



South Carolina Department of Transportation



SHEET NO.	TOTAL SHEETS
1	11

INDEX OF SHEETS		
JDB REVISIONS LOG	JDB-REV	
JDB REFERENCE DATA & GENERAL NOTES	JDB-A	
JDB REFERENCE DATA	JDB-B	
JDB DETAILS	JDB-C & JDB-D	
JDB PLAN	JDB 1-3	
JDB PROFILE	JDB 4-5	

JOINT UTILITY DUCT BANK PLANS
FOR
PROJECT NO. P039719
CAROLINA CROSSROADS PHASE 2
INTERCHANGE OF I-20 AND
US 176 (BROAD RIVER ROAD)

APPROXIMATE LOCATION OF JUDB IS	
BEGIN JUDB	
LATITUDE	34° 02'31.62"N
LONGITUDE	81° 05'48.96"W
END JUDB	
LATITUDE	34° 02'16.03"N
LONGITUDE	81° 05'29.16"W

BEGIN JUDB CONSTRUCTION
US 176 (BROAD RIVER ROAD)
STA. 10 + 00



= PROJECT LOCATION AREA

LAYOUT
NOT TO SCALE

END JUDB CONSTRUCTION
US 176 (BROAD RIVER ROAD)
STA. 33 + 40.14

REVISIONS: 1 MBC 03-17-23 REVISED SHEET TOTAL, INDEX, JDB END STATION



EQUALITIES IN STATIONING
NONE

EXCEPT AS MAY BE OTHERWISE SPECIFIED ON THE PLANS OR IN THE SPECIAL PROVISIONS, ALL MATERIALS AND WORKMANSHIP ON THIS PROJECT SHALL CONFORM TO THE SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION (2007 EDITION) AND THE STANDARD DRAWINGS FOR ROAD CONSTRUCTION IN EFFECT AT THE TIME OF FINAL RFP.



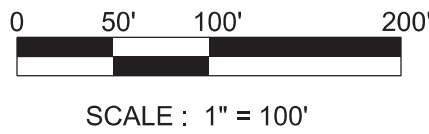
ENGINEER OF RECORD

FOR CONSTRUCTION :

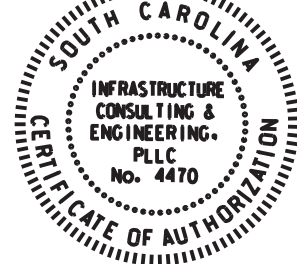
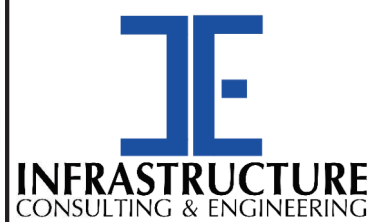
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3/16/2023



Company	Name	Title	Email	Phone
AT&T (T1/OH7)	Andrew Washington	Manager OSP Planning & Engineering Design	aw8544@att.com	803.414.8882
Charter (OH8/TV1)	Steve Jones	Construction Supervisor	Steve.Jones@charter.com	803.744.5514
City of Columbia (W1/SS1)	John Hilbert	Utiliy Relocation Manager	John.Hilbert@columbiasc.gov	803.545.3283
Dominion Energy - Gas (G1)	Patrick Gibbons	Gas Engineer	patrick.gibbons@dominionenergy.com	803.354.2459
Dominion Energy (DESC) - Power Distribution (OH1/E1)	Austin Peacock	Customer Projects Designer	austin.peacock@dominionenergy.com	803.217.9195
Lumen (fka CenturyLink) (OH11/T4)	Rich Williams	Network Implementation Program Manager	richard2.williams@lumen.com	803.704.5342
SCDOT-ITS (TF1)	Steve Littlejohn	State ITS Manager	littlejosl@scdot.org	803.737.0256
SEGRA (OH9/T2)	Jamie Gregg	Manager, Fiber Construction Engineering	james.gregg@segra.com	864.609.7926
Palmetto Utilities (S3)	Adam Delk	VP Engineering	adelk@swwc.com	803.995.5071
Verizon (OH10/T7)	Randy Gilbert	Fiber Optic Engineer	randy.gilbert@verizonwireless.com	803.214.3622



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Date: 2023.03.17 09:32:13-04'00'

SCALE: 1" = 100'

6			
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1	MBC	03-17-23	REVISED FOR BRIDGE ATTACHMENT (CONDUITS IN SIDEWALK)
0	MBC	08-08-22	RELEASED FOR CONSTRUCTION
REV. NO.	BY	DATE	DESCRIPTION OF REVISION

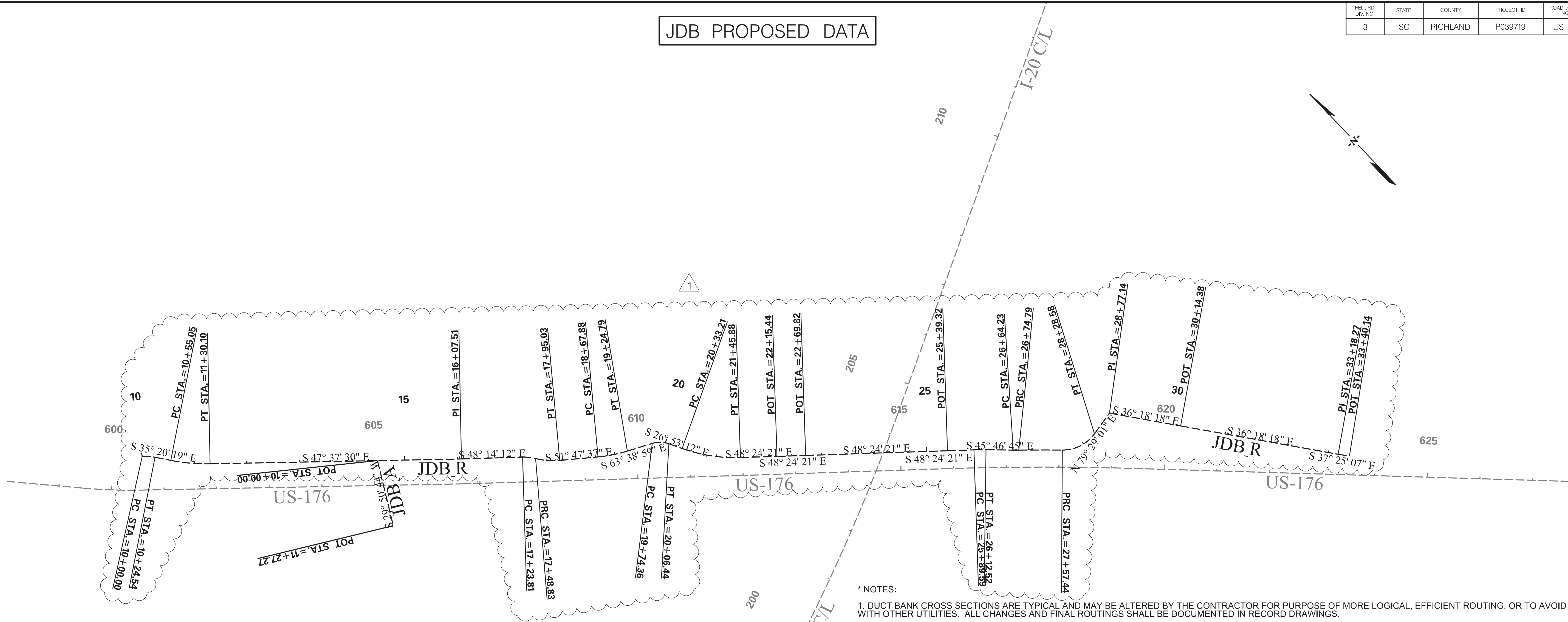
SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION

CAROLINA CROSSROADS PHASE 2

JDB REFERENCE DATA SHEET & GENERAL NOTES

JDB PROPOSED DATA

FED. RD. DIV. NO.	STATE	COUNTY	PROJECT ID	ROAD / ROUTE NO.	SHEET NO.
3	SC	RICHLAND	P039719	US 176	JDB-A



JDB_R

Beginning chain JDB_R description

Curve Data
Curve JDB_R-1
P.I. Station 10+12.37 N 803,634.61 E 1,970,649.16
Delta = 17° 34' 39" (RT)
Degree = 71° 37' 11"
Tangent = 12.37
Length = 24.54
Radius = 80.00
External = 0.95
Long Chord = 24.45
Mid. Ord. = 0.94
P.C. Station 10+00.00 N 803,642.07 E 1,970,639.30
P.T. Station 10+24.54 N 803,624.52 E 1,970,656.32
C.C. N 803,578.25 E 1,970,591.06
Back = S 52° 54' 58" E
Ahead = S 35° 20' 19" E
Chord Bear = S 44° 07' 39" E

Course from PT JDB_R-1 to PC JDB_R-2 S 35° 20' 19" E Dist 30.51

Curve Data
Curve JDB_R-2
P.I. Station 10+92.72 N 803,568.90 E 1,970,695.75
Delta = 12° 17' 10" (LT)
Degree = 16° 22' 13"
Tangent = 37.67
Length = 75.05
Radius = 350.00
External = 2.02
Long Chord = 74.91
Mid. Ord. = 2.01
P.C. Station 10+55.05 N 803,599.63 E 1,970,673.96
P.T. Station 11+30.10 N 803,543.52 E 1,970,723.58
C.C. N 803,802.08 E 1,970,959.48
Back = S 35° 20' 19" E
Ahead = S 47° 37' 30" E
Chord Bear = S 41° 28' 55" E

Course from PT JDB_R-2 to JDBR002 S 47° 37' 30" E Dist 477.40

Point JDBR002 N 803,221.75 E 1,971,076.26 Sta 16+07.51

Course from JDBR002 to PC JDB_R-3 S 48° 14' 12" E Dist 116.30

Curve Data
Curve JDB_R-3
P.I. Station 17+36.40 N 803,135.90 E 1,971,172.41
Delta = 15° 56' 00" (RT)
Degree = 63° 39' 43"
Tangent = 12.60
Length = 25.03
Radius = 90.00
External = 0.88
Long Chord = 24.95
Mid. Ord. = 0.87
P.C. Station 17+23.81 N 803,144.29 E 1,971,163.01
P.T. Station 17+48.83 N 803,125.26 E 1,971,179.14
C.C. N 803,077.16 E 1,971,103.07
Back = S 48° 14' 12" E
Ahead = S 32° 18' 12" E
Chord Bear = S 40° 16' 12" E

Curve Data
Curve JDB_R-4
P.I. Station 17+72.16 N 803,105.54 E 1,971,191.60
Delta = 19° 29' 24" (LT)
Degree = 42° 11' 21"
Tangent = 23.32
Length = 46.20
Radius = 135.81
External = 1.99
Long Chord = 45.97
Mid. Ord. = 1.96
P.C. Station 17+48.83 N 803,125.26 E 1,971,179.14
P.T. Station 17+95.03 N 803,091.12 E 1,971,209.93
C.C. N 803,197.83 E 1,971,293.93
Back = S 32° 18' 12" E
Ahead = S 51° 47' 37" E
Chord Bear = S 42° 02' 55" E

Course from PT JDB_R-4 to PC JDB_R-5 S 51° 47' 37" E Dist 72.85

Curve Data
Curve JDB_R-5
P.I. Station 18+96.44 N 803,028.40 E 1,971,289.61
Delta = 11° 51' 22" (LT)
Degree = 20° 50' 05"
Tangent = 28.55
Length = 56.90
Radius = 275.00
External = 1.48
Long Chord = 56.80
Mid. Ord. = 1.47
P.C. Station 18+67.88 N 803,046.06 E 1,971,267.18
P.T. Station 19+24.79 N 803,015.72 E 1,971,315.20
C.C. N 803,262.15 E 1,971,437.26
Back = S 51° 47' 37" E
Ahead = S 63° 38' 59" E
Chord Bear = S 57° 43' 18" E

Course from PT JDB_R-5 to PC JDB_R-6 S 63° 38' 59" E Dist 49.57

JDB PROPOSED DATA

Curve Data
Curve JDB_R-6
P.I. Station 19+90.98 N 802,986.34 E 1,971,374.51
Delta = 36° 45' 47" (RT)
Degree = 114° 35' 30"
Tangent = 16.61
Length = 32.08
Radius = 50.00
External = 2.69
Long Chord = 31.53
Mid. Ord. = 2.55
P.C. Station 19+74.36 N 802,993.72 E 1,971,359.62
P.T. Station 20+06.44 N 802,971.53 E 1,971,382.03
C.C. N 802,948.91 E 1,971,337.43
Back = S 63° 38' 59" E
Ahead = S 26° 53' 12" E
Chord Bear = S 45° 16' 05" E

Course from PT JDB_R-6 to PC JDB_R-7 S 26° 53' 12" E Dist 26.77

Curve Data
Curve JDB_R-7
P.I. Station 20+90.22 N 802,896.81 E 1,971,419.91
Delta = 21° 31' 09" (LT)
Degree = 19° 05' 55"
Tangent = 57.01
Length = 112.67
Radius = 300.00
External = 5.37
Long Chord = 112.01
Mid. Ord. = 5.27
P.C. Station 20+33.21 N 802,947.65 E 1,971,394.13
P.T. Station 21+45.88 N 802,858.96 E 1,971,462.55
C.C. N 803,083.32 E 1,971,661.70
Back = S 26° 53' 12" E
Ahead = S 48° 24' 21" E
Chord Bear = S 37° 38' 46" E

Course from PT JDB_R-7 to JDBR003 S 48° 24' 21" E Dist 69.55

Point JDBR003 N 802,812.79 E 1,971,514.56 Sta 22+15.44

Course from JDBR003 to JDBR004 S 48° 24' 21" E Dist 54.38

Point JDBR004 N 802,776.69 E 1,971,555.23 Sta 22+69.82

Course from JDBR004 to JDBR005 S 48° 24' 21" E Dist 269.50

Point JDBR005 N 802,597.78 E 1,971,756.78 Sta 25+39.32

Course from JDBR005 to PC JDB_R-8 S 48° 24' 21" E Dist 50.28

Curve Data
Curve JDB_R-8
P.I. Station 26+01.06 N 802,556.79 E 1,971,802.96
Delta = 2° 37' 36" (RT)
Degree = 11° 27' 33"
Tangent = 11.46
Length = 22.92
Radius = 500.00
External = 0.13
Long Chord = 22.92
Mid. Ord. = 0.13
P.C. Station 25+89.59 N 802,564.40 E 1,971,794.38
P.T. Station 26+12.52 N 802,548.80 E 1,971,811.17
C.C. N 802,190.47 E 1,971,462.46
Back = S 48° 24' 21" E
Ahead = S 45° 46' 45" E
Chord Bear = S 47° 05' 33" E

Course from PT JDB_R-8 to PC JDB_R-9 S 45° 46' 45" E Dist 51.71

Curve Data
Curve JDB_R-9
P.I. Station 26+69.51 N 802,509.05 E 1,971,852.01
Delta = 1° 12' 36" (LT)
Degree = 11° 27' 33"
Tangent = 5.28
Length = 10.56
Radius = 500.00
External = 0.03
Long Chord = 10.56
Mid. Ord. = 0.03
P.C. Station 26+64.23 N 802,512.74 E 1,971,848.23
P.T. Station 26+74.79 N 802,505.45 E 1,971,855.87
C.C. N 802,871.06 E 1,972,196.94
Back = S 45° 46' 45" E
Ahead = S 46° 59' 21" E
Chord Bear = S 46° 23' 03" E

Curve Data
Curve JDB_R-10
P.I. Station 27+16.11 N 802,477.26 E 1,971,886.09
Delta = 0° 49' 08" (RT)
Degree = 0° 59' 27"
Tangent = 41.33
Length = 82.66
Radius = 5,782.50
External = 0.15
Long Chord = 82.65
Mid. Ord. = 0.15
P.C. Station 26+74.79 N 802,505.45 E 1,971,855.87
P.T. Station 27+57.44 N 802,448.64 E 1,971,915.91
C.C. N 798,277.15 E 1,967,911.41
Back = S 46° 59' 21" E
Ahead = S 46° 10' 13" E
Chord Bear = S 46° 34' 47" E

Curve Data
Curve JDB_R-11
P.I. Station 27+95.94 N 802,421.98 E 1,971,943.68
Delta = 54° 20' 46" (LT)
Degree = 76° 23' 40"
Tangent = 38.50
Length = 71.14
Radius = 75.00
External = 9.30
Long Chord = 68.50
Mid. Ord. = 8.28
P.C. Station 27+57.44 N 802,448.64 E 1,971,915.91
P.T. Station 28+28.58 N 802,429.01 E 1,971,981.53
C.C. N 802,502.75 E 1,971,967.85
Back = S 46° 10' 13" E
Ahead = N 79° 29' 01" E
Chord Bear = S 73° 20' 36" E

Course from PT JDB_R-11 to JDBR006 N 79° 29' 01" E Dist 48.57

Point JDBR006 N 802,437.87 E 1,972,029.28 Sta 28+77.14

Course from JDBR006 to JDBR007 S 36° 18' 18" E Dist 137.23

Point JDBR007 N 802,327.28 E 1,972,110.54 Sta 30+14.38

Course from JDBR007 to JDBR008 S 36° 18' 18" E Dist 303.90

Point JDBR008 N 802,082.37 E 1,972,290.47 Sta 33+18.27

Course from JDBR008 to JDBR009 S 37° 25' 07" E Dist 21.87

Point JDBR009 N 802,065.00 E 1,972,303.76 Sta 33+40.14

Ending chain JDB_R description

JDB_A

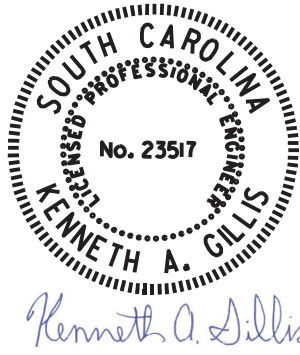
Beginning chain JDB_A description

Point JDBA01 N 803,329.218 E 1,970,958.472 Sta 10+00.00

Course from JDBA01 to JDBA02 S 29° 50' 43.88" W Dist 127.270

Point JDBA02 N 803,218.827 E 1,970,895.135 Sta 11+27.27

Ending chain JDB_A description



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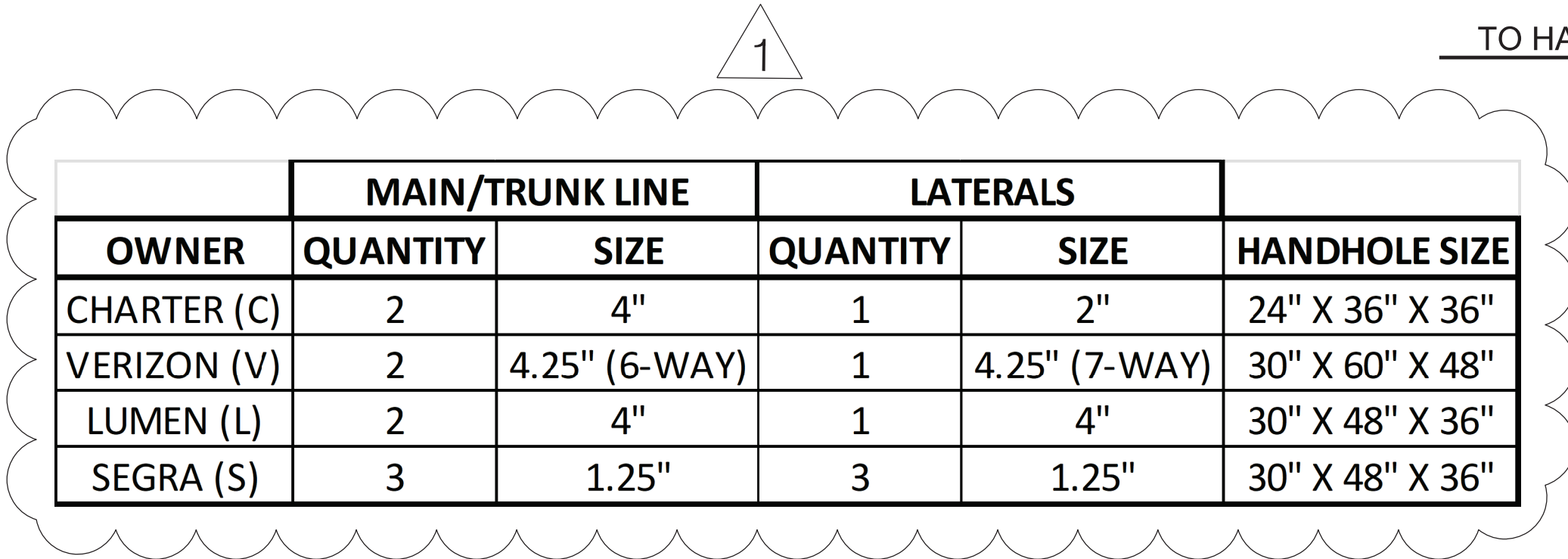
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REV. NO.	BY	DATE	DESCRIPTION OF REVISION

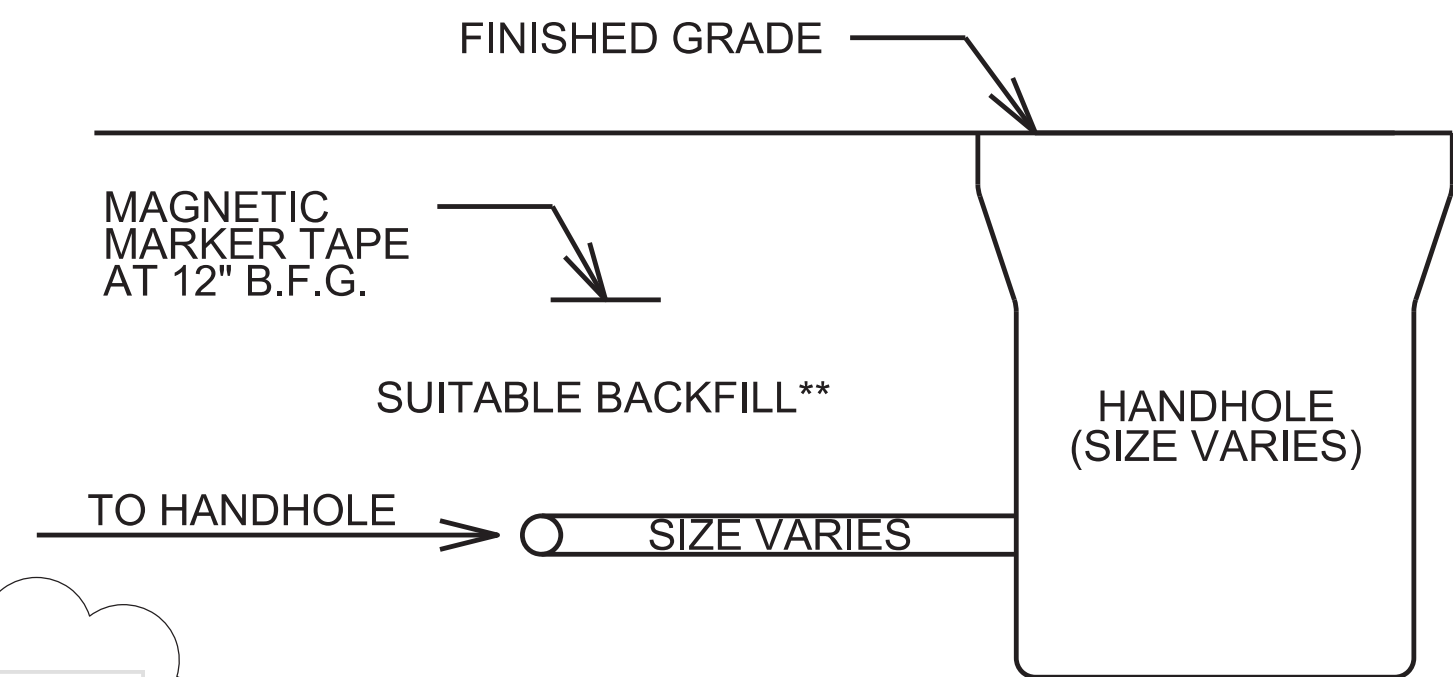
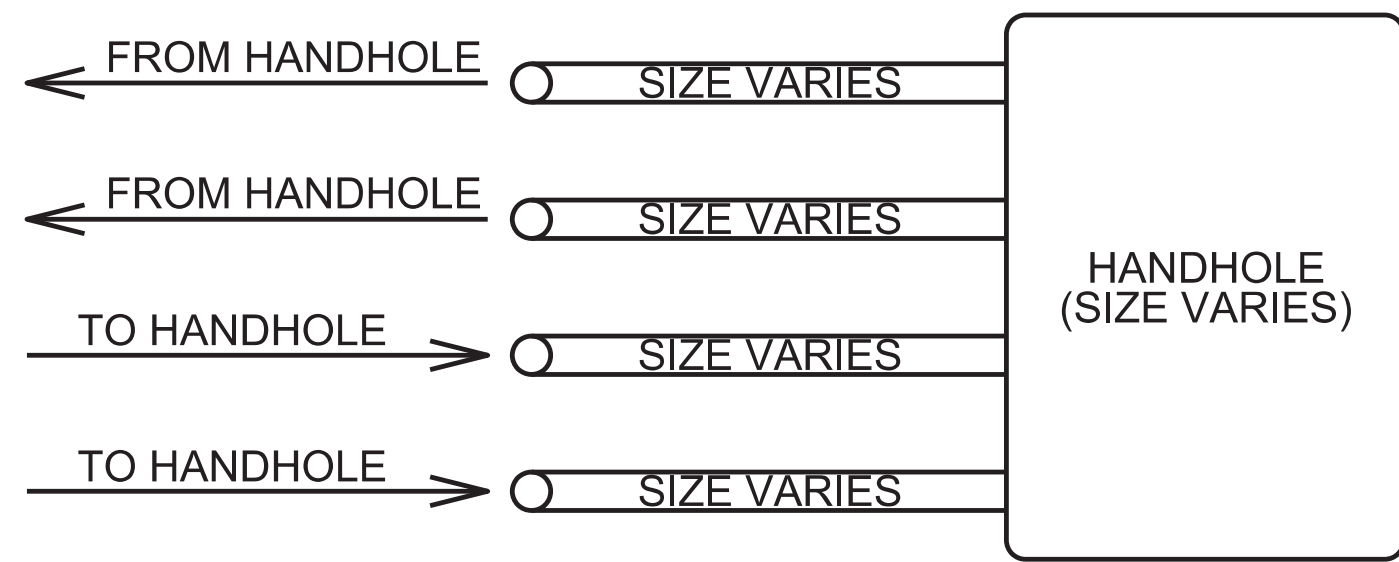
SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION






CAROLINA CROSSROADS PHASE 2

JDB REFERENCE DATA SHEET



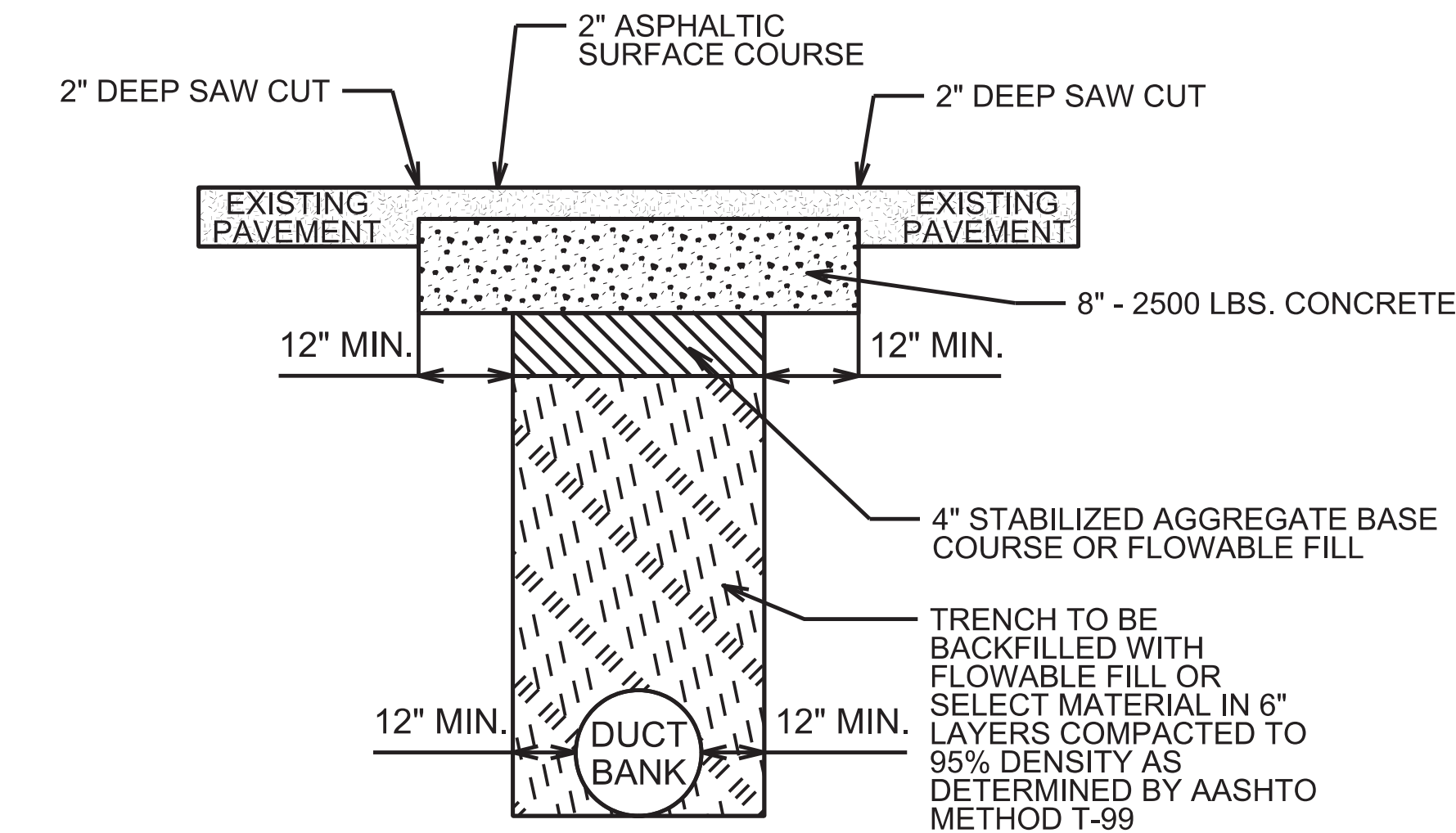
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 STANDARDS. FLOWABLE FILL TO BE USED
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 COVER IS LESS THAN 36" FROM THE BOTTOM
 OF PAVEMENT STRUCTURE TO THE BACK OF
 CURB TO THE BACK OF CURB.**



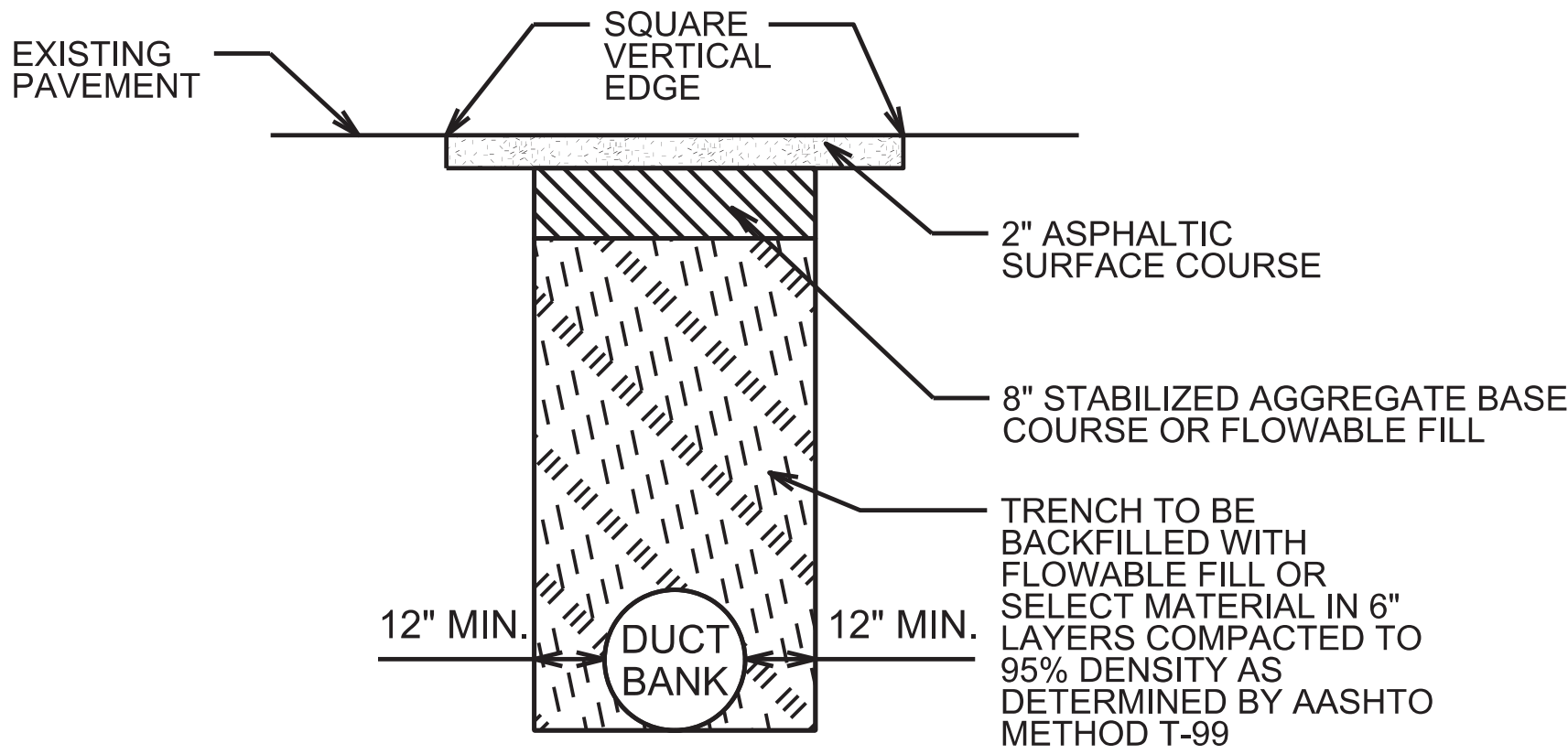
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				1	MBC	03-17-23	REVISED FOR BRIDGE ATTACHMENT (POUNDERS IN SIDEWALK)	
				0	MBC	08-08-22	RELEASED FOR CONSTRUCTION	
				REV. NO.	BY	DATE	DESCRIPTION OF REVISION	COMMUNICATIONS JOINT DUCT BANK DUCT BANK DETAILS

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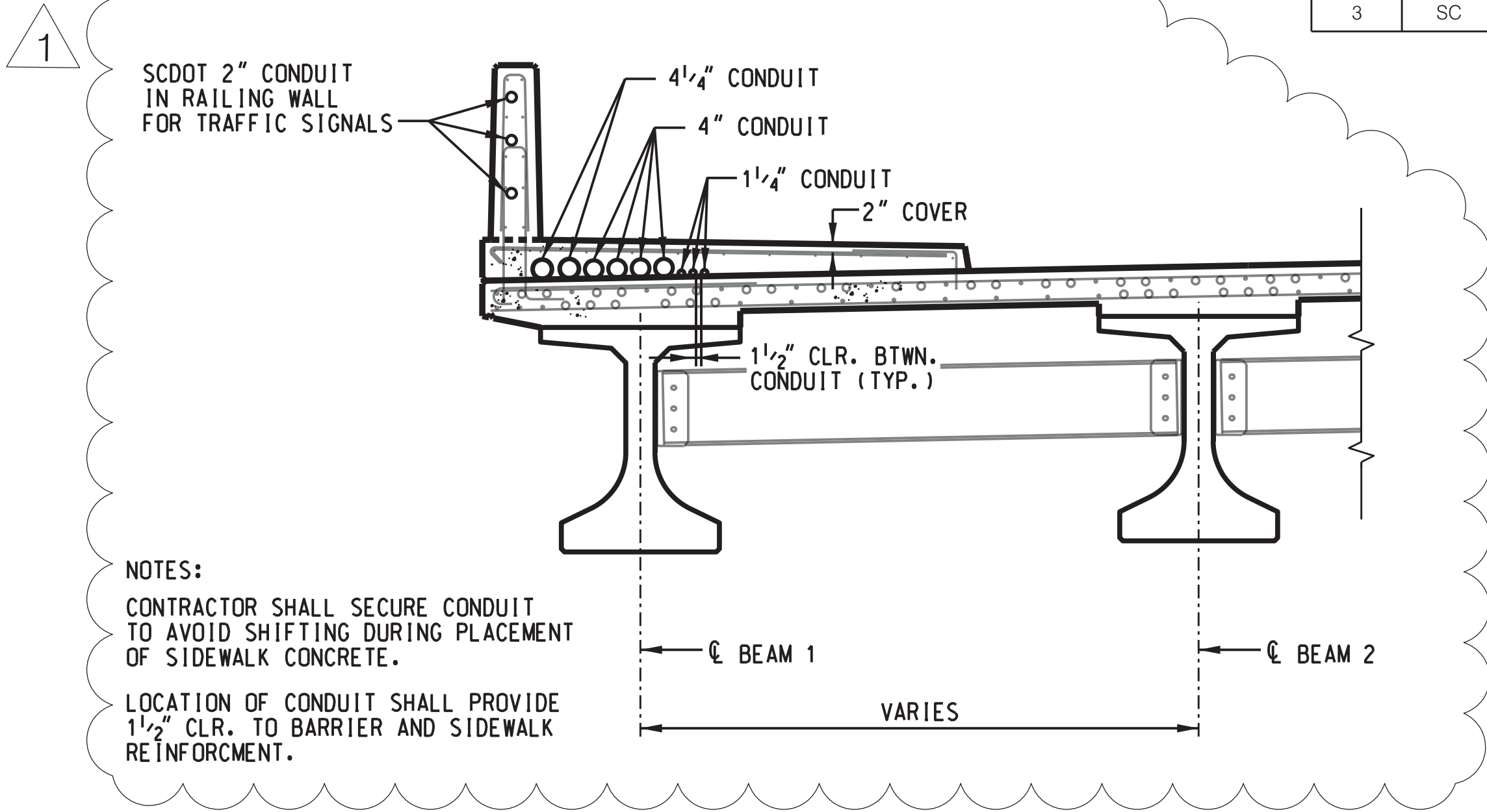
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3	SC	RICHLAND	P039719	US 176	JDB-D



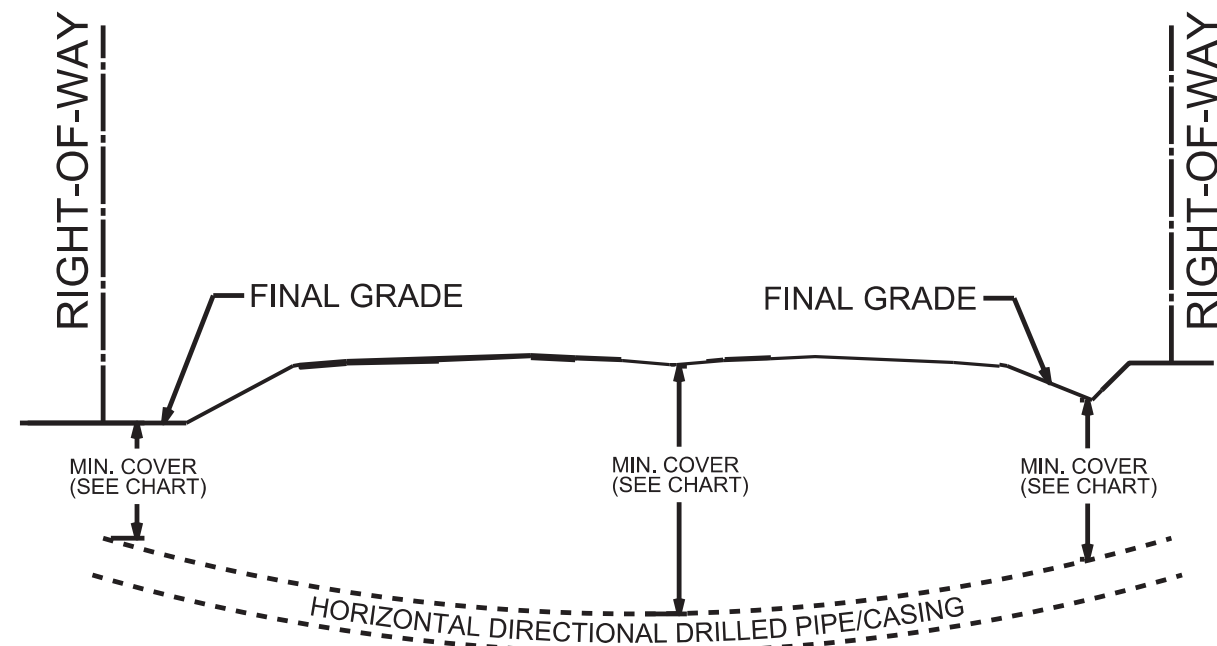
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OPEN CUT REPAIR FOR HIGH VOLUME
ASPHALT PAVEMENT DETAIL
NTS



SCDOT UAM
OPEN CUT REPAIR FOR LOW VOLUME
ASPHALT PAVEMENT & DRIVEWAYS DETAIL
NTS







BRIDGE 42A CONDUITS WITHIN SIDEWALK
DETAIL
NTS



CASING/CARRIER PIPE DIAMETER	MINIMUM COVER
GREATER THAN 2 INCHES UP TO 6 INCHES	4 FEET
GREATER THAN 6 INCHES UP TO 14 INCHES	10 FEET
GREATER THAN 14 INCHES UP TO 24 INCHES	15 FEET
GREATER THAN 24 INCHES UP TO 48 INCHES	25 FEET

SCDOT UAM
HORIZONTAL DIRECTIONAL DRILL MINIMUM
COVER REQUIREMENTS DETAIL
NTS

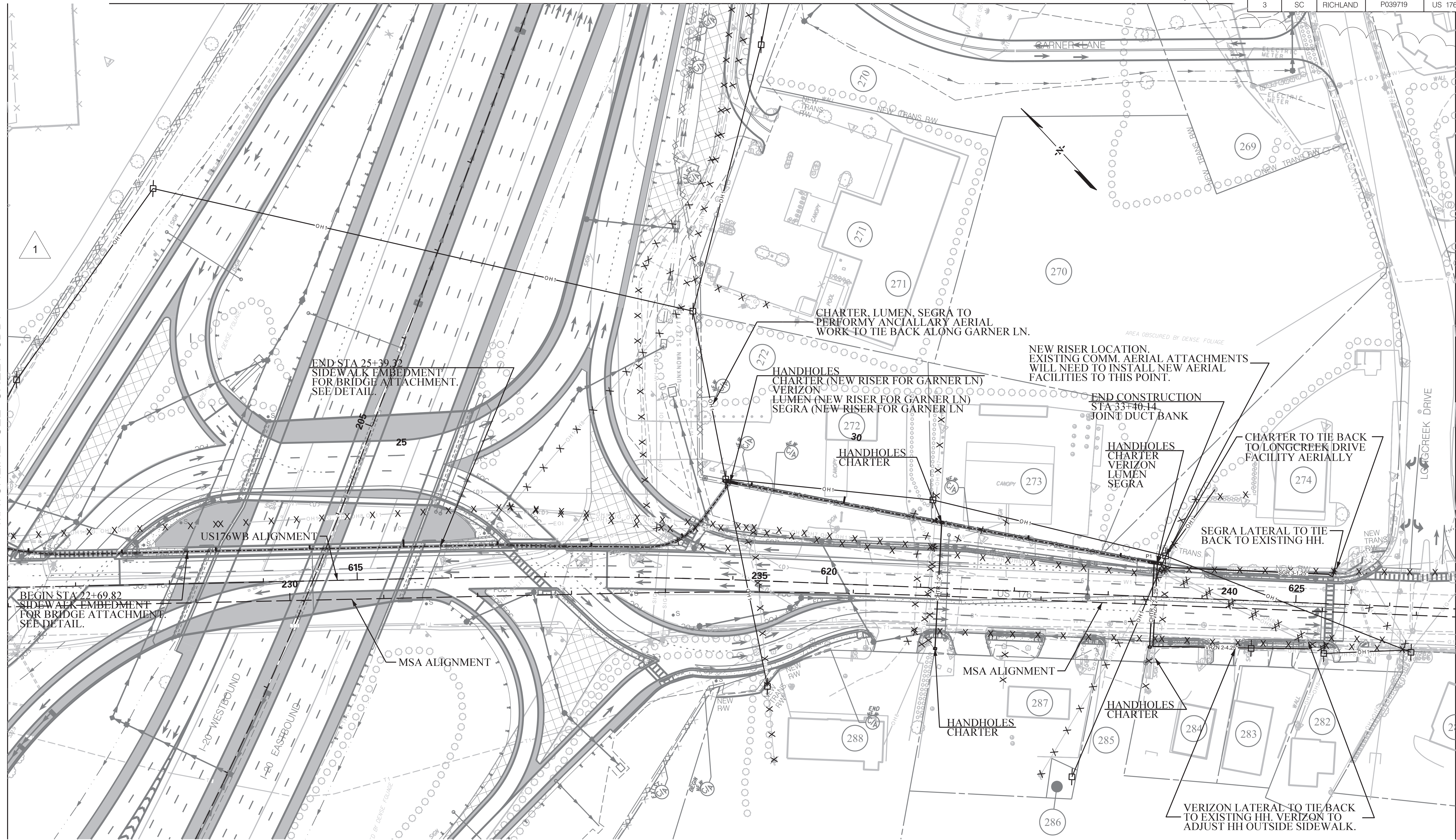
	 JOINT VENTURE  UNITED <small>CONSULTING & ENGINEERING</small>	 INFRASTRUCTURE CONSULTING & ENGINEERING	 <i>Kenneth A. Gillis</i> Digitally signed by Kenneth A. Gillis Date: 2023.03.17 09:57:03-04'00'	SCALE: NTS	6				SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION
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1	MBC	03-17-23	REVISED FOR BRIDGE ATTACHMENT (CONDUITS IN SIDEWALK)	COMMUNICATIONS JOINT DUCT BANK DUCT BANK DETAILS					
0	MBC	08-08-22	RELEASED FOR CONSTRUCTION						
REV. NO.	BY	DATE	DESCRIPTION OF REVISION						

MATCHLINE SEE SHEET JDB3 INSET B

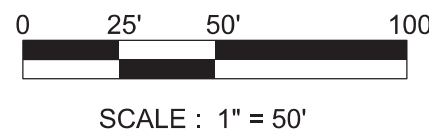
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3	SC	RICHLAND	P039719	US 176	JDB2

MATCHLINE SEE SHEET JDB1

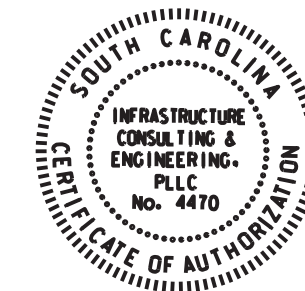
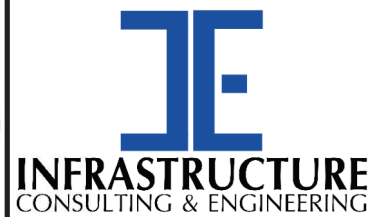
MATCHLINE SEE SHEET JDB3 INSET A



NOTE: PRELIMINARY DESC
RELOCATION PLAN SHOWN
FOR INFORMATION ONLY.
SUBJECT TO CHANGE.



ALIGNMENT CONTROL CAN BE FOUND ON
REFERENCE DATA SHEET JDB-A



Digitally signed by Kenneth A. Gillis
Date: 2023.03.17 09:58:21-0400'

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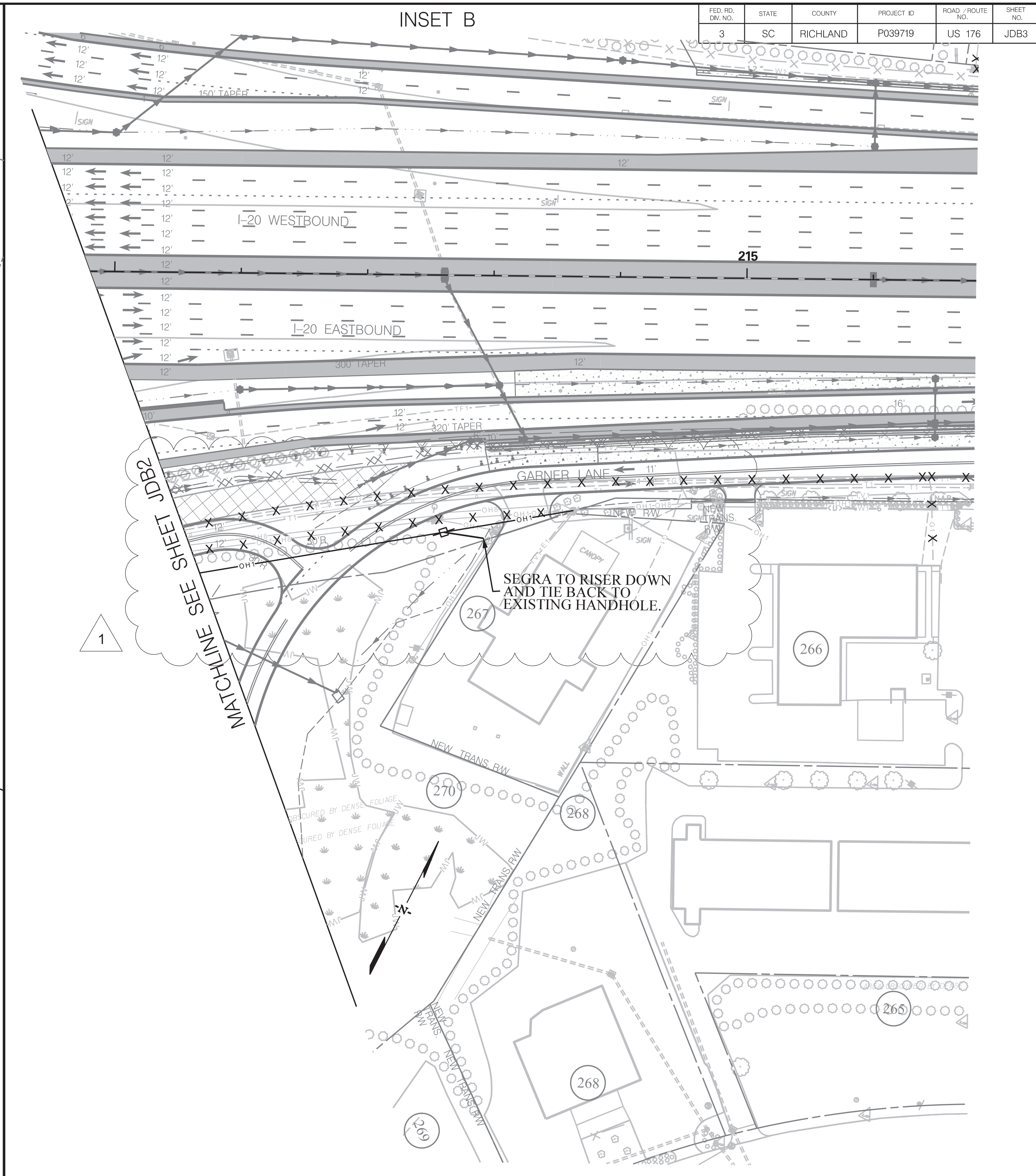
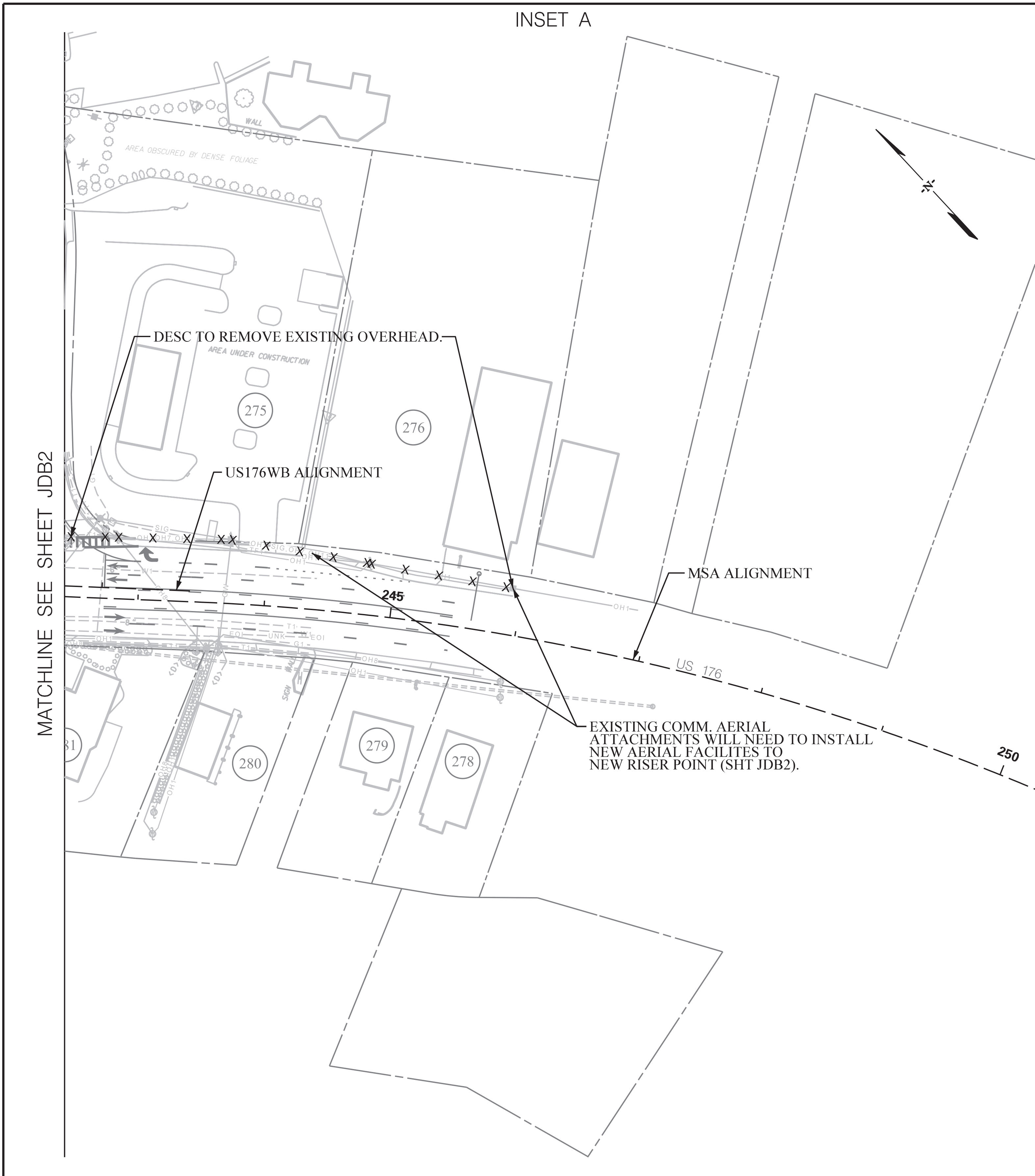
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0	MBC	08-08-22	RELEASED FOR CONSTRUCTION

SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION

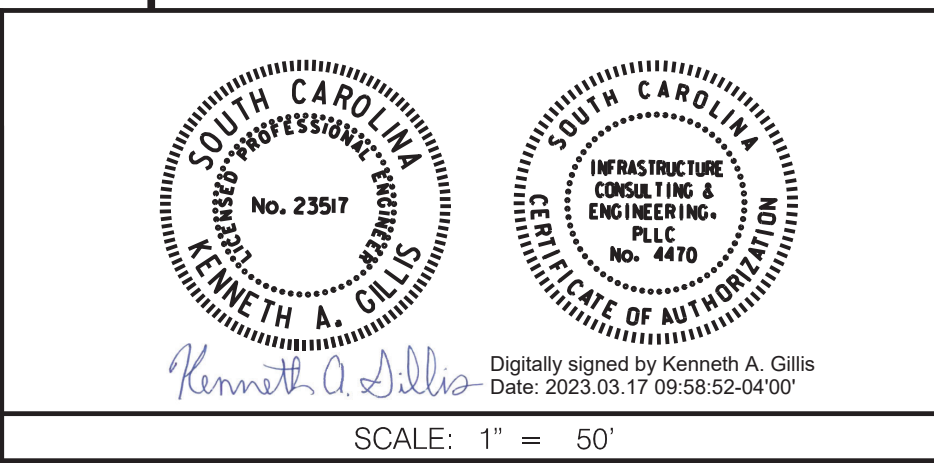
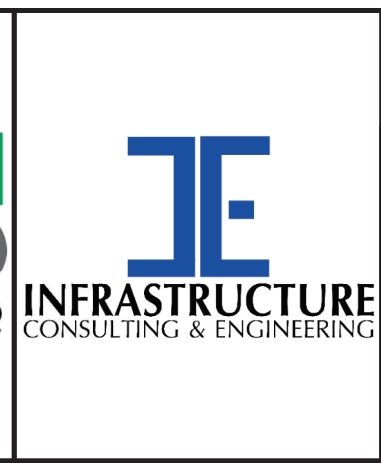
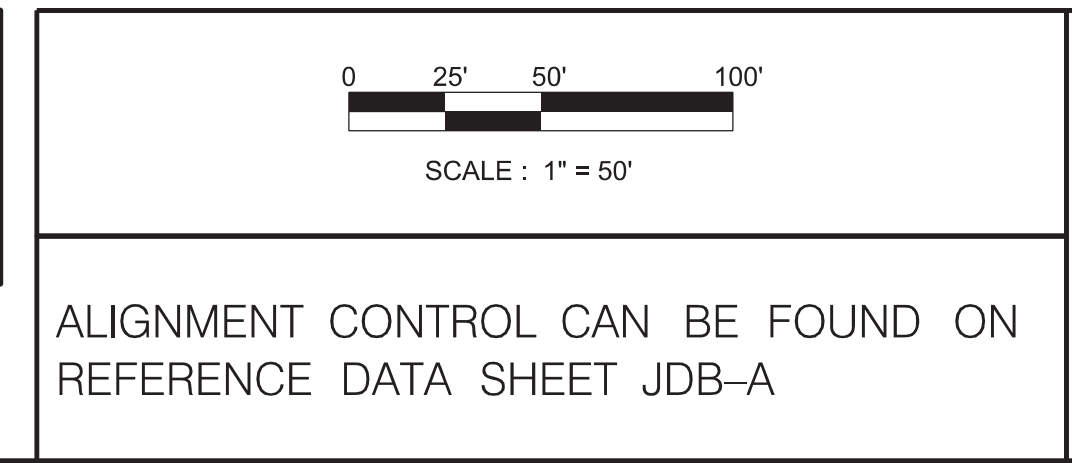
CAROLINA CROSSROADS PHASE 2

COMMUNICATIONS JOINT DUCT BANK
PLAN SHEET

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3/16/2023



NOTE: PRELIMINARY DESC
RELOCATION PLAN SHOWN
FOR INFORMATION ONLY.
SUBJECT TO CHANGE.



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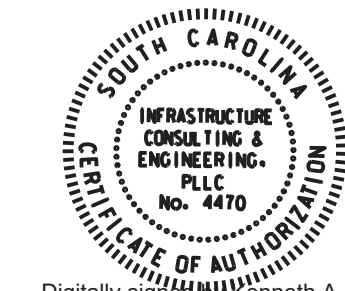
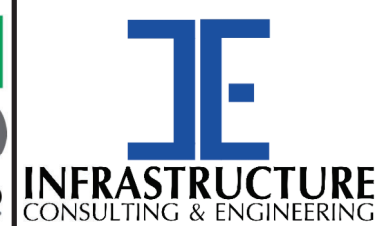
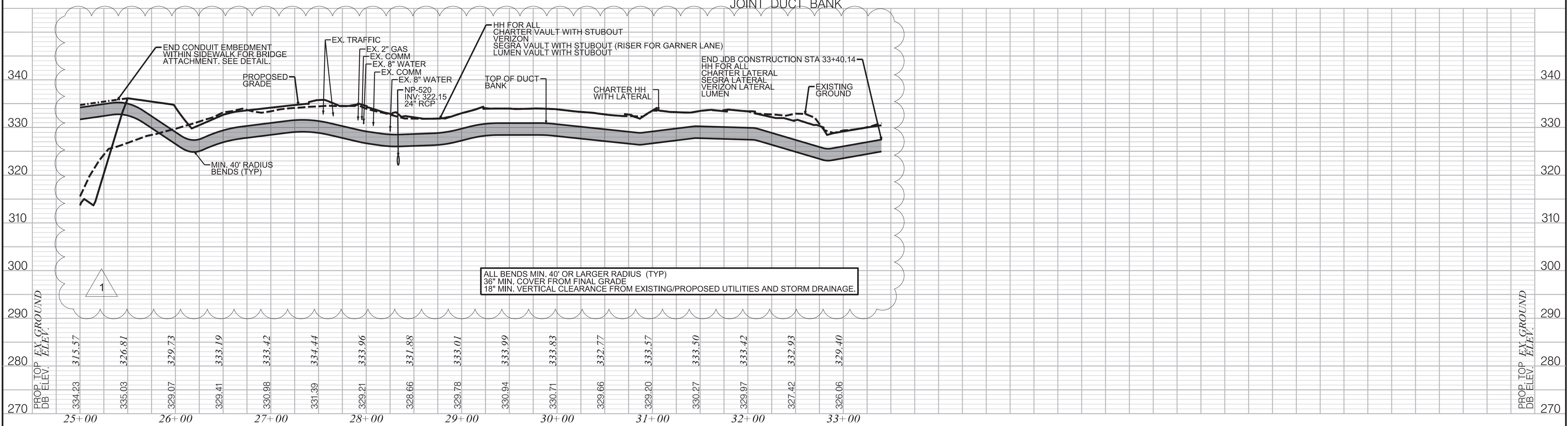
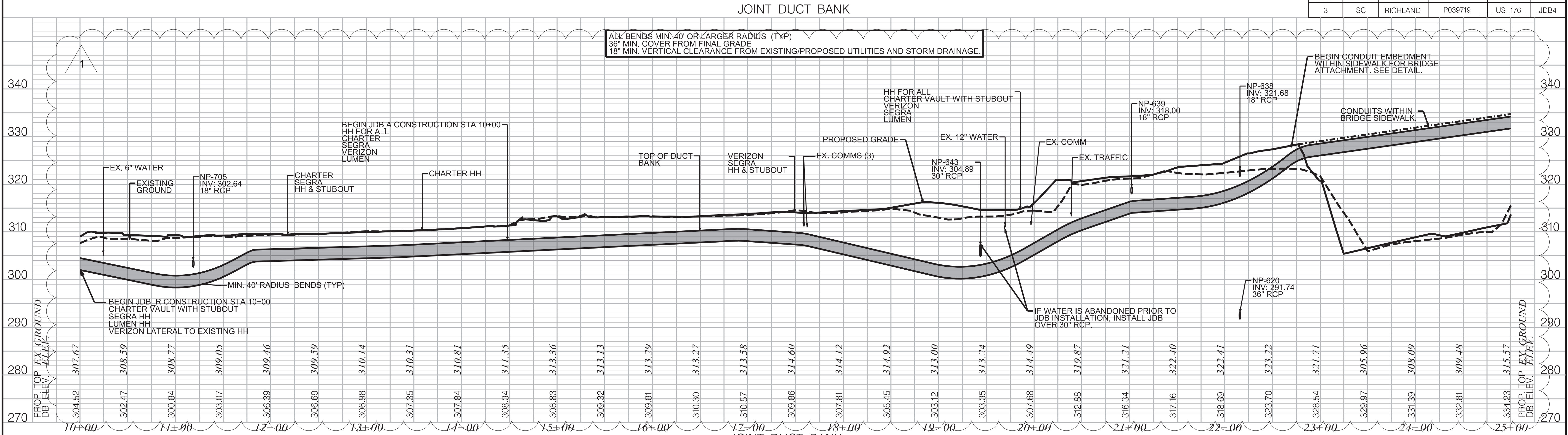
SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION

CAROLINA CROSSROADS PHASE 2

COMMUNICATIONS JOINT DUCT BANK
PLAN SHEET

Z:\Projects\20-8CCR Ph 2\Utility Coordination\DCN\JDB\PLANS\20-8_JDB_SHEET4_PRO.dgn
3/16/2023

FED. RD. DIV. NO.	STATE	COUNTY	PROJECT ID	ROAD / ROUTE NO.	SHEET NO.
3	SC	RICHLAND	P039719	US 176	JDB4



SCALE: 1" = 50' HORIZONTAL 1" = 10' VERTICAL

6			
5			
4			
3			
2			
1	MBC	03-17-23	REVISED FOR BRIDGE ATTACHMENT (CONDUITS IN SIDEWALK)
0	MBC	08-08-22	RELEASED FOR CONSTRUCTION
REV. NO.	BY	DATE	DESCRIPTION OF REVISION

SOUTH CAROLINA DEPARTMENT OF TRANSPORTATION

CAROLINA CROSSROADS PHASE 2

JOINT DUCT BANK
PROFILE SHEET

