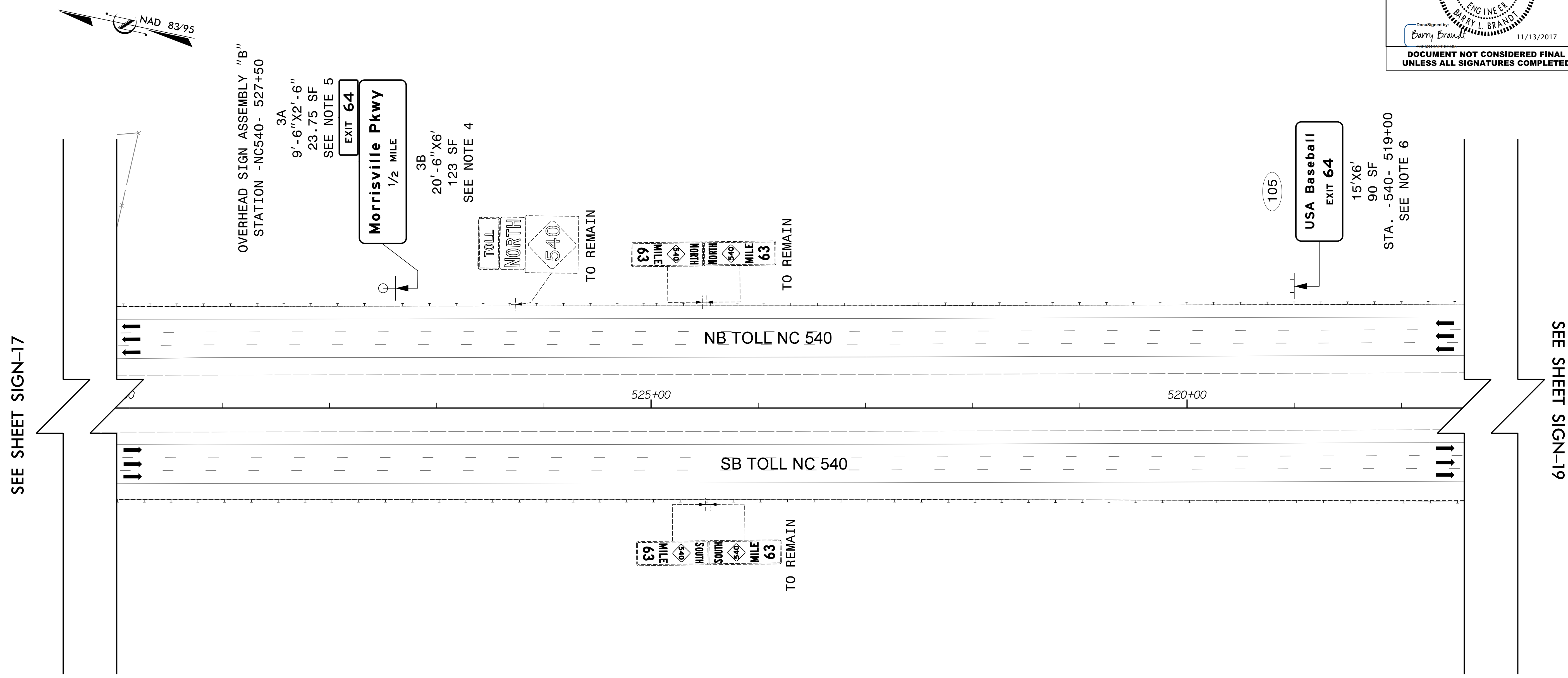


**This electronic collection of documents is provided
for the convenience of the user
and is Not a Certified Document –**

**The documents contained herein were originally issued
and sealed by the individuals whose names and license
numbers appear on each page, on the dates appearing
with their signature on that page.**

**This file or an individual page
shall not be considered a certified document.**

TIP NO. U-5315 A&B	SHEET NO. SIGN-18
APPROVED: _____	
DATE: _____	
SEAL	
<small>DocuSigned by: Barry Brandt 11/13/2017</small>	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	



- CONSTRUCTION NOTES**
- 4 SIGN ERECTION, TYPE A (OVERHEAD)
 - 5 SIGN ERECTION, TYPE B (OVERHEAD)
 - 6 SIGN ERECTION, TYPE A (GROUND MOUNTED)

PLANS PREPARED BY :

RK&K

RUMMEL, KLEPPER & KAHL, LLP
 900 RIDGEFIELD DRIVE SUITE 350
 RALEIGH, NORTH CAROLINA 27609-3960
 NC LICENSE NO. F-0112 (919) 878-9560

FOR
**THE NORTH CAROLINA
 TURNPIKE AUTHORITY**

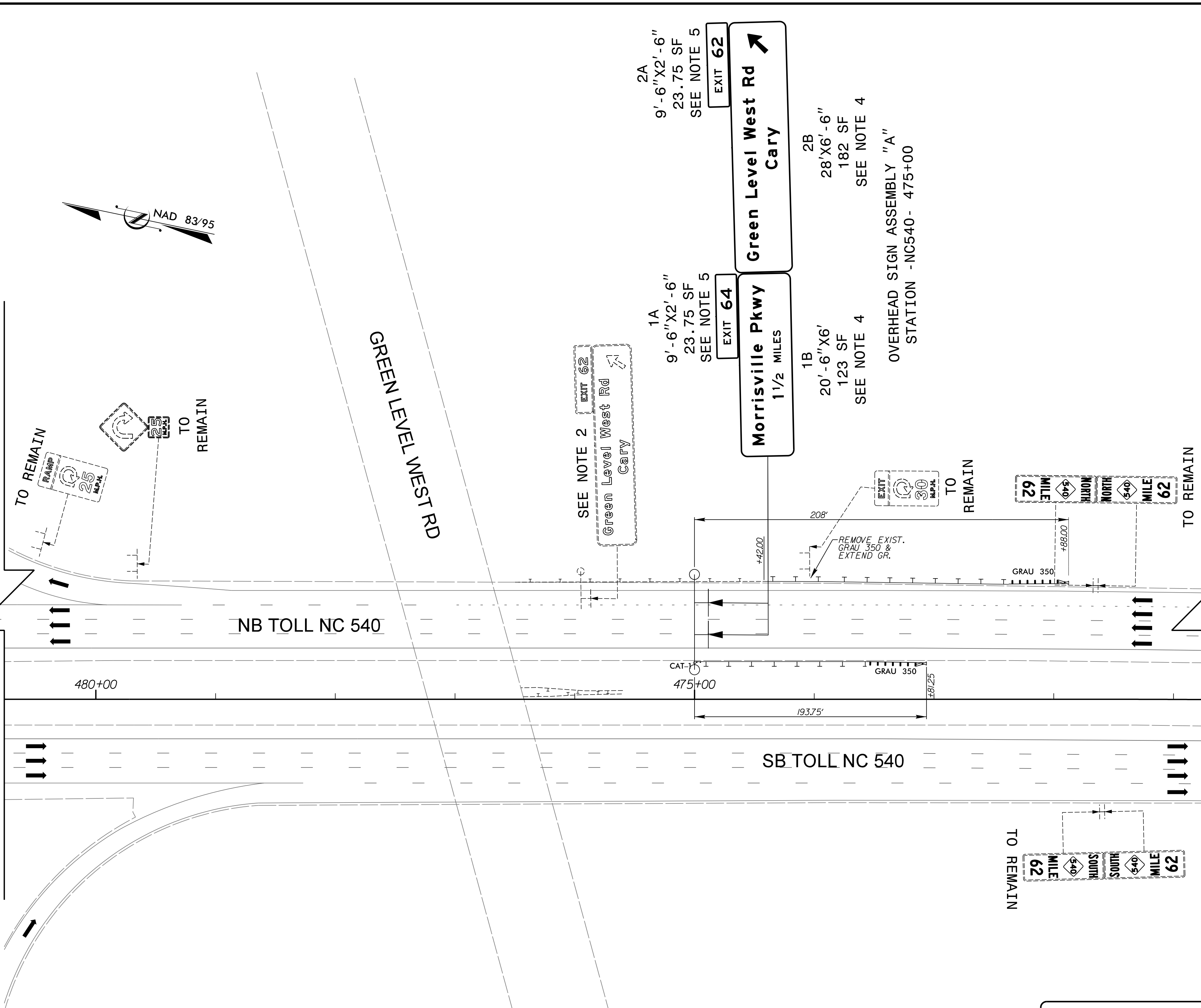
**EXISTING AND
 PROPOSED SIGNS
 STA. -NC540-
 517+50 TO 530+00**

10/13/2017
 R:\TrafFic\Signing\CADD\Signing_Layout_Plans\Pages\U5315_sgn_S-18.dgn
 NJM

TIP NO. U-5315 A&B	SHEET NO. SIGN-19
APPROVED: _____	
DATE: _____	
SEAL	
<small>DocuSigned by: Barry Brandt 11/13/2017</small>	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

SEE SHEET SIGN-18

SEE SHEET SIGN-20



- CONSTRUCTION NOTES**
- 2 DISPOSAL OF SIGN SYSTEM, OVERHEAD
 - 4 SIGN ERECTION, TYPE A (OVERHEAD)
 - 5 SIGN ERECTION, TYPE B (OVERHEAD)

PLANS PREPARED BY :

RK&K

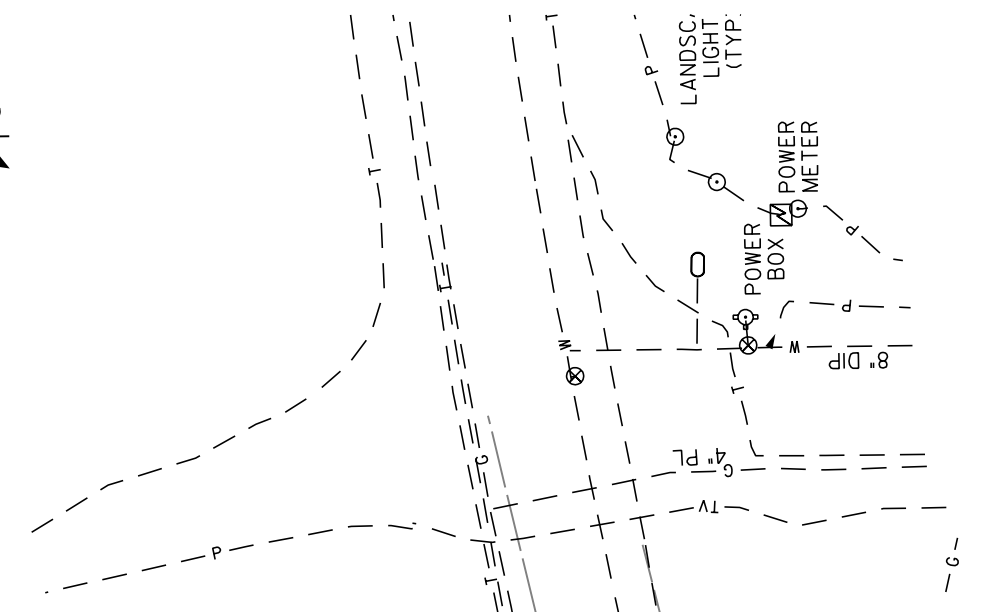
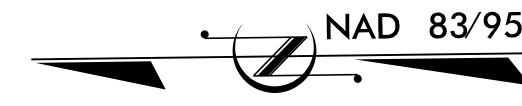
RUMMEL, KLEPPER & KAHL, LLP
 900 RIDGEFIELD DRIVE SUITE 350
 RALEIGH, NORTH CAROLINA 27609-3960
 NC LICENSE NO. F-0112 (919) 878-9560

FOR
**THE NORTH CAROLINA
 TURNPIKE AUTHORITY**

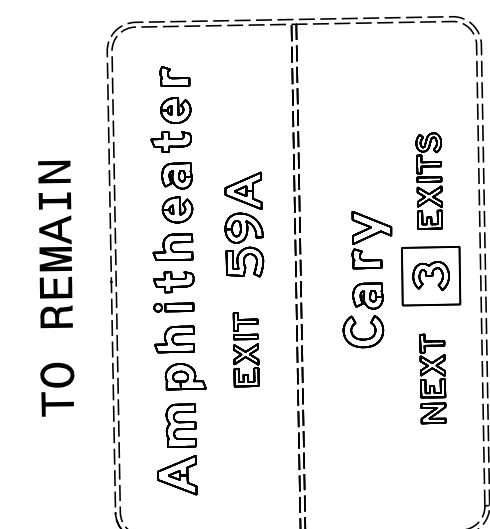
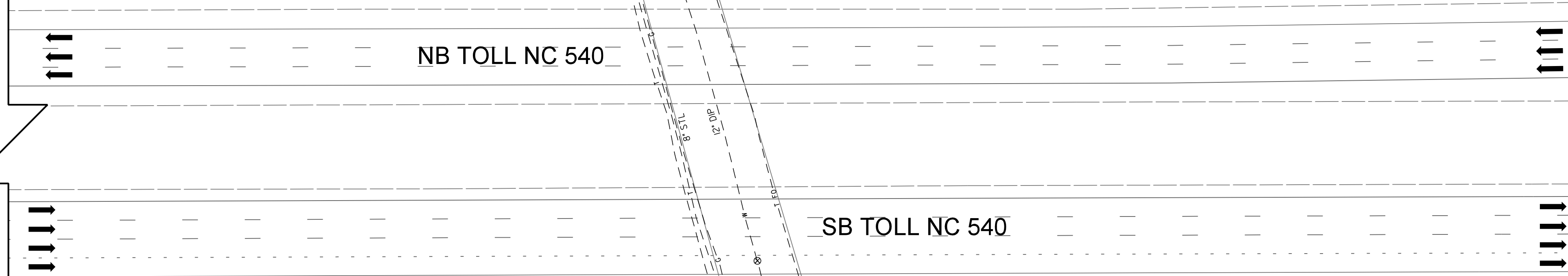
**PROPOSED AND
 EXISTING SIGNS
 STA. -NC540-
 770+75 TO 780+75**

TIP NO. U-5315 A&B	SHEET NO. SIGN-20
APPROVED: _____	
DATE: _____	
SEAL	
<small>DocuSigned by: Barry Brandt 11/13/2017</small>	
DOCUMENT NOT CONSIDERED FINAL UNLESS ALL SIGNATURES COMPLETED	

OVERLAY PLACEMENT DETAIL



SEE SHEET SIGN-19



SEE NOTE 11

CONSTRUCTION NOTES

11 SIGN ERECTION, OVERLAY (GROUND MOUNTED)

PLANS PREPARED BY :

RK&K

RUMMEL, KLEPPER & KAHL, LLP
 900 RIDGEFIELD DRIVE SUITE 350
 RALEIGH, NORTH CAROLINA 27609-3960
 NC LICENSE NO. F-0112 (919) 878-9560

FOR
**THE NORTH CAROLINA
 TURNPIKE AUTHORITY**

**EXISTING SIGN
 NC 540 AT
 OLIVE CHAPEL RD OVERPASS**

TOTAL BILL OF MATERIAL

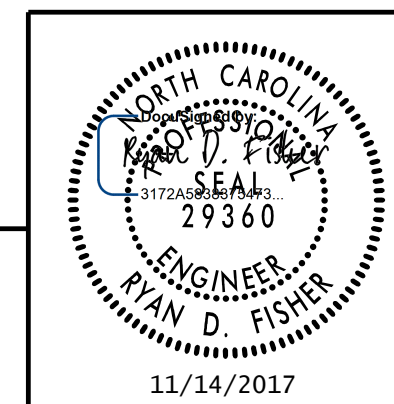
STRUCTURE I.D.	STATION	LOCATION	* OVERHEAD FOOTING	SUPPORTS, OVERHEAD SIGN STRUCTURE (TRUSS)	GENERIC SIGNING ITEM - CLASS A CONCRETE (AESTHETIC COLUMNS ONLY)	** GENERIC SIGNING ITEM - REINFORCING STEEL (AESTHETIC COLUMNS ONLY)
			CUBIC YARDS	LUMP SUM	CUBIC YARDS	POUNDS
A	475+00.00	-NC540-	10.6	LUMP SUM	27.5	4,730
B	527+50.00	-NC540-	7.6	LUMP SUM	12.0	2,050
C	550+00.00	-NC540-	11.0	LUMP SUM	27.8	4,776
D	590+21.00	-NC540-	15.2	LUMP SUM	29.5	4,971
E	655+00.00	-NC540-	5.1	LUMP SUM	11.1	1,955
F	691+50.00	-NC540-	15.1	LUMP SUM	28.9	4,897
T15 IN	21+16.00	-LPD-	11.4	LUMP SUM	28.5	4,846
T15 OUT	20+66.00	-LPD-	11.4	LUMP SUM	28.4	4,850
T16 IN	20+14.00	-RPB-	9.0	LUMP SUM	28.6	4,884
T16 OUT	20+64.00	-RPB-	9.0	LUMP SUM	28.8	4,900
TOTAL			105.4	LUMP SUM	251.1	42,859

* OVERHEAD FOOTING QUANTITY INCLUDES FOUNDATION CONCRETE FOR DRILLED PIERS AND TRANSITION FOOTINGS. THE CONTRACT UNIT PRICE FOR OVERHEAD FOOTINGS WILL BE FULL COMPENSATION FOR PROVIDING REINFORCING STEEL TO CONSTRUCT DRILLED PIERS AND TRANSITION FOOTINGS.

** QUANTITY INCLUDES #9 V1 BARS.

PROJECT NO. U-5315 A & B
 WAKE COUNTY
 STATION: _____

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
OVERHEAD STRUCTURES
 TOTAL BILL OF MATERIAL



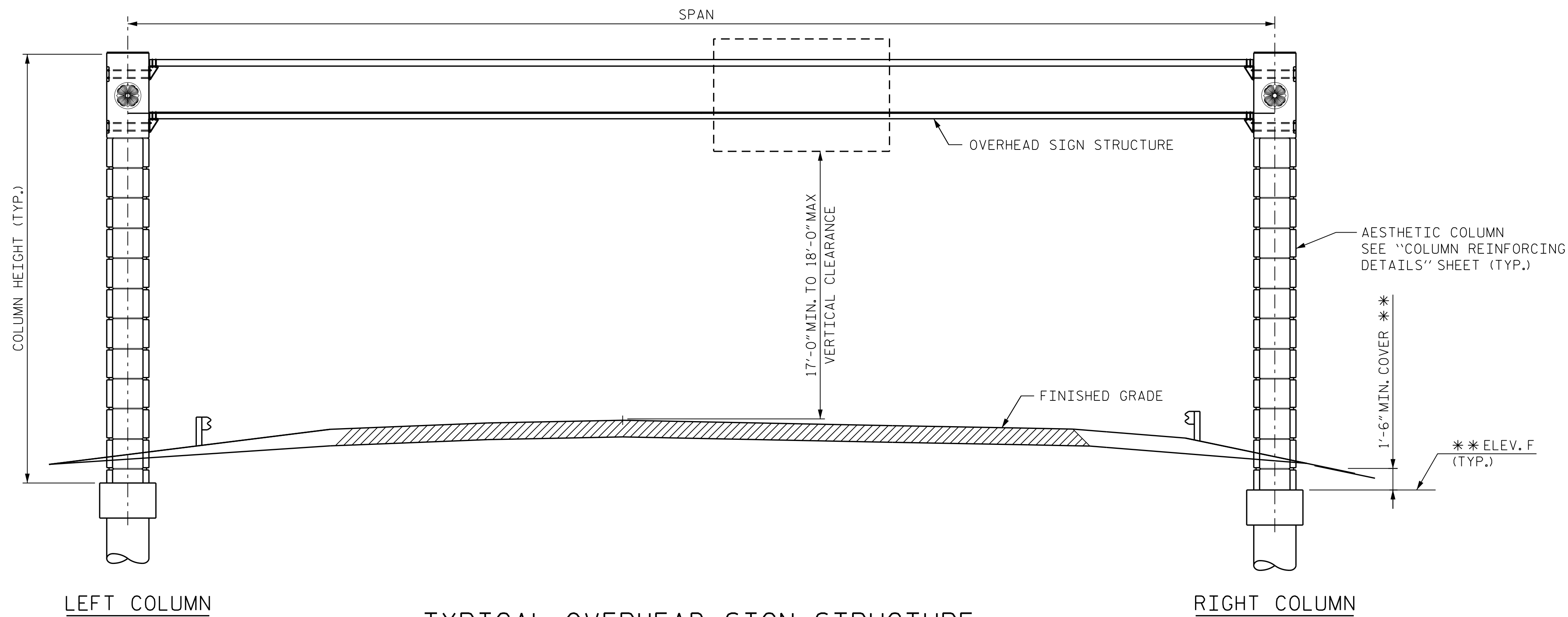
RK&K
 RUMMEL, KLEPPER & KAHL, LLP
 900 RIDGEFIELD DRIVE SUITE 350
 RALEIGH, NC 27609-3960 (919) 878-9560
 NC LICENSE NUMBER: F-0112

REVISIONS				SHEET NO.		
NO.	BY:	DATE:	NO.	BY:	DATE:	SIGN-21
1			3			TOTAL SHEETS 12
2			4			

**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

localuser 11/14/2017 R:\Structures\1050\SD_0HS_001.dgn

DRAWN BY : B. A. HAAG DATE : AUG 2017
 CHECKED BY : R. D. FISHER DATE : AUG 2017
 DESIGN ENGINEER OF RECORD : R. D. FISHER DATE : AUG 2017



TYPICAL OVERHEAD SIGN STRUCTURE

(LOOKING IN THE DIRECTION OF TRAFFIC)

NOTES:

ONLY FOUNDATION AND COLUMN DESIGNS ARE PROVIDED IN THESE PLANS. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND SHOP DRAWINGS OF THE OVERHEAD SIGN AND GANTRY TRUSS STRUCTURES.

CONNECTIONS BY OTHERS.

COLUMNS AND FOUNDATIONS DESIGNED FOR THE EFFECTS OF DEAD, WIND AND ICE LOADS IN ACCORDANCE WITH AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINARIES AND TRAFFIC SIGNALS (90 MPH WIND SPEED).

FOR OVERHEAD AND DYNAMIC MESSAGE SIGN FOUNDATIONS SEE SPECIAL PROVISIONS.

FOR OVERHEAD SIGN AND GANTRY SUPPORTS SEE SPECIAL PROVISIONS.

CLASS 'A' CONCRETE SHALL BE USED IN COLUMNS, FOOTINGS, CAPS AND GRADE BEAMS.

'DRILLED PIER' CONCRETE SHALL BE USED IN DRILLED PIERS WHERE REQUIRED.

DEFORMED STEEL BAR REINFORCEMENT SHALL CONFORM TO AASHTO M31 GRADE 60.

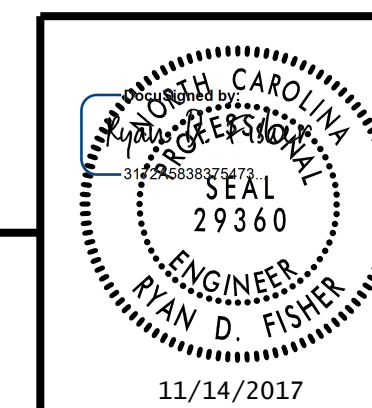
CONTRACTOR SHALL VERIFY COLUMN HEIGHTS AND MINIMUM VERTICAL CLEARANCE PRIOR TO CONSTRUCTION. COLUMN HEIGHTS AND FOOTING ELEVATIONS MAY BE ADJUSTED WITH APPROVAL OF THE ENGINEER.

VERIFY THE LOCATION OF UNDERGROUND UTILITIES AND DRAINAGE STRUCTURES BEFORE DRILLING HOLES TO ENSURE SUFFICIENT CLEARANCE IS AVAILABLE.

STRUCTURE ID	STATION	LOCATION	SPAN	LEFT COLUMN													RIGHT COLUMN												
				OFFSET	NORTHING	EASTING	FOUNDATION TYPE *	COLUMN HEIGHT	ELEV. F	VAR "FA" **	VAR "FB" **	VAR "FC" **	VAR "FF" **	VAR "FG" **	VAR "FH" **	VAR "FJ" **	OFFSET	NORTHING	EASTING	FOUNDATION TYPE *	COLUMN HEIGHT	ELEV. F	VAR "FA" **	VAR "FB" **	VAR "FC" **	VAR "FF" **	VAR "FG" **	VAR "FH" **	VAR "FJ" **
"A"	475+00.00	-NC540-	88.00'	18.97' RT.	739,842.1703	2,033,773.0669	B1	25'-7"	341.25	8'-0"	3'-6"	14	6"	2'-6"	4'-6"	6'-2"	106.97' RT.	739,860.2161	2,033,859.1968	B1	26'-2"	340.66	7'-0"	3'-6"	14	6"	2'-6"	4'-6"	6'-2"
"C"	550+00.00	-NC540-	85.00'	18.17' RT.	747,182.6172	2,032,234.2882	B1	25'-7"	349.26	8'-0"	3'-6"	14	6"	2'-6"	4'-6"	6'-2"	103.17' RT.	747,200.0478	2,032,317.4818	B1	26'-9"	348.09	8'-0"	3'-6"	14	6"	2'-6"	4'-6"	6'-2"
"D"	590+21.00	-NC540-	94.00'	19.19' LT.	751,174.9970	2,031,913.6474	B1	26'-4"	311.83	17'-0"	3'-6"	14	6"	2'-6"	4'-6"	6'-2"	113.19' LT.	751,174.9970	2,031,819.6474	B1	29'-3"	308.91	11'-0"	3'-6"	14	6"	2'-6"	4'-6"	6'-2"
"F"	691+50.00	-NC540-	91.00'	2.91' RT.	760,801.1427	2,033,520.9178	B1	28'-1"	368.28	13'-0"	3'-6"	14	6"	2'-6"	4'-6"	6'-2"	88.09' LT	760,862.3885	2,033,453.6129	B1	26'-4"	370.03	15'-0"	3'-6"	14	6"	2'-6"	4'-6"	6'-2"

* TYPE B1 = SINGLE DRILLED SHAFT FOUNDATION
 ** SEE "FOUNDATION DETAILS SHEET"

PROJECT NO. U-5315 A & B
WAKE COUNTY
 STATION: _____



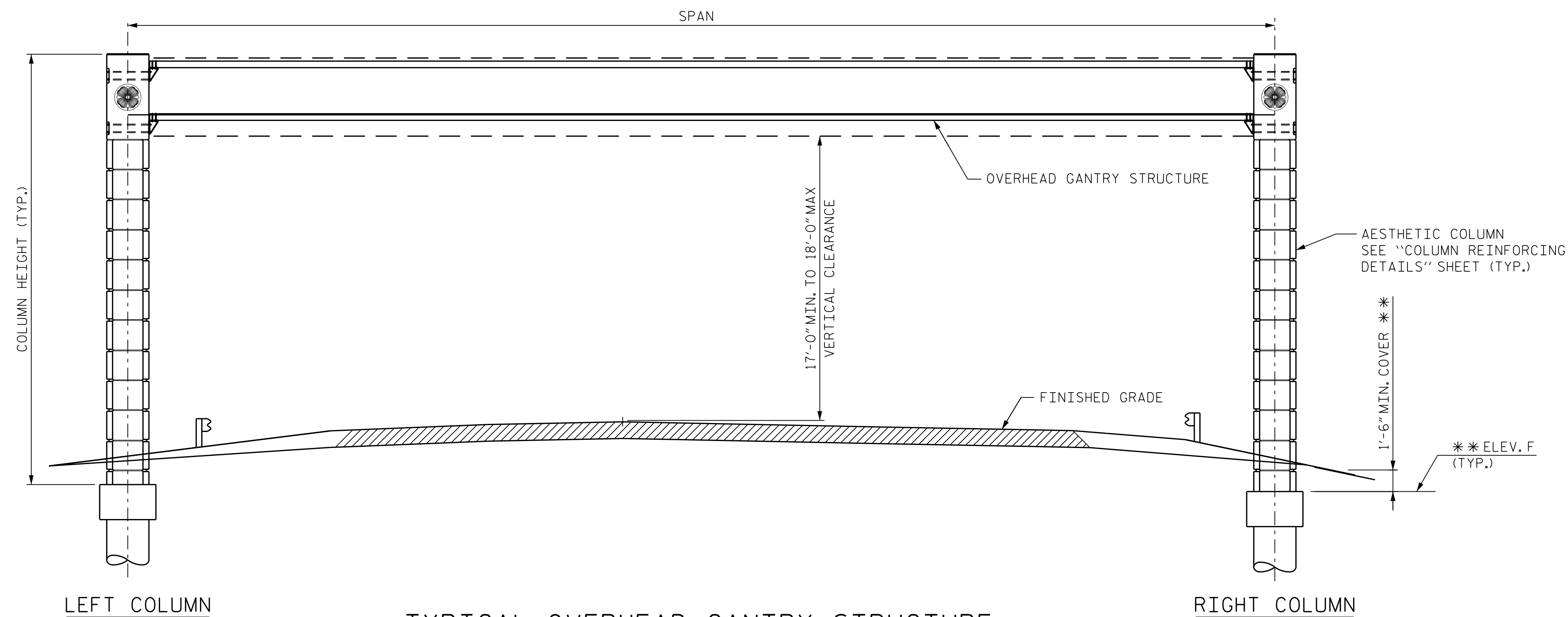
RK&K
 RUMMEL, KLEPPER & KAHL, LLP
 900 RIDGEFIELD DRIVE SUITE 350
 RALEIGH, NC 27609-3960 (919) 878-9560
 NC LICENSE NUMBER: F-0112

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
OVERHEAD STRUCTURES
 OVERHEAD SIGN STRUCTURES
 DATA TABLE

REVISIONS				SHEET NO.		
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			12
2			4			

DRAWN BY : B. A. HAAG DATE : AUG 2017
 CHECKED BY : R. D. FISHER DATE : AUG 2017
 DESIGN ENGINEER OF RECORD : R. D. FISHER DATE : AUG 2017

**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**



TYPICAL OVERHEAD GANTRY STRUCTURE

(LOOKING IN THE DIRECTION OF TRAFFIC)

NOTES:

ONLY FOUNDATION AND COLUMN DESIGNS ARE PROVIDED IN THESE PLANS. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND SHOP DRAWINGS OF THE OVERHEAD SIGN AND GANTRY TRUSS STRUCTURES.

CONNECTIONS BY OTHERS.

COLUMNS AND FOUNDATIONS DESIGNED FOR THE EFFECTS OF DEAD, WIND AND ICE LOADS IN ACCORDANCE WITH AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINARIES AND TRAFFIC SIGNALS (90 MPH WIND SPEED).

FOR OVERHEAD AND DYNAMIC MESSAGE SIGN FOUNDATIONS SEE SPECIAL PROVISIONS.

FOR OVERHEAD SIGN AND GANTRY SUPPORTS SEE SPECIAL PROVISIONS.

CLASS 'A' CONCRETE SHALL BE USED IN COLUMNS, FOOTINGS, CAPS AND GRADE BEAMS.

'DRILLED PIER' CONCRETE SHALL BE USED IN DRILLED PIERS WHERE REQUIRED.

DEFORMED STEEL BAR REINFORCEMENT SHALL CONFORM TO AASHTO M31 GRADE 60.

CONTRACTOR SHALL VERIFY COLUMN HEIGHTS AND MINIMUM VERTICAL CLEARANCE PRIOR TO CONSTRUCTION. COLUMN HEIGHTS AND FOOTING ELEVATIONS MAY BE ADJUSTED WITH APPROVAL OF THE ENGINEER.

VERIFY THE LOCATION OF UNDERGROUND UTILITIES AND DRAINAGE STRUCTURES BEFORE DRILLING HOLES TO ENSURE SUFFICIENT CLEARANCE IS AVAILABLE.

STRUCTURE ID	STATION	LOCATION	SPAN	LEFT COLUMN											RIGHT COLUMN										
				OFFSET	FOUNDATION TYPE *	COLUMN HEIGHT	ELEV. F	VAR "FA" **	VAR "FB" **	VAR "FC" **	VAR "FF" **	VAR "FG" **	VAR "FH" **	VAR "FJ" **	OFFSET	FOUNDATION TYPE *	COLUMN HEIGHT	ELEV. F	VAR "FA" **	VAR "FB" **	VAR "FC" **	VAR "FF" **	VAR "FG" **	VAR "FH" **	VAR "FJ" **
T15 IN	21+16.00	-LPD-	46.00'	16'-0" RT.	B1	26'-2"	352.90	13'-0"	3'-0"	11	6"	2'-6"	4'-0"	6'-2"	30'-0" LT.	B1	27'-2"	351.90	13'-0"	3'-0"	11	6"	2'-6"	4'-0"	6'-2"
T15 OUT	20+66.00	-LPD-	46.00'	16'-0" RT.	B1	26'-4"	353.63	13'-0"	3'-0"	11	6"	2'-6"	4'-0"	6'-2"	30'-0" LT.	B1	27'-1"	352.88	13'-0"	3'-0"	11	6"	2'-6"	4'-0"	6'-2"
T16 IN	20+14.00	-RPB-	44.00'	14'-0" LT.	B1	26'-10"	332.89	7'-0"	3'-0"	11	6"	2'-6"	4'-0"	6'-2"	30'-0" RT.	B1	26'-11"	332.80	10'-0"	3'-0"	11	6"	2'-6"	4'-0"	6'-2"
T16 OUT	20+64.00	-RPB-	44.00'	14'-0" LT.	B1	26'-10"	334.04	7'-0"	3'-0"	11	6"	2'-6"	4'-0"	6'-2"	30'-0" RT.	B1	27'-3"	333.62	10'-0"	3'-0"	11	6"	2'-6"	4'-0"	6'-2"

* TYPE B1 = SINGLE DRILLED SHAFT FOUNDATION

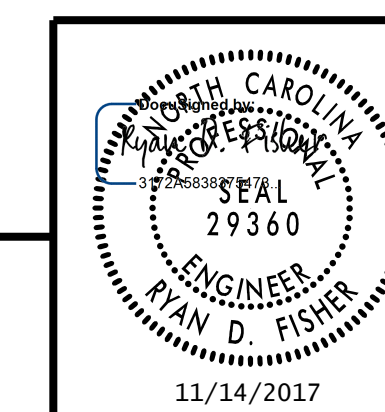
** SEE "FOUNDATION DETAILS SHEET"

PROJECT NO. U-5315 A & B

WAKE COUNTY

STATION: _____

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
OVERHEAD STRUCTURES
OVERHEAD GANTRY STRUCTURES
DATA TABLE



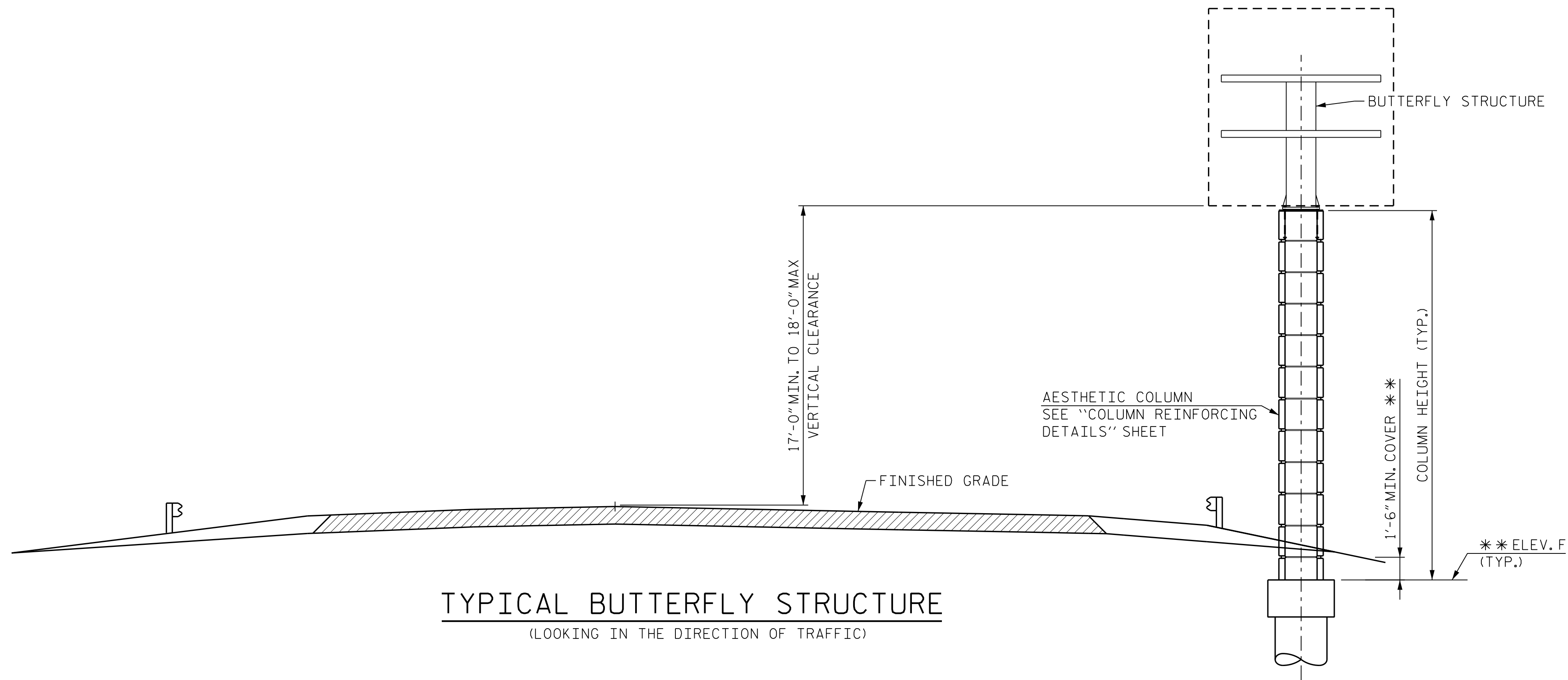
RK&K
RUMMEL, KLEPPER & KAHL, LLP
900 RIDGEFIELD DRIVE SUITE 350
RALEIGH, NC 27609-3960 (919) 878-9560
NC LICENSE NUMBER: F-0112

**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	SIGN-23
1			3			TOTAL SHEETS
2			4			12

11/13/2017 R:\DGN\11050_SD_OHS_003.dgn

DRAWN BY : B. A. HAAG DATE : AUG 2017
CHECKED BY : R. D. FISHER DATE : AUG 2017
DESIGN ENGINEER OF RECORD : R. D. FISHER DATE : AUG 2017



TYPICAL BUTTERFLY STRUCTURE
(LOOKING IN THE DIRECTION OF TRAFFIC)

NOTES:

ONLY FOUNDATION AND COLUMN DESIGNS ARE PROVIDED IN THESE PLANS. THE CONTRACTOR IS RESPONSIBLE FOR THE DESIGN AND SHOP DRAWINGS OF THE OVERHEAD SIGN AND GANTRY TRUSS STRUCTURES.

CONNECTIONS BY OTHERS.

COLUMNS AND FOUNDATIONS DESIGNED FOR THE EFFECTS OF DEAD, WIND AND ICE LOADS IN ACCORDANCE WITH AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINARIES AND TRAFFIC SIGNALS (90 MPH WIND SPEED).

FOR OVERHEAD AND DYNAMIC MESSAGE SIGN FOUNDATIONS SEE SPECIAL PROVISIONS.

FOR OVERHEAD SIGN AND GANTRY SUPPORTS SEE SPECIAL PROVISIONS.

CLASS 'A' CONCRETE SHALL BE USED IN COLUMNS, FOOTINGS, CAPS AND GRADE BEAMS.

'DRILLED PIER' CONCRETE SHALL BE USED IN DRILLED PIERS WHERE REQUIRED.

DEFORMED STEEL BAR REINFORCMENT SHALL CONFORM TO AASHTO M31 GRADE 60.

CONTRACTOR SHALL VERIFY COLUMN HEIGHTS AND MINIMUM VERTICAL CLEARANCE PRIOR TO CONSTRUCTION. COLUMN HEIGHTS AND FOOTING ELEVATIONS MAY BE ADJUSTED WITH APPROVAL OF THE ENGINEER.

VERIFY THE LOCATION OF UNDERGROUND UTILITIES AND DRAINAGE STRUCTURES BEFORE DRILLING HOLES TO ENSURE SUFFICIENT CLEARANCE IS AVAILABLE.

COLUMN

STRUCTURE ID	STATION	LOCATION	OFFSET	NORTHING	EASTING	FOUNDATION TYPE *	COLUMN HEIGHT	ELEV. F	VAR 'FA' **	VAR 'FB' **	VAR 'FC' **	VAR 'FF' **	VAR 'FG' **	VAR 'FH' **	VAR 'FJ' **
B	527+50.00	-NC540-	103' RT.	744,997.8297	2,032,778.7141	B1	23'-1"	327.65	14'-0"	3'-6"	14	6"	2'-6"	4'-6"	6'-2"
E	655+00.00	-NC540-	97' LT.	757,591.6894	2,031,827.4831	B1	21'-6"	349.94	7'-0"	3'-6"	14	6"	2'-6"	4'-6"	6'-2"

TYPE B1 = SINGLE DRILLED SHAFT FOUNDATION

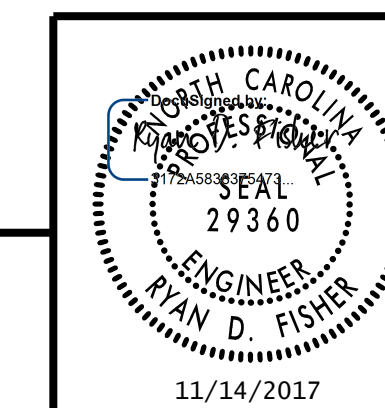
** SEE "FOUNDATION DETAILS SHEET"

PROJECT NO. U-5315 A & B

WAKE COUNTY

STATION: _____

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
OVERHEAD STRUCTURES
BUTTERFLY OVERHEAD
SIGN STRUCTURES
DATA TABLE



RK&K
RUMMEL, KLEPPER & KAHL, LLP
900 RIDGEFIELD DRIVE SUITE 350
RALEIGH, NC 27609-3960 (919) 878-9560
NC LICENSE NUMBER: F-0112

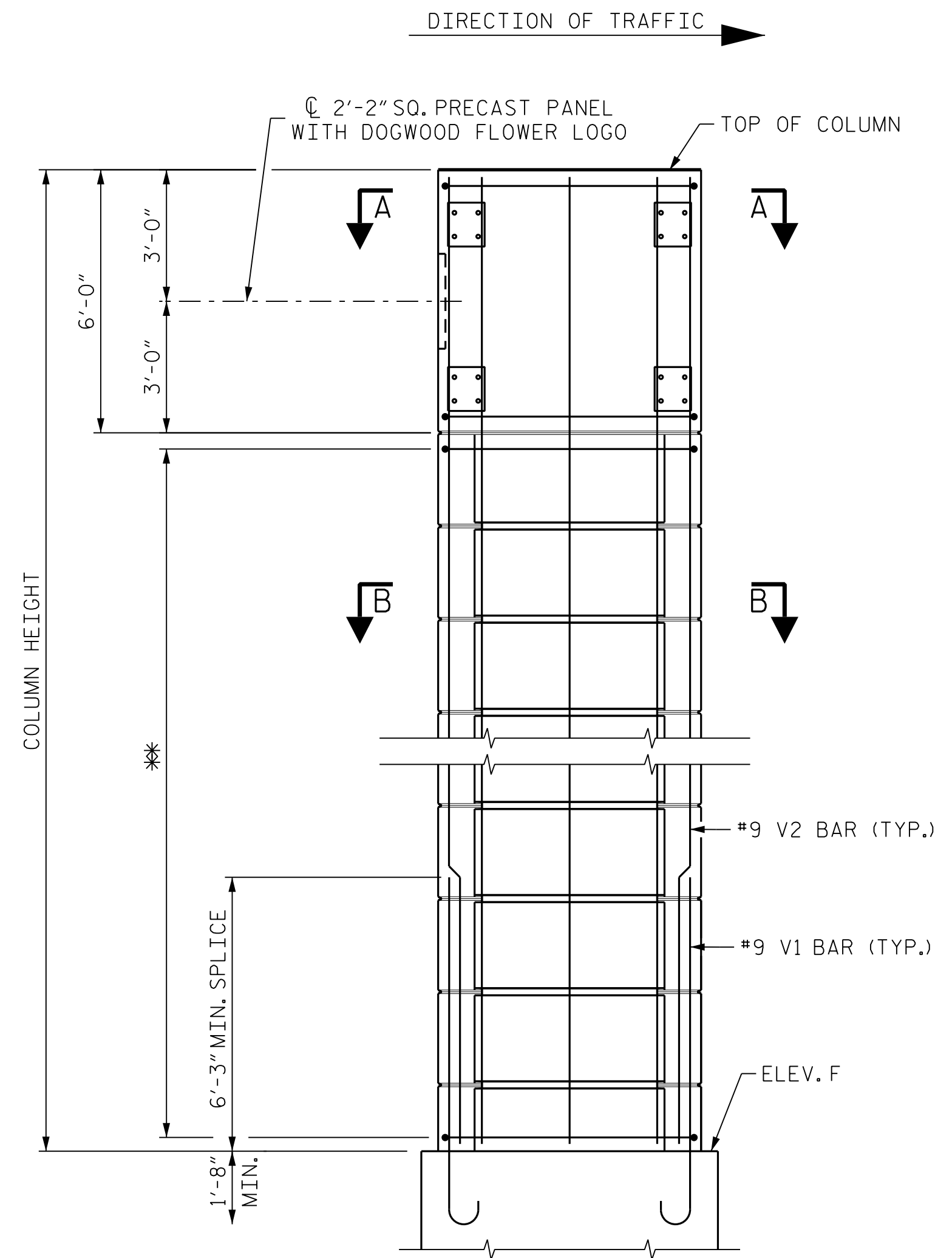
11/14/2017

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	SIGN-24
1			3			TOTAL SHEETS
2			4			12

**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

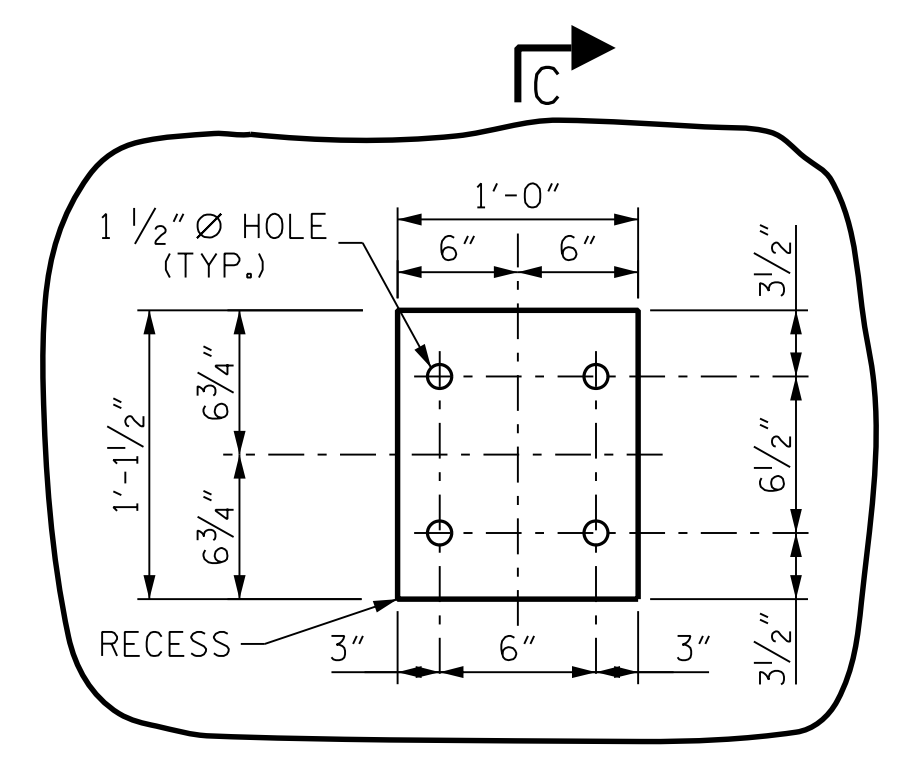
11/13/2017 R:\DGN\11050_SD_OHS_004.dgn

DRAWN BY : B. A. HAAG DATE : AUG 2017
CHECKED BY : R. D. FISHER DATE : AUG 2017
DESIGN ENGINEER OF RECORD : R. D. FISHER DATE : AUG 2017

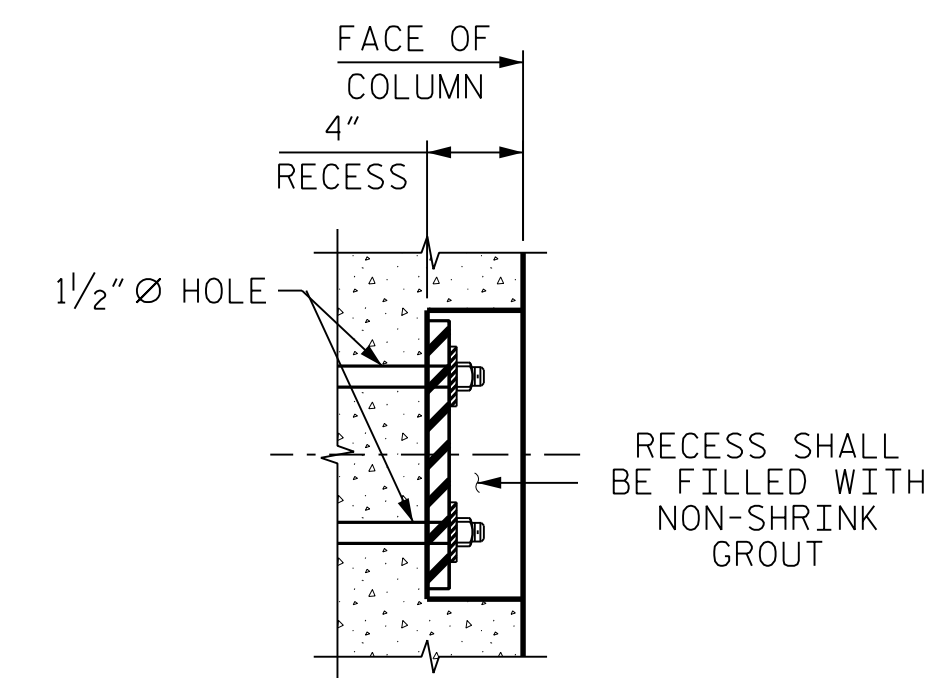


COLUMN ELEVATION

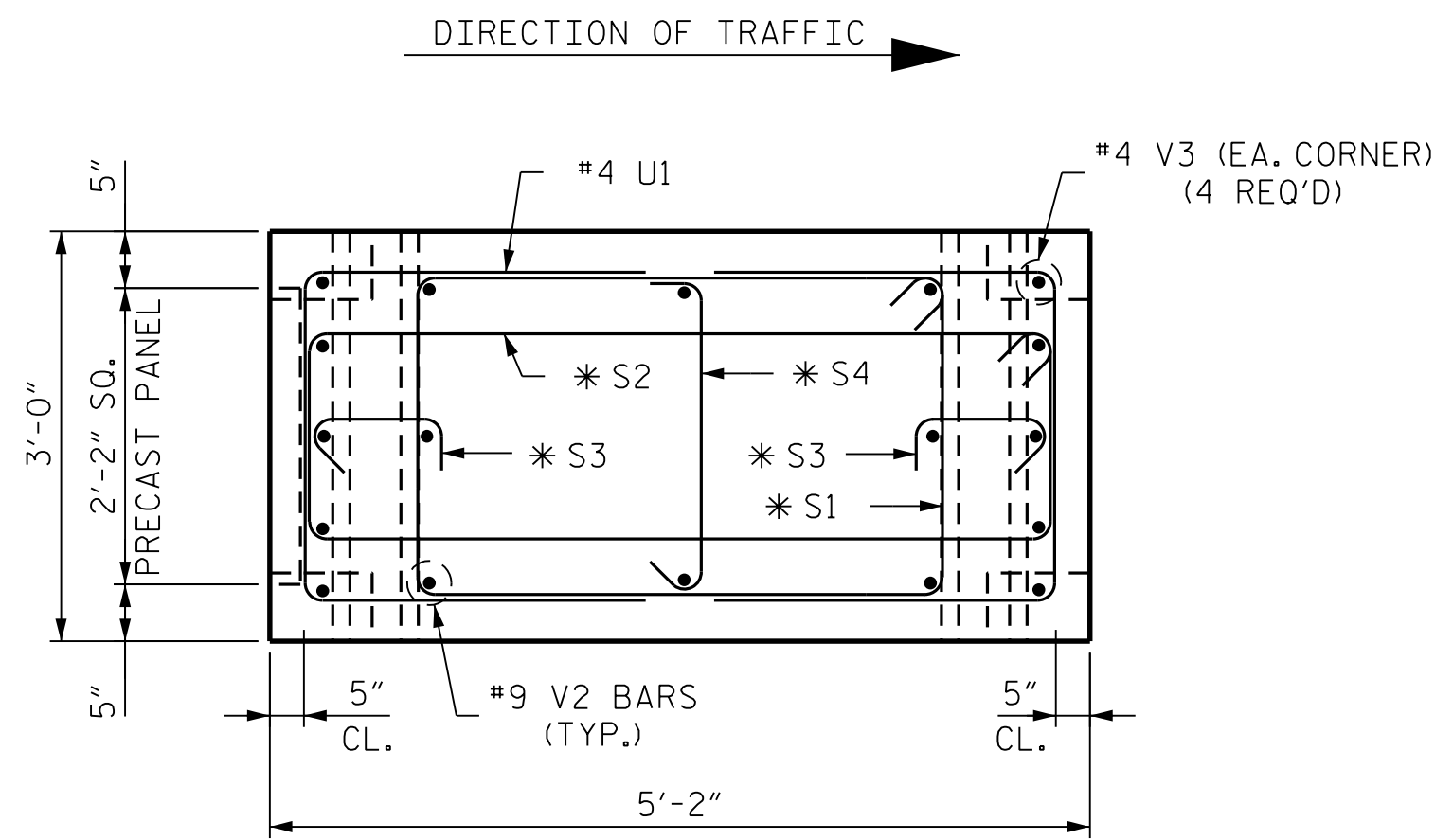
NOTE:
OMIT COLUMN CAP AND PRECAST PANEL WITH DOGWOOD FLOWER LOGO ON COLUMNS FOR BUTTERFLY OVERHEAD SIGNS.
**#4 "S" BARS @ 1'-0" CTS. - OVERHEAD SIGN AND BUTTERFLY



RECESS DETAIL

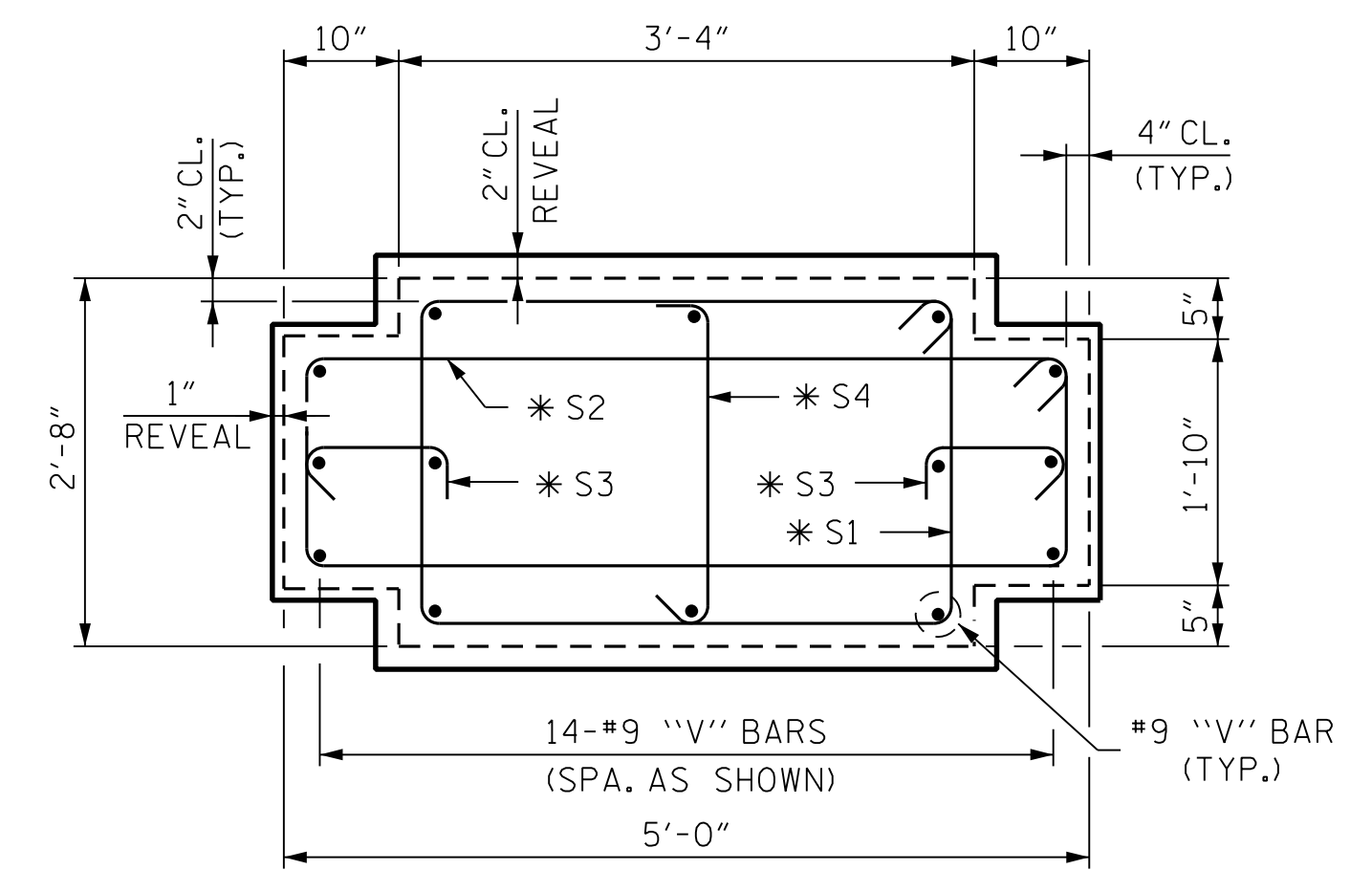


SECTION C-C

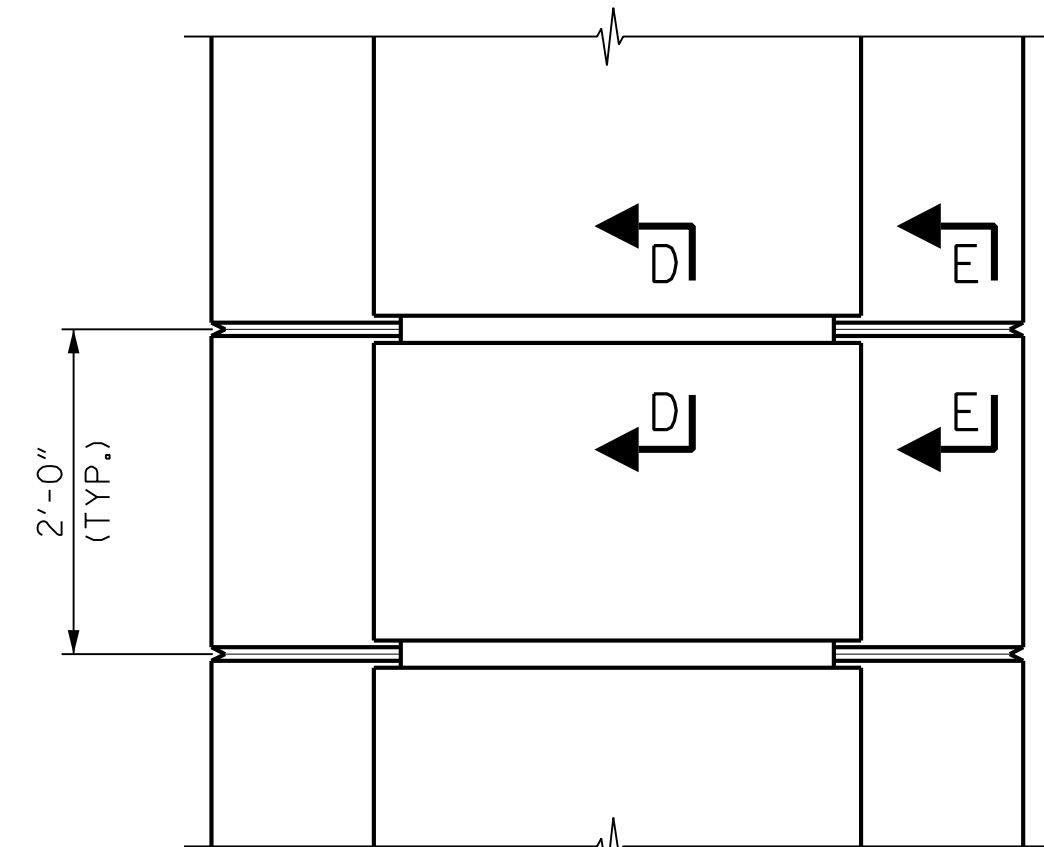


SECTION A-A

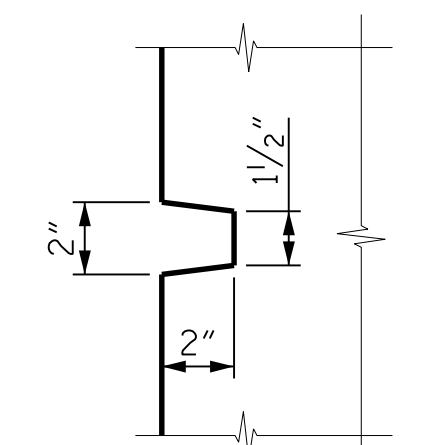
NOTE:
BAR SIZES INDICATED BY AN ASTERISK (*), INDICATES SIZE VARIES BY LOCATION AS FOLLOWS:
#4 "S" BARS - OVERHEAD SIGNS AND BUTTERFLY COLUMNS



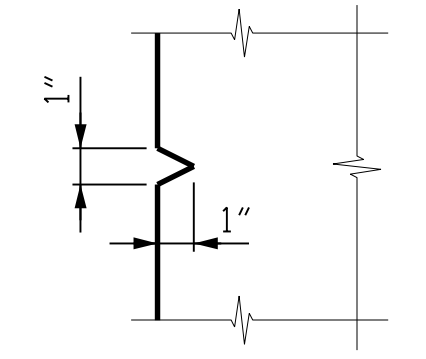
SECTION B-B



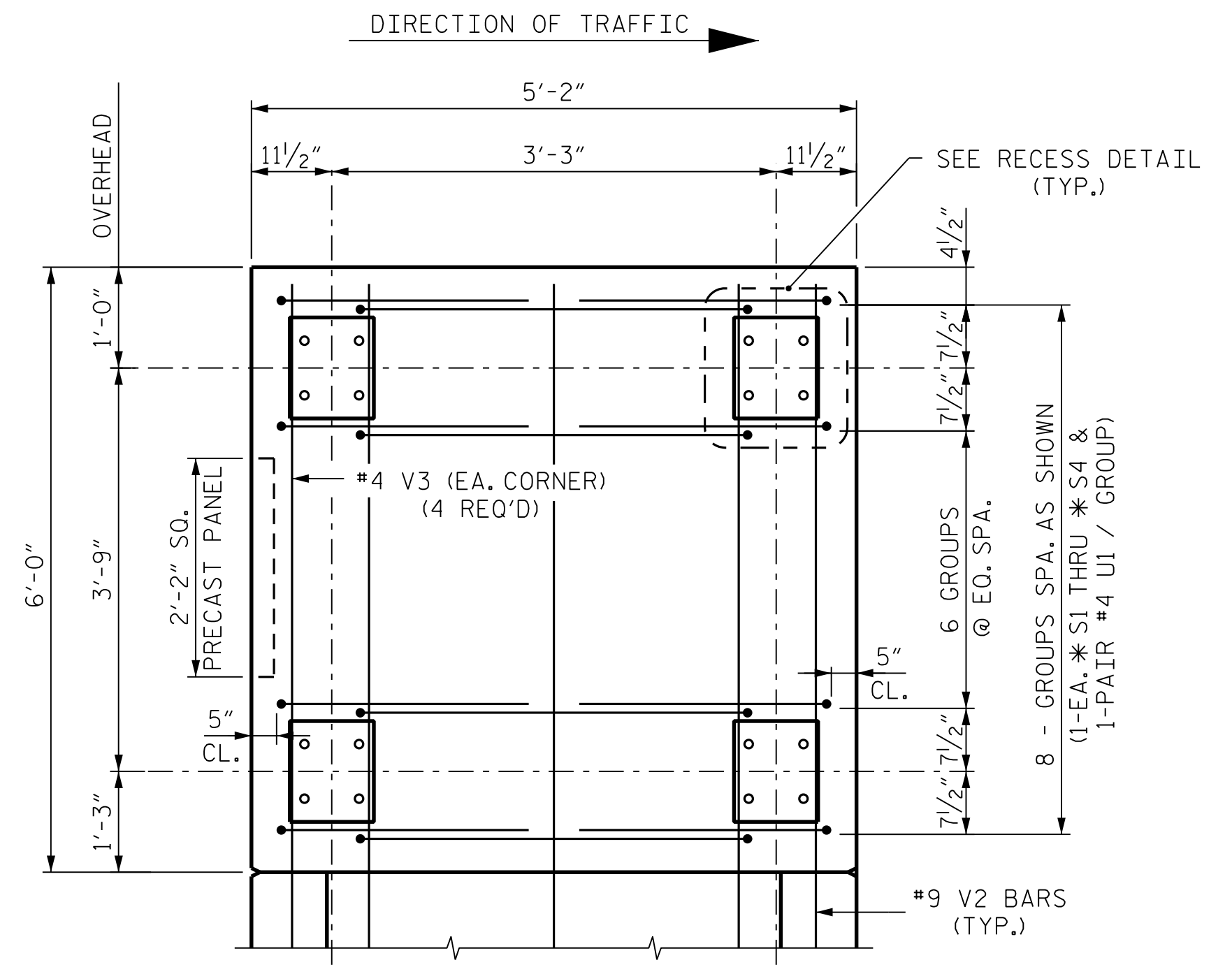
COLUMN RUSTICATION DETAILS



SECTION D-D (2" REVEAL)



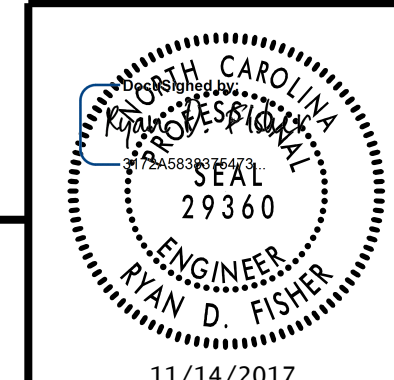
SECTION E-E (1" REVEAL)



CAP ELEVATION

PROJECT NO. U-5315 A & B
WAKE COUNTY
STATION: _____
SHEET 1 OF 2

STATE OF NORTH CAROLINA
DEPARTMENT OF TRANSPORTATION
RALEIGH
OVERHEAD STRUCTURES
COLUMN REINFORCING DETAILS-
OVERHEAD AND PEDESTAL



11/14/2017

RK&K
RUMMEL, KLEPPER & KAHL, LLP
900 RIDGEFIELD DRIVE SUITE 350
RALEIGH, NC 27609-3960 (919) 878-9560
NC LICENSE NUMBER: F-0112

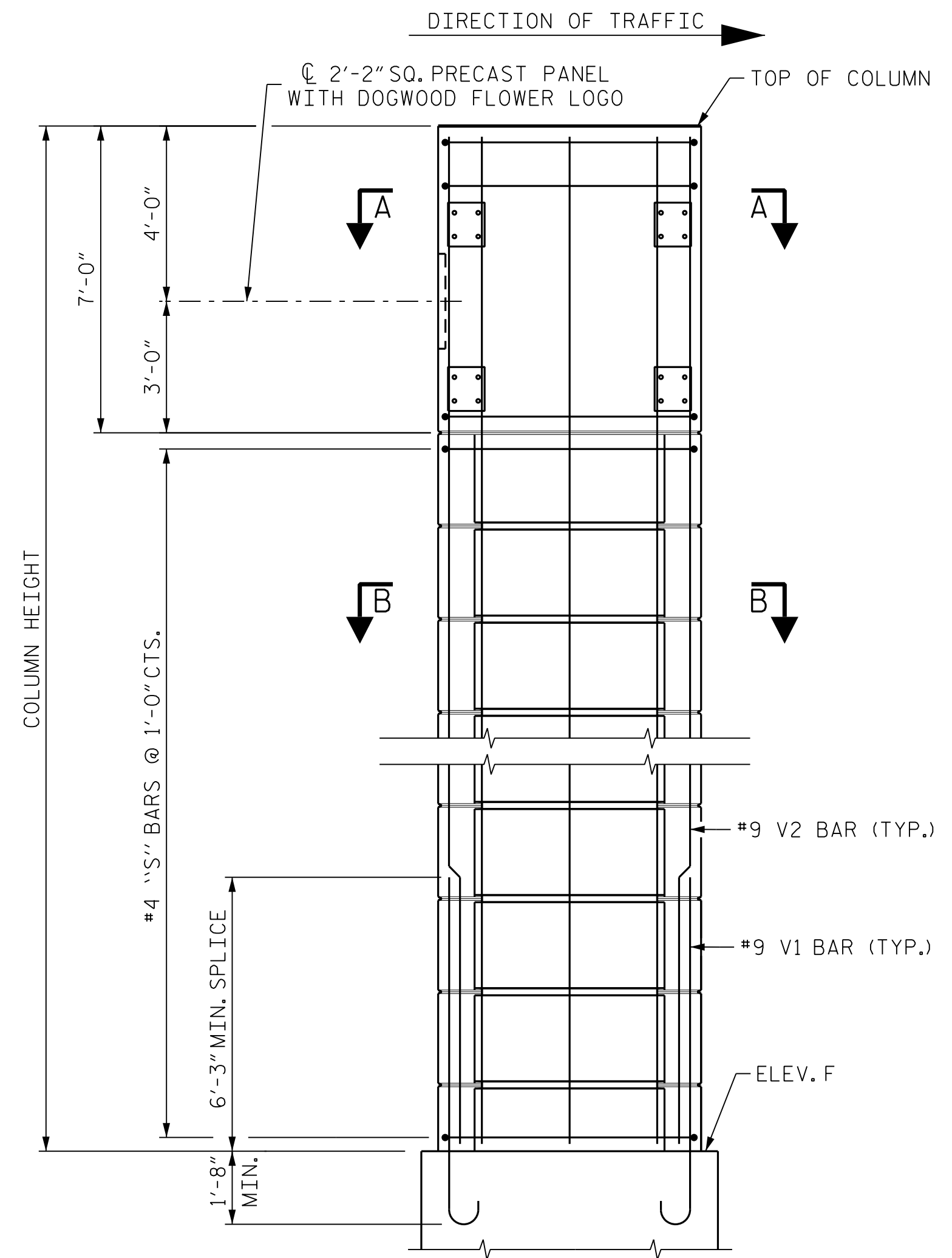
**DOCUMENT NOT CONSIDERED FINAL
UNLESS ALL SIGNATURES COMPLETED**

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

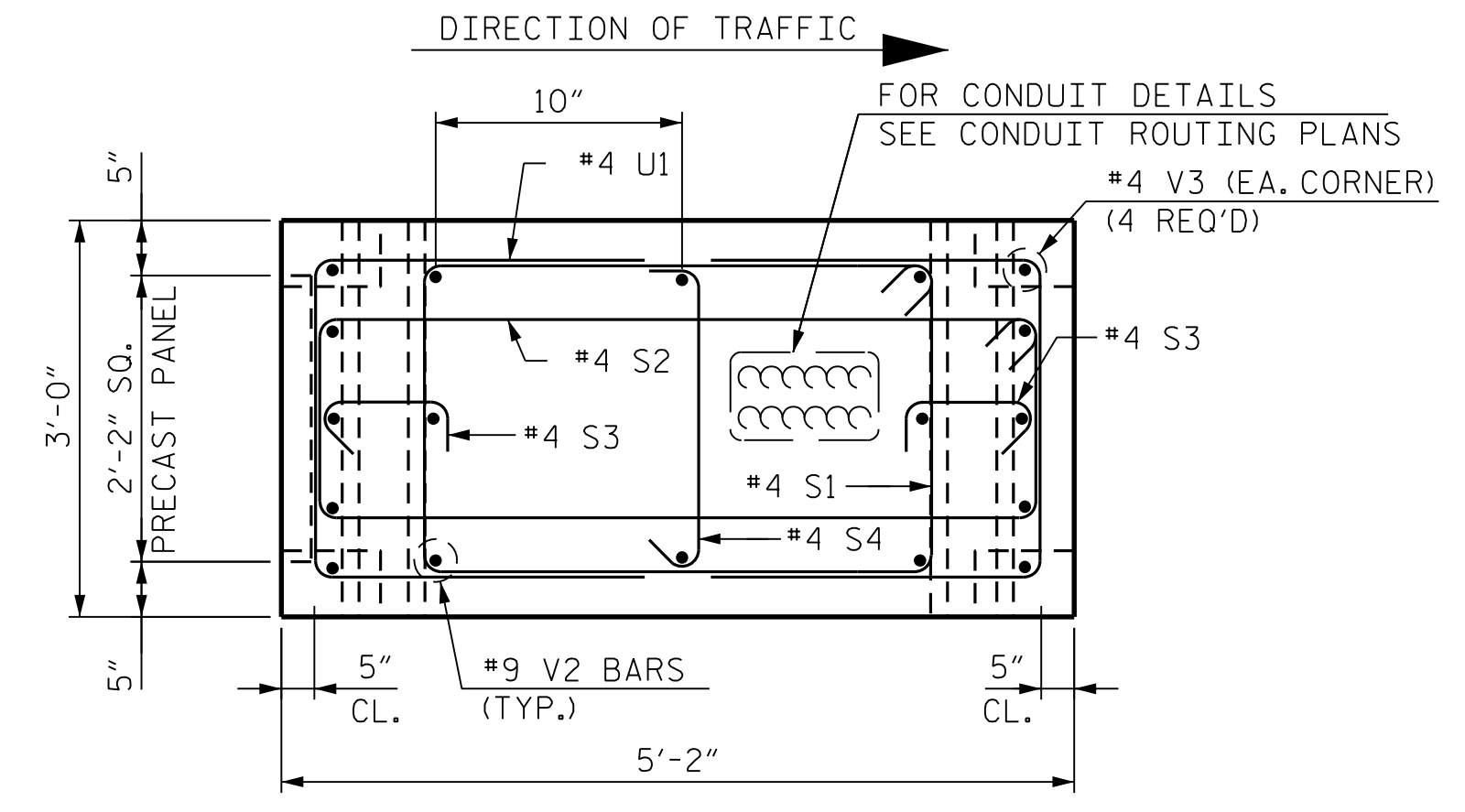
TOTAL SHEETS: 12

11/13/2017 R:\DGN\11050_SD_OHS_005.dgn

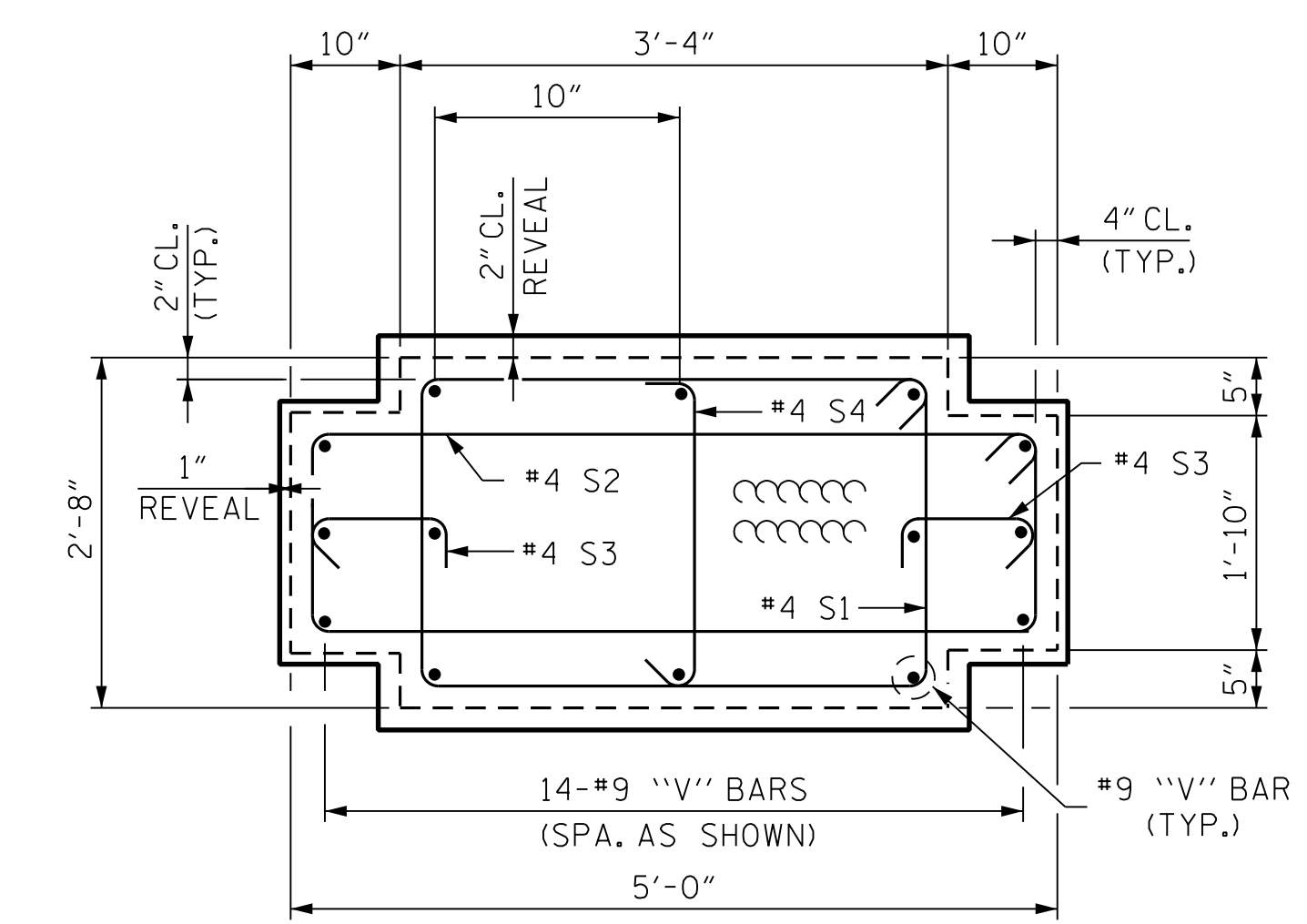
DRAWN BY : B. A. HAAG DATE : AUG 2017
CHECKED BY : R. D. FISHER DATE : AUG 2017
DESIGN ENGINEER OF RECORD : R. D. FISHER DATE : AUG 2017



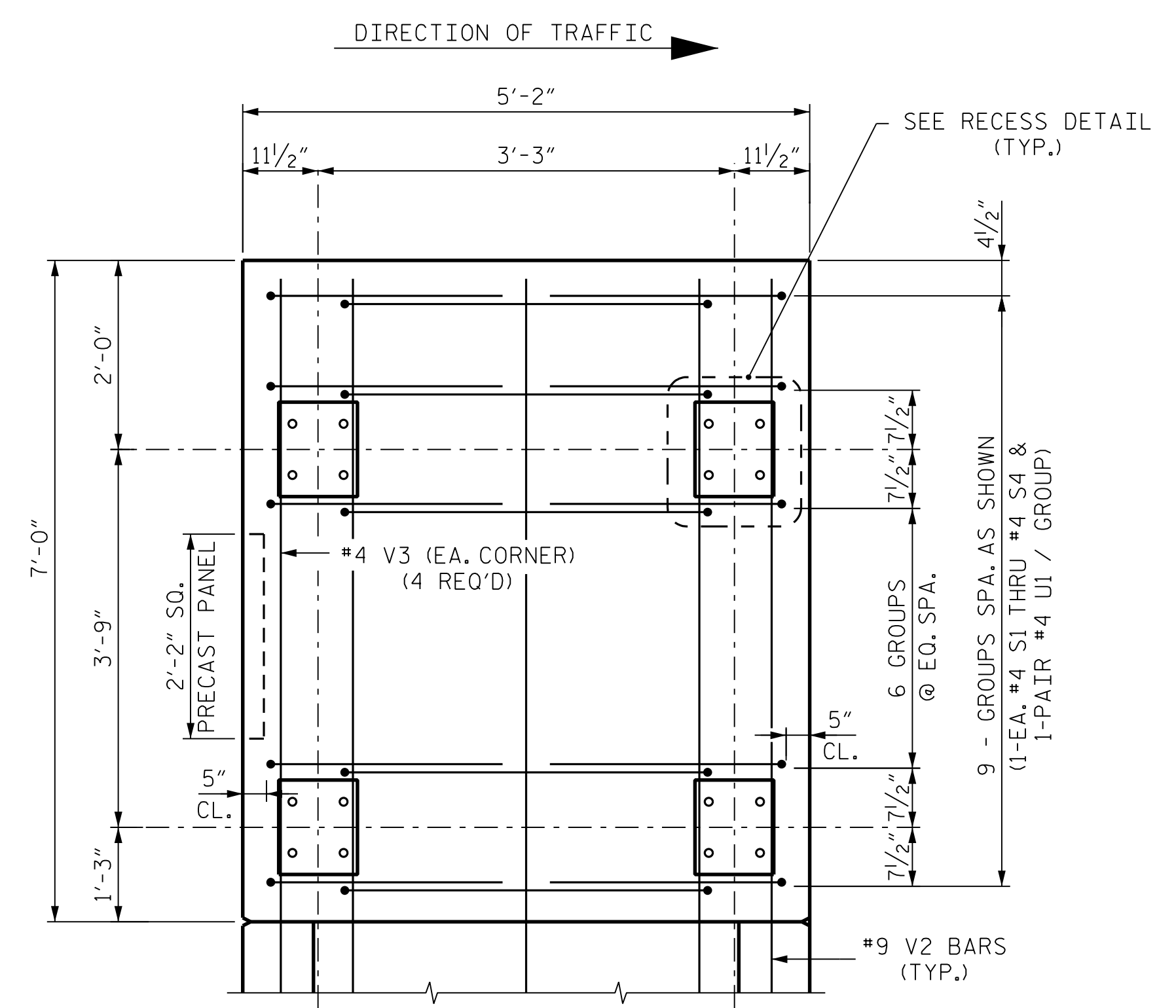
COLUMN ELEVATION



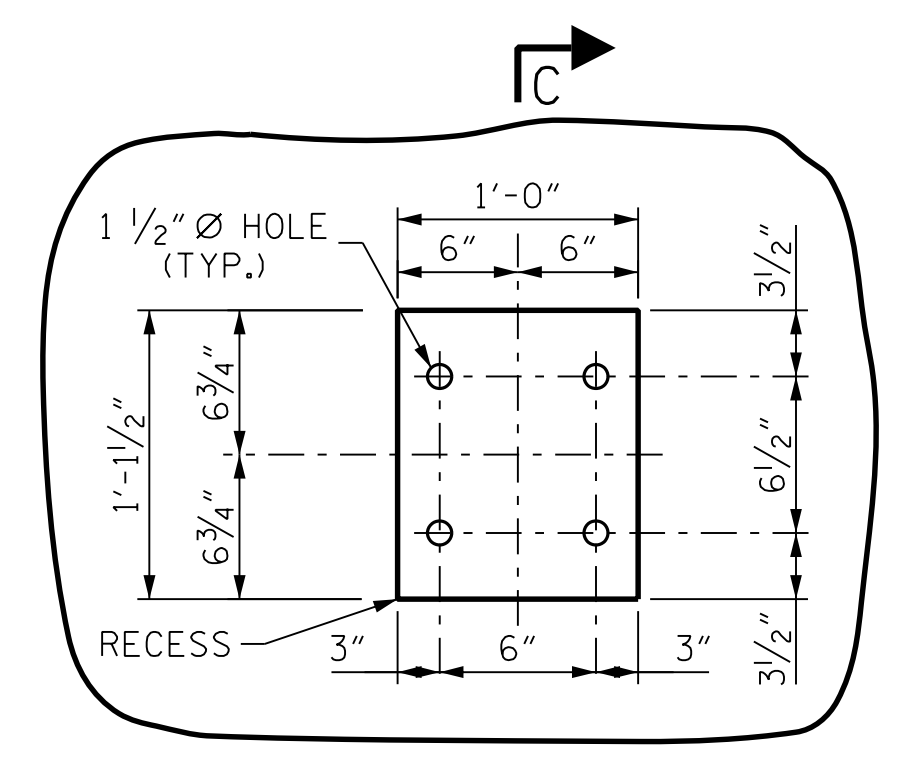
SECTION A-A



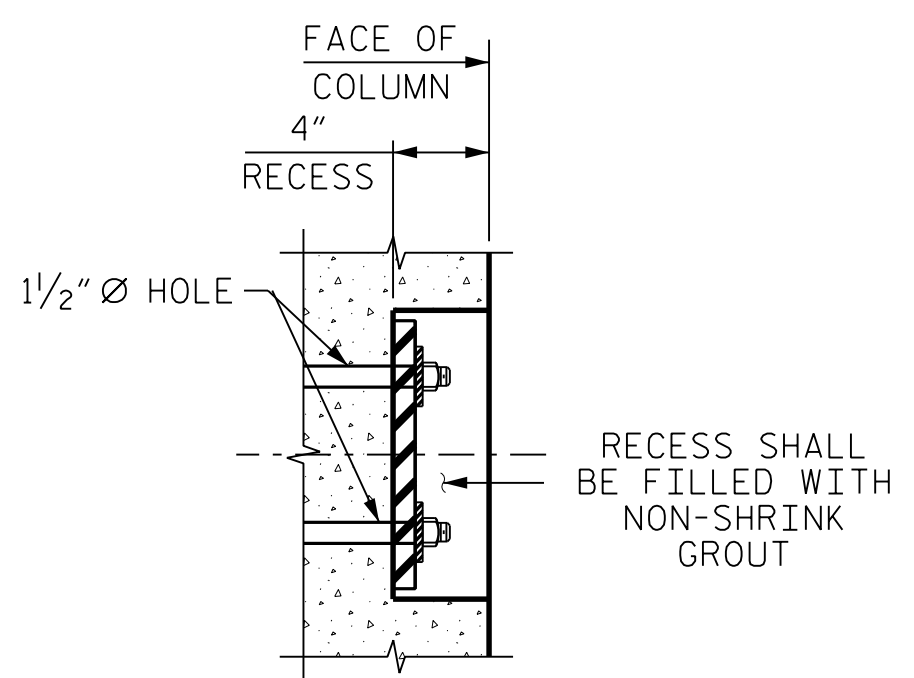
SECTION B-B



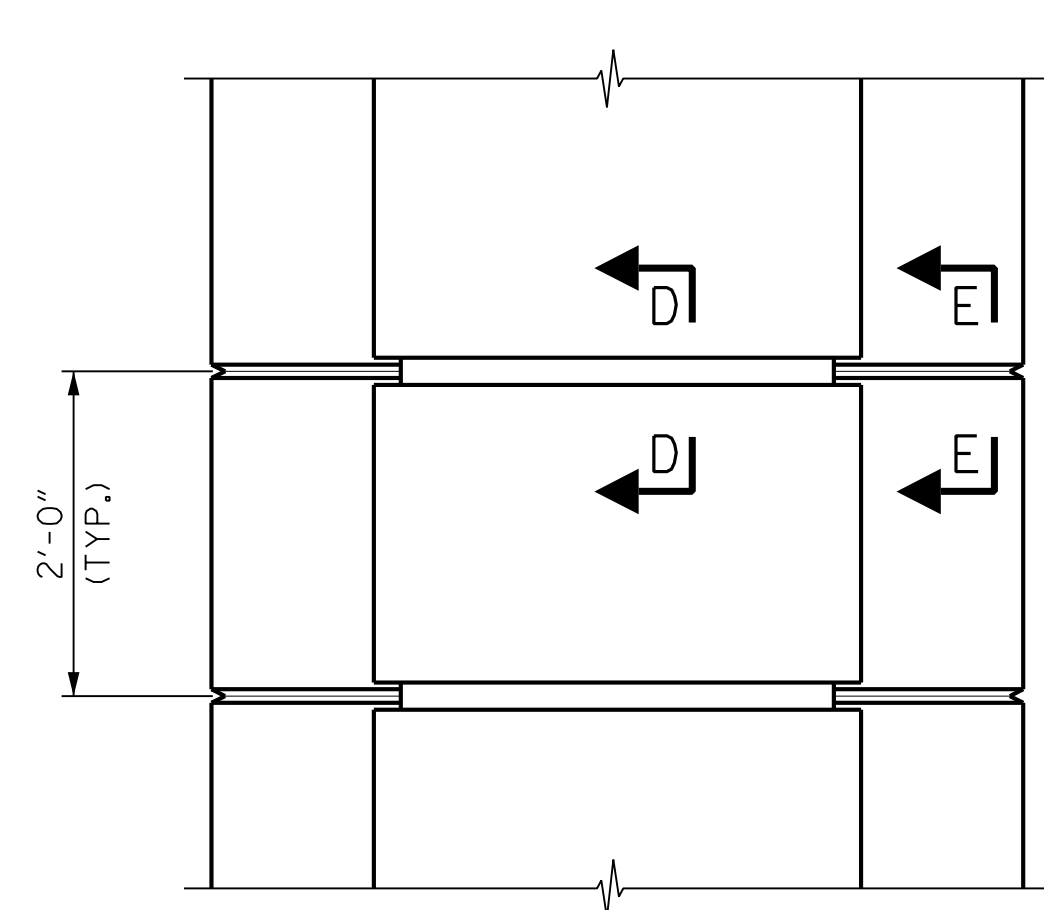
CAP ELEVATION



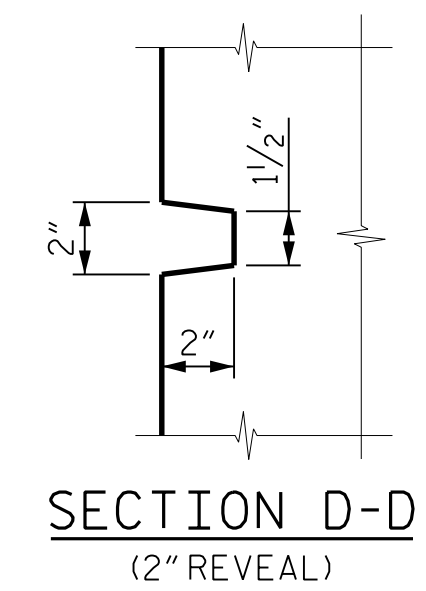
RECESS DETAIL



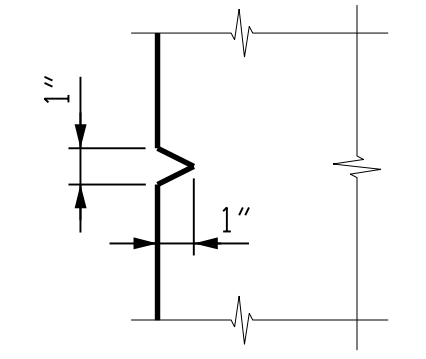
SECTION C-C



COLUMN RUSTICATION DETAILS



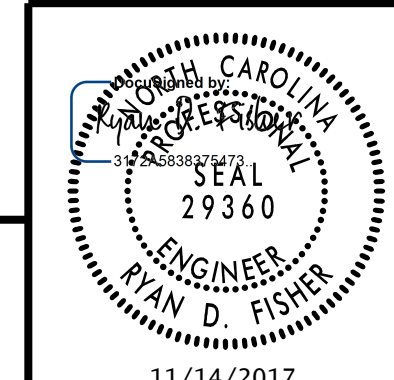
SECTION D-D (2" REVEAL)



SECTION E-E (1" REVEAL)

PROJECT NO. U-5315 A & B
WAKE COUNTY
 STATION: _____
 SHEET 2 OF 2

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
OVERHEAD STRUCTURES
 COLUMN REINFORCING DETAILS-
 GANTRY



RK&K
 RUMMEL, KLEPPER & KAHL, LLP
 900 RIDGEFIELD DRIVE SUITE 350
 RALEIGH, NC 27609-3960 (919) 878-9560
 NC LICENSE NUMBER: F-0112

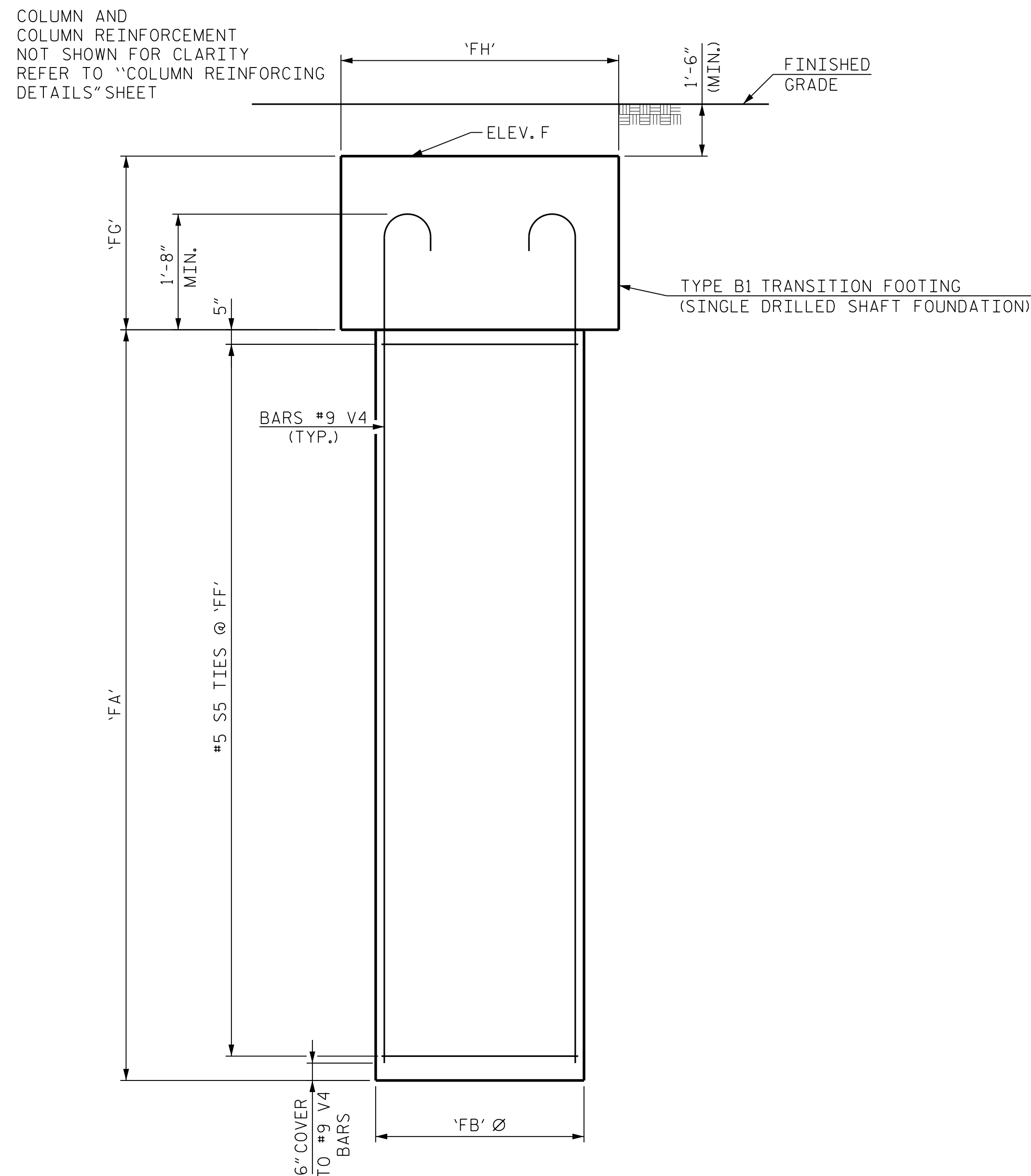
REVISIONS				SHEET NO.	
NO.	BY:	DATE:	NO.	BY:	DATE:
1			3		
2			4		

**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

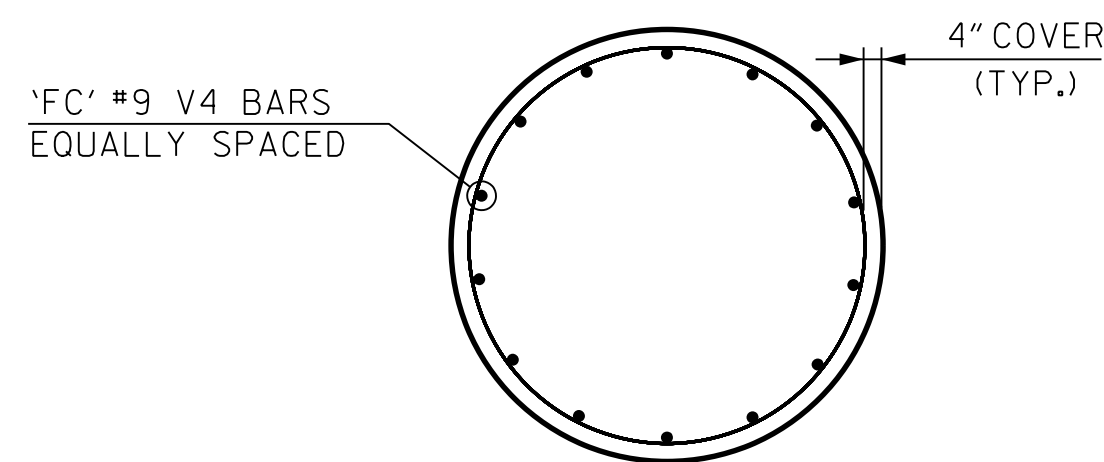
TOTAL SHEETS
12

11/13/2017 R:\DGN\11050_SD_OHS_006.dgn

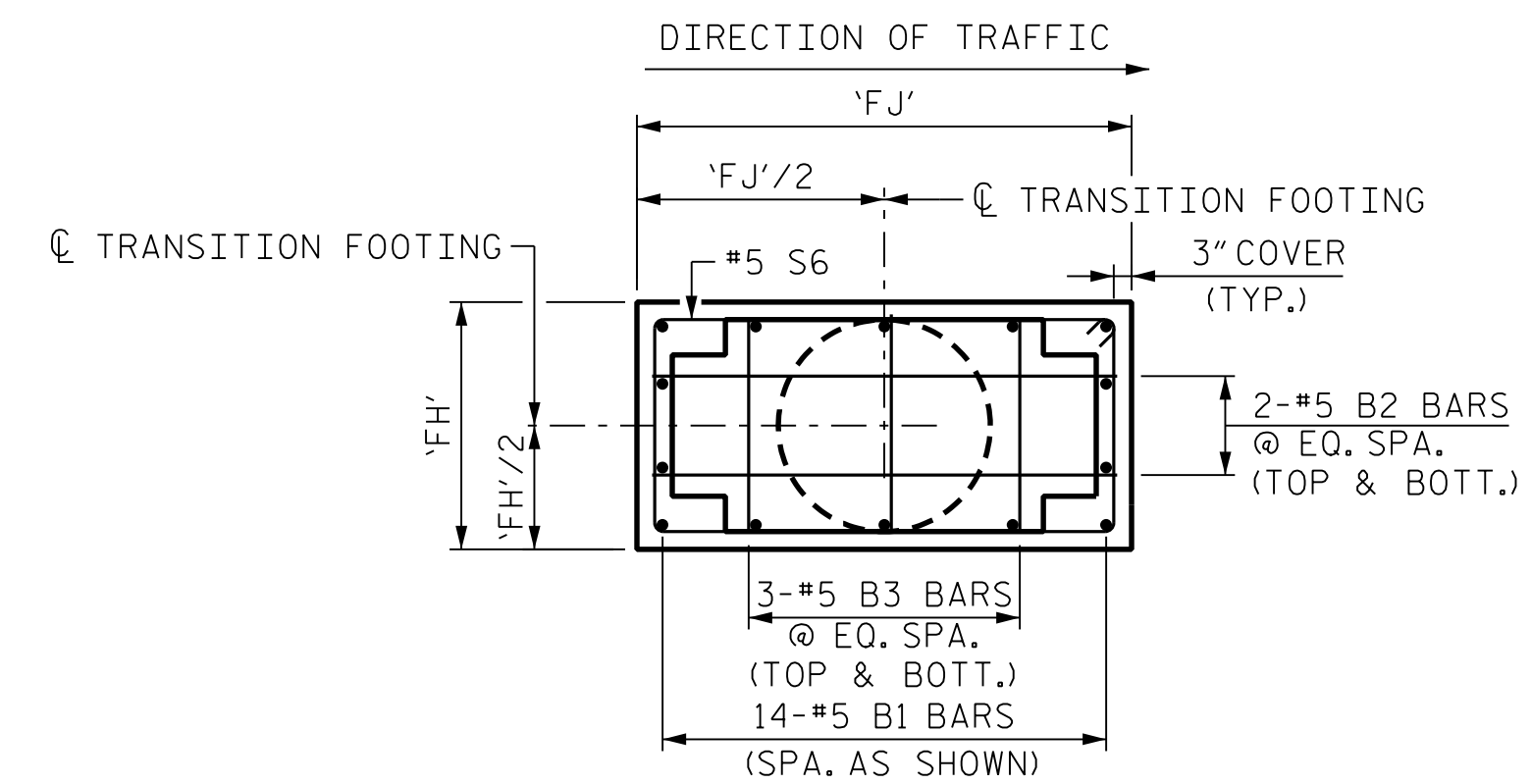
DRAWN BY : B. A. HAAG DATE : AUG 2017
 CHECKED BY : R. D. FISHER DATE : AUG 2017
 DESIGN ENGINEER OF RECORD : R. D. FISHER DATE : AUG 2017



DRILLED SHAFT ELEVATION

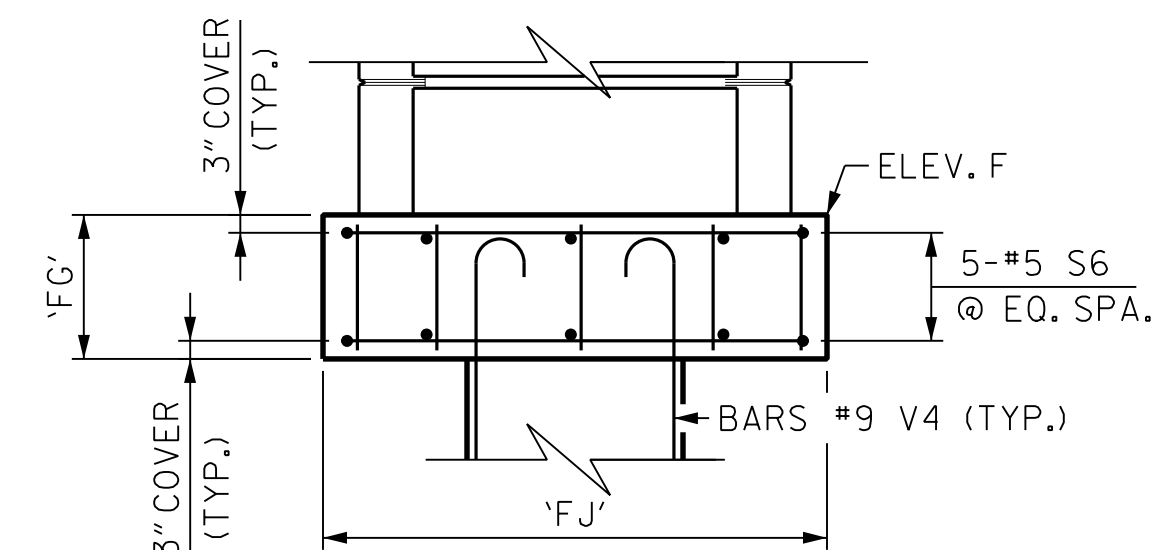


DRILLED SHAFT PLAN



TYPE B1 TRANSITION FOOTING PLAN

(SINGLE DRILLED SHAFT FOUNDATION)

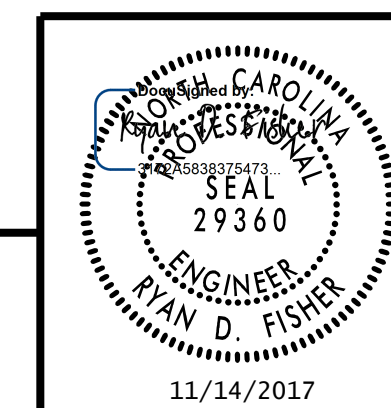


TYPE B1 TRANSITION FOOTING ELEVATION

(SINGLE DRILLED SHAFT FOUNDATION)

PROJECT NO. U-5315 A & B
WAKE COUNTY
 STATION: _____

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
OVERHEAD STRUCTURES
 FOUNDATION DETAILS



RK&K
 RUMMEL, KLEPPER & KAHL, LLP
 900 RIDGEFIELD DRIVE SUITE 350
 RALEIGH, NC 27609-3960 (919) 878-9560
 NC LICENSE NUMBER: F-0112

REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	SIGN-27
1			3			TOTAL SHEETS
2			4			12

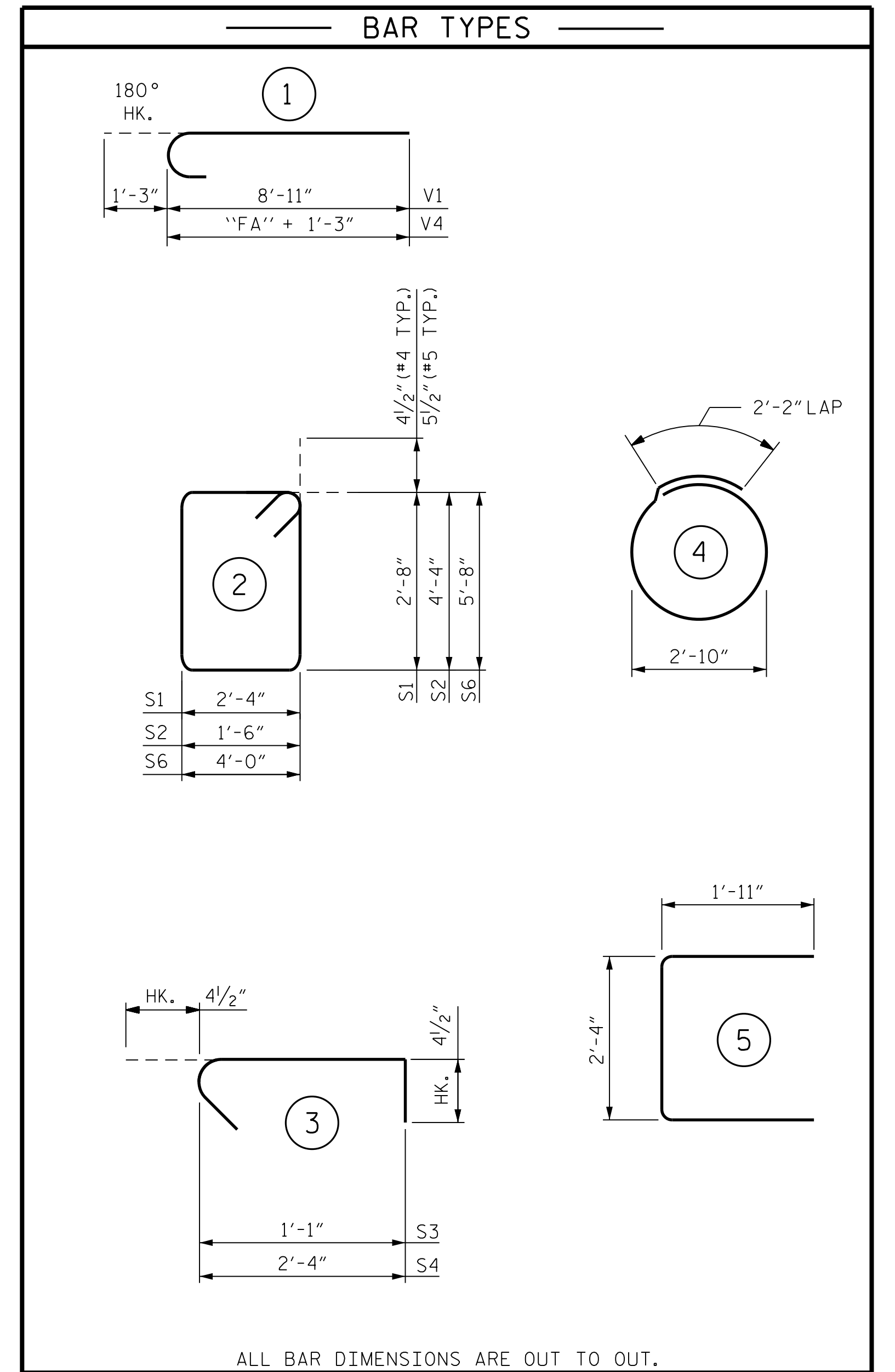
**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

11/13/2017 R:\DGN\11050_SD_OHS_007.dgn

DRAWN BY : B. A. HAAG DATE : AUG 2017
 CHECKED BY : R. D. FISHER DATE : AUG 2017
 DESIGN ENGINEER OF RECORD : R. D. FISHER DATE : AUG 2017

REINFORCING BAR SCHEDULE

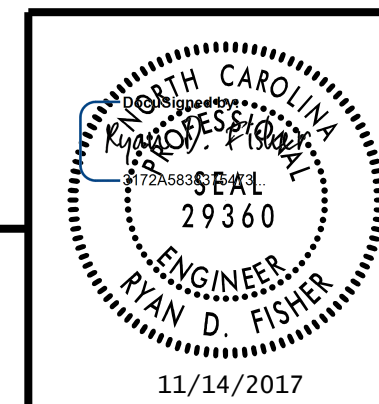
STRUCTURE ID "A" (LEFT COLUMN)						STRUCTURE ID "C" (LEFT COLUMN)						STRUCTURE ID "D" (LEFT COLUMN)						STRUCTURE ID "F" (LEFT COLUMN)					
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT	BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT	BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT	BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B1	14	#5	STR.	2'-0"	29	B1	14	#5	STR.	2'-0"	29	B1	14	#5	STR.	2'-0"	29	B1	14	#5	STR.	2'-0"	29
B2	4	#5	STR.	5'-8"	24	B2	4	#5	STR.	5'-8"	24	B2	4	#5	STR.	5'-8"	24	B2	4	#5	STR.	5'-8"	24
B3	6	#5	STR.	4'-0"	25	B3	6	#5	STR.	4'-0"	25	B3	6	#5	STR.	4'-0"	25	B3	6	#5	STR.	4'-0"	25
S1	29	#4	2	10'-9"	208	S1	29	#4	2	10'-9"	208	S1	29	#4	2	10'-9"	208	S1	31	#4	2	10'-9"	223
S2	29	#4	2	12'-5"	241	S2	29	#4	2	12'-5"	241	S2	29	#4	2	12'-5"	241	S2	31	#4	2	12'-5"	257
S3	58	#4	3	1'-10"	71	S3	58	#4	3	1'-10"	71	S3	58	#4	3	1'-10"	71	S3	62	#4	3	1'-10"	76
S4	29	#4	3	3'-1"	60	S4	29	#4	3	3'-1"	60	S4	29	#4	3	3'-1"	60	S4	31	#4	3	3'-1"	64
S5	15	#5	4	11'-1"	173	S5	15	#5	4	11'-1"	173	S5	33	#5	4	11'-1"	381	S5	25	#5	4	11'-1"	289
S6	5	#5	2	20'-3"	106	S6	5	#5	2	20'-3"	106	S6	5	#5	2	20'-3"	106	S6	5	#5	2	20'-3"	106
U1	16	#4	5	6'-2"	66	U1	16	#4	5	6'-2"	66	U1	16	#4	5	6'-2"	66	U1	16	#4	5	6'-2"	66
V1	14	#9	1	10'-2"	484	V1	14	#9	1	10'-2"	484	V1	14	#9	1	10'-2"	484	V1	14	#9	1	10'-2"	484
V2	14	#9	STR.	25'-4"	1,206	V2	14	#9	STR.	25'-4"	1,206	V2	14	#9	STR.	26'-1"	1,242	V2	14	#9	STR.	27'-10"	1,325
V3	4	#4	STR.	5'-8"	15	V3	4	#4	STR.	5'-8"	15	V3	4	#4	STR.	5'-8"	15	V3	4	#4	STR.	5'-8"	15
V4	14	#9	1	10'-6"	500	V4	14	#9	1	10'-6"	500	V4	14	#9	1	19'-6"	928	V4	14	#9	1	15'-6"	738
REINFORCING STEEL 3,208 LBS.						REINFORCING STEEL 3,208 LBS.						REINFORCING STEEL 3,880 LBS.						REINFORCING STEEL 3,721 LBS.					
STRUCTURE ID "A" (RIGHT COLUMN)						STRUCTURE ID "C" (RIGHT COLUMN)						STRUCTURE ID "D" (RIGHT COLUMN)						STRUCTURE ID "F" (RIGHT COLUMN)					
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT	BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT	BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT	BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B1	14	#5	STR.	2'-0"	29	B1	14	#5	STR.	2'-0"	29	B1	14	#5	STR.	2'-0"	29	B1	14	#5	STR.	2'-0"	29
B2	4	#5	STR.	5'-8"	24	B2	4	#5	STR.	5'-8"	24	B2	4	#5	STR.	5'-8"	24	B2	4	#5	STR.	5'-8"	24
B3	6	#5	STR.	4'-0"	25	B3	6	#5	STR.	4'-0"	25	B3	6	#5	STR.	4'-0"	25	B3	6	#5	STR.	4'-0"	25
S1	29	#4	2	10'-9"	208	S1	30	#4	2	10'-9"	215	S1	32	#4	2	10'-9"	230	S1	29	#4	2	10'-9"	208
S2	29	#4	2	12'-5"	241	S2	30	#4	2	12'-5"	249	S2	32	#4	2	12'-5"	265	S2	29	#4	2	12'-5"	241
S3	58	#4	3	1'-10"	71	S3	60	#4	3	1'-10"	73	S3	64	#4	3	1'-10"	78	S3	58	#4	3	1'-10"	71
S4	29	#4	3	3'-1"	60	S4	30	#4	3	3'-1"	62	S4	32	#4	3	3'-1"	66	S4	29	#4	3	3'-1"	60
S5	13	#5	4	11'-1"	150	S5	15	#5	4	11'-1"	173	S5	21	#5	4	11'-1"	243	S5	29	#5	4	11'-1"	335
S6	5	#5	2	20'-3"	106	S6	5	#5	2	20'-3"	106	S6	5	#5	2	20'-3"	106	S6	5	#5	2	20'-3"	106
U1	16	#4	5	6'-2"	66	U1	16	#4	5	6'-2"	66	U1	16	#4	5	6'-2"	66	U1	16	#4	5	6'-2"	66
V1	14	#9	1	10'-2"	484	V1	14	#9	1	10'-2"	484	V1	14	#9	1	10'-2"	484	V1	14	#9	1	10'-2"	484
V2	14	#9	STR.	25'-11"	1,234	V2	14	#9	STR.	26'-6"	1,261	V2	14	#9	STR.	29'-0"	1,380	V2	14	#9	STR.	26'-1"	1,242
V3	4	#4	STR.	5'-8"	15	V3	4	#4	STR.	5'-8"	15	V3	4	#4	STR.	5'-8"	15	V3	4	#4	STR.	5'-8"	15
V4	14	#9	1	9'-6"	452	V4	14	#9	1	10'-6"	500	V4	14	#9	1	13'-6"	643	V4	14	#9	1	17'-6"	833
REINFORCING STEEL 3,165 LBS.						REINFORCING STEEL 3,282 LBS.						REINFORCING STEEL 3,654 LBS.						REINFORCING STEEL 3,739 LBS.					



PROJECT NO. U-5315 A & B
WAKE COUNTY
 STATION: _____

SHEET 1 OF 2

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
OVERHEAD STRUCTURES
 BILL OF MATERIAL
 OVERHEAD SIGN STRUCTURES



RK&K
 RUMMEL, KLEPPER & KAHL, LLP
 900 RIDGEFIELD DRIVE SUITE 350
 RALEIGH, NC 27609-3960 (919) 878-9560
 NC LICENSE NUMBER: F-0112

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

TOTAL SHEETS
12

**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

11/13/2017 R:\DGN\11050_SD_OHS_008.dgn

DRAWN BY : B. A. HAAG DATE : AUG 2017
 CHECKED BY : R. D. FISHER DATE : AUG 2017
 DESIGN ENGINEER OF RECORD : R. D. FISHER DATE : AUG 2017

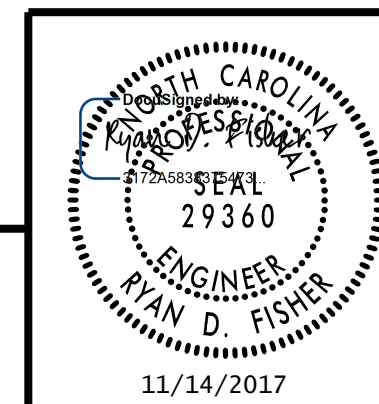
CONCRETE QUANTITIES					
STRUCTURE ID "A" (LEFT COLUMN)			STRUCTURE ID "D" (LEFT COLUMN)		
DRILLED PIER CONCRETE			DRILLED PIER CONCRETE		
POUR #1 - DRILLED PIER	CU. YDS.	2.9	POUR #1 - DRILLED PIER	CU. YDS.	6.1
CLASS "A" CONCRETE BREAKDOWN			CLASS "A" CONCRETE BREAKDOWN		
POUR #2 - FOOTING	CU. YDS.	2.6	POUR #2 - FOOTING	CU. YDS.	2.6
POUR #3 - COLUMN	CU. YDS.	13.6	POUR #3 - COLUMN	CU. YDS.	14.0
TOTAL CLASS "A" CONCRETE	CU. YDS.	16.2	TOTAL CLASS "A" CONCRETE	CU. YDS.	16.6
STRUCTURE ID "A" (RIGHT COLUMN)			STRUCTURE ID "D" (RIGHT COLUMN)		
DRILLED PIER CONCRETE			DRILLED PIER CONCRETE		
POUR #1 - DRILLED PIER	CU. YDS.	2.5	POUR #1 - DRILLED PIER	CU. YDS.	3.9
CLASS "A" CONCRETE BREAKDOWN			CLASS "A" CONCRETE BREAKDOWN		
POUR #2 - FOOTING	CU. YDS.	2.6	POUR #2 - FOOTING	CU. YDS.	2.6
POUR #3 - COLUMN	CU. YDS.	13.9	POUR #3 - COLUMN	CU. YDS.	15.5
TOTAL CLASS "A" CONCRETE	CU. YDS.	16.5	TOTAL CLASS "A" CONCRETE	CU. YDS.	18.1
STRUCTURE ID "C" (LEFT COLUMN)			STRUCTURE ID "F" (LEFT COLUMN)		
DRILLED PIER CONCRETE			DRILLED PIER CONCRETE		
POUR #1 - DRILLED PIER	CU. YDS.	2.9	POUR #1 - DRILLED PIER	CU. YDS.	4.6
CLASS "A" CONCRETE BREAKDOWN			CLASS "A" CONCRETE BREAKDOWN		
POUR #2 - FOOTING	CU. YDS.	2.6	POUR #2 - FOOTING	CU. YDS.	2.6
POUR #3 - COLUMN	CU. YDS.	13.6	POUR #3 - COLUMN	CU. YDS.	14.9
TOTAL CLASS "A" CONCRETE	CU. YDS.	16.2	TOTAL CLASS "A" CONCRETE	CU. YDS.	17.5
STRUCTURE ID "C" (RIGHT COLUMN)			STRUCTURE ID "F" (RIGHT COLUMN)		
DRILLED PIER CONCRETE			DRILLED PIER CONCRETE		
POUR #1 - DRILLED PIER	CU. YDS.	2.9	POUR #1 - DRILLED PIER	CU. YDS.	5.3
CLASS "A" CONCRETE BREAKDOWN			CLASS "A" CONCRETE BREAKDOWN		
POUR #2 - FOOTING	CU. YDS.	2.6	POUR #2 - FOOTING	CU. YDS.	2.6
POUR #3 - COLUMN	CU. YDS.	14.2	POUR #3 - COLUMN	CU. YDS.	14.0
TOTAL CLASS "A" CONCRETE	CU. YDS.	16.8	TOTAL CLASS "A" CONCRETE	CU. YDS.	16.6

PROJECT NO. U-5315 A & B
WAKE COUNTY

STATION: _____

SHEET 2 OF 2

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
OVERHEAD STRUCTURES
 BILL OF MATERIAL
 OVERHEAD SIGN STRUCTURES



RK&K
 RUMMEL, KLEPPER & KAHL, LLP
 900 RIDGEFIELD DRIVE SUITE 350
 RALEIGH, NC 27609-3960 (919) 878-9560
 NC LICENSE NUMBER: F-0112

11/14/2017

REVISIONS				SHEET NO.		
NO.	BY:	DATE:	NO.	BY:	DATE:	TOTAL SHEETS
1			3			12
2			4			

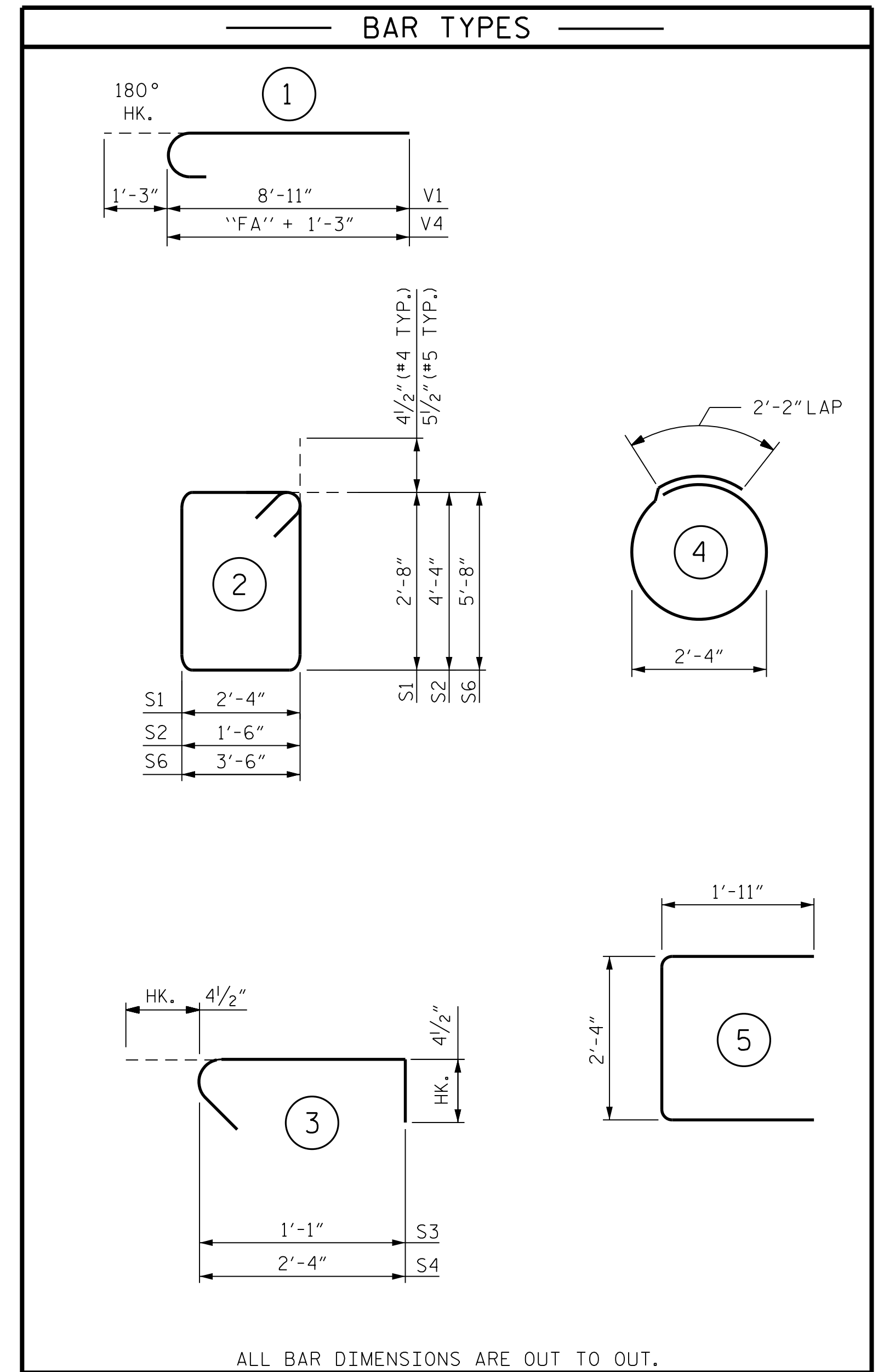
**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

11/13/2017 R:\DGN\11050_SD_OHS_009.dgn

DRAWN BY : B. A. HAAG DATE : AUG 2017
 CHECKED BY : R. D. FISHER DATE : AUG 2017
 DESIGN ENGINEER OF RECORD : R. D. FISHER DATE : AUG 2017

REINFORCING BAR SCHEDULE

STRUCTURE ID T15 IN (LEFT COLUMN)						STRUCTURE ID T15 OUT (LEFT COLUMN)						STRUCTURE ID T16 IN (LEFT COLUMN)						STRUCTURE ID T16 OUT (LEFT COLUMN)					
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT	BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT	BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT	BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B1	14	#5	STR.	2'-0"	29	B1	14	#5	STR.	2'-0"	29	B1	14	#5	STR.	2'-0"	29	B1	14	#5	STR.	2'-0"	29
B2	4	#5	STR.	5'-8"	24	B2	4	#5	STR.	5'-8"	24	B2	4	#5	STR.	5'-8"	24	B2	4	#5	STR.	5'-8"	24
B3	6	#5	STR.	3'-6"	22	B3	6	#5	STR.	3'-6"	22	B3	6	#5	STR.	3'-6"	22	B3	6	#5	STR.	3'-6"	22
S1	29	#4	2	10'-9"	208	S1	29	#4	2	10'-9"	208	S1	30	#4	2	10'-9"	215	S1	30	#4	2	10'-9"	215
S2	29	#4	2	12'-5"	241	S2	29	#4	2	12'-5"	241	S2	30	#4	2	12'-5"	249	S2	30	#4	2	12'-5"	249
S3	58	#4	3	1'-10"	71	S3	58	#4	3	1'-10"	71	S3	60	#4	3	1'-10"	73	S3	60	#4	3	1'-10"	73
S4	29	#4	3	3'-1"	60	S4	29	#4	3	3'-1"	60	S4	30	#4	3	3'-1"	62	S4	30	#4	3	3'-1"	62
S5	25	#5	4	9'-6"	248	S5	25	#5	4	9'-6"	248	S5	13	#5	4	9'-6"	129	S5	13	#5	4	9'-6"	129
S6	5	#5	2	19'-3"	100	S6	5	#5	2	19'-3"	100	S6	5	#5	2	19'-3"	100	S6	5	#5	2	19'-3"	100
U1	18	#4	5	6'-2"	74	U1	18	#4	5	6'-2"	74	U1	18	#4	5	6'-2"	74	U1	18	#4	5	6'-2"	74
V1	14	#9	1	10'-2"	484	V1	14	#9	1	10'-2"	484	V1	14	#9	1	10'-2"	484	V1	14	#9	1	10'-2"	484
V2	14	#9	STR.	25'-11"	1,234	V2	14	#9	STR.	26'-1"	1,242	V2	14	#9	STR.	26'-7"	1,265	V2	14	#9	STR.	26'-7"	1,265
V3	4	#4	STR.	6'-8"	18	V3	4	#4	STR.	6'-8"	18	V3	4	#4	STR.	6'-8"	18	V3	4	#4	STR.	6'-8"	18
V4	11	#9	1	15'-6"	580	V4	11	#9	1	15'-6"	580	V4	11	#9	1	9'-6"	355	V4	11	#9	1	9'-6"	355
REINFORCING STEEL 3,393 LBS.						REINFORCING STEEL 3,401 LBS.						REINFORCING STEEL 3,099 LBS.						REINFORCING STEEL 3,099 LBS.					
STRUCTURE ID T15 IN (RIGHT COLUMN)						STRUCTURE ID T15 OUT (RIGHT COLUMN)						STRUCTURE ID T16 IN (RIGHT COLUMN)						STRUCTURE ID T16 OUT (RIGHT COLUMN)					
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT	BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT	BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT	BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B1	14	#5	STR.	2'-0"	29	B1	14	#5	STR.	2'-0"	29	B1	14	#5	STR.	2'-0"	29	B1	14	#5	STR.	2'-0"	29
B2	4	#5	STR.	5'-8"	24	B2	4	#5	STR.	5'-8"	24	B2	4	#5	STR.	5'-8"	24	B2	4	#5	STR.	5'-8"	24
B3	6	#5	STR.	3'-6"	22	B3	6	#5	STR.	3'-6"	22	B3	6	#5	STR.	3'-6"	22	B3	6	#5	STR.	3'-6"	22
S1	30	#4	2	10'-9"	215	S1	30	#4	2	10'-9"	215	S1	30	#4	2	10'-9"	215	S1	30	#4	2	10'-9"	215
S2	30	#4	2	12'-5"	249	S2	30	#4	2	12'-5"	249	S2	30	#4	2	12'-5"	249	S2	30	#4	2	12'-5"	249
S3	60	#4	3	1'-10"	73	S3	60	#4	3	1'-10"	73	S3	60	#4	3	1'-10"	73	S3	60	#4	3	1'-10"	73
S4	30	#4	3	3'-1"	62	S4	30	#4	3	3'-1"	62	S4	30	#4	3	3'-1"	62	S4	30	#4	3	3'-1"	62
S5	25	#5	4	9'-6"	248	S5	25	#5	4	9'-6"	248	S5	19	#5	4	9'-6"	188	S5	19	#5	4	9'-6"	188
S6	5	#5	2	19'-3"	100	S6	5	#5	2	19'-3"	100	S6	5	#5	2	19'-3"	100	S6	5	#5	2	19'-3"	100
U1	18	#4	5	6'-2"	74	U1	18	#4	5	6'-2"	74	U1	18	#4	5	6'-2"	74	U1	18	#4	5	6'-2"	74
V1	14	#9	1	10'-2"	484	V1	14	#9	1	10'-2"	484	V1	14	#9	1	10'-2"	484	V1	14	#9	1	10'-2"	484
V2	14	#9	STR.	26'-11"	1,281	V2	14	#9	STR.	26'-10"	1,277	V2	14	#9	STR.	26'-8"	1,269	V2	14	#9	STR.	27'-0"	1,285
V3	4	#4	STR.	6'-8"	18	V3	4	#4	STR.	6'-8"	18	V3	4	#4	STR.	6'-8"	18	V3	4	#4	STR.	6'-8"	18
V4	11	#9	1	15'-6"	580	V4	11	#9	1	15'-6"	580	V4	11	#9	1	12'-6"	468	V4	11	#9	1	12'-6"	468
REINFORCING STEEL 3,459 LBS.						REINFORCING STEEL 3,455 LBS.						REINFORCING STEEL 3,275 LBS.						REINFORCING STEEL 3,291 LBS.					

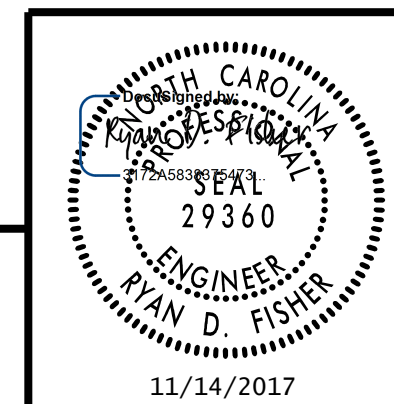


PROJECT NO. U-5315 A & B
WAKE COUNTY

STATION: _____

SHEET 1 OF 2

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
OVERHEAD STRUCTURES
 BILL OF MATERIAL
 OVERHEAD GANTRY STRUCTURES



RK&K
 RUMMEL, KLEPPER & KAHL, LLP
 900 RIDGEFIELD DRIVE SUITE 350
 RALEIGH, NC 27609-3960 (919) 878-9560
 NC LICENSE NUMBER: F-0112

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

TOTAL SHEETS
12

**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

11/13/2017 R:\DGN\11050_SD_OHS_010.dgn

DRAWN BY : B. A. HAAG DATE : AUG 2017
 CHECKED BY : R. D. FISHER DATE : AUG 2017
 DESIGN ENGINEER OF RECORD : R. D. FISHER DATE : AUG 2017

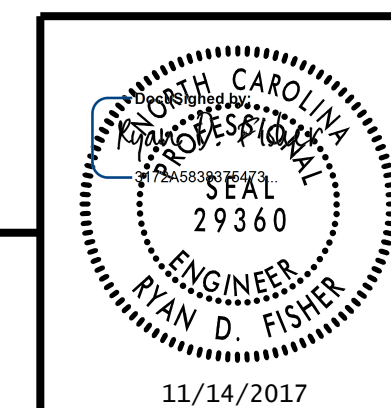
CONCRETE QUANTITIES					
STRUCTURE ID T15 IN (LEFT COLUMN)			STRUCTURE ID T16 IN (LEFT COLUMN)		
DRILLED PIER CONCRETE					
POUR #1 - DRILLED PIER	CU. YDS.	3.4	POUR #1 - DRILLED PIER	CU. YDS.	1.8
CLASS "A" CONCRETE BREAKDOWN CU. YDS.					
POUR #2 - FOOTING	CU. YDS.	2.3	POUR #2 - FOOTING	CU. YDS.	2.3
POUR #3 - COLUMN	CU. YDS.	14.0	POUR #3 - COLUMN	CU. YDS.	14.3
TOTAL CLASS "A" CONCRETE	CU. YDS.	16.3	TOTAL CLASS "A" CONCRETE	CU. YDS.	16.6
STRUCTURE ID T15 IN (RIGHT COLUMN)			STRUCTURE ID T16 IN (RIGHT COLUMN)		
DRILLED PIER CONCRETE					
POUR #1 - DRILLED PIER	CU. YDS.	3.4	POUR #1 - DRILLED PIER	CU. YDS.	2.6
CLASS "A" CONCRETE BREAKDOWN CU. YDS.					
POUR #2 - FOOTING	CU. YDS.	2.3	POUR #2 - FOOTING	CU. YDS.	2.3
POUR #3 - COLUMN	CU. YDS.	14.5	POUR #3 - COLUMN	CU. YDS.	14.3
TOTAL CLASS "A" CONCRETE	CU. YDS.	16.8	TOTAL CLASS "A" CONCRETE	CU. YDS.	16.6
STRUCTURE ID T15 OUT (LEFT COLUMN)			STRUCTURE ID T16 OUT (LEFT COLUMN)		
DRILLED PIER CONCRETE					
POUR #1 - DRILLED PIER	CU. YDS.	3.4	POUR #1 - DRILLED PIER	CU. YDS.	1.8
CLASS "A" CONCRETE BREAKDOWN CU. YDS.					
POUR #2 - FOOTING	CU. YDS.	2.3	POUR #2 - FOOTING	CU. YDS.	2.3
POUR #3 - COLUMN	CU. YDS.	14.0	POUR #3 - COLUMN	CU. YDS.	14.3
TOTAL CLASS "A" CONCRETE	CU. YDS.	16.3	TOTAL CLASS "A" CONCRETE	CU. YDS.	16.6
STRUCTURE ID T15 OUT (RIGHT COLUMN)			STRUCTURE ID T16 OUT (RIGHT COLUMN)		
DRILLED PIER CONCRETE					
POUR #1 - DRILLED PIER	CU. YDS.	3.4	POUR #1 - DRILLED PIER	CU. YDS.	2.6
CLASS "A" CONCRETE BREAKDOWN CU. YDS.					
POUR #2 - FOOTING	CU. YDS.	2.3	POUR #2 - FOOTING	CU. YDS.	2.3
POUR #3 - COLUMN	CU. YDS.	14.4	POUR #3 - COLUMN	CU. YDS.	14.5
TOTAL CLASS "A" CONCRETE	CU. YDS.	16.7	TOTAL CLASS "A" CONCRETE	CU. YDS.	16.8

PROJECT NO. U-5315 A & B
WAKE COUNTY

STATION: _____

SHEET 2 OF 2

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
OVERHEAD STRUCTURES
 BILL OF MATERIAL
 OVERHEAD GANTRY STRUCTURES



RK&K
 RUMMEL, KLEPPER & KAHL, LLP
 900 RIDGEFIELD DRIVE SUITE 350
 RALEIGH, NC 27609-3960 (919) 878-9560
 NC LICENSE NUMBER: F-0112

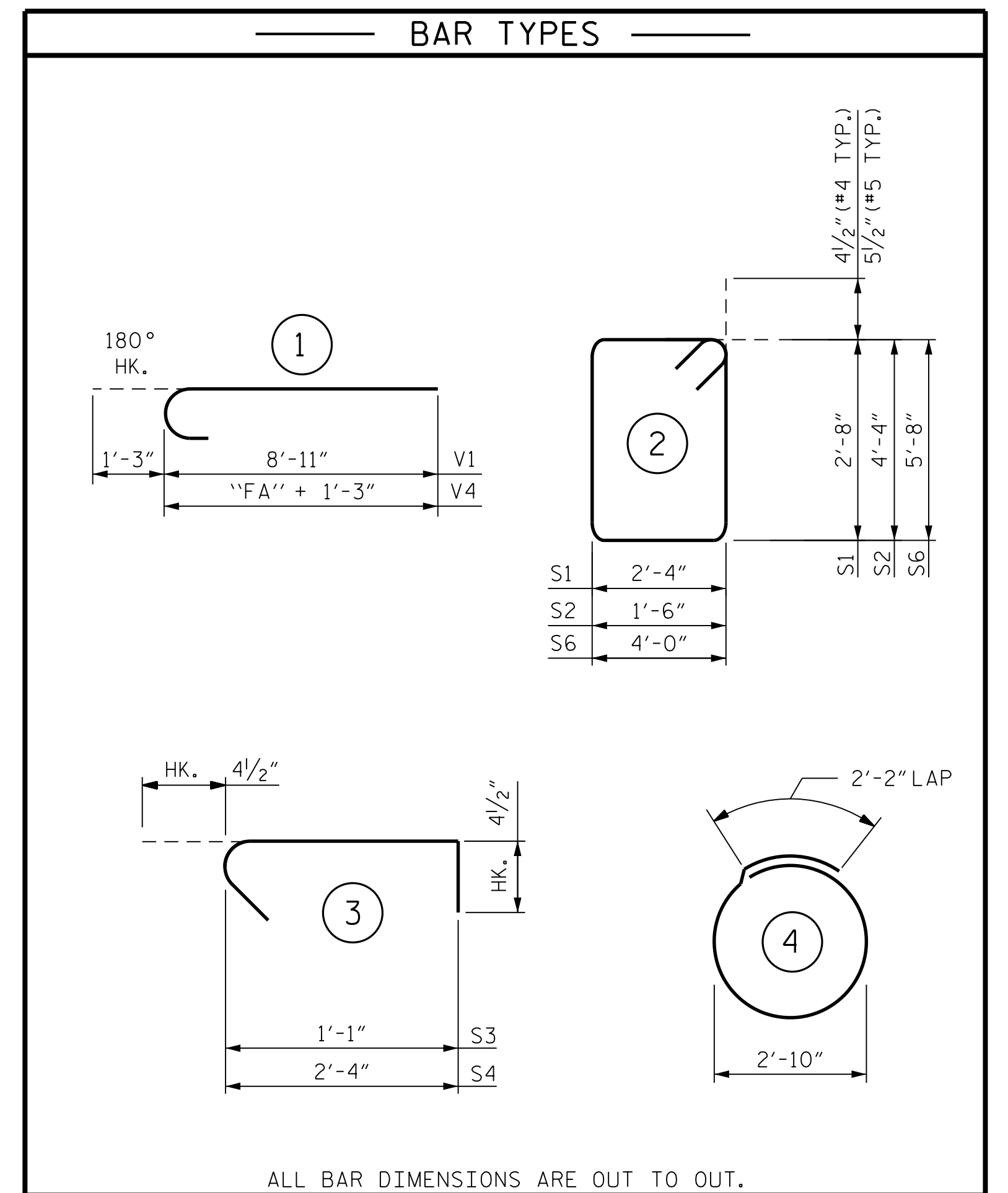
REVISIONS				SHEET NO.		
NO.	BY:	DATE:	NO.	BY:	DATE:	SIGN-31
1			3			TOTAL SHEETS
2			4			12

**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**

11/13/2017 R:\DGN\11050_SD_OHS_011.dgn

DRAWN BY : B. A. HAAG DATE : AUG 2017
 CHECKED BY : R. D. FISHER DATE : AUG 2017
 DESIGN ENGINEER OF RECORD : R. D. FISHER DATE : AUG 2017

REINFORCING BAR SCHEDULE											
STRUCTURE ID "B"						STRUCTURE ID "E"					
BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT	BAR	NO.	SIZE	TYPE	LENGTH	WEIGHT
B1	14	#5	STR.	2'-0"	29	B1	14	#5	STR.	2'-0"	29
B2	4	#5	STR.	5'-8"	24	B2	4	#5	STR.	5'-8"	24
B3	6	#5	STR.	4'-0"	25	B3	6	#5	STR.	4'-0"	25
S1	24	#4	2	10'-9"	172	S1	23	#4	2	10'-9"	165
S2	24	#4	2	12'-5"	199	S2	23	#4	2	12'-5"	191
S3	48	#4	3	1'-10"	59	S3	46	#4	3	1'-10"	56
S4	24	#4	3	3'-1"	49	S4	23	#4	3	3'-1"	47
S5	27	#5	4	11'-1"	312	S5	13	#5	4	11'-1"	150
S6	5	#5	2	20'-3"	106	S6	5	#5	2	20'-3"	106
V1	14	#9	1	10'-2"	484	V1	14	#9	1	10'-2"	484
V2	14	#9	STR.	22'-10"	1,087	V2	14	#9	STR.	21'-3"	1,012
V4	14	#9	1	16'-6"	785	V4	14	#9	1	9'-6"	452
REINFORCING STEEL 3,331 LBS.						REINFORCING STEEL 2,741 LBS.					

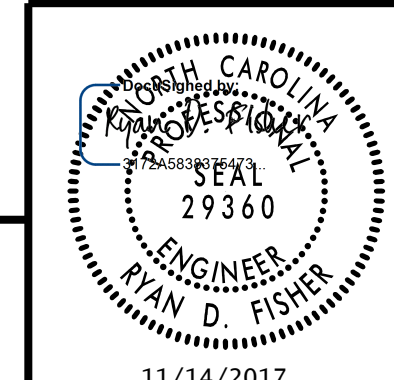


CONCRETE QUANTITIES					
STRUCTURE ID "B"			STRUCTURE ID "E"		
DRILLED PIER CONCRETE			DRILLED PIER CONCRETE		
POUR #1 - DRILLED PIER	CU. YDS.	5.0	POUR #1 - DRILLED PIER	CU. YDS.	2.5
CLASS "A" CONCRETE BREAKDOWN			CLASS "A" CONCRETE BREAKDOWN		
POUR #2 - FOOTING	CU. YDS.	2.6	POUR #2 - FOOTING	CU. YDS.	2.6
POUR #3 - COLUMN	CU. YDS.	12.0	POUR #3 - COLUMN	CU. YDS.	11.1
TOTAL CLASS "A" CONCRETE	CU. YDS.	14.6	TOTAL CLASS "A" CONCRETE	CU. YDS.	13.7

PROJECT NO. U-5315 A & B
WAKE COUNTY
 STATION: _____

STATE OF NORTH CAROLINA
 DEPARTMENT OF TRANSPORTATION
 RALEIGH
OVERHEAD STRUCTURES
 BILL OF MATERIAL
 BUTTERFLY OVERHEAD
 SIGN STRUCTURES

RK&K
 RUMMEL, KLEPPER & KAHL, LLP
 900 RIDGEFIELD DRIVE SUITE 350
 RALEIGH, NC 27609-3960 (919) 878-9560
 NC LICENSE NUMBER: F-0112



REVISIONS						SHEET NO.
NO.	BY:	DATE:	NO.	BY:	DATE:	SIGN-32
1			3			TOTAL SHEETS
2			4			12

11/13/2017 R:\DGN\11050_SD_OHS_012.dgn

DRAWN BY : B. A. HAAG DATE : AUG 2017
 CHECKED BY : R. D. FISHER DATE : AUG 2017
 DESIGN ENGINEER OF RECORD : R. D. FISHER DATE : AUG 2017

**DOCUMENT NOT CONSIDERED FINAL
 UNLESS ALL SIGNATURES COMPLETED**