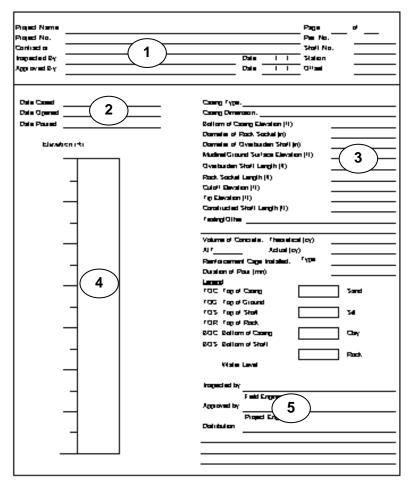


Project Name File No. Contractor					Page 1 Bent No. Shaft No.	of <u>6</u>
Completed By Contractor Reviewed By SCDOT	DS Foreman - Inspector -		Date Date	/ /	Station Offset	
					Construction	Temporary
Date Cased		_ Casing Type:				
Date Opened		_ Casing Dimensio	n (OD):	<u> </u>		
Date Poured		Bottom of Casing				
		Top of Casing Ele				
Elevation (ft)		Diameter of Rock	k Socket (IN)	_		
		Diameter of Shaf	it (IN)	_		
		Mud-line/Ground	Surface Elevati	ion (FT)		
		Wet & Dry Shaft	Length (FT)	_		
		Rock Socket Len	ıgth (FT)	_		
		Top of Shaft Elev	√ation (FT)	_		
		Tip Elevation (FT	<u> </u>	_		
		Constructed Sha	ft Length (FT)			_
		Testing/Other:				
		Volume of Concr	ete:		Theoretical (V	/T) CY
		OP = VP-VT =	UP = \	VT - VP=	Actual (VP) C	Υ
		Reinforcement C	age Installed:		Туре	
		Duration of Pour	(min)			
		Legend				
		TOC	Top of Casir	ng		Sand
		TOG	Top of Grou	ınd		
		TOS	Top of Shaft	t		Silt
		TOR	Top of Rock	(
		BOC	Bottom of C	asing		Clay
		BOS	Bottom of SI	haft		
		BOR	Bottom of R	≀ock		Rock
		₹	-Water Level			
		Completed by				
		Contractor	DS	S Foreman/E		
		Reviewed by			3	
		SCDOT	Ins	spector/Engi	ineer	
		Notes:				
		Shaft location va	riance at top:			

HOW TO COMPLETE THE DRILLED SHAFT LOG





Fill in every blank on the form. If it does not apply put an "N/A" or a long dash.

Use pencil – but never erase. If you need to change something, strike a single line through the item and insert the correct information above it. If there is insufficient room to make a note, footnote the item and go to the bottom of the page, or use a separate page.

- Heading:
- Fill in before drilling starts.
- Be sure to print your name and the start date of drilling.
- The Geotechnical Engineer will sign approval line.
- 2. Shaft Data: Fill in appropriate dates, elevations, and diameters.
- 3. Concrete Data: Record data from the Concrete Volumes form.
- 4. Construct Shaft Illustration using the symbols provided.
- 5. Fill in "Inspected by" and "Distribution".



Project Name File No. Contractor Completed By Contracto Reviewed By SCDOT	4.995 Drilled Shaft, Inc.		_Date06/0	Page 1 Bent No. Shaft No. Station O5/02 Offset	of 6 3 3 508 + 36 24 FT. Right
	00/04/00			Construction	Temporary
Date Cased	06/04/02	Casing Type:	2).	Steel	
Date Opened	06/04/02	Casing Dimension (Of	-	48.0 IN.	
Date Poured	06/05/02	Bottom of Casing Elevation		86.0 FT. msl	
Floration (ft)		Top of Casing Elevation		101.0 FT. msl	
Elevation (ft) TOS = TOC = 101.0'	TOG = 100.0'	Diameter of Rock Soc Diameter of Shaft (IN)		42.0 IN. 37 Ft. @ <u>+</u> 48.0 IN. 8	2.15 ET @ 47 IN
97.0′ = ♥					x 13 F1. @ 47 HV.
	47"	Mud-line/Ground Surfa	, ,	100.0 FT. msl 52.0 FT.	
]	Wet & Dry Shaft Length		10.0 FT. @ 42IN.	
l 	 	Rock Socket Length (I	-	101.0 FT. msl	
		Top of Shaft Elevation	(F1)	39.0 FT. msl	
BOC = 86.0'		Tip Elevation (FT) Constructed Shaft Ler	ath (ET)	62.0 FT.	
	 }				2.001
	+ 48"	Testing/Other: Slurry, Volume of Concrete:	Siump, Air, Com		
11/4	48	OP = VP-VT = 0.6 CY	/ LID = \/T \/D=	Theoretical (VT Actual (VP) CY	.,
M/-	14 5	Reinforcement Cage I	_	Type Spira	
	SW 71	Duration of Pour (min)		100 Min.	
I I MIN	. IVII	Legend		100 1/1111.	
	\-\ \ -\ \ \		of Casing		Sand
L#	/ ² / ₂ /		of Ground	The state of the state of	Curia
65.0'			of Shaft		Silt
 	777		of Rock		Sill.
l ///	///		om of Casing	$\mathcal{I}\mathcal{I}\mathcal{I}\mathcal{I}$	Clay
l //	///		om of Shaft		,
[///	BOR Bot	tom of Rock		Rock
l	///	Π		ш	
V/.	///	₩ Wat	er Level		
l //		Completed by			
TOR = 49.0'	~~~	Contractor	DS Forema	n/Engineer - John Q I	Doe
		Reviewed by			
<u> </u>	42"	SCDOT	Inspector/E	ngineer - John Smith	
		Notes:	•		
		Shaft location variance	e at top: 2" after p	plan station & 1" right	
BOR =BOS = 39.0'	Π'-1			-	
-	<u> </u>				



Project Name File No. Contractor Completed By Contra Reviewed By SCDOT	Replace Bridge over 4.995 Drilled Shaft, Inc. actor DS Foreman - John Inspector - Jane Sn	Q. Doe	Date06	Page 1 Bent No. Shaft No. S/05/02 Station Offset	of 6 6 3 508 + 36 24 FT. Right
Date Cased	06/04/02	Casing Type:		Construction	Temporary Steel
Date Opened	06/04/02	Casing Dimension (0	OD):		48.0 IN.
Date Poured	06/05/02	Bottom of Casing Ele	evation (FT)		86.0 FT.
		Top of Casing Eleva	tion (FT)		101.0 FT.
Elevation (ft)		Diameter of Rock So	ocket (IN)	42.0 IN.	-
TOTC = 101.0	100.0'	Diameter of Shaft (IN	۷)	<u>+</u> 48.0 IN.	
97.0' =		Mud-line/Ground Su	rface Elev. (FT)	100.0 FT. msl	
≃		Wet & Dry Shaft Len	gth (FT)	51.0 FT.	
		Rock Socket Length	(FT)	10.0 FT.	
		Top of Shaft Elevation	on (FT)	100.0 FT. msl	
		Tip Elevation (FT)		39.0 FT. msl	
BOTC = 86.0'		Constructed Shaft Le	ength (FT)	61.0 FT.	
<u>بر-ب</u> +		Testing/Other: Slurry	, Slump, Air, Con	npression Cylinders, &	CSL
	± 48"	Volume of Concrete:		Theoretical (V	,
l li i/	40	OP = VP-VT = <u>0.5</u>	CY UP = VT - VF		
	$\mathbb{Z}^{(N)}$	Reinforcement Cage	Installed:	Type: Welded	Hoops
Ä	K 78/41	Duration of Pour (mi	n)	100 Min.	
	$\{\{Y_i\}\}$	Legend		5c	
	火发剂		op of Casing		Sand
	<u> </u>		op of Ground		
65.0'			op of Shaft		Silt
	////		op of Rock	(
[/	7///		ottom of Casing		Clay
l Y/	(///)		ottom of Shaft		
I //	////	BOR B	ottom of Rock		Rock
/	////	<u>V</u>	ator Loval		
	////		ater Level		
I 灬	/ 	Completed by	DO E	an Engineer total	Date
TOR = 49.0'	 	Contractor	DS Foren	nan/Engineer - John Q	Doe
│	42"	Reviewed by	Inconcetor	Engineer - long Cmith	
	' 	SCDOT Notes:	inspector	Engineer - Jane Smith	
+	┍ ┸┯┸┨		ce at ton: 1" after	nlan station & 4" left is	Called Bridge
BOR =BOS = 39.0'			-	plan station & 4" left.	
20.1 - 200 - 00.0				Received verbal approv	
		nom BCE. Contract	or tola to submit le	etter covering this shaft	variance.



Reviewed By	By Contractory SCDOT	DS Forem Inspector	-	onstruction casi	Date Date	/ / / /	Page 2 Bent No. Shaft No. Station Offset	! (of _	6
	C	asing Informati	on				ıger Diam.			
ID	OD	Top Elev.	Length	Bot. Elev.			Core Diam. d Surface Elev.			
							a Sunace Elev. Table Elev.	·		
							nce Elev.			
		·=				Drilling	Mud			
Notes										
Depth (Elev.	Time	е		Soil De	scription an	d Notes			
			In							
			Out							
			In							-
			Out							
			In							
			Out							
			In							
			Out							
			In							
			Out							
			In							
			Out							
			In							
			Out							
			In							
			Out							
			In							
			Out							

HOW TO COMPLETE THE DRILLED SHAFT EXCAVATION LOG



Project Name Project No. Confusct or trapacted By Approved By	$_{\cdot}$	1)		Page d
		ran Elev.	Lengih	Rol. Day.	Yeal Augus Dearn. Cricard Seal seas Dear. Water Father Clay. Poline more Clay. Drining Mad
Notes					
Dagih	Ellev.	rem	•		Sai Deceptor and Notes
			h		
			Out		
	<u> </u>		h		
⊢ 4	.)		Out		
			h.		
			Out		<u> </u>
			h		(0)
		<u> </u>	_~~		
		⊢ (5]		
		\rightarrow			
			ln l		
			Out .		
			in Out		
			in in		
			- n		
			in in		
	_	_	-		
	_		in in		
			- n		
			- 50		

Fill in every blank on the form. If it does not apply put an "N/A" or a long dash.

Use pencil – but never erase. If you need to change something, strike a single line through the item and insert the correct information above it. If there is insufficient room to make a note, footnote the item and go to the bottom of the page, or use a separate page.

- 1. Heading: -Fill in before drilling starts.
 - -Be sure to print your name and the start date for drilling.
 - -The Geotechnical Engineer will sign approval line.
- 2. Casing: -Measure Length (L) in the field.
 - -Surveyor provides Top of Casing elevation (TE).
 - -Compute bottom elevation (BE): TE-L=BE
- 3. Site Data -Soil Auger diameter measure and record in inches.
 - -Ground surface elev. provided by surveyor.
 - -Water table elev. measure w/tape in hole before slurry is introduced (if applicable).
 - -Water table may need to be estimated from seepage in dry hole method.
 - -Reference Elevation provided by surveyor.
 - -Drill mud If used, complete the "Slurry Inspection Log"; compare to Installation Plan
- 4. Depth/Elevation: Depth (D) can be measured by:
 -) Contractor has kelly bar marked (spot checking only)
 - Weighted tape (for accurate measurements)

Reference elevation is always known; i.e., template, top of casing, or top of ground.

Elevation (E) – compute *TE-D=E*

Enter Depth/Elev. For EVERY change in the soil/rock condition.

5. Time: May use military or 24 hour clock. Be consistent and correct! Remember that shaft

drilling can occur over several days, so be sure to mark date changes.

6. Material: Use this form to record all activity during shaft excavation. Label all major soil strata.



DRILLED SHAFT EXCAVATION LOG (REV 06-03-02) SAMPLE 1 Construction Casing

Reviewed B	By Contractor y SCDOT gering not a	4.995 Drilled Sha DS Forema Inspector -	aft, Inc. an - Joh John Si n using		S-322 Date Date	Page 2 Bent No. Shaft No. 06/03/02 Station 06/03/02 Offset Soil Auger Diam.	of 6 3 3 508 + 36 24 Ft. Right
ID	OD	Top Elev.	Length	Bot. Elev.		Rock Core Diam.	42"
47"	48" 1	101.0 MSL	15'	86.0 MSL		Ground Surface Elev.	100.0 MSL
				<u> </u>		Water Table Elev.	97.0 MSL
						Reference Elev.	101.0 MSL
						Drilling Mud	Slurry
Notes	Switched to 42	2" Rock Core	@ 52.0' ((49.0 ' MSL) at 1:50 pm.			
Depth (Feet)	Elev. (Ft. MSL)	Time	•	:	Soil De	escription and Notes	
1.0	100.0	7:30 am	In	Tan Silty Sand			
15.0	86.0	9:00 am	Out	Tan Silty Sand			
15.0	86.0	9:10 am	In	Dark Tan Sand			
36.0	65.0	11:30 am	Out	Dark Tan Sand			
36.0	65.0	11:40 am	In	Dense Silty Sand (PWR) w/	Mica		
52.0	49.0	1:30 pm	Out	Dense Silty Sand (PWR) w/	Mica		
52.0	49.0	1:50 pm	In	Very Dense Rock (Granite)			
61.0	40.0	4:50 pm	Out	Very Dense Rock (Granite)			
61.0	40.0	7:15 am	In	Very Dense Rock (Granite)	Contin	ued drilling from previous day	1
62.0	39.0	7:30 am	Out	Very Dense Rock (Granite)	Contin	ued drilling from previous day	1
			In				
			Out				
			In				
			Out				
			In				
			Out				
			In				
			Out				
			In				
			Out				



DRILLED SHAFT EXCAVATION LOG (REV 06-03-02) SAMPLE 2 Temporary Casing

Casing Inform ID 47"	Sy Contractor Cy SCDOT gering not a ation: Constru OD 48" 1	4.995 Drilled Sha DS Forema Inspector - Illowed whe action Top Elev.	aft, Inc. an - Joh Jane S n using Length	nith Date construction casing. orary X	06/03/02 06/03/02 Soil Aug Rock Co Ground Water T	Page 2 Bent No. Shaft No. Station Offset ger Diam. ore Diam. Surface Elev. sable Elev. ce Elev.	of 6 6 3 508 + 36 24 Ft. Right 46" 42" 100.0 MSL 97.0 MSL 101.0 MSL Slurry
 Depth	Elev.						
(Feet)	(Ft. MSL)	Time	•	Soil [Description and	Notes	
1	100.0	7:30 am	In	Tan Silty Sand			
15.0	86.0	9:00 am	Out	Tan Silty Sand			
15.0	86.0	9:10 am	In	Dark Tan Sand			
36.0	65.0	11:30 am	Out	Dark Tan Sand			
36.0	65.0	11:40 am	In	Dense Silty Sand (PWR) w/Mica			
52.0	49.0	1:30 pm	Out	Dense Silty Sand (PWR) w/Mica			
52.0	49.0	1:50 pm	In	Very Dense Rock (Granite)			
61.0	40.0	4:50 pm	Out	Very Dense Rock (Granite)			
61.0	40.0	7:15 am	In	Very Dense Rock (Granite) Cont	inued drilling fro	om previous day	/
62.0	39.0	7:30 am	Out	Very Dense Rock (Granite) Cont	inued drilling fro	om previous day	/
			In				
			Out				
			In				
			Out				
			In				
			Out				
			In				
			Out				
			In				
			Out				



SLURRY INSPECTION LOG (REV 06-03-02)

Project Name					
File Number		Composition:	Brand	Туре	Proportions
Bent No.	Shaft No.	Mineral Type			
Water Source: *		Addition			
Date of Initial Hydration	/ / Time	Sadilives			

				TE	TEST PROPERTIES	IES				
:	Before	Firs	t 8 Hours Duri	First 8 Hours During Construction **	on **	Additional Testing	al Testing	At End of	Before	Before
Sampling	Introduction of Slurry	Test 1	Test 2	Test 3	Test 4	Test 1	Test 2	Excavation	Concreting Test 1	Concreting Test 2
Date:										
Time:										
Test Depth at Levels:	Holding Tank							At Bottom	At Bottom	At Bottom
Density										
Viscosity										
% Sand										
Hd										
Cake / Filtrate	N/A									
Notes: * Salt	water shall n	ot be used to	hydrate the slı	* Salt water shall not be used to hydrate the slurry or stabilize the excavation.	e the excavation	on.				
* A I	stst A minimum of 4 sets of tests shall be made	sets of tests s	shall be made	during the first 8 hours of slurry use.	t 8 hours of slu	urry use. Slurr	y sampling aı	nd testing shal	Slurry sampling and testing shall be observed by the	by the
Engi	Engineer. When the results show consistent	ne results sho		vehavior, the te	sting frequen	cy may be dec	reased to 1 se	st every 4 hour	behavior, the testing frequency may be decreased to 1 set every 4 hours of slurry use.	4
Contractor DS Foreman:	3 Foreman:						Date: /			
SCDOT Inspector:	ector:]	Date: /	/	Page 3	of 6

HOW TO COMPLETE THE SLURRY INSPECTION LOG

SLURRY INSPECTION LOG

PIOJECTNO.		-		r						
Drilled Shaft	No	(1]			Composit	lon:	Braid	~~~~	e P	roportions
Shaft Location	·		<u></u>		Mheral T	ype		【 2 】		
Wanter Source	e: **				Addition	ε				
				1	EST PROPERT	TES				
0	Before	First	t 8 Hours Dur	ing Constru	ction *	Additio	nal Testing	At End of	Before	Before
Sampling	Introduction of Slurry	Test 1	Test 2	Test 3	Test 4	Test 1	Test 2	Excavation	Concreting Test 1	Concreting Test 2
Date:										
Time:										
Properties	Test Deptirat Leuels:			3				At Bottom	At Bottom	At Bottom
Density										
Viscosity										
% Said										
рН										
Cake / Filtrate										
Notes: 1 A m l	ilm um of 4 sets o	n'tests shall be n	nade divilhor the 1	first8 kours o	ris lurno use . Siu mo:	sampling and:	testing shall be obs	enjed by the Eng	heer. When the	results show

Notes:	s: "A milimim of 4 sets of tests shall be made during the first8 hours of slurry use. Slurry sampling and testing shall be o	obsenued by the Engliseer. When the results show
	consistent be haulon, the teating theque noy may be decreased to 1 setemeny 4 hours of six my use.	
	"Saltwarer shall not be used to hydrate the shurry the excausation.	
·		
· '		
·		
Contra	tractor Representative:	1 1
State In	e Inspector: Date:	1 1

1. Heading: - Fill in before drilling starts.

- The Project Resident Engineer will sign approval line.

2. Slurry Data: - Fill in appropriate brands, types, and proportion.

3. Test Data: - Record test data as the testing Inspector performs the tests.

- Note the depth at which the samples were obtained.
- Make sure that a minimum of 4 tests are performed within the first 8 hours of slurry use.
- 4. Notes: Record any unusual events or results.
- 5. Fill in "Contractor Representative" and "State Inspector".

Fill in every blank on the form. If it does not apply put an "N/A" or a long dash.

Use pencil – but never erase. If you need to change something, strike a single line through the item and insert the correct information above it. If there is insufficient room to make a note, footnote the item and go to the bottom of the page, or use a separate page.



SLURRY INSPECTION LOG (REV 06-03-02) SAMPLE 1 Construction Casing

Project Name	ЭГ	Replace Bridge over Cooper Creek along US-322	je over Coope	r Creek along	g US-322					
File Number		4.995				Composition:	Brand	Type	Prop	Proportions
Bent No.		3	Shaft No. 3			Mineral Type	Augua Gel	Bentonite		1400 LBS / 5000 GAL
Water Source: *	* 	Hydrant (City water)	water)			ooniii oo				
Date of Initia	Date of Initial Hydration	06/03/02	Time 9:00 am	0 am		Additives				
				TES	TEST PROPERTIES	LIES				
	Before	First	First 8 Hours During Construction **	ng Construction	** uc	Additional Testing	l Testing	At End of	Before	Before
Sampling	Sampling Introduction of Slurry	Test 1	Test 2	Test 3	Test 4	Test 1	Test 2	Excavation	Concreting Test 1	Concreting Test 2
Date:	06/04/02	06/04/02	06/04/02	06/04/02	06/04/02			06/05/02	06/05/02	06/05/02
Time:	11:00 am	1:30 pm	2:30 pm	4:00 pm	5:00 pm			7:30 am	8:15 am	9:20 am
Test Depth at Levels:	Holding Tank	50 FT	53 FT	58 FT	60 FT			At Bottom	At Bottom	At Bottom
Density	99	67.1	67.3	65.8	6.33			69.1	66.1	66.3
Viscosity	33	37	38	36	28			42	38	37
% Sand	%0	3%	4%	2%	7.5%			10%	2%	2%
Hd	10	o	6	6	6			O	10	10

Notes: * Salt water shall not be used to hydrate the slurry or stabilize the excavation.

** A minimum of 4 sets of tests shall be made during the first 8 hours of slurry use. Slurry sampling and testing shall be observed by the Engineer. When the results show consistent behavior, the testing frequency may be decreased to 1 set every 4 hours of slurry use.

Note: Side of shaft caked. Cleaned shaft sides.

Contractor DS Foreman:	John Q. Doe	Date:	06/05/02			
SCDOT Inspector: John Smith	Smith	Date:	06/05/02	Page	က	of e



SLURRY INSPECTION LOG (REV 06-03-02) SAMPLE 2 Temporary Casing

Project Name	ne	Replace Bridge over Cooper Creek along US-322	e over Coope	ır Creek along	3 US-322					
File Number		4.995				Composition:	Brand	Type	Prop	Proportions
Bent No.		3 9	Shaft No. 3			Mineral Type	Augua Gel	Bentonite		1400 LBS / 5000 GAL
Water Source: *	* .e.	Hydrant (City wat	water)			:: ::: :::				
Date of Initia	Date of Initial Hydration	06/03/02	Time 9:00 am	0 am		Addillyes				
				TES	TEST PROPERTIES	IES				
3	Before	First	8 Hours Durir	First 8 Hours During Construction **	3n **	Additional Testing	l Testing	At End of	Before	Before
Sampling	sampling Introduction of Slurry	Test 1	Test 2	Test 3	Test 4	Test 1	Test 2	_	Concreting Test 1	Concreting Test 2
Date:	06/04/02	06/04/02	06/04/02	06/04/02	06/04/02			06/05/02	06/05/02	06/05/02
Time:	11:00 am	1:30 pm	2:30 pm	4:00 pm	5:00 pm			7:30 am	8:15 am	9:20 am
Test Depth at Levels:	Holding Tank	50 FT	53 FT	58 FT	60 FT			At Bottom	At Bottom	At Bottom
Density	65	67.1	67.3	65.8	6.38			69.1	66.1	66.3
Viscosity	33	37	38	36	25			42	38	37
% Sand	%0	3%	4%	2%	2.5%			10%	2%	2%
Нф	10	თ	6	6	6			6	10	10

Notes: * Salt water shall not be used to hydrate the slurry or stabilize the excavation.

** A minimum of 4 sets of tests shall be made during the first 8 hours of slurry use. Slurry sampling and testing shall be observed by the

Engineer. When the results show consistent behavior, the testing frequency may be decreased to 1 set every 4 hours of slurry use.

Note: Side of shaft caked. Cleaned shaft sides.

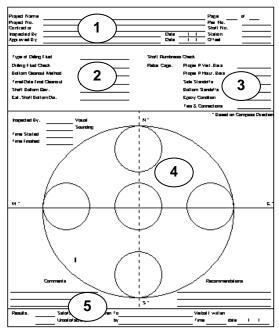
Date:	ı	06/05/02	Date:	in: John Q. Doe	Contractor DS Foreman:
	Page 3 of	06/05/02	Date:	ine Smith	SCDOT Inspector: Jan



Project Name File No. Contractor Completed By Contractor Reviewed By SCDOT	DS Foreman - Inspector -		Date	Page 4 Bent No. Shaft No. Station Offset	of <u>6</u>
Type of Drilling Fluid DS Location Variance at To Bottom Cleanout Method Time/Date Final Cleanout Shaft Bottom Elev. Est. Shaft Bottom Dia.	p		ar Cage: Prope Prope Side S Bottor	m Spacers Connections	
Inspected By: Time Test Started Time Test Finished Time Test Started Time Test Finished	Visual Sound	ding N *		rior to placing Rebar ca	
W *					E *
Note: 50% of base shall h No area of shaft bottom s Notes)	Comments/Recomm	endations
	factory DS Foreman atisfactory SCDOT Inspen		s Max. Vertica		per 4 Ft. Max.

HOW TO COMPLETE THE DRILLED SHAFT INSPECTION LOG





Fill in every blank on the form. If it does not apply put an "N/A" or a long dash.

Use pencil – but never erase. If you need to change something, strike a single line through the item and insert the correct information above it. If there is insufficient room to make a note, footnote the item and go to the bottom of the page, or use a separate page.

- Heading:
- -Fill in before drilling starts.
- -Be sure to print your name and the start date of drilling.
- -The Project Resident Engineer or designated representative will sign approval line.
- 2. Shaft Status:

Drill Fluid Check – Responsibility of Contractor. Record density check performed by Contractor or Inspector.

Contra	icioi di iliapecidi.							
Type o	of Drill Fluid – record							
a)	Natural							
b)	b) Mineral (commercial)							
c)	Plain water							
Remer	mber: Polymer slurry not allowed							

- -Bottom Cleanout Method: Observe and record equipment type (i.e., cleanout bucket, air lift, submersible pump, etc.). Must match Installation Plan.
- -Time/Date Final Cleanout: Record when last cleanout performed prior to rebar cage placement.
- -Shaft Bottom Elevation Use weighted tape to measure; record.
- -Estimate Shaft Bottom Diameter record auger diameter.
- Cage Check:
- -Reinforcing cage usually checked by others.
- -Proper number of Vertical bars count and record # of vertical bars in hole; compare to plan.
- -Epoxy you should <u>never</u> see coated rebar
- 4. Shaft Cleaniness:
- check procedure being used, record
- 1) Using S.I.D., visually inspect the shaft bottom in each of a minimum of 5 locations as shown on form.
- 2) Using a weighted tape, sound the shaft in each of a minimum of 5 locations as shown on form. "Feel" for hard bottom it translates to clean hole. Remember specifications.
- Record Results:



DRILLED SHAFT INSPECTION LOG (REV 06-03-02) SAMPLE 1 Construction Casing

Project Name File No. Contractor Completed By Contractor Reviewed By SCDOT	Replace Bridge over Cooper 4.995 Drilled Shaft, Inc. DS Foreman - John Q. Doe Inspector - John Smith	Creek along US-3 Date Date	e 06/05/02	Page 4 Bent No. Shaft No. Station Offset	of 6 3 3 508 + 36 24 FT. Right
Type of Drilling Fluid DS Location Variance at To Bottom Cleanout Method Time/Date Final Cleanout Shaft Bottom Elev. Est. Shaft Bottom Dia.	Bentonite 2" After Sta. & 1" Right		ness Check/4' Proper # Vert. I Proper # Horiz. Side Spacers Bottom Spacer Ties & Connect	Bars 16 EA # 36 Bars # 19 Bar @ 4 EA 6 s 16 EA	
Time Test Started 7:44 Time Test Finished 8:00 Time Test Started 9:10	QD Visual Sounding 3/8" 0 am 3/8" 25 am	1/2" Te	est just prior to pla est just prior to Direction	acing Rebar cage	
	<u>-</u>	Re	Comme ebar cage placed oncrete placed aft		ed after first test.
Unsa	factory DS Foreman		Time	9:25 am Dat	



DRILLED SHAFT INSPECTION LOG (REV 06-03-02) SAMPLE 2 Temporary Casing

File No. Contractor Completed By Contractor	Replace Bridge over Cooper 4.995 Drilled Shaft, Inc. DS Foreman - John Q. Doe Inspector - Jane Smith	Da		Page 4 Bent No. Shaft No. Station Offset	of 6 6 3 508 + 36 24 FT. Right
Type of Drilling Fluid DS Location Variance at Top Bottom Cleanout Method Time/Date Final Cleanout Shaft Bottom Elev. Est. Shaft Bottom Dia.	Bentonite 1" Before Sta. & 4" Left** Airlift 7:45 am on 06/05/02 39.0 msl 42 Inches		pe: Proper # Vert. Proper # Horiz Side Spacers Bottom Space Ties & Connec	Bars 16 EA # 36 z. Bars # 19 W Ho 4 EA e	
Time Test Started 7:45 Time Test Finished 8:00 Time Test Started 9:10 Time Test Finished 9:2	2D Visual Sounding 5 am 0 am 5 am 5 am 0 or		Test just prior to pl Test just prior to * Direction	lacing Rebar cage	
Notes 60% area < 1/2", first test ok 60% area < 1/2", second te	est okay.	1"	Comme Rebar cage placed Concrete placed at ** - See note on Pa	fter second test wa	ed after first test.
	tisfactory SCDOT Inspector		Time	9:25 am Date	e 06/05/02
NOTE: Specification Tolerar	nces - Location Variance at To	p = 3 inches Max	. Vertical (Plumb	oness) = 1 inch pe	er 4 Ft. Max.



DRILLED SHAFT CONCRETE PLACEMENT LOG (REV 06-03-02)

		DS Forema Inspector -	ın -		Date Date		Page Bent Shaft Static	No. t No. on	6	
Placemen De-airing Reference Shaft Top Top of Ro	Method	Tremie Pumped Relief Valve Plug Cap	Total V Time F	Volume in Lines First Truck Baten of Water Per l	s + Pump Truc tched: Hr. Inside Shaf		e Check)	Σ =	Volu	
Shaft Bott	tom Elev.		Rebar	r Cage Top Ele	ev. At Start -		At Finis	h		
Truck No.	Concrete Volume	Arrival Time	Start Time	Finish Time	Tremie Depth	Depth To		Notes		
	Concrete Volu	me Delivered		1	Total Placeme	ent Time (T	emp. Casing	Removed) _		
T Casing	Removal**	DD Top E	lev.	Bot. Elev.	Start F		Rebar Cage C Rebar Cage R	entered*	YES	NO
Notes * If	f no, then re-cent	ter rebar cage.	** If una	ble to remove	temporary ca	ising, ther	າ call Bridge (Construction	Office.	

HOW TO COMPLETE THE DRILLED SHAFT CONCRETE PLACEMENT LOG

Protect Name Protect No. 1 Plear No. Plear No. Shall No. Plear No. Plear No. Shall No.			DRII	LED SHA	FT CONCE	RETE PLA	CEMENT	. O G		
Personal Description of Person	Project N Contract Inspecies	o. r By		1				Pier i Shani Statio	No.	
Selecting Sev. Start Fog Sev. Start Fog Sev. Start Fog Sev. Start Patient Sev. Start Pati			Pumped Raisi Vo	Ave Tug	Volume in	Lms		D	Length	Volume
Conce site Violence Conce site France Conce site	Shariran ran a' Pas	Clav. A. Clav.	4	Degil	io Waler kon	.	an Casa		I	
Conce die Volume Debvesed Processes Frank Conce die Franked Conce die Volume Debvesed Photometi Frank Conce die Franked Conce die Franked Conce die Franked Conce die Franked 9	No.	Volume	Terms	rema	rema	Dagih	Company		Plotes	
Corce sis Volume Dakvesed Passement Free Coorce Coorc		\sum	 			7			8	
Conce also Volume Delivered Placement Free (Cooking Removed) OD Fog Slav. 8d. Slav. Stat Fresh Rebs Corp Centered Conce also Freshed Personal 9										
Consult Freshed		Comp als V	oluma Dakvas	ıd		Placement fo	ma (Casang Pa	imovaid)		
	Ramov si	gp	rop Clev.	$\overline{}$	Sial	Finah				

Fill in every blank on the form. If it does not apply put an "N/A" or a long dash.

Use pencil – but never erase. If you need to change something, strike a single line through the item and insert the correct information above it. If there is insufficient room to make a note, footnote the item and go to the bottom of the page, or use a separate page.

- . Heading: -Fill in before drilling starts.
 - -Be sure to print your name and the start date of drilling.
 - -The Project Resident Engineer or designated representative will sign approval line.
- 2. Indicate correct "Placement" and "Deairing" method.
- 3. Compute and fill in Concrete Volumes: $V = (\pi d^2/4) \times L$
- 4. Fill in as much as possible prior to pour.
- 5. Record Truck number and amount of concrete.
- 6. Time: -May be military or standard clock. Be consistent and correct.

Watch for date changes on late night pours.

7. Depths: -Tremie embedment may be measured by markings on the tremie. Depth to

concrete may be measured by weighted tape.

- 8. Notes: Record any unusual events or items.
- 9. Casing/Rebar Data: -The rebar cage fabrication will normally be performed on-site. Observe the lifting

to make sure deformation or damage does not occur (especially to CSL tubes). Check that the correct cage is being used. Check reinforcing steel diagram against the actual cage to be sure cage is correct. When the cage is being placed, observe the spacing to assure the cage is set to the proper elevation.



DRILLED SHAFT CONCRETE PLACEMENT LOG (REV 06-03-02) SAMPLE 1 Construction Casing

	or	4.995 Drilled actor DS For	Shaft, Inc.	ın Q. Doe	reek along US Date	06/05/02		No	6 3 3 08 + 36 FT. Right
Placemen	_	Tremie X Pumpeo		Volume in P		# 17	ID T	Total Length	Volume 1.2 CY
De-airing	wiethod	X Plug	alve Pump	Truck					0.2 CY
Reference Shaft Top Top of Ro Shaft Bott	Elev. ock Elev.	101.0 msl 101.0 msl 49.0 msl 39.0 msl	Time F	irst Truck Bato of Water Per I	s + Pump Truck ched: <u>9:10 am</u> Hr. Inside Shaft v At Start - 10			·	1.4 CY
Truck No.	Concrete Volume	Arrival Time	Start Time	Finish Time	Tremie/ Pump Lines Total Length	Depth To Concrete from Casing Top		Notes	
17	9.0 CY	9:20 am	9:25 am	9:40 am	160 FT	41.0 FT	Remove	d 10' of pum	np line.
22	9.0 CY	9:30 am	9:45 am	10:00 am	160 FT	21.7 FT	Remove	d 20' of pum	np line.
8	9.0 CY	9:40 am	10:05 am	10:20 am	130 FT	2.4 FT		d 20' of pum	
17	4.0 CY	10:30 am	10:35 am	10:50 am	120 FT	0		.0 CY (Reme les and over	
31.0 C	Y_Concrete \	Volume Deliver	ed		Total Placemer	nt Time (Temp. 0	Casing Re	moved) 1	00 Min.
T Casing	Removal**	OD To NA	p Elev. E	3ot. Elev.	Start Fi		Cage Cent Cage Re-c		
Notes * If	no, then re-	center rebar c	age. ** If u	nable to remo	ove temporary o	casing, then ca	II Bridge (Construction	ı Office.



DRILLED SHAFT CONCRETE PLACEMENT LOG (REV 06-03-02) SAMPLE 2 Temporary Casing

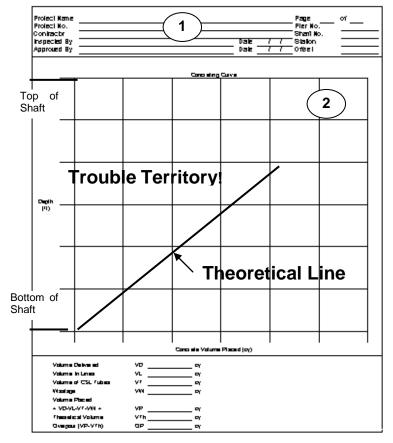
December December	Project N File No. Contract		4.995	e Bridge ov Shaft, Inc.	er Cooper C	creek along U	S-322	Page 5 Bent No. Shaft No.	of	6 6 3
Placement Method X Pumped Pump Truck # ID Total Length Volume in Pump Truck 17 6" 170" 1.2	Complete	ed By Contra	actor DS For		ın Q. Doe	Dat	e 06/05/02			08 + 36
No. Pump Pump Truck Lines (6" x 10") 17 6" 170" 1.2	Reviewe	d By SCDO	T Inspect	or - Jane S	mith	Dat	e 06/05/02	Offset	24	FT. Right
De-airing Method Valve X Plug Pump Truck De-airing Method X Plug Total Volume in Lines + Pump Truck Σ = 1.4	Placemer	nt Method	X Pumped	d Pump I					_	Volume 1.2 CY
Reference Elev. 101.0 msl 100.0 msl 100.0 msl 200.0 msl	De-airing	Method	Valve	Pump T	ruck					0.2 CY
Truck No. Concrete Volume Arrival Time Start Time Finish Time Tremie/ Time Depth To Concrete from Casing Top Notes 17 9.0 CY 9:20 am 9:25 am 9:40 am 160 FT 41.0 FT Removed 10' of pump lin 22 9.0 CY 9:30 am 9:45 am 10:00 am 160 FT 21.7 FT Removed 20' of pump lin 8 9.0 CY 9:40 am 10:05 am 10:20 am 130 FT 2.4 FT Removed 20' of pump lin 17 4.0 CY 10:30 am 10:35 am 10:50 am 120 FT 0 Waste 2.0 CY (Removed temporary casing, pump and concrete overflow.) 31.0 CY Concrete Volume Delivered Total Placement Time (Temp. Casing Removed) 100 M T Casing Removal** OD Top Elev. Bot. Elev. 85.0 msl Start Finish 10:35 am Rebar Cage Centered* X	Shaft Top	Elev.	100.0 msl	Time F	irst Truck Bat	ched: <u>9:10 am</u>		k): NA - Slurr		1.4 CY
Truck No. Concrete Arrival Time Time Time Time Time Total Length Casing Top	Shaft Bott	tom Elev.	39.0 msl	Rebar	Cage Top Ele	ev. At Start - 1	08.0 msl	At Finish - 108	.0 msl	
22 9.0 CY 9:30 am 9:45 am 10:00 am 160 FT 21.7 FT Removed 20' of pump lin						Pump Lines	Concrete from		Notes	
8 9.0 CY 9:40 am 10:05 am 10:20 am 130 FT 2.4 FT Removed 20' of pump lin 17 4.0 CY 10:30 am 10:35 am 10:50 am 120 FT 0 Waste 2.0 CY (Removed temporary casing, pump and concrete overflow.) 31.0 CY Concrete Volume Delivered Total Placement Time (Temp. Casing Removed) YES T Casing Removal** 48" 101.0 msl 85.0 msl 10:25 am 10:35 am Rebar Cage Centered X	17	9.0 CY	9:20 am	9:25 am	9:40 am	160 FT	41.0 FT	Removed 10	of pum	p line.
17 4.0 CY 10:30 am 10:35 am 10:50 am 120 FT 0 Waste 2.0 CY (Removed temporary casing, pump and concrete overflow.) 31.0 CY Concrete Volume Delivered Total Placement Time (Temp. Casing Removed) YES T Casing Removal**	22	9.0 CY	9:30 am	9:45 am	10:00 am	160 FT	21.7 FT	Removed 20	of pum	p line.
	8	9.0 CY	9:40 am	10:05 am	10:20 am	130 FT	2.4 FT	Removed 20	of pum	p line.
31.0 CY Concrete Volume Delivered Total Placement Time (Temp. Casing Removed) YES T Casing Removal** Total Placement Time (Temp. Casing Removed) YES YES T Casing Removal** Total Placement Time (Temp. Casing Removed) YES Rebar Cage Centered* X	17	4.0 CY	10:30 am	10:35 am	10:50 am	120 FT	0	Waste 2.0 C	Y (Remo	ved the
31.0 CY Concrete Volume Delivered Total Placement Time (Temp. Casing Removed) YES T Casing Removal** 48" 101.0 msl 85.0 msl 10:25 am 10:35 am Rebar Cage Re-centered X		:	:				:	temporary ca	sing, pu	ımp lines
YES OD Top Elev. Bot. Elev. Start Finish Rebar Cage Centered* T Casing Removal** 48" 101.0 msl 85.0 msl 10:25 am 10:35 am Rebar Cage Re-centered X								and concrete	e overflo	w.)
YES OD Top Elev. Bot. Elev. Start Finish Rebar Cage Centered* T Casing Removal** 48" 101.0 msl 85.0 msl 10:25 am 10:35 am Rebar Cage Re-centered X		ļ	<u> </u>	ļ			<u> </u>	<u> </u>		
YES OD Top Elev. Bot. Elev. Start Finish Rebar Cage Centered* T Casing Removal** 48" 101.0 msl 85.0 msl 10:25 am 10:35 am Rebar Cage Re-centered X		:	<u> </u>			:	 	 		
YES OD Top Elev. Bot. Elev. Start Finish Rebar Cage Centered* T Casing Removal** 48" 101.0 msl 85.0 msl 10:25 am 10:35 am Rebar Cage Re-centered X		<u>:</u>	<u> </u>			<u> </u>	1	<u> </u>		
YES OD Top Elev. Bot. Elev. Start Finish Rebar Cage Centered* T Casing Removal** 48" 101.0 msl 85.0 msl 10:25 am 10:35 am Rebar Cage Re-centered X							 			
YES OD Top Elev. Bot. Elev. Start Finish Rebar Cage Centered* T Casing Removal** 48" 101.0 msl 85.0 msl 10:25 am 10:35 am Rebar Cage Re-centered X										
YES OD Top Elev. Bot. Elev. Start Finish Rebar Cage Centered* T Casing Removal** 48" 101.0 msl 85.0 msl 10:25 am 10:35 am Rebar Cage Re-centered X										
T Casing Removal** 48" 101.0 msl 85.0 msl 10:25 am 10:35 am Rebar Cage Centered X	31.0 C	Y Concrete \	/olume Deliver	red		Total Placeme	ent Time (Temp.	Casing Remove	ed) <u>1</u>	00 Min.
	Ŧ 0	D 101		-					·	Х
		_								



or DS Foreman -		Date	/ /	Bent No. Shaft No. Station	6 of — —	<u> </u>
порестог -			1 1	Oliset		
	Concre	ting Curve				
	Concrete Vol	ume Placed (cy)		_		
bes T-VW = e	VD VPTL VCSLT VW	cy cy cy cy				
d Tru		Concrete Vol. Concrete Vol.	Concreting Curve	Concreting Curve Concrete Volume Placed (cy) Concrete Volume	Concrete Volume Placed (cy) Conc	Concrete Volume Placed (cy) Conc

HOW TO COMPLETE THE DRILLED SHAFT CONCRETE VOLUMES LOG





Fill in every blank on the form. If it does not apply put an "N/A" or a long dash.

Use pencil – but never erase. If you need to change something, strike a single line through the item and insert the correct information above it. If there is insufficient room to make a note, footnote the item and go to the bottom of the page, or use a separate page.

1.	Heading:	-Fill in before drilling starts.					
		-Be sure to print your name and the start date of drilling.					
		-The Project Resident Engineer or designated representative will sign approval line.					
2.	Concrete curve:	-compute Theoretical Volume of Concrete based on shaft size:					
		$Vth = (\pi d^2 / 4)x L$					
		-locate points based on known cubic yards of concrete placed at measured "bottom" depth.					
		<u>-must</u> be plotted during concrete placement.					

Note: Plotted line should closely parallel Theoretical line.

There is a problem if:

- a point plots way above or below the Theoretical line and/or
- there is a significant rise or fall in an otherwise straight line (change in slope of line).



DRILLED SHAFT CONCRETE VOLUMES LOG (REV 06-03-02) SAMPLE 1 Construction Casing

File No. Contract Complete	Project Name Replace Bridge over Cooper Creek along US-322 Page 6 of 6 File No. 4.995 Bent No. 3 Contractor Drilled Shaft, Inc. Shaft No. 3 Completed By Contractor DS Foreman - John Q. Doe Date 06/05/02 Station 508 + 36 Reviewed By SCDOT Inspector - John Smith Date 06/05/02 Offset 24 FT. Right								
	61 60		Cond	Concreting Curve					
	50				<i></i>		10		
	40						20		
Depth	30	Theoretical					30		
(FT)	20			Actual			40		
	10						50		
	0						60 61		
	0	5	10 Concrete Vo	15 lume Placed (CY)	20	25	30		
Vo Vo Wa	olume Delivered olume In Pump olume of CSL T astage olume Placed	Truck + Lines	VD	VD 31.0 CY VPTL -1.4 CY - Volume left in pump truck and lines. VCSLT +0.2 CY					
= \ Th O\	= VD-VPTL-VCSLT-VW = Theoretical Volume Over Pour (VP-VTh =/> 1.00) Under Pour (VP-VTh < 1.00)			VP 27.8 CY VTh 27.2 CY OP 0.6 CY UP NA CY					



DRILLED SHAFT CONCRETE VOLUMES LOG (REV 06-03-02) SAMPLE 2 Temporary Casing

Project N File No. Contract Complet Reviewe	tor	Replace Bridge 4.995 Drilled Shaft, li tor DS Foreman - Inspector - Jan	John Q. Doe	ek along US-322 Date Date	Be	nt No. aft No. ation	6 3 508 + 36 FT. Right	
	61 60		Concreting Curve					
	50						10	
	40						20	
Depth (FT)	30	Theoretical					30	
	20			Actual			40	
	10						50	
	0 0		10	15	20	25	60 61 30	
	10	5	ı	lume Placed (CY)	20	25	30	
Volume Delivered Volume In Pump Truck + Lines Volume of CSL Tubes Wastage Volume Placed		Γruck + Lines	VD	VD 31.0 CY VPTL -1.4 CY - Volume left in pump truck and lines. VCSLT +0.2 CY				
= VD-VPTL-VCSLT-VW = Theoretical Volume Over Pour (VP-VTh =/> 1.00) Under Pour (VP-VTh < 1.00)			VP VTh OP UP	27.8 CY 27.3 CY 0.5 CY NA CY				