

TEXAS DEPARTMENT OF TRANSPORTATION

Change Order Third Party Funding Notification Sheet

This form is used when the subject change order involves funding by a source other than TxDOT/U.S. DOT, and involves third parties who are providing funding under an Advanced Funding Agreement or Donation Agreement.

CCSJ: <u>3510-04-019</u>	CO #: 18
Project: STP 2022 (936)MM, etc.	District: Houston
Highway: SH 99	Contractor: Webber, LLC
County: Fort Bend	Contract #: 351004019
1. Outside funding provided by:	
Fort Bend County	
(Outside Entity's Legal Name)	
2. Type of outside funding agreement for this change:	(Check one)
3. Indicate the type and amount of funding:	
☐ Fixed Price (Lump Sum) ☐ Actual Cost	(Estimated Amount) \$37,839.34
(a) Contract Items (Value): \$	\$37,839.34
(b) CO & Contingency: (a)x 6.25 % = \$	\$2,364.96
TOTAL (a)+(b): \$	\$40,204.30
Third Party Notifications: I hereby acknowledge notification	n of the modifications covered by this Change Order.
Name: KP George	Title: Fort Bend County Judge
Clubral Third Party Representative Signature	Date:
Funding for this Change Order has been arranged by	:
Name:	Title:
	Date:
TyDOT Representative Signature	

^{*} The percentage (%) value for E&C (Engineering and Contingencies) can be obtained from TxDOTConnect. Within the CSJ > under Funding and Estimate > Estimated Cost > Project Cost Details > use the Change Order & Contingency percentage shown.



CHANGE ORDER NBR.

18

REPORT DATE: 5/9/2025 3:12:33PM

351004019 CONTRACT ID:

STP 2022(936)MM PROJECT:

\$90,916,059.57

01233001 CONTRACT:

AWARD AMOUNT: PROJECTED AMOUNT: \$91,826,567.57 \$92,567,975.26 ADJ PROJECTED AMT: \$92,567,975.26 PEND ADJ PROJ AMT:

WEBBER, LLC CONTRACTOR:

\$37,839,34 CO AMOUNT:

CO TYPE: NON-PARTICIPATING

\$0.00 3RD PARTY AMOUNT:

OVERRIDE APPRV LEVEL:

HIGHWAY:	SH 99
DISTRICT:	12

FORT BEND COUNTY:

Carlos M. Zepeda, Jr., P.E. AREA ENGINEER:

AREA NUMBER: 061

-runctions. —	
Extra Work	Force Account
Zero Dollar	☐ Final Quantity
Overrun/Underrun	Change Project Limits
☐ Time Adjustment	Delete/Add CSJ
Stock Account	

102-IN DRILLED SHAFT DOWEL PACKAGE DELAY **DESCRIPTION:** 1B - 1B-INCORRECT PS&E (CONSULTANT DESIGN) REASON:

SECONDARY REASON(S):

DESCRIBE THE REASON FOR THE CHANGE ORDER AND WHAT IS BEING CHANGED. WHEN NECESSARY, INCLUDE EXCEPTIONS TO THIS AGREEMENT:

The subject project provides for the widening and upgrading of SH 99 from FM 1093 to just north of Kingsland Blvd. consisting of widening the existing SH 99 main lane pavement from two lanes to three lanes in each direction including ramp reconstructions using Continuously Reinforced Concrete Pavement and pavement markings in Fort Bend County. As noted, the design Engineer-of-Record is consultant RPS. The Designer of the plans in which the error occurred is DEC.

During the 102-IN drilled shaft operation for the SB Exit Ramp Bridge, the drilling subcontractor identified a plan error with the dowel package for the proposed column steel reinforcement. When they tried lowering the reinforcement package to be embedded into the drilled shaft, they found that the spacing of the 48 #11 bars would not fit within the 54 #11 bars for the drilled shaft cage, as shown on the 102-IN bent detail sheets.

To mitigate the conflict, the EOR had to reduce the dowel package bar spacing and increase the length of embedment into the shaft. This change resulted in longer steel reinforcement and a replacement steel plate template required to be procured by the Contractor. In addition, during the review and revision for the 102-IN package, the EOR determined that a similar issue was present in the dowel package for the 90-IN drilled shafts and thus made the corrections with their resubmittal.

During the redesign for the dowel package, the subcontractor was subject to downtime. Submitted with this package is their standby time and additional work to reconfigure a new steel template.

The subject change order adds one new Item of Work to the Contract and is summarized in the Sitemanager change order form.

The subject change order adds revised plan sheets 642 to 648, 650, and 651 to the Contract.

The contractor has submitted the attached cost breakdown which is considered was reviewed against field observations and deemed substantially accurate and fair and reasonable for the work involved.

The revisions covered by this change order do not require revisions to the original environmental clearances or approval by the Texas Department of Licensing and Regulation.

This change order is estimated to result in an overrun of funds associated with the project in the amount of \$37,839.34. This change order will not cause the accumulative amount of change orders to exceed 10 percent of the original contract amount and is under \$50,000.00; therefore, will not require District Engineer approval.

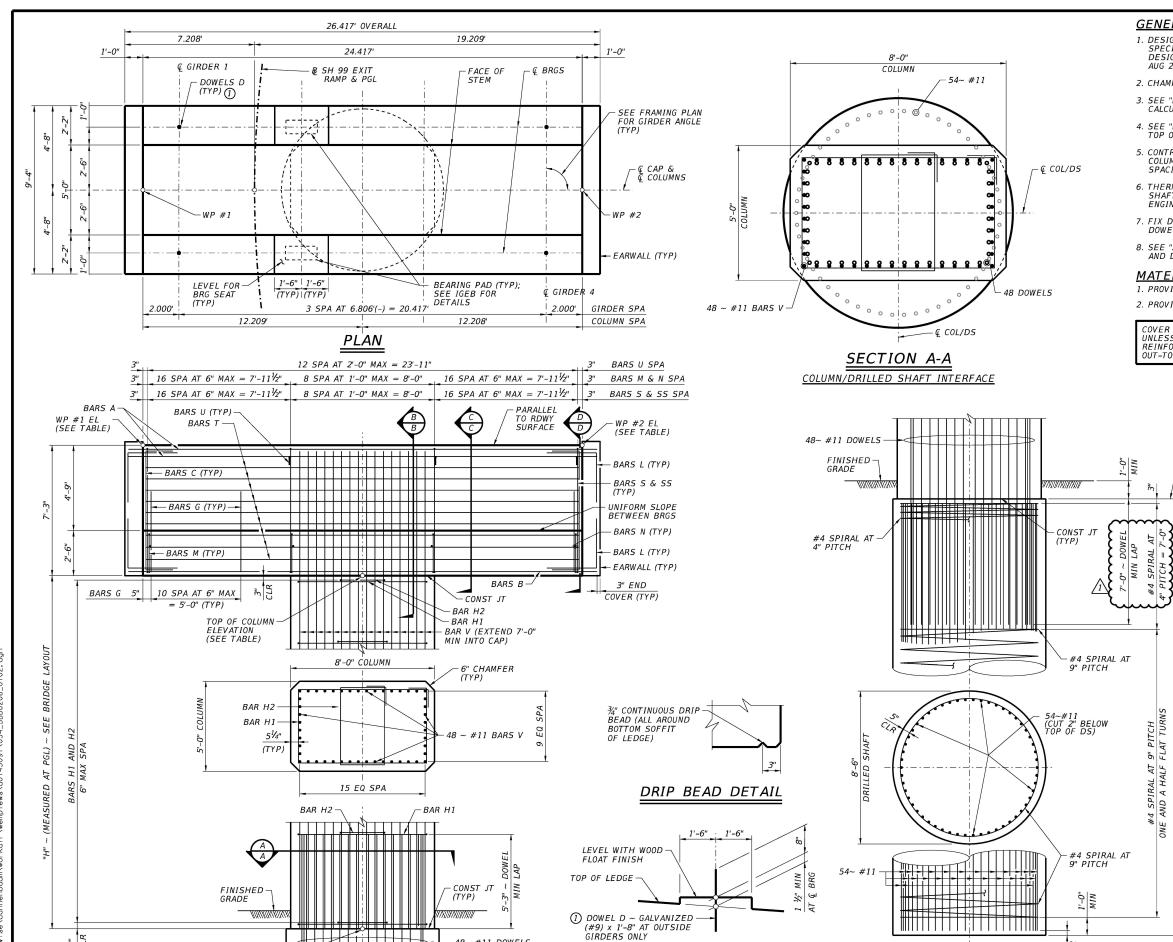
ADDITIONAL TIME NOT NEEDED

"By signing this change order, the contractor agrees to waive any and all claims for additional compensation due to any and all other expenses; additional changes for time, overhead and profit; or loss of compensation as a result of this change and that this agreement is made in accordance Item 4 and the Contract. Exceptions should be noted in explanation above."

THE CONTRACTOR

BY:		DISTRICT ENGINEER:	
	DATE		DATE
TYPED/PRINTED NAME:		DIRECTOR, CONSTRUCTION DIVISION:	
	DATE		DATE
TYPED/PRINTED TITLE:		DEPUTY EXECUTIVE DIRECTOR:	
	DATE		DATE
AREA ENGINEER:		FHWA:	
	DATE		DATE

AREA ENGINEER'S SEAL:



48~ #11 DOWELS - SEE DRILLED SHAFT

ELEVATION VIEW FOR REINF

ELEVATION

BEARING SEAT DETAILS

(BRG SURFACE MUST BE CLEAN AND FREE OF ALL LOOSE MATERIAL BEFORE PLACING BRG PAD.)

GENERAL NOTES:

- 1. DESIGNED FOR HL-93 LOADING IN ACCORDANCE WITH AASHTO LRFD BRIDGE SPECIFICATIONS, 9TH EDITION, AS MODIFIED BY THE TXDOT BRIDGE DESIGN MANUAL LRFD, JAN 2020 AND TXDOT BRIDGE DETAILING GUIDE
- 2. CHAMFER CORNERS AND EDGES PER ITEM 420.
- 3. SEE "BRIDGE LAYOUTS" SHEETS FOR DRILLED SHAFT LENGTH AND CALCULATED FOUNDATION LOADS.
- 4. SEE "MISCELLANEOUS SLAB DETAILS, STANDARD IGMS(MOD)". FOR ADDITIONAL TOP OF STEM DETAILS AT CONTROLLED / CONSTRUCTION JOINT.
- 5. CONTRACTOR SHALL ADJUST CAP REINFORCEMENT TO AVOID CONFLICTS WITH COLUMN REINFORCEMENT BARS EXTENDING INTO CAP. MINIMUM CLEAR SPACING BETWEEN PARALLEL CAP BARS SHALL BE AT LEAST 2 ½".
- 6. THERMAL INTEGRITY PROFILER (TIP) TESTING IS REQUIRED OF ALL DRILLED SHAFTS. SEE SPECIAL SPECIFICATIONS 4021. IF DIRECTED BY THE ENGINEER, PERFORM FOUNDATIONS LOAD TEST PER ITEM 405 AND STM D4945.
- 7. FIX DOWELS PRIOR TO PLACEMENT OF DRILLED SHAFT CONCRETE. FIT ALL DOWELS INSIDE OF COLUMN BARS AS SHOWN.
- 8. SEE "AESTHETIC DETAILS" SHEETS FOR EARWALL DETAILS, COLUMN REVEALS AND DETAILS NOT SHOWN.

MATERIAL NOTES:

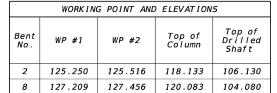
-TOP OF DR SHAFT

ELEVATION

DRILLED SHAFT

- 1. PROVIDE GRADE 60 REINFORCING STEEL.
- 2. PROVIDE CLASS C CONCRETE (f'c = 3,600 psi).

COVER DIMENSIONS ARE CLEAR DIMENSIONS UNLESS NOTED OTHERWISE. REINFORCING BAR DIMENSIONS SHOWN ARE OUT-TO-OUT OF BARS.



HL93 LOADING



		07 107 2025	
1	8/10/23	MODIFY DOWEL LAP LENGTH.	YFS
NO.	DATE	REVISION	APPROV



SHEET 1 OF 2

DE CORP 3100 W ALABAMA HOUSTON, TX 77098 (713) 520-9570 • www.decorp.com T.B.P.E. FIRM REGISTRATION #392



SH 99

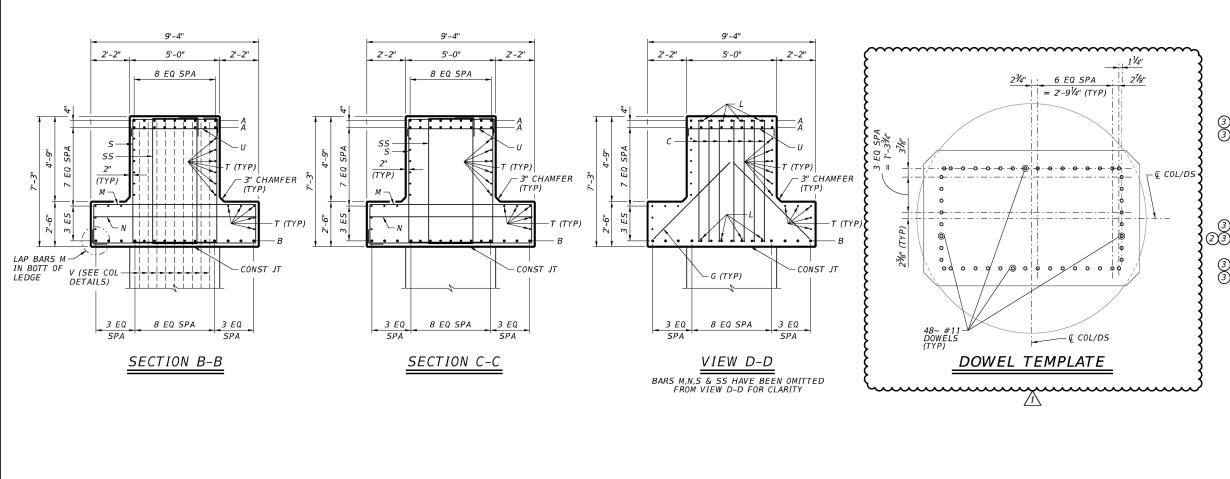
BENT NOS. 2 & 8

SH 99 SB EXIT RAMP

FED. RD. DIV. NO.		PROJECT NO.
6		
STATE	DIST.	COUNTY
TEVAC	шош	CODT DEN

642 TEXAS HOU FORT BEND CONT. SECT. JOB HIGHWAY NO. 04 019.ETC

TOP OF DRILLED SHAFT ELEVATION (SEE TABLE)



	BAR	NO.	SIZE	LENGI	Н	WEIGHT
	Α	18	#11	25' - 1	1"	2,479
	В	15	#11	25 ' - 1	1"	2,065
	С	14	#5	8′-1	0"	129
	D	4	#9	1'-	8"	23
_	G	44	#6	6′-	0"	397
3	H1	32	#4	23' -	3"	497
3)	H2	32	#4	14'-	0"	299
	М	43	#6	24' -	4"	1,572
	N	43	#6	9'-	0"	581
	S	43	#6	25' -	2"	1,625
	SS	43	#6	20'-	9"	1,340
	T	22	#6	1"	796	
_	U	13	#4	5′-	6"	48
(M)	V	48	#11	23′ -	0"	5,866
3)	REINFORG	CING STE	EL		LB	17,717
_	CLASS "C	C" CONC (CAP)		CY	42.8
3) CLASS "C" CONC (COL)(BENT 2) CY 1 3) CLASS "C" CONC (COL)(BENT 8) CY 2					17.8	
3)	CLASS "C" CONC (COL)(BENT 8) CY 23.					23.7
	O 500 601	IT D A CT O DU	C 14/5004/47/			

- 2 FOR CONTRACTOR'S INFORMATION ONLY.
- 3 QUANTITIES SHOWN ARE BASED ON A "H" VALUE OF 16". FOR EACH LINEAR FOOT VARIATION IN "H" VALUE, MAKE THE FOLLOWING ADUSTMENTS: BARS V LENGTH, 1'-O".

 NUMBER OF BARS H1 AND H2 BY 2.

 REINFORCING STEEL, 305 LBS.

 CLASS "C" CONC (COL), 1.48 CY.
- 4) QUANTITIES FOR ONE BENT ONLY.

<u>NOTE:</u>

1. SEE SHEET 1 OF 2 FOR GENERAL NOTES.

COVER DIMENSIONS ARE CLEAR DIMENSIONS UNLESS NOTED OTHERWISE.
REINFORCING BAR DIMENSIONS SHOWN ARE OUT-TO-OUT OF BARS.

HL93 LOADING



8/10/2023

1	8/10/23	MODIFY DOWEL SPACING.	YFS
NO.	DATE	REVISION	APPROV



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SH 99

BENT NOS. 2 & 8

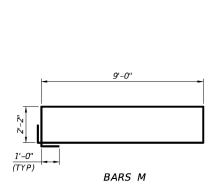
SH 99 SB EXIT RAMP

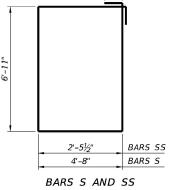
<i>SHEET 2 OF 2</i>

SIILLI Z	0, 2			SHEET
FED.RD. DIV.NO.		PROJECT NO.		
6				643
STATE	DIST.		COUNTY	
TEXAS	HOU	F	ORT BEND	
CONT.	SECT.	JOB	HIG	HWAY NO.
3510	04	019, ETC.	S	н 99

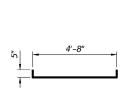
41/2" (TYP) 7'-11/2" BARS H1 BARS H2 1'-0" 2'-6½"

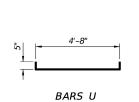
BARS H1 AND H2





(TYP)

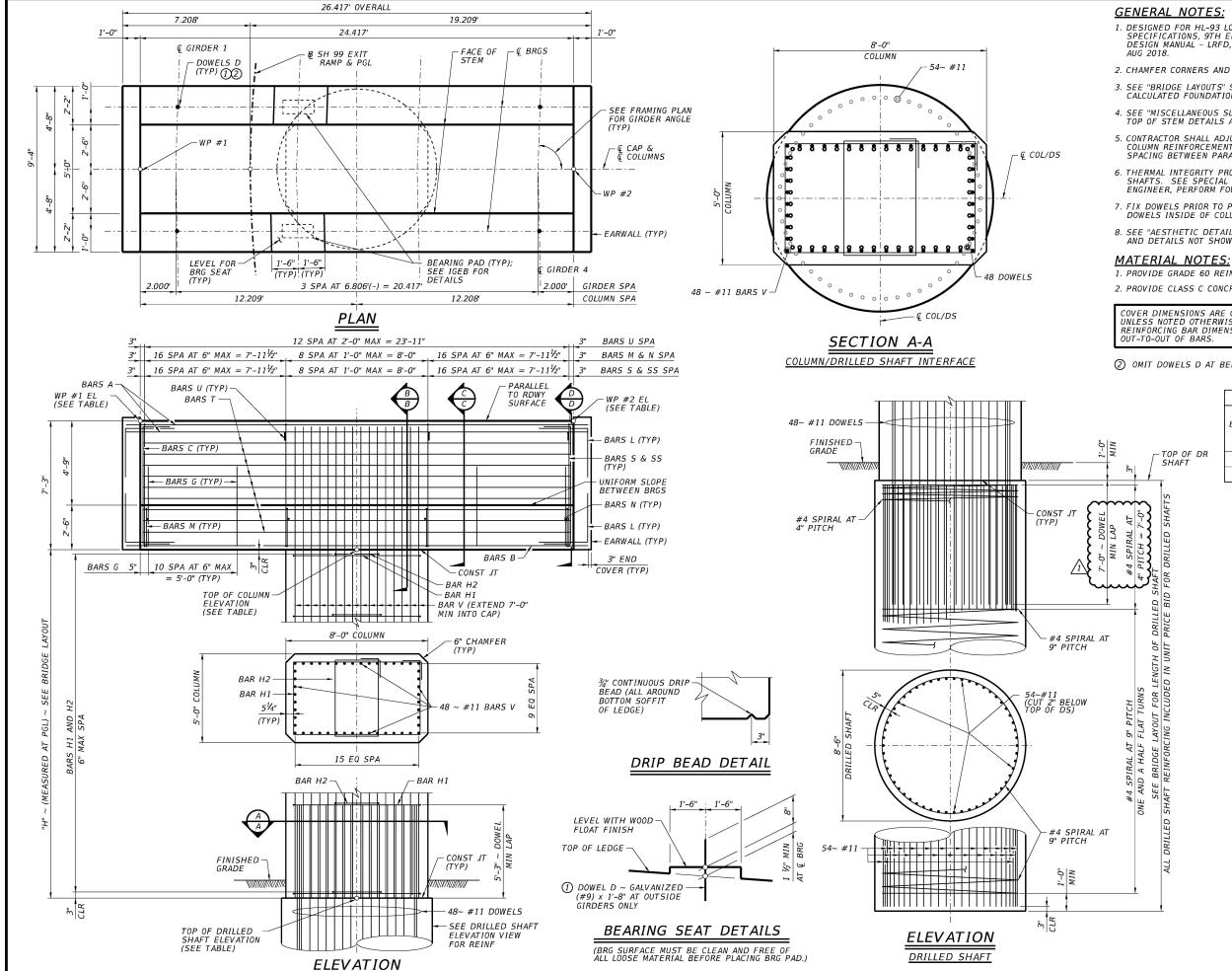




DRILLED SHAFT REINFORCING

USER: wemplews 8/10/2023 3:37:40 PM c:\projectwise\dannenba

BARS C

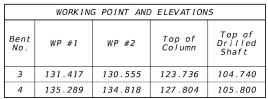


- 1. DESIGNED FOR HL-93 LOADING IN ACCORDANCE WITH AASHTO LRFD BRIDGE SPECIFICATIONS, 9TH EDITION, AS MODIFIED BY THE TXDOT BRIDGE DESIGN MANUAL LRFD, JAN 2020 AND TXDOT BRIDGE DETAILING GUIDE
- 2. CHAMFER CORNERS AND EDGES PER ITEM 420.
- 3. SEE "BRIDGE LAYOUTS" SHEETS FOR DRILLED SHAFT LENGTH AND CALCULATED FOUNDATION LOADS.
- 4. SEE "MISCELLANEOUS SLAB DETAILS, STANDARD IGMS(MOD)". FOR ADDITIONAL TOP OF STEM DETAILS AT CONTROLLED / CONSTRUCTION JOINT.
- 5. CONTRACTOR SHALL ADJUST CAP REINFORCEMENT TO AVOID CONFLICTS WITH COLUMN REINFORCEMENT BARS EXTENDING INTO CAP. MINIMUM CLEAR SPACING BETWEEN PARALLEL CAP BARS SHALL BE AT LEAST 2 ½".
- 6. THERMAL INTEGRITY PROFILER (TIP) TESTING IS REQUIRED OF ALL DRILLED SHAFTS. SEE SPECIAL SPECIFICATIONS 4021. IF DIRECTED BY THE ENGINEER, PERFORM FOUNDATIONS LOAD TEST PER ITEM 405 AND STM D4945.
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- 8. SEE "AESTHETIC DETAILS" SHEETS FOR EARWALL DETAILS, COLUMN REVEALS AND DETAILS NOT SHOWN.

- 1. PROVIDE GRADE 60 REINFORCING STEEL.
- 2. PROVIDE CLASS C CONCRETE (f'c = 3,600 psi).

COVER DIMENSIONS ARE CLEAR DIMENSIONS UNLESS NOTED OTHERWISE. REINFORCING BAR DIMENSIONS SHOWN ARE OUT-TO-OUT OF BARS.

2 OMIT DOWELS D AT BENT 4.



HL93 LOADING



1	8/10/23	MODIFY DOWEL LAP LENGTH.	YFS
NO.	DATE	REVISION	APPROV.



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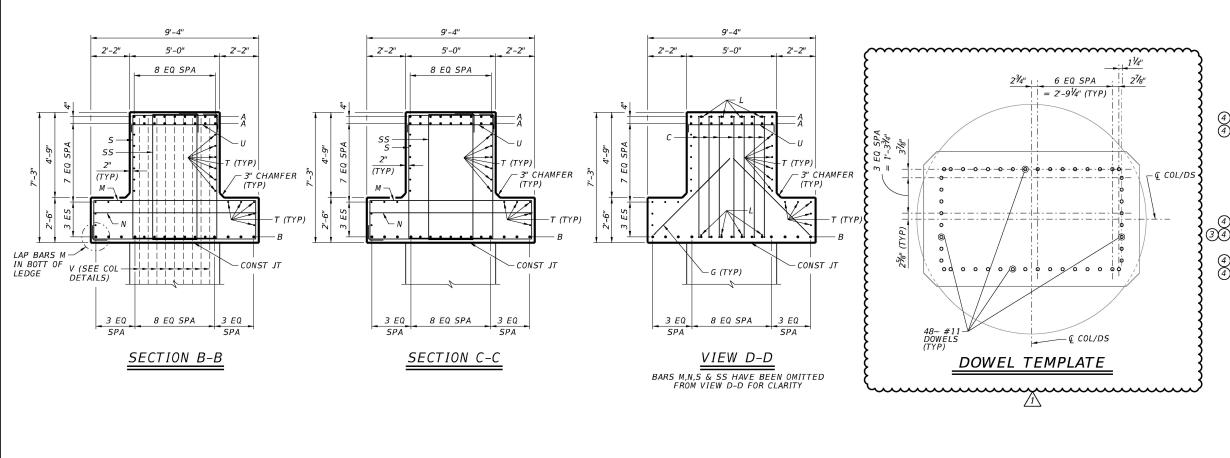
SH 99

BENT NOS. 3 & 4

SH 99 SB EXIT RAMP

SHEET 1 OF 2

FED. RD.					
STATE DIST. COUNTY TEXAS HOU FORT BEND CONT. SECT. JOB HIGHWAY NO.	FED. RD. DIV. NO.	PROJECT NO.			
TEXAS HOU FORT BEND CONT. SECT. JOB HIGHWAY NO.	6				644
CONT. SECT. JOB HIGHWAY NO.	STATE	DIST.		COUNTY	
32311	TEXAS	HOU	FORT BEND		
3510 04 019, ETC. SH 99	CONT.	SECT.	JOB	HIG	HWAY NO.
	3510	04	019,ETC. SH 99		Н 99



	BAR	NO.	SIZE	LENGT	Η	WE I GHT
	Α	18	#11	25' - 1	1"	2,479
	В	15	#11	25' - 1	1 "	2,065
	С	14	#5	8'-1	0"	129
	D	4	#9	1'-	8"	23
	G	44	#6	6′-	0"	397
4) 4)	Н1	44	#4	23′-	3"	683
4	H2	44	#4	14'-	0"	411
	М	43	#6	24'-	4"	1,572
	N	43	#6	9′-	0"	581
	S	43	#6	25′-	2"	1,625
	SS	43	#6	20'-9"		1,340
	T	22	#6	24'-	1"	796
	U	13	#4	5′-	6"	48
4) 4)	V	48	#11	29′-	0"	7,396
4	REINFOR	CING STE	EL		LB	19,545
	CLASS "C" CONC (CAP)				CY	42.8
4) 4)	4 CLASS "C" CONC (COL) (BENT 3) CY 28					
4	CLASS "C	C" CONC (COL) (BENT	4)	CY	32.6
	O					

- (3) FOR CONTRACTOR'S INFORMATION ONLY.
- 4 QUANTITIES SHOWN ARE BASED ON A "H" VALUE OF 22". FOR EACH LINEAR FOOT VARIATION IN "H" VALUE, MAKE THE FOLLOWING ADUSTMENTS: BARS V LENGTH, 1'-O".

 NUMBER OF BARS H1 AND H2 BY 2.

 REINFORCING STEEL, 305 LBS.

 CLASS "C" CONC (COL), 1.48 CY.
- (5) QUANTITIES FOR ONE BENT ONLY.

<u>NOTE:</u>

1. SEE SHEET 1 OF 2 FOR GENERAL NOTES.

COVER DIMENSIONS ARE CLEAR DIMENSIONS UNLESS NOTED OTHERWISE.
REINFORCING BAR DIMENSIONS SHOWN ARE OUT-TO-OUT OF BARS.

HL93 LOADING



8/10/2023

1	8/10/23	MODIFY DOWEL SPACING.	YFS				
NO.	DATE	REVISION	APPROV.				



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SH 99

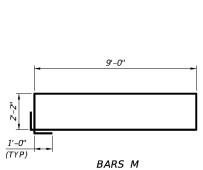
BENT NOS. 3 & 4

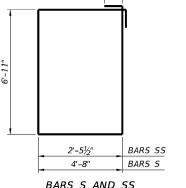
SH 99 SB EXIT RAMP

SHEET	2	OF	2

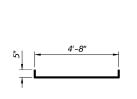
SHEET 2 OF 2					
FED.RD. DIV.NO.		SHEET NO.			
6				645	
STATE	DIST.		COUNTY		
TEXAS	HOU	F	ORT BEND		
CONT.	SECT.	JOB	HIG	HWAY NO.	
3510	04	019,ETC.	S	н 99	

41/2" (TYP) 7'-11/2" BARS H1





(TYP)



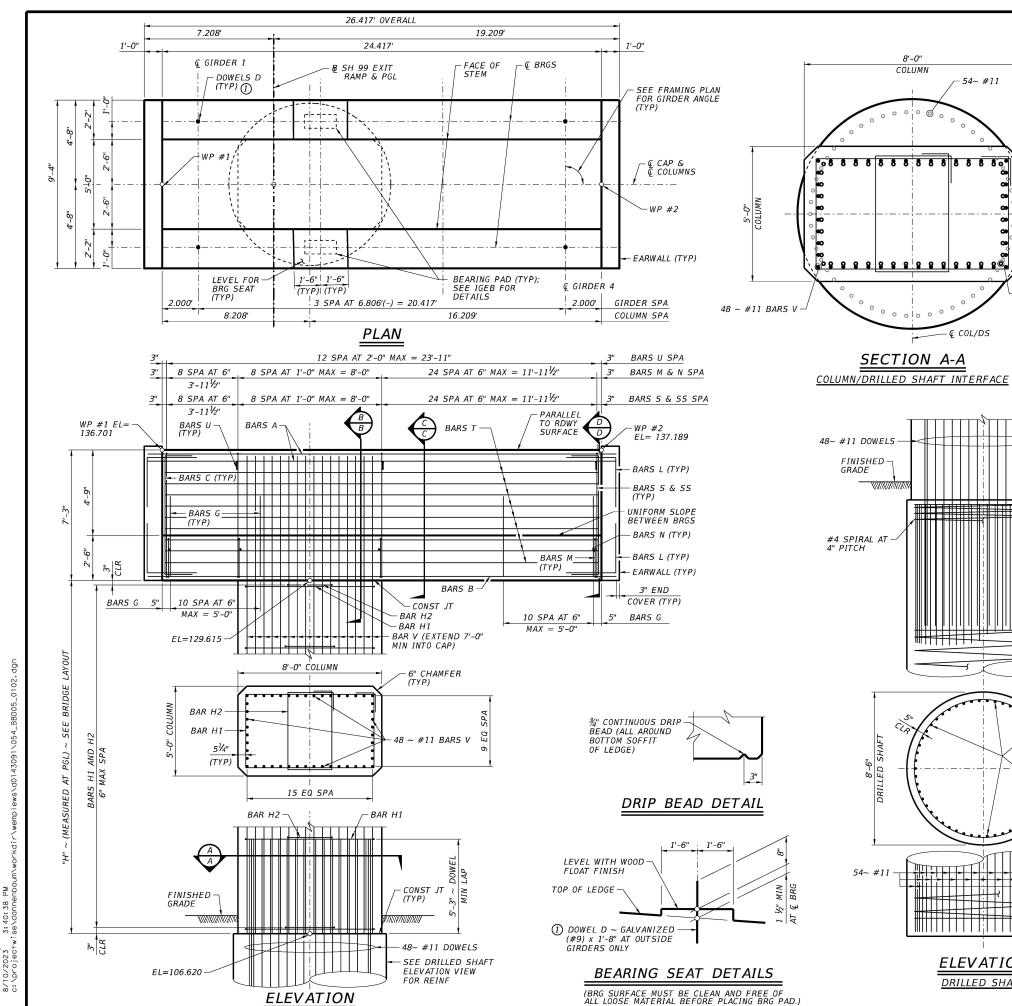
BARS S AND SS

BARS U

BARS H2 1'-0" 2'-6½" (TYP) BARS C BARS H1 AND H2

DRILLED SHAFT REINFORCING

USER: wemplews 8/10/2023 3:39:45 PM c:\projectwise\dannenba



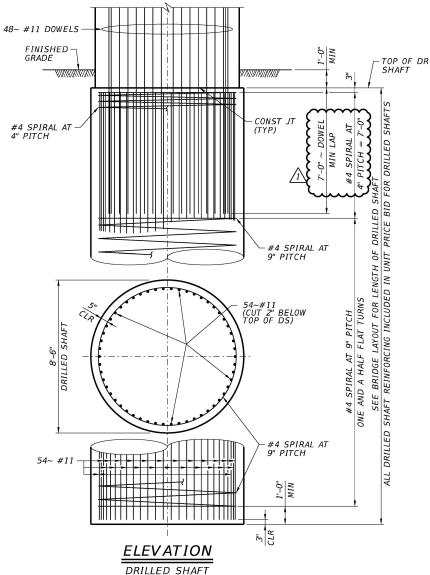
GENERAL NOTES:

- 1. DESIGNED FOR HL-93 LOADING IN ACCORDANCE WITH AASHTO LRFD BRIDGE SPECIFICATIONS, 9TH EDITION, AS MODIFIED BY THE TXDOT BRIDGE DESIGN MANUAL LRFD, JAN 2020 AND TXDOT BRIDGE DETAILING GUIDE
- 2. CHAMFER CORNERS AND EDGES PER ITEM 420.
- 3. SEE "BRIDGE LAYOUTS" SHEETS FOR DRILLED SHAFT LENGTH AND CALCULATED FOUNDATION LOADS.
- 4. SEE "MISCELLANEOUS SLAB DETAILS, STANDARD IGMS(MOD)". FOR ADDITIONAL TOP OF STEM DETAILS AT CONTROLLED / CONSTRUCTION JOINT.
- 5. CONTRACTOR SHALL ADJUST CAP REINFORCEMENT TO AVOID CONFLICTS WITH COLUMN REINFORCEMENT BARS EXTENDING INTO CAP. MINIMUM CLEAR SPACING BETWEEN PARALLEL CAP BARS SHALL BE AT LEAST 2 ½".
- 6. THERMAL INTEGRITY PROFILER (TIP) TESTING IS REQUIRED OF ALL DRILLED SHAFTS. SEE SPECIAL SPECIFICATIONS 4021. IF DIRECTED BY THE ENGINEER, PERFORM FOUNDATIONS LOAD TEST PER ITEM 405 AND STM D4945.
- 7. FIX DOWELS PRIOR TO PLACEMENT OF DRILLED SHAFT CONCRETE. FIT ALL DOWELS INSIDE OF COLUMN BARS AS SHOWN.
- 8. SEE "AESTHETIC DETAILS" SHEETS FOR EARWALL DETAILS, COLUMN REVEALS AND DETAILS NOT SHOWN.

MATERIAL NOTES:

- 1. PROVIDE GRADE 60 REINFORCING STEEL.
- 2. PROVIDE CLASS C CONCRETE (f'c = 3,600 psi).

COVER DIMENSIONS ARE CLEAR DIMENSIONS UNLESS NOTED OTHERWISE. REINFORCING BAR DIMENSIONS SHOWN ARE OUT-TO-OUT OF BARS.



COLUMN

SECTION A-A

54~ #11

− € COL/DS

€ COL/DS

48 DOWELS

HL93 LOADING



8/10/2023

1	8/10/23	MODIFY DOWEL LAP LENGTH.	YFS
NO.	DATE	REVISION	APPRO



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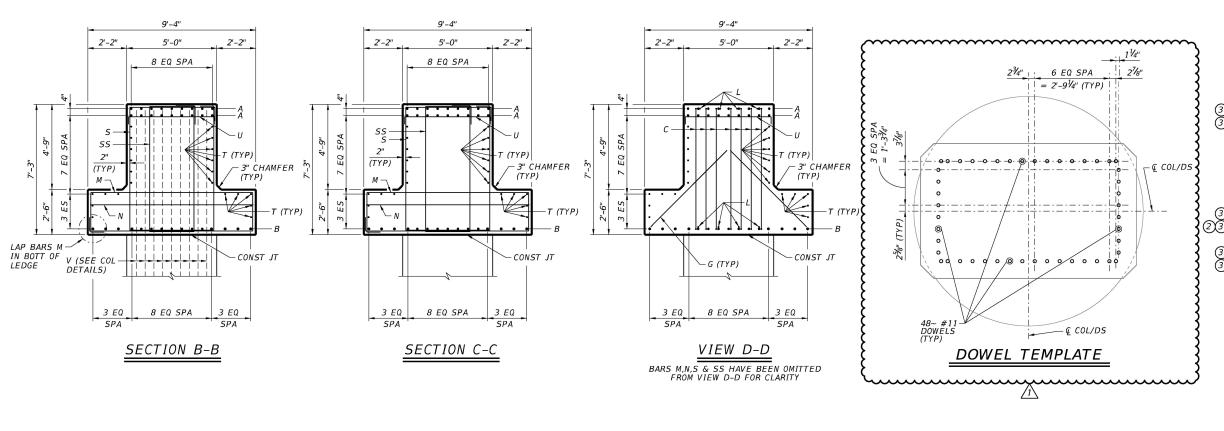
SH 99

BENT NO. 5

SH 99 SB EXIT RAMP

SHELL I OF 2						
FED.RD. DIV.NO.		PROJECT NO.	SHEET NO.			
6					646	
STATE	DIST.	COUNTY				
TEXAS	HOU	FORT BEND				
CONT.	SECT.	JOB HIGHWAY NO.			HWAY NO.	
		0.0 570				

3510 04 019.ETC. SH 99



	BAR	BAR NO. SIZE LENGT			Η	WE I GHT
	Α	18	#11	25' - 11"		2,479
	В	15	#11	25' - 1	1 "	2,065
	С	14	#5	8'-1	0"	129
	D	4	#9	1'-	8"	23
	G	44	#6	6′-	0"	397
١	H1	46	#4	23' -	3"	714
١	H2	46	#4	14'-	14'-0"	
	М	43	#6	24' -	4"	1,572
	N	43	#6	9'-0"		581
	S	43	#6	25' -	2"	1,625
	SS	43	#6	20'-	9"	1,340
	T	22	#6	24'-	1"	796
	U	13	#4	5'-6"		48
١	V	48	#11	30'-		7,651
1	REINFORG	LB	19,850			
	CLASS "C" CONC (CAP)					42.8
	CLASS "C	CY	34.1			

FOR CONTRACTOR'S INFORMATION ONLY.

③ QUANTITIES SHOWN ARE BASED ON A "H" VALUE OF 23". FOR EACH LINEAR FOOT VARIATION IN "H" VALUE, MAKE THE FOLLOWING ADUSTMENTS: BARS V LENGTH, 1'-O".

NUMBER OF BARS H1 AND H2 BY 2.

REINFORCING STEEL, 305 LBS.

CLASS "C" CONC (COL), 1.48 CY.

NOTE:

1. SEE SHEET 1 OF 2 FOR GENERAL NOTES.

COVER DIMENSIONS ARE CLEAR DIMENSIONS UNLESS NOTED OTHERWISE. REINFORCING BAR DIMENSIONS SHOWN ARE OUT-TO-OUT OF BARS.

HL93 LOADING



8/10/2023

1	8/10/23	MODIFY DOWEL SPACING.	YFS
NO.	DATE	REVISION	APPROV



FLAT AND

1 ½ TOP

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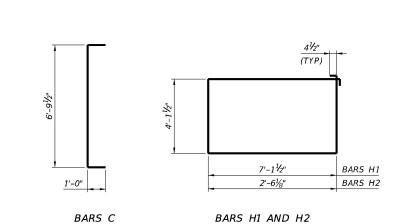


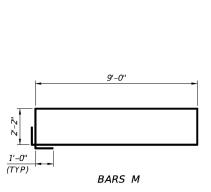
SH 99

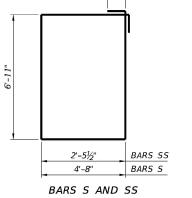
BENT NO. 5

SH 99 SB EXIT RAMP

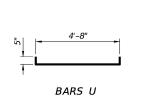
SHEET 2 OF 2					
FED.RD. DIV.NO.		SHEET NO.			
6			647		
STATE	DIST.		COUNTY		
TEXAS	HOU	F	ORT BEND		
CONT.	SECT.	JOB	HIG	HWAY NO.	
3510	04	019, ETC.	S	Н 99	







(TYP)



DRILLED SHAFT REINFORCING

GENERAL NOTES:

- 1. DESIGNED FOR HL-93 LOADING IN ACCORDANCE WITH AASHTO LRFD BRIDGE SPECIFICATIONS, 9TH EDITION, AS MODIFIED BY THE TXDOT BRIDGE DESIGN MANUAL LRFD, JAN 2020 AND TXDOT BRIDGE DETAILING GUIDE
- 2. CHAMFER CORNERS AND EDGES PER ITEM 420.
- 3. SEE "BRIDGE LAYOUTS" SHEETS FOR DRILLED SHAFT LENGTH AND CALCULATED FOUNDATION LOADS.
- 4. SEE "MISCELLANEOUS SLAB DETAILS, STANDARD IGMS(MOD)". FOR ADDITIONAL TOP OF STEM DETAILS AT CONTROLLED / CONSTRUCTION JOINT.
- 5. CONTRACTOR SHALL ADJUST CAP REINFORCEMENT TO AVOID CONFLICTS WITH COLUMN REINFORCEMENT BARS EXTENDING INTO CAP. MINIMUM CLEAR SPACING BETWEEN PARALLEL CAP BARS SHALL BE AT LEAST 2 ½".
- 6. THERMAL INTEGRITY PROFILER (TIP) TESTING IS REQUIRED OF ALL DRILLED SHAFTS. SEE SPECIAL SPECIFICATIONS 4021. IF DIRECTED BY THE ENGINEER, PERFORM FOUNDATIONS LOAD TEST PER ITEM 405 AND STM D4945.
- 7. FIX DOWELS PRIOR TO PLACEMENT OF DRILLED SHAFT CONCRETE. FIT ALL DOWELS INSIDE OF COLUMN BARS AS SHOWN.
- 8. SEE "AESTHETIC DETAILS" SHEETS FOR EARWALL DETAILS, COLUMN REVEALS AND DETAILS NOT SHOWN.

MATERIAL NOTES:

- 1. PROVIDE GRADE 60 REINFORCING STEEL.
- 2. PROVIDE CLASS C CONCRETE (f'c = 3,600 psi).

COVER DIMENSIONS ARE CLEAR DIMENSIONS UNLESS NOTED OTHERWISE. REINFORCING BAR DIMENSIONS SHOWN ARE OUT-TO-OUT OF BARS.

HL93 LOADING



8/10/2023

1	8/10/23	MODIFY DOWEL LAP LENGTH AND NUMBER.	JFT
NO.	DATE	REVISION	APPROV.



SHEET 1 OF 2

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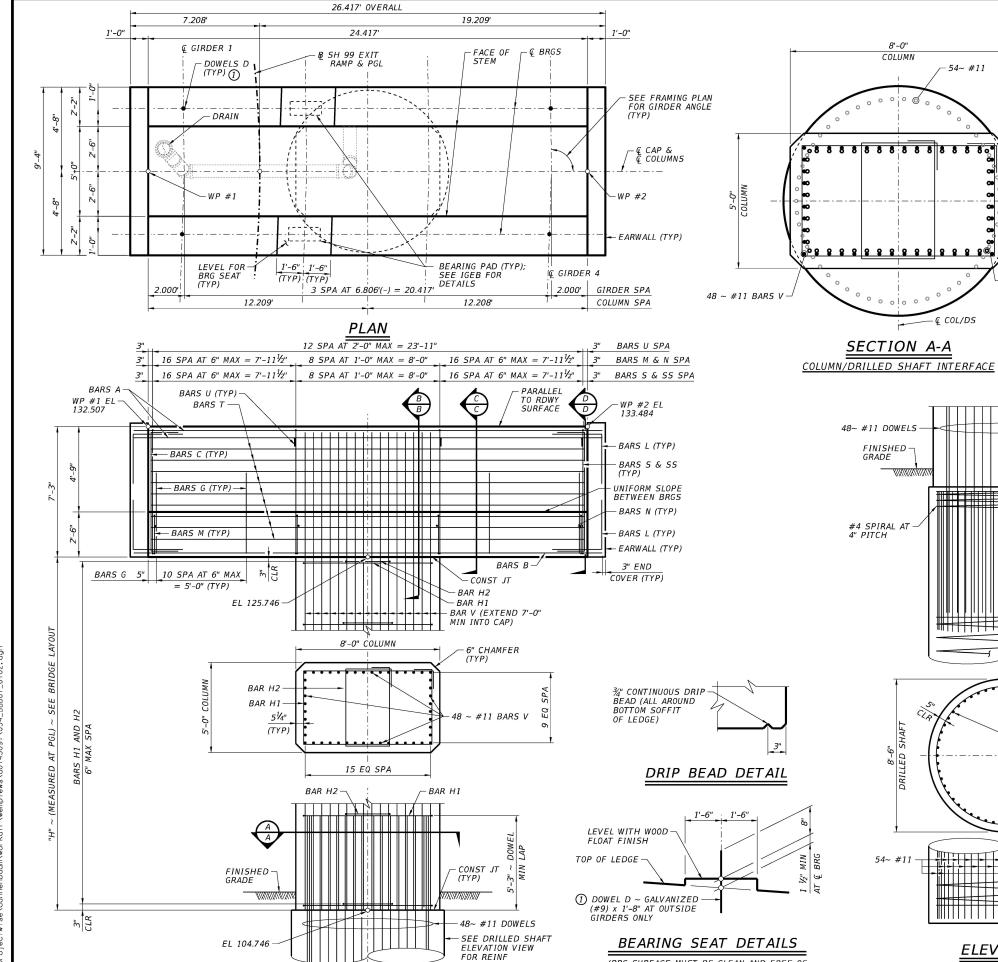
SH 99

BENT NO. 6

SH 99 SB EXIT RAMP

FED.RD. DIV.NO.		SHEET NO.		
6				648
STATE	DIST.		COUNTY	
TEXAS	HOU	F		
CONT.	SECT.	JOB	HIG	HWAY NO.

3510 04 019, ETC.



ELEVATION

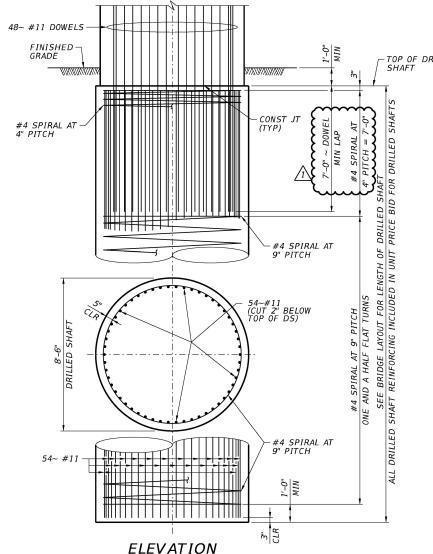
GENERAL NOTES:

- 1. DESIGNED FOR HL-93 LOADING IN ACCORDANCE WITH AASHTO LRFD BRIDGE SPECIFICATIONS, 9TH EDITION, AS MODIFIED BY THE TXDOT BRIDGE DESIGN MANUAL LRFD, JAN 2020 AND TXDOT BRIDGE DETAILING GUIDE
- 2. CHAMFER CORNERS AND EDGES PER ITEM 420.
- 3. SEE "BRIDGE LAYOUTS" SHEETS FOR DRILLED SHAFT LENGTH AND CALCULATED FOUNDATION LOADS.
- 4. SEE "MISCELLANEOUS SLAB DETAILS, STANDARD IGMS(MOD)". FOR ADDITIONAL TOP OF STEM DETAILS AT CONTROLLED / CONSTRUCTION JOINT.
- 5. CONTRACTOR SHALL ADJUST CAP REINFORCEMENT TO AVOID CONFLICTS WITH COLUMN REINFORCEMENT BARS EXTENDING INTO CAP. MINIMUM CLEAR SPACING BETWEEN PARALLEL CAP BARS SHALL BE AT LEAST 2 ½".
- 6. THERMAL INTEGRITY PROFILER (TIP) TESTING IS REQUIRED OF ALL DRILLED SHAFTS. SEE SPECIAL SPECIFICATIONS 4021. IF DIRECTED BY THE ENGINEER, PERFORM FOUNDATIONS LOAD TEST PER ITEM 405 AND STM D4945.
- 7. FIX DOWELS PRIOR TO PLACEMENT OF DRILLED SHAFT CONCRETE. FIT ALL DOWELS INSIDE OF COLUMN BARS AS SHOWN.
- 8. SEE "AESTHETIC DETAILS" SHEETS FOR EARWALL DETAILS, COLUMN REVEALS AND DETAILS NOT SHOWN.
- 9. SEE "BRIDGE DRAIN DETAILS" SHEETS FOR DECK DRAIN INFORMATION.

MATERIAL NOTES:

- 1. PROVIDE GRADE 60 REINFORCING STEEL.
- 2. PROVIDE CLASS C CONCRETE (f'c = 3,600 psi).

COVER DIMENSIONS ARE CLEAR DIMENSIONS UNLESS NOTED OTHERWISE. REINFORCING BAR DIMENSIONS SHOWN ARE OUT-TO-OUT OF BARS.



COLUMN

SECTION A-A

54~ #11

− @ COL/DS

€ COL/DS

48 DOWELS

HL93 LOADING

YINFEI SUN 130211

8/10/2023

1 8/10/23 YFS MODIFY DOWEL LAP LENGTH. NO. DATE REVISION APPRO\

DEC ENGINEERING EXCELLENCE

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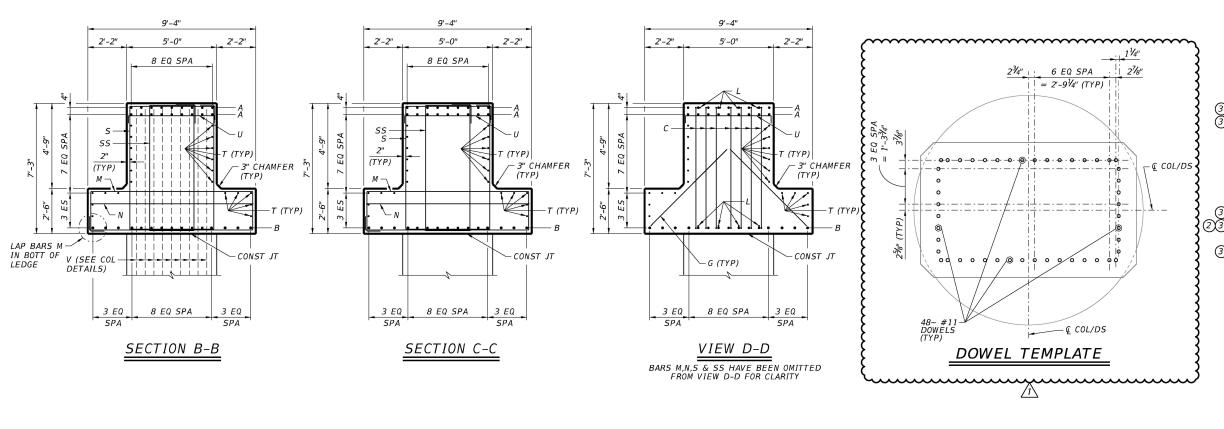
SH 99

BENT NO. 7

SH 99 SB EXIT RAMP

SHEET I	SHEET I OF 2						
FED. RD. DIV. NO.		PROJECT NO.	SHEET NO.				
6				650			
STATE	DIST.	COUNTY					
TEXAS	HOU	FORT BEND					
CONT.	SECT.	JOB HIGHWAY NO.					
3510	0.4	O10 ETC	c	ц оо			

(BRG SURFACE MUST BE CLEAN AND FREE OF ALL LOOSE MATERIAL BEFORE PLACING BRG PAD.)



BAR	NO.	SIZE	LENGTH		WE I GHT
Α	18	#11	25' - 11"		2,479
В	15	#11	25' - 11"		2,065
С	14	#5	8'-10"		129
D	4	#9	1'-8"		23
G	44	#6	6'-0"		397
H1	42	#4	23' - 3"		652
H2	42	#4	14'-0"		393
М	43	#6	24'-4"		1,572
N	43	#6	9'-0"		581
S	43	#6	25'-2"		1,625
SS	43	#6	20'-9"		1,340
T	22	#6	24'-1"		796
U	13	#4	5′-6″		48
V	48	#11	28'-0"		7,141
REINFORCING STEEL					19,241
CLASS "C" CONC (CAP)					42.8
CLASS "C" CONC (COL)			CY	31.1	

- (2) FOR CONTRACTOR'S INFORMATION ONLY.
- ③ QUANTITIES SHOWN ARE BASED ON A "H" VALUE
 OF 21'. FOR EACH LINEAR FOOT VARIATION IN "H"
 VALUE, MAKE THE FOLLOWING ADUSTMENTS:
 BARS V LENGTH, 1'-O'.
 NUMBER OF BARS H1 AND H2 BY 2.
 REINFORCING STEEL, 305 LBS.
 CLASS "C" CONC (COL), 1.48 CY.

NOTE:

1. SEE SHEET 1 OF 2 FOR GENERAL NOTES.

COVER DIMENSIONS ARE CLEAR DIMENSIONS UNLESS NOTED OTHERWISE. REINFORCING BAR DIMENSIONS SHOWN ARE OUT-TO-OUT OF BARS.

HL93 LOADING



8/10/2023

8/10/23	MODIFY DOWEL SPACING.	YFS
DATE	REVISION	APPROV
		8/10/23 MODIFY DOWEL SPACING.



FLAT AND

1 ½ TOP

DRILLED SHAFT REINFORCING

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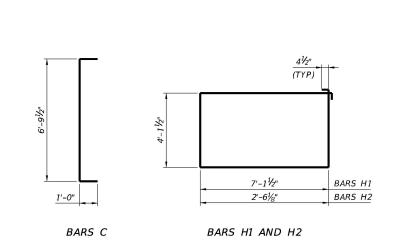


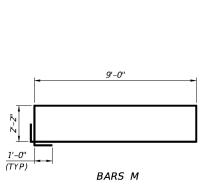
SH 99

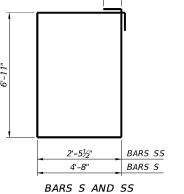
BENT NO. 7

SH 99 SB EXIT RAMP

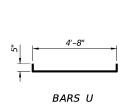
SIILLI Z	01 2			
FED.RD. DIV.NO.	PROJECT NO.			SHEET NO.
6				651
STATE	DIST.	COUNTY		
TEXAS	HOU	FORT BEND		
CONT.	SECT.	JOB	HIGHWAY NO.	
3510	04	019,ETC.	S	н 99

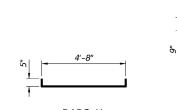






(TYP)





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