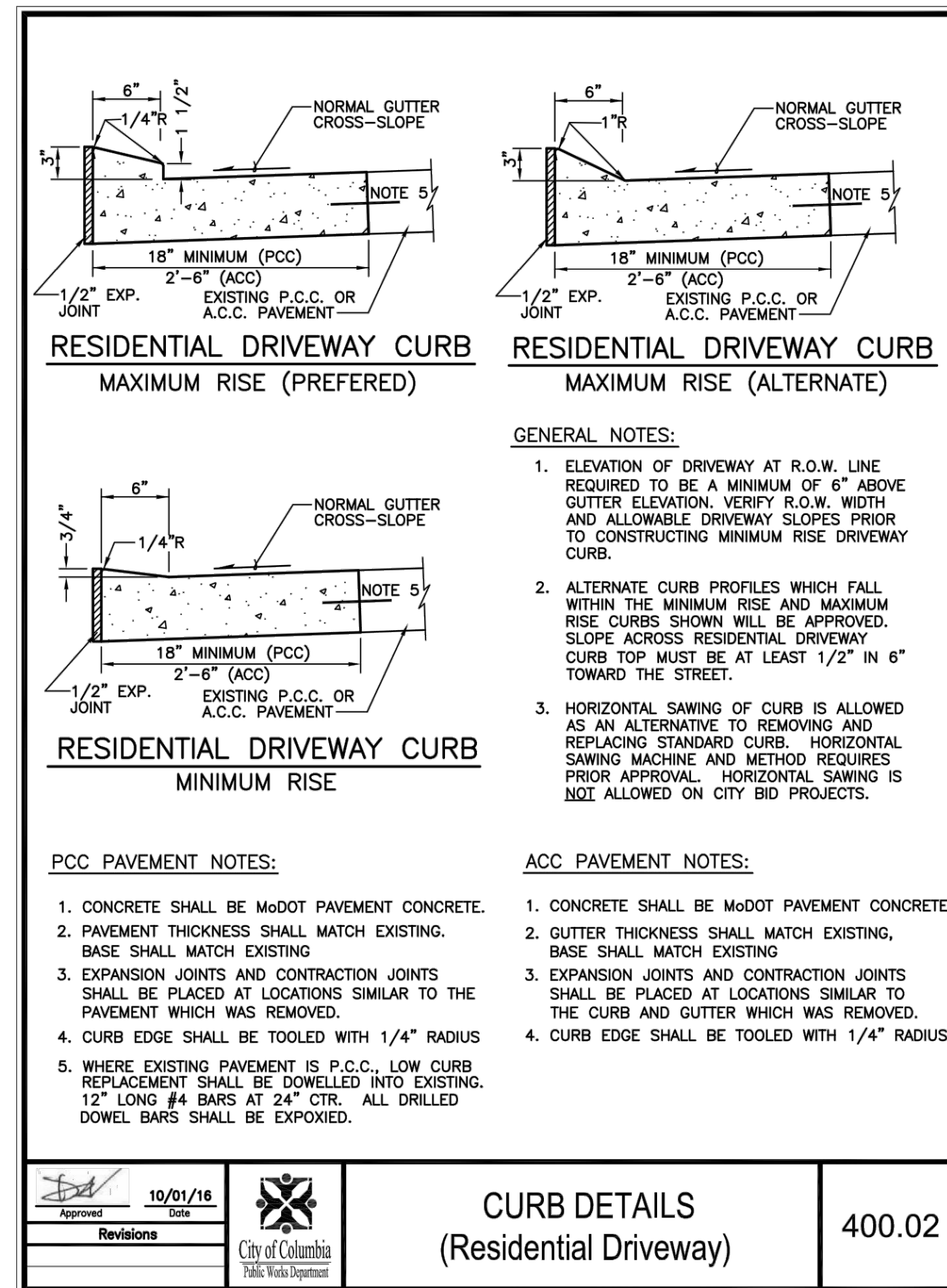
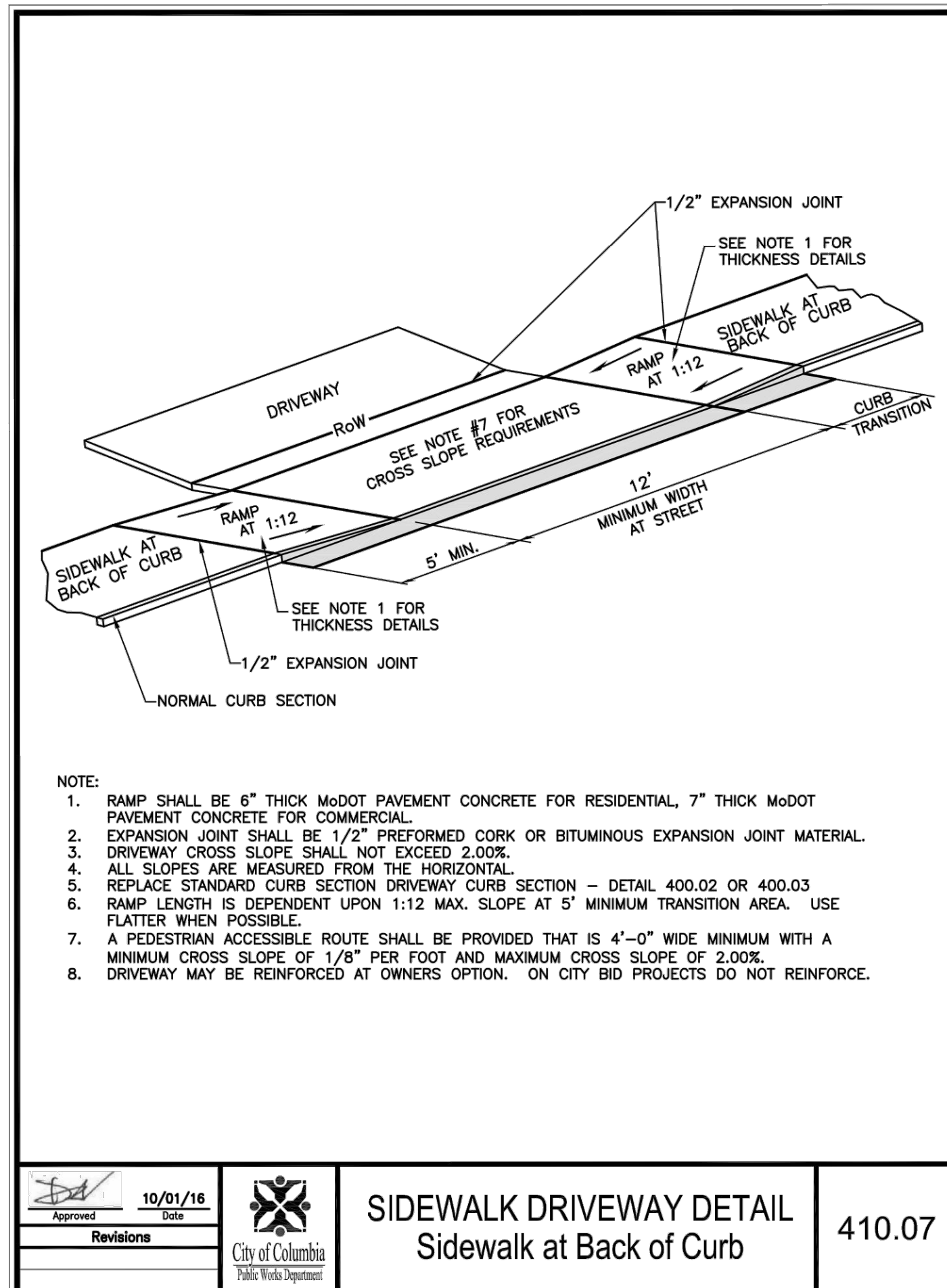
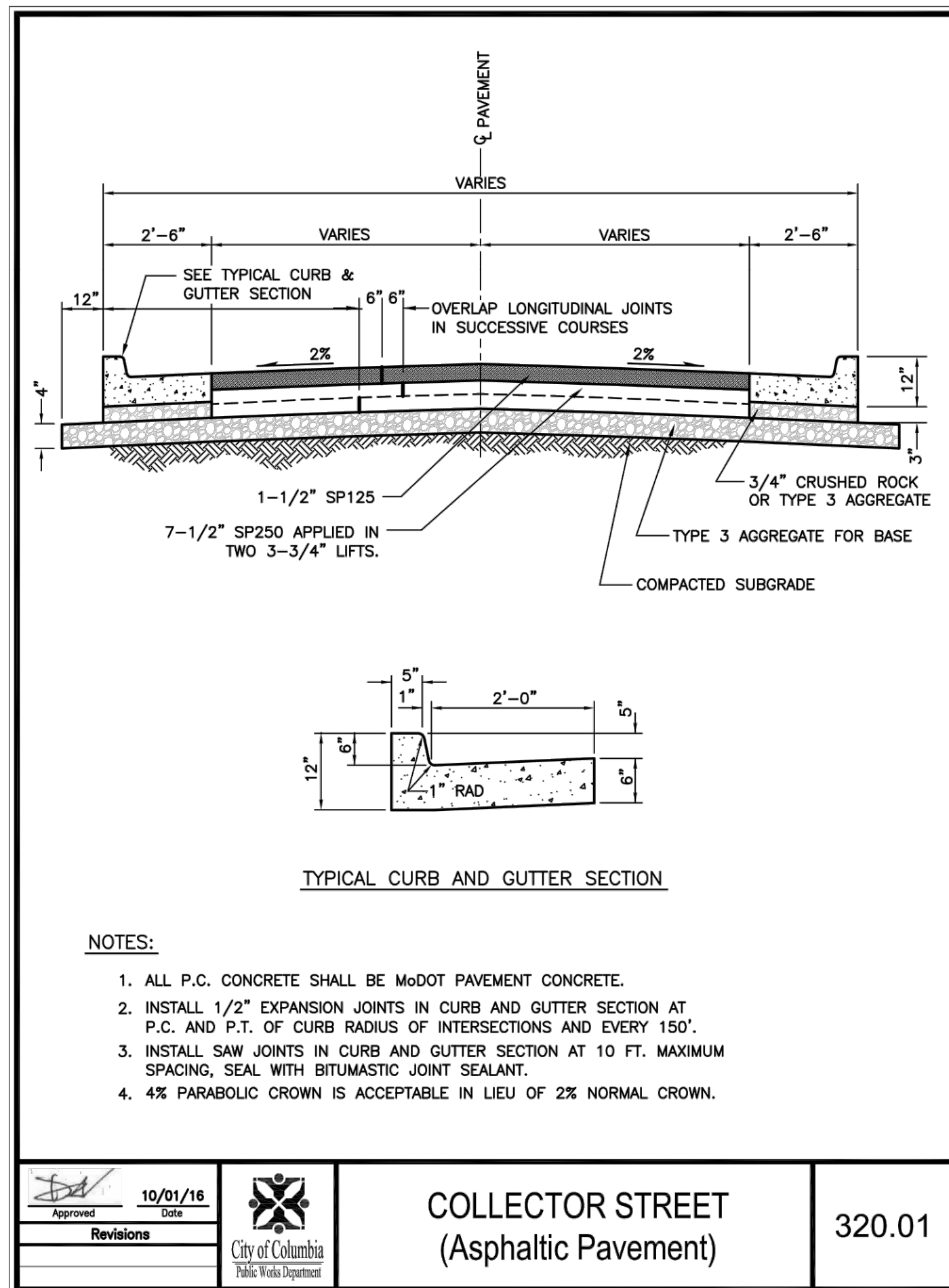


REVISIONS		DRAWING INFO.			
NO.	DESCRIPTION	BY	DATE	FIELD BY:	FIELD BOOK:
				ND/CAW	20NC40008
				ND/CAW	
				GDS	
				10/21/2021	

CROSS SECTIONS
 RIDGEMONT DR. BRIDGE OVER
 COUNTRY HOUSE BRANCH
 SEC. 22 T48N, R13W
 CITY OF COLUMBIA, MISSOURI

SHEET NUMBER
25
 OF **28**





DRAWING INFO.		NO.		REVISIONS	
FIELD BY:	NO./DATE	DATE	DESCRIPTION	NO.	DESCRIPTION
DRAWN BY:	GIS				
CHECK BY:	10/21/2021				
DATE:	FIELD BOOK:				
NO.:	JOB NUMBER:				

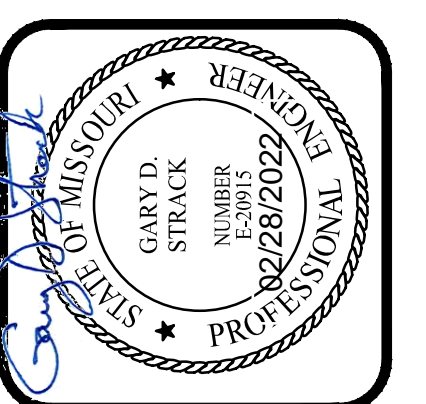
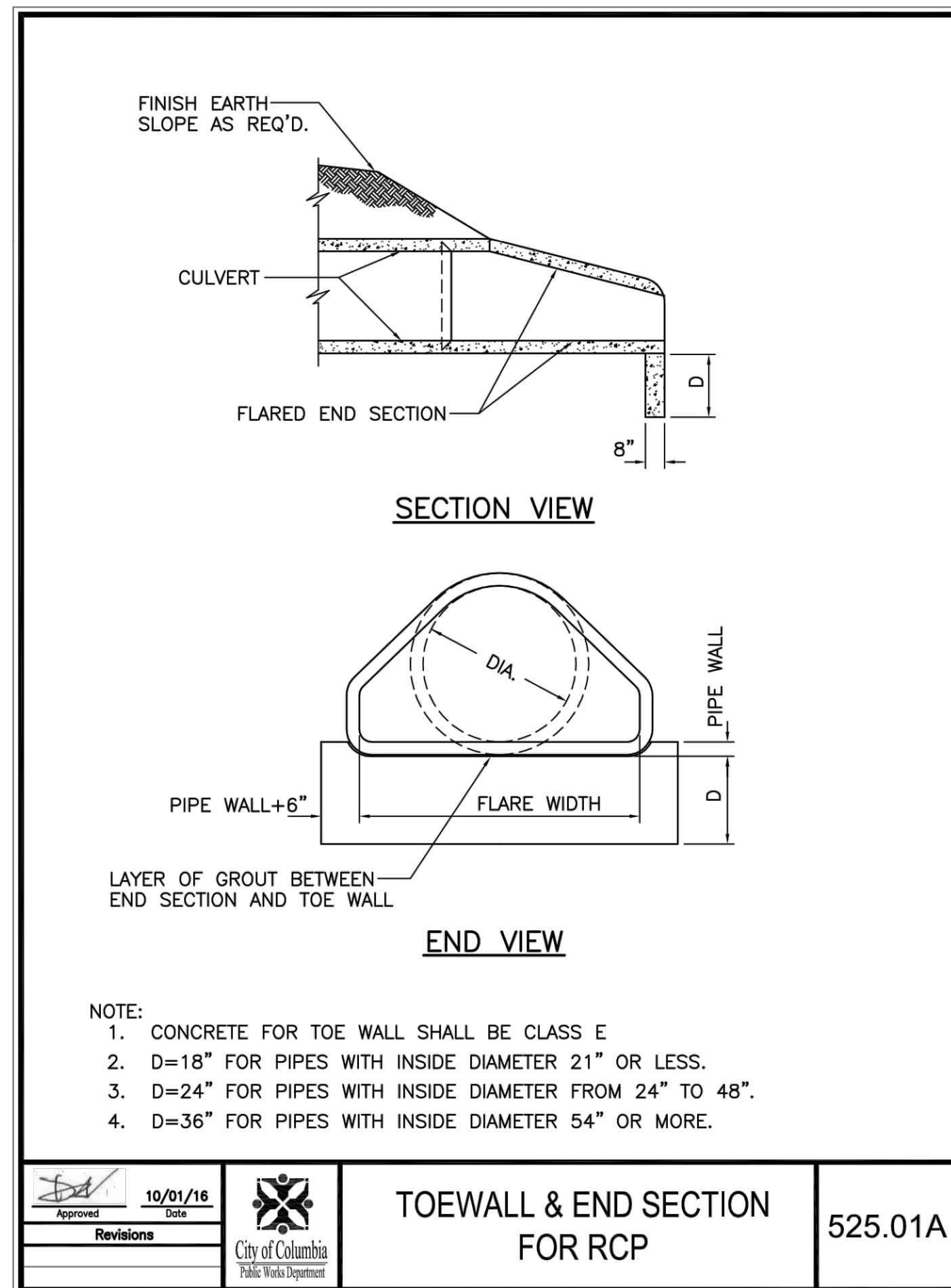
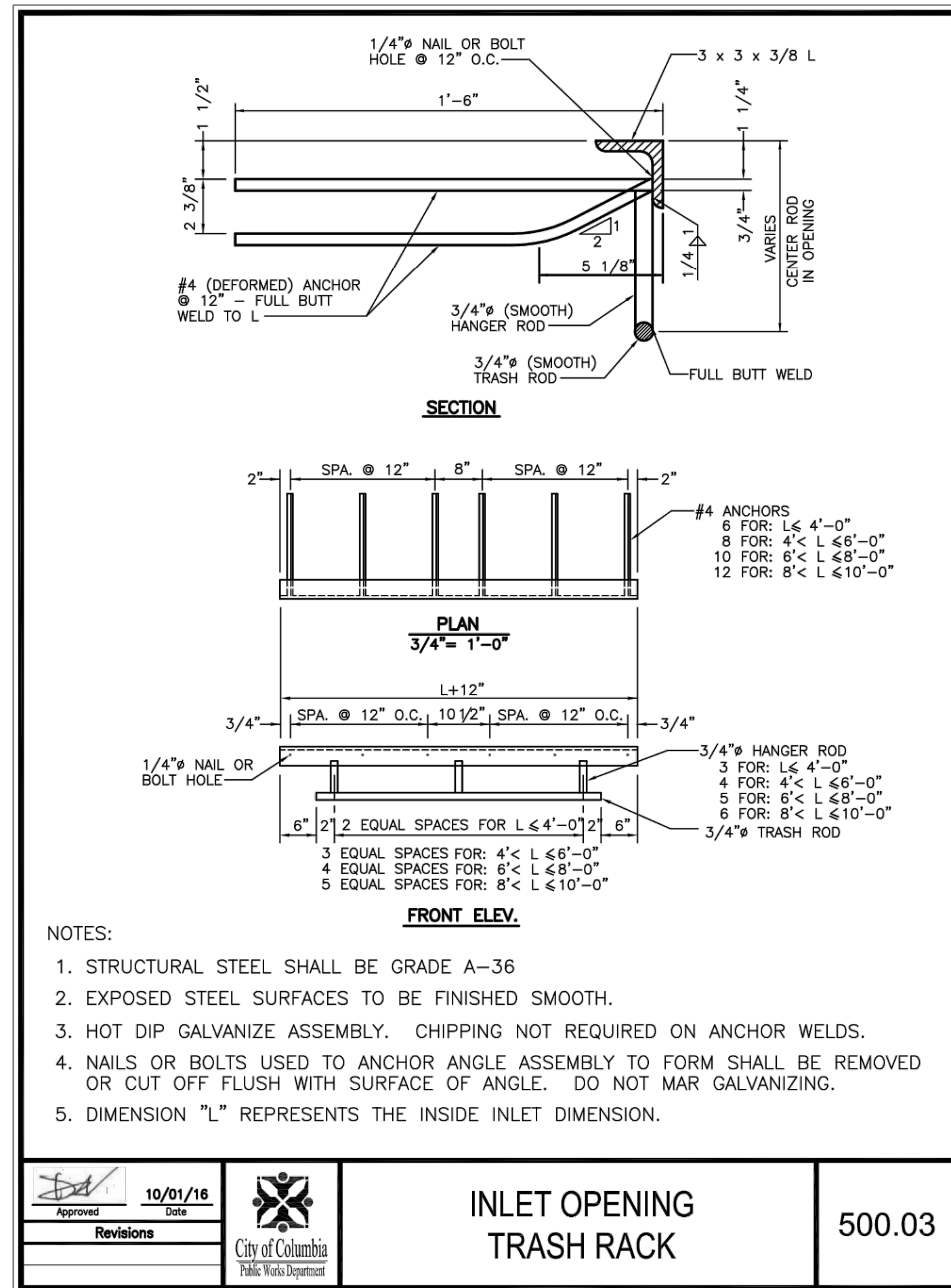
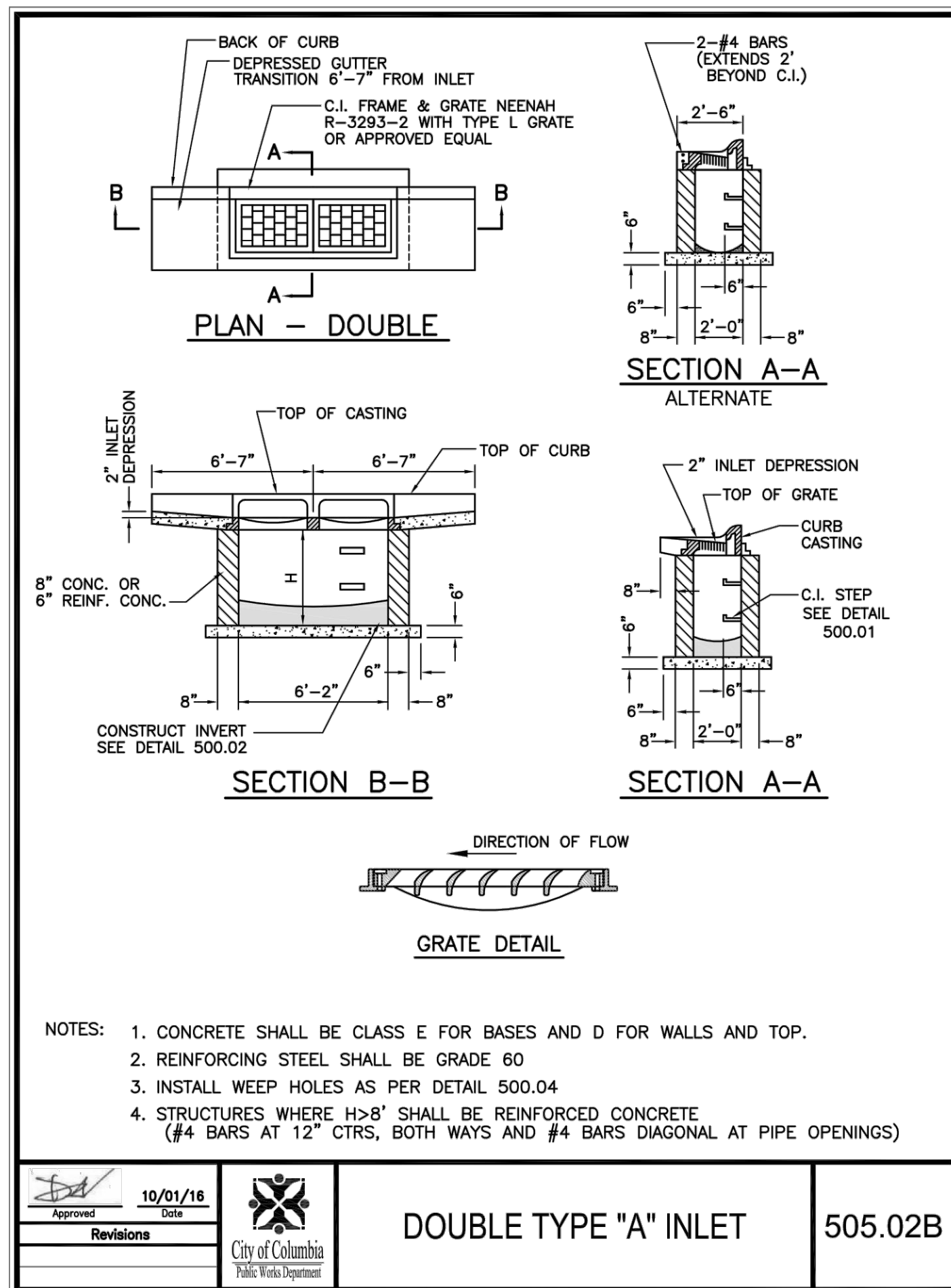
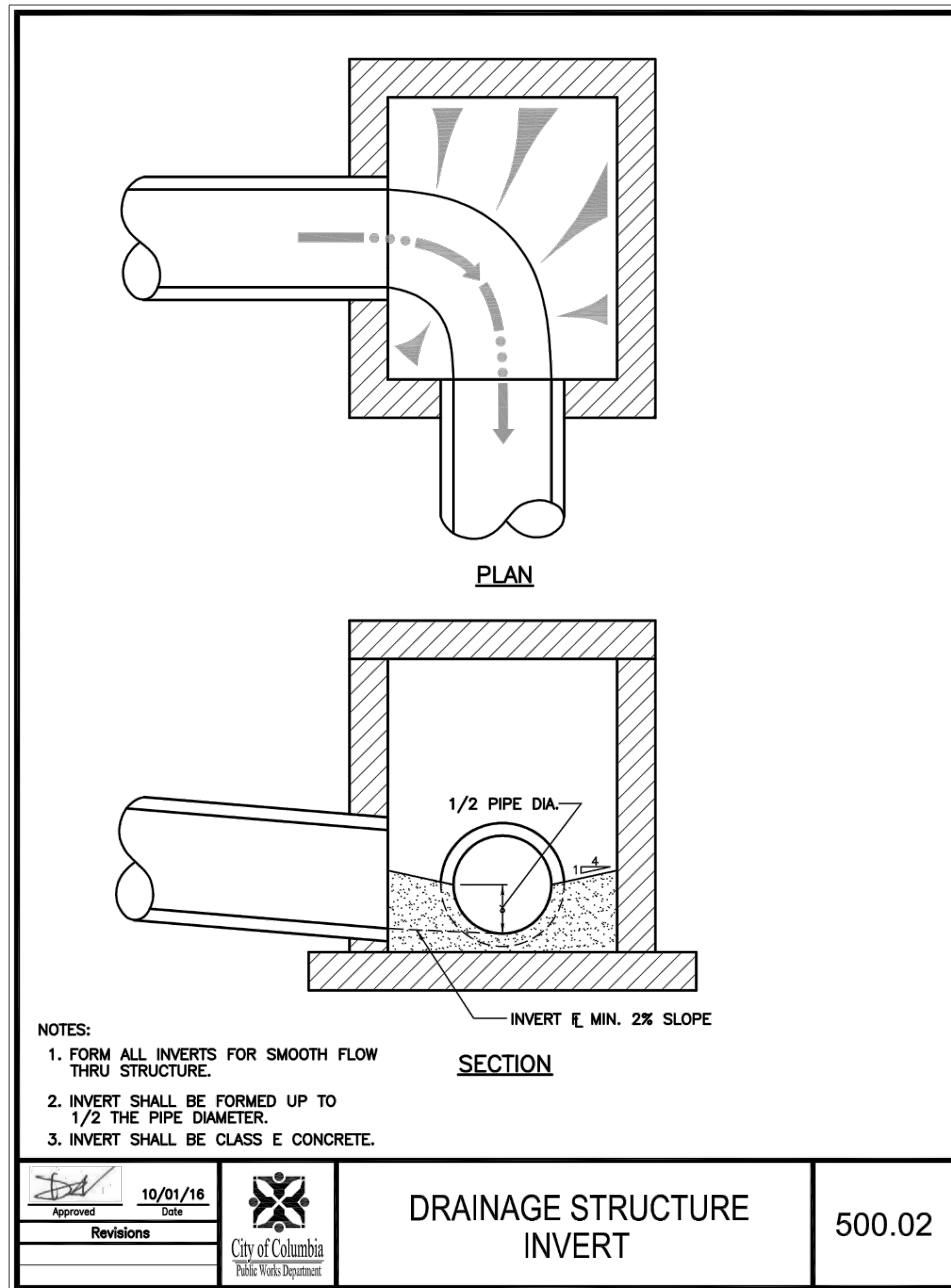
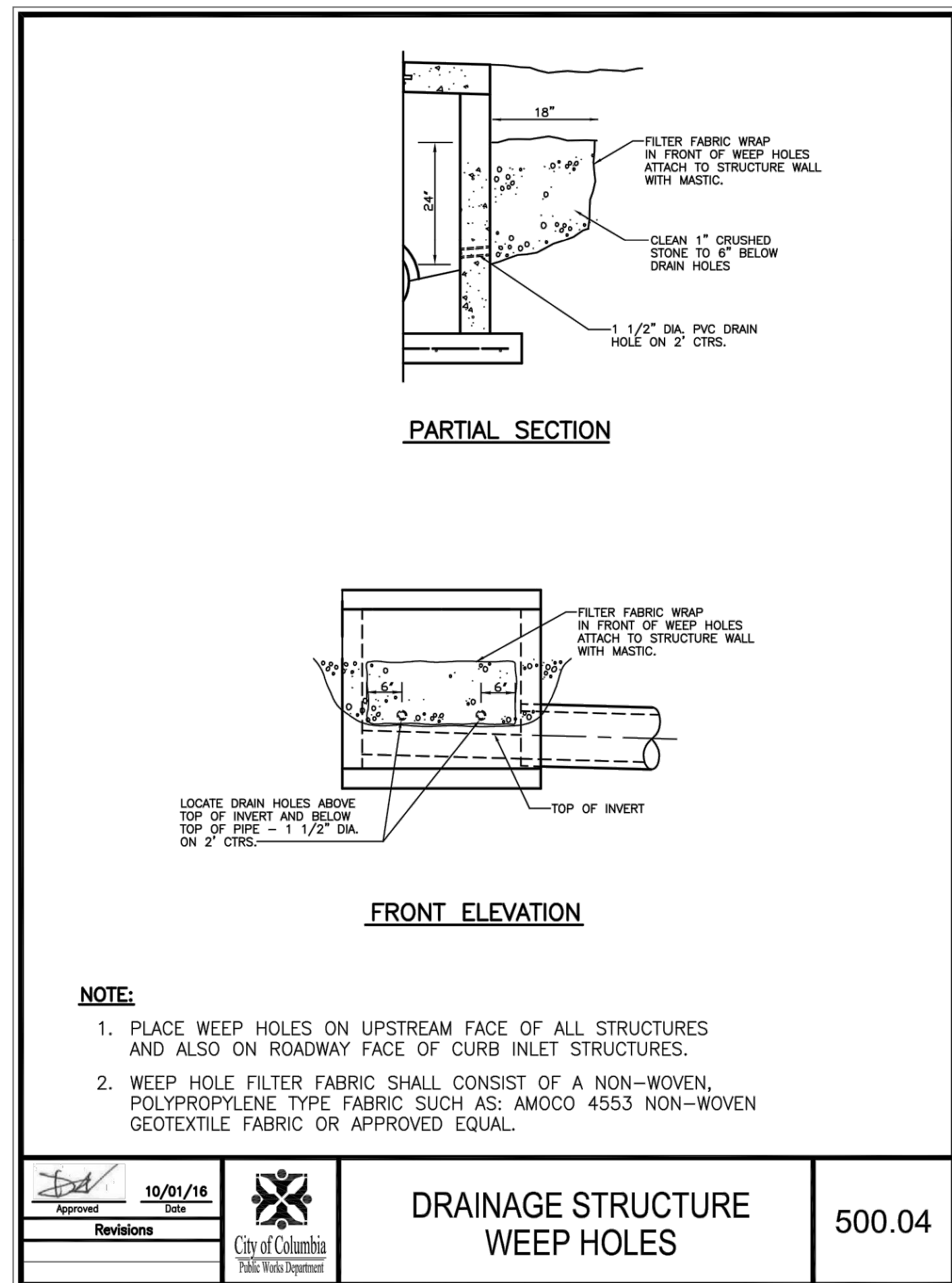
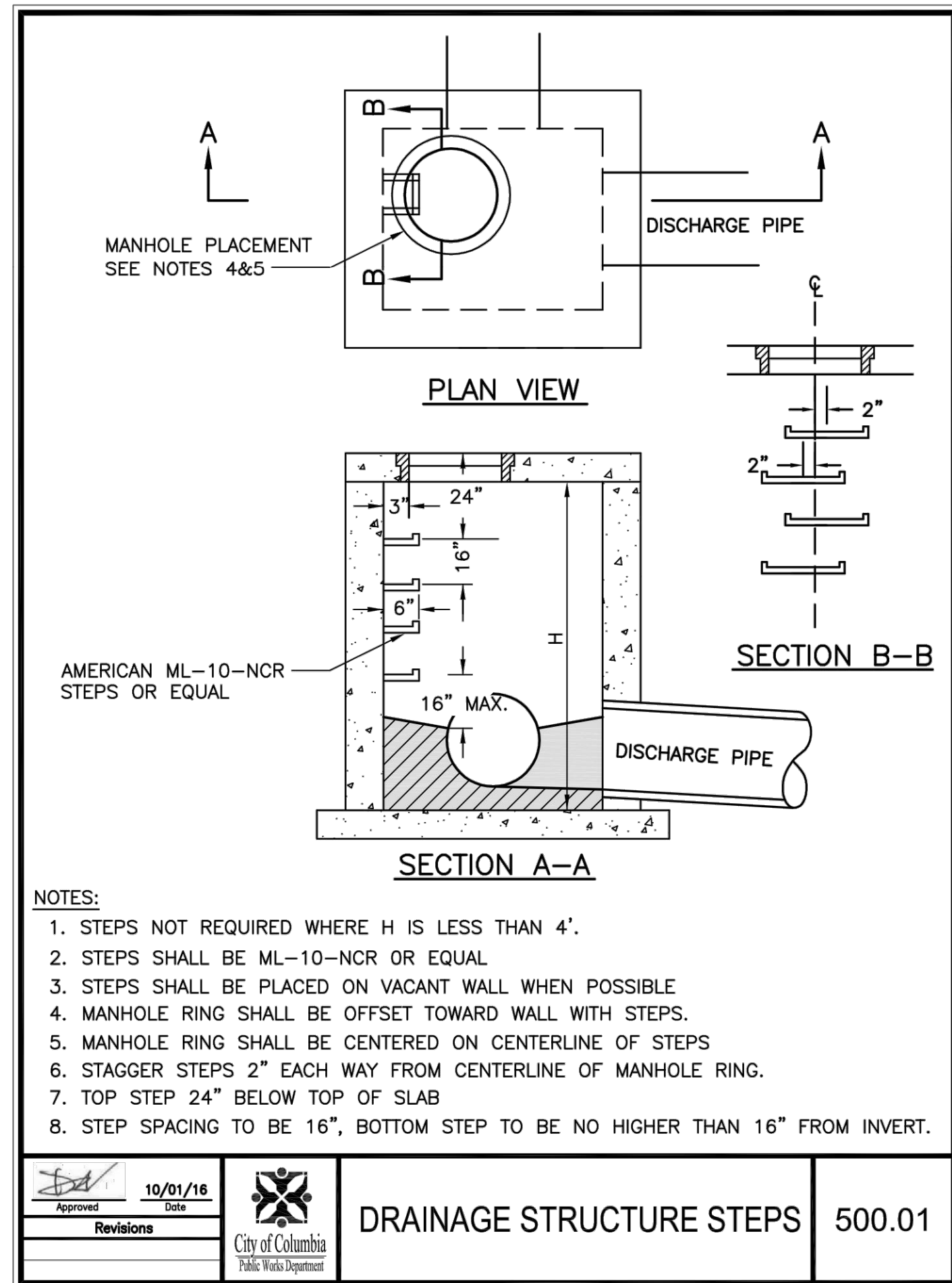
DETAILS

RIDGEMONT DR. BRIDGE OVER COUNTY HOUSE BRANCH

SEC. 22 T48N. R13W

CITY OF COLUMBIA, MISSOURI

SHEET NUMBER **26** OF **28**

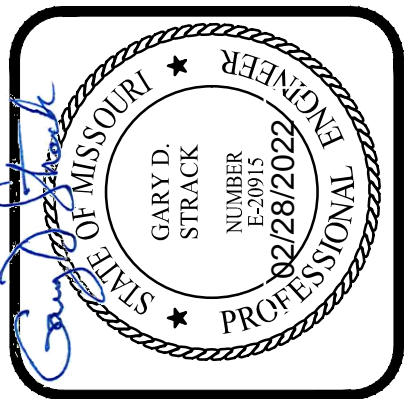
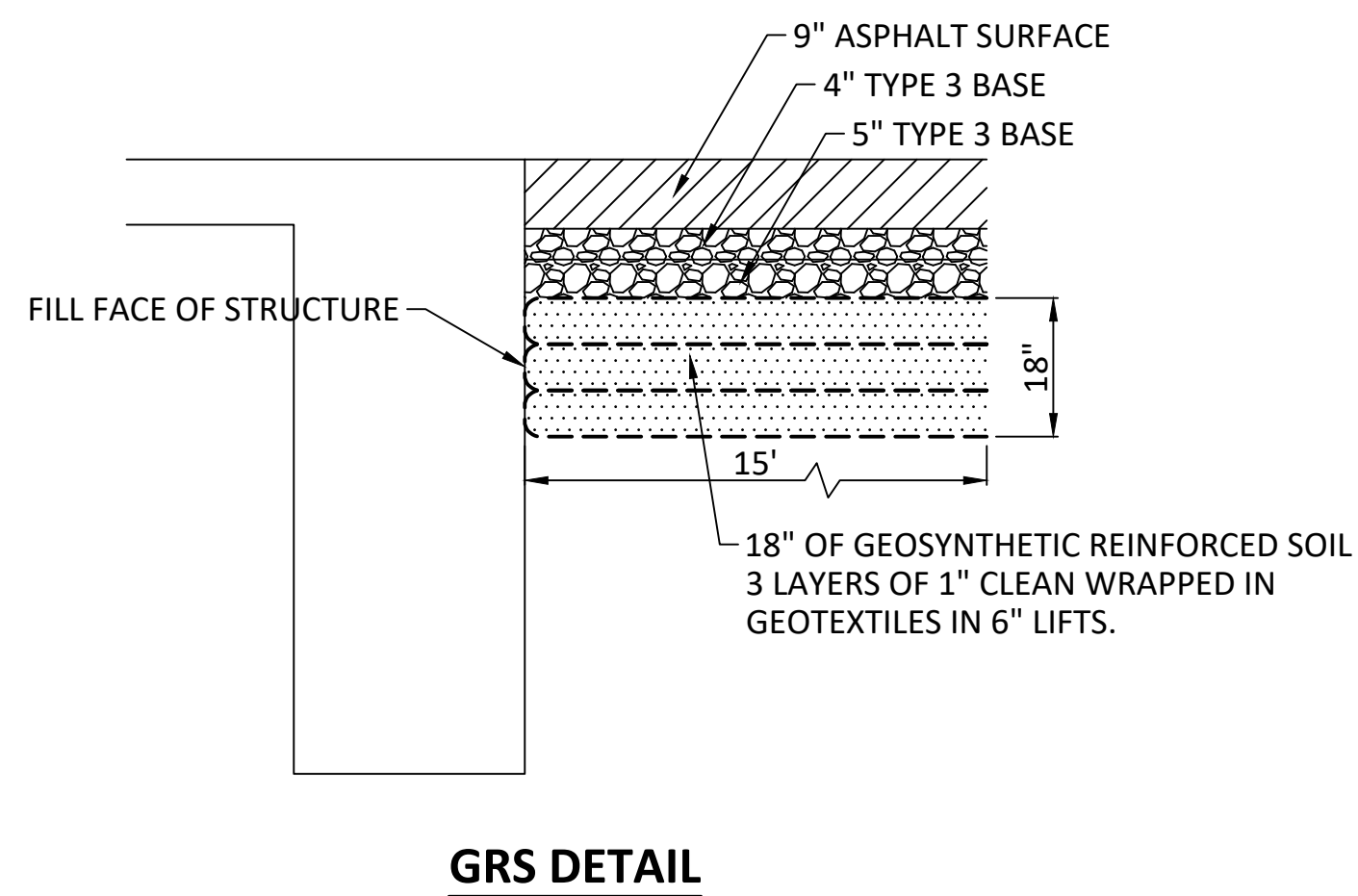
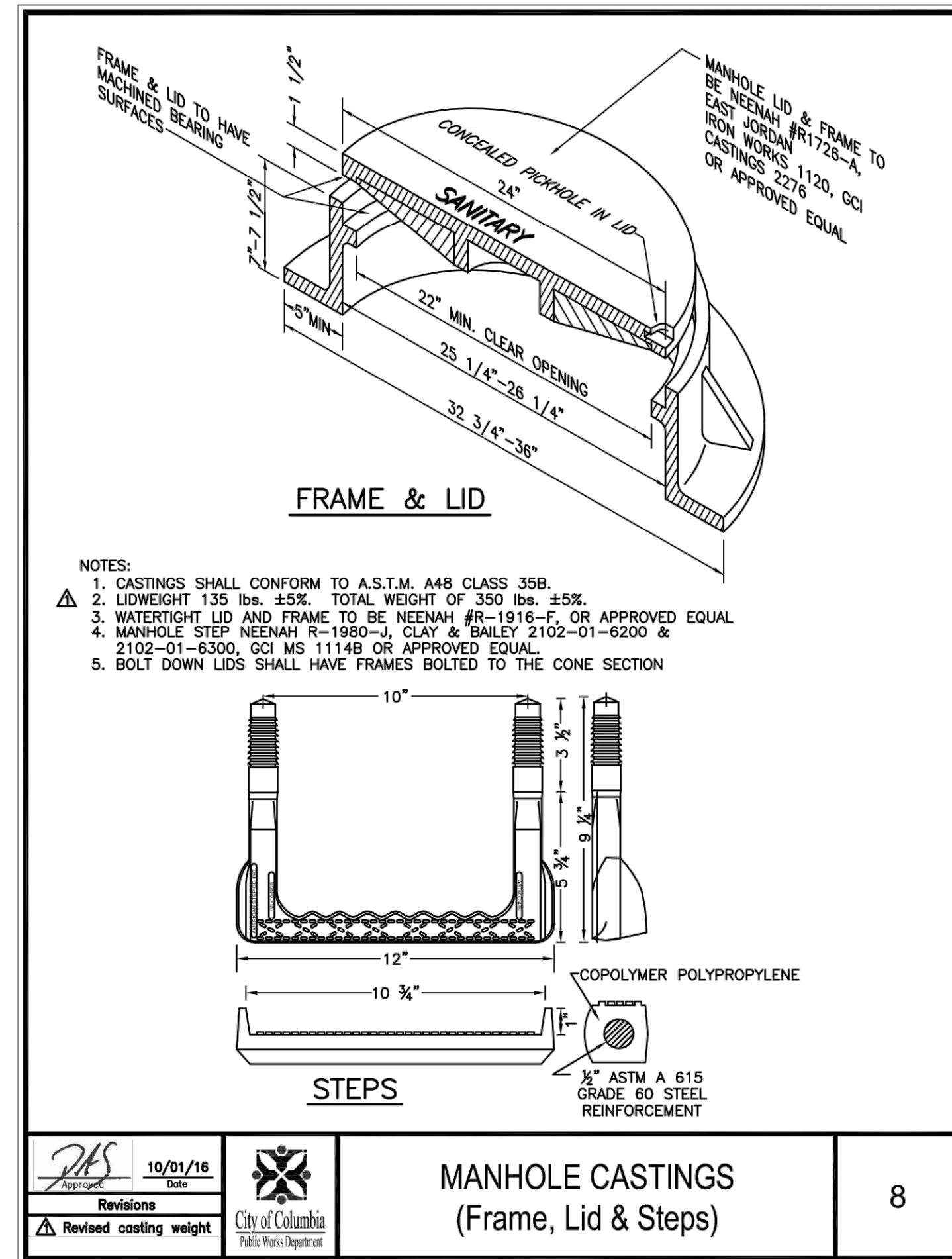
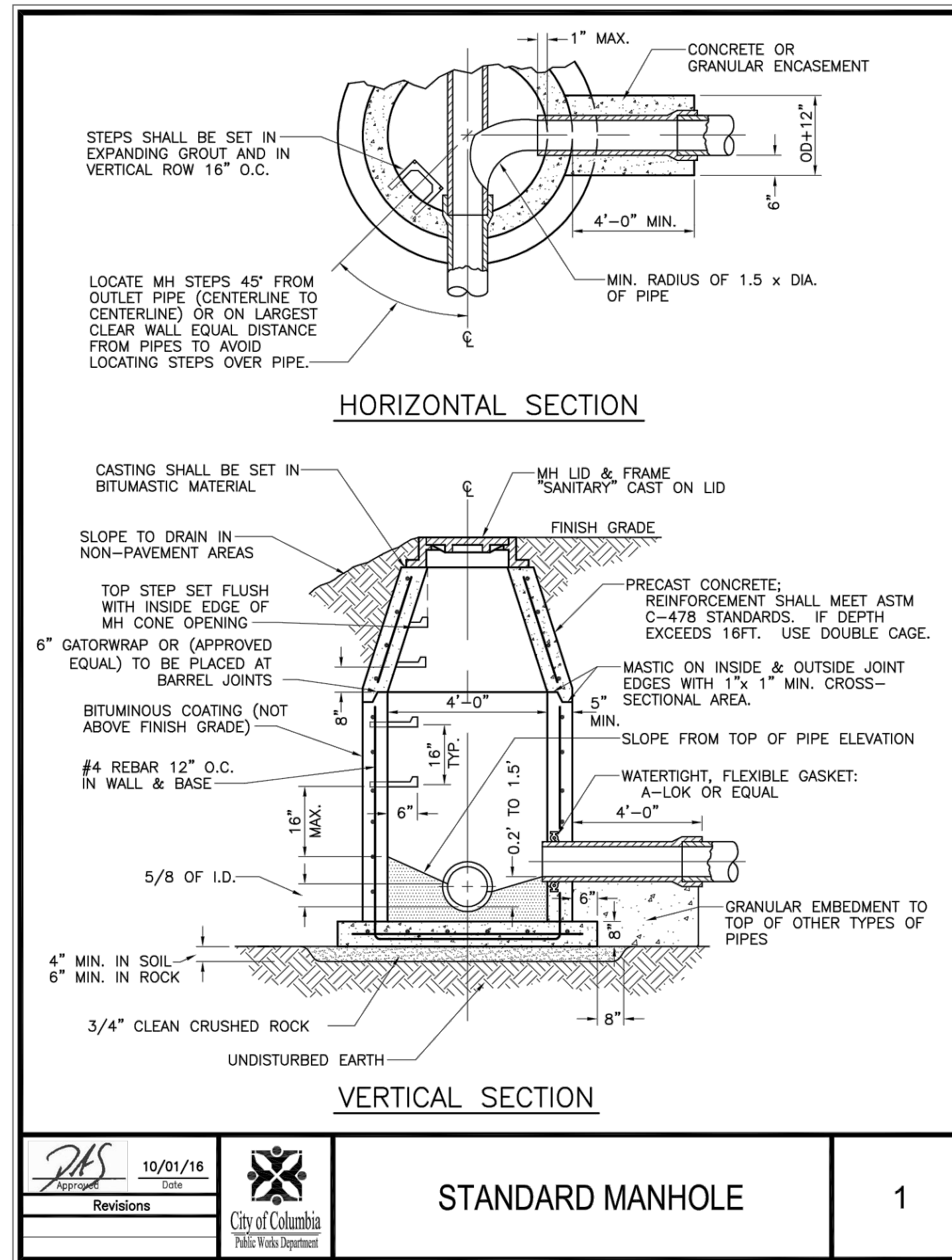
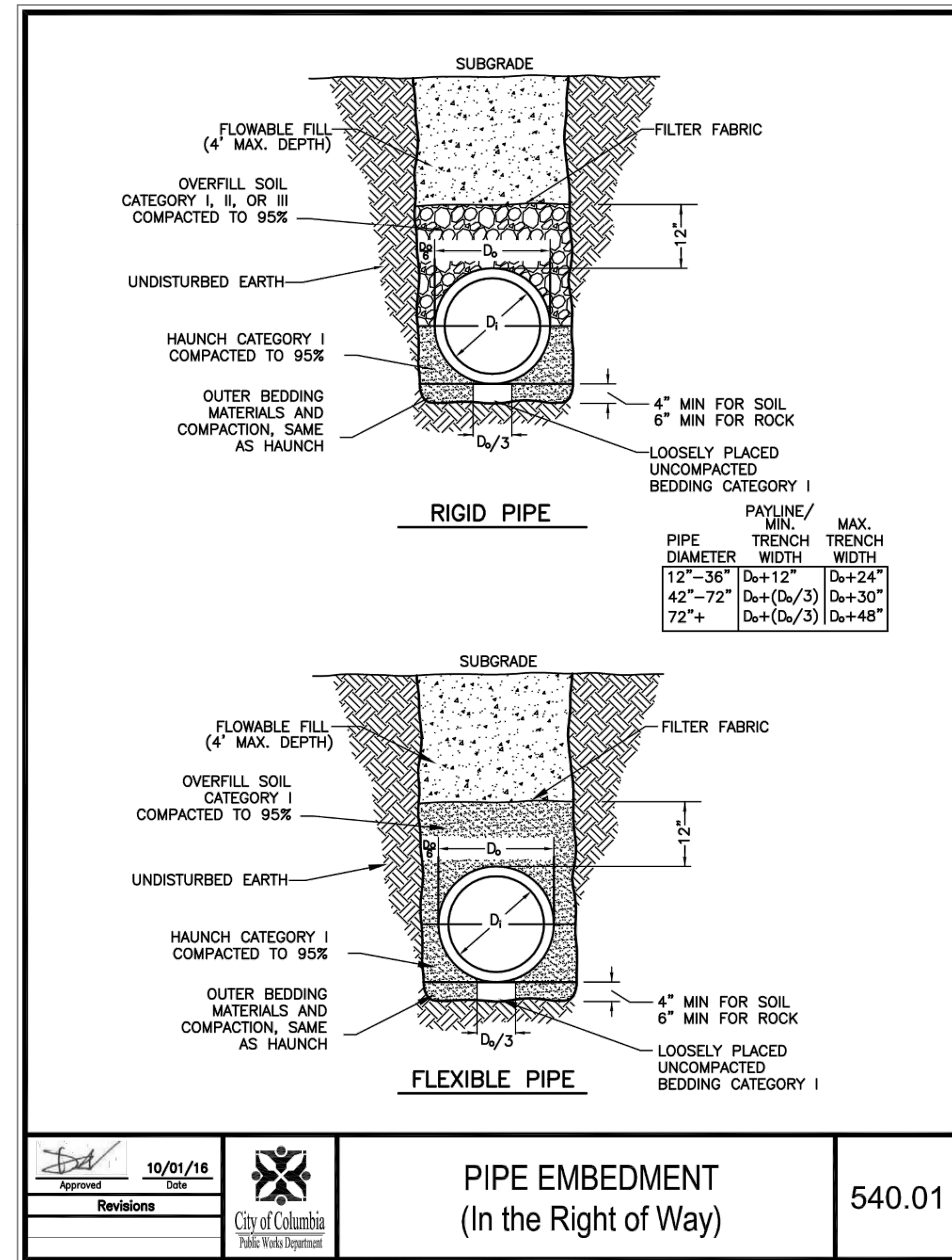


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