

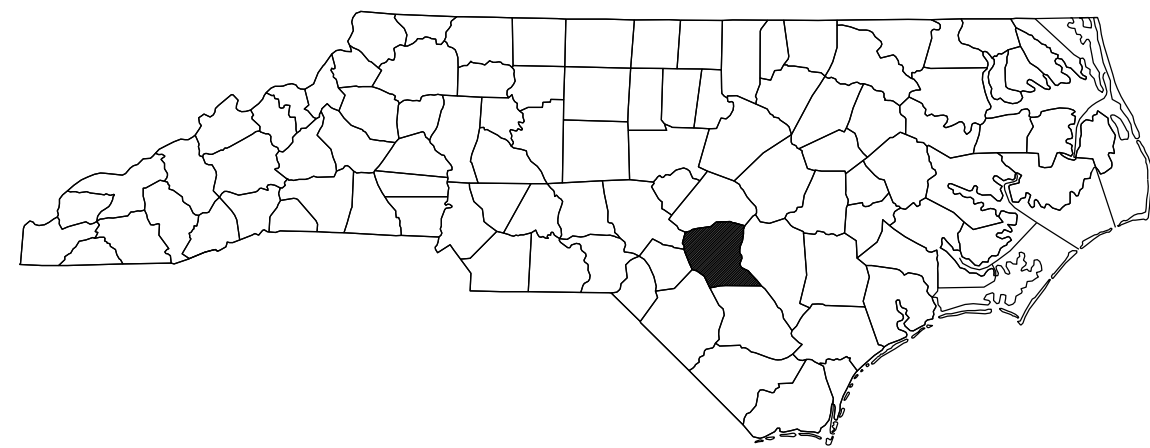
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**This file or an individual page
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PROJECT: 15BPR.58

CONTRACT NO: C204461



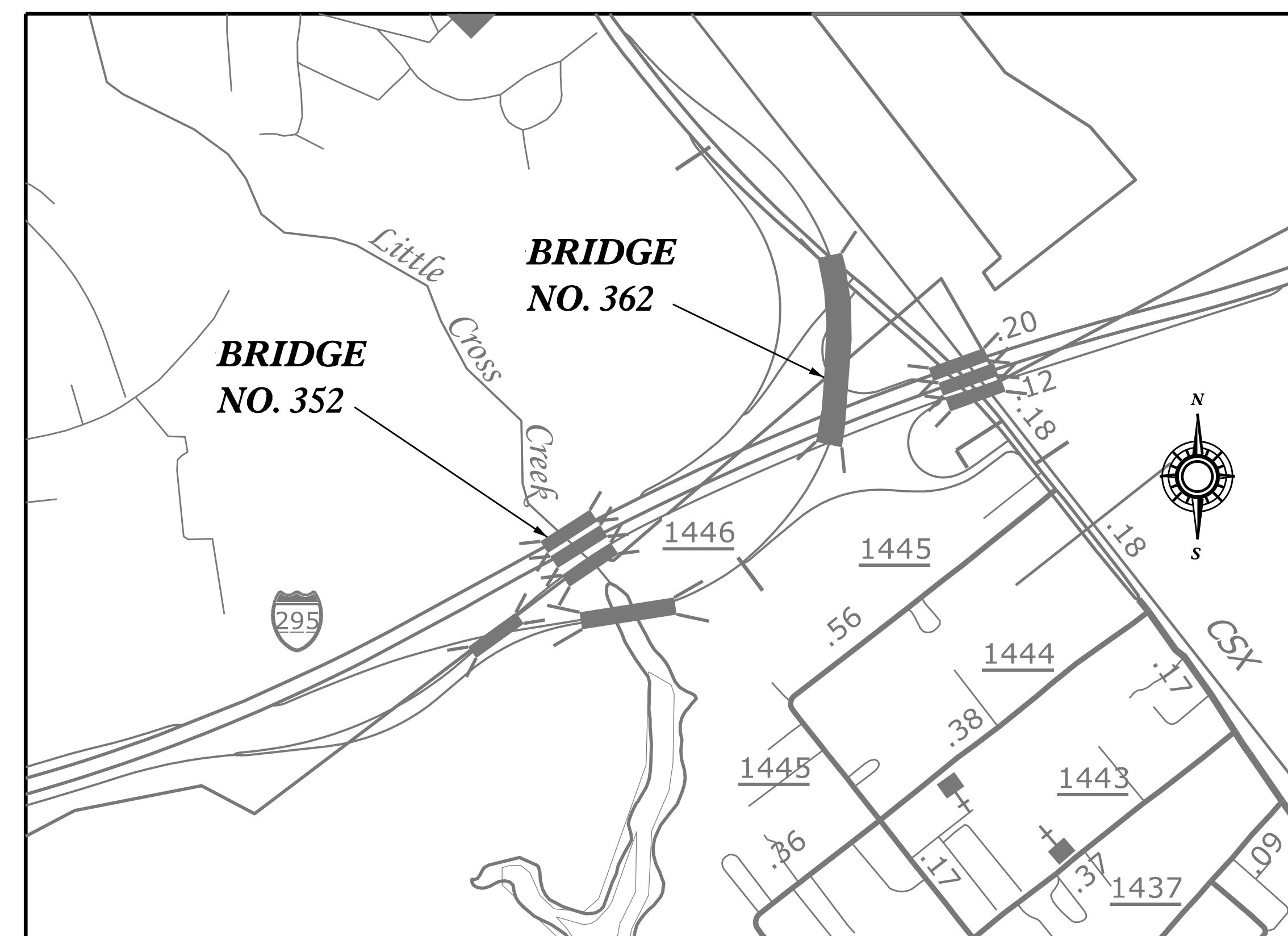
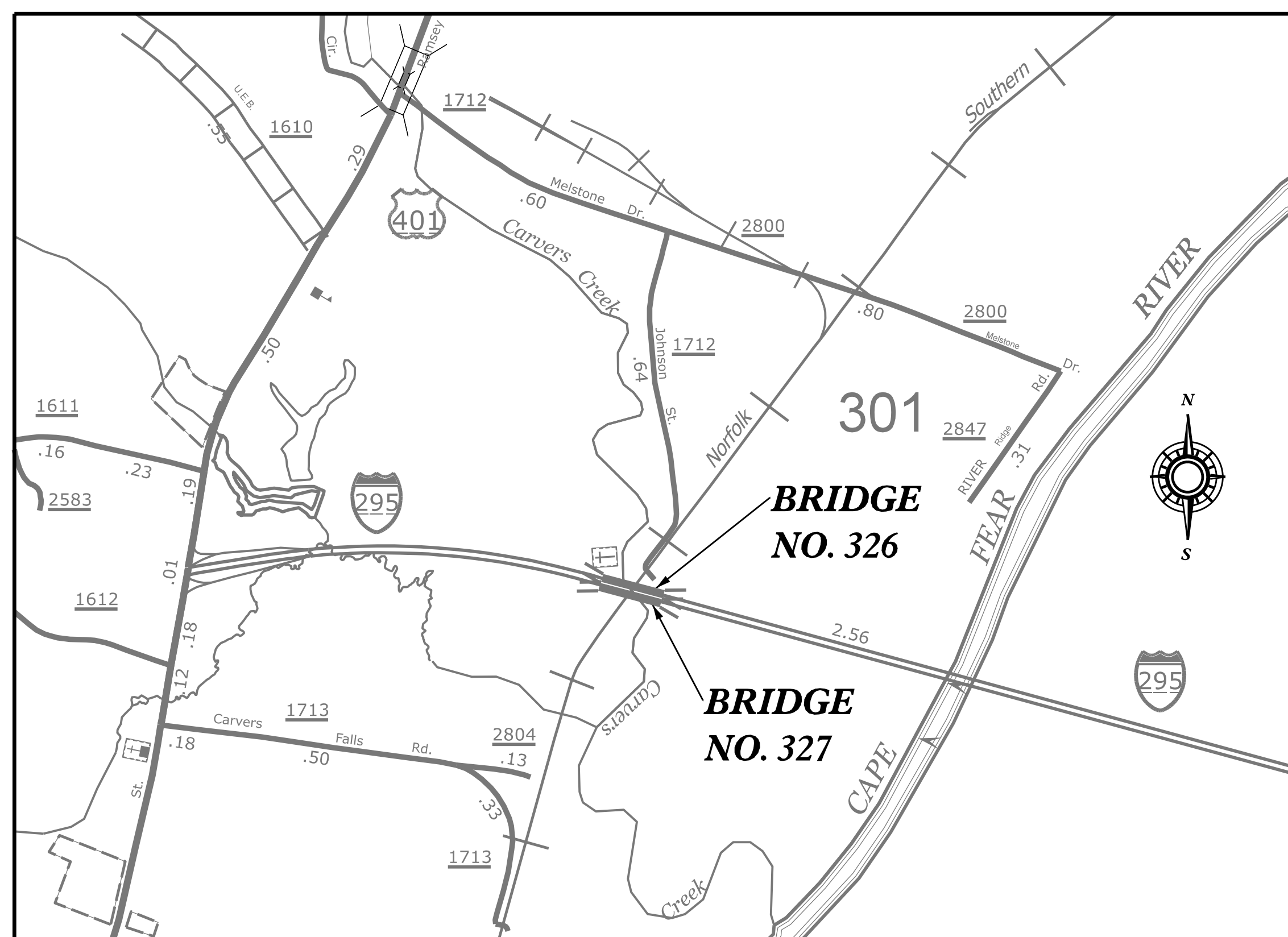
STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

CUMBERLAND COUNTY

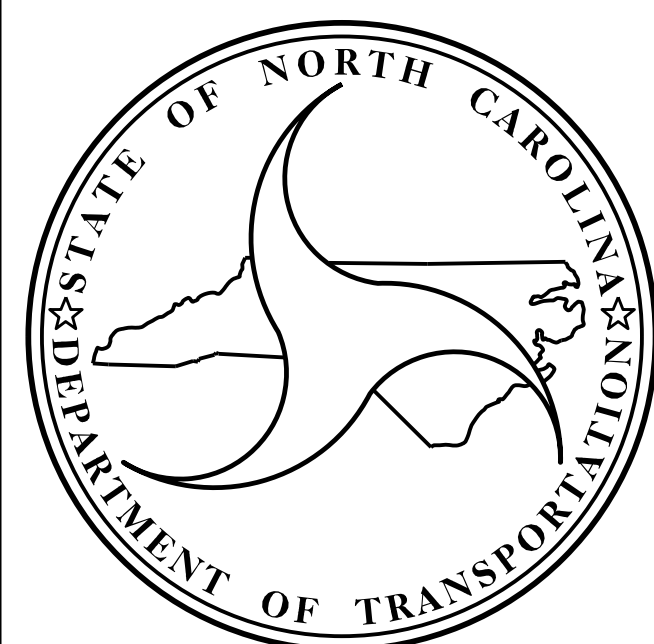
STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	15BPR.58	1	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
15BPR.58		P.E.	
15BPR.58		CONST.	

LOCATION: BRIDGE #250326 ON I-295 S OVER CARVERS CREEK, NSRR, & SR 1712
 BRIDGE #250327 ON I-295 N OVER CARVERS CREEK, NSRR, & SR 1712
 BRIDGE #250352 ON I-295 S OVER LITTLE CROSS CREEK
 BRIDGE #250362 ON I-295 FLYOVER RAMP OVER I-295 & NC 210

TYPE OF WORK: BRIDGE PRESERVATION - SHOTBLASTING & SILANE DECK TREATMENT



VICINITY MAP



DESIGN DATA

BRIDGE #250326 ADT 2019 = 12,250
 BRIDGE #250327 ADT 2019 = 12,250
 BRIDGE #250352 ADT 2018 = 7,000
 BRIDGE #250362 ADT 2018 = 13,833

PROJECT LENGTH

BRIDGE #250326 = 0.165 MILE
 BRIDGE #250327 = 0.165 MILE
 BRIDGE #250352 = 0.121 MILE
 BRIDGE #250362 = 0.305 MILE

Prepared in the Office of:
DIVISION OF HIGHWAYS
 STRUCTURES MANAGEMENT UNIT
 1000 BIRCH RIDGE DR.
 RALEIGH, N.C. 27610

2018 STANDARD SPECIFICATIONS

LETTING DATE :

JANUARY 17, 2023

Kristy W. Alford, P.E., CPM
 PROJECT ENGINEER

Aster G. Abraha, P.E.
 PROJECT DESIGN ENGINEER

PROJECT: 15BPR.58

CONTRACT NO: C204461

STATE OF NORTH CAROLINA
DIVISION OF HIGHWAYS

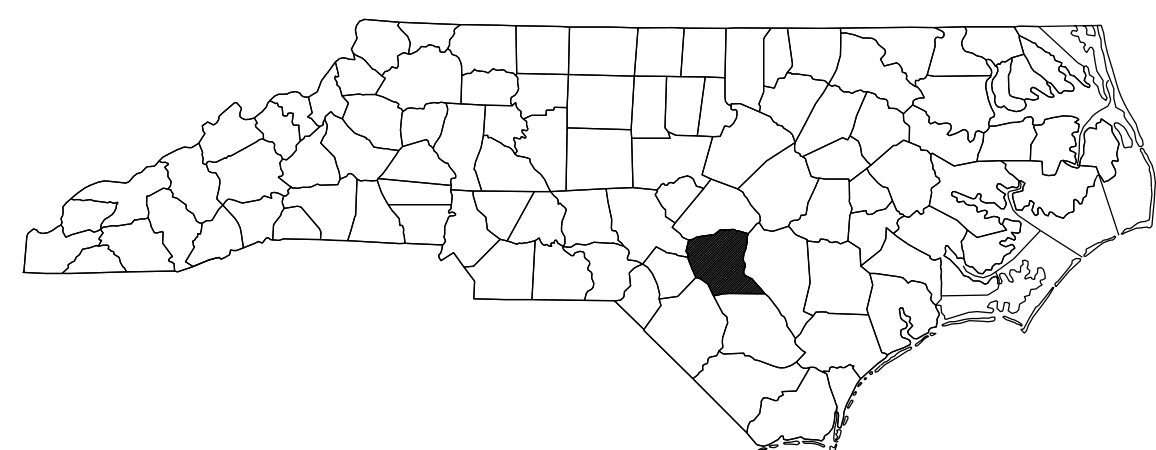
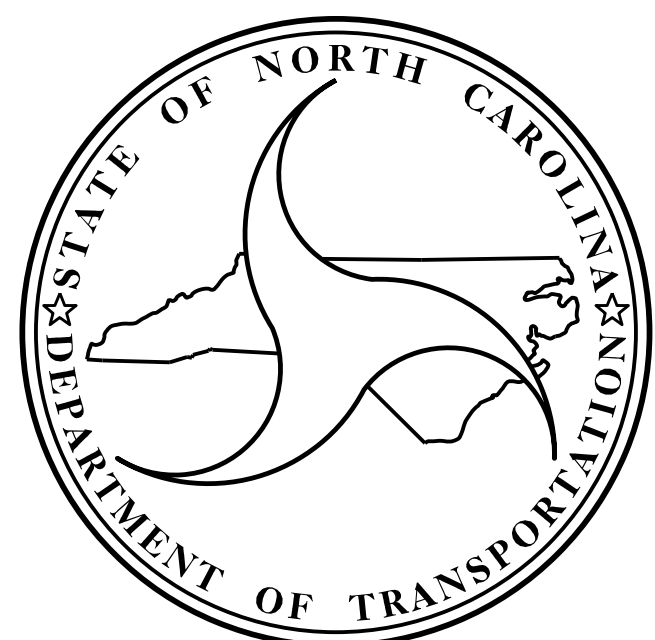
CUMBERLAND COUNTY

LOCATION: BRIDGE #250326 ON I-295 S OVER CARVERS CREEK, NSRR, & SR 1712
BRIDGE #250327 ON I-295 N OVER CARVERS CREEK, NSRR, & SR 1712
BRIDGE #250352 ON I-295 S OVER LITTLE CROSS CREEK
BRIDGE #250362 ON I-295 FLYOVER RAMP OVER I-295 & NC 210

STATE	STATE PROJECT REFERENCE NO.	SHEET NO.	TOTAL SHEETS
N.C.	15BPR.58	1A	
STATE PROJ. NO.	F.A. PROJ. NO.	DESCRIPTION	
15BPR.58		P.E.	
15BPR.58		CONST.	

INDEX OF STRUCTURES SHEETS

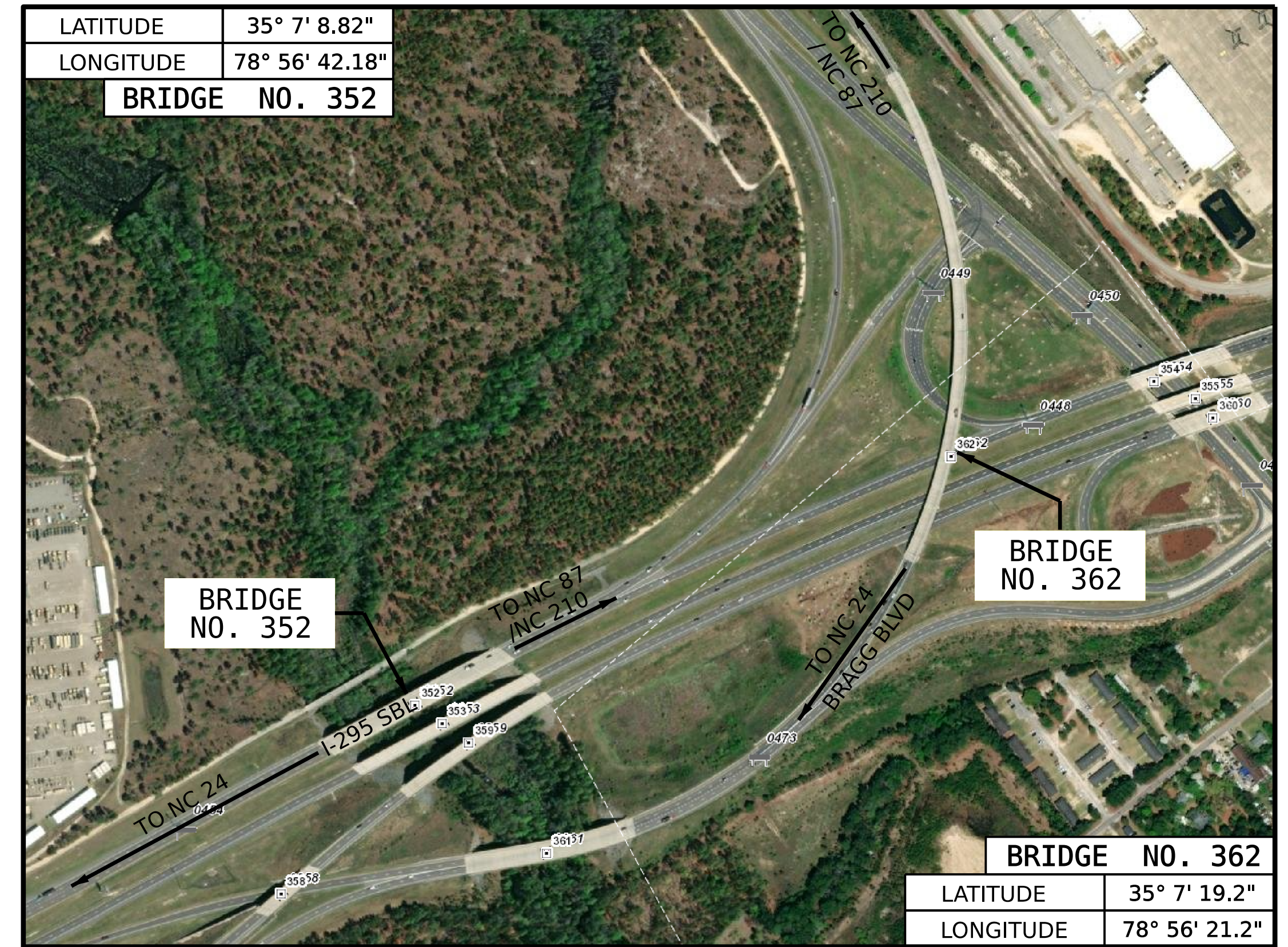
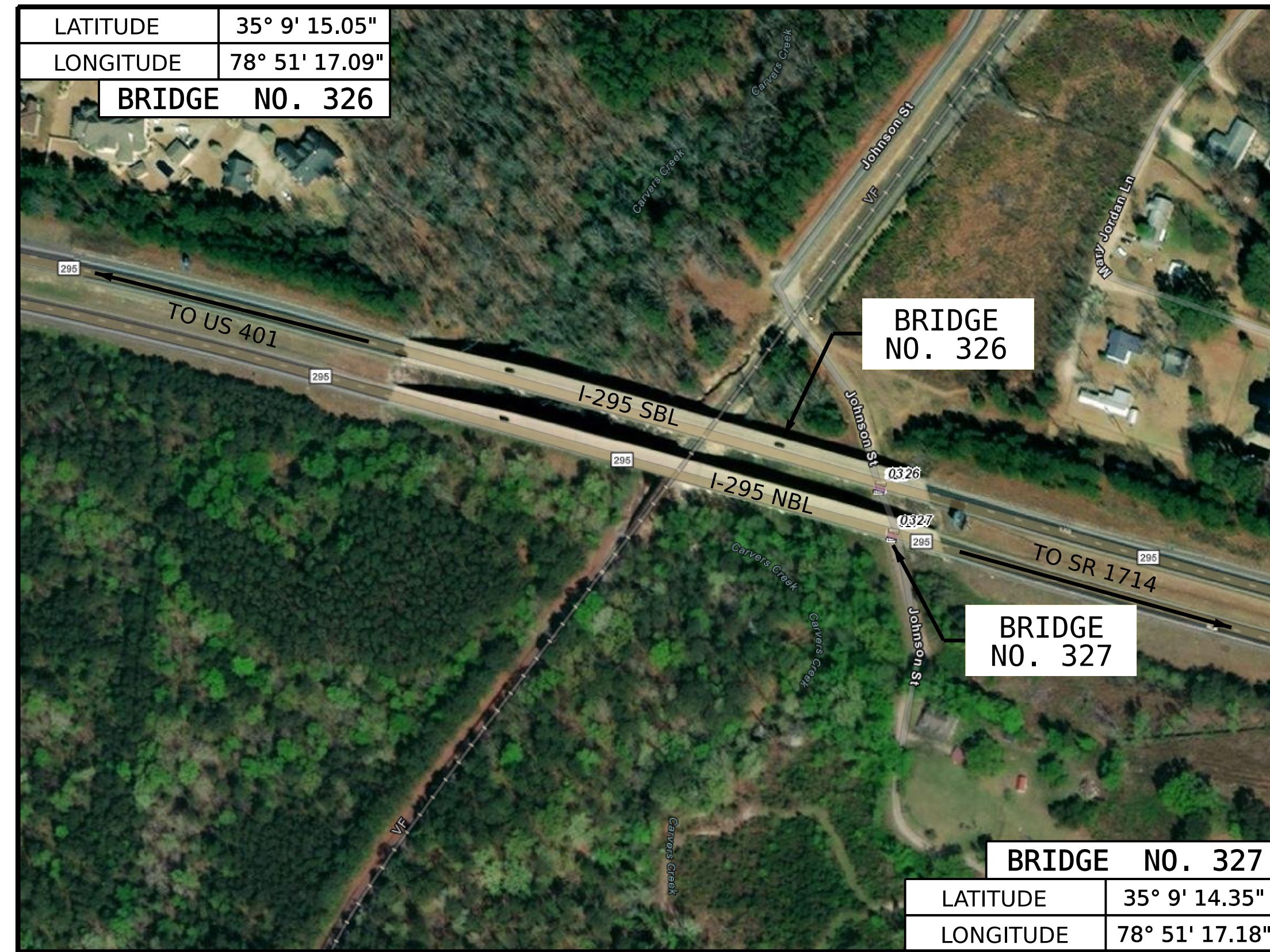
<u>SHEET No.</u>	<u>DESCRIPTION</u>
1	TITLE SHEET
1A	INDEX OF SHEETS
S-1	LOCATION SKETCH
S-2	BILL OF MATERIALS
STRUCTURE No. 250326	
S1-1 THRU S1-2	GENERAL DRAWING
S1-3	TYPICAL SECTION
S1-4 THRU S1-5	SILANE DECK TREATMENT
STRUCTURE No. 250327	
S2-1 THRU S2-2	GENERAL DRAWING
S2-3	TYPICAL SECTION
S2-4 THRU S2-5	SILANE DECK TREATMENT
STRUCTURE No. 250352	
S3-1	GENERAL DRAWING
S3-2	TYPICAL SECTION
S3-3 THRU S3-4	SILANE DECK TREATMENT
STRUCTURE No. 250362	
S4-1 THRU S4-4	GENREAL DRAWING
S4-5	TYPICAL SECTION
S4-6 THRU S4-9	SILANE DECK TREATMENT
STANDARD SHEETS	
SN	STANDARD NOTES



TYPE OF WORK:

BRIDGE PRESERVATION - SHOTBLASTING & SILANE DECK TREATMENT

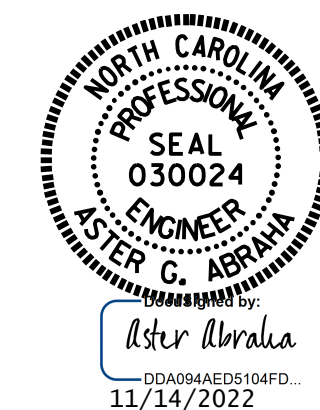
Prepared in the Office of:
DIVISION OF HIGHWAYS
STRUCTURES MANAGEMENT UNIT
1000 BIRCH RIDGE DR.
RALEIGH, N.C. 27610



LOCATION SKETCH

INFORMATION INDICATED ON THE LOCATION SKETCH SHALL BE CONSIDERED GENERAL INFORMATION ONLY. CONTRACTOR SHALL CONFIRM, THROUGH OTHER SOURCES, SPECIFIC INFORMATION REGARDING THE BRIDGES, ROADWAYS, UTILITIES, THE SURROUNDING AREA, AND ANY OTHER ASPECTS THAT MAY BE NECESSARY TO PERFORM AND COMPLETE THE PROJECT.

PROJECT NO. 15BPR.58
CUMBERLAND
 BRIDGE NO. 250326, 250327,
250352 & 250362



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
LOCATION SKETCH

DRAWN BY : G. AYES DATE : 08/2021
 CHECKED BY : S. WANCE DATE : 09/2021
 DESIGN ENGINEER OF RECORD: A. ABRAHA DATE : _____

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-1
1			3			TOTAL SHEETS
2			4			

GENERAL NOTES:

THE CONTRACTOR'S ATTENTION IS CALLED TO THE FACT THAT DUE TO THE NATURE OF PRESERVATION PROJECTS, THE EXTENT OF WORK CANNOT ALWAYS BE ACCURATELY DETERMINED PRIOR TO COMMENCEMENT OF WORK. REPAIR LOCATIONS AND ESTIMATES OF QUANTITIES ARE GIVEN WITH THE BEST INFORMATION AVAILABLE. IF ADDITIONAL REPAIRS NOT SHOWN ON THE DRAWINGS ARE DEEMED NECESSARY BY THE ENGINEER, THE ENGINEER SHALL NOTE ON THE DRAWINGS THE APPROXIMATE LOCATION AND DESCRIPTION OF THE REPAIRS.

EXISTING DIMENSIONS AND BRIDGE CONDITION ARE FROM THE BEST INFORMATION AVAILABLE. THE CONTRACTOR SHALL FIELD VERIFY THE INFORMATION SHOWN ON THE PLANS AND NOTIFY THE ENGINEER IF ACTUAL DIMENSIONS AND CONDITIONS DIFFER.

THE CONTRACTOR SHALL HAVE NO CLAIM WHATSOEVER AGAINST THE DEPARTMENT FOR ANY DELAYS OR ADDITIONAL COST INCURRED BASED ON DIFFERENCES BETWEEN WHAT IS SHOWN ON THE PLANS AND THE ACTUAL CONDITIONS AT THE PROJECT SITE.

IT IS THE CONTRACTOR'S RESPONSIBILITY TO FOLLOW ALL STATE AND FEDERAL SAFETY REQUIREMENTS.

WORK ON THE BRIDGE(S) SHALL BE PERFORMED SO AS NOT TO ALLOW DEBRIS TO FALL BELOW, EXCEPT WHERE THE CONTRACTOR PLANS TO USE PLATFORMS, NETS, SCREENS OR OTHER PROTECTIVE DEVICES TO CATCH THE MATERIAL. THE CONTRACTOR SHALL SUBMIT PLANS FOR CONSTRUCTION IN ACCORDANCE WITH ARTICLE 402-2 OF THE STANDARD SPECIFICATIONS AND THE PROJECT SPECIAL PROVISIONS.

THE CONTRACTOR SHALL PERFORM ALL WORK WITH CARE SO THAT THE EXISTING STRUCTURE WHICH IS TO REMAIN IN PLACE WILL NOT BE DAMAGED. IF THE CONTRACTOR DAMAGES ANY PART OF THE EXISTING STRUCTURE WHICH IS TO REMAIN IN PLACE, THE DAMAGED AREA SHALL BE REPAIRED OR REPLACED IN A MANNER SATISFACTORY TO THE ENGINEER AT NO ADDITIONAL COST TO THE DEPARTMENT.

ANY DAMAGE TO EXISTING REINFORCING STEEL, DURING CONTRACTOR'S OPERATIONS, SHALL BE REPAIRED AS DIRECTED BY THE ENGINEER AND PERFORMED AT NO ADDITIONAL COST TO THE DEPARTMENT.

FOR CONTROL OF TRAFFIC AND LIMITS ON PHASING OF CONSTRUCTION, SEE TRANSPORTATION MANAGEMENT PLANS.

PRIOR TO BEGINNING WORK, THE CONTRACTOR SHALL SUBMIT FOR REVIEW AND APPROVAL A COMPLETE SEQUENCE OF TASKS FOR EACH OPERATION AFFECTING THE BRIDGE SURFACE AND/OR TRAFFIC.

FOR OTHER DESIGN DATA AND GENERAL NOTES, SEE SHEET SN.

FOR SUBMITTAL OF WORKING DRAWINGS, SEE SPECIAL PROVISIONS.

FOR FALSEWORK AND FORMWORK, SEE SPECIAL PROVISIONS.

FOR CRANE SAFETY, SEE SPECIAL PROVISIONS.

FOR GROUT FOR STRUCTURES, SEE SPECIAL PROVISIONS.

ALL PAVEMENT MARKINGS WILL BE IN ACCORDANCE WITH THE TRAFFIC CONTROL PLANS.

EXISTING JOINTS AND DECK DRAINS SHALL BE SEALED PRIOR TO BEGINNING SURFACE PREPARATIONS OF THE BRIDGE DECK. THE CONTRACTOR SHALL TAKE CARE THAT ANY CONSTRUCTION DEBRIS THAT COLLECTS IN THE DRAINS IS CONTAINED. DRAINS IN SHOULDERS OF ADJACENT TRAVEL LANE(S) SHALL BE KEPT FREE AND CLEAR OF DEBRIS.

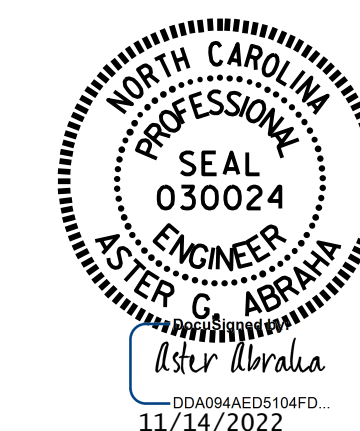
FOR VOLUMETRIC MIXER, SEE SPECIAL PROVISIONS.

FOR SHOTBLASTING BRIDGE DECK AND SILANE DECK TREATMENT, SEE SPECIAL PROVISIONS.

FOR CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT, SEE SPECIAL PROVISIONS.

TOTAL BILL OF MATERIAL				
BRIDGE NO.	VOLUMETRIC MIXER	CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT	SHOTBLASTING BRIDGE DECK	SILANE DECK TREATMENT
	LUMP SUM	SQ. FT.	SQ. YD.	SQ. YD.
250326	LUMP SUM	1.0	2,846.6	2,846.6
250327	LUMP SUM	2.0	2,987.3	2,987.3
250352	LUMP SUM	1.0	4,460.5	4,460.5
250362	LUMP SUM	1.0	6,672.2	6,672.2
TOTAL	LUMP SUM	5.0	16,966.6	16,966.6

PROJECT NO. **15BPR.58**
CUMBERLAND COUNTY
 BRIDGE NO. **250326, 250327, 250352, & 250362**

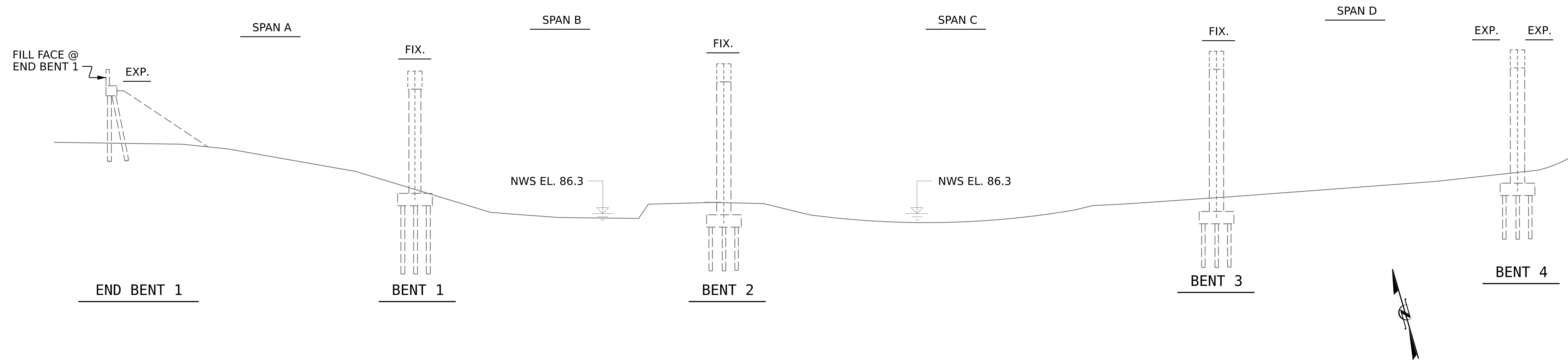


STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
BILL OF MATERIAL AND GENERAL NOTES

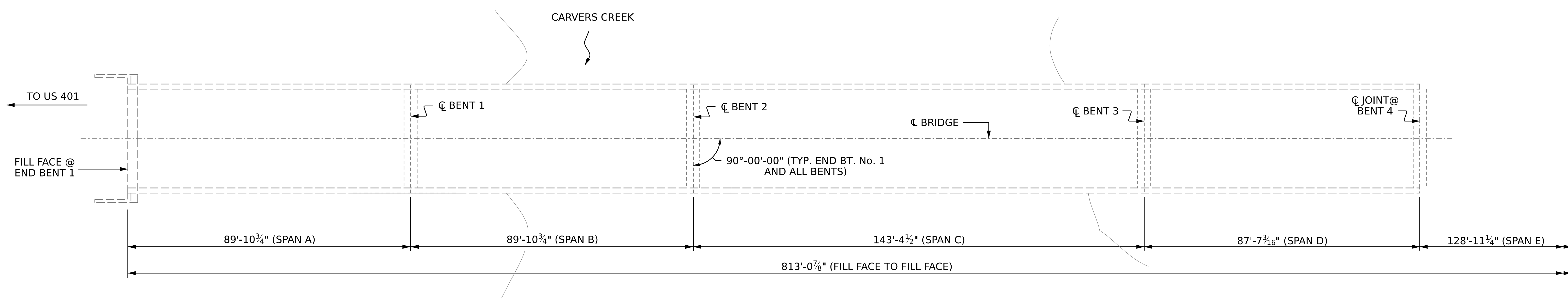
DRAWN BY : G. AYES DATE : 8/2022
 CHECKED BY : A. G. ABRAHA DATE : 10/2022
 DESIGN ENGINEER OF RECORD: _____ DATE : _____

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S-2
1			3			TOTAL SHEETS
2			4			2



SECTION ALONG CL BRIDGE



PLAN

(FOOTINGS, COLUMNS AND PILES NOT SHOWN IN PLAN VIEW FOR CLARITY)

NOTES

- GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND INSPECTION REPORT DATED 03/02/2021.
- BRIDGE ORIENTATION CONFORMS TO THE ORIGINAL BRIDGE PLANS.

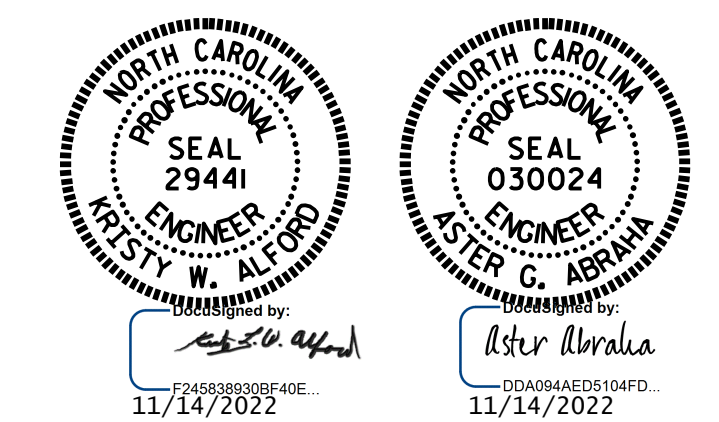
SCOPE OF WORK

- PREPARE BRIDGE DECK BY SHOTBLASTING METHODS.
- PLACE SILANE DECK TREATMENT.

PROJECT NO. **15BPR.58**
CUMBERLAND COUNTY
 BRIDGE NO. **250326**

SHEET 1 OF 2 MILEPOST - 35.41

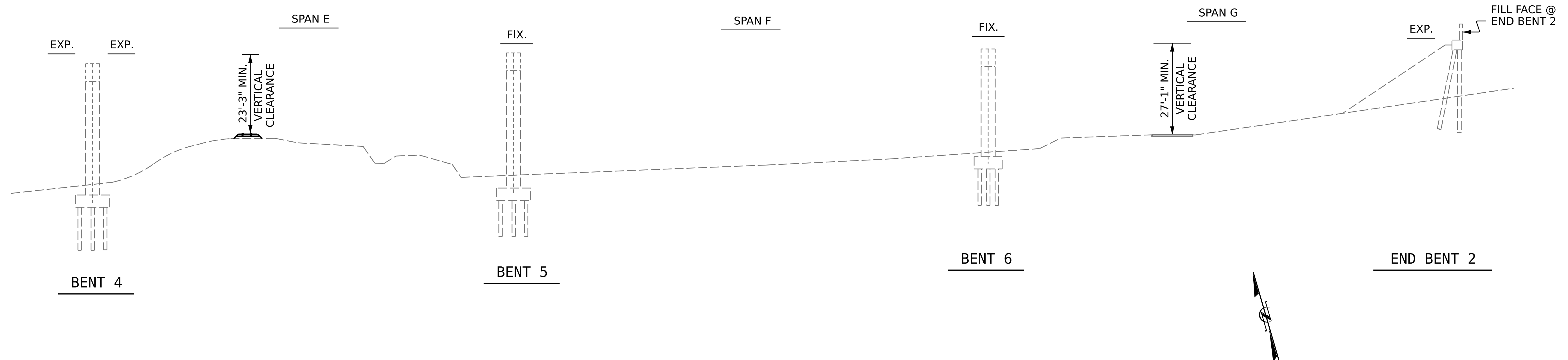
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
GENERAL DRAWING
 FOR BRIDGE ON I-295 S
 OVER CARVERS CREEK,
 NSRR, AND SR 1712
 BETWEEN US 401 & SR 1714



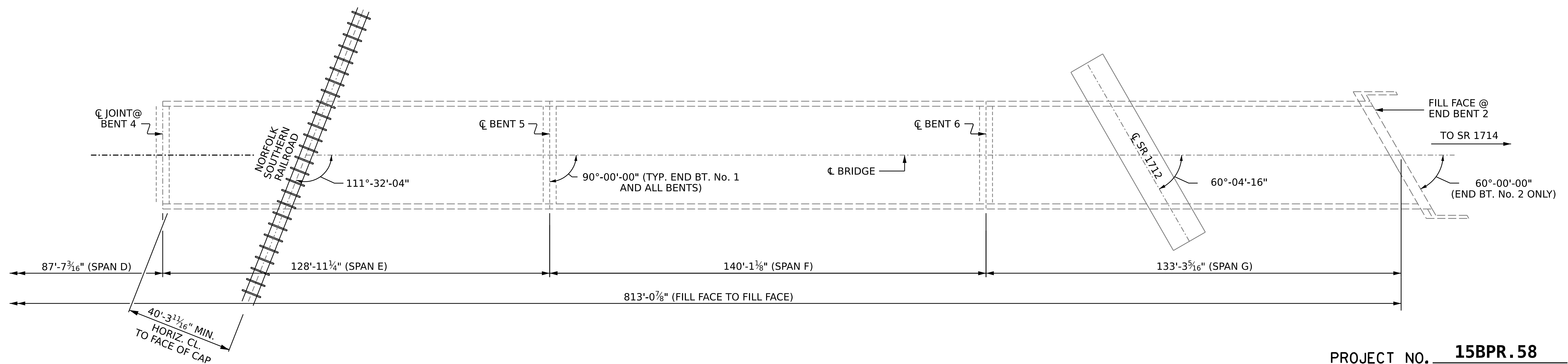
DRAWN BY : G. AYES DATE : 08/2021
 CHECKED BY : A. G. ABRAHA DATE : 10/2022
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 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-1
1			3			TOTAL SHEETS
2			4			5



SECTION ALONG CL BRIDGE



PLAN

(FOOTINGS, COLUMNS AND PILES NOT SHOWN IN PLAN VIEW FOR CLARITY)

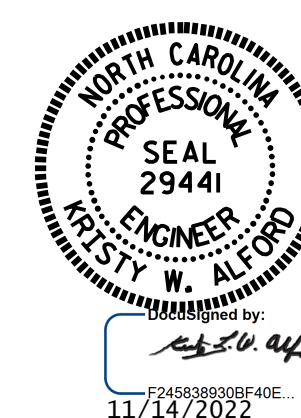
PROJECT NO. **15BPR.58**
CUMBERLAND COUNTY
 BRIDGE NO. **250326**

SHEET 2 OF 2 MILEPOST - 35.41

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

GENERAL DRAWING

FOR BRIDGE ON I-295 S
 OVER CARVERS CREEK,
 NSRR, AND SR 1712
 BETWEEN US 401 & SR 1714



DRAWN BY : G. AYES DATE : 08/2021
 CHECKED BY : A. G. ABRAHA DATE : 08/2021
 DESIGN ENGINEER OF RECORD: _____ DATE : _____

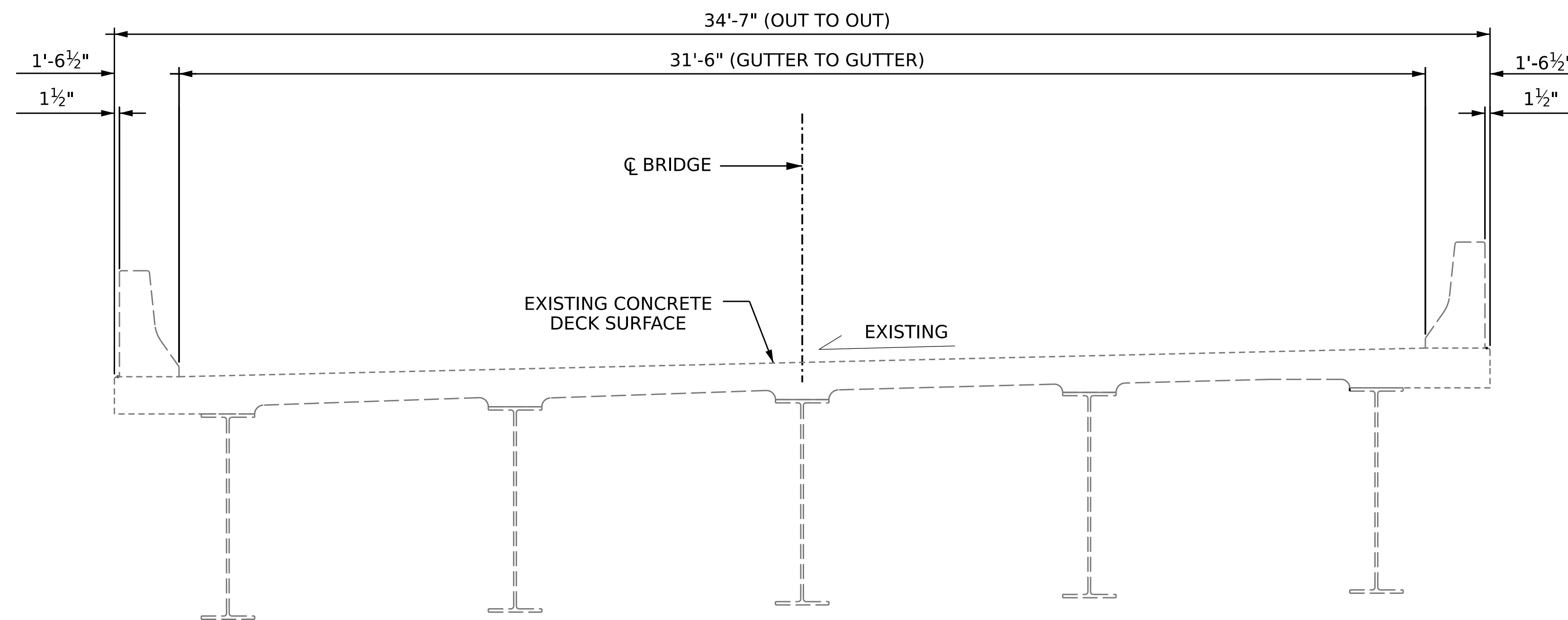
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NO.	BY:	DATE:	NO.	BY:	DATE:	S1-2
1			3			TOTAL SHEETS
2			4			5

NOTES

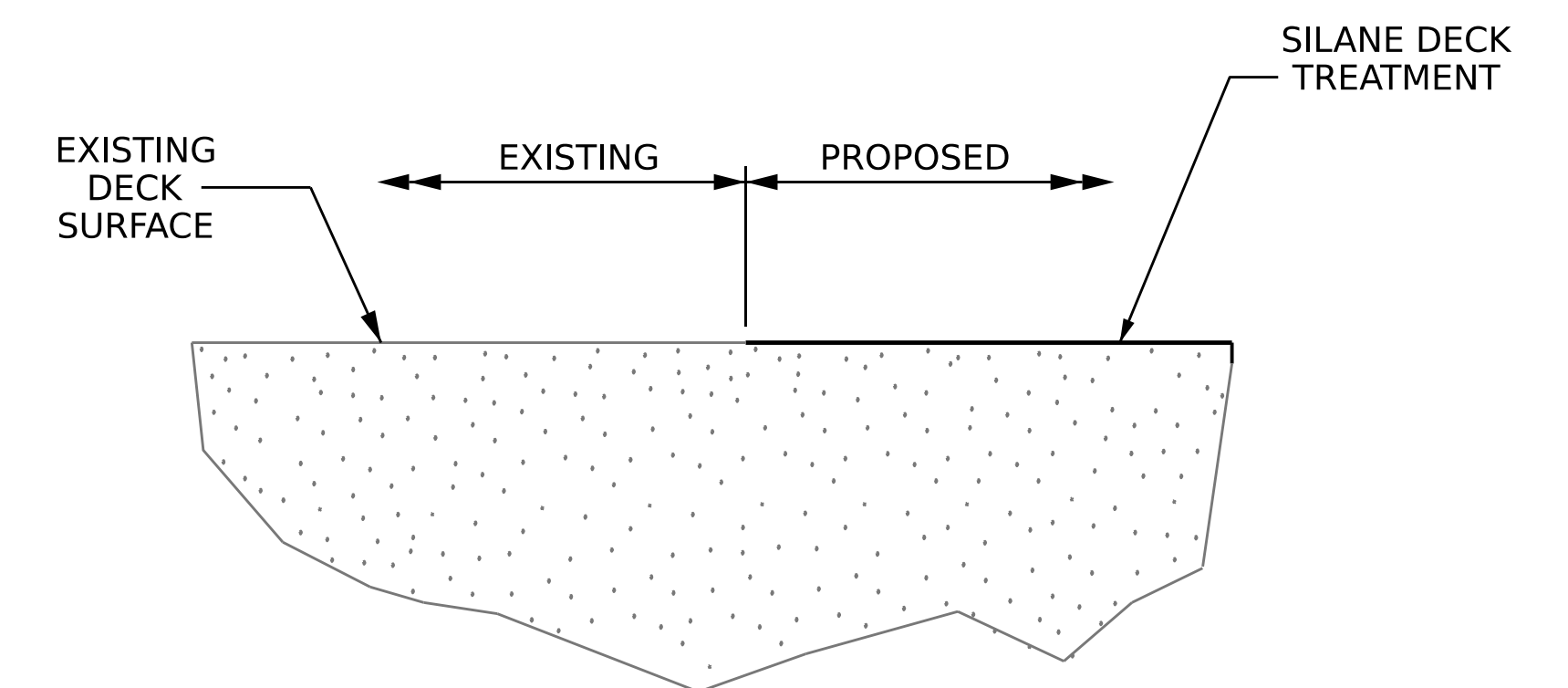
SEE TRAFFIC PLANS FOR LANE WIDTH, SEQUENCING, AND OTHER TRAFFIC CONTROL MEASURES FOR STAGING OF SURFACE PREPARATION AND SILANE DECK TREATMENT.

PROTECT TRAFFIC FROM REBOUND, DUST, OVERSPRAY, AND CONSTRUCTION ACTIVITIES. PROVIDE APPROPRIATE SHIELDING, AS REQUIRED AND/OR DIRECTED BY ENGINEER.

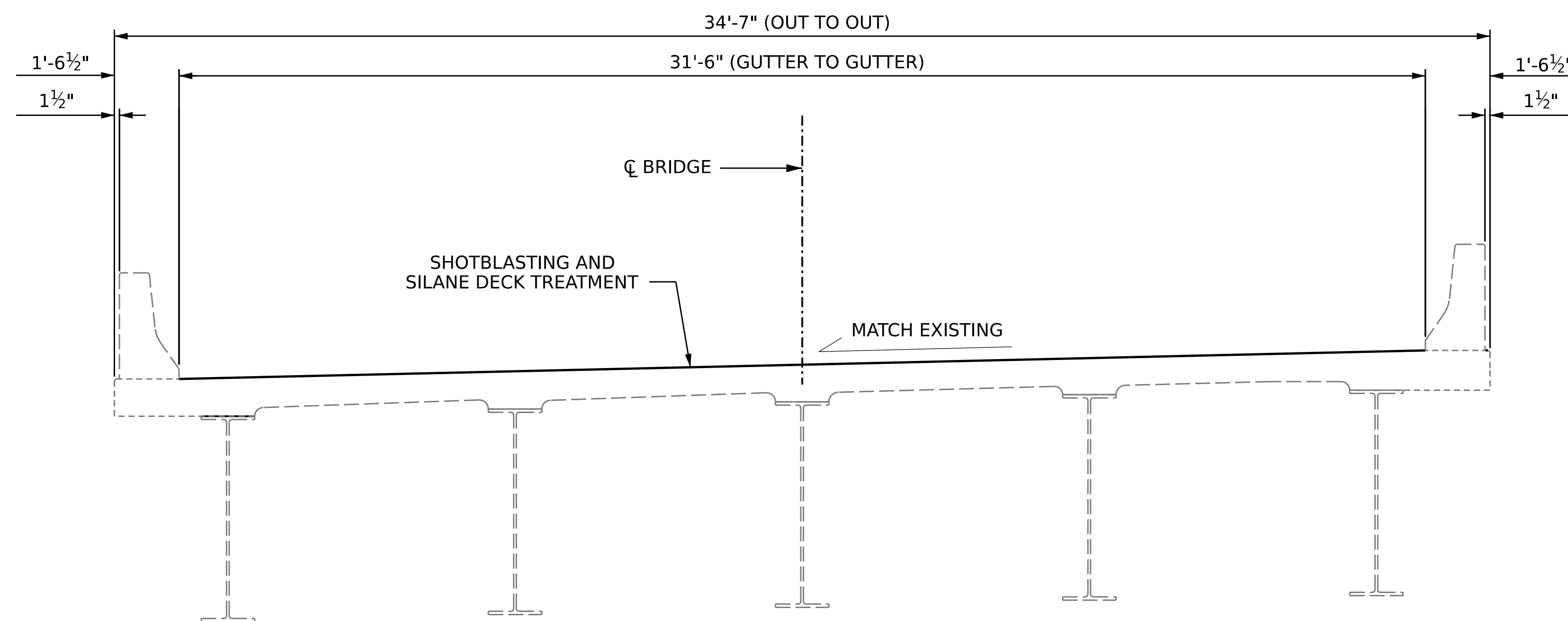


TYPICAL SECTION

(EXISTING)



SILANE DECK TREATMENT DETAIL



TYPICAL SECTION

(PROPOSED)

PROJECT NO. **15BPR.58**
CUMBERLAND COUNTY
BRIDGE NO. **250326**



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SUPERSTRUCTURE

TYPICAL SECTION
AND SILANE DECK
TREATMENT DETAILS

DOCUMENT NOT CONSIDERED
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SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S1-3
2			4			TOTAL SHEETS
						5

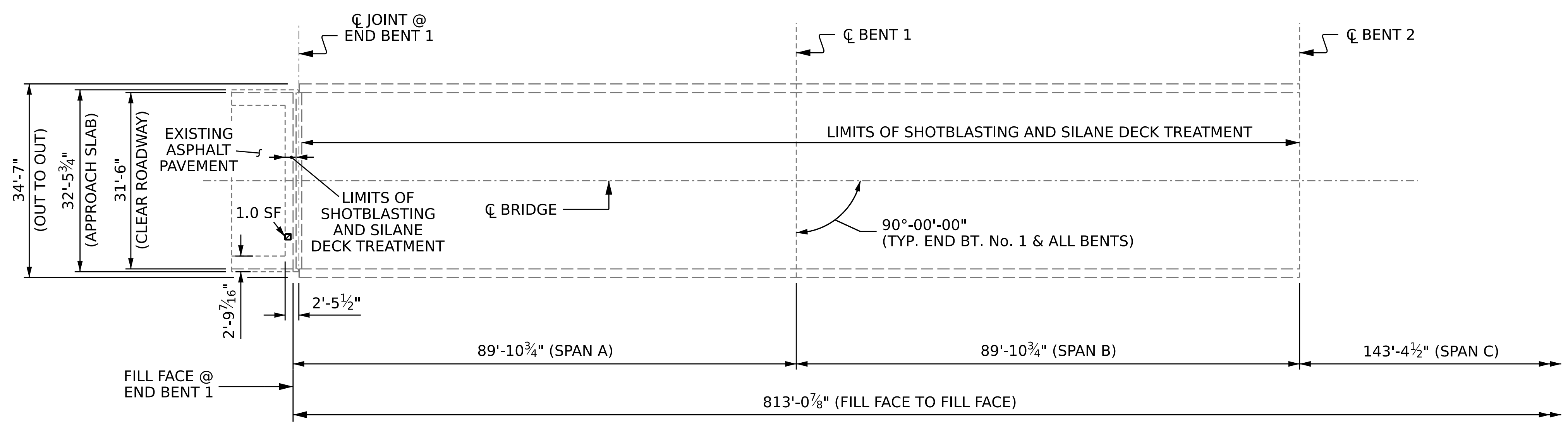
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CHECKED BY : A. G. ABRAHA DATE : 10/2022
DESIGN ENGINEER OF RECORD: _____ DATE : _____

SUMMARY OF QUANTITIES FOR SPANS A-D AND APPROACH SLAB 1

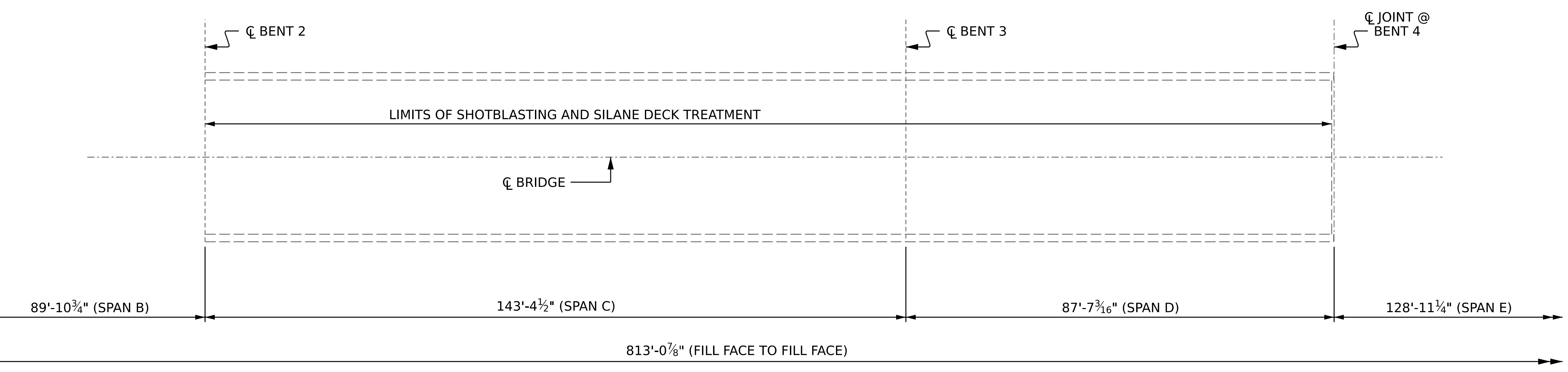
	ESTIMATE	ACTUAL
SHOTBLASTING BRIDGE DECK	1,438.1 SY	
SILANE DECK TREATMENT	1,438.1 SY	
CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT	1.0 SF	

NOTES

SEE SPECIAL PROVISIONS FOR SILANE DECK TREATMENT.
SEE SPECIAL PROVISIONS FOR CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT.



PLAN OF SPANS



PLAN OF SPANS

REPAIR KEY

- [White Box] - SHOTBLASTING AND SILANE DECK TREATMENT
- [Hatched Box] - CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT

PROJECT NO. **15BPR.58**
CUMBERLAND COUNTY
BRIDGE NO. **250326**

SHEET 1 OF 2



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SILANE DECK TREATMENT

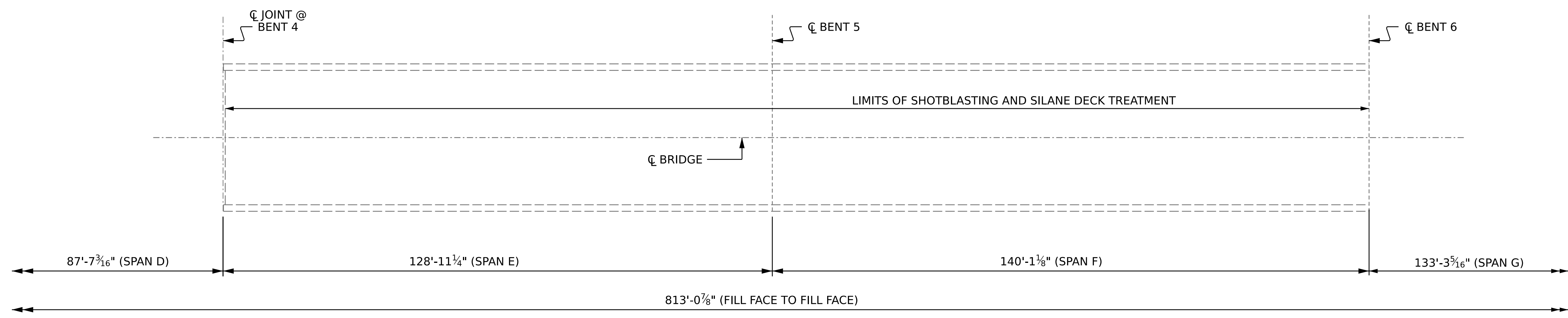
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DESIGN ENGINEER OF RECORD: _____ DATE : _____

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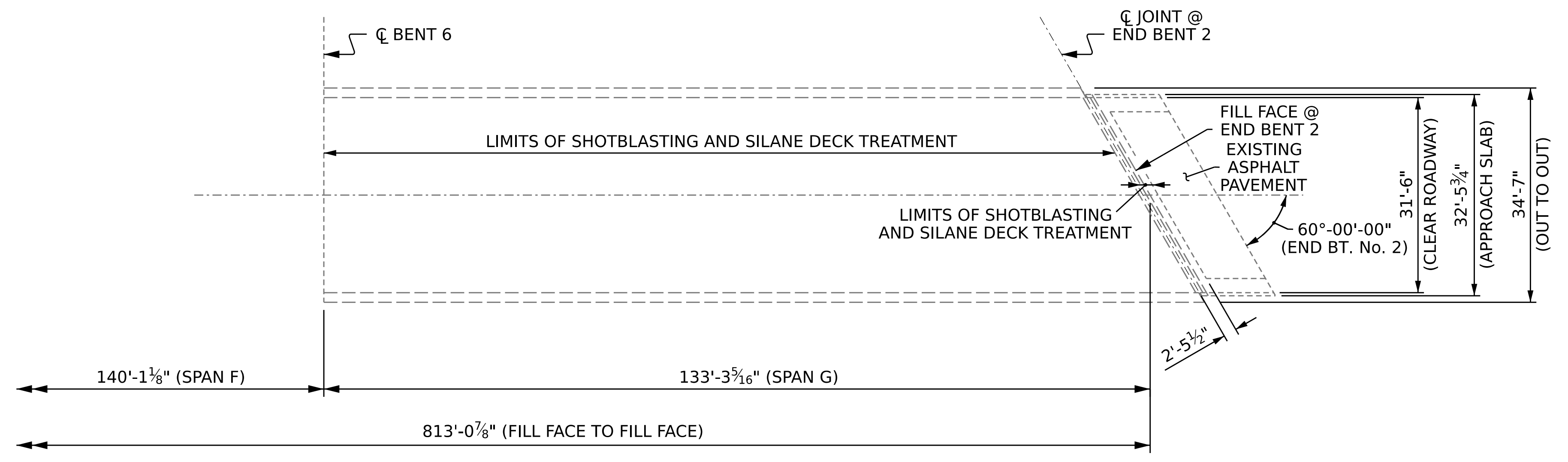
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-4
1			3			TOTAL SHEETS
2			4			5

SUMMARY OF QUANTITIES FOR SPANS E-G AND APPROACH SLAB 2

	ESTIMATE	ACTUAL
SHOTBLASTING BRIDGE DECK	1,408.5 SY	
SILANE DECK TREATMENT	1,408.5 SY	
CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT	0 SF	



PLAN OF SPANS



PLAN OF SPANS

PROJECT NO. **15BPR.58**
CUMBERLAND COUNTY
 BRIDGE NO. **250326**
 SHEET 2 OF 2



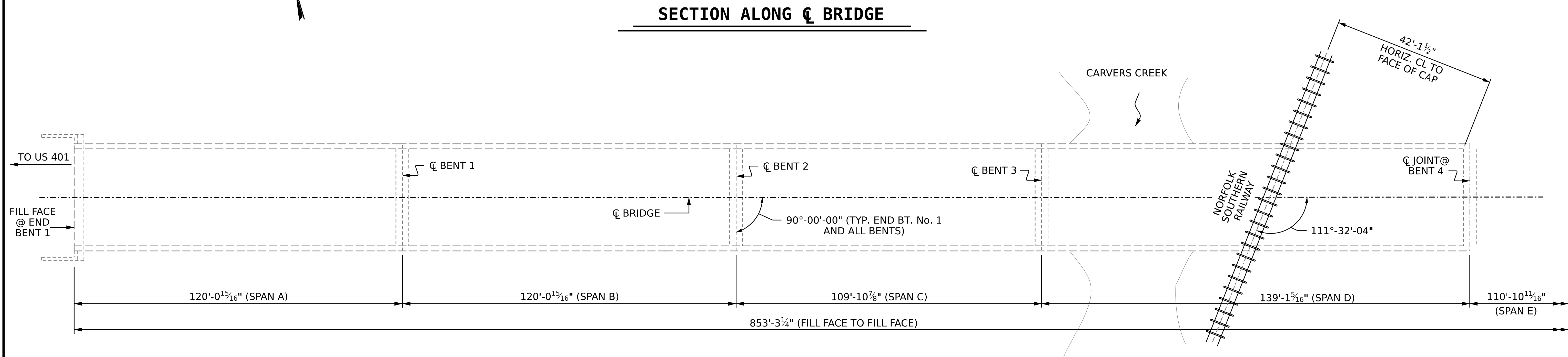
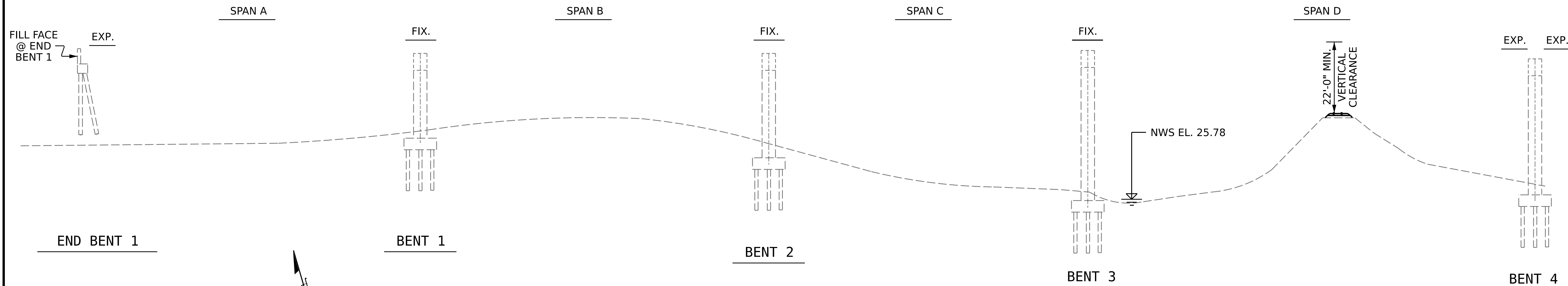
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SILANE DECK TREATMENT

DRAWN BY : G. AYES DATE : 08/2021
 CHECKED BY : A. G. ABRAHA DATE : 10/2022
 DESIGN ENGINEER OF RECORD: _____ DATE : _____

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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S1-5
1			3			TOTAL SHEETS
2			4			5



NOTES

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- BRIDGE ORIENTATION CONFORMS TO THE ORIGINAL BRIDGE PLANS.

SCOPE OF WORK

- PREPARE BRIDGE DECK BY SHOTBLASTING METHODS.
- PLACE SILANE DECK TREATMENT.

PLAN

(FOOTINGS, COLUMNS AND PILES NOT SHOWN IN PLAN VIEW FOR CLARITY)

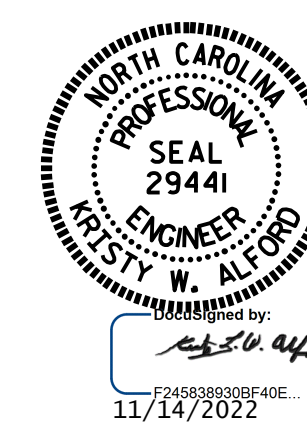
PROJECT NO. **15BPR.58**
CUMBERLAND COUNTY
 BRIDGE NO. **250327**

SHEET 1 OF 2 MILEPOST - 35.41

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

GENERAL DRAWING

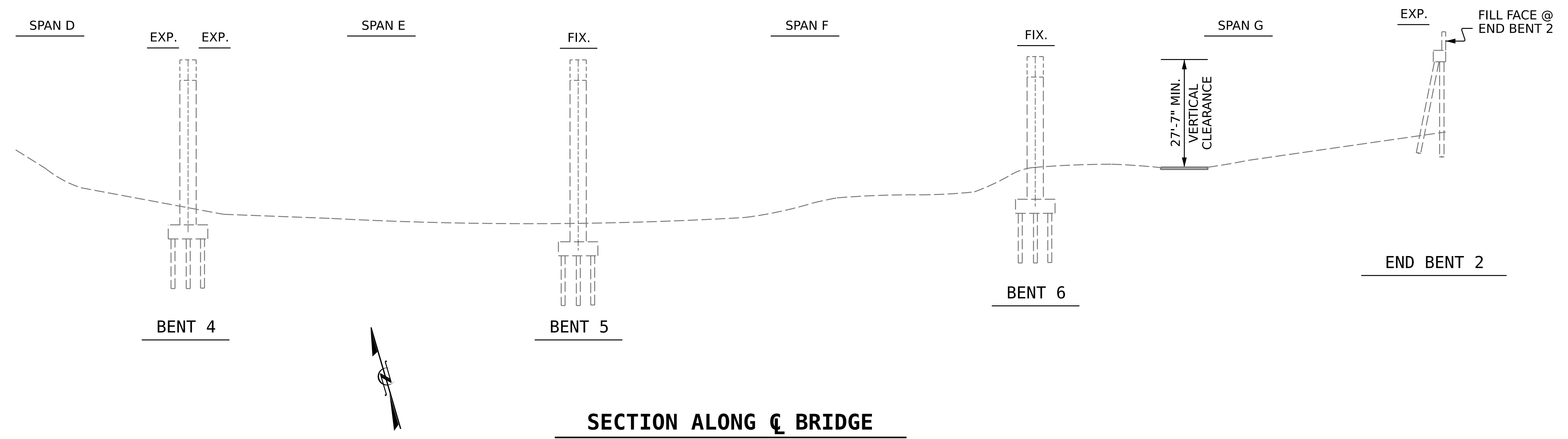
FOR BRIDGE ON I-95 N
 OVER CARVERS CREEK,
 NSRR, AND SR 1712
 BETWEEN US 401 & SR 1714



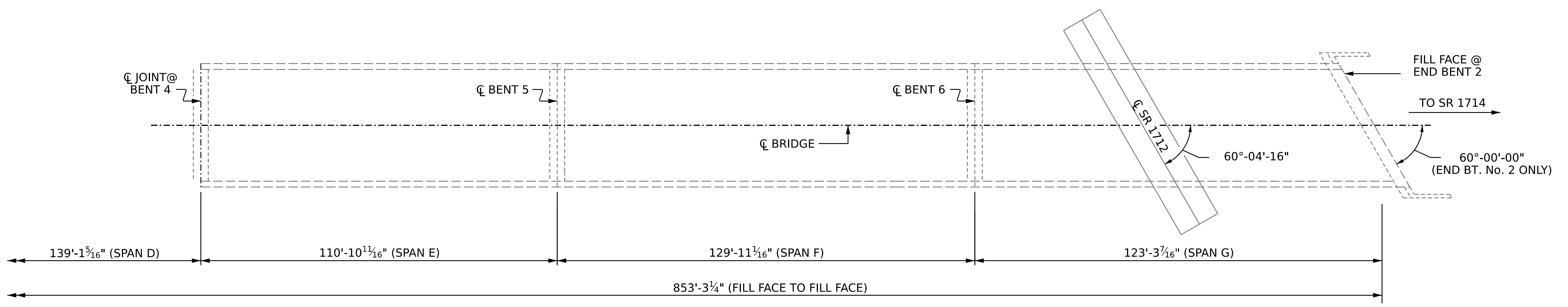
DRAWN BY : G. AYES DATE : 8/2021
 CHECKED BY : A. G. ABRAHA DATE : 10/2022
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REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S2-1
1			3			TOTAL SHEETS
2			4			5



SECTION ALONG CL BRIDGE

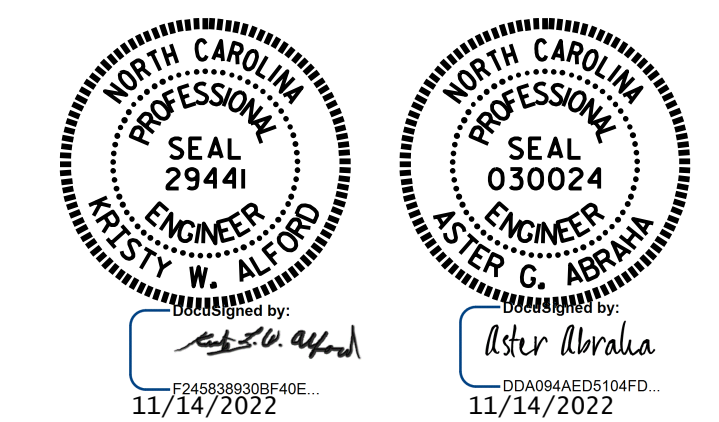


PLAN

(FOOTINGS, COLUMNS AND PILES NOT SHOWN IN PLAN VIEW FOR CLARITY)

PROJECT NO. **15BPR.58**
CUMBERLAND COUNTY
 BRIDGE NO. **250327**
 SHEET 2 OF 2 MILEPOST - 35.41

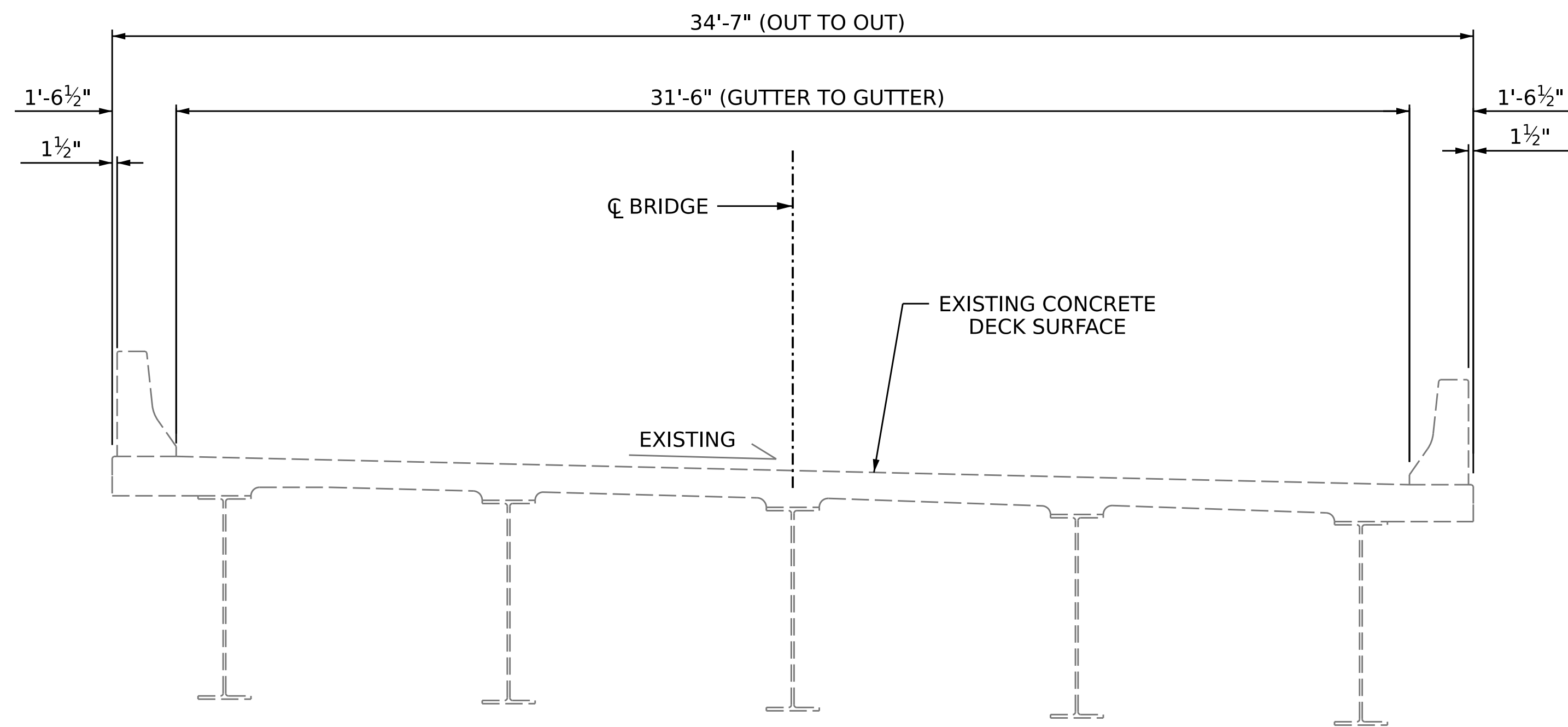
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
GENERAL DRAWING
 FOR BRIDGE ON I-95 N
 OVER CARVERS CREEK,
 NSRR, AND SR 1712
 BETWEEN US 401 & SR 1714



DRAWN BY : G. AYES DATE : 8/2021
 CHECKED BY : A. G. ABRAHA DATE : 10/2022
 DESIGN ENGINEER OF RECORD: _____ DATE : _____

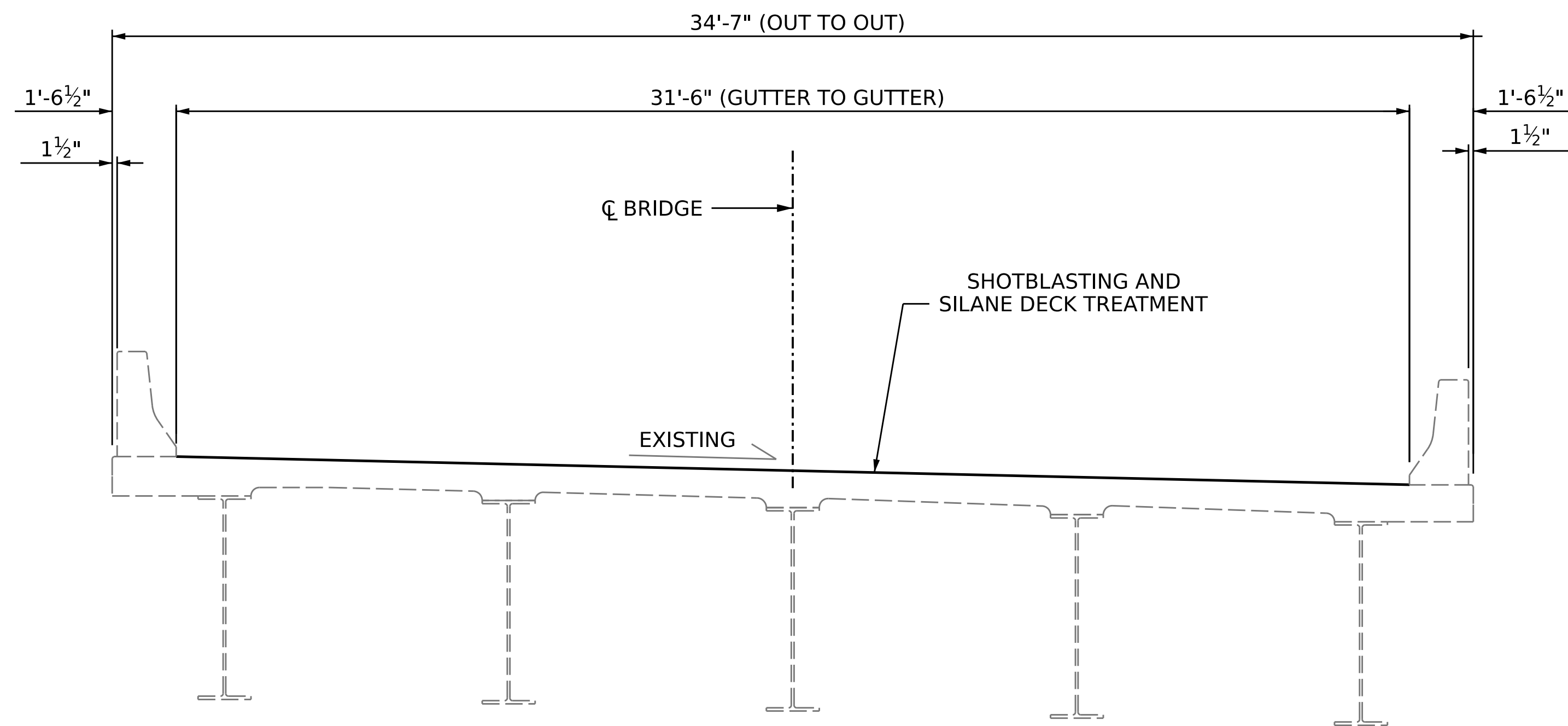
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 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S2-2
1			3			TOTAL SHEETS 5
2			4			



TYPICAL SECTION

(EXISTING)



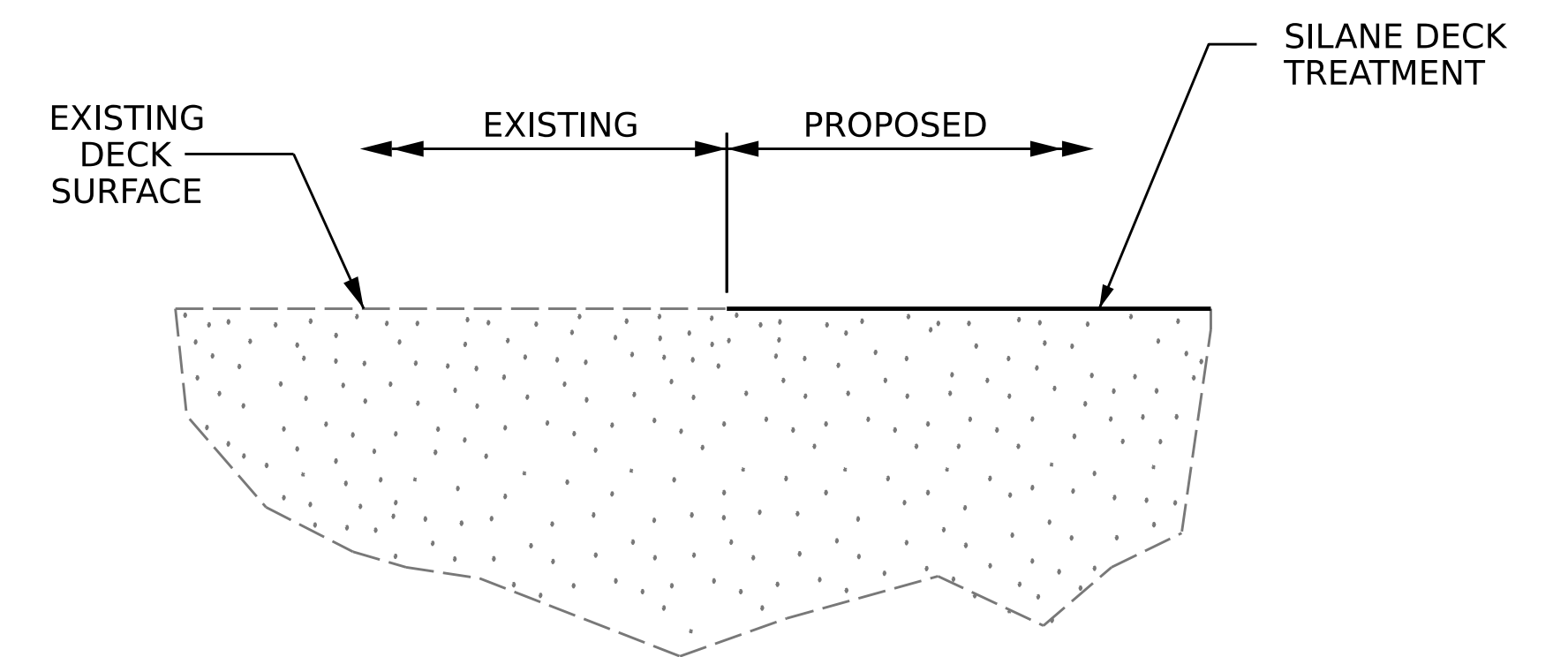
TYPICAL SECTION

(PROPOSED)

NOTES

SEE TRAFFIC PLANS FOR LANE WIDTH, SEQUENCING, AND OTHER TRAFFIC CONTROL MEASURES FOR STAGING OF SURFACE PREPARATION AND SILANE DECK TREATMENT.

PROTECT TRAFFIC FROM REBOUND, DUST, OVERSPRAY, AND CONSTRUCTION ACTIVITIES. PROVIDE APPROPRIATE SHIELDING, AS REQUIRED AND/OR DIRECTED BY THE ENGINEER.



SILANE DECK TREATMENT DETAIL

PROJECT NO. 15BPR.58
CUMBERLAND COUNTY
 BRIDGE NO. 250327



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SUPERSTRUCTURE
 TYPICAL SECTION
 AND SILANE DECK
 TREATMENT DETAILS

DRAWN BY : G. AYES DATE : 09/2021
 CHECKED BY : _____ DATE : _____
 DESIGN ENGINEER OF RECORD : _____ DATE : _____

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

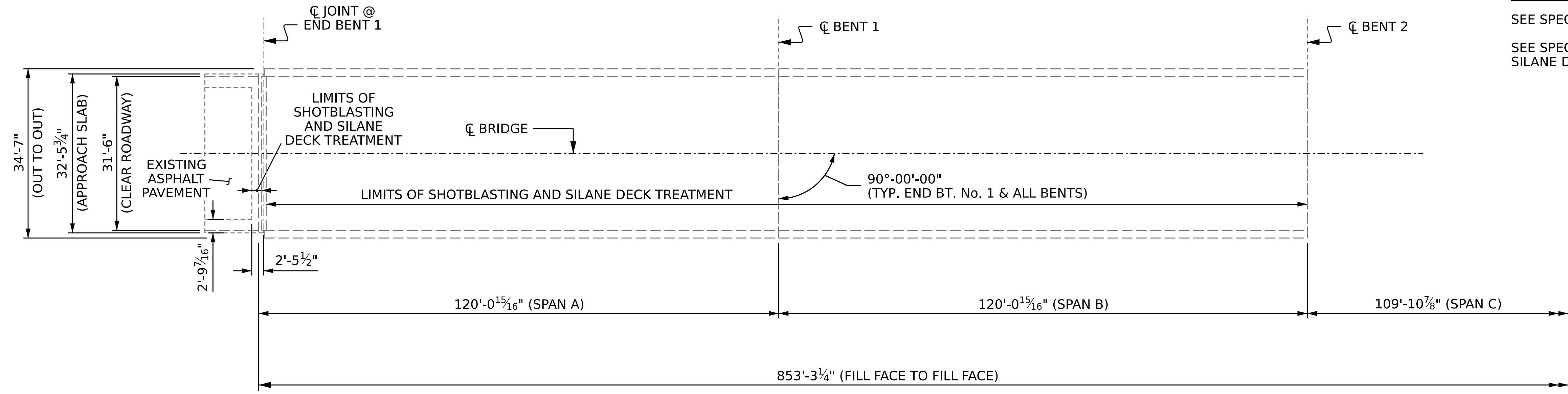
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S2-3
2			4			TOTAL SHEETS 5

SUMMARY OF QUANTITIES FOR SPANS A-D AND APPROACH SLAB 1

	ESTIMATE	ACTUAL
SHOTBLASTING BRIDGE DECK	1,712.6 SY	
SILANE DECK TREATMENT	1,712.6 SY	
CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT	0 SY	

NOTES

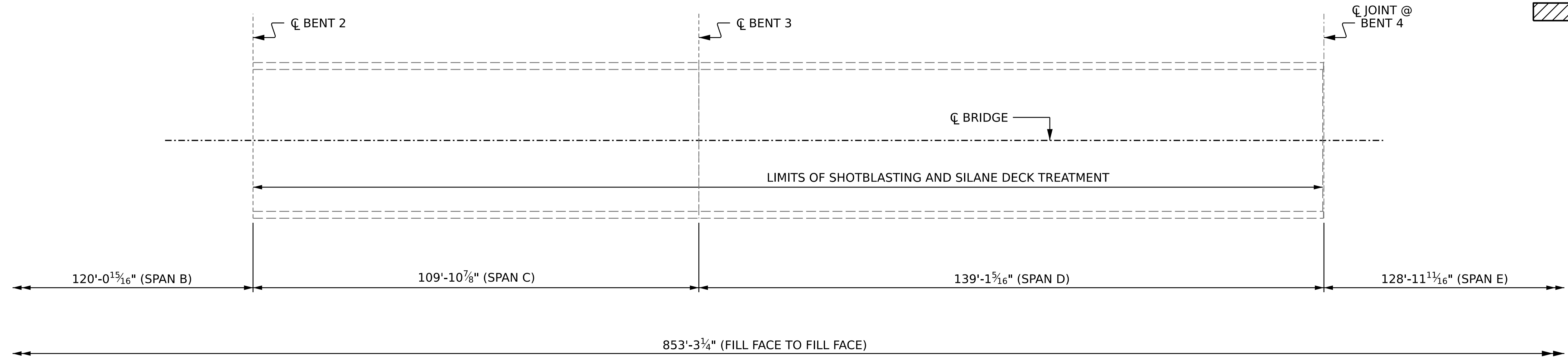
SEE SPECIAL PROVISIONS FOR SILANE DECK TREATMENT.
SEE SPECIAL PROVISIONS FOR CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT.



PLAN OF SPANS

REPAIR KEY

- SHOTBLASTING AND SILANE DECK TREATMENT
- CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT



PLAN OF SPANS

PROJECT NO. **15BPR.58**
CUMBERLAND COUNTY
BRIDGE NO. **250327**

SHEET 1 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH

SILANE DECK TREATMENT



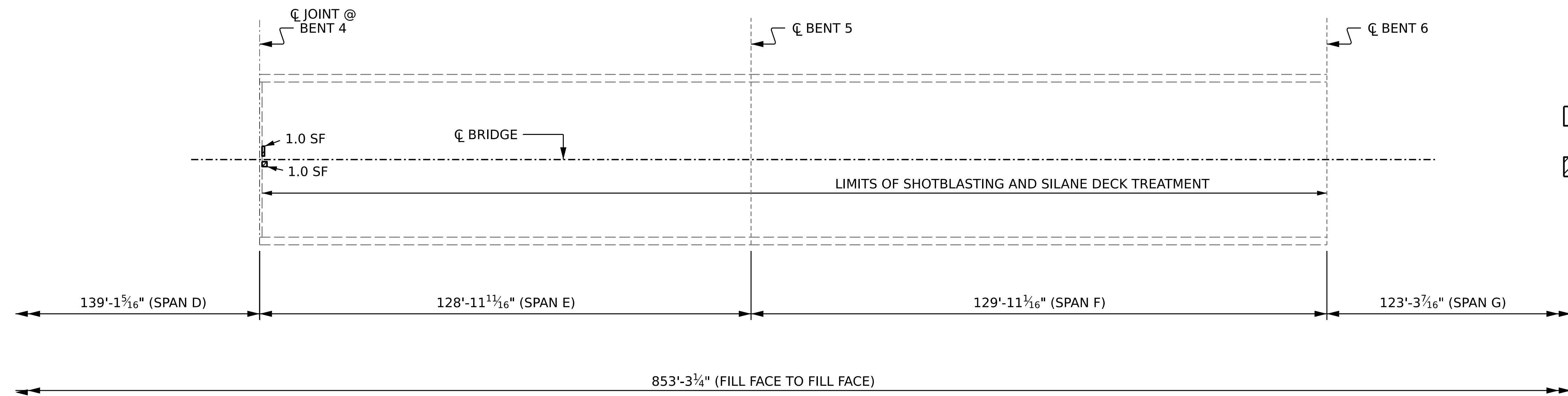
DRAWN BY : G. AYES DATE : 8/2021
CHECKED BY : A. G. ABRAHA DATE : 10/2022
DESIGN ENGINEER OF RECORD: _____ DATE : _____

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S2-4
1			3			TOTAL SHEETS
2			4			5

SUMMARY OF QUANTITIES FOR SPANS E-G AND APPROACH SLAB 2

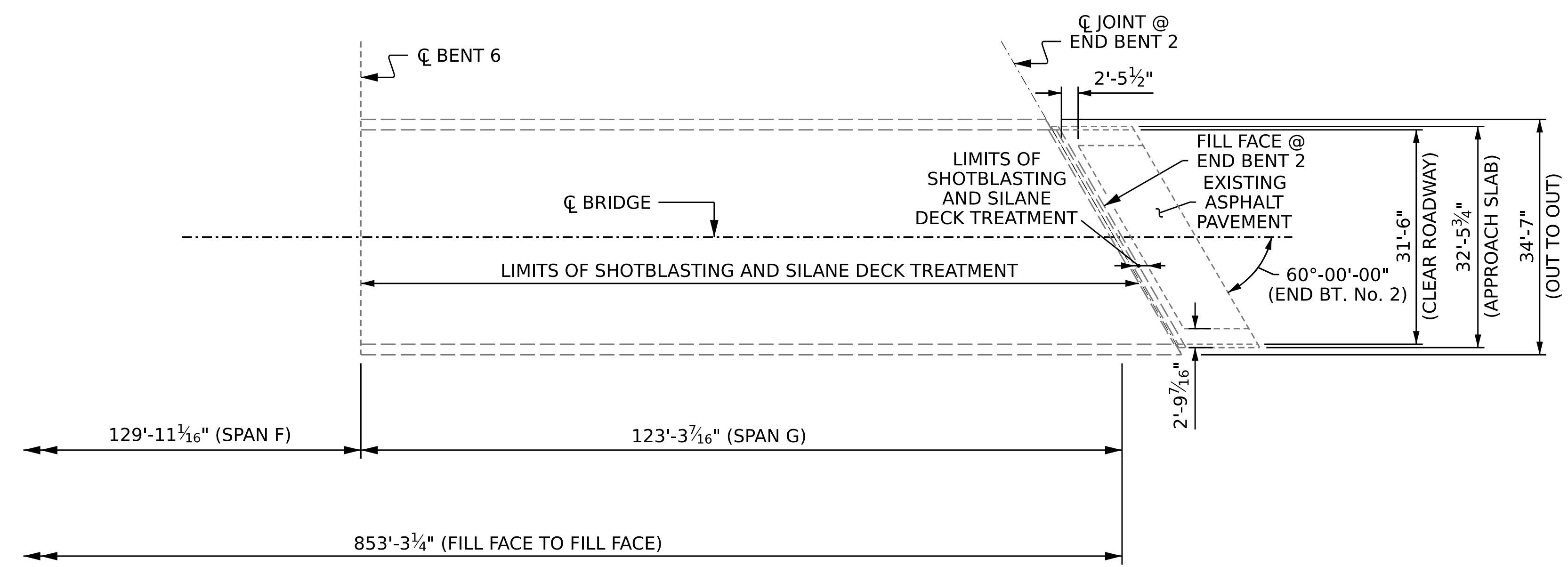
	ESTIMATE	ACTUAL
SHOTBLASTING BRIDGE DECK	1,274.7 SY	
SILANE DECK TREATMENT	1,274.7 SY	
CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT	2.0 SF	



PLAN OF SPANS

REPAIR KEY

- [White Box] - SHOTBLASTING AND SILANE DECK TREATMENT
- [Hatched Box] - CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT



PLAN OF SPANS

PROJECT NO. **15BPR.58**
CUMBERLAND COUNTY
 BRIDGE NO. **250327**
 SHEET 2 OF 2

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

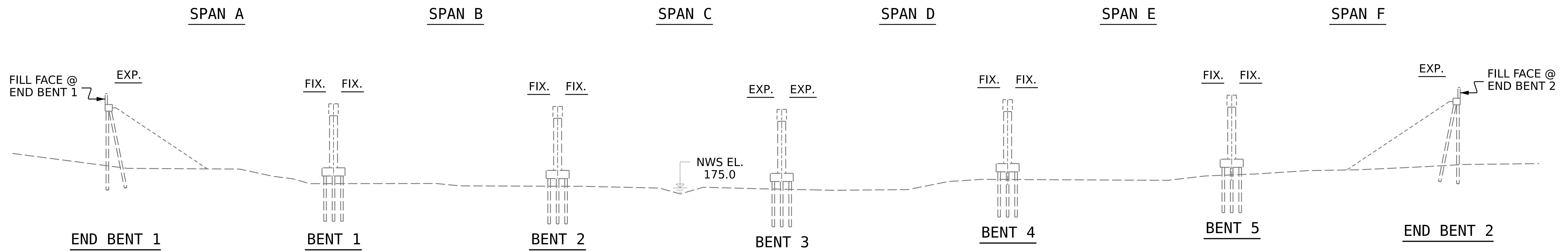
SILANE DECK TREATMENT



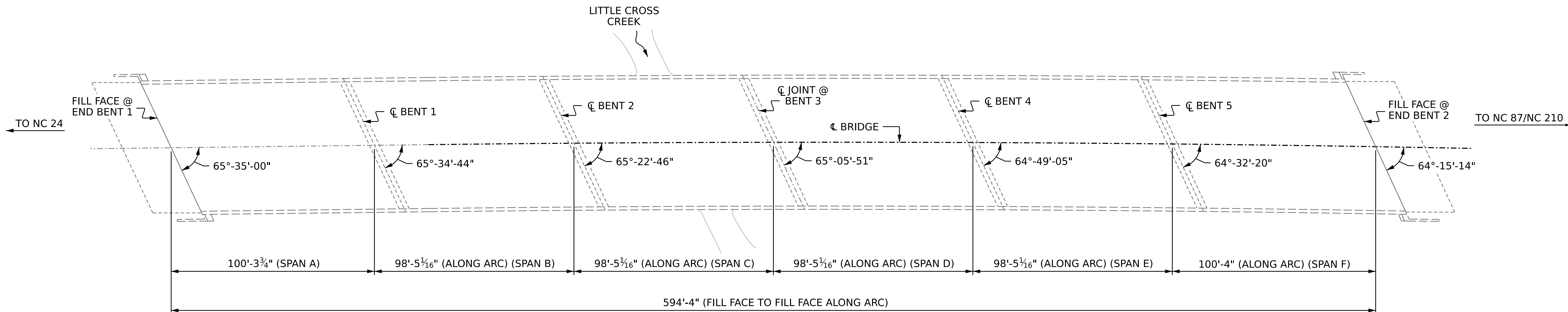
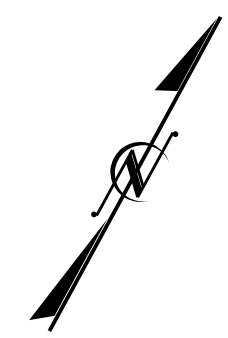
DRAWN BY : G. AYES DATE : 8/2021
 CHECKED BY : A. G. ABRAHA DATE : 10/2022
 DESIGN ENGINEER OF RECORD: _____ DATE : _____

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S2-5
1			3			TOTAL SHEETS
2			4			5



SECTION ALONG Q BRIDGE



PLAN

(FOOTINGS, COLUMNS AND PILES NOT SHOWN IN PLAN VIEW FOR CLARITY)

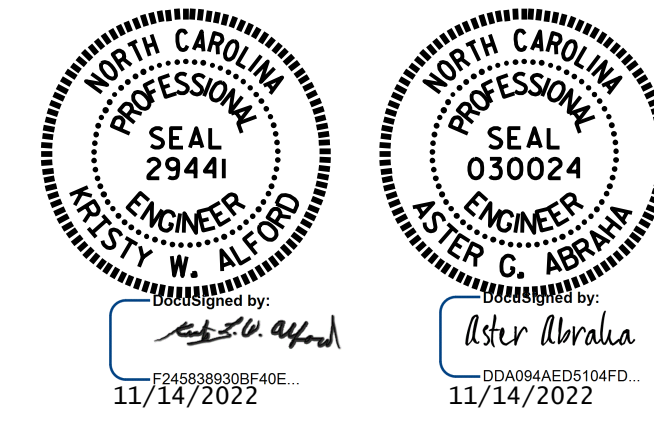
NOTES

- GENERAL DRAWING INFORMATION IS TAKEN FROM THE ORIGINAL PLANS AND INSPECTION REPORT DATED 07/28/2021.
- BRIDGE ORIENTATION CONFORMS TO THE ORIGINAL BRIDGE PLANS.

SCOPE OF WORK

- PREPARE BRIDGE DECK BY SHOTBLASTING METHODS.
- PLACE SILANE DECK TREATMENT.

PROJECT NO. **15BPR.58**
CUMBERLAND COUNTY
 STATION: **250352**

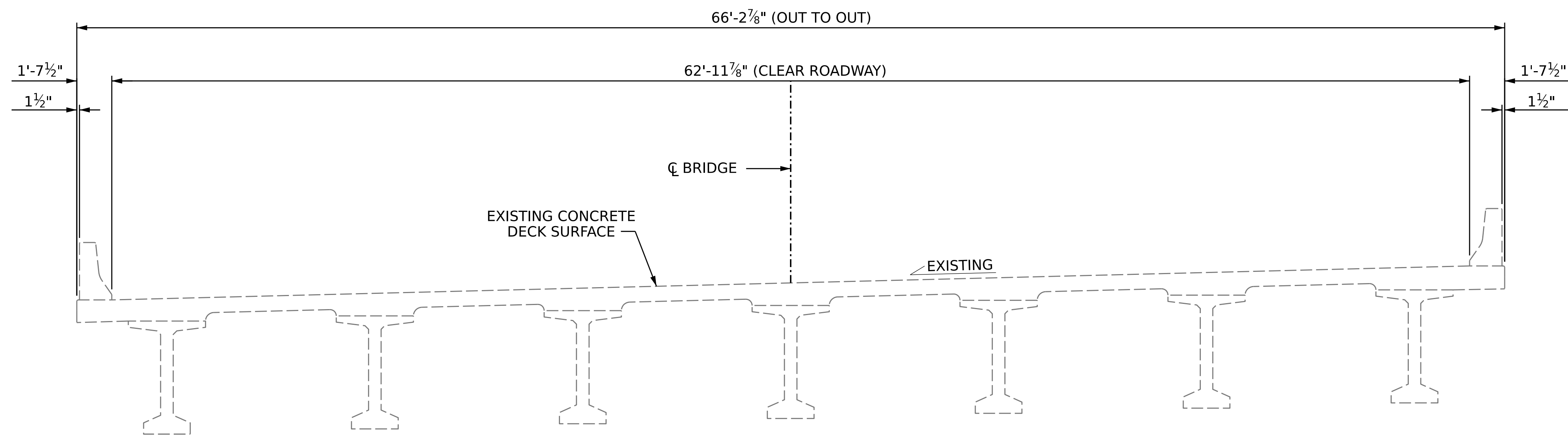


STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
GENERAL DRAWING
 FOR BRIDGE ON I-95 S
 OVER LITTLE CROSS CREEK
 BETWEEN NC 24 & NC 87/NC 210

DRAWN BY : G. AYES DATE : 8/2022
 CHECKED BY : A. G. ABRAHA DATE : 10/2022
 DESIGN ENGINEER OF RECORD: _____ DATE : _____

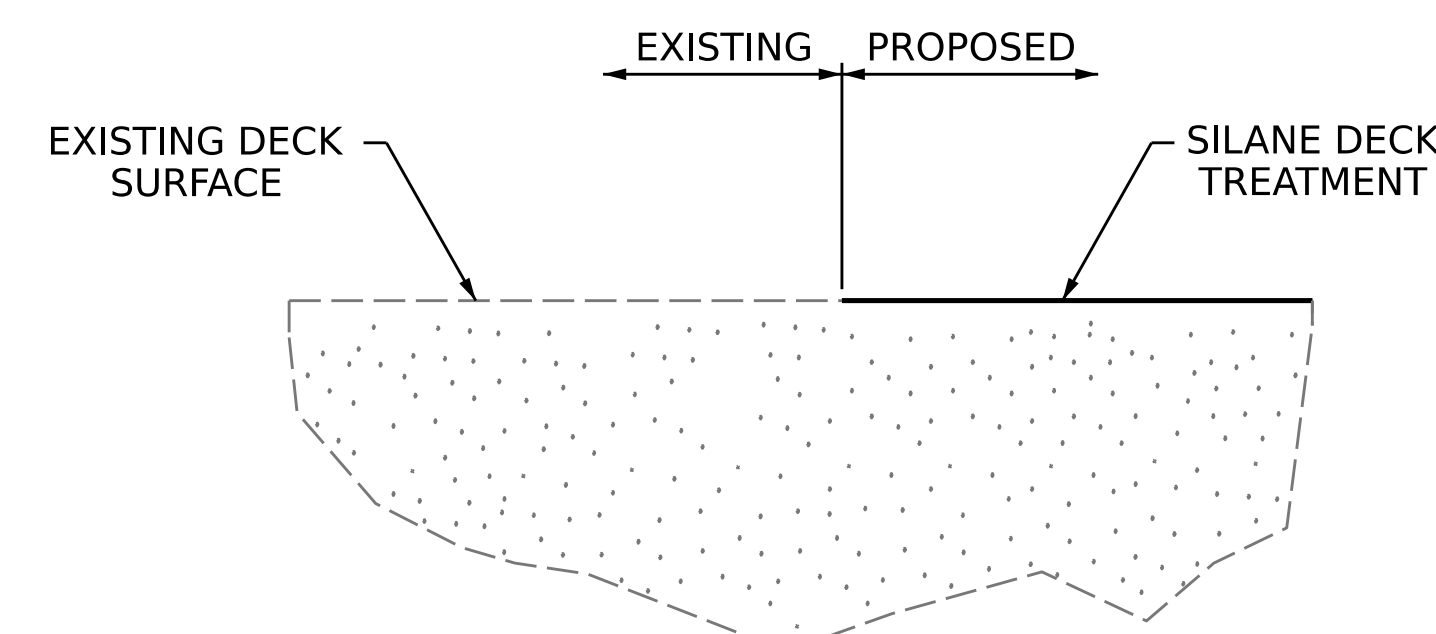
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S3-1
1			3			TOTAL SHEETS
2			4			4

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

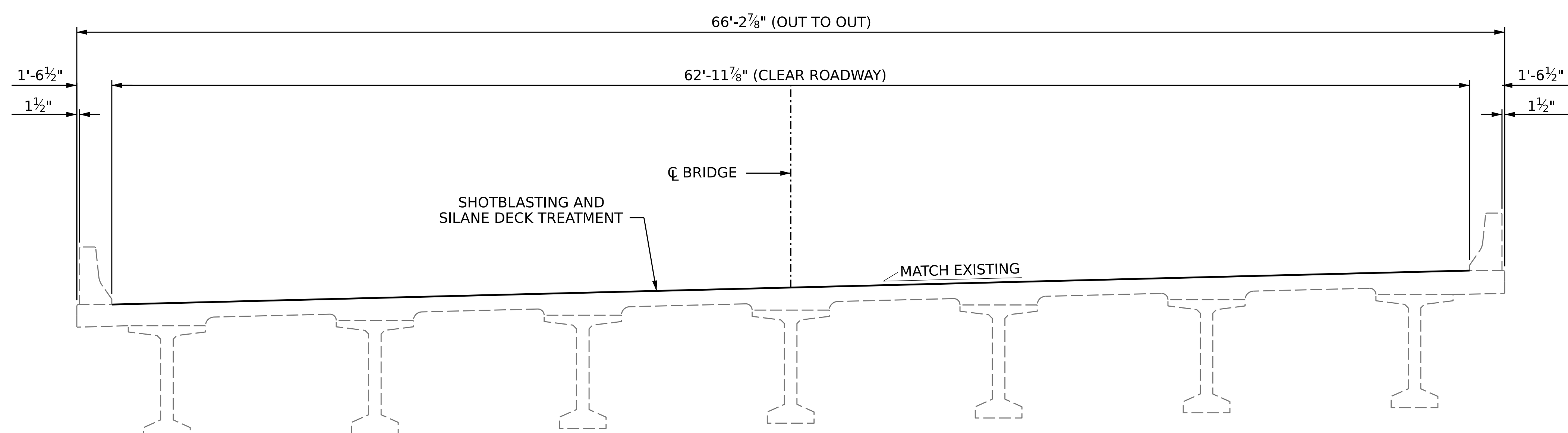


TYPICAL SECTION
(EXISTING)

NOTES
 SEE TRAFFIC PLANS FOR LANE WIDTH, SEQUENCING, AND OTHER TRAFFIC CONTROL MEASURES FOR STAGING OF SURFACE PREPARATION AND SILANE DECK TREATMENT.
 PROTECT TRAFFIC FROM REBOUND, DUST, OVERSPRAY, AND CONSTRUCTION ACTIVITIES. PROVIDE APPROPRIATE SHIELDING, AS REQUIRED AND/OR DIRECTED BY THE ENGINEER.

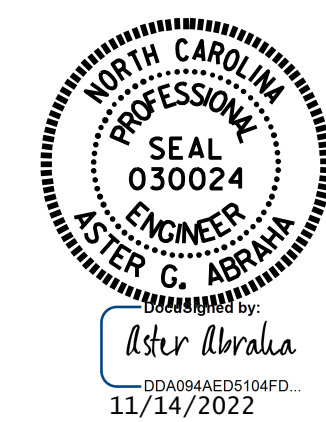


SILANE DECK TREATMENT DETAIL



TYPICAL SECTION
(PROPOSED)

PROJECT NO. **15BPR.58**
CUMBERLAND COUNTY
 BRIDGE NO. **250352**



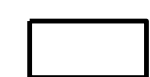
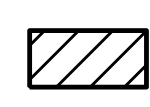
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
SUPERSTRUCTURE
 TYPICAL SECTION
 AND SILANE DECK
 TREATMENT DETAILS

DRAWN BY : G. AYES DATE : 9/2021
 CHECKED BY : A. G. ABRAHA DATE : 10/2022
 DESIGN ENGINEER OF RECORD: _____ DATE : _____

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			4
2			4			

REPAIR KEY

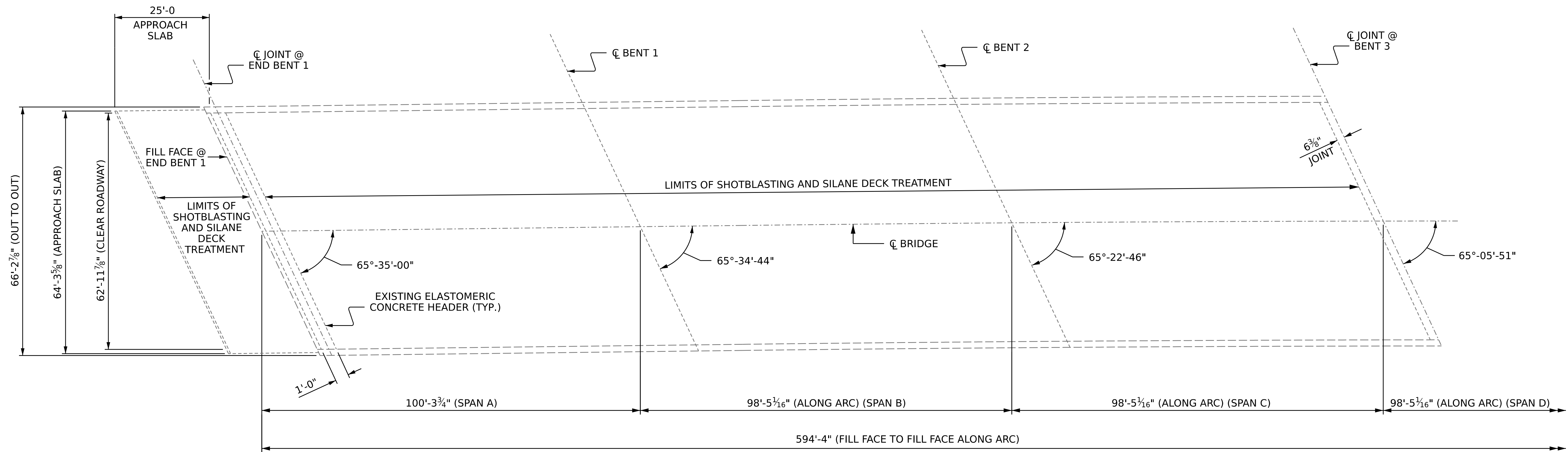
-  - SHOTBLASTING AND SILANE DECK TREATMENT
-  - CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT

NOTES

SEE SPECIAL PROVISIONS FOR SILANE DECK TREATMENT.
 SEE SPECIAL PROVISIONS FOR CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT.

SUMMARY OF QUANTITIES FOR SPANS A-B-C & APPROACH SLAB 1

	ESTIMATE	ACTUAL
SHOTBLASTING BRIDGE DECK	2,230.3 SY	
SILANE DECK TREATMENT	2,230.3 SY	
CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT	0 SF	



PLAN OF SPANS

PROJECT NO. **15BPR.58**
CUMBERLAND COUNTY
 BRIDGE NO. **250352**

SHEET 1 OF 2





STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
SILANE DECK TREATMENT

DRAWN BY : G. AYES DATE : 8/2022
 CHECKED BY : A. G. ABRAHA DATE : 10/2022
 DESIGN ENGINEER OF RECORD: _____ DATE : _____

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

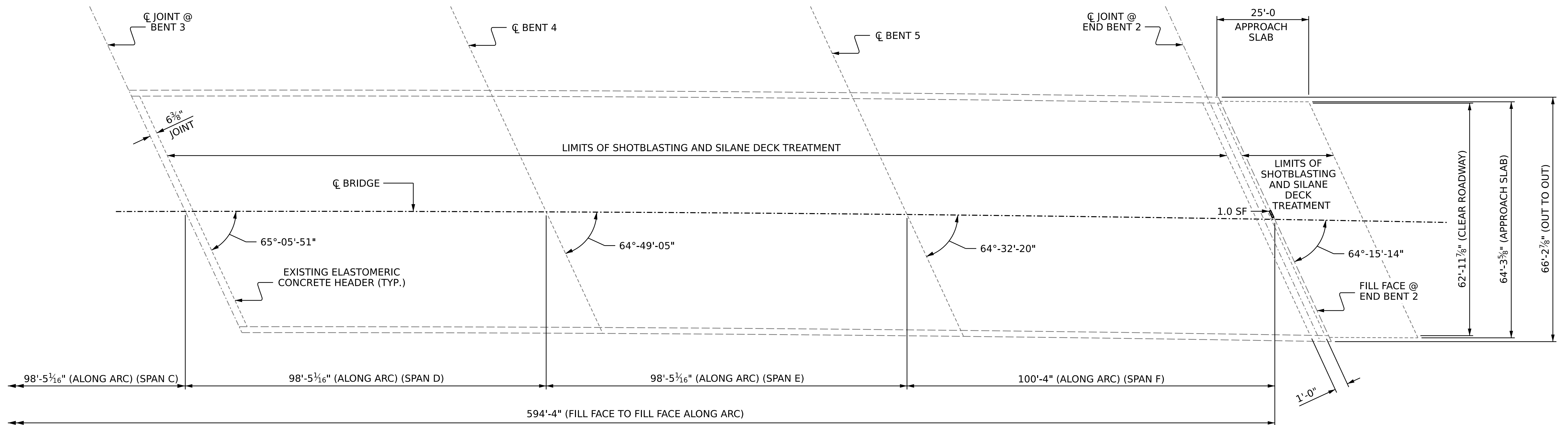
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	
1			3			S3-3
2			4			TOTAL SHEETS 4

REPAIR KEY

-  - SHOTBLASTING AND SILANE DECK TREATMENT
-  - CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT

SUMMARY OF QUANTITIES FOR SPANS D-E-F & APPROACH SLAB 2

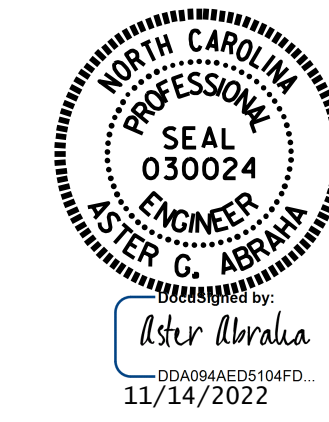
	ESTIMATE	ACTUAL
SHOTBLASTING BRIDGE DECK	2,230.2 SY	
SILANE DECK TREATMENT	2,230.2 SY	
CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT	1.0 SF	



PLAN OF SPANS

PROJECT NO. **15BPR.58**
CUMBERLAND COUNTY
 STATION: **250352**

SHEET 2 OF 2



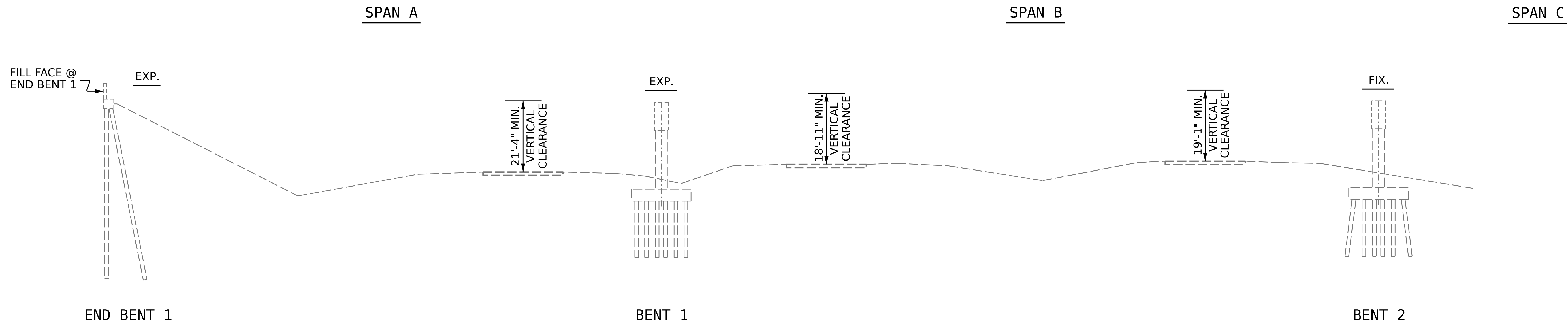
STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

SILANE DECK TREATMENT

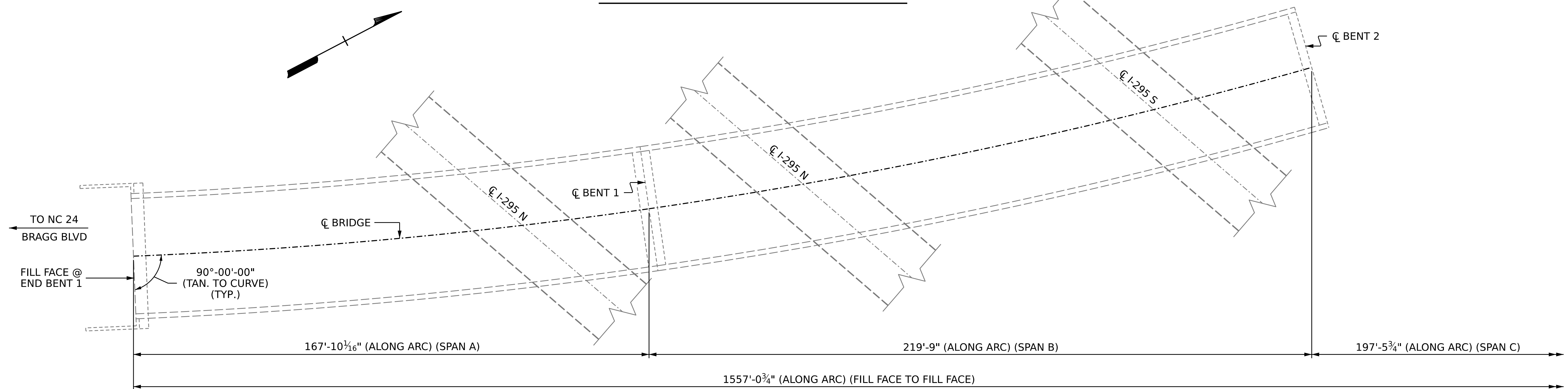
DRAWN BY : G. AYES DATE : 8/2022
 CHECKED BY : A. G. ABRAHA DATE : 10/2022
 DESIGN ENGINEER OF RECORD: _____ DATE : _____

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S3-4
1			3			TOTAL SHEETS
2			4			4



SECTION ALONG Q BRIDGE



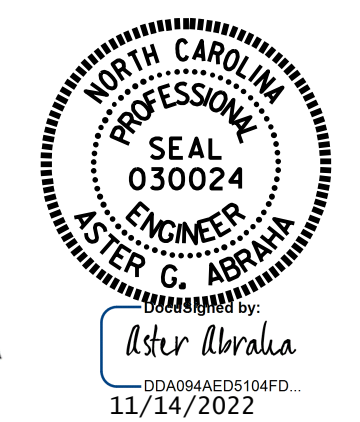
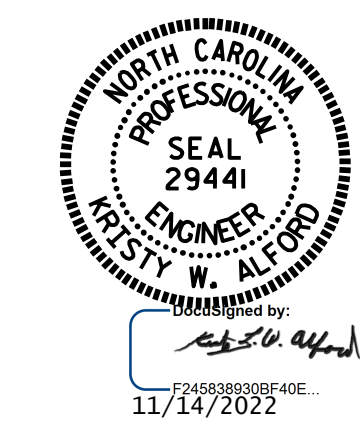
PLAN

(FOOTINGS, COLUMNS AND PILES NOT SHOWN IN PLAN VIEW FOR CLARITY)

PROJECT NO. **15BPR.58**
CUMBERLAND COUNTY
 BRIDGE NO. **250362**

SHEET 1 OF 4

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
GENERAL DRAWING
 FOR BRIDGE ON I-295 FLYOVER
 RAMP OVER I-295 AND NC 210
 BETWEEN NC 24 & NC 87/NC 210



REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S4-1
1			3			TOTAL SHEETS 9
2			4			

DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED

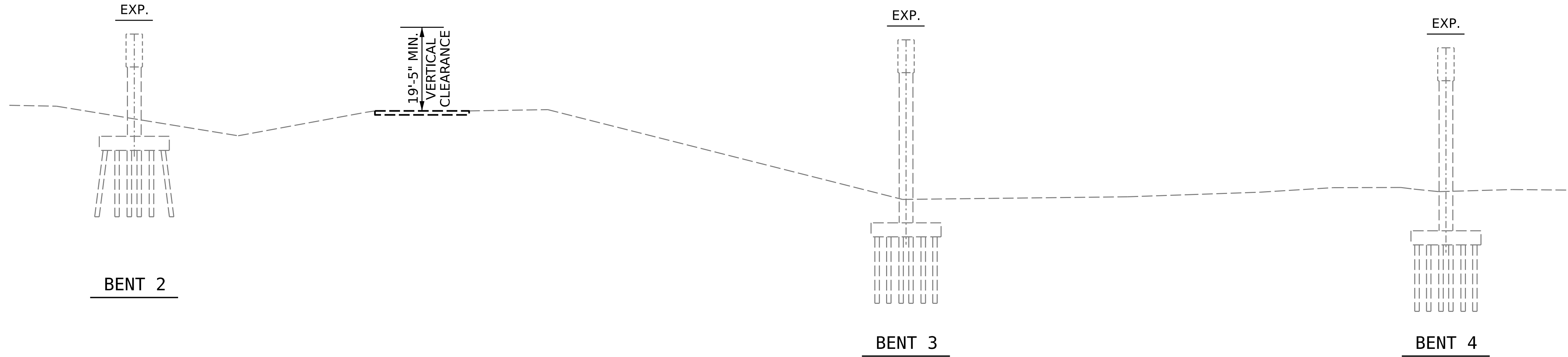
DRAWN BY : G. AYES DATE : 10/2021
 CHECKED BY : A. G. ABRAHA DATE : 10/2022
 DESIGN ENGINEER OF RECORD: _____ DATE : _____

SPAN B

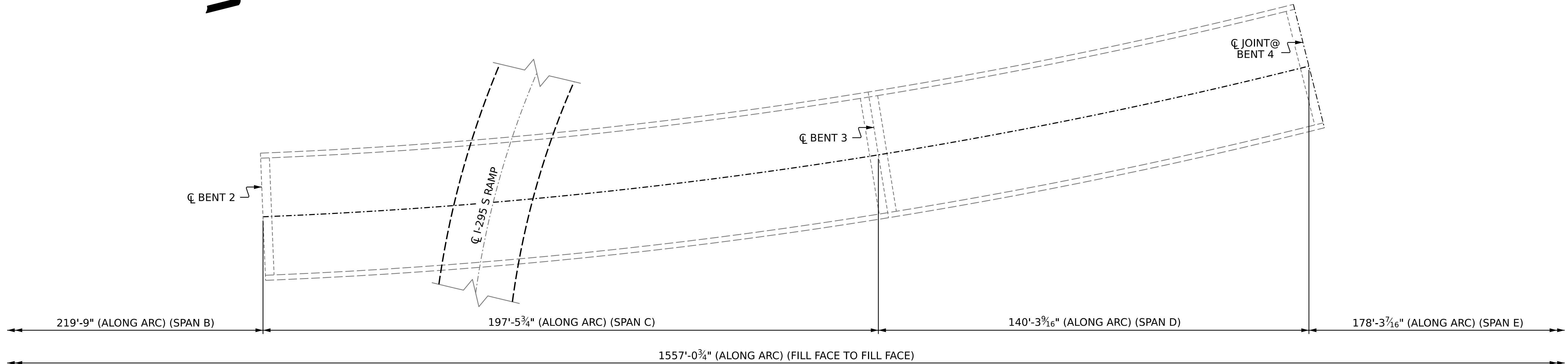
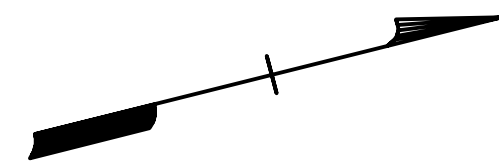
SPAN C

SPAN D

SPAN E



SECTION ALONG ϕ BRIDGE



PLAN

(FOOTINGS, COLUMNS AND PILES NOT SHOWN IN PLAN VIEW FOR CLARITY)

PROJECT NO. **15BPR.58**
CUMBERLAND COUNTY
 BRIDGE NO. **250362**

SHEET 2 OF 4

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

GENERAL DRAWING

FOR BRIDGE ON I-295 FLYOVER
 RAMP OVER I-295 AND NC 210
 BETWEEN NC 24 & NC 87/NC 210



DRAWN BY : G. AYES DATE : 10/2021
 CHECKED BY : A. G. ABRAHA DATE : 10/2022
 DESIGN ENGINEER OF RECORD: _____ DATE : _____

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S4-2
1			3			TOTAL SHEETS
2			4			9

SPAN D

SPAN E

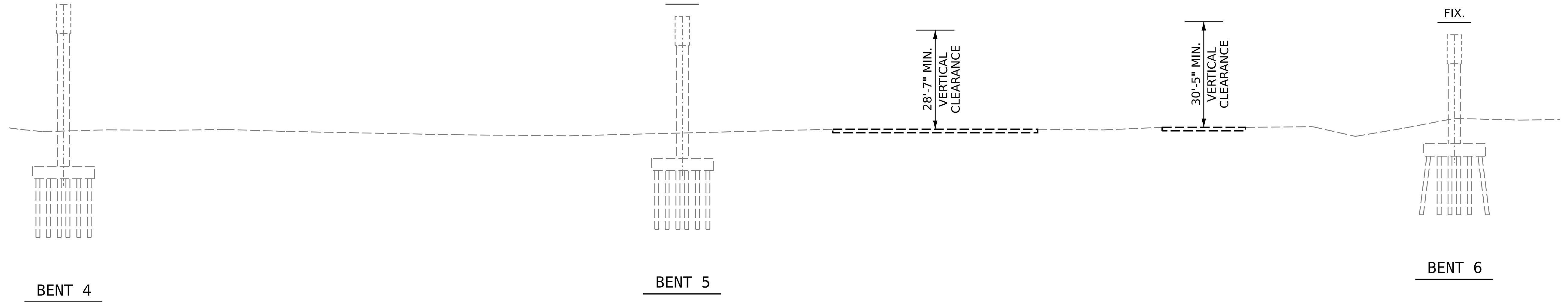
SPAN F

SPAN G

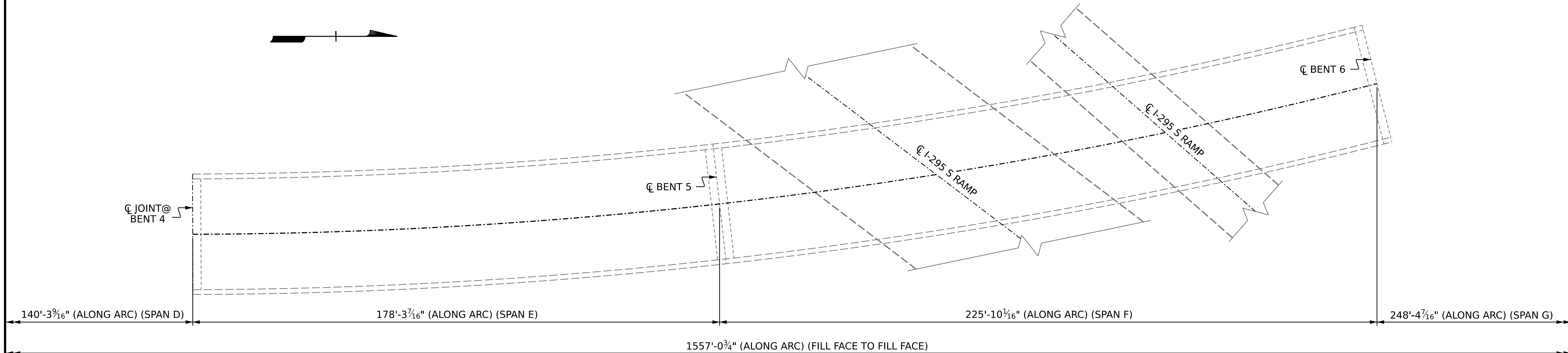
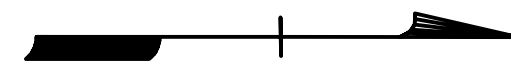
EXP. EXP.

EXP.

FIX.



SECTION ALONG ϕ BRIDGE



PLAN

(FOOTINGS, COLUMNS AND PILES NOT SHOWN IN PLAN VIEW FOR CLARITY)

PROJECT NO. **15BPR.58**
CUMBERLAND COUNTY
 BRIDGE NO. **250362**

SHEET 3 OF 4

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

GENERAL DRAWING

FOR BRIDGE ON I-295 FLYOVER
 RAMP OVER I-295 AND NC 210
 BETWEEN NC 24 & NC 87/NC 210



DRAWN BY : G. AYES DATE : 10/2021
 CHECKED BY : A. G. ABRAHA DATE : 10/2022
 DESIGN ENGINEER OF RECORD: _____ DATE : _____

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S4-3
1			3			TOTAL SHEETS
2			4			9

SPAN F

SPAN G

SPAN H

FIX.

EXP.

EXP.

FILL FACE @
END BENT 2

17'-4" MIN.
VERTICAL
CLEARANCE

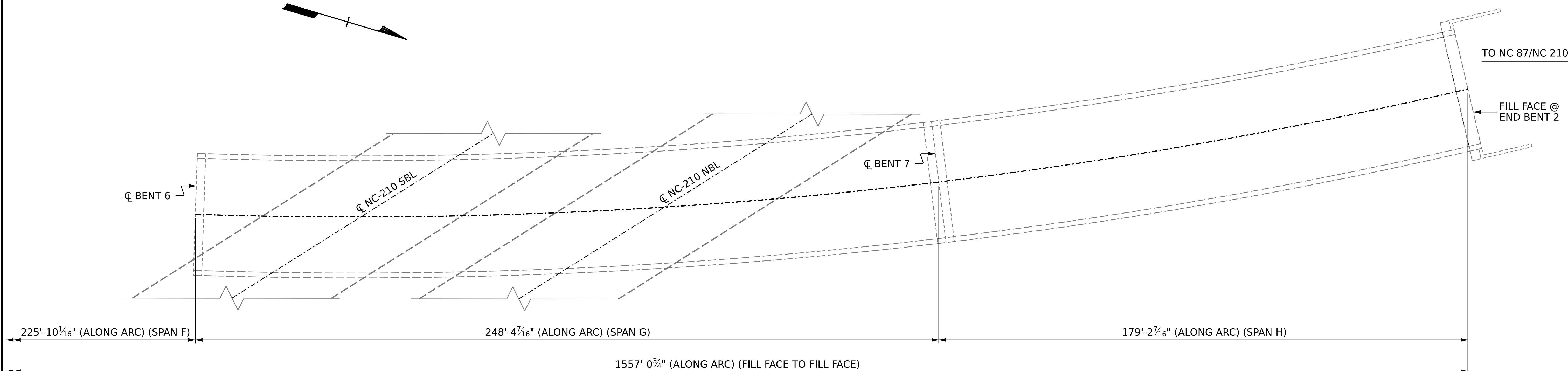
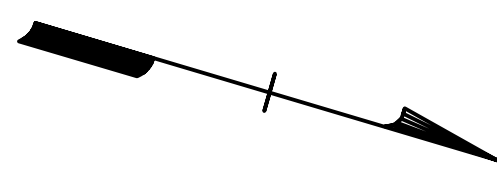
20'-9" MIN.
VERTICAL
CLEARANCE

BENT 6

BENT 7

END BENT 1

SECTION ALONG ϕ BRIDGE



PLAN

(FOOTINGS, COLUMNS AND PILES NOT
SHOWN IN PLAN VIEW FOR CLARITY)

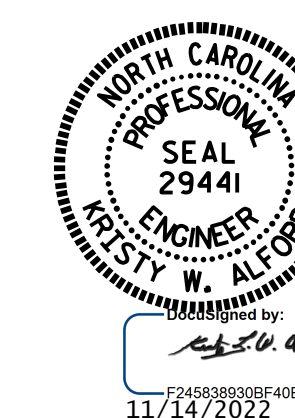
PROJECT NO. **15BPR.58**
CUMBERLAND COUNTY
 BRIDGE NO. **250362**

SHEET 4 OF 4

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

GENERAL DRAWING

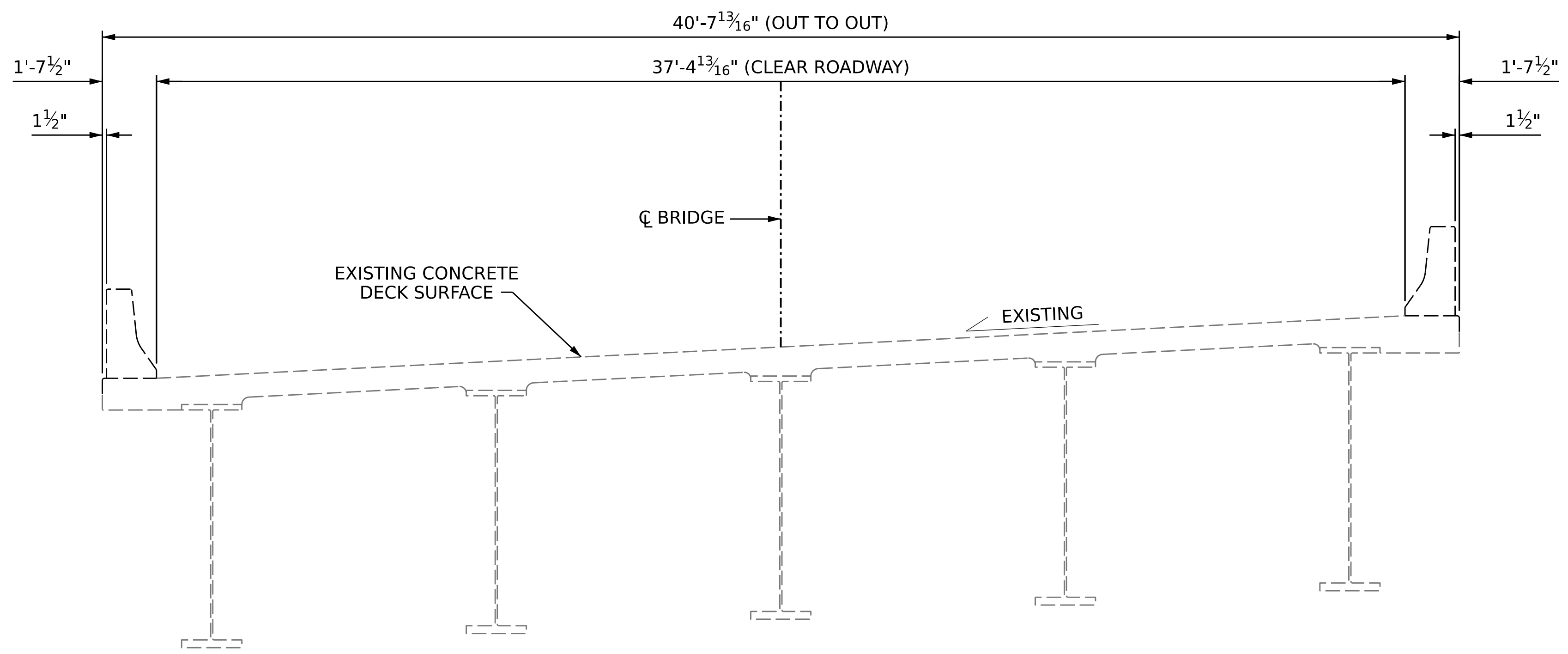
FOR BRIDGE ON I-295 FLYOVER
 RAMP OVER I-295 AND NC 210
 BETWEEN NC 24 & NC 87/NC 210



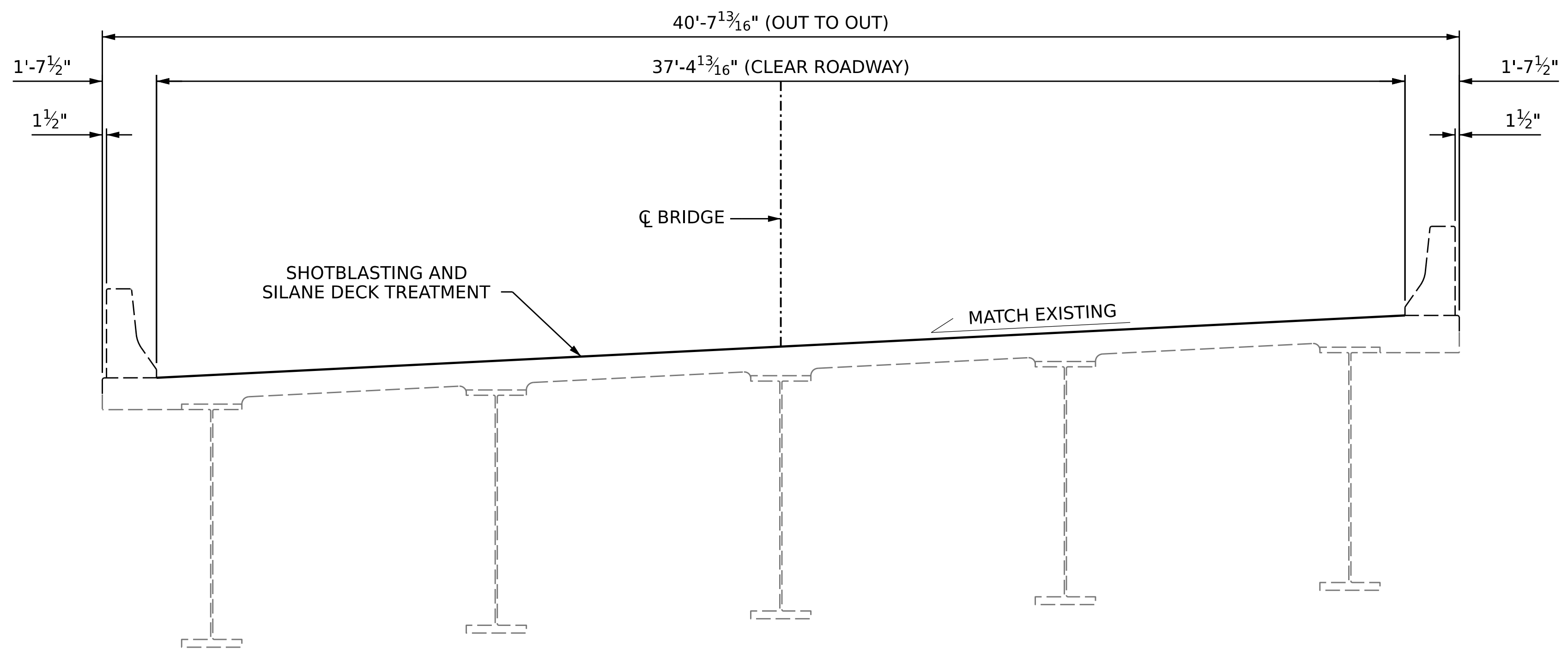
DRAWN BY : G. AYES DATE : 10/2021
 CHECKED BY : A. G. ABRAHA DATE : 10/2022
 DESIGN ENGINEER OF RECORD: _____ DATE : _____

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S4-4
1			3			TOTAL SHEETS 9
2			4			



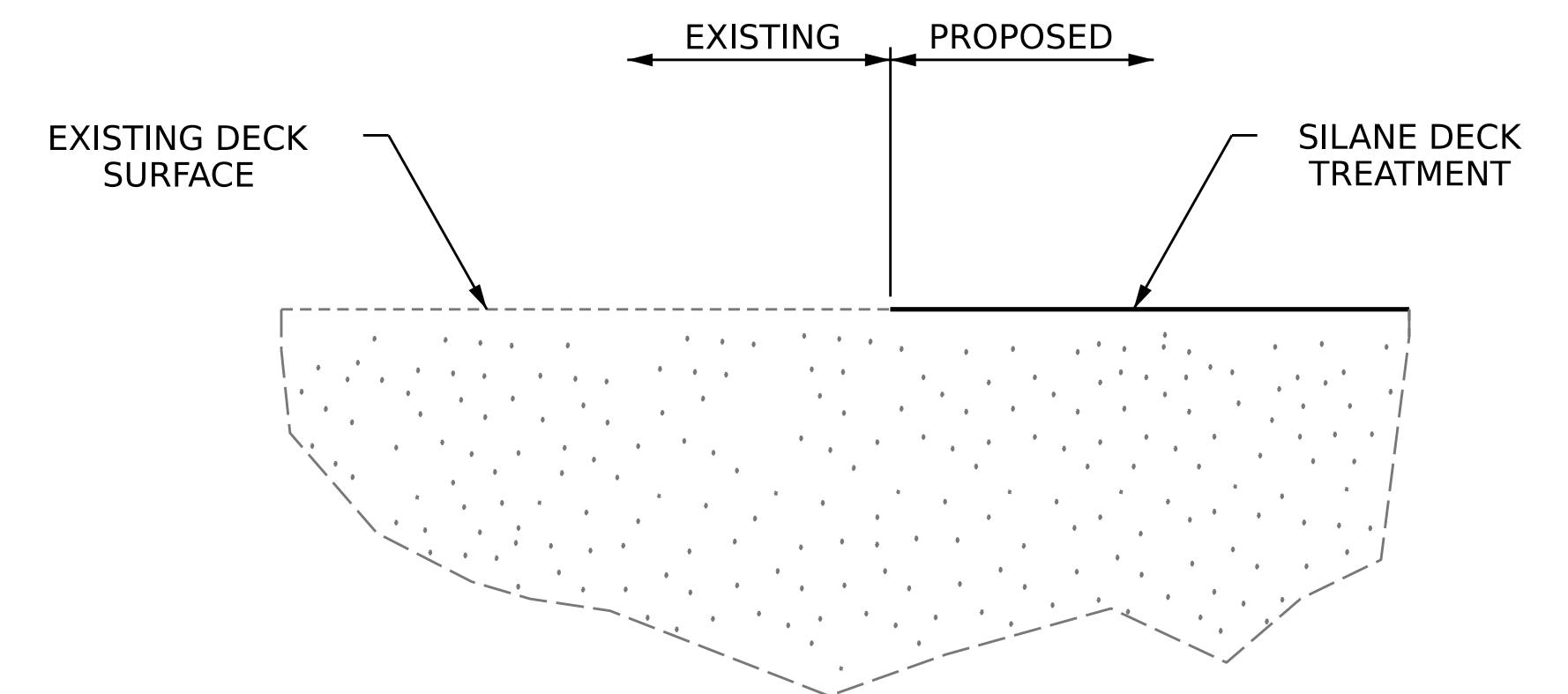
TYPICAL SECTION
(EXISTING)



TYPICAL SECTION
(PROPOSED)

NOTES

SEE TRAFFIC PLANS FOR LANE WIDTH, SEQUENCING, AND OTHER TRAFFIC CONTROL MEASURES FOR STAGING OF SURFACE PREPARATION AND SILANE DECK TREATMENT.
PROTECT TRAFFIC FROM REBOUND, DUST, OVERSPRAY, AND CONSTRUCTION ACTIVITIES. PROVIDE APPROPRIATE SHIELDING, AS REQUIRED AND/OR DIRECTED BY THE ENGINEER.



SILANE DECK TREATMENT DETAIL

PROJECT NO. 15BPR.58
CUMBERLAND COUNTY
BRIDGE NO. 250362



STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH



SUPERSTRUCTURE
TYPICAL SECTION
AND SILANE DECK
TREATMENT DETAILS

DRAWN BY : G. AYES DATE : 10/2021
CHECKED BY : A. G. ABRAHA DATE : 10/2022
DESIGN ENGINEER OF RECORD: _____ DATE : _____

DOCUMENT NOT CONSIDERED
FINAL UNLESS ALL
SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S4-5
1			3			TOTAL SHEETS
2			4			9

REPAIR KEY

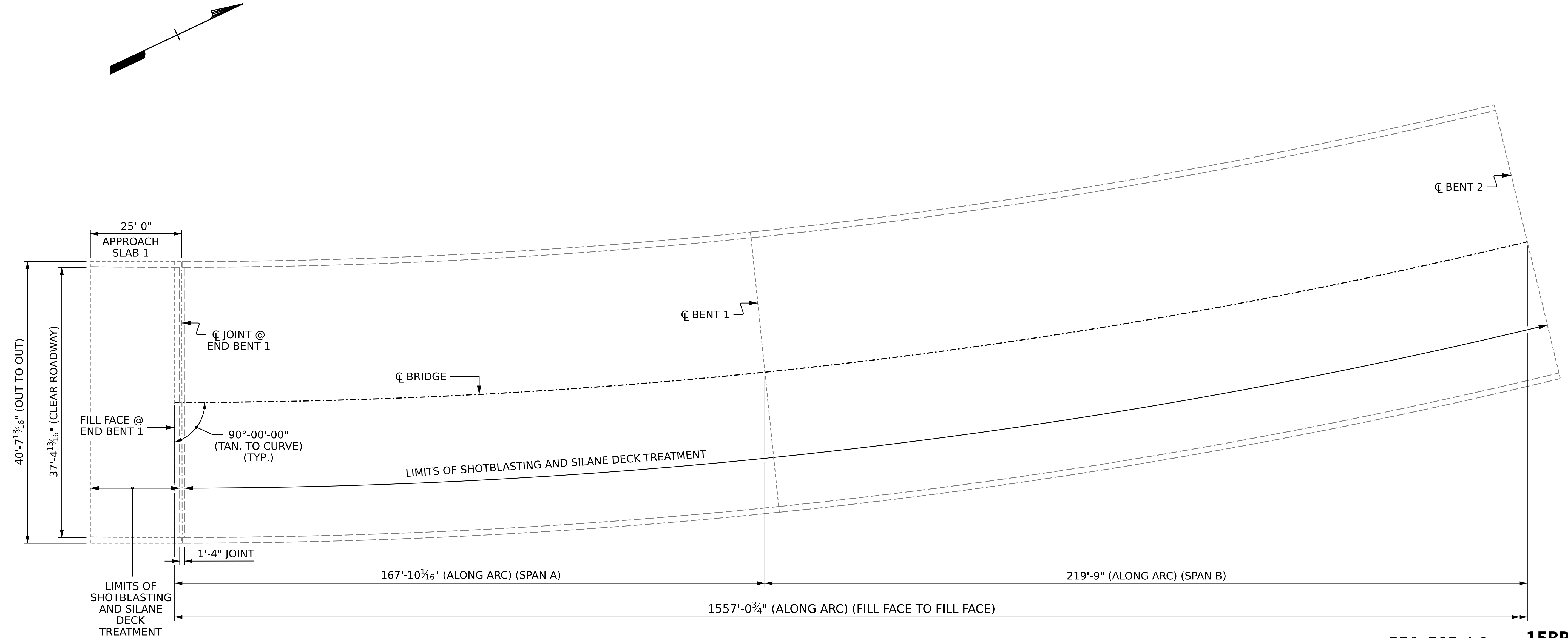
-  - SHOTBLASTING AND SILANE DECK TREATMENT
-  - CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT

NOTES

SEE SPECIAL PROVISIONS FOR SILANE DECK TREATMENT.
 SEE SPECIAL PROVISIONS FOR CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT.

SUMMARY OF QUANTITIES FOR SPANS A, B, & APPROACH SLAB 1

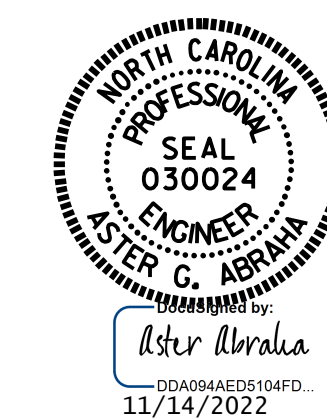
	ESTIMATE	ACTUAL
SHOTBLASTING BRIDGE DECK	1,709.8 SY	
SILANE DECK TREATMENT	1,709.8 SY	
CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT	0 SF	



PLAN OF SPANS

PROJECT NO. **15BPR.58**
CUMBERLAND COUNTY
 BRIDGE NO. **250362**

SHEET 1 OF 4



STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH



**PLAN OF SPAN A, B,
 AND APPROACH SLAB 1**

DRAWN BY : G. AYES DATE : 8/2022
 CHECKED BY : A. G. ABRAHA DATE : 10/2022
 DESIGN ENGINEER OF RECORD: _____ DATE : _____

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

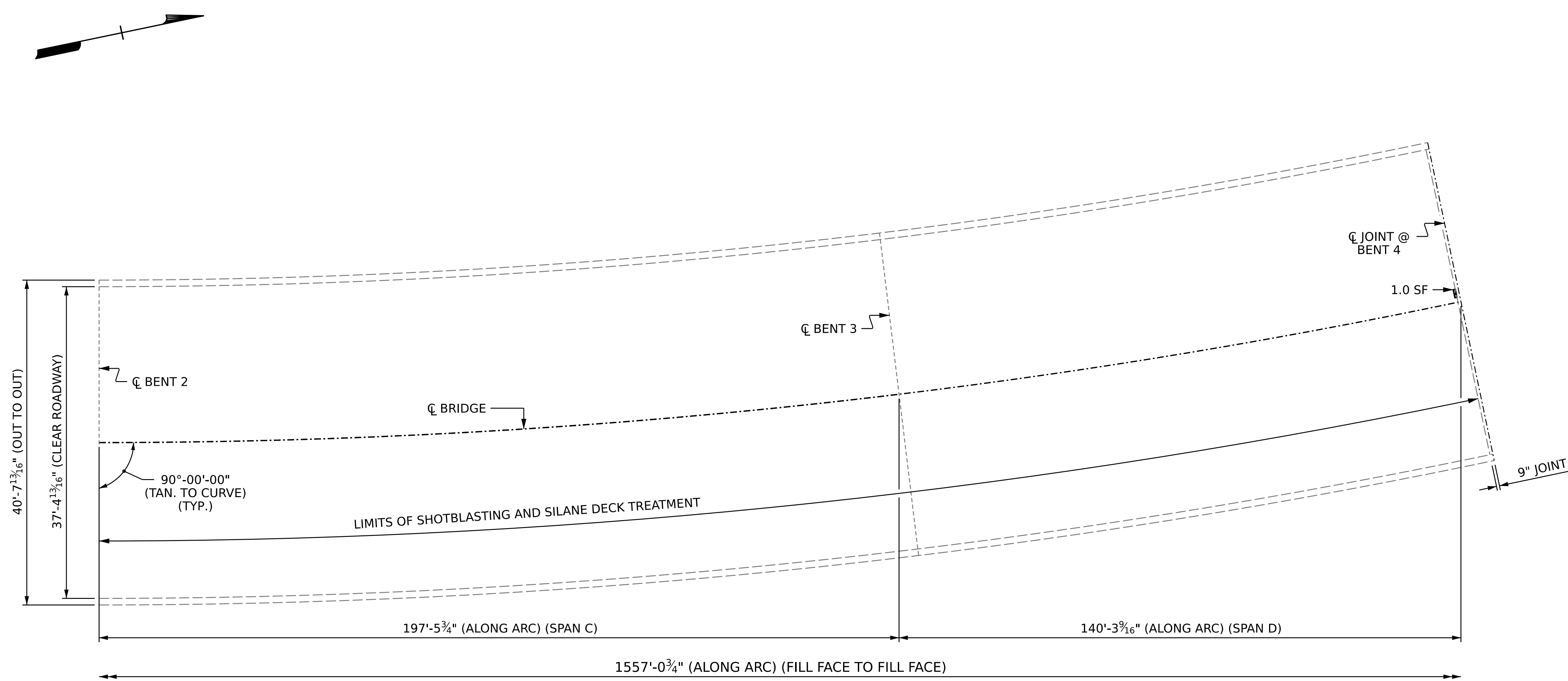
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S4-6
1			3			TOTAL SHEETS
2			4			9

REPAIR KEY

-  - SHOTBLASTING AND SILANE DECK TREATMENT
-  - CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT

SUMMARY OF QUANTITIES FOR SPANS C AND D

	ESTIMATE	ACTUAL
SHOTBLASTING BRIDGE DECK	1,405.0 SY	
SILANE DECK TREATMENT	1,405.0 SY	
CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT	1.0 SF	



PLAN OF SPANS

PROJECT NO. 15BPR.58
CUMBERLAND COUNTY
 BRIDGE NO. 250362

SHEET 2 OF 4

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

PLAN OF SPAN C & D





DRAWN BY : G. AYES DATE : 8/2022
 CHECKED BY : A. G. ABRAHA DATE : 10/2022
 DESIGN ENGINEER OF RECORD: _____ DATE : _____

DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

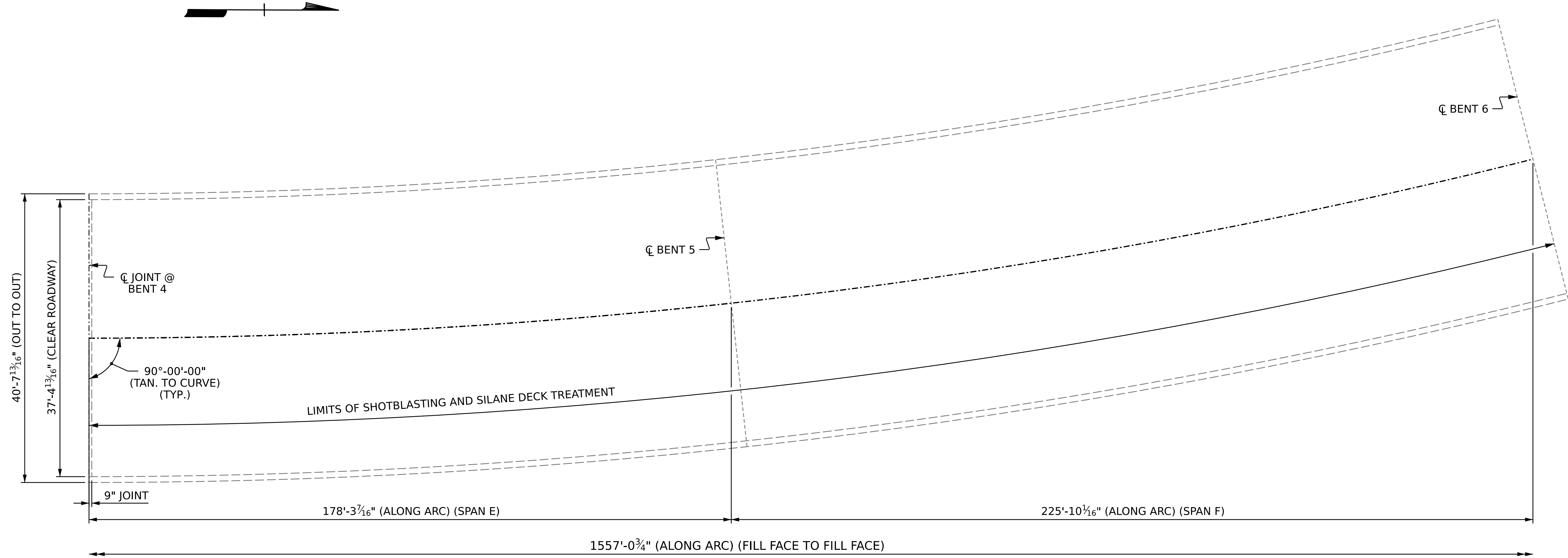
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NO.	BY:	DATE:	NO.	BY:	DATE:	S4-7
1			3			TOTAL SHEETS
2			4			9

REPAIR KEY

-  - SHOTBLASTING AND SILANE DECK TREATMENT
-  - CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT

SUMMARY OF QUANTITIES FOR SPANS E AND F

	ESTIMATE	ACTUAL
SHOTBLASTING BRIDGE DECK	1,681.2 SY	
SILANE DECK TREATMENT	1,681.2 SY	
CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT	0 SF	



PLAN OF SPANS

PROJECT NO. **15BPR.58**
CUMBERLAND COUNTY
 BRIDGE NO. **250362**

SHEET 3 OF 4

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

PLAN OF SPAN E & F



DRAWN BY : G. AYES DATE : 8/2022
 CHECKED BY : A. G. ABRAHA DATE : 10/2022
 DESIGN ENGINEER OF RECORD: _____ DATE : _____



DOCUMENT NOT CONSIDERED
 FINAL UNLESS ALL
 SIGNATURES COMPLETED

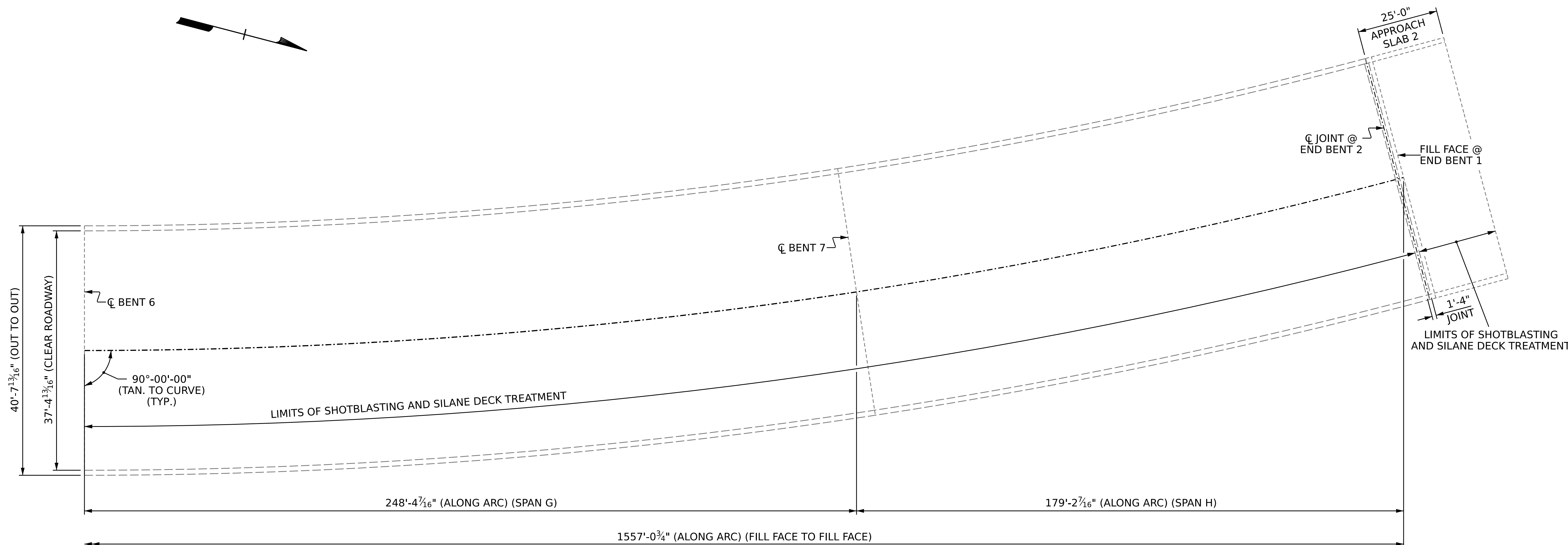
REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S4-8
1			3			TOTAL SHEETS
2			4			9

SUMMARY OF QUANTITIES FOR SPANS G, H & APPROACH SLAB 2

	ESTIMATE	ACTUAL
SHOTBLASTING BRIDGE DECK	1,876.2 SY	
SILANE DECK TREATMENT	1,876.2 SY	
CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT	0 SF	

REPAIR KEY

-  - SHOTBLASTING AND SILANE DECK TREATMENT
-  - CONCRETE DECK REPAIR FOR SILANE DECK TREATMENT



PLAN OF SPANS

PROJECT NO. **15BPR.58**
CUMBERLAND COUNTY
 BRIDGE NO. **250362**

SHEET 4 OF 4

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH

PLAN OF SPAN G & H



DRAWN BY : G. AYES DATE : 8/2022
 CHECKED BY : A. G. ABRAHA DATE : 10/2022
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 SIGNATURES COMPLETED

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	S4-9
1			3			TOTAL SHEETS 9
2			4			

STANDARD NOTES

DESIGN DATA:

SPECIFICATIONS	-----	A.A.S.H.T.O. (CURRENT)
LIVE LOAD	-----	SEE PLANS
IMPACT ALLOWANCE	-----	SEE A.A.S.H.T.O.
STRESS IN EXTREME FIBER OF STRUCTURAL STEEL - AASHTO M270 GRADE 36	--	20,000 LBS. PER SQ. IN.
	--	27,000 LBS. PER SQ. IN.
	--	27,000 LBS. PER SQ. IN.
REINFORCING STEEL IN TENSION - GRADE 60	----	24,000 LBS. PER SQ. IN.
CONCRETE IN COMPRESSION	-----	1,200 LBS. PER SQ. IN.
CONCRETE IN SHEAR	-----	SEE A.A.S.H.T.O.
STRUCTURAL TIMBER - TREATED OR UNTREATED EXTREME FIBER STRESS	----	1,800 LBS. PER SQ. IN.
COMPRESSION PERPENDICULAR TO GRAIN OF TIMBER	-----	375 LBS. PER SQ. IN.
EQUIVALENT FLUID PRESSURE OF EARTH	-----	30 LBS. PER CU. FT. (MINIMUM)

MATERIAL AND WORKMANSHIP:

EXCEPT AS MAY OTHERWISE BE SPECIFIED ON PLANS OR IN THE SPECIAL PROVISIONS, ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE 2018 "STANDARD SPECIFICATIONS FOR ROADS AND STRUCTURES" OF THE N.C. DEPARTMENT OF TRANSPORTATION.

STEEL SHEET PILING FOR PERMANENT OR TEMPORARY APPLICATIONS SHALL BE HOT ROLLED.

CONCRETE:

UNLESS OTHERWISE REQUIRED ON PLANS, CLASS A CONCRETE SHALL BE USED FOR ALL PORTIONS OF ALL STRUCTURES WITH THE EXCEPTION THAT: CLASS AA CONCRETE SHALL BE USED IN BRIDGE SUPERSTRUCTURES, ABUTMENT BACKWALLS, AND APPROACH SLABS; AND CLASS B CONCRETE SHALL BE USED FOR SLOPE PROTECTION AND RIP RAP.

CONCRETE CHAMFERS:

UNLESS OTHERWISE NOTED ON THE PLANS, ALL EXPOSED CORNERS ON STRUCTURES SHALL BE CHAMFERED $\frac{3}{4}$ " WITH THE FOLLOWING EXCEPTIONS: TOP CORNERS OF CURBS MAY BE ROUNDED TO $\frac{1}{2}$ " RADIUS WHICH IS BUILT INTO CURB FORMS; CORNERS OF TRANSVERSE FLOOR EXPANSION JOINTS SHALL BE ROUNDED WITH A $\frac{1}{4}$ " FINISHING TOOL UNLESS OTHERWISE REQUIRED ON PLANS; AND CORNERS OF EXPANSION JOINTS IN THE ROADWAY FACES AND TOPS OF CURBS AND SIDEWALKS SHALL BE ROUNDED TO A $\frac{1}{4}$ " RADIUS WITH A FINISHING STONE OR TOOL UNLESS OTHERWISE REQUIRED ON PLANS.

DOWELS:

DOWELS WHEN INDICATED ON PLANS AS FOR CULVERT EXTENSIONS, SHALL BE EMBEDDED AT LEAST 12" INTO THE OLD CONCRETE AND GROUTED INTO PLACE WITH 1:2 CEMENT MORTAR.

ALLOWANCE FOR DEAD LOAD DEFLECTION, SETTLEMENT, ETC. IN CASTING SUPERSTRUCTURES:

BRIDGES SHALL BE BUILT ON THE GRADE OR VERTICAL CURVE SHOWN ON PLANS. SLABS, CURBS AND PARAPETS SHALL CONFORM TO THE GRADE OR CURVE.

ALL DIMENSIONS WHICH ARE GIVEN IN SECTION AND ARE AFFECTED BY DEAD LOAD DEFLECTIONS ARE DIMENSIONS AT CENTER LINE OF BEARING UNLESS OTHERWISE NOTED ON PLANS. IN SETTING FORMS FOR STEEL BEAM BRIDGES AND PRESTRESSED CONCRETE GIRDER BRIDGES, ADJUSTMENTS SHALL BE MADE DUE TO THE DEAD LOAD DEFLECTIONS FOR THE ELEVATIONS SHOWN. WHERE BLOCKS ARE SHOWN OVER BEAMS FOR BUILDING UP TO THE SLAB, THE VERTICAL DIMENSIONS OF THE BLOCKS SHALL BE ADJUSTED BETWEEN BEARINGS TO COMPENSATE FOR DEAD LOAD DEFLECTIONS, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER. WHERE BOTTOM OF SLAB IS IN LINE WITH BOTTOM OF TOP FLANGES, DEPTH OF SLAB BETWEEN BEARINGS SHALL BE ADJUSTED TO COMPENSATE FOR DEAD LOAD DEFLECTION, VERTICAL CURVE ORDINATE, AND ACTUAL BEAM CAMBER.

IN SETTING FALSEWORK AND FORMS FOR REINFORCED CONCRETE SPANS, AN ALLOWANCE SHALL BE MADE FOR DEAD LOAD DEFLECTIONS, SETTLEMENT OF FALSEWORK, AND PERMANENT CAMBER WHICH SHALL BE PROVIDED FOR IN ADDITION TO THE ELEVATIONS SHOWN. AFTER REMOVAL OF THE FALSEWORK, THE FINISHED STRUCTURES SHALL CONFORM TO THE PROFILE AND ELEVATIONS SHOWN ON THE PLANS AND CONSTRUCTION ELEVATIONS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR FALSEWORK OR FORMS FOR BRIDGE SUPERSTRUCTURE AND ANY STRUCTURE OR PARTS OF A STRUCTURE AS NOTED ON THE PLANS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL BEFORE CONSTRUCTION OF THE FALSEWORK OR FORMS IS STARTED.

REINFORCING STEEL:

ALL REINFORCING STEEL SHALL BE DEFORMED. DIMENSIONS RELATIVE TO PLACEMENT OF REINFORCING ARE TO CENTERS OF BARS UNLESS OTHERWISE INDICATED IN THE PLANS. DIMENSIONS ON BAR DETAILS ARE TO CENTERS OF BARS OR ARE OUT TO OUT AS INDICATED ON PLANS.

WIRE BAR SUPPORTS SHALL BE PROVIDED FOR REINFORCING STEEL WHERE INDICATED ON THE PLANS. WHEN BAR SUPPORT PIECES ARE PLACED IN CONTINUOUS LINES, THEY SHALL BE SO PLACED THAT THE ENDS OF THE SUPPORTING WIRES SHALL BE LAPPED TO LOCK LEGS ON ADJOINING PIECES.

STRUCTURAL STEEL:

AT THE CONTRACTOR'S OPTION, HE MAY SUBSTITUTE $\frac{7}{8}$ " \emptyset SHEAR STUDS FOR THE $\frac{3}{4}$ " \emptyset STUDS SPECIFIED ON THE PLANS. THIS SUBSTITUTION SHALL BE MADE AT THE RATE OF 3 - $\frac{7}{8}$ " \emptyset STUDS FOR 4 - $\frac{3}{4}$ " \emptyset STUDS, AND STUD SPACING CHANGES SHALL BE MADE AS NECESSARY TO PROVIDE THE SAME EQUIVALENT NUMBER OF $\frac{7}{8}$ " \emptyset STUDS ALONG THE BEAM AS SHOWN FOR $\frac{3}{4}$ " \emptyset STUDS BASED ON THE RATIO OF 3 - $\frac{7}{8}$ " \emptyset STUDS FOR 4 - $\frac{3}{4}$ " \emptyset STUDS. STUDS OF THE LENGTH SPECIFIED ON THE PLANS MUST BE PROVIDED. THE MAXIMUM SPACING SHALL BE 2'-0".

EXCEPT AT THE INTERIOR SUPPORTS OF CONTINUOUS BEAMS WHERE THE COVER PLATE IS IN CONTACT WITH BEARING PLATE, THE CONTRACTOR MAY, AT HIS OPTION, SUBSTITUTE FOR THE COVER PLATES DESIGNATED ON THE PLANS COVER PLATES OF THE EQUIVALENT AREA PROVIDED THESE PLATES ARE AT LEAST $\frac{3}{16}$ " IN THICKNESS AND DO NOT EXCEED A WIDTH EQUAL TO THE FLANGE WIDTH LESS 2" OR A THICKNESS EQUAL TO 2 TIMES THE FLANGE THICKNESS. THE SIZE OF FILLET WELDS SHALL CONFORM TO THE REQUIREMENTS OF THE CURRENT ANSI/AASHTO/AWS "BRIDGE WELDING CODE". ELECTROSLAG WELDING WILL NOT BE PERMITTED.

WITH THE SOLE EXCEPTION OF EDGES AT SURFACES WHICH BEAR ON OTHER SURFACES, ALL SHARP EDGES AND ENDS OF SHAPES AND PLATES SHALL BE SLIGHTLY ROUNDED BY SUITABLE MEANS TO A RADIUS OF APPROXIMATELY $\frac{1}{16}$ " INCH OR EQUIVALENT FLAT SURFACE AT A SUITABLE ANGLE PRIOR TO PAINTING, GALVANIZING, OR METALLIZING.

HANDRAILS AND POSTS:

METAL STANDARDS AND FACES OF THE CONCRETE END POSTS FOR THE METAL RAIL SHALL BE SET NORMAL TO THE GRADE OF THE CURB, UNLESS OTHERWISE SHOWN ON PLANS. THE METAL RAIL AND TOPS OF CONCRETE POSTS USED WITH THE ALUMINUM RAIL SHALL BE BUILT PARALLEL TO THE GRADE OF THE CURB.

METAL HANDRAILS SHALL BE IN ACCORDANCE WITH THE PLANS. RAILS SHALL BE AS MANUFACTURED FOR BRIDGE RAILING. CASTINGS SHALL BE OF A UNIFORM APPEARANCE. FINS AND OTHER DEFORMATIONS RESULTING FROM CASTING OR OTHERWISE SHALL BE REMOVED IN A MANNER SO THAT A UNIFORM COLORING OF THE COMPLETED CASTING SHALL BE OBTAINED. CASTINGS WITH DISCOLORATIONS OR OF NON-UNIFORM COLORING WILL NOT BE ACCEPTED. CERTIFIED MILL REPORTS ARE REQUIRED FOR METAL RAILS AND POSTS.

SPECIAL NOTES:

GENERALLY, IN CASE OF DISCREPANCY, THIS STANDARD SHEET OF NOTES SHALL GOVERN OVER THE SPECIFICATIONS, BUT THE REMAINDER OF THE PLANS SHALL GOVERN OVER NOTES HEREON, AND SPECIAL PROVISIONS SHALL GOVERN OVER ALL. SEE SPECIFICATIONS ARTICLE 105-4.

ENGLISH

JANUARY, 1990

STD. NO. SN